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04-05 2008

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INNOVATION AWARD TELE SATELLITE & BROADBAND 04-05/2008

World's First Optical LNB

Global Invacom's First Public Showing of its World's First Fiber Optic LNB - The Start of a Revolution in Signal Distribution for Satellite TV

Company Report
GT-SAT
LNBs Worldwide

Test Report
Topfield TF7720HSIR
Elegant HDTV Receiver with Irdeto Reader

Test Report
Metabox HD Combo CI
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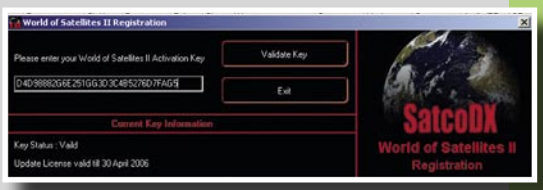
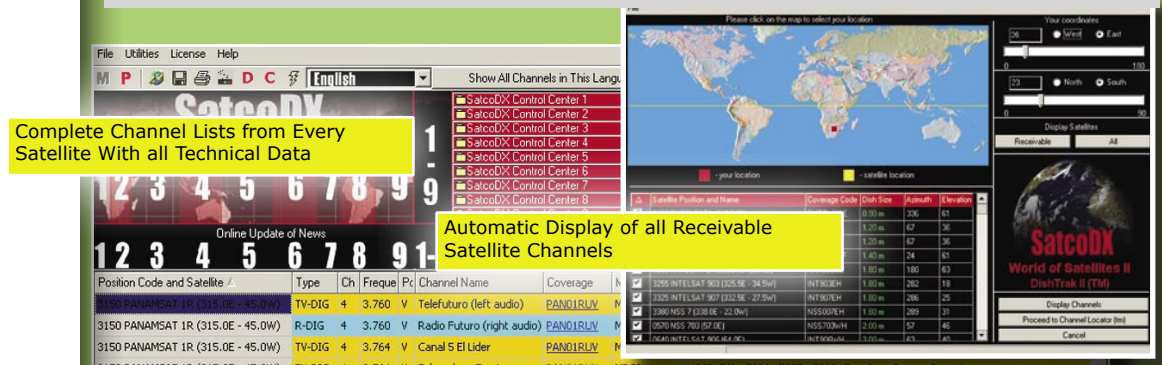
2. Enter the Activation Code by clicking LICENSE and then REGISTRATION. After entering Activation Code click VALIDATE KEY and EXIT. Now you are ready to download the newest satellite transponder data anytime you want, provided your computer is connected to the Internet and is allowed to access FTP.

Note: SatcoDX Software also runs without Activation Code, or with an outdated Activation Code. However, the satellite data on



display will be either from last time you performed an update, or from the time when original software has been compiled. By default, each SatcoDX software contains the set of satellite data as current as when it was compiled and put together.



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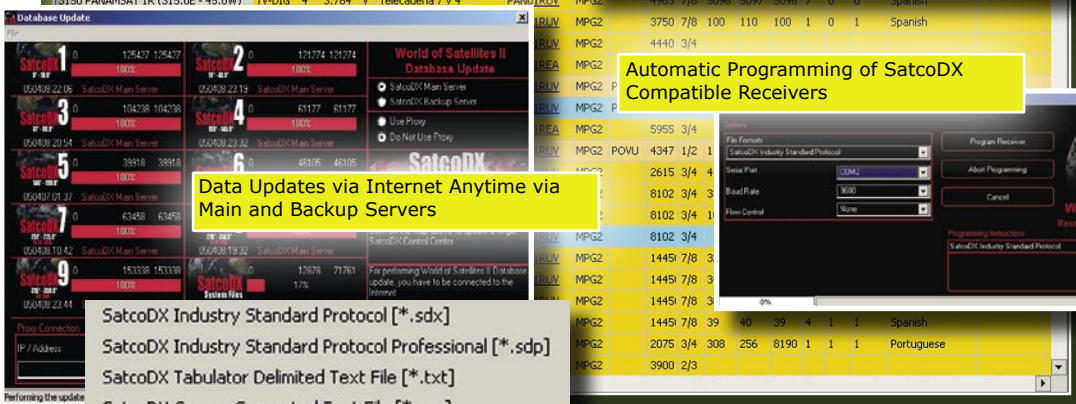
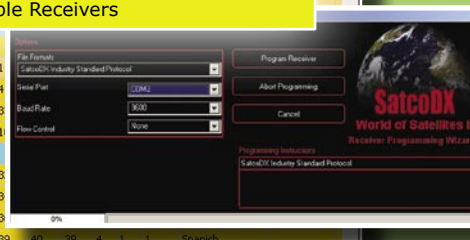
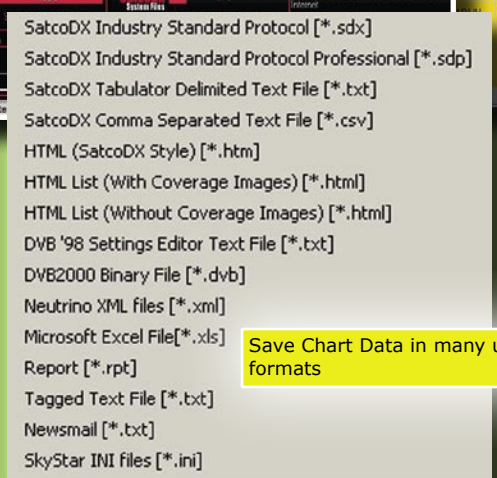
Automatic Display of all Receivable Satellite Channels



Automatic Programming of SatcoDX Compatible Receivers



Data Updates via Internet Anytime via Main and Backup Servers



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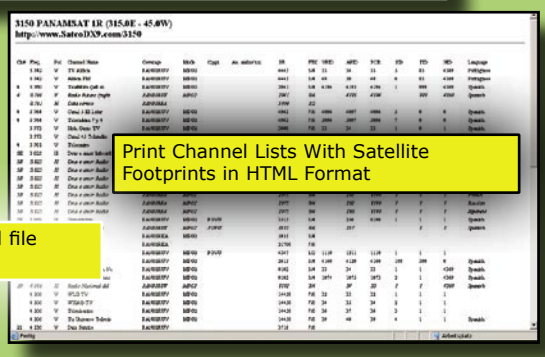

Print Channel Lists With Satellite Footprints in HTML Format

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Dear Readers

We find ourselves at the beginning of a revolution. You didn't notice it? Many revolutions are like that: they start somewhere unnoticed by anyone and then one day you end up right in the middle of it. Only when it's nearly over you realize that there was a revolution since nothing is like it was before.

This time it's called "Coax Cable's Long Goodbye". Sure enough, coax cable has already been done away with in the professional arena and replaced with fiber optics. Only the end-user at home has been spared – well mostly anyway: audio equipment already comes with fiber optic connections. And now the fiber optic signal distribution victory parade is making its way into the home.

We highlighted some laboratory samples of this new technology in the previous issue of TELE-satellite; in this issue you will find a report on the first concrete use of hand-made samples. This is a revolution? Absolutely! Most revolutions start off slow before they get bigger.

This new fiber optic signal distribution technology will naturally be used in applications where it makes sense, for example, when it becomes necessary to span long stretches. Eventually, there will be more uses for this technology. It will become cheaper. The day will finally come when there is no doubt that the solution for signal distribution is fiber optic cable.

Many years will pass before that day arrives. Don't run and bring your rolls of coax cable to the recycle station just yet. But, at the same time, it wouldn't hurt to become more familiar with this new technology. Its advantages shouldn't be ignored. Some of these advantages, such as the extremely low satellite signal loss over long stretches, will make uses possible that cannot be realized with today's coax cable technology. Or, from an economics point of view, fiber optic technology will open and lock in new markets that as of today have not yet been thought of.

By the way, fiber optic technology also means an end to electricity. The switching of fiber optic lines is accomplished via criteria other than by electrical high frequency lines. The revolution that just started comes with one other addition: "A long farewell from coax cable and quick learning of the laws of optics."

As always, TELE-satellite will guide you along this path!

Sincerely, Alexander Wiese

P.S.: My favorite radio station of the month: Petőfi Radio on HOTBIRD 13° east (12.149V, A-PID 100): a surprisingly wide variety of music from a state-run Hungarian station. I highly recommend it!

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- VFD Display for service information

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- 1000 services (TV and Radio) programmable
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BLU FOX S

blucom ENTAVIO

- Premiere and Premiere Star
- interactive services via mobile phone by Bluetooth
- Optical digital output

BLU FOX CI

blucom ENTAVIO

- Premiere and Premiere Star
- interactive services via mobile phone by Bluetooth
- 1x CI Slot
- Optical digital output

TOPFIELD

TF 6000 FE

Digital Satellite Receiver

- MPEG-2 Digital and fully DVB compliant
- DiSEqC 1.0, 1.1, 1.2 and USALS (DiSEqC 1.3)
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- CRYPTOWORKS (Arena)
- PREMIERE

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- ALPHACRYPT Classic
- ALPHACRYPT TC
- VIACCESS MPEG 2+4
- CONAX MPEG 2+4

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EUROPE

EUTELSAT TO LAUNCH TOW SATELLITE

Eutelsat plans to launch satellites that can prolong the lifetime of other satellites by towing them through space, creating millions of euros in savings, according to Financial Times Deutschland. The paper claims that there are already contracts with the UK's Orbital Satellite Services, who will build the tow-satellites. Orbital head Baard Eilertsen confirmed the company plans to launch tow-satellites in 2011. The tow-satellite's lifetime will likely be about 10-12 years.

ANDORRA

STA DEPLOYS COMVERSE IPTV SOLUTION

Comverse has announced that STA, the Andorran Telecommunications operator, has enhanced its triple play offering by deploying the Comverse IPTV solution. Upon launch, STA's new triple play offering will include IPTV with MPEG 2 and MPEG 4 encoding, a Conditional Access System (CAS), and Digital Rights Management (DRM). These services will be delivered over STA's new fiber-to-the-home (FTTH) network.

AUSTRIA

TELEKOM AUSTRIA TO EXPAND IPTV SERVICE

Telekom Austria is currently signing up an average of 1,000 new households each week for its IPTV service, aonTV, and hopes to extend coverage to 50% of the country's population by the end of this year. Telekom Austria is aiming to expand its IPTV content portfolio to around 100 channels by late 2008. It has also announced an agreement with On Demand Deutschland that will see aonTV's VOD line-up increase to more than 500 movies.

BELGIUM

BELGACOM TO LAUNCH HD OVER IPTV IN APRIL

Belgacom has confirmed that it will start broadcasts of high-definition programmes on its "Belgacom TV" IPTV service this April. The HD broadcasts will require a VDSL2 line, which Belgacom says will be available to 60% of Belgian homes by this April. According to reports, Alcatel-Lucent has been updating the infrastructure for the service and Nokia Siemens Networks has been developing the set-top boxes

CROATIA

T-HT ORDERS IPTV EQUIPMENT FROM ERICSSON

T-Hrvatski Telekom (T-HT) has placed two equipment orders worth a total of HRK10 million (USD2 million) with Ericsson Nikola Tesla, the local division of the Swedish technology giant. One contract is for the delivery of IPTV equipment with a further order for quality measurement systems.

FRANCE

NEUF CEGETEL SIGNS UP 750.000 IPTV SUBSCRIBERS

Neuf Cegetel has announced that it reached 750,000 subscribers for its IPTV service at the end of last year, up from 600,000 at the end of June 2007, as well as adding five new international channels. Neuf Cegetel also had 3.22 million DSL customers at the end of 2007, up from 2.2 million at the end of the previous year, giving it a 21% share of the French broadband market. Neuf Cegetel recently added five new international channels to its IPTV service: TV Record Europa, Record News, CLP TV, Apsara TV, and Guyson TV.

GERMANY

DEUTSCHE TELEKOM TARGETS 500.000 IPTV SUBSCRIBERS

Deutsche Telekom has set itself an aggressive new IPTV subscriber target of 500,000 customers by the end of this year, according to CEO René Obermann. DT ended 2007 with 150,000 orders for its Entertain IPTV service, of which 116,000 had been connected, representing a growth of 100,000 orders during the 4Q of 2007. The operator ended 2007 with more than 9 million retail DSL customers in Germany.

GREECE

ON TELECOMS SELECTS NEPTUNY'S CAPLAN PLATFORM

ON Telecoms has deployed Neptuny's Caplan-IPTV Edition platform to support its IPTV service. The operator is using Caplan-IPTV Edition to ensure efficiency of its existing systems and optimise the allocation of its IT resources as well as provide a strategic view in order to help predict trends in demand for services. ON Telecoms has already deployed a metropolitan fibre network in Attica passing 1.3 million households.

LITHUANIA

TEO ENDS 2007 WITH 17,500 IPTV SUBSCRIBERS

TEO has announced that its number of IPTV subscribers increased 350% in 2007 and reached 17,500 by year-end. IPTV services accounted for 1.1% of the company's annual revenue, which totalled LTL 793 (US$339.67 million), up 8% from 2006. TEO had 258,600 broadband subscribers by the end of 2007, up 43% from the previous year.

NORWAY

THOR 5 SATELLITE SUCCESSFULLY LAUNCHED

A Proton launch vehicle successfully lifted the THOR 5 satellite into orbit on February 12, marking the first mission of the year for ILS, and the second Proton flight in two weeks. The THOR 5 satellite will operate at 1 degree West, where it will deliver broadcast and interactive services across the Nordic region, Europe and the Middle East for Telenor Satellite Broadcasting. THOR 5 is a STAR 2 model spacecraft built by Orbital Sciences Corp.

RUSSIA

EXPRESS-AM33 RACHES ORBITAL POSITION

Russian Satellite Communications Co. (RSCC) expects to begin commercial operations of its new Express-AM33 telecommunications satellite by early March following a successful January 28 launch by a Russian Proton-M rocket from Russia's Baikonur Cosmodrome in Kazakhstan. The Express-AM33 satellite carries 10 C-band and 16 Ku-band transponders, plus a single L-band transponder. It will operate from 96.5 degrees East and will serve customers in Russia and in the Asia-Pacific region. RSCC has plans to launch the Express-AM44 satellite in mid-2008.

SWEDEN

SIRIUS 4 SATELLITE OPERATIONAL

The Sirius 4 communications satellite is now in full operation and has taken over all transmissions from its predecessors, Sirius 2 and Sirius 3. The satellite was launched by SES Sirius on 18 November 2007. Sirius 4 is intended to meet the increased demand for HDTV broadcasts in the Nordic countries, and the increase in new television channels within eastern Europe. Sirius 4 is expected to be in operation for at least 15 years, and will accommodate broadband communication as well as television broadcasts.

UNITED KINGDOM

ORANGE DELAYS FULL IPTV LAUNCH

Orange has delayed the full commercial launch of its IPTV service until later this year. The company recently said that it was on track to launch commercially before the end of 2007. But the service has been rolled out only on a trial basis to around 300 paying Orange customers in London and Leeds.

NORTH AMERICA

CANADA

HDTV NETWORKS TO LAUNCH 8 TV CHANNELS

Canadian fast food and satellite radio executive John Bitove made his bid to federal broadcast regulators for a new national TV network in high definition. The proposal, which is facing opposition from Canada's other big broadcasters, would see Bitove's company, HDTV Networks, launch eight TV stations across the country. The network wants to broadcast a high-definition signal over the air, meaning it would be available to viewers by antenna rather than requiring a cable or satellite subscription. In addition to broadcasting its signal free over the air, HDTV Networks wants to be carried as a national network on cable and satellite TV services.

UNITED STATES

FIOS TV TOPS ONE MILLION CUSTOMERS

Verizon has topped one million customers for its IPTV service, FiOS TV, which it launched just over two years ago and has since rolled out across 13 states. According to the company, 2007 was the biggest year yet for FiOS TV, in 2007, with 226,000 customers added in the fourth quarter alone. Verizon added it was on target to provide 150 HD channels via its IPTV service by the end of 2008.

LATIN AMERICA

ARGENTINA

TELECOM ARGENTINA TO START IPTV TESTS IN JUNE

Telecom Argentina is planning to begin technical tests of its IPTV service in June. However, there is a possibility that the commercial launch of the service may be postponed until the government permits telecom companies to offer broadcasting services. Telecom Argentina, and its competitor Telefonica de Argentina, have been waiting to enable this service once the current legislations are relaxed.

BRAZIL

GVT CONFIRMS IPTV LAUNCH FOR JULY

GVT has confirmed its plans to launch a video on demand (VOD) IPTV service by July of this year. According to the Vice President for GVT's residential market, Alcides Troller Pinto, they will offer IPTV via VOD in all state capitals and cities with more than 200,000 people where the company has operations.

COLOMBIA

ETB DELAYS IPTV TENDER

Empresa de Telecomunicaciones de Bogotá (ETB) has postponed its plans to launch a tender for the hiring of an IPTV content and equipment supplier, due to a new National TV Law bill, according to local media reports. The tender was expected for mid-January, and has been postponed as the new bill involves the unification of regulatory bodies, thus affecting the cost and characteristics of pay-TV licences and costs. The delay will however almost

certainly affect the telco's date for launch of an IPTV service, named as September 1 of this year.

NETHERLANDS ANTILLES
TELEFONICA BONAIRIANO SELECTS SECUREMEDIA
Telefonia Bonairiano (Telbo) has selected SecureMedia's Encryptonite ONE content protection system its newly launched "mitv" IPTV service. The IPTV service was developed by Telbo and consultancy firms Savant Communications and Manycast Consultancy. The service consists of a basic package of around 40 channels including HBO, Discovery and Fox, and Telbo will also offer the Dutch public channels (Nederland 1, 2 and 3) which will be inserted into the head end via optical submarine cables.

ASIA & PACIFIC

INDIA
TRAI IN FAVOUR OF CABLERS OFFERING IPTV
Broadcast regulator TRAI is considering allowing registered cable operators to provide IPTV without a new license, while proposing a revenue related license fee for telecom firms giving the service. In its final draft recommendation, TRAI said registered cable TV operators would not require any further license. Telecom service providers having license to provide triple play services and ISPs with net worth more than Rs 100 crore will not require any further registration to provide IPTV.

ISRAEL
SPACECOM REJECTS SES'S US$ 350 MILLION BID
Israeli satellite operator Spacecom said its board has decided to reject a US$ 350 million offer by SES for most of its assets and operations, disagreeing with the Luxembourg company's plans for the business and judging the offer price to be too low. Directors also felt the terms and conditions were 'very burdening' and create a real risk to the prospects of the deal being executed, Spacecom said. SES wanted to buy Spacecom's Amos-2 satellite, the Amos-3 satellite after it becomes operational, the rights to the 4 degrees West orbital position and the agreements of Spacecom's customers on the Amos-1, 2, and 3 satellites, with these assets being clear of all debts.

SINGAPORE
STAR HUB AND MEDIA CORP IN HDTV CONTROVERSY
A disagreement between StarHub and MediaCorp has prevented some viewers from tuning in to the full spectrum of crystal clear programmes on their HD TV sets. More than 499,000 StarHub subscribers now receive MediaCorp's regular free-to-air channels, like Channel 5, via their cable set-top boxes, but they cannot yet tune in to new free HD channels. This is because MediaCorp and StarHub are deadlocked in discussions to bring such channels to cable customers. To watch programmes on MediaCorp's new HD5 channel they will have to buy another set-top box.

SOUTH KOREA
DAUM TEAMS UP WITH MICROSOFT TO LAUNCH IPTV
Daum, has sealed a deal with Microsoft and Celrun in order to provide new services for the IPTV market. Whilst Celrun has agreed to produce the hardware, Microsoft has said that it can provide support for the services as well as publicize the product internationally. Daum's role includes the provision of IPTV content and support for operational procedures. The service will launch in the second quarter of 2008.

HANAROTELECOM SIGNS OUTPUT DEAL WITH DISNEY
Hanarotelecom has signed a deal with U.S. entertainment giant Disney to provide movies through its Internet-based TV service. Under the deal, HanaTV customers will be able to view popular movies and animations such as the "Pirates of The Caribbean" and "Finding Nemo." Launched in 2006, HanaTV has attracted more than 800,000 customers.

TAIWAN
VASTAR REVEALS IPTV PLANS
Vastar Cable TV System, based in Taichung County in central Taiwan, has revealed plans to launch an IPTV service. Vastar reportedly plans to provide triple-play services of voice, data and VOD in order to compete with local IPTV provider Chunghwa Telecom. Vastar's triple play service can also be integrated with the company's WiMAX operations in the future. The company is currently establishing infrastructure based on its existing cable TV network in order to begin the operation of fixed-line voice communication services in central Taiwan by the end of this year. Vastar has selected Ethernet solutions from Nortel.

AFRICA

AFRICA
RASCOM'S SATELLITE TO LAST ONLY TWO YEARS
Thales Alenia Space has said the Rascom-QAF1 trans-African telecommunications satellite it built, which had a helium leak, can be restored to its planned orbit but that its operating life will be 2 years instead of the planned 15. The helium leak forced engineers to use much of the craft's maneuvering propellant reserves to reach its final orbit. Rascom-QAF 1 is the world's first pan-African satellite, designed to beam telephone, Internet and DTH TV services.

OCEANIA

AUSTRALIA
FOXTEL ANNOUNCES HDTV SERVICE
FOXTEL has unveiled "HD+", its new high-definition service that will broadcast exclusive content to customers later this year. According to CEO Kim Williams the service will combine regular standard-definition (SD) programming with exclusive high-definition (HD) channels from the BBC, Discovery, National Geographic, Fox Sports and ESPN. The Foxtel Box Office will also be offering on-demand movies in HD format. Foxtel also announced the "IQ2", an upgrade to its IQ set-top box product, which will be the only way to access the HD+ service.

NEW OPTUS SATELLITE OPERATIONAL
Optus has switched on its newest satellite, expanding its telecommunications capacity for rural and regional Australians. The Optus D2 satellite, which was launched on October 5 last year, has been made operational after completing a series of in-orbit tests. The Optus D2 satellite paves the way for the decommissioning of the ageing Optus B3 satellite, which has been in orbit for more than 15 years. The satellite will provide rural and regional Australians with enhanced capacity for VSAT and extended reach for DTH services. The next satellite in the series, the Optus D3, is currently under construction and scheduled for launch next year

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Development and Application of 3D Diffractive Antennas

I.V.Minin, O.V.Minin
Novosibirsk State Technical University, Russia

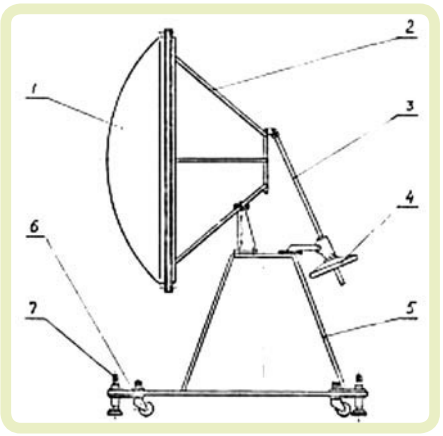

Diagram of a pilot design of diffractive antenna for reception of satellite TV signals (material – foam-polystyrene, n=1.3, diameter 1.2 m).

Fresnel zone plate (FZP) antennas have existed for many years – TELE-satellite has reported on a sample in issue 05/2003. FZP are a type of diffractive antenna. The original concept of the zone plate evolved from the work at optical frequencies by Augustin Fresnel in the early nineteenth century [1]. There has been a renewed interest in their design over the past few years for applications in the microwave and millimeter band, where they offer attractive advantages over shaped lenses and traditional parabolic antennas like simplicity of construction, greatly reduced thickness, light weight, and low cost.

Circular Fresnel zone plate lens antennas are planar and consist of rings which alternate between transparent and opaque (metal). The metal rings coincide with the alternating 180° phase zones on the surface of the antenna aperture. They block the electromagnetic (EM) waves from the source, placed at the focus of the lens, that are 180 degrees out of phase relative to the center of the aperture. The EM waves that hit the opaque regions diffract through and combine to collimate a beam in the far field.

Flat antennas are developed as an alternative to parabolic antennas. These are essentially stripline antenna arrays. The advantages of flat antennas are: compact design, light weight, easy handling and simple installation on house walls. Such antennas readily comply with the interior design of living spaces, both structurally and esthetically, and have high manufacturability (printed circuits technology can be used) etc.

In general, FZP lens antennas can be made with any arbitrary shape surface. However, more practical are zone plates with axially-symmetric, rotational silhouettes.

An alternative to smooth reflector and flat antennas can be diffractive antennas of lens and reflector types. Furthermore, the asymmetric design of diffractive antennas permits the designer to get rid of aperture blockage by shifting the irradiator.

Another promising but not yet sufficiently developed approach to the design of multibeam antennas and scanning systems is the use of electric and magnetic fields to change the refractive coefficient and other optical properties of certain materials.

Flat (right) and paraboloidal (left) diffractive lens antennas at 35 GHz.

Characteristics of Parabolic and Diffractive Antennae

Parameter	Parabolic antenna	Diffractive antenna
Optical schematic diagram	Focal point in front of the antenna	Focal point at the rear of the antenna
Blockage	Yes	No
Shape of surface	Fixed, parabolic	arbitrary
Material	Metal	Dielectric
Electromagnetic compatibility	Low	High
Noise immunity	Low	High (the antenna is a frequency filter)
Precision of surface machining	±λ/32	(±λ/5...±λ/10)
Frequency band	Wide: from 0 to f	Variable
Need for cowling (radome)	Cowling required	Cowling not required
Multi-beam mode	Constrained	+/- 15°-30°
Satellite focussing	By rotating the entire antenna	Only the receiver moves
Demands on rotating support mechanism	Increases as antenna diameter increases	Mild

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Lens antennas are aperture antennas of optical type. In general, a lens antenna consists of an irradiator and a lens. An irradiator must have the phase centre coinciding with the lens focal point, and must form the beam pattern for the required amplitude distribution on the emitting surface and create minimal loss to energy «spilling» over lens edges.

As for the comparative characteristics of beam patterns of the parabolic and diffractive antennas, the following important aspects must be mentioned:

- When a beam in a parabolic antenna is tilted by moving the irradiator, the zeros of the beam pattern "smear over", the main scattering lobe is broadened, the side lobes grow significantly and the gain diminishes.
- The situation is different with diffractive antennas. Both the width of the beam pattern and the amplification change insignificantly while the level of side lobes increases much slower than in the case of the parabolic antenna.

For the reception of satellite TV signals the main advantages of such antennas would be:

- a system of detectors placed along the focal surface of the stationary antenna can be used for simultaneous reception of signals from several satellites;
- Application of lens-type antennas permits two effects to be achieved at the same time: using this antenna as aerodynamic radome for lowering wind loads, and improving the operating conditions for the reception unit by protecting it from the aggressive factors of the surrounding environment;
- It becomes possible to design the external appearance of the antenna almost arbitrarily;

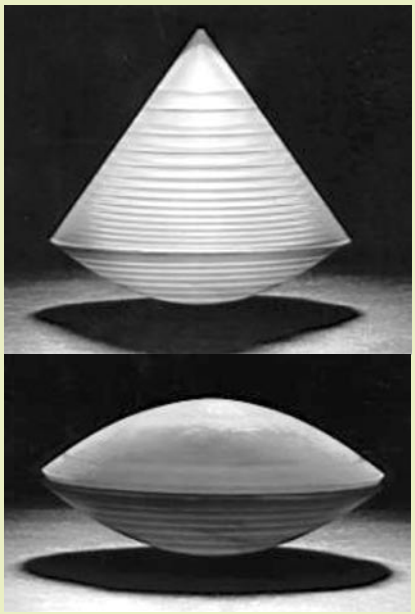
Typically satellite television antennas require low-noise high-sensitivity amplifiers, commonly known as LNB. Amplifiers of this type can be driven or saturated by short "surges" of high-amplitude noise. A conventional antenna simply amplifies such "noise surges". Diffractive antennas are less sensitive to such short noise "surges", thus reducing the probability of noise-driving in low-noise amplifiers. Modulated data vary slowly with time relative to the carrier wave (10-12 GHz) in TV satellite communications. The gain of the diffractive antenna is the sum of gains in each zone at the corresponding moment of time. Therefore a high-amplitude short noise "surge" can be amplified by only a limited number of zones. Consequently, the amplification of this surge will be reduced compared to the total signal amplification, so that the low-noise amplifier cannot be driven or saturated.

A sufficiently serious problem of protecting antenna icing arises in a number of countries. The design of diffractive antennas working in the radiation reflection mode makes it possible to create antennas with heating that operate under conditions of snow and ice covering. To achieve this, all metal coated radiation-reflecting zones in half-wavelength or multilevel antennas are electrically connected into a heater circuit, and electric current is run through it. Therefore, the problem of special heating devices is automatically eliminated for such type of antenna – their role is played by metalized Fresnel zones. Designs similar to these may also prove useful in space when it is necessary to protect spacecraft's antenna from temperature-induced strains.

3D Diffractive microwave focusing elements have very extensive potential, not yet implemented, and can be applied to most different fields in industry, medicine etc.

Application of a 3D diffractive antenna for satellite TV reception.

Pilot model of a heated diffractive antenna: the metal rings, of which the diffractive antenna consists, are double used as a heater



Three-dimensional diffractive antennas of various shapes.

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First of its Kind:
Global Invacom Optical LNB

Tested for the first time ever: LNB with optical fiber connection in a real reception test

In the previous issue of TELE-satellite we reported exclusively on the development of an LNB with an optical fiber connection by the English manufacturer Global Invacom. At the time the only specimen available was a bulky lab sample. Since then Global Invacom has put together ten prototype optical LNBs so that this new and innovative technology can be tested in real world applications. Global Invacom carried out their first public test at the TELE-satellite Test Center in Austria. Two Global Invacom representatives, project manager Andrew Collar and technician Norman Harris, travelled to Vienna and mounted their optical LNB on an existing 90 cm offset antenna and routed the optical cable from LNB to the lab.

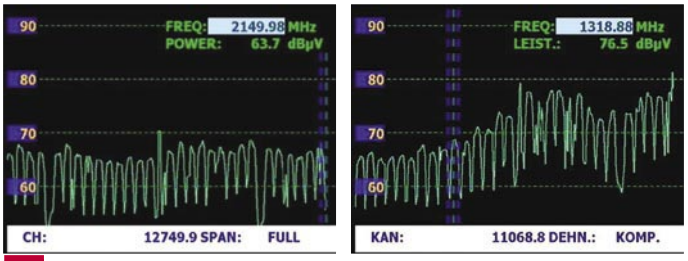
While installing the LNB, Andrew Collar and Norman Harris explained how the new LNB actually works. As it turns out, simplicity is the key to success - a stacker that is built into the LNB distributes the four reception polarizations (vertical low and high band as well as horizontal low and high band) to four distinct frequency ranges.

Next, the RF signal is converted into a digital signal which is then sent through the optical cable via a laser beam. At the other end of the line this light beam is received by a converter box which reconverts the signal back into a regular satellite signal which can then be processed by any standard digital satellite receiver.

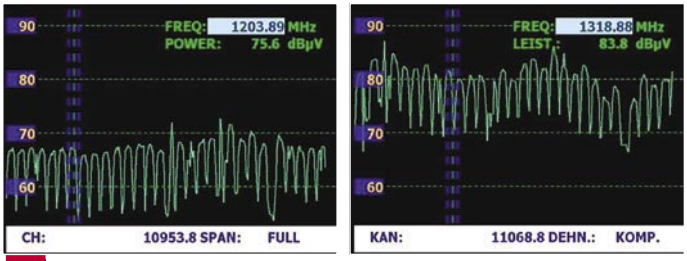
As we watched the Global Invacom staff set up the test system, it became evident that the company intends to introduce the system one step at a time with the aim of keeping everything as simple as possible.

The LNB features two connectors, a standard "F" connec-

Signal measurement on RAI transponder on HOTBIRD 13° east. Conventional single LNB (left) and Global Invacom optical LNB (right)



Vertical low band (conventional single LNB on the left and Global Invacom optical LNB on the right)



Horizontal low band (conventional single LNB on the left and Global Invacom optical LNB on the right)

Optical LNB by Global Invacom – the 9th of only ten hand-made and fully functional prototype LNBs.

Comment

Tony Taylor, managing director of Global Invacom, and his team of advisors are in the rare but envious position of making decisions regarding the future of a new technology which will affect the entire satellite industry. They have to look for and find answers to questions such as: Which type of plugs will be used for the optical LNB? Shall we rely on the existing standard even though it has not been conceived for outdoor use? How can we make the plug of an optical cable weather-proof? How durable and water-proof are existing optical cables that are available in stores today?

And then there are those strategic questions which are even more difficult to answer: Should optical LNBs be licensed? Not at all, or can technological details be given to other manufacturers? What about the pricing aspects of the optical LNB and converter box? Too high a price will slow down market penetration of any new technology and at the same time favor the development of less expensive competing products with yet another technology. A mishmash of different standards would then be the result.

And then there's the mother of all questions: How should the optical LNB be marketed? Is the term 'optical LNB' one that should stay or does it call for the invention of a new name? How about "Laser LNB"? And finally: How can manufacturers of satellite receivers be convinced to add optical LNB inputs to their boxes?

Only one thing is for sure: Global Invacom will find the right answers to all of these questions!

Alexander Wiese

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tor (like on any typical LNB) and an optical cable connector. As already mentioned in the previous issue of TELE-satellite, the "F" connector is required to provide the LNB with power. Global Invacom is still deciding whether to use a low voltage power connector or this existing "F" connector to supply power in the production version - a decision will be made in the next couple of months. An advantage to keeping the "F" connector would be that customers wanting to upgrade to an optical LNB would only need to run the new optical cable; the existing coax cable would simply be used along with a power pack to supply power to the LNB.

A standard optical cable can be used to carry the signal between the LNB and converter box. Since this kind of cable has become the norm in modern telecom networks, the price has come down significantly over the past several years and is now about 1€ per meter.

So, price is one advantage of this new technology; the cost of standard coax cables keeps rising consistently due to rising copper prices worldwide. Keep in mind though that optical cables should always be used with their pre-attached plugs since special equipment is required along with a great amount of skill as well as a lot of time to change the connectors on optical cables.

Global Invacom will also offer optical cables which can be attached to each other using special connectors so that any required cable length can be achieved. For the time being, standard FCPC plugs will be used even though the manufacturer might switch to a new in-house developed connector system at some point in the future.

Once the signal is converted to optical format, it is carried through the optical cable either to the first node or directly to the receiver. The thin optical cable is capable of carrying the full frequency range of a complete satellite and can thus be perfectly split using passive taps. Distribution switches, as used in most MDU networks today are no longer required with this system.

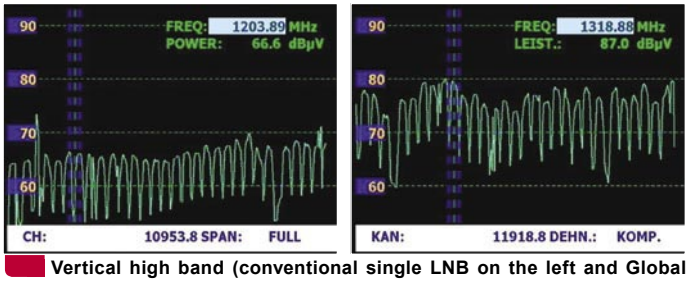
When this system reaches the store shelves, it will support splitting the signal into as many as 16 optical cables. Over time this number will be increased almost endlessly since it only depends on the optical power output of the laser beam which can be increased by the manufacturer according to the application in which it will be used. Initially two LNB's with different fixed output powers are expected to support: small up to 16 node or large up to 96 node MDU networks.

For an average home this means the signal is carried from the LNB through an optical cable to one or more central nodes from which it is then distributed to individual rooms using additional thin optical cables. Unlike much thicker coax cables, these thin optical cables can more easily be added to existing ducts, even if these ducts are already occupied with other cables. In addition, optical cables are resistant to any kind of interference. If necessary, optical cables can even be routed around the strongest electrical motor without any adverse effects.

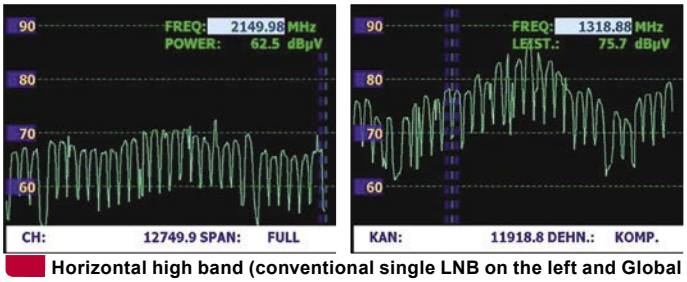
In the individual rooms, the optical signal cable is fed into a converter box which in turn provides two (in later stages up to four) individual connections for standard multiple tuner satellite receivers.

Norman Harris (left), Global Invacom technician, and Andrew Collar, Global Invacom project manager, install the new Global Invacom optical LNB on a 90 cm dish at the TELE-satellite Test Center Austria in Vienna.

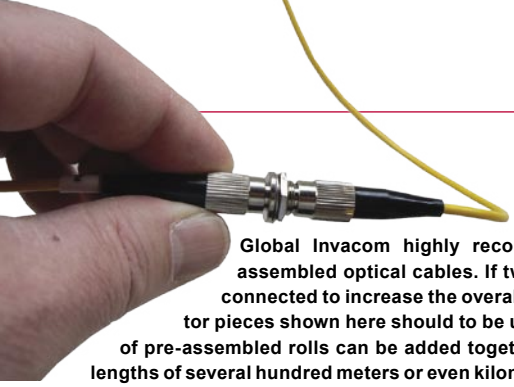
A word of caution to all installers: Never simply plug in optical cables – the connections of the cables need to be perfectly clean before they are put together. Various methods can be used to achieve this; the most practical is using the device shown here: the connector of a fibre optical cable is inserted and a lever is then operated to clean the connector with an extremely fine-grain abrasive paper that is only used once. This is the only way to guarantee a plugged connection is established without any signal attenuation.



Vertical high band (conventional single LNB on the left and Global Invacom optical LNB on the right)



Horizontal high band (conventional single LNB on the left and Global Invacom optical LNB on the right)



Global Invacom highly recommends using only pre-assembled optical cables. If two such cables need to be connected to increase the overall cable length, the connector pieces shown here should to be used. This way any number of pre-assembled rolls can be added together to create overall cable lengths of several hundred meters or even kilometers. The picture illustrates the thinness of optical cables with a diameter of only three millimeters.

The converter box design shown in the picture is a prototype and does not represent the final design. The actual box will be smaller so that it can be buried or installed like a regular satellite IF splitter socket or electrical socket. In this way it can be concealed completely. Thanks to the optical cabling a single thin line can be used to connect up to four individual satellite receiver tuners. In addition, Global Invacom is planning an option to feed DVB-T signals into the line as well. This will allow you to connect two or four satellite receivers as well as a TV with integrated DVB-T tuner or a DVB-T set-top box. In this way a single thin cable becomes a universal means of transportation for all types of digital media content.

By the way, don't be fooled by the yellow optical cable you see in our pictures; these are also lab samples. The final cables that will be available for sale will come in more subdued colors such as grey or white but will include colors for every taste and if you insist on having a bright green cable, for example, you could get that too.

This is what our test setup looked like: the two boxes to the left are converters which split optical signals into two identical satellite signals. In this way, two satellite receivers can be connected and operated completely independently from each other. On page 46 of the previous TELE-satellite issue, the same device can be seen as a lab specimen. Global Invacom was able to reduce the size significantly; the actual devices that will officially be introduced will be even smaller.
In the center of the picture you can see an optical 1-to-4 splitter (above) and 1-to-2 splitter (below), both of which already are available for the distribution of telecom signals with optical cables.
To the right there is the hand made optical prototype LNB which was used for this test.

Everyday use

For our test setup at the Austrian TELE-satellite Test Center in Vienna we chose to use a 90 cm dish with a 40 mm feed adaptor. In the first step, we mounted a standard single LNB to align the dish to HOTBIRD 13° east using the Promax TV Explorer II (a test report of this device will appear in the next issue of TELE-satellite). For comparison later on, we saved the spectrum analyzer results of all four HOTBIRD polarizations before the Global Invacom professionals went about installing their optical LNB.

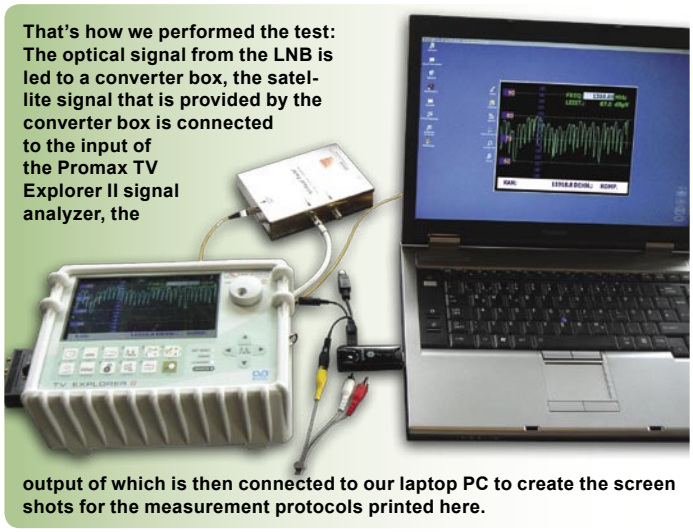
Once they finished with the installation, we stared in awe at the signal analyzer and realized at first glance that the results appeared quite different - and by that we mean better. We compared all four polarizations and found out that in each instance the optical LNB delivered better results. The signal level of the optical LNB was remarkably better and delivered a more accentuated result for individual transponders while the initially installed single LNB left a consistently weaker impression.

The reasons for this are twofold: first, the optical LNB is a state-of-the art high-quality product, and second, there is almost no signal attenuation with optical signal transmission - the actual value is approximately 0.3 dB per kilometer!

At first we used a 2 way splitter in our test configuration, but once we experienced first hand how beautifully this new system worked, we decided to go for the max and asked the Global Invacom representatives to distribute the output signal of the LNB to the currently maximum possible 16 individual optical outputs. That is a maximum of 64 Satellite Tuner inputs.

The measurements supported what we had expected right from the start: there was no deviation in the results; all was still next to perfect according to the TV Explorer II.

We can just imagine the smiles that this system will put on the installer's faces who, up



That's how we performed the test: The optical signal from the LNB is led to a converter box, the satellite signal that is provided by the converter box is connected to the input of the Promax TV Explorer II signal analyzer, the output of which is then connected to our laptop PC to create the screen shots for the measurement protocols printed here.

until now, have always had to take into account attenuation, interference, tap or switch gain flatness and so on when distributing satellite signals to multiple outlets.

To sum up, we were totally impressed with how well this new technology performed in a real word setup. As if that wasn't enough, the third signal measurement we performed on the 11804V transponder used by the Italian public broadcaster RAI, cast away any remaining doubts that we might have had. At 86.7 dBµV, the signal level delivered by the optical LNB was significantly higher than what we had received from the single LNB (75.3 dBµV).

Yet, the more important C/N and MER values were also better with the optical LNB. To be fair, we also have to mention that the single LNB was tested in dry weather conditions while the optical LNB had to prove its worth during rain that set in soon after the LNB had been mounted. We can safely assume that both the C/N and MER values of the optical LNB would have been even better in dry conditions.

Areas of Application

In the truest sense of the word, Global Invacom has developed this new system with all customers in mind. Apart from individual users and households, this technology is also particularly suited for apartment buildings and multi-family homes. Originating from the optical LNB, the signal is fed to central nodes where it is split until each apartment is equipped with enough outlets.

Spinning this idea even further, remote or rural areas can establish small-scale local cable networks since the satellite signal needs to only be received at one central location and then fed into the fiber optical network. Global Invacom tests with cable lengths of up to 12 km achieved positive results without a significant loss of signal strength (apart from the 0.3 dB per kilometer attenuation this technology brings with it).

Considering the fact that optical cables can easily be integrated into virtually any existing duct system, this is a viable alternative to setting up a coaxial cable network which is troublesome to establish and prone to signal attenuation and interference.

Future Perspectives

It's not only Global Invacom that is convinced a turning point in satellite signal distribution has been reached; we at TELE-satellite also believe the path Global Invacom has taken with its optical LNB might become a superhighway in the future. Just try to imagine a satellite receiver which does not pick up the signal from a standard coax cable but is instead directly connected to the LNB by means of a fiber optical cable! And that's not all - PCs, TVs, DVD players and so on can all become members of such a network and exchange data via a super-thin, hardly visible cable with all the content and signals made available to all of the components all of the time regardless of whether it's DVB-S, DVB-T or Internet access.

With the introduction of its optical LNB, Global Invacom has created a true milestone en route to this perfect scenario. We hope that many component manufactures will jump on the bandwagon on the way to forever changing the way we experience multimedia content today and even more so in the coming years.

Unfortunately, Global Invacom was not ready to reveal any pricing information; the final details will only become available shortly before the official market launch. Initially, the optical LNB will be designed to receive signals from one satellite only, but Global Invacom is working on expanding the system and plans to offer cables consisting of more than one optical cable at a later stage. Looking like any other standard cable, this new development will allow the reception of signals from two, three or four satellites simultaneously and splitting them so that each end device will be able to access any signal from any of these satellites at any time.

Another Global Invacom plan involves putting the laser unit in a separate box outside the LNB so that the size of the optical LNB can be reduced with the laser box then being placed inconspicuously on the antenna mast. Official sale of the optical LNB will start in June/July 2008 and as soon as the first units hit the stores, TELE-satellite will take a closer look at the final product.

Expert Opinion

Thomas Haring
TELE-satellite
Test Center
Austria

+

The major plus of the optical LNB is that all four signal levels of a satellite can be transmitted simultaneously via a single cable and virtually loss-free. Thanks to this, the signal can be split almost endlessly and each outlet is provided with all the signals that can be accessed completely independently.

Another advantage is that this system can bridge large distances without compromising signal quality. Fibre optical cables are extremely thin and flexible; they will fit into any existing duct system. The very low signal attenuation results in a considerable gain when large distances need to be covered (like in our test setup, for example, that added up to some 50 meters from antenna to signal analyzer) compared with coax cables. This gain in combination with the higher C/N value may be the decisive factor in taking a weak signal and putting it on a TV screen or not. The low material costs (approx. 1€ per meter for the fibre optical cable, 25€ for a splitter for two connections, 60 to 70€ for four connections) are another convincing argument in favor of this innovative system.

-

Practically none, apart from the fact that – from a strictly mechanical point of view – fibre optical cables require more care than standard coax cables. In addition, it is important to set up the system very diligently so that the cables are able to carry signals without any obstruction so as to make sure that users can enjoy this new technology to its fullest.

TECHNIC DATA

Manufacturer	Global Invacom, Essex, UK
Website	www.global-invacom.com
E-Mail	sales@invacom.com
Tel	+44-1621-743440
Model	Optical LNB Handmade Evaluation Prototype
Function	Universal single LNB with optical output and stacked frequency ranges
Reception range	10.7-11.7 GHz/11.7-12.75 GHz
Power supply	13/18V over "F" connector
Optical connection	FCPC

Topfield TF7720HSIR

Elegant HDTV receiver with built-in Irdeto card reader

HDTV in particular highlights a trend that has emerged over recent years, namely that high-quality programming is increasingly shown on pay TV channels only. A number of manufacturers have picked up on this and are now offering HDTV receivers with integrated encryption systems in addition to the CI slots that are common these days. South Korean manufacturer Topfield has joined these ranks with its new TF7720HSIR.

The receiver comes in a stylish silver case which will blend in smoothly into almost any TV rack out there. As usual with Topfield receivers, the front panel features five buttons to operate the box without remote control, as well as a four-digit segment display and three status LEDs indicating the current operating mode. A flap on the right side of the panel hides the Irdeto-compatible card reader.

Next, let's take a look at the rear panel which is nicely equipped as well with all connections needed. Apart from the HDMI socket which comes with all HDTV products, you'll find the satellite IF in and out sockets, two scart euroconnectors, six RCA jacks for composite video, stereo audio and YUV, an optical audio output and an RS-232 interface for connecting the receiver to a PC.

The remote control sits nicely in your hand and the pleasant surface texture of its buttons together with their clear labelling and pleasant pressure point make it the perfect companion to the TF7720HSIR.

During the various tests we performed we even discovered that the remote works perfectly with other Topfield devices as well. For instance, the somewhat outdated TF3000CIPro we use to operate our rooftop rotating antenna was only too happy to accept any commands we sent from this remote.

HDTV reception / clearly arranged info bar |

HDTV reception / clearly arranged info bar |

The manual that comes with the receiver is clearly laid out, has appropriate illustrations at all the right places and uses easy-to-understand language to explain the receiver's range of features so that you'll soon be comfortable with this new box.

Everyday use

When you switch on any Topfield receiver for the first time it immediately shows the main menu rather than an installation wizard, and the TF7720HSIR is no exception. Still, you can't leave the main menu before the box knows what reception configuration it is connected to and before it has performed a channel search.

You start with customising the receiver according to you personal preferences, for instance by selecting the proper OSD language. Apart from English, French, German, Italian and Spanish you can also choose Arabic, Greek, Turkish, Danish, Swedish, Norwegian, Dutch, Russian, Polish, Persian, Finnish, Slovakian, Czech or Hungarian. There couldn't be a more striking proof for the TF7720HSIR's international genes which make it an option in virtually all four corners of the earth.

As with all other Topfield receivers as well, the internal clock can be synced via satellite and users can restrict this feature to specific transponders or channels.

Video is provided via HDMI in 576p, 720p and 1080i and you can activate automatic detection so that the receiver chooses the right format as appropriate.

Using a scart connection the CVBS, S-Video and RGB video

TELE SATELLITE AWARD & BROADBAND 04-05/2008
TOPFIELD TF7720HSIR
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Turkish	Türkçe	www.TELE-satellite.com/TELE-satellite-0805/tur/topfield.pdf

to 5000 channels. You can do this directly and temporarily right in the channel list, using sorting parameters such as alphabet, satellite, provider, FTA/CAS, CAS/FTA or favourite/non-favourite.

Press the same button once again and the TF7720HSIR will show extended program information, if this is transmitted by the program provider. This new Topfield receiver's EPG works like you would expect from a premium manufacturer, namely

types are available. There is no manual setting for the desired colour system.

Once all these initial settings are finished the receiver needs to know which type of LNB is/are connected and how it/they can be addressed. If you receive more than one satellite position with a fixed antenna then DiSEqC 1.0 or 1.1 will be the right protocol for you, while owners of rotating dishes are also looked after with integrated DiSEqC 1.2 and 1.3 (USALS), both of which are implemented in an exemplary way.

A total of 143 pre-stored European and Asian satellite positions with relevant transponder parameters and fairly current data are available for the channel search.

Because the TF7720HSIR can receive Ku band as well as C band signals a number of preconfigured LOF settings are available, which can also be adjusted manually, if required.

The channel search menu is very clearly laid out and offers an automatic search of complete satellite as well as a manual or extended transponder search.

In extended mode PID values can be entered manually. To make sure the receiver doesn't miss a single channel we recommend to activate the network scan. We were absolutely impressed by both the speed and accuracy of the automatic search. Slightly more than four minutes was all it took to scan our 90-transponder test satellite, and the Topfield box didn't miss a single channel. Even some recent DVB-S2 transponders were found right away as the required parameters had already been included in the pre-stored transponder list by the manufacturer.

As soon as the scan is finished and the channel list is filled, the receiver lets you exit the main menu and immediately switches to the first channel on the list. Pressing the OK button calls up the complete channel list and all the chaos that usually comes with it. So it's paramount at this stage to tidy up the list of up

If you like to edit the channels permanently you'll have to access a dedicated area in the main menu to do this. There you can also move, rename, delete or sort channels so that you will end up with a nice and tidy channel list that gives you convenient access to everything you'll ever like to watch.

Channels you watch on a regular basis can be moved to one of the favourites lists and channels that are not suitable for children can be locked with a PIN so that they will only appear on screen when unlocked with this dedicated PIN.

When watching TV an excellently designed info bar pops up whenever a new channel is selected or after the Info button on the remote is pressed. Apart from the title of the current event it displays status information about the channel and indicates any additional features that may be available, such as teletext, Dolby Digital audio, language options, encryption, video format, etc.

brilliantly, and it can display program details for either one channel at a time or for four channels at once.

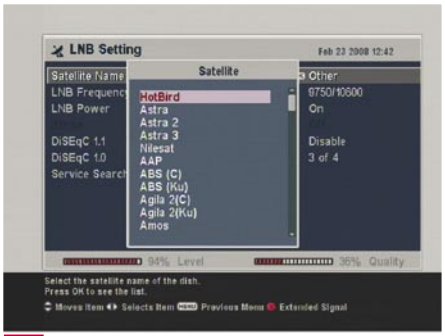
Zapping is pure fun with this box, because it never takes more than a second to switch from one channel to the next, no matter whether it's HDTV or SDTV. Video output through HDMI is brilliant and makes you hunger for programming in high-resolution.

The perfect overall impression is rounded off by a user interface that clearly deserves its name and reflects all the brainwork that Topfield has put into it – the coloured function buttons do a great trick, for example. The built-in teletext decoder works just as reliably as the subtitle mode or audio selection.

Even so, the manufacturer does not rest on its laurels and is constantly working on improving the receiver software. Updates can be loaded directly over the air if your dish

Flawless reception of weak signals from 7° West

Main menu



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Expert opinion

Thomas Haring
TELE-satellite
Test Center
Austria

+

The TF7720HSIR is a compact and elegant HDTV receiver capable of receiving and decoding Irdeto pay TV channels thanks to its integrated card reader.

It perfectly fits into the living room and is the ideal box for the whole family.

-

None!

points to ASTRA 19.2° East. Alternatively you may choose to connect your receiver to the PC to perform a manual software update after downloading the latest version from Topfield website.

Thanks to the integrated Irdeto card reader channels with this encryption method can be received and decoded even without a CI module, provided you have a valid smart card.

When tested with a subscription card of European pay TV provider Euro1080, which transmits via ASTRA3A 23,5° East, this system worked without a glitch. Even the reactivation of our smart card which had been out of use for some time was possible without a problem.

As always, we finish off our tests with pushing the limits of the tuner. In case you had any doubts about that, the TF7720HSIR is a real winner and was able to pull in signals from weak transponders in the C and Ku bands rather impressively, like signals from EXPRESS A1R 40° East or ABS1 75° East at our test location in Vienna.

SCPC signals were detected if they came in with 2 Ms/s or more, which is up to what the Topfield claims for this box.

Even low bandwidth SCPC signals can be received flawlessly thanks to the low-threshold tuner

TECHNIC DATA

Manufacturer	Topfield, Seongnam/Korea
Fax	+82-31-7082607
E-Mail	inquiry@topfield.co.kr
Model	TF7720HSIR
Function	Digital DVB-S, DVB-S2 HDTV Receiver with Irdeto CA
Channel memory	5000
SCPC compatible	yes (> 2Ms/s)
USALS	yes
DiSEqC	1.0 / 1.1 / 1.2 / 1.3
Scart euroconnectors	2
Audio/Video outputs	3 x RCA + 3x RCA YUV
UHF Modulator	no
S-Video	yes
Component output	yes
HDMI connection	yes
0/12 Volt connection	no
Digital Audio output	yes
EPG	yes
C/KU-Band compatible	yes
Power supply	90-250 VAC, 50/60 Hz
Power consumption	max. 23W, Stand-by 7W

Channel search

EPG version I

EPG version II

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Nanoxx 9500HD

Small Box, Great Picture

TELE SATELLITE AWARD & BROADBAND 04-05/2008

NANOXX 9500HD
Small enclosure, superbly crisp picture, extremely fast channel search, and connection for HDD

After having put to the test the Nanoxx 9600IP in previous issue TELE-satellite and after the high marks that receiver was able to score we were of course more than happy to accept the manufacturer's offer of having a thorough look at the brand new Nanoxx 9500 HD for this issue. This time the surprises began even before we switched on the box for the fist time, because when unpacking 9500 HD the whole team was astonished by its small dimensions of only 37.5 x 6 x 23 cm. So to all readers with little space in their living rooms we can say that finally there is a HDTV receiver you too will be able to squeeze in.

Nonetheless, the range of features is much bigger than the sheer size suggests: on the back panel there is the usual IF input plus looped-through output, as well as two scart euroconnectors, a total of six RCA jacks for YUV, stereo audio and composite video, an S-Video output, an optical and coax digital audio output, an RS232 interface, an RJ network socket and even a USB 2.0 interface for connecting an external hard disk or USB stick.

HDTV reception |

As we're talking about HDTV here the manufacturer has of course also thought about digital HDMI 1.2 socket which is able to provide digital audio and video in 576p 720p and 1080i.

Let's turn to the front panel, which boasts seven buttons for operating receiver without remote control and sports an alphanumeric VFD display which is extremely easy to read.

A small flap on the right side of front panel hides two CI slots for all standard modules as well as a card reader for Conax, X-Crypt, DG-Crypt, Firecrypt and Crypton.

The included remote control sits nicely in your hand and all buttons are cleverly arranged so they can easily be reached.

The labelling is exemplary, an assessment which also holds true for the user's manual which comes in German and English. It has a clearly arranged layout and provides all information necessary to use the features of the receiver.

Clearly arranged info bar |

Everyday use

The Nanoxx 9500HD first greets its users with an installation wizard, just like most other boxes as well these days. This feature is intended to take the fear out of setting up a digital satellite receiver for the first time.

The first step is to ask for the desired language for on-screen display, with following options being available: German, English, French, Turkish, Russian, Italian, Portuguese, Spanish, Danish, Dutch, Polish, Czech, Swedish, Norwegian, Finnish, Serbian, Greek, Hungarian, Croatian, Albanian and Farsi. This makes the Nanoxx HD receiver the box with the widest range of languages by far and we applaud the manufacturer for this effort!

Provided the box is used in one of the German speaking countries and the user has selected German as his language of choice there is the option to load a very up-to-date pre-stored channel list for ASTRA 19.2° East and HOTBIRD 13° East. If this option is not used, the receiver will proceed to the channel scan.

We think users in other markets would just as much appreciate this feature and Nanoxx should perhaps look at that possibility.

Once you've reached the antenna settings you need to tell the box which positions can

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be received with the existing equipment and how the receiver should switch between available positions.

The Nanoxx 9500HD features a current list of 153 pre-stored European and Asian satellite positions and a number of selection options for each single entry. For example, DiSEqC 1.0 and 1.1 are supported for multi-feed installations while protocols 1.2 and 1.3 (USALS) are available for rotating dishes.

A number of pre-configured LNB type settings can be called up and even if you insist on connecting your new S-band antenna to the 9500HD you'll be happy to know that LOFs can be entered manually as well.

All initial settings are finished? Well then, let's move up another step to scan for channels. Three modes are available to fill the 10,000-channel memory, namely automatic, manual and blind scan. We were absolutely impressed with the speed with which the Nanoxx 9500HD performed this task. After just over three minutes it had completed a full scan of our 90-transponder test satellite.

The integrated blind scan feature is a very special extra of the Nanoxx 9500HD. Using this option the scan is performed in steps of 3 or 4 MHz covering the full frequency range. Up to four symbol rates can be predefined for each scan, or you can leave it to the receiver to detect the respective symbol rates automatically.

In our test the box did a very thorough job, which – however – took its time depending on the selected frequency range. It can take up to 60 minutes per satellite, but if you limit the scan to, say, only one polarisation you can cut that time in half.

If you need to customise the receiver according to your personal preferences the system settings menu is the place to go. Language options include a range of settings for audio, EPG, teletext and subtitles, while media settings can be changed to adjust the video output. Setting the internal clock and managing timer entries is also child's play in this menu.

Use the multimedia menu to set up the Nanoxx 9500HD for use with an external harddisk, USB stick or an existing network you may have up and working at home.

In theory, any harddisk in an external USB 2.0 case may be connected to the receiver, as long as it is formatted using FAT32. Otherwise, the receiver will not recognise it.

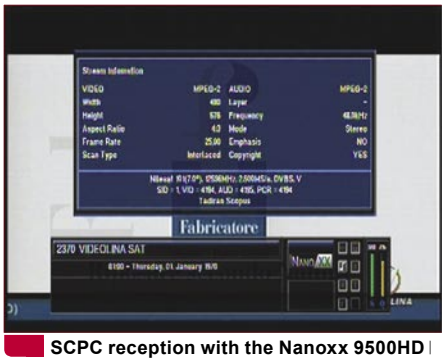
Unfortunately the receiver itself does not offer the possibility to create a partition on a harddisk and format that partition in FAT32. You will need to first connect the disk to a PC for formatting using software such as 'Partition Magic', as more than 32 GB cannot be formatted under MS Windows (Microsoft prefers NTFS for this purpose – mainly due to tactical considerations).

Thanks to the integrated network interface any PC wired to a home network can access the receiver. The IP address required for that can either be assigned manually or the box uses DHCP to obtain IP address from router.

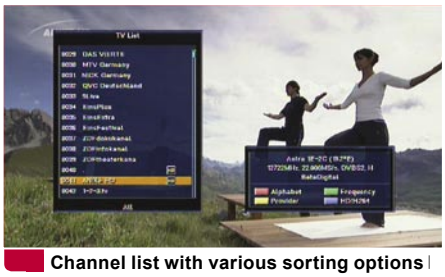
The integrated FTP explorer is another very nice feature which allows downloading and installing software updates directly from the Internet using any available server.

The next menu item reveals status information about the two CI slots, which we successfully tested with Irdeto, Cryptoworks, Alphacrypt and Viacess modules. Information about the built-in smartcard reader can be also retrieved here.

Once all parameters are set



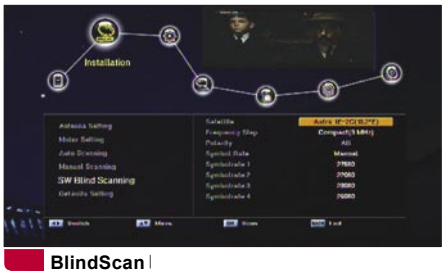
SCPC reception with the Nanoxx 9500HD



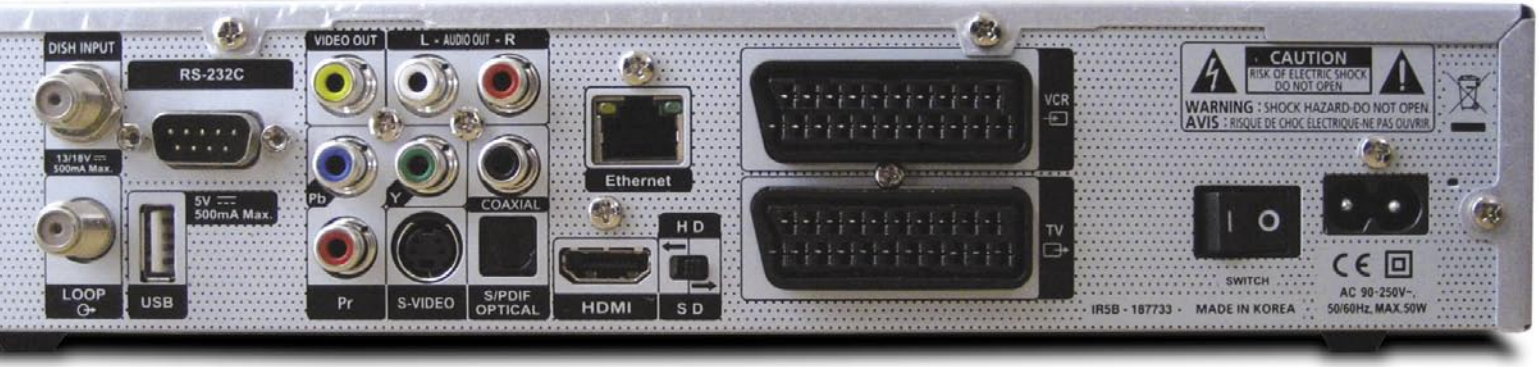
Channel list with various sorting options

EPG (multi-channel display)

Main menu



BlindScan



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the time has come to leave main menu and let the receiver switch to first channel in list. Together with the picture there appears a clearly laid out info bar on bottom of screen, providing details about the current and next event as well as showing various icons about status of channel, such as encryption, HDTV, locking status, teletext, subtitles and audio options. Signal strength and quality indicators round off the perfect overall impression.

Pressing INFO button of remote for another time calls up extended information on currently shown event, and if you're still not fully satisfied try the same button yet once again and you'll be delighted to find a huge range of channel parameters showing up on the screen.

If you find the electronic program guides of many receivers less than convincing then the Nanoxx 9500HD might be the box for you at last. Its EPG either shows program details for one channel over several days, or for six channels at a time. And this information is not only available, but available in an easy-to-use and cleverly arranged layout. Timer entries for recordings can be set directly in the EPG, so what more could you possibly ask for?

If you want to change channels you need to press the OK button which prompts a list of all available channels to appear on screen. If you're looking for a particular channel you cannot only have channels listed alphabetically, but also sorted by provider, frequency or signal type (SDTV or HDTV).

The Nanoxx 9500HD is one of those boxes that leave channel list on screen after a new channel has been selected. To make it disappear again you need to press OK once more.

Channel switching is good and takes about 1.5 seconds. For channels that are transmitted on same transponder the switching time is even less. By the way, it does not make a difference whether zapping takes place between SDTV and HDTV channels or vice versa.

Are you one of those viewers who cannot resist zapping up and down the channel list during commercial breaks? Why not use the mosaic function of this receiver and have the video of four or six channels shown on screen as thumbnails?

What we particularly liked as well is the extremely good video and audio quality of the Nanoxx 9500HD. The remote control allows for quickly adjusting the output signal and the supported 576p, 720p or 1080i formats can be chosen at the touch of a button.

Apart from HDTV reception the main focus of this box clearly is the possibility to connect an external USB harddisk. This is what it takes to make the 9500HD a fully-fledged PVR with all features we have come to expect and appreciate. We were pleasantly surprised that recordings started totally unnoticed, while several PVRs of other manufactures sometimes create short video or audio interruptions every time a recording starts. Only one tuner is built into this receiver, which in turn means you can make only one recording at a time. However, it is still possible to watch another channel on the same transponder while making a recording.

Playing back recorded events or content that is transferred to receiver via a network (XVid, AVI, JPG and MP3 files are supported) is very easy. Nanoxx has really put some brainwork into this and now all you have to do is press the MEDIA button on the remote control to start playback.

Various search, fast forward and rewind modes are also included and the only feature we somewhat missed is setting markings in order to jump to that particular point of the recording at a later stage with the touch of a button.

No test is complete without going to the limits of the tuner, and that's what we did with the Nanoxx 9500HD as well. Extremely weak signals like horizontal transponders on NILESAT 7° West in Vienna or ASTRA2D 28.2° East in Munich were dealt with remarkably well and signals with a C/N of 4.5 dB or above delivered faultless video. SCPC reception was no problem either and our test transponder with a symbol rate of just 2.5 Ms/s was locked and processed without flaw.

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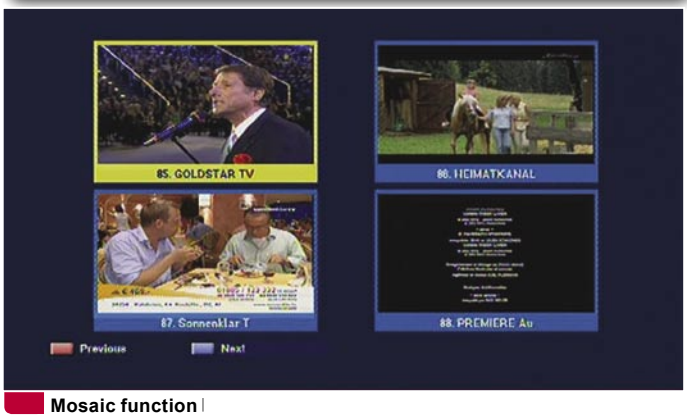

Mosaic function

Expert opinion

Thomas Haring
TELE-satellite
Test Center
Austria

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The Nanoxx 9500HD is a perfectly functional new-generation HDTV PVR receiver which will fit into any rack thanks to its small size.

It is exceptionally easy to operate and offers brilliant video and audio.

With its network and USB 2.0 connectivity it is suitable for a wide range of different uses.

\-

Customised channel lists should be offered for additional languages.

TECHNIC DATA

Manufacturer	Nanoxx
Website	www.nanoxx.info
Model	9500 HD
Function	Digital HDTV PVR Receiver
Channel Memory	10000
Satellites	153
Symbolrate DVB-S	2~45 Ms/s
Symbolrate DVB-S2	10~30 Ms/s
SCPC compatible	yes (2.5 Ms/s and above in our test)
USALS	yes
DiSEqC	1.0 / 1.1 / 1.2 / 1.3
Scart euroconnectors	2
Audio/Video outputs	3 x RCA + 3x RCA for YUV
YUV output	yes
UHF Modulator	no
0/12 Volt Output	no
Digital Audio Output	yes (optical, coax)
EPG	yes
C/Ku-Band compatible	yes
Power Supply	100~250 VAC, 50/60 Hz
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Metabox HD Combo CI

First HD receiver for DVB-S, DVB-S2 and DVB-T

At TELE-satellite we're always delighted when companies wander off the beaten track and introduce products that have not been available in the marketplace before. The Metabox HD Combo CI of Korean manufacturer Metamultimedia is such an innovation. As the 'Combo' in its model name suggests, this box brings together two different reception modes: DVB-S/DVB-S2 and DVB-T.

And this is also why the back panel features a terrestrial antenna jack complete with loop-through output next to the usual IF input and output for satellite signals. Added to that are two scart euroconnectors, a total of six RCA jacks for composite video, stereo audio and YUV, as well as an optical digital audio output. The HDMI interface that is also located on the back panel makes sure digital video and audio are transmitted free of loss.

There is also an interface labelled E-SATA. It had not been activated on our test unit, but Metamultimedia is working on activating this function, which will then convert HD Combo CI into a full PVR.

Software updates and new channel lists can be loaded into the memory the contemporary way by simply plugging in a USB stick with the required files on the front panel. Speaking of the front panel, it features an easy-to-read VFD display as well as eight buttons for operating the receiver without using the remote control.

An unimposing flap on the right side of the front panel hides two CI slots and the USB interface for updates.

Of course the receiver comes with a remote control which sits pleasantly in your hand and boasts clearly labelled buttons which can be reached quite easily and have a nice feel to them.

Everyday use

Turn on the Metabox HD Combo CI for the first time and it quickly will ask you to select your desired OSD language. English, German, French, Portuguese, Spanish, Turkish, Italian and Farsi are available. Once the receiver knows how to communicate with you it swiftly moves you to the main menu which cannot be left until a channel scan has been performed.

At this point we also have to say that we cannot praise Metamultimedia highly enough for devising such a great looking and easy to use on-screen menu layout. From both an optical and an ergonomical point of view it is right up with the best and allows setting up the receiver in a self-explanatory way.

In the Installation sub-menu we first have to decide which of the two tuners has to be configured. Choosing DVB-S/DVB-S2 a list of 57 pre-stored satellites is made available, and the Metabox has no issues with addressing more then one satellite positions as it features DiSEqC 1.0 for up to four stationary LNBs and DiSEqC 1.2 and/or 1.2 (USALS) for rotating antennas. The only protocol missing is DiSEqC 1.1, which means owners of large multi-feed antennas are left in the rain for the time being.

There are pre-programmed settings for several types of LNBs which means almost any reception equipment will be set up and working with this box in next to no time. Should you require more exotic frequency settings you can always enter these manually.

Beginners will be particularly impressed with this receiver's automatic DiSEqC detection feature. Using it, all you have to do is mark the required satellite positions on the list and let the box look for the appropriate DiSEqC settings based on the pre-stored transponder list.

Both satellite and transponder data can be edited in a dedi-

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For the Professionals

cated sub-menu at any time and without a lot of hassle. Contrary to many other manufacturers Metamultimedia offers a cleverly designed solution for that even below the surface, when you go into more detail.

The Metabox boasts a 10,000-channel memory which can be filled using either an automatic or a manual signal scan. Owners of dishes with a DiSEqC motor installed will particularly appreciate that up to ten satellite positions can be marked before the actual scan begins. This is a feature that can save a lot of time if you have a rotating dish.

Our scan on a 90-transponder satellite took a little over six minutes, which does not break any Olympic record but compares favourably to many competing receivers.

Looking for digital terrestrial channels requires even less patience and expertise. Simply choose whether you want to perform an automatic or a manual scan and that's it. An automatic scan will check the UHF frequency band that has been defined prior to starting the scan. If the attached terrestrial antenna has a built-in amplifier the receiver can be set to provide a 5-Volt power supply directly over the signal cable.

In order to organise the usual chaos that prevails after an initial scan the Metabox HD Combo CI offers a whole range of sorting and editing functions, such as sorting the channels according to alphabet, satellite, transponder, encryption system, child lock or S-ID.

To make sure all channels you watch frequently can be found at the touch of a button at a later stage, you should move them to one of five favourite lists which can be freely defined by the user.

User preferences are dealt with in the second major menu item. It is here that you can instruct the box to set the current time based on information from DVB-S or DVB-T data streams, and you can set up to eight timer entries with the option of timer actions being repeated daily.

The HDMI interface of the Metabox can provide video signals in 576p, 720p and 1080i using the PAL colour system, while the scart euroconnectors can be set to deliver RGB, CVBS or S-Video signals.

Once all initial settings are made and the channel list is filled with all the offerings of digital satellite and terrestrial television and radio, you're free to leave the main menu so that the receiver switches to the first channel on the list.

Whenever a new channel appears on screen a clearly arranged info bar is inserted on the bottom of the screen. It presents information on the current program as well as status icons referring to teletext, subtitles, encryption, Dolby Digital audio, child lock or HD contents, among other things.

If you press the Info button for a second time extended EPG information on the current program is made available, if this is transmitted by the channel provider.

While we're at it, the EPG of the Metabox stands out with its clever design and great functionality. You can either call up details for each single channel or an overview of five channels at a time. If you press the OK button the channel list is displayed as expected, but even here Metamultimedia has gone beyond the conventional and offers a virtual keyboard which pops up when you press the green button on the remote. Simply key in the name of a channel you're looking for and the box will call up this particular channel if it's in the overall channel list. Of course you can also temporarily sort channels according to various parameters so that you will easily find whatever you're looking for.

The time it takes the HD Combo CI to switch from one channel to the next is a little more than one second, which we feel is fine. It's only when switching to HD channels that the box may take a moment or two before moving on.

Usability of the Metabox HD Combo CI is brilliant with all the features already mentioned above. But there are even more nice little amenities that add up to move this receiver right to the best of the pack: NVOD support, language and subtitle selection or multi-picture mode for displaying up to 16 channels at the same time.

Metamultimedia ships its receiver with a low threshold tuner which will lock and process signals with a C/N as low as 5 db. SCPC compatibility for DVB-S is specified for 1~45 Ms/s, but our tests could not quite confirm this. Even though, every SCPC signal with 1.6 Ms/s or above will work, which in itself is more than your average satellite box is capable of.

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SCPC reception with the Metabox HD Combo CI

Main menu

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Software updates are available at regular intervals as the manufacturer is striving to constantly improve its products. Updates can be installed over the air if your satellite dish points to ASTRA 19.2° East or by using a USB stick.

Expert opinion

Thomas Haring
TELE-satellite
Test Center
Austria

+

The Metabox HD Combo CI is a dedicated receiver for the whole family which shines thanks to its ease of use and sophisticated features. It comes in an elegant case that will add a finishing touch to any living room multimedia rack.

With a combination of DVB-S, DVB-S2 and DVB-T the manufacturer tries to leave the beaten track and in our opinion succeeds in creating a clever innovation which is particularly useful considering the fact that local channels are mostly available only on terrestrial TV.

Thanks to this receiver it is finally possible to receive local terrestrial channels as well as HDTV satellite channels using the same box.

-

none

TECHNIC

DATA

Manufacturer	Metamultimedia Co. Ltd., South Korea
Fax	+82 2 6300 4112
E-Mail	master@metamultimedia.net
Model	Metabox HD Combo CI
Funcktion	HDTV receiver for DVB-S, DVB-S2 and DVB-T
Channel memory	10000
Symbolrate DVB-S	1~45 Ms/s
SCPC compatible	yes (> 1.6 Ms/s)
USALS	yes
DiSEqC	1.0 / 1.2 / 1.3
Scart euroconnectors	2
Audio/Video outputs	3 x RCA + 3x RCA YUV
UHF Modulator	no
S-Video	yes
Component video output	yes
HDMI	yes
0/12 Volt connection	no
Digital Audio output	yes
EPG	yes
C/Ku Band compatible	yes

Opensat X9000HDCI

Channel Surfer's Dream

The black box with very distinctive horizontal red band in the middle of the front panel looks a bit weird at a first glance. However if you put it among other black components of your multimedia rack, you would admit that this red element enlivens the whole set. Six flat red buttons merge nicely into the band. They allow you not only to change channels and adjust volume but also to do quite a lot of settings on the OSD menu (except for those requiring numerical entry).

The upper part of the front panel is made from dimmed transparent plastic behind which an alphanumeric vacuum fluorescent display is installed. It shows the channel number and name or date and time when X9000HDCI is in standby mode. It is easily readable even from a large distance. The whole bottom part of the front panel is actually a flap under which you can find a double CI connector and a card reader slot. More about it later.

The rear panel has everything what a single tuner HD receiver should have. All digital and analog video and audio outputs one may need are provided. Well, maybe except for S-Video but this signal is available via Scart connector. There is also a DB-9 connector for serial interface. You will not find a UHF modulator here but who really needs it nowadays? Good that the manufacturer added the power supply switch because the power cord cannot be disconnected from the box.

The pearl color remote control does not look very ergonomic but due to the very nice feel you have when pressing the buttons, you start liking it very soon. This is the first important point for a diehard channel surfer.

Along with the receiver and remote control unit, you get the cables (HDMI, YPbPr and A/V) and user's manual. We got English language version. It is not too long, not too short – just as it should be. It is full of pictures and drawings. However, if you have a minimal experience with satellite equipment, you will probably not need it at all – the receiver OSD is so logical and easy to follow.

Installation

After power up, you see the First Installation assistant. This is a simplified version of the installation and it should work in majority of cases. You can always step back with a red button, so even if you press OK too fast, you can always get back. As usually, the first step is to choose the language. The choice is really impressive: English, German, French, Russian, Spanish, Italian, Arabic, Norwegian, Swedish, Suomi, Dutch, Danish, Czech, Slovak, Greek, Turkish, Hungarian and Polish. If you think that the next step is to choose the satellite you want to watch, you are absolutely right. Are you ready? You have 159 satellites from all over the world to choose from! X9000HDCI is really a global product!

When you have chosen your Hotbird, Astra or whatever, the next selection window is displayed. This time, it is about the local oscillator frequencies of the LNB installed on your dish. You can pick from: 5150, 9750/10600, 9750/10750, 9750, 10000, 10750, 11300, 11475 MHz or select the User Single or the User Double option to enter manually non-typical LOF values. X9000HDCI is fully compliant with Ku/C bands and can also be used for more exotic bands.

If the LNB from your dish is not directly connected to the receiver but via a DiSEqC 1.0 switch, you have the opportunity to inform your X9000HDCI about that in the next installation step. At that moment however, you are not asked about the motor. The users of motorized dishes should rather exit the installation assistant and configure their motors via the menu OSD. DiSEqC 1.2 and USALS are both supported.

In this way we arrive to the last installation step "Start Scan". When started, the receiver will scan the satellite you have chosen and will look for all channels (TV+Radio, FTA+Scrambled). If you are not the absolute newbie, we advice you to exit this channel scan by pressing the EXIT button. Otherwise, you will end up with a large number of unnecessary scrambled channels that you will not be able to watch anyway and you will have to delete them later. If you have a motor you probably left one step earlier. So, what now? We can do all the settings via the on screen menu system. Doing that we have more flexibility - more options to choose from.

After pressing MENU button, the first submenu appears. It is the Installation Menu. Using right/left arrows, we can switch to other menus: Option, Channel, Advanced, Channel and Status. However, our installation is not finished yet. So, let's stay in the Installation menu. The first menu item is Dish in which we can configure our antenna system. This time, setting the motor is also possible. Another nice feature of X9000HDCI is the possibility to supply the LNB with increased voltage levels. Instead of 13/18V, you may choose 14/19V. This may help to properly supply LNB when using long coaxial cable.

From that screen, you can proceed to Auto Scan. Also

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here, you have more options than in the simplified installation. You can choose to scan channels: TV+Radio, only TV, only Radio, Free+CAS, only Free or only CAS. If you have a PayTV subscription, and you know what conditional access system your provider is using, we suggest to select the Free+CAS scan and press the red button. You will be offered a possibility to mark the CAS you are interested in. For example if you have only subscription for Viaccess scrambled channels, unmark all other CA systems (Mediaguard, Irdeto, and so on) and leave only Viaccess. In this way, your X9000HDCI will ignore everything but FTA and Viaccess channels.

Receiver scanning speed is quite acceptable. It needed 7 minutes to scan Hotbird (FTA+CAS mode) and 12 minutes to scan Hotbird and Astra together (only FTA channels). All DVB-S and DVB-S2 transponders are detected and processed. No matter QPSK or 8PSK. Of course, the receiver supports both MPEG-2 and MPEG-4 (H.264/AVC) data streams. SCPC channels starting from 1 Ms/sec are no problem. We successfully tested the receiver with 1.110 Ms/sec signal. We also checked that the X9000HDCI worked well with weak signals on the edge of the reception area (with our 85 cm test antenna). However the accuracy and completeness of transponder data for some satellites leaves something to be desired. We heartily recommend to update it as described later in this report.

There is no network scan option settable in the automatic scan. But it is available in the manual scan. So, if you know that the most up-to-date satellite transponder data is transmitted in the NIT table of a given transponder, you may want to scan it. This may result in addition of new transponders to the receiver memory. The memory is not very big: 4000 channels and 500 transponders. If you use the motor you will probably scan FTA only channels plus selected transponders transmitting scrambled channels you can decipher. Manual transponder scan offers also possibility to enter PID's manually both in decimal and hexadecimal formats. You can specify video, audio and PCR PID. That's what feed hunters love.

Last item in the installation menu is the transponder edit function. So if something changes in the future, we will be able to update our receiver. Speaking of updates, we can update separately the firmware and the channel list. To do that we need a PC program that can be downloaded from the manufacturer website (http://www.opensat.info/). Using the "Updater and Channel Editor" you can not only conveniently edit channel list but also upload SatcoDX channel lists in the sdx format to your receiver (see www.satcodx.com). In this way, we can keep the transponder data up-to-date.

Everyday use

Naturally, right after installation, you want to do some zapping to see how fast the receiver changes channels. Fasten your belt - X9000HDCI is a real champion. It needs less than 1 second to switch to an FTA channel and slightly over 1 second to a scrambled one. And we mean both SD and HD! There are no glitches during switching: neither video nor audio. This is a receiver for all those addicts of continuous channel zapping!

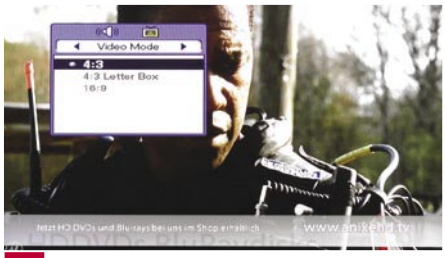
As always, right after the channel change the information bar appears. Being relatively big, it contains a lot of data: channel and program information, transponder data, date and time, signal indicators and a lot of icons describing channel/program properties. It is easily readable even from a larger distance due to clear design and well chosen colors. The second press of INFO button shows the extended description of the current program. We can display also the next program information.

To see more programming information, the EPG button has to be used. The Electronic Program Guide is displayed in a grid form: the X-axis is a timescale and a column on the left contains channel names. Inside the grid, the bars with a program names are shown. You can navigate in all directions with the arrow keys. Everything is logically positioned and very easy to read. National fonts seem to be displayed correctly, though naturally, we could not test every language and every channel. Data appears really fast – after one or two seconds. As expected, you can bookmark an interesting program.

The next important functionality of every receiver is its ability to organize channels. After pressing OK button, the channel list is presented. Except for sorting by satellite or by channel name, we can conveniently organize the channels directly from this window. Interesting that we can add the selected channel to more that one favorite list. X9000HDCI displays a window with 8 favorite list names (Favorite1 through Favorite8) and all we have to do is to put a check next to the list name we want the channel to be in. Organization of channels always takes a lot of time and sometimes can drive you crazy. But if

Antenna Setting

Channel List



Video Mode Setting

EPG

Extended program information

Info Bar

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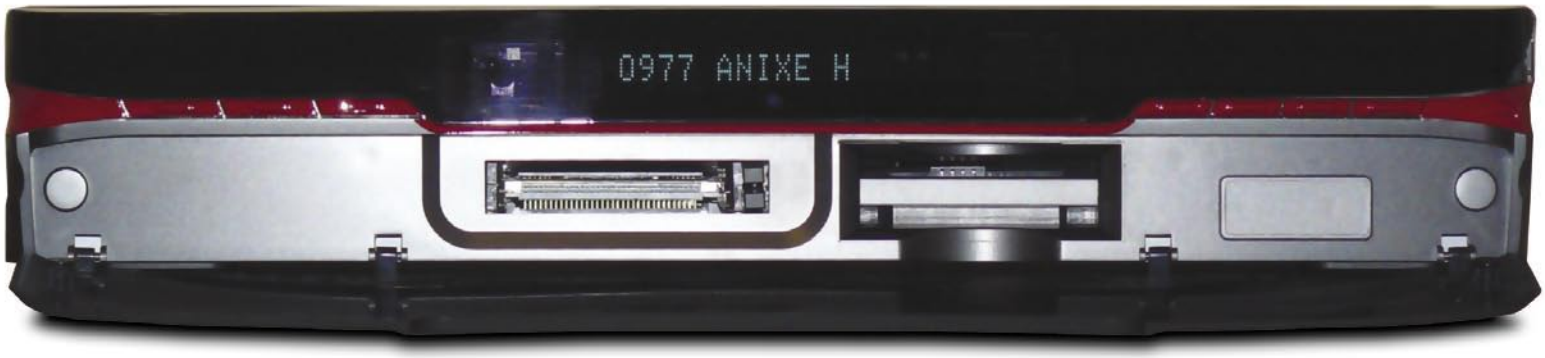
Turkish	Türkçe	www.TELE-satellite.com/TELE-satellite-0805/tur/opensat.pdf

you compared this receiver to others, you would say that tidying up the channels is much more fun in X9000HDCI. That is true not only thanks to the well-designed user interface. You have a very pleasant feel when pressing RCU buttons. This was confirmed by a number of persons. And during the organization of channels, you press the buttons a lot.

a program marked for the audience of 15+ is about to start and you set the maturity level for 7 (the age of the youngest kid in your family) the watching will be blocked until the correct PIN is entered. However if you doubt that providers on your satellite always stick to the rule, you better block the entire channel.

We would like to mention also



When everything concerning channels is set and organized, it is time to check the video and audio quality. We are happy to confirm that everything is perfect. HD video is output in digital form via HDMI interface (resolutions: 576p, 720p or 1080i) and in analog form via YPbPr RCA outputs. You can obtain SD video via the common SCART connectors (CVBS, RGB or S-Video) and RCA socket (CVBS). You can have simultaneously HD digital signal and SD analog signal. The quality of signal leaves nothing to be desired. Even if we watch the standard SD converted to 1080i fed via HDMI to LCD or plasma TV-set, the quality is exceptionally good. We did not notice any video artifacts when channel zapping.

Audio is available in standard stereo format (via RCA sockets) as well as via optical digital interface S/PDIF. So, if you have the home theater equipment and your favorite channels transmit audio in AC3 (Dolby Digital) format, you will enjoy the surround effects of this technology when using X9000HDCI. PCM format of digital audio is also supported.

Among the other features, X9000HDCI has a parental control function that enables blocking the programs inappropriate for young audience. The available maturity settings are: 7, 12, 15, 18 years. You have to know that it can work only if providers mark all of their programs with the correct values. If so, when

another small feature – the screen saver. You can set it from 5 minutes to 120 minutes. If no user activity is detected during this time, for example when listening to the satellite radio, the screen saver will activate.

We usually do not get into too much detail concerning CA functionality because it differs significantly from CAS to CAS and from provider to provider. However this time, we would like to draw your attention to a very nice feature of X9000HDCI. Except for the 2 CI slots that can accept practically every CAM, you also have the universal card reader. "The universal" means that it can work with Mediaguard (Seca), Conax, Cryptoworks, Viaccess or Irdeto smart card. We checked that the Mediaguard 2 smartcard worked equally well when put in the CAM inserted into CI connector and when put directly into the card reader slot. This is really nice since the card readers usually work with only one embedded CA system.

The more advanced satellite fans should be informed that there is alternative software for X9000HDCI easily available on the Internet. Let's just say that it increases the possibility to receive otherwise unavailable channels.

Finally, and for the ones looking for a model with PVR: in the near future Opensat will introduce model X9500 HDTV, which includes a PVR and USB.

Expert Opinion

Jacek Pawlowski
TELE-satellite
Test Center
Poland

\+

Very fast receiver that will delight not only a regular viewer but also an addicted channel surfer. Interesting product for those who love to play with alternative firmwares, channel lists, and other features. Very good tuner and high quality of video and audio. Especially unique feature: universal multi-CA smart card reader and 2 CAM slots enable the user to have 3 different PayTV subscriptions with one receiver!

\-

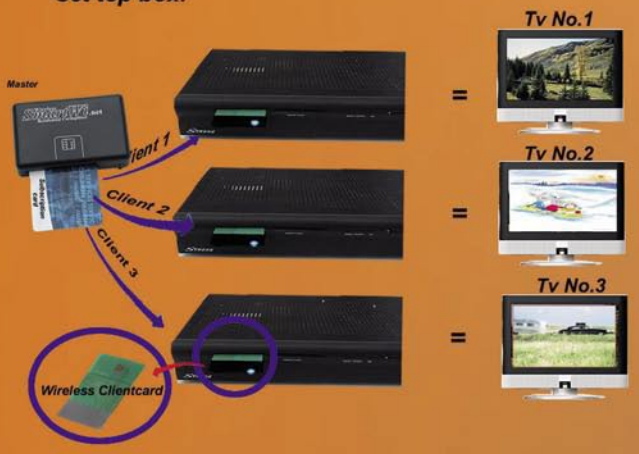
No DiSEqC 1.1. Small channel memory. Computer illiterates may have problem due to out-of-date transponder data.

TECHNIC DATA

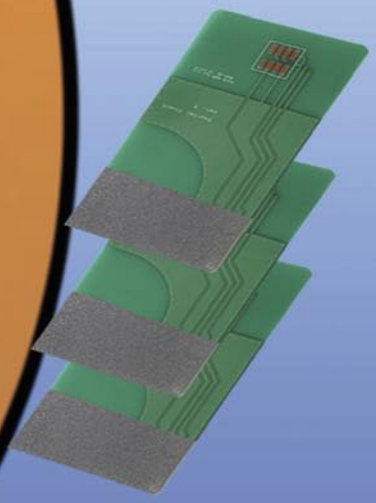
Manufacturer	ABC BIZNIS, Krušovská 4646, 955 01 Topoľčany, Slovakia
Distributor	RESYS, S.G. Recica 1219, 912 20 Tetovo, Macedonia
Email	info@abcbiznis.sk, info@resys-sat.com
Model	X9000HDCI
Function	Digital DVB-S/S2 MPEG2/4 HD Receiver with single tuner
Channel memory	4000
SCPC compatible	Yes (from 1Ms/sec)
DiSEqC	1.0, 1.2 and USALS
Audio/Video Output	3xRCA + 3xRCA YPbPr
UHF Modulator	no
S-Video	no (only via SCART)
Component output	yes
HDMI output	yes
Programmable 0/12V	no
Digital Audio Output	yes (optical)
LAN	no
USB	no
EPG	yes
C/Ku Band compatible	yes
PAL/NTSC	yes (automatically)
Power Supply	90~260 VAC, 27W max.

Wireless SmartWi.net
Residential Cardsplitter

SmartWi is a wireless card splitter solution witch can be used in household with more than one set top box.



SmartWi split your subscription card and make is possible to watch differed programs on each set top box with only one subscriptions card.



Wireless SmartWi works on most common set top box for Satellite, Cable and Terrestrial systems

Wireless SmartWi come standard with
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1 Power adaptor for Smartwi master.

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- Goto X.X° Function
- Indicating LED for Easy Trouble Shooting

DiSEqC Positioner

V-Box II DiSEqC 1.0 DiSEqC 1.2
- 99 Memories
- Controlled by Receiver
- 3 Digit LED Display
- Full Protective Design
- Optional Remote Control
- Software Limit Protection

Stand Alone Positioner

EZ-2200

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- IR Remote Control
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Sony LF-PK1

TV all over the house and all over the world

Thomas Haring

Location Free Player ▲

HDTV is not the only subject that has been dominating the scene; other areas have also enjoyed a boom such as IPTV. And we're not just talking about commercial IPTV; boxes such as the Slingbox that we highlighted in the 09/2007 issue of TELE-satellite or the Sony LF-PK1 that we will be introducing to you here have migrated from being a niche product to one that is becoming popular with the average user. These boxes link the reception mediums with the Internet and thereby make the location where you watch and listen independent from where the antenna is erected.

On the front panel of the Sony LF-PK1 are five status LEDs that show its current operational mode as well as the type of network connection in use. Near the bottom is a button to turn the box on and off.

The rear panel is equipped with six RCA jacks (2x composite video in and 2x stereo audio in), an S-Video jack, a VHF/UHF tuner, a network connection, a jack for the external IR Blaster as well as a connection for the 12-volt power supply.

The box can also be used with a WLAN connection although no external antenna can be attached. The necessary software comes on the included CD-ROM plus there's also a short user manual that explains the most important steps of the installation. As expected from Sony, the box is very well manufactured and includes every desired feature.

Everyday Use

After setting up the box and connecting it with a satellite receiver, we quickly assigned it an IP address for the local network and then started the installation of the "Location Free Player", Sony's own player software designed especially for this box. Before the installation could really even get started, an error put a stop to everything: it seems the player is not compatible with Windows Vista.

For us this was no problem since we had plenty of PC's to work with in our test labs and one of those sure enough was still working with Windows XP. But for normal users this could be an inconvenience.

In the meantime, Sony has released an update for the "Location Free Player" so that it can also work with Windows Vista. Unfortunately, this update can only be installed if an older version of the player is already in use. According to the Q&A section on Sony's website, they suggest you make sure that the "Location Free Player" is already installed on your PC before you upgrade it to a Windows Vista machine since the update could not be installed later on.

If you already have Windows Vista on your PC, Sony's website doesn't have anything to say about that. Not very customer-friendly, is it?

After we finally got the "Location Free Player" to run on our PC, the next ugly surprise appeared: the software announced that it cannot link itself to this box.

At first we thought it was an error in the player configuration or in our own router in the test lab, but it very quickly became clear that it was a problem with the English version of the "Location Free Player" that we were using. So, instead we installed the Korean version that was included on the same CD and, wouldn't you know it, the software immediately linked with the box and in just a very short time the picture from the satellite receiver could be seen on our monitor.

It would seem that Sony, a company that is also heavily

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with DiSEqC Switch
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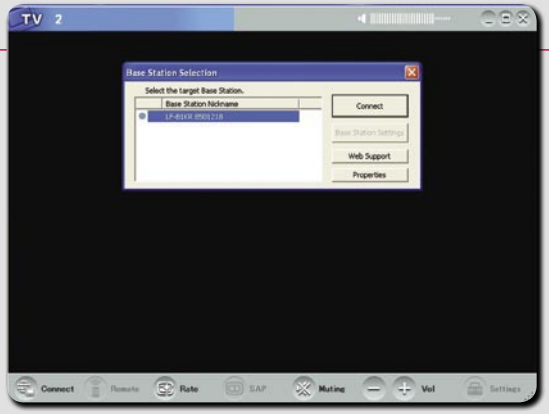

Making the Connection with the LF-PK1 Box ▲

Virtual Remote Control ▲

involved in the business of international film and television, placed special emphasis on country-specific uses for its box. Supposedly, they want to prevent, for example, viewers in Europe from receiving channels from the USA or Asia and vice-versa. Similar to PayTV, it all seems to be a question of movie and TV rights.

The picture quality even at first glance was exceptionally good with hardly any load on our dedicated line. Even our tests using a 6 Mbit DSL connection turned out positive with the box providing outstanding picture quality. And while using a modest 1.5 Mbit, there was still enough bandwidth available to surf the Internet.

Naturally, things were a little different at the other end, but if a half-ways decent DSL connection is used, this should also be no problem.

In the next step we wanted to take full control of the equipment. For this purpose, the Sony box comes with a so-called IR blaster that is used to control the attached equipment. The IR diodes of the blaster are simply positioned on the front side near the IR receiver of the box to be controlled and with the help of the virtual remote control in the "Location Free Player", all necessary control commands can be sent via the Internet and then relayed through the IR blaster to the receiver.

We quickly found an appropriate receiver for this test and in just a short time we were able to completely control the PVR box without the use of a remote control and, for example, have a look at its saved recordings. We were happy to see that the software reacted very quickly enough to various remote control commands so that the box could be operated with hardly any recognizable delays.

An additional feature of the LFPK-1 is the integrated WLAN connection. This makes it possible, for example, to effortlessly route the picture from your PVR box to a laptop in the backyard. Watching your favorite TV series in the great outdoors when the weather is nice can now be done without running any cables and without any great expense.

In our tests the integrated WLAN antenna did a fair job although an external antenna would have been better for extended range. This whole idea would become especially interesting if a Sony PlayStation Portable were available. You could then enjoy wireless video and audio from any desired source on the PlayStation Portable's monitor anywhere in the house. Surprisingly, the reception range was quite good; we had no reception problems even outside of the test lab.

All things considered, we can say that on the one hand the Sony LF-PK1 is the ideal box for anyone who wants access to their receiver and watch their favorite programs while on the road. On the other hand, it is also the perfect tool for users who want to watch their favorite channels on mobile devices such as a laptop or a PlayStation Portable. Thanks to the relatively narrow bandwidth required, the transmitted TV picture can even be received in a hotel with exceptional quality without putting a strain on the Internet connection.

The box is completely unsuitable for anyone that, for example, wants to use a friend in the USA to transmit those local channels to Europe or Asia. It would only be possible if the country-specific version of the "Location Free Player" were used. In such a case, we strongly recommend using alternative systems such as the Slingbox.

◀ IR Blaster

Conclusion

The Sony LFPK-1 is an easy to use and simple to install box that provides access to your local TV channels anywhere in the world.

The overall quality of the box is very good; even the included software – the "Location Free Player" – functions properly and is child's play to use.

At the moment Sony doesn't offer any real support for Microsoft's newest operating system Windows Vista despite it already being available for almost a year.

The manufacturer attempted to limit the use of the box to specific regions in that the box and the "Location Free Player" must use the same language.

Overall, the Sony LF-PK1 left us with a two-part impression: outstanding technology along with artificial limits while in practical use.

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Website	www.metamultimedia.net
Function	HDTV receiver for DVB-S, DVB-S2 and DVB-T
DVB-S2/LAN	• / —
Channel Memory	10000
DiSEqC	1.0 / 1.2 / 1.3
S-Video/HDMI	• / •
Scart/Digital Audio	• / •

TELE SATELLITE AWARD & BROADBAND 04-05/2008

OPENSAT X9000HDCI
Fasten your seatbelt: super fast channel zapping combined with superb audio and video quality in SD and HD

Manufacturer	ABC BIZNIS
Website	www.opensat.info
Function	DVB-S/S2 MPEG2/4 HD Receiver with single tuner
DVB-S2/LAN	• / —
Channel Memory	4000
DiSEqC	1.0 / 1.2
S-Video/HDMI	— / •
Scart/Digital Audio	• / •

TELE SATELLITE AWARD & BROADBAND 04-05/2008

TOPFIELD TF7720HSIR
Ideal HDTV Receiver for FTA and Irdeto encrypted channels

Manufacturer	Topfield
Website	www.topfield.co.kr
Function	DVB-S, DVB-S2 HDTV receiver with Irdeto CA
DVB-S2/LAN	• / —
Channel Memory	5000
DiSEqC	1.0 / 1.1 / 1.2 / 1.3
S-Video/HDMI	• / •
Scart/Digital Audio	• / •

TELE SATELLITE AWARD & BROADBAND 04-05/2008

NANOXX 9500HD
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Manufacturer	NanoXX
Website	www.nanoxx.info
Function	Digital HDTV PVR Receiver
DVB-S2/LAN	• / •
Channel Memory	10000
DiSEqC	1.0 / 1.1 / 1.2 / 1.3
S-Video/HDMI	• / •
Scart/Digital Audio	• / •

TELE SATELLITE AWARD & BROADBAND 02-03/2008

TOPFIELD TF7700 HDPVR
Fully capable twin receiver with proven HDTV technology and outstanding picture quality.

Manufacturer	Topfield
Website	www.topfield.co.kr
Function	Digital DVB-S, DVB-S2 HD-PVR Receiver with Ethernet Connection
DVB-S2/LAN	• / •
Channel Memory	5000
DiSEqC	1.0 / 1.1 / 1.2 / 1.3
S-Video/HDMI	• / •
Scart/Digital Audio	• / •

TELE SATELLITE AWARD & BROADBAND 02-03/2008

NANOXX 9600 IP
Perfectly working CA receiver with smart use of network interface

Manufacturer	NanoXX
Website	www.nanoxx.info
Function	Digital CA satellite receiver with PVR functionality via network
DVB-S2/LAN	— / •
Channel Memory	6000
DiSEqC	1.0 / 1.2 / 1.3
S-Video/HDMI	— / —
Scart/Digital Audio	• / •

TELE SATELLITE AWARD & BROADBAND 02-03/2008

AB IPBOX 350PRIME PVR
A Linux-based Receiver as Powerful as Never Before

Manufacturer	AB-COM
Website	www.abcom.sk
Function	Linux-based receiver for terrestrial, cable and satellite DVB reception
DVB-S2/LAN	— / •
Channel Memory	4000
DiSEqC	1.0 / 1.1 / 1.2 / 1.3
S-Video/HDMI	— / —
Scart/Digital Audio	• / •

TELE SATELLITE AWARD & BROADBAND 12-01 /2008

ARION AF-4000HDCI
A receiver that will make any newbie happy as well as please any pro with its endless possibilities

Manufacturer	Arion
Website	www.arion.co.kr
Function	HDTV satellite receiver with CI slot
DVB-S2/LAN	• / —
Channel Memory	4000
DiSEqC	1.0 / 1.1 / 1.2 / 1.3
S-Video/HDMI	— / •
Scart/Digital Audio	• / •

TELE SATELLITE AWARD & BROADBAND 12-01 /2008

NanoXX 9400
Very fast low-threshold blind scan receiver – ideal for DXers

Manufacturer	NanoXX
Website	www.nanoxx.info
Function	Blind scan receiver with USB
DVB-S2/LAN	— / —
Channel Memory	10000
DiSEqC	1.0 / 1.1 / 1.2
S-Video/HDMI	— / —
Scart/Digital Audio	• / •

TELE SATELLITE AWARD & BROADBAND 12-01 /2008

INFOSAT ZIMPLE BOX 3
Fast and easy to use receiver for FTA reception with a very sensitive tuner

Manufacturer	Infosats
Website	www.infosats.com
Function	MPEG2 FTA Receiver with Blind Scan
DVB-S2/LAN	— / —
Channel Memory	1000
DiSEqC	1.0 / 1.2
S-Video/HDMI	— / —
Scart/Digital Audio	— / —

TELE SATELLITE AWARD & BROADBAND 10-11/2007

TECHNOTREND S2-3650CI
HDTV Reception with Many Features for Little Money

Manufacturer	DVB-Shop
Website	www.dvbshop.net
Function	USB box for reception of DVB and DVB-S2 in SDTV/HDTV
DVB-S2/LAN	• / —
Channel Memory	unlimited
DiSEqC	1.0
S-Video/HDMI	— / —
Scart/Digital Audio	— / —

TELE SATELLITE AWARD & BROADBAND 10-11/2007

JIUZHOU DVS-2018BS
Very Stable, Solid Receiver for Professional Use

Manufacturer	Jiuzhou
Website	www.jiuzhou.com.cn
Function	Professional Digital Satellite Receiver with 2 CI slots
DVB-S2/LAN	— / —
Channel Memory	!
DiSEqC	—
S-Video/HDMI	— / —
Scart/Digital Audio	— / —

TELE SATELLITE AWARD & BROADBAND 10-11/2007

TECHNISAT DIGITSIM S2
Exceptional Mini-receiver with Very High Signal Sensitivity and Ease-of-Use

Manufacturer	TechniSat Digital
Website	www.technisat.com
Function	Digital Satellite Receiver with two Systems for SIM Cards
DVB-S2/LAN	— / —
Channel Memory	4000
DiSEqC	1.0 / 1.2 / 1.3
S-Video/HDMI	— / —
Scart/Digital Audio	• / —

TELE SATELLITE AWARD & BROADBAND 10-11/2007

TECHNOTREND TT-MICRO S320
Top video quality thanks to HDMI – at an affordable price

Manufacturer	DVB-Shop
Website	www.dvbshop.net
Function	Digital satellite receiver with HDMI
DVB-S2/LAN	• / —
Channel Memory	!
DiSEqC	1.0
S-Video/HDMI	— / •
Scart/Digital Audio	• / •

TELE SATELLITE AWARD & BROADBAND 08-09/2007

JIUZHOU DTS1601
Well designed, solid receiver with a mature firmware and blindscan

Manufacturer	Jiuzhou
Website	www.jiuzhou.com.cn
Function	Digital Satellite Receiver FTA
DVB-S2/LAN	— / —
Channel Memory	4800
DiSEqC	1.0 / 1.2
S-Video/HDMI	• / —
Scart/Digital Audio	• / •

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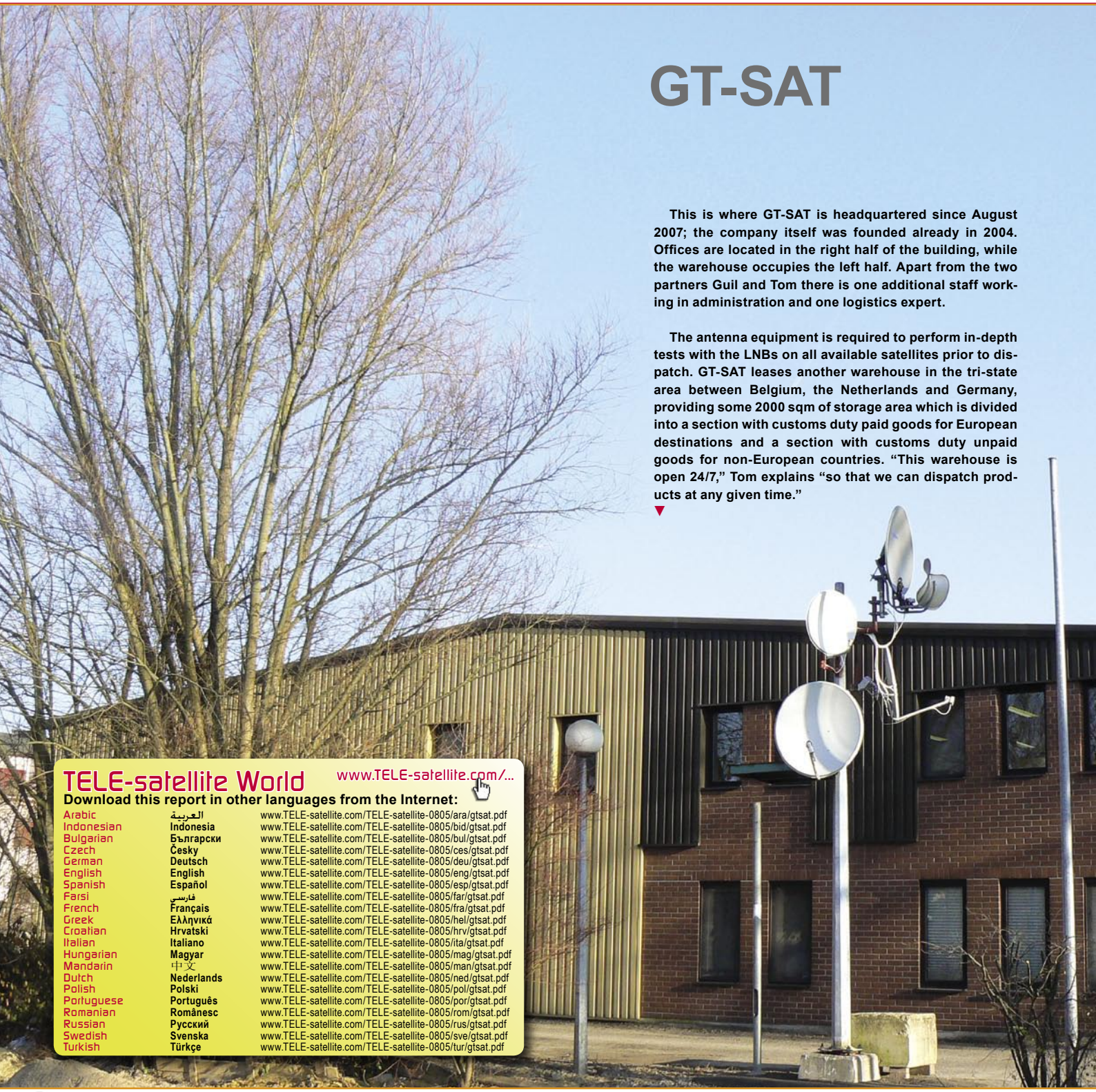
GT-SAT



This is where GT-SAT is headquartered since August 2007; the company itself was founded already in 2004. Offices are located in the right half of the building, while the warehouse occupies the left half. Apart from the two partners Guil and Tom there is one additional staff working in administration and one logistics expert.

The antenna equipment is required to perform in-depth tests with the LNBs on all available satellites prior to dispatch. GT-SAT leases another warehouse in the tri-state area between Belgium, the Netherlands and Germany, providing some 2000 sqm of storage area which is divided into a section with customs duty paid goods for European destinations and a section with customs duty unpaid goods for non-European countries. "This warehouse is open 24/7," Tom explains "so that we can dispatch products at any given time."

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Rarely is a company as cleverly organised as GT-SAT. Every piece fits into the next, much like a jigsaw puzzle. As it turns out, however, a lot of effort and hard work had been required to achieve such smooth operations. We travelled to the tiny principality of Luxembourg right in the heart of Europe to find out how they created such a successful business from scratch.

Luxembourg has a population of only half a million people. "Add to that more than 100.000 people who commute from France, the Netherlands and Germany on a daily basis to work here," Guil Mediouni reveals some economic fact about his adopted country. Together with Tom Schulz he is an equal partner in GT-SAT, "even though we'd never have made it without Jack, our partner" according to Tom.

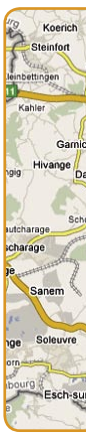
Jack is the owner of LNB manufacturer Litec in Taiwan and runs production facilities in Shenzhen, China.

Incidentally, many things happened by accident. Tom Schulz originates from Oldenburg in northern Germany and became Export Director at a large manufacturer of satellite accessories in 1996. In 2001 he decided to quit this job and transfer to a large satellite distributor in Luxembourg, where he met Guil Mediouni from Israel, who also worked in the industry since 2000. Tom and Guil got along with each other perfectly, mainly because they take their work seriously, which basically boils down to taking customers seriously.

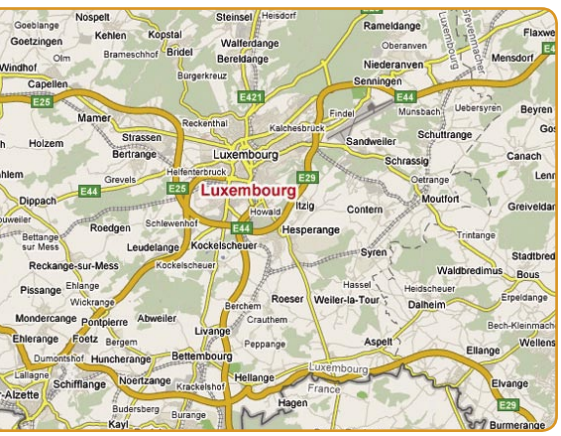
With this in mind, they decided to take their ideals a step further. GT-SAT was established in 2004 with the support of their partner and friend Jack Chao from Litec in Taiwan, who had just set up a manufacturing site for LNB in Shenzhen.

"A partnership built on trust, total support and mutual reward from working together," is not only their internal motto, but also their attitude towards their clients.

"This was a dream come true: being our own bosses, taking our own decisions and – above all – implementing our vision of a partnership with customers," Tom says.



This is GT: Guil Mediouni on the right and Tom Schulz on the left.
Tom's mother tongue is German and Guil speaks Hebrew as his first language, which makes English the language of choice at GT-SAT. Tom is an early riser, while Guil is a night owl, making at least one of them available for customers more or less around the clock. Guil takes care of finances and technology, while Tom is the marketing and logistics professional.



Jack turned out to be a generous partner, but distribution always means running a financial risk. "We started out as a two-men-show in my apartment", Tom walks down memory lane. "Commuting for me involved getting up from my sofa bed and walking to the living room where the PC was installed. The only traffic hazards would be loose network cables lying around everywhere."

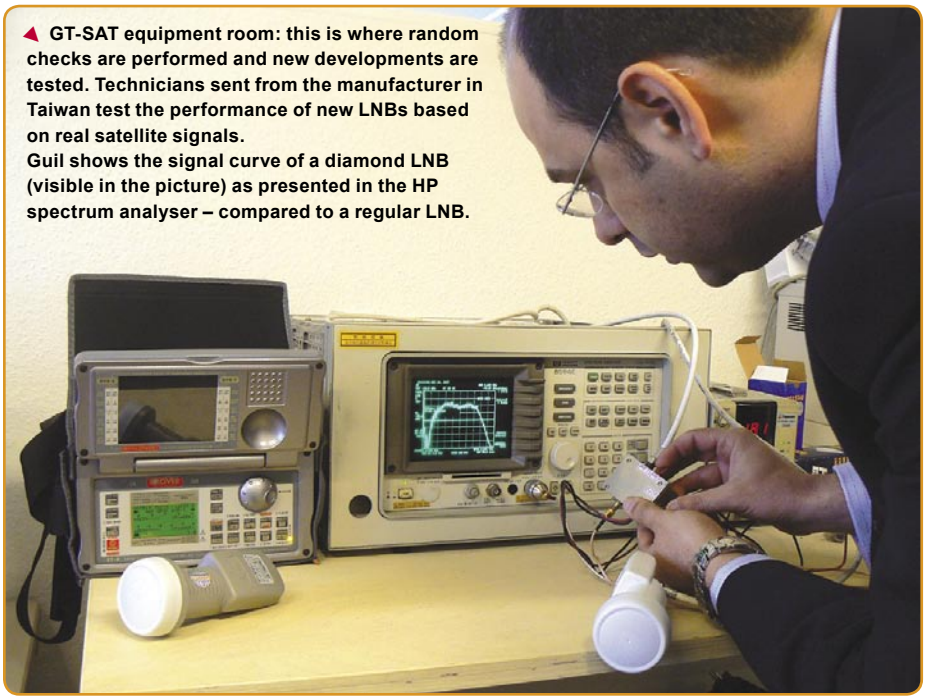
The warehouse was in fact the garage and if that became too confined they'd simply expand their business to the public driveway – unless it was raining, of course.

Today, GT-SAT leases airy premises complete with open-plan offices and a lot of warehouse space. "Now we even have room for more employees," explains Tom. "Currently we're looking for people working in sales, accounting, logistics as well as in engineering."

Sounds like a lot of new staff are required? Guil has the background story: "At the moment our strong business growth calls for additional employees so that this growth can be sustained."

So how fast does their business expand? Guil takes out his laptop computer and shows us the hard facts. "2005 was our first business year and we achieved a turnover of EUR 2.1 million. In 2006 it increased to 5.8 million and 2007 saw turnover figures of EUR 7.3 million." The target for 2008 is set at 10 million, a figure that says a lot about Guil's and Tom's expectations. They clearly intent to become market leader.

Most GT-SAT customers are suppliers for



GT-SAT equipment room: this is where random checks are performed and new developments are tested. Technicians sent from the manufacturer in Taiwan test the performance of new LNBs based on real satellite signals.
Guil shows the signal curve of a diamond LNB (visible in the picture) as presented in the HP spectrum analyser – compared to a regular LNB.

◀ **View of the warehouse. One of the main reasons for GT-SAT's unusual success is the capability of dispatching large orders at any time, which is a prerequisite for obtaining wholesale customers. Up to 300.000 LNBs are stored in GT-SAT's warehouses in Belgium and Luxembourg, which represent a huge amount of money. Exports go via the port of Antwerp in Belgium, a 40-foot container holds some 60.000 LNBs. "Our business is insured with a company called Coface," Guil explains. "This way our own creditworthiness is safeguarded."**

Tom and Guil lay great store in considering their customers as partners. "We aim for a long-term business relationship rather than short-term success," Tom argues and Guil remembers an instance back in the beginning of their business. "The switching of one of our first LNB deliveries didn't work properly." Things like that happen in real life, and this is how GT-SAT reacted: "We recalled all faulty LNBs and sent a replacement by air freight free of charge to all affected customers." Each installer having received a faulty LNB also got a collection of the latest LNB types as an added benefit. "Thanks to how quickly we reacted our customers were not angry at us and we had a chance to show to our customers that we were really serious about thinking of our customers as partners," Guil remembers that episode of his business career.

Of course it is only possible to offer such incentives if both partners equally value the investment in such partnerships. "We'd rather not make an additional profit than upset our customers," seconds Tom, who lists the pillars of success for GT-SAT: "Quality, service, reliability, communication."

If you'd like to meet the two guys in person, simply visit the GT-SAT stand at ANGA in Cologne, where they are present each year. "We'd like to extend our partnerships," Tom tells us and invites importers, wholesale dealers and distributors to get in touch with GT-SAT.

What makes GT-SAT so impressive is that Tom and Guil as business partners truly act in concert. They both have the same goal and – what's even more – the same understanding of how to reach that goal.

On this firm footing long-term success will be a given to GT-SAT and their existing and future partners.

▲ **Each GT-SAT LNB has its own serial number, so that each product can be traced back. Even in the warehouse each LNB can be traced because the serial numbers of all LNBs are also attached onto the carton board box.**

program providers, which explains the large proportion of bulk deliveries. As a matter of fact, GT-SAT indirectly supplies LNBs to providers in Scandinavia and the Baltic States, in Russia, and Eastern Europe.

Tom details the LNB types: "In 2004 we started with the four basic types: single, twin, quattro and quad." They then added circular types, the mini series, and in 2007 the range was complemented by the Diamond series featuring high-quality LNBs which not only offer top-notch reception capabilities but are also especially weatherproof. "The Diamond series was a huge success in tropical countries," Tom proudly explains. These high-tech LNBs are increasingly in demand in Europe as well these days.

New at GT-SAT

▲ **This is a first test sample of the new circular quad LNBF hitting stores at the end of the third quarter of 2008. GT-SAT is also developing a unicable LNB which is also scheduled to become available at the same time. A striking feature of most GT-SAT LNBs is the 40 mm long mount which allows installers to perfectly adjust the LNB in focus.**

▲ **GT-SAT will introduce this monoblock with 3° spacing shortly after this issue has hit the shelves. Shortly before that a single and twin monoblock with 4.3° spacing will become available as well.**

◀ **This circular LNB for the 12.2 to 12.7 GHz frequency range is introduced together with this issue of TELE-satellite and is designed for the American market.**

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TELE SATELLITE AWARD & BROADBAND 04-05/2008
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+ 2 Common Interface Slots und 1 Smart Card Reader for Conax, X-Crypt, DG-Crypt, Firecrypt and Crypton
+ HDMI Ver. 1.2, S-VHS und YPbPr Outputs

conax
X CRYPT
Blind Scan

NanoXX 9200, 9400

Digital Satellite Receiver of Premium Quality

+ 10.000 Channels Memory, Blindscan-Tuner
+ USB1.1 Plug for Software + Channellist Upgrades + JPG-Foto Show
+ 2 Smart Card Reader for Conax, X-Crypt, DG-Crypt, Firecrypt and Crypton
+ Nanoxx 9400: same as 9200 but additional 2 Common Interface Slots

conax
X CRYPT
Blind Scan

NanoXX 9300C

Digital Cable Receiver of Premium Quality

+ 10.000 Channels Memory, Blindscan-Tuner, DVB-C Standard
+ USB1.1 Plug for Software + Channellist Upgrades + JPG-Foto Show
+ 1 Smart Card Reader for Conax, X-Crypt, DG-Crypt, Firecrypt and Crypton
+ 2 Common Interface Slots

iP Internet Protocol PVR
X CRYPT

NanoXX 9600IP

Digital Satellite Receiver incl. IP PVR Function*

+ 6.000 Channels Memory,
+ Ethernet RJ45 Plug for Software Upgrades via Internet
+ 1 Smart Card Reader for XCrypt

iP Internet Protocoll Personal Video Recorder PVR

* Record Video in MPEG format directly over your LAN Home Network to the hard disk of your Personal Computer (Windows). The needed Software Tool is included on CD Rom.
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http://www.p-sat.at

http://www.nanoxx.info

NANOXX

NASA in Seoul

NASA CNS rented the ground floor, the basement and the roof of the small office building in the suburb of Yongsan.

Normally, when you hear the name NASA you immediately think of space travel. But satellite technology should also come to mind. A company with a name like NASA CNS is definitely worth finding out more about, and that's exactly what we did.

Shin Hui Tae, owner and President, greeted us in his office in Yongsan near downtown Seoul. Up until June of 2007, the company was still called NASA SAT; now it's NASA CNS. Shin Hui Tae explained the acronym: "Century Network Satellite" – an all-encompassing name.

Shin told us about how it all started, "I started my business career with Daewoo, one of South Korea's largest conglomerates." But it didn't last long; he didn't see many large opportunities to climb the corporate ladder and decided to move over to the satellite wholesaler "Fuji Satellites". This company no longer exists.

In June of 2000 it was time: "I started my own company; it was a one-man operation", remembered Shin. Today he his proud to have 10 employees. "Three are in sales while the other seven are technicians."

For installation work he relies on a total of 10 companies with which he has set up cooperative agreements. "We have the exclusive rights for Seoul and Kyong-gi to install antennas for the American Armed Forces Network (AFN) in South Korea", explained Shin, "AFN is transmitted over NSS6 and here in South Korea a 65cm dish is good enough."

For reception, addressable PowerVu receivers are used that can only be purchased from the American PX. His customers are exclusively American military personnel; NASA CNS sells roughly 1500 systems a year to these users.

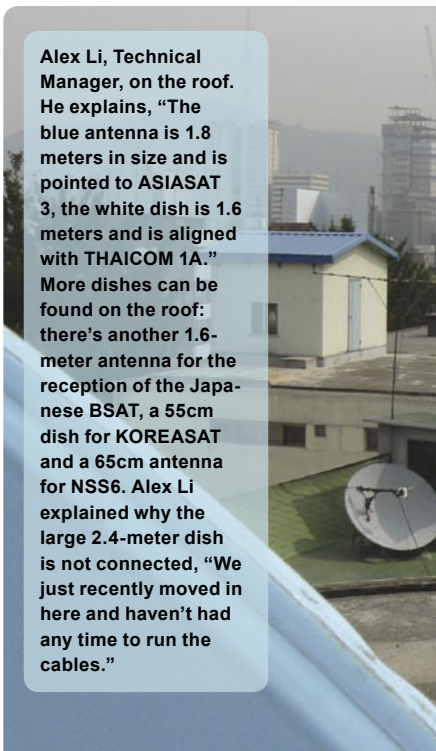
"70% of our sales come from satellite components", explains Shin, the rest is from MATV equipment. 30% of their sales go to third party's that include dealers as well as the private sector.

What does Shin think about the future? "We're not expecting much in the satellite business", comments Shin pessimistically, "only in 2011 when new satellites are launched do we expect business to get better." More detailed information on these satellite projects is not really known.

Shin is trying to maintain his sales and expand on them. "In 2006 we had sales of 1500 million Won." This is roughly 1.1 million Euros. For 2007 Shin is expecting an increase to about 1.5 million Euros.

NASA CNS is managing to stay successful despite a difficult environment.

Shin Hui Tae is founder and owner of NASA CNS. In addition to the 65cm antenna (in the background on the right) for reception of AFN Korea, his best-selling product is the 1.8-meter antenna that he obtains from Taiwan. "We sell 200 of these dishes a year", explains Shin. 100 of the 2.4-meter segmented-panel antennas are sold every year while the other sizes such as 1.6 meters account for roughly 300 sales a year.



Alex Li, Technical Manager, on the roof. He explains, "The blue antenna is 1.8 meters in size and is pointed to ASIASAT 3, the white dish is 1.6 meters and is aligned with THAICOM 1A." More dishes can be found on the roof: there's another 1.6-meter antenna for the reception of the Japanese BSAT, a 55cm dish for KOREASAT and a 65cm antenna for NSS6. Alex Li explained why the large 2.4-meter dish is not connected, "We just recently moved in here and haven't had any time to run the cables."

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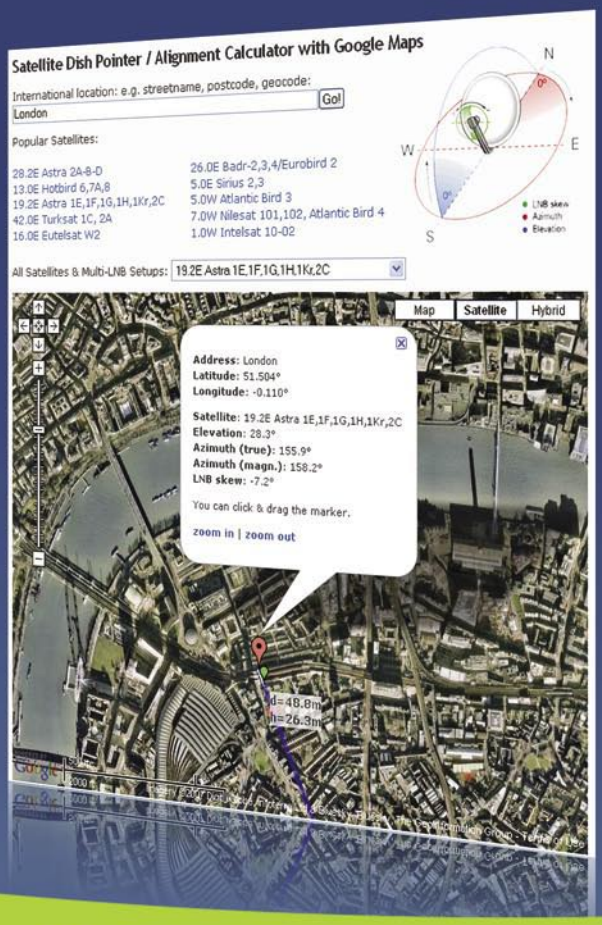

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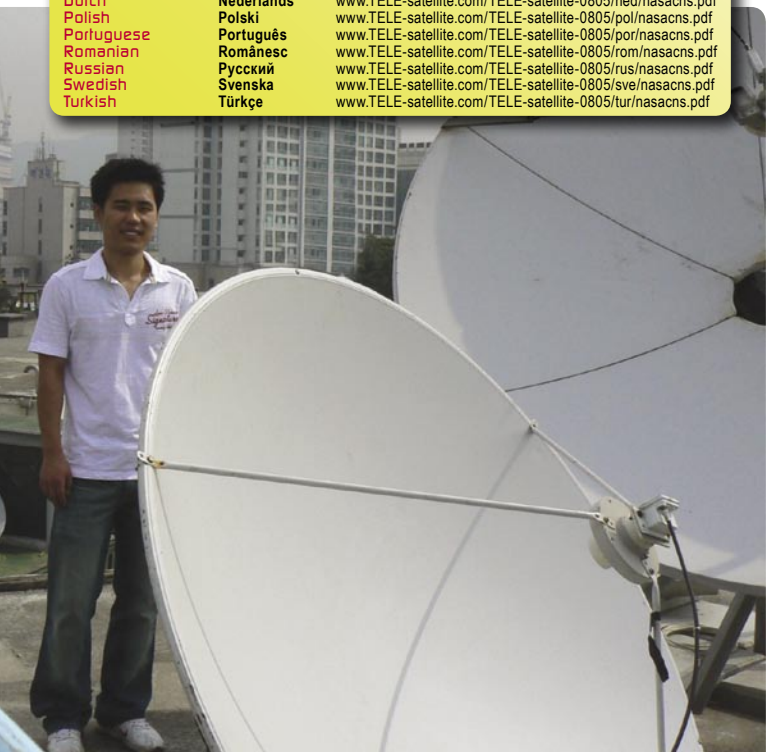


Shin Hui Tae standing next to the satellite receiver rack that is connected to all the antennas on the roof. He is happy that his company is being introduced in TELE-satellite.

Jakarta's Venus Star

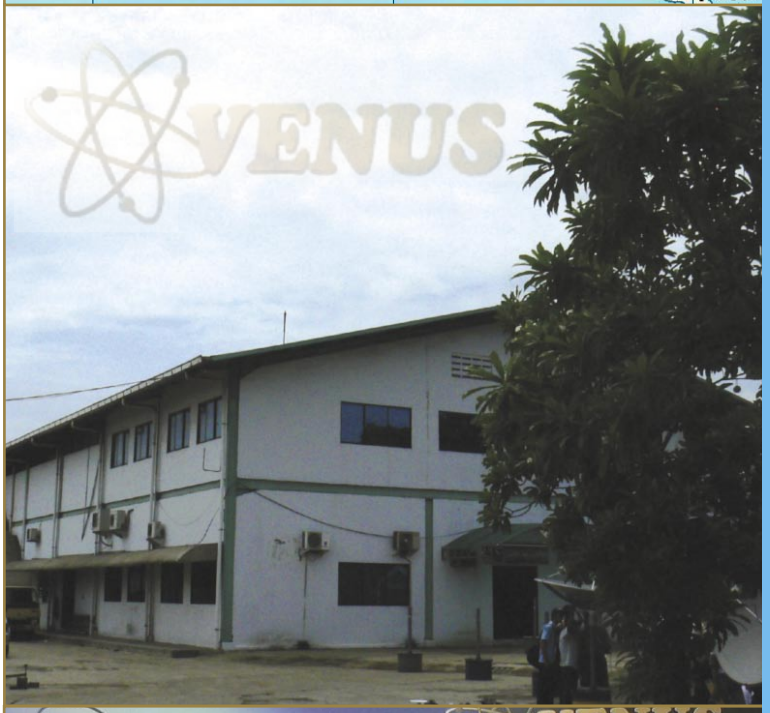
The company PT Subur Semesta was founded in 1978 in Jakarta on Java, one of the 17,000 islands that make up Indonesia. 60% of the 220 million inhabitants can be found on Java of which 15 million live in the capital city Jakarta – it could even be a few million more. To be noticed here you need an extremely bright star and it is for that reason that PT Subur Semesta uses the planet Venus as their trademark. The wonderful ambiguity with the God of Love Venus can only make you smile. One of the founders of the company, Liong Ten Fook, came up with the name – an ingenious idea!

But Liong Ten Fook was not the only founder; his partner was back then and still is now Thiang Tiong An. "We originally started as a telephone accessory factory. Later on we added emergency lights, that is, lights with built in batteries that are used everywhere whenever there is a power outage", remembers Liong Ten Fook.

PT Subur Semesta entered the satellite arena in 1989 when they began to offer analog satellite receivers. In 2000 the first digital receiver appeared and in 2002 it all turned really serious when the production of satellite dishes began. In the meantime the company expanded its management: Tjia Tek Ijoe climbed aboard as a partner. Today PT Subur Semesta is run by these three partners.

A large amount of money was invested in 2004 explains Tjia Tek Ijoe: "We acquired a machine press so that we could manufacture the dish segments ourselves." Heavy investment in the company occurred again one year later: "We bought a powder painting system to spray paint the segments."

But it was still not enough. Tjia Tek Ijoe revealed to us that there's yet another large investment: "We invested another USD 600,000 for the fabrication of mesh antennas. This lets us produce 20,000 dishes every month."



In western Jakarta, not too far from the international airport, can be found PT Subur Semesta, brand name Venus. The offices are at the front of the building with the windows, and towards the back are the factory buildings that house the machines to manufacture the dish antennas. The company employs a total of 200 people of which 60 are involved with the manufacture of dishes. They work from 8AM to 5PM Monday thru Friday and on Saturdays to 2PM.

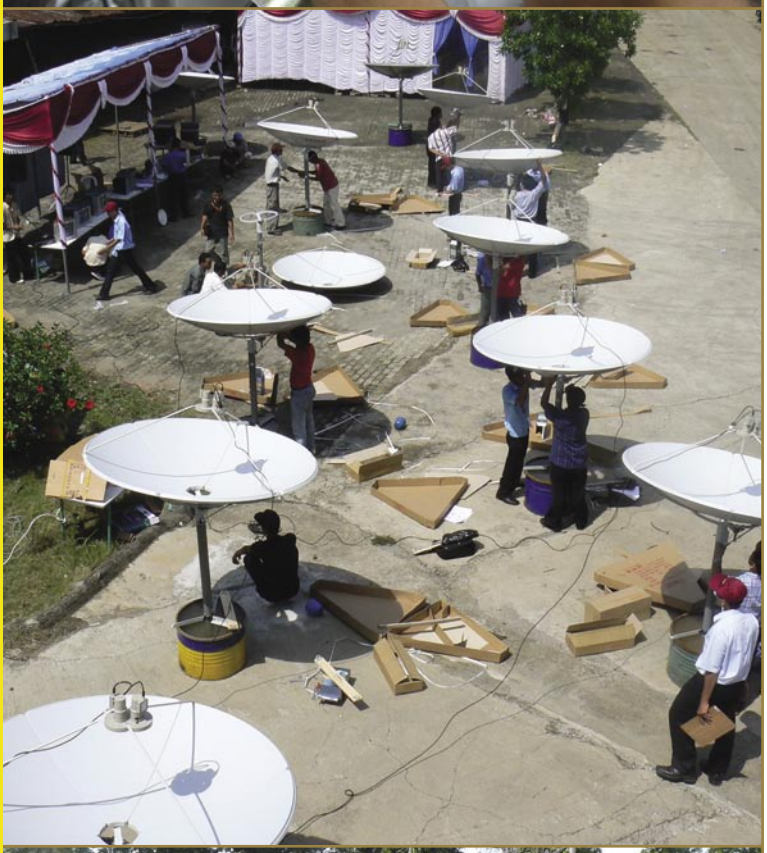
Those are large numbers; we wanted to know how many solid antennas are being manufactured today: "At the moment, our production capacity is at about 15,000 antennas per month of which the majority are sold domestically", explained Thiang Tiong An, "Our company supplies approximately 15% of the Indonesian market."

Of their total production, 80% is delivered domestically, the rest is exported. According to Thiang Tiong An, "40% of our dish production goes to Thailand and Vietnam, the remainder goes to Brunei with a small percentage going to Australia."

"Naturally we want to expand our exports", explains Tjia Tek Ijoe, "We are investing heavily in quality." PT Subur Semesta

PT Subur Semesta's three partners: From the left, Liong Ten Fook, Finance Director, Tjia Tek Ijoe, Managing Director, and Thiang Tiong An, Technical Director

A devious discovery from Venus: this small tool makes it very easy to precisely align a dish.



PT Subur Semesta organizes seminars for installers eight times a year. Distributors send their technical people to learn how to quickly and efficiently set up a packaged 1.8-meter antenna with dual-feed LNB. To make these seminars even more attractive, time limits are set and winners are announced. Food and drink is also taken care of as can be seen by the accommodation tent in the background. A large loudspeaker is also set up there to keep the young installers happy with loud music. Each seminar handles 60 installers where they are taught to install a dish such that the dual-feed can successfully receive PALAPA C2 at 113° east and TELKOM at 108° east.

The installers take great care to remain within the preset time limits. That would be 45 minutes from the box to successful reception using a dual-feed LNB and 75 minutes for the successful set up of a motorized system. Since Jakarta is located so close to the Equator, the declination angles are very small.

Protecting the environment at PT Subur Semesta: Tjia Tek Ijoe shows us the waste water treatment system the company invested in so that they comply with ISO environmental standards.

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is working on getting ISO certified. "We are expecting the test results in April 2008", reports Tjia Tek Ijoe proudly, "We applied for ISO 9001 and 14001." This means that PT Subur Semesta also follows the most stringent environmental guidelines. "In order to have international success, we have to have quality in every respect", confirms Tjia Tek Ijoe, "For the coating of our dishes we use, for example, lead-free paints from Akzo Nobel and even the dish is made of the quality material Galvalume, a product of the manufacturer Bluescope in Australia. The material consists of 55% aluminum and 45% Zinc and is therefore especially resistant and durable."

Finance Manager Liong Ten Fook is proud of PT Subur Semesta's sales figures. "Every year there's an increase", he comments. "The year before it was 10% less while in 2008 we expect 10% more."

50% of their sales are attributed to TVRO products such as dishes and the installation of satellite receivers as well as the sale of imported actuators and LNBs. Then there's also the sale of their "homemade" 2in1 and 4in1 products: that would be Combi-feeds for C-band LNBs with offsets of 5° with the 2in1 and 5° -2.5° -5° with the 4in1. Unfortunately, PT Subur Semesta can't really hope for any large business with this product since it's so easy to copy it.

Tjia Tak Ijoe gave us a look at their production: "40% of our dishes are made of steel, 40% are galvanized and 20% are made from Galvalume, the best dish material."

The Venus Star from Jakarta is well on the way to establishing itself in the international league, and could very well come out on top of the international market share with their quality dishes that happen to be "Made in Indonesia"!

How a Solid Dish Antenna is Built

1: The roll of material for the solid dishes can be seen to the left. PT Subur Semesta offers three different materials: steel, galvanized steel and Galvalume, an improved aluminum variation. The thickness of the material is 0.60 mm and a single roll weighs in at eight tons. The roll is loaded onto a dispensing machine in the background which feeds a cutting machine.

2: The segments are cut out of the roll. Six segments make up one dish. One roll takes about one work day to be completely cut into segments.

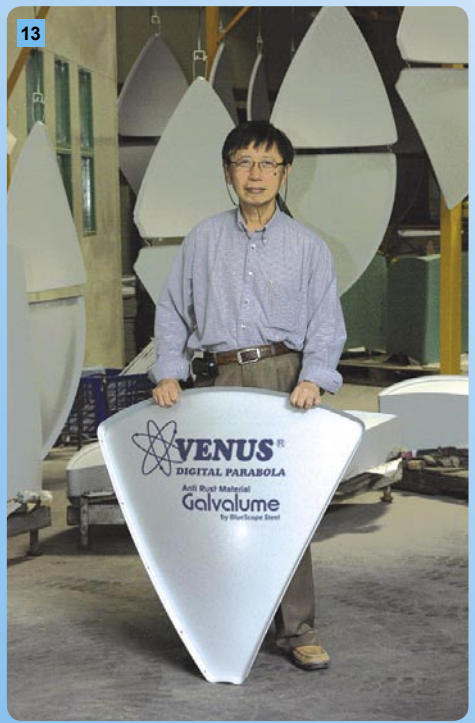
3: Mr. Santoso is the Human Resources manager and shows us the work plan: how many tons of material were processed.

4: The cut segments are pressed into parabolic form using this machine. 500 tons of pressure is used to shape the segments. This machine is used for the 1.8-meter dish segments. A second press is used for the 1.5 and 1.65-meter segments.

5: In the next step the mounting holes are punched and the cut edges are removed.

6: Every 12 seconds the segment blanks are stacked on top of each other.

7: The prepared segments arrive for spray painting. A conveyor belt is used to carry four



segments at a time through the machine. Care is taken to make sure that no damaged segments end up on the conveyor belt; they are manually removed. The conveyor belt runs a total of 300 meters and it takes one hour for a segment to reach the other side.

8: Automatic spray guns transfer the paint to the segments.

9: An employee takes care of spots manually.

10: The spray-painted segments are placed in a drying room after which they pass through quality control.

11: An employee uses a micrometer to check the paint thickness; it must be between 55 and 60µm.

12: The finished segments. PT Subur Semesta also produces OEM dishes. Liong Ten Fook shows us here three samples: the Diamond dish goes to customers in Thailand, Unisat goes to Vietnam and BN sat to Brunei.

13: This is what a dish segment with the Venus name looks like: Tjia Tek Ijoe shows us a model from the Galvalume series. Domestically, the 1.8-meter dish is their bestseller and accounts for 90% of sales. On the export side, the 1.5 and 1.65-meter models are also offered and make up 10%; 80% of exports consist of the 1.8-meter model.

It wasn't always like that explains Tjia Tek Ijoe, "In 2007 the RCTI TV channel switched over to a very weak transponder on PALAPA C2. The first private TV channel in Indonesia is very popular but now everyone had to buy the 1.8-meter dish."

14

The joke was that the RCTI and satellite operator PALAPA belonged to the same company. Instead of assigning the TV channel from their own company to the best transponder, as would be expected, it had to make do with the weakest. Why? The strongest transponder could be sold for a much better price. This logic gave PT Subur Semesta a good amount of business with their larger dishes.

14: The finished segments are packed: six segments make up one complete antenna and are packaged together with the mounting ring.

15: The mounting ring is also made in-house and is made from a 5.4-meter long bar with 20x20mm sides.

16: The still-open mounting ring is welded together.

17: The complete six-segment dish package is ready to be shipped to the world.

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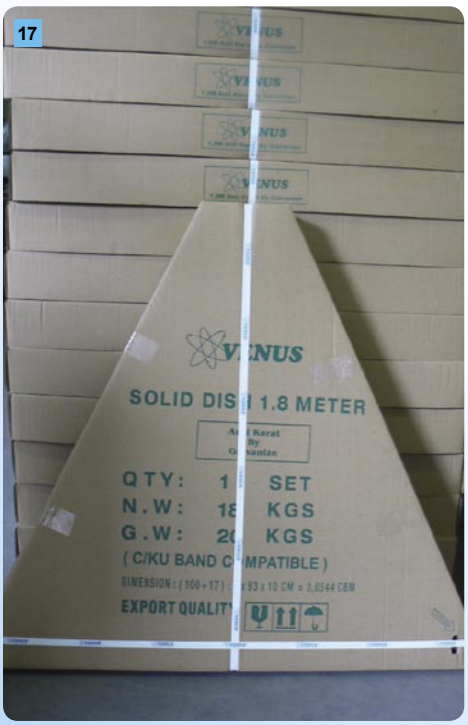

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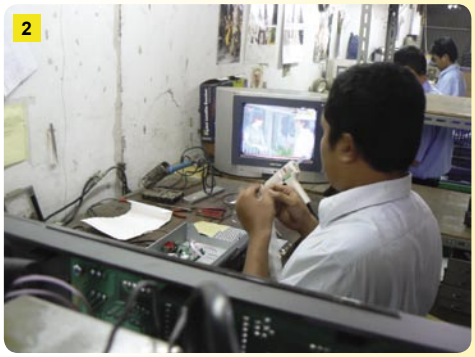
Receiver Assembly at PT Subur Semesta

1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3

4

1: From parts delivered by a Chinese manufacturer, PT Subur Semesta assembles satellite receivers with their own Venus name. The chassis for the receivers are produced locally. The power supplies can be seen to the left with the main boards to the right.

2: One of the testing stations: every receiver has its components and its electrical properties checked out

3: A look inside one of the assembled Venus receivers

4: Jhonny Yang is responsible for the software in the Venus receiver. Here he is standing in front of the burn-in station. Every receiver goes through a four-hour burn-in test to identify any weaknesses before the receiver is delivered to the customer.

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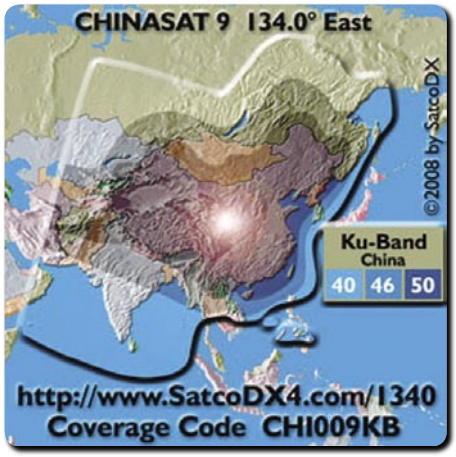
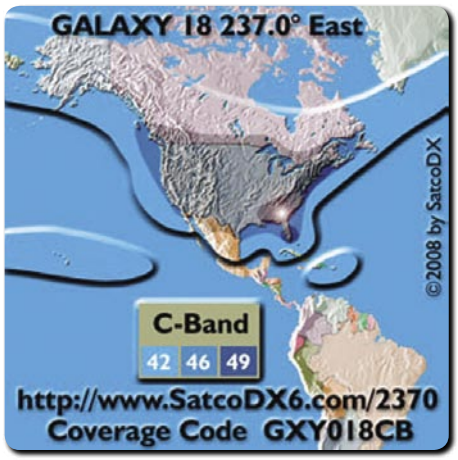
CHINASAT 9

With a launcher called Long March 3 B, CHINASAT 9 will start in March 2008 for operation at 134° East. The bird will use 22 Ku-band transponders.



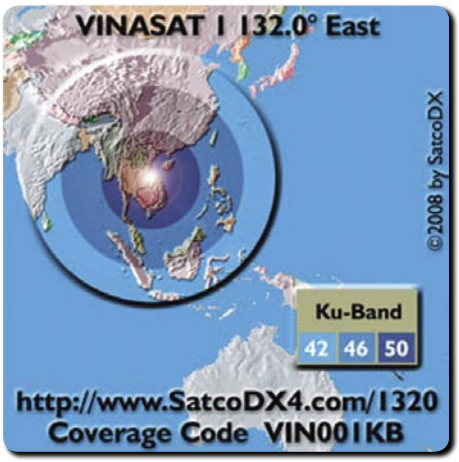
GALAXY 18

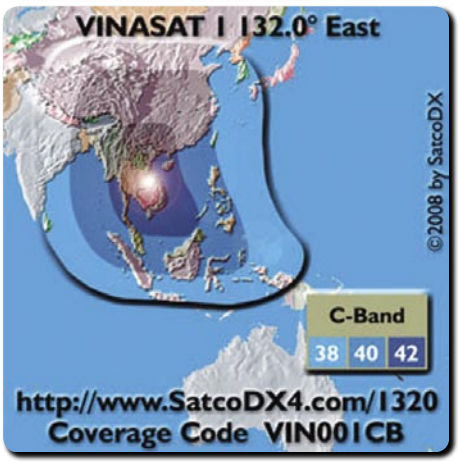
This satellite will start in March or April 2008 with a Zenit 3 rocket. It will provide 24 Ku- and 24 C-band transponders on 123° Ost (237° West). It will replace GALAXY 10R, which was launched in 2000 with a life expectancy of 15 years. Due to high energy consumption in August 2004, lifetime of GALAXY 10R has been reduced significantly.



VINASAT 1

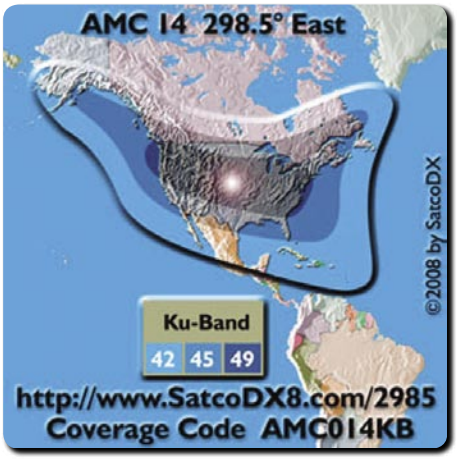
This new bird called VINASAT 1 will use 12 Ku- and 8 C-band transponders at 132° East. Launcher is Ariane 5 and launch time in April/May 2008. The bird will be in co-position to JCSAT 5A. This satellite has a minimum service life of 15 years.





AMC 14

With a Russian Proton rocket AMC 14 will start in March or April 2008 into the orbit. It will use 32 Ku-band transponders on 298.5° East (61.5° West) and will replace ECHOSTAR 3.

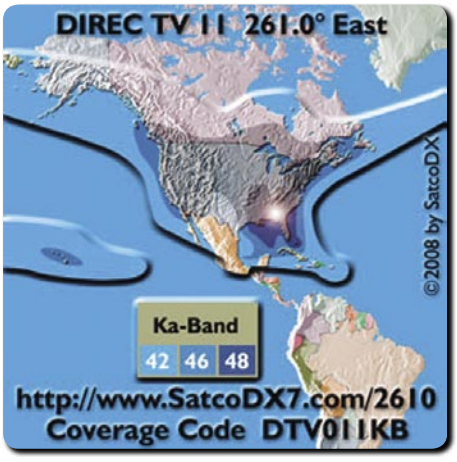


STAR ONE C2

This bird will start in end of March 2008 with an Ariane 5 rocket into the orbit. The satellite will replace BRASILSAT B4 on 290° East (70° Wset) and has 16 Ku- and 28 C-Band transponders.

DIREC TV 11

With a launcher named Zenit 3, DIREC TV 11 will start into the orbit in March 2008. It will provide 32 Ka-band transponders on 261° East (99° West).



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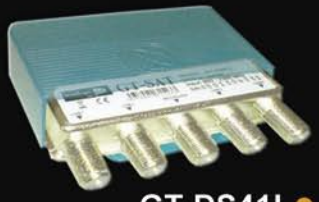

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Edited by
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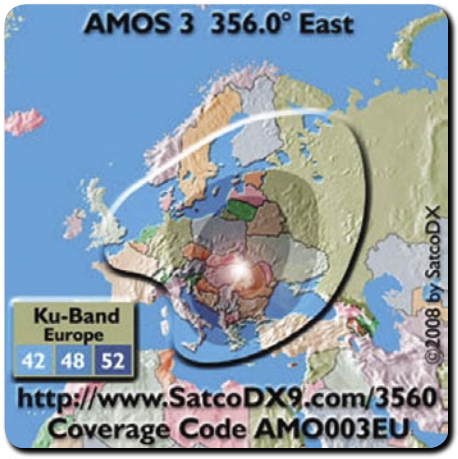
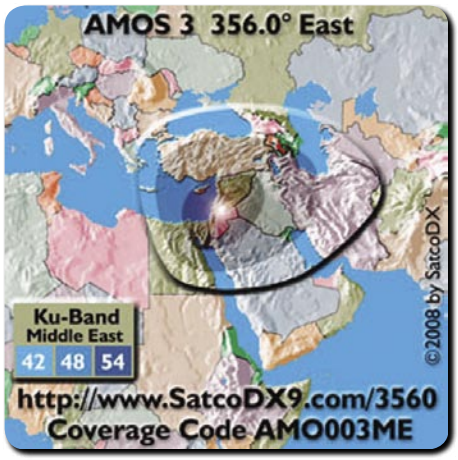
AMOS 3

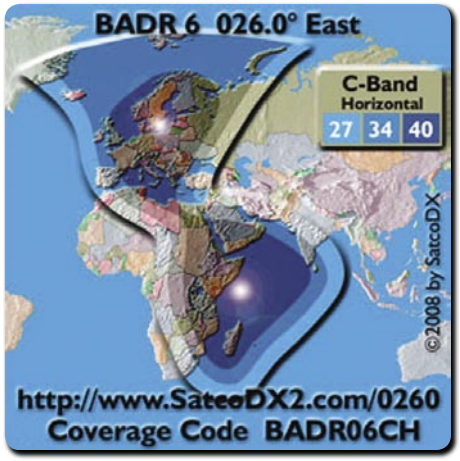
AMOS 3 is scheduled to be launched with a Zenit 3-rocket on 24 March 2008. It will replace AMOS 1 at 356° East (4° West). AMOS 3 will provide 15 Ku-Band transponders with a bandwith of 72 MHz. The new bird will have a lifetime of 12 years.





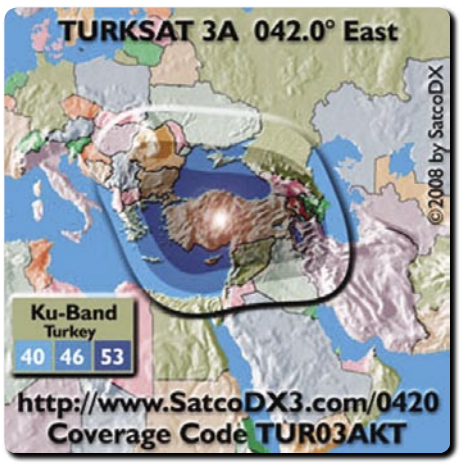
BADR 6

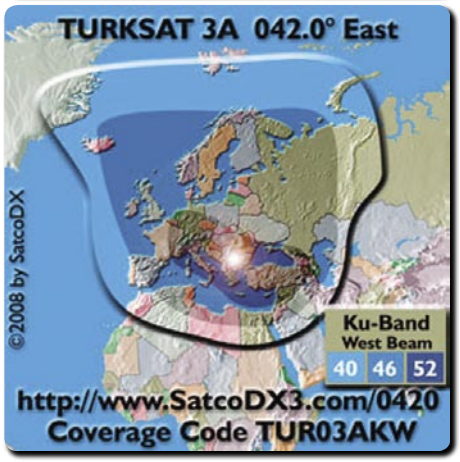
It will bring 20 Ku- and 24 C-Band transponders for 26° East. BADR 6 will provide more space for this important orbit position in the Arabic world. Launcher is once more Ariane 5.



TURKSAT 3A

Another brand-new bird for Turkish viewers will start in March or April 2008 with an Ariane 5-rocket. It will use 24 Ku-band transponders at 42° East, replacing TURKSAT 1C.





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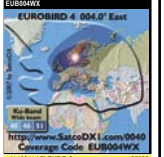

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12.111 H Virgin Radio AM 27500
12.111 H VTM 27500
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12.188 H Virtual Poland Aud 27500
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12.226 H Animal Planet Europe 25540
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12.303 H Disc_Romania 25547
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● 12.380 H Thoroughbred Racing 27500
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● 12.380 H European Radio for B 27500
12.380 H Pace Europa 27500
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12.456 H Pro TV 27500
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● 12.456 H ch 5 27500
12.456 H Download 27500
● 12.456 H MTV Romania 27500
12.456 H Pro Cinema 27500
12.456 H Radio Pro Fm Infopro 27500
● 12.456 H ProTv Intl 27500
12.456 H Info Pro 27500
● 12.456 H Pro FM 27500
● 12.608 H tele 27500
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12.637 H Explorer(Skyper)F SS) 14463
12.637 H TV1000 Poland (FSS 14463
12.637 H Viasat History (FSS) 14463
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12.678 V MTV Baltics LV 13333
● 12.678 V ROMANTICA 13333
● 12.678 V ALPHA TV 13333
● 12.678 V FLIX TV 13333
● 12.678 V MONEY CHANNEL 13333
● 12.678 V REALTEATA TV 13333
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12.697 V Manele TV 14685
12.697 V Meteo TV 14685
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12.697 V Viasat Sport 1 14685
● 12.697 V SCOPUS-NET-TECH 14685
● 12.697 V TARAF TV 14685
12.697 V VH TV 14685
12.697 V WBS Television 14685
● 12.697 V R.M.S. 14685
12.697 V Radio DEEA 14685
12.697 V Service 1 14685
12.697 V Service 2 14685
12.697 V. SPERANTEI 14685
12.697 V Vocea Evanghheiei 14685
● 12.715 V test 13333

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● 11.747 V Allsvenskan 1 27500
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● 11.843 H LTV World 27500
● 11.843 H TV5 27500
● 11.843 H Radio Pukas 27500
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● 11.862 V MTV EU 27500
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● 11.862 V YLE FST 27500
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● 12.034 H Toon Disney 27500
● 12.034 H TV1000 Classic 27500
● 12.034 H TV1000 Family 27500
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● 12.054 V TV3 Denmark 27500
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● 12.098 V TV 2 Sport HD 27500
● 12.098 V Viasat Sport HD 27500
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● 12.476 V TV 2/Bornholm 27500
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● 12.476 V TV 2/Syd 27500
● 12.476 V TV 2/Øst 27500
● 12.476 V TV 2/Østjylland 27500
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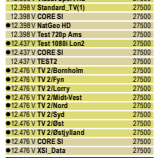
EUTELSAT W3A
7.0 East
EUW3AAB



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10.976 H RNM 2 Amontana 3333
● 10.976 H RNM Madagasikara 3333
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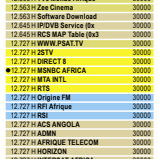
EUTW3ADA



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● 11.175 V TV Kultura 27500
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● 12.054 V Nokia Download 9780 27500
● 12.054 V Nokia Download 9902 27500
● 12.054 V Pace BL2 27500
● 12.054 V Pace Main 27500
● 12.054 V Samsung BL2 27500
● 12.054 V Samsung Main 27500
● 12.054 V XSI_Data 27500
12.092 V Aftonbladet TV7 27500
● 12.092 V Playhouse Disney 27500
● 12.092 V TV2 NEWS 27500
● 12.092 V TV4 Sport 27500
● 12.092 V N1 27500
● 12.092 V N2 27500
● 12.092 V N3 27500
● 12.092 V T 27500
12.092 V Vision Norge 27500
12.092 V XIM 27500
12.092 V YLEN Klassinen 27500
12.092 V CORE SI 27500
12.092 V XSI_Data 27500
● 12.098 V Tiji 720p Jena 2 27500
● 12.098 V TV 2 Sport HD 27500
● 12.098 V Viasat Sport HD 27500
● 12.098 V Standard_TV(1) 27500
● 12.098 V CORE SI 27500
● 12.098 V NatGeo HD 27500
12.098 V Test 720p Ams 27500
● 12.437 V Test 1080i Lon2 27500
● 12.437 V CORE SI 27500
● 12.437 V TEST2 27500
● 12.476 V TV 2/Bornholm 27500
● 12.476 V TV 2/Fyn 27500
● 12.476 V TV 2/Lorry 27500
● 12.476 V TV 2/Midt-Vest 27500
● 12.476 V TV 2/Nord 27500
● 12.476 V TV 2/Syd 27500
● 12.476 V TV 2/Øst 27500
● 12.476 V TV 2/Østjylland 27500
● 12.476 V CORE SI 27500
● 12.476 V XSI_Data 27500

EUTELSAT W3A
7.0 East
EUW3AAB

10.976 H MBS tv 3333
10.976 H TVM Malagasy 3333
● 10.976 H AFRICA NEWS FEEDS 3333
● 10.976 H MBS Radio 3333
10.976 H Radio Fahazavana 3333
● 10.976 H Radio MADA 3333
10.976 H RNM 2 Amontana 3333
● 10.976 H RNM Madagasikara 3333
● 11.102 H GO AFRICA TV. 3000
12.520 H IP-Roaming 27500
12.520 H PCR 27500
● 12.520 H WJA-Ka Linkstar Serv 27500
12.563 H A1 Jazeera Int 30000
● 12.563 H ASN 30000
12.563 H BBC World 30000
● 12.563 H E! Entertainment 30000
12.563 H Fox Sports Africa 30000
● 12.563 H G Prime 30000
12.563 H G Prime 30000
● 12.563 H G Sports 1 30000
12.563 H G Sports 2 30000
● 12.563 H G XTRA 30000
12.563 H GOD 30000
12.563 H Kiss 30000
12.563 H MGM 30000
● 12.563 H MTV base 30000
12.563 H Nickelodeon 30000
12.563 H Sky News 30000
● 12.563 H TV5 Monde Afrique 30000
● 12.563 H Zee Cinema 30000
12.563 H Software Download 30000
12.645 H IPIDVB Service (8x 30000
12.645 H RCS MAP Table (0x3 30000
● 12.727 H WWW.PSAT.TV 30000
12.727 H 2STV 30000
12.727 H DIRECT 8 30000
● 12.727 H MBC-AFRICA 30000
12.727 H MTA INTL 30000
12.727 H RTS 30000
12.727 H Regine FM 30000
12.727 H RFI Afrique 30000
12.727 H RSI 30000
● 12.727 H ACS ANGOLA 30000
12.727 H ADMN 30000
● 12.727 H AFRIQUE TELECOM 30000
12.727 H HORIZON 30000
12.727 H INTERSAT AFRICA 30000
12.727 H SatSurf 30000
12.727 H SYTEA Bridge 30000
12.727 H TELEDATA 30000

EUTW3ADA

● 11.175 V Intd. 27500
● 11.175 V TV Info 27500
11.175 V TV Sport 27500
11.175 V TV1 27500
11.175 V TV2 27500
11.175 V TV Polonia 27500
11.175 V TV Historia 27500
● 11.175 V TV Kultura 27500
● 11.190 H MBC-R0D. TV2 and 3210
11.190 H RODRIGUES TVI and 3210
11.263 H LinkStar 27491
11.283 V OpensSkyPush 27491
11.283 V EUROSPORT 27500
11.283 V PROD ESP 27500
11.283 V EUROSPORT2 27500
● 11.283 V EUROSPORTNEWS 27500
11.283 V PROD ESP2 27500
11.283 V RFI Afrique 27500
11.283 V RFI Amerique 27500
11.283 V RFI Americas 5 27500
11.283 V RFI Anik 27500
11.283 V RFI Austria 27500
11.283 V RFI Balkan 27500
11.283 V RFI Barcelona 27500
11.283 V RFI BBC Hungary 27500
11.283 V RFI BBC Sahel 27500
11.283 V RFI Bucarest 27500
11.283 V RFI Cambodge 27500
11.283 V RFI Chypre 27500
11.283 V RFI Divers 1 27500
11.283 V RFI Divers 2 27500
11.283 V RFI Divers 3 27500
11.283 V RFI Divers 4 27500
11.283 V RFI Divers 5 27500
11.283 V RFI Divers 6 27500
11.283 V RFI Divers 7 27500
11.283 V RFI Divers 8 27500
11.283 V RFI Ekaterinbourg 27500
11.283 V RFI Epra 27500
11.283 V RFI Erevan 27500
11.283 V RFI Fileas 27500
11.283 V RFI Francais 27500
11.283 V RFI Germany 27500
11.283 V RFI Hispasat1 27500
11.283 V RFI Hispasat2 27500
11.283 V RFI Kaboul 27500
11.283 V RFI Kosovo 27500
11.283 V RFI Langues Div 27500
11.283 V RFI Langues Est 27500
11.283 V RFI Langues1 27500
11.283 V RFI Langues2 27500
11.283 V RFI Latine 27500
11.283 V RFI Liban 27500
11.283 V RFI Lisbonne 27500
11.283 V RFI Montenegro 27500
11.283 V RFI Multilingue 27500
11.283 V RFI Musique 27500
11.283 V RFI Ocean Indien 27500
11.283 V RFI Orbit 27500
11.283 V RFI Prague 27500
11.283 V RFI Reserve 27500
11.283 V RFI Rmc Asmaa 27500
11.283 V RFI Rmc Mo 27500
11.283 V RFI Russia 27500
11.283 V RFI Skopje 27500
11.283 V RFI Sofia 27500
11.283 V RFI St Peter 27500
11.283 V RFI Tblissi 27500
11.283 V RFI Test 27500
11.283 V RFI World1 27500
11.283 V RFI World2 27500
11.283 V RFI World3 27500
11.283 V RFI Worldspace 27500
11.283 V RFI WS Ouest 27500
11.283 V RFI WS Sud 27500
11.283 V GC-ME 27500
11.283 V LOREAL-W3 27500
11.283 V Mcast File mutualisé 27500
11.283 V Média France - W3 27500
11.283 V PMI File W3 27500
11.283 V PMI streaming W3 27500
11.283 V SCHOOLNET-Varamin 27500
11.324 V BFBS 1 27500
● 11.324 V BFBS 10 27500
11.324 V BFBS 2 27500
11.324 V BFBS 3 27500
11.324 V BFBS 4 27500
11.324 V BFBS 5 27500
11.324 V BFBS 6 27500
11.324 V BFBS 7 27500
11.324 V BFBS 8 27500
11.324 V BFBS 9 27500
● 11.324 V AFGHANISTAN 27500
11.324 V R2 CYPRUS 27500
11.324 V R2 EUROPE 27500
11.324 V R2 WORLD 27500
● 11.324 V BALKANS 27500
● 11.324 V BFBS UK 27500
● 11.324 V CYPRUS 27500
● 11.324 V EUROPE 27500
● 11.324 V GURKHA 27500
● 11.324 V M.EAST 27500
● 11.324 V NIRELAND 27500
11.324 V DATA 27500
● 11.324 V ESP2 FAPL Clean 27500
11.342 H ESP2 German 27500
11.342 H JSTV 27500
11.342 H Africable 27500
● 11.342 H Extra 3 27500
11.342 H ORTM 27500
11.342 H RTS 27500
● 11.342 H MOOD MEDIA 27500
11.342 H MOOD RADIO 27500
11.342 H Oasis FM 27500
11.342 H PUBLIRAD 27500
11.342 H RSI 27500
11.342 H AT&T 27500
11.342 H AVANTI 27500
11.342 H ENVIATEL 27500
11.342 H NORTIS 27500
11.342 H VOXLINK 27500
11.342 H Voxlink MIP 27500
● 11.452 V ATA TV 25066
● 11.452 V CHANNEL 1 RUSSIA 25066
● 11.452 V DIGITURK INFO 25066
● 11.452 V E! ENTERTAINMENT 25066
11.452 V ESP2 FAPL Clean 25066
●

Freq Pol Channel Name	Symbol rate
12.540 H Skyplex RMB	27500
12.540 H SKYPLEX TXP1	27500
12.558 V CONTO TV 1	27500
12.558 V CONTO TV 2	27500
12.558 V Administra.ir.- FLTV	27500
12.558 V AL_JAZEERA CHILDR	27500
12.558 V BHT 1	27500
● 12.558 V CONTO TV	27500
12.558 V COOLtv	27500
● 12.558 V T. R. Padre Pio	27500
● 12.558 V BH Radio 1	27500
● 12.558 V alenia	27500
● 12.558 V Alenia	27500
12.558 V AleniaSpazio	27500
12.558 V CID09000200	27500
● 12.558 V CID09000201	27500
● 12.558 V FILMNET4700	27500
12.558 V CIDb0003200	27500
12.558 V CRF-Perugia	27500
● 12.558 V crf_isa	27500
12.558 V CSF-Viminale	27500
12.558 V ITA-FOC-17(SKY2)	27500
12.558 V Network	27500
12.558 V OAT-DOH-008	27500
12.558 V SIMS Signaling	27500
12.558 V skn-92-8	27500
12.558 V skygate24	27500
12.558 V skygate27	27500
12.558 V SkyPlex CHID 4	27500
● 12.558 V Skyplex Internal	27500
● 12.558 V SKYPLEX TXP32	27500
12.577 H CONTO TV1	27500
12.577 H CONTO TV2	27500
12.577 H PINK EXTRA	27500
12.577 H pink plus	27500
12.577 H Abu Dhabi Sport	27500
● 12.577 H ARM 1	27500
12.577 H CONTO TV	27500
● 12.577 H CONTO TV3	27500
12.577 H Etruria Channel	27500
12.577 H Hope Channel	27500
12.577 H Hope Channel 2	27500
12.577 H LibertyTV FR	27500
12.577 H LibertyTV NL	27500
12.577 H TELESUD	27500
● 12.577 H RADIO PINK	27500
12.577 H RDI Radio ARMENIA	27500
12.577 H WorldSat	27500
12.577 H worldsat-o	27500
12.597 V CINN	27500
12.597 V JSTV1	27500
12.597 V JSTV2	27500
● 12.597 V 1TVRUS Europe	27500
12.597 V BBC World	27500
12.597 V Euronews	27500
12.597 V KTO	27500
12.597 V Planeta Sport	27500
12.597 V AWR Radio 128Kbit	27500
12.597 V Family Europe	27500
12.597 V Family Int 1	27500
12.597 V Family Int 2	27500
12.597 V GBTS1	27500
12.597 V GBTS2	27500
● 12.597 V IBC TAMIL RADIO	27500
● 12.597 V PEC 3 RRI 3	27500
● 12.597 V PRA Radio	27500
● 12.597 V Radio New Hope	27500
12.597 V RCI 1	27500
12.597 V RCI 2	27500
12.597 V RCI 3	27500
12.597 V RTE	27500
12.597 V Sedayeiran	27500
12.597 V The Voice	27500
12.597 V VTCSW1	27500
12.597 V WRN Deutsch	27500
12.597 V WRN Eng AAP	27500
12.597 V WRN English	27500
12.597 V WRN Gents	27500
12.597 V WRN Francais	27500
12.597 V WRN Mul AAP	27500
12.597 V WRN Russkij	27500
12.597 V WRN Sawt Al Alam	27500
12.597 V YLESAT 1	27500
12.597 V YLESAT 2	27500
12.597 V Quadriga	27500

HOT008AB
HOTBIRD 8 013.0° East
Ku-Band
44 33
http://www.SatcoDX1.com/0130
Coverage Code HOT008KB

10.719 V CANAL+ Sport HD	27500
10.719 V DTV 4	27500
10.719 V DTV CABLE MI	27500
10.719 V DTV CABLE PL	27500
10.719 V EUROSPORT 2	27500
10.719 V INFO+/C+ Sport2	27500
10.719 V MINIMINI	27500
● 10.719 V Movies24	27500
10.719 V PLANETE	27500
10.719 V T4	27500
10.719 V 4fun.TV	27500
10.719 V Music Choice 3	27500
10.719 V Music Choice 4	27500
10.719 V Music Choice Pop	27500
10.719 V Music Choice Swiat	27500
10.719 V ESP	27500
10.719 V ST	27500
10.723 H AXN	29900
10.723 H AXN Crime	29900
10.723 H AXN Sci-Fi	29900
10.723 H Discovery Historia	29900
● 10.723 H Religia	29900
10.723 H 10.722 H	29900
10.723 H AL_JAZEERA SP+1	29900
10.723 H AL_JAZEERA SP+2	29900
10.723 H ANTI EUROPE	29900
10.723 H Dogan TV	29900
10.723 H ANTI EUROPE PROMO	29900
10.723 H MTA INTL	29900
10.723 H RTPi	29900
10.723 H NPR	29900
10.723 H Radio Al	29900
10.723 H RDP Radio	29900
10.758 V C Cinema Classic	27500
10.758 V C Cinéma Culte	27500
10.758 V C Cinema Emotion	27500
10.758 V C Cinéma Famiz	27500
10.758 V C Cinema Frisson	27500
10.758 V C Cinéma Premier	27500
10.758 V C Cinéma Premier 16/	27500
10.758 V Cinema Star	27500
10.758 V TPS Star	27500
10.758 V France Bleu	27500
10.758 V France Vivace	27500
10.758 V Playin TV Outlist	27500
10.758 V Sud Radio	27500
10.758 V TPS & Vous	27500
10.758 V Canal+	27500
10.758 V Playin TV	27500
10.758 V PRIVATE SPICE	27500
10.758 V RADIO2000	27500
10.758 V Tests terminaux	27500
10.758 V X X L	27500
10.796 V CANAL+ FAMILY	27500
10.796 V Fun TV	27500
10.796 V Infosport	27500
10.796 V M6 Music Hits	27500
10.796 V Paris Premiere	27500
10.796 V Piwi	27500
10.796 V Planete Juniors	27500
10.796 V Série Club	27500
10.796 V Teleteon Africa	27500
10.796 V TPS 8 Foot	27500
10.796 V Teleteon	27500
10.796 V Teva	27500
10.796 V France Info	27500
10.796 V France Inter	27500
10.796 V Radio FG	27500
10.796 V Quizz_TP1	27500
10.892 H 119 test 1 E	27500
10.892 H 119 test 1. E	27500
10.892 H 119 test 2 E	27500
10.892 H 119 test 2. E	27500
10.892 H 119 test 3 E	27500
10.892 H 119 test 3. E	27500
10.892 H ALE KINO!	27500
10.892 H CANAL+	27500
10.892 H CANAL+ FILM	27500
10.892 H CANAL+ SPORT	27500
10.892 H DTV CABLE	27500
10.892 H DTV CABLE 2	27500
10.892 H DTV CABLE 3	27500
10.892 H DTV CABLE AL	27500
10.892 H DTV CABLE JE	27500
10.892 H DTV CABLE KU	27500
10.892 H DTV CABLE ZI	27500
10.892 H H test 1	27500
10.892 H H test 2	27500
10.892 H H test 3	27500
10.892 H JETIX	27500
10.892 H KUCHNIA.TV	27500
10.892 H TVP 1	27500
10.892 H TVP 2	27500
10.892 H ZigZap	27500
10.892 H ZONE CLUB	27500
10.892 H CYFRA+ RADIO	27500
10.892 H CYFRA+ RMF	27500
10.892 H tech	27500
10.892 H tech 2	27500
10.892 H CYFRA+ PR	27500
10.892 H PHILIPS DOWNLOAD	27500
10.911 V Eurosport	27500
10.911 V Histoire	27500
10.911 V LCI	27500
10.911 V M6	27500
10.911 V Odyssée	27500
10.911 V Planete Thalassa	27500
10.911 V Privatespice	27500
10.911 V TF1	27500
10.911 V TF6	27500
10.911 V TFOU	27500

10.911 V Télétoon+1	27500
10.911 V Météo Express	27500
10.911 V BFM	27500
10.911 V Contact FM	27500
10.911 V Skyrock	27500
10.911 V Sport FM	27500
10.911 V BANDIAGARA	27500
10.911 V FIP	27500
10.911 V France Culture	27500
10.911 V France Musique	27500
10.911 V Mouv'	27500
● 10.911 V Météo Express	27500
10.911 V Radio Courtoisie	27500
10.930 H SIGMA SPORTS 1	27500
10.930 H A TEST	27500
10.930 H Animal Planet	27500
10.930 H FILMNET1 Cy	27500
10.930 H FILMNET2	27500
10.930 H FILMNET2 Cy	27500
10.930 H MGM	27500
10.930 H MTV	27500
10.930 H National Geographic	27500
10.930 H OTV Test	27500
10.930 H SIGMA SPORTS 2	27500
10.930 H SSEra 2	27500
10.930 H SuperSport1 Cy	27500
10.930 H SuperSport2	27500
10.930 H SuperSport3	27500
10.930 H SuperSport3 Cy	27500
10.930 H Travel Channel	27500
10.930 H VH1	27500
10.930 H CY Feed	27500
10.930 H NOVA SCOPE	27500
10.930 H Radio Gold	27500
10.930 H REAL FM	27500
10.930 H SS FM	27500
10.930 H Sega	27500
10.930 H EEPG	27500
10.930 H OTV PVR	27500
10.949 V Cartoon Network	27500
10.949 V CN/TCM CEE Combo	27500
10.949 V Disney Channel	27500
10.949 V Turner Classic Movie	27500
10.949 V AI Forat	27500
10.949 V AI Hiwar TV	27500
10.949 V AI Masar	27500
10.949 V ANB	27500
10.949 V DMC TV	27500
10.949 V Nournat	27500
10.949 V Rete Capri	27500
10.949 V Sun RTV	27500
10.949 V Sun TV +442083356780	27500
10.949 V AI Forat Radio	27500
10.949 V BN	27500
10.949 V Radio Capri	27500
10.949 V Suryan Radio	27500
10.949 V Al Mamlaka	27500
11.727 V Disc Chnl	27500
11.727 V Disc Civ	27500
11.727 V Disc Science	27500
11.727 V Trav + Leisure	27500
11.727 V BBC Arabic	27500
11.727 V Infochannel	27500
11.727 V Nepali	27500
11.727 V Sardegna Uno	27500
11.727 V Sardinia	27500
11.727 V SET	27500
11.727 V Sicilia Int	27500
11.727 V Telefortune	27500
11.727 V TRSP	27500
11.727 V Zagros Tv	27500
11.727 V BBC Albanian	27500
11.727 V BBC Arabic	27500
11.727 V BBC Azeri	27500
11.727 V BBC Balkans	27500
11.727 V BBC English (Europe)	27500
11.727 V BBC English Mid-Ea	27500
11.727 V BBC English News	27500
11.727 V BBC TV - ARABE	27500
11.727 V BBC Feed 2	27500
11.727 V BBC Feed 3	27500
11.727 V BBC Feed 4	27500
11.727 V BBC Feed 5	27500
11.727 V BBC Feed 6	27500
11.727 V BBC Persian	27500
11.727 V BBC Romanian	27500
11.727 V BBC Russian	27500
11.727 V BBC Turkish	27500
11.727 V BBC Ukrainian	27500
11.727 V Zagros Radio	27500
11.746 H AL ARABIYA	27500
11.746 H Dubai Sports	27500
11.746 H Iqraa TV	27500
11.746 H NFINITY	27500
11.746 H MBC Maghreb Al-Ara	27500
11.746 H ME SHOP	27500
11.746 H PMC	27500
11.746 H Sama Dubai	27500
● 11.746 H SAMACOM FEED	27500
11.746 H SHAROIYA	27500
11.746 H EDTV Radio 1	27500
11.746 H EDTV Radio 2	27500
● 11.766 V Rai Gulp	27500
11.766 V RAI1	27500
11.766 V RAI2	27500
11.766 V RAI3	27500
11.766 V RaiEdu2	27500
11.766 V RaiMed	27500
11.766 V Senato	27500
11.766 V FD Inglese	27500
11.766 V Notturno Italiano	27500
11.766 V Overload	27500
● 11.785 H Al-Hayat	27500
● 11.785 H Arabiive	27500
● 11.785 H Arabiive-Out of date	27500
11.785 H Canal 24 Horas	27500
11.785 H Channel One	27500
11.785 H Didar Global TV	27500
● 11.785 H ERO LIVE 1	27500
● 11.785 H ERO LIVE 1-Out of	27500
● 11.785 H ERO PULSE	27500
● 11.785 H ERO PULSE-Out of d	27500
● 11.785 H Galaxy Nepal	27500
● 11.785 H GAYTV	27500
● 11.785 H Ictimai TV	27500
● 11.785 H IGHRA	27500
● 11.785 H IGHRA-Out of date	27500
● 11.785 H Kicc TV	27500
● 11.785 H KontaktChance.TV	27500
● 11.785 H KontaktChance.TV-Out	27500
● 11.785 H Mars TV	27500
● 11.785 H MARE TV-Out of dat	27500
● 11.785 H R1	27500
● 11.785 H R1-Out of date	27500
● 11.785 H SAT EROTICA	27500
● 11.785 H SAT EROTICA-Out o	27500
● 11.785 H Subacopea	27500
● 11.785 H SUBACQUEA TV	27500
11.785 H TVE Internacional	27500
11.785 H TVE Internacional As	27500
● 11.785 H VIP.TV	27500
11.785 H Radio 1	27500
11.785 H Radio 3	27500
11.785 H Radio 4	27500
11.785 H Radio 5	27500
11.785 H Radio Clasica	27500
11.785 H Radio Exterior	27500
11.785 H RNE Contribucion	27500
11.804 V Camagia	27500
11.804 V Rai Edu1	27500
11.804 V Radio La Liberta'	27500
11.804 V RaiNettunoSat1	27500
11.804 V RaiNettunoSat2	27500
11.804 V RaiNettuno24	27500
11.804 V RaiSportSat	27500
11.804 V RaiTest	27500
11.804 V SAT2000	27500
11.804 V BLUSAT2000	27500
11.804 V DAB	27500
11.804 V FD auditorium	27500
11.804 V GR Parlam.	27500
11.804 V Isoradio	27500
11.804 V Radio VATICANA	27500
11.804 V RADIODUE	27500
11.804 V RADIOTRE	27500
11.804 V RADIOUNO	27500
11.823 H R11	27500
11.823 H ALPHA TV	27500
11.823 H ALTER	27500
11.823 H ANT-1	27500
11.823 H FILMNET1	27500
11.823 H JETIX	27500
11.823 H MEGA	27500
11.823 H NOVA	27500
11.823 H R12	27500
11.823 H R13	27500
11.823 H R3	27500
11.823 H R4	27500
11.823 H R5	27500
11.823 H R6	27500
11.823 H STAR	27500
11.823 H SuperSport1	27500
11.823 H DS Test	27500
11.823 H Greek Church	27500
11.823 H Love Radio	27500
11.823 H Melodi Radio	27500
11.823 H RR1	27500
11.823 H RR3	27500
11.823 H Skai Radio	27500
11.823 H SSEra 1	27500
11.823 H SuperSport1	27500
11.823 H Test2	27500
11.843 V Caccia e Pesca	27500
11.843 V Fox Crime +1	27500
11.843 V Jimmy	27500
11.843 V MotoTV	27500
11.843 V Yacht & Sail	27500
11.843 V SKY Inside	27500
11.843 V SKY Play.IT	27500
11.843 V SKY Sound	27500
11.843 V DI561	27500
11.843 V DI562	27500
11.843 V IEPG Data	27500
11.843 V Playjam	27500
● 11.862 H Animal Planet	27500
● 11.862 H Class CNBC	27500
● 11.862 H Comedy Central	27500
● 11.862 H Discovery	27500
● 11.862 H Discovery Real Time	27500
● 11.862 H Nickelodeon	27500
● 11.862 H Raisat Cinema	27500
● 11.862 H Raisat Gambero	27500
● 11.862 H Raisat YOYO	27500
11.862 H Rock TV	27500
11.862 H Videoitalia	27500
11.862 H EPG Data	27500
11.881 V Alice	27500
11.881 V Fantasy	27500
11.881 V Fox +1	27500
11.881 V Leonardo	27500
11.881 V Marcopolo	27500
11.881 V NatGeo Wild	27500
11.881 V Nuvolari	27500
11.881 V IEPG Data	27500
11.881 V DI582	27500

11.881 V DI583	27500
11.881 V Gestione Collegam. T	27500
11.881 V Prima Fila	27500
11.900 H AXN	27500
● 11.900 H Disney Ch. +1	27500
● 11.900 H Inter Channel	27500
● 11.900 H Juventus Channel	27500
● 11.900 H Matchmusic	27500
● 11.900 H MTV	27500
● 11.900 H Playhouse Disney	27500
● 11.900 H Raisat Premium	27500
● 11.900 H Raisat Smash	27500
● 11.900 H RaisatExtra	27500
● 11.900 H Toon Disney	27500
● 11.900 H EPG Data	27500
● 11.919 V Retequattro	27500
11.919 V Test	27500
● 11.919 V Canale 5	27500
11.919 V Italia 1	27500
● 11.919 V Mediashopping	27500
11.919 V Radio Mater	27500
11.938 H Chasse & Peche	27500
11.938 H EI Entertainment	27500
11.938 H FILMNET3	27500
11.938 H FILMNET3 Cy	27500
11.938 H Motors TV	27500
11.938 H Playboy TV	27500
11.938 H Playboy TV Cy	27500
11.938 H Private Spice	27500
11.938 H Private Spice Cy	27500
11.938 H SuperSport4	27500
11.938 H SuperSport4 Cy	27500
11.938 H SuperSport5	27500
11.938 H SuperSport6	27500
11.938 H SuperSport6 Cy	27500
11.938 H The History Channel	27500
11.938 H Nova Promo	27500
11.938 H Mad Radio	27500
11.938 H NostAlgia Radio	27500
11.938 H GAMES	27500
11.958 V SKY Sport 1	27500
● 11.958 V adv Video	27500
11.958 V SKY Sport 2	27500
11.958 V SKY SuperCalcio	27500
11.958 V Sport Active 1	27500
11.958 V Sports Active 2	27500
11.958 V Sports Active 3	27500
● 11.958 V i-Spot Nokia Nseries	27500
● 11.958 V i-Spot Puntoshop	27500
11.958 V IEPG Data	27500
11.977 H Cartoon Network	27500
11.977 H Cult	27500
11.977 H Cultoon	27500
11.977 H Fox Crime	27500
11.977 H Fox Life	27500
11.977 H Fox News	27500
11.977 H History +1	27500
11.977 H Jetix	27500
11.977 H NatGeoAdventur	27500
11.977 H NationalGeo +1	27500
11.977 H Sky News	27500
11.977 H IEPG Data	27500
11.977 H SKY PASS	27500
12.015 H ART CHILDRENTARA	27500
12.015 H ART CINEMA - ARAB	27500
12.015 H ART HEKAYAT - ARA	27500
12.015 H ART MOVIES - ARAB	27500
12.015 H ART MOVIES2 - ARA	27500
12.015 H ART PRIME SPORT -	27500
12.015 H ART SPORT 1 - ARA	27500
12.015 H ART SPORT 2 - ARA	27500
12.015 H ART SPORT 3 - ARA	27500
12.015 H ART SPORT 4 - ARA	27500
12.015 H ART SPORT 5 - ARA	27500
12.015 H ART SPORT 6 - ARA	27500
12.015 H LBC EUROPE - ARAB	27500
12.015 H NILE DRAMA - ARAB	27500
12.015 H FUTURE TV - ARABE	27500
12.015 H IQRAA - ARABESQUE	27500
● 12.034 V Disney Channel	27500
12.034 V E!	27500
● 12.034 V New Ch1	27500
12.034 V SKY Calcio 1	27500
12.034 V SKY Mania	27500
12.034 V SKY Max	27500
12.034 V SKY Movies	27500
12.034 V SKYCinema 1	27500
12.034 V SKYCinema 3	27500
12.034 V EPG Data	27500
12.054 H BBC Prime	27500
12.054 H Bloomberg	27500
● 12.054 H Eurosport Sci	27500
● 12.054 H ESPN Classic	27500
● 12.054 H Eurosport	27500
● 12.054 H Eurosport 2	27500
● 12.054 H EurosportNews	27500
12.054 H SKY Sport 3	27500
12.054 H SKY Vivo	27500
● 12.054 H Sportitalia	27500
12.054 H EPG Data	27500
12.073 V Prima Fila 11	27500
12.073 V Prima Fila 13	27500
12.073 V Prima Fila 22	27500
12.073 V Prima Fila 28	27500
12.073 V Prima Fila 3	27500
12.073 V Prima Fila 30	27500
12.073 V Prima Fila 5	27500
12.073 V SKY Calcio 2	27500
12.073 V SKY Calcio 3	27500
12.073 V SKY Calcio 4	27500
12.073 V SKY Calcio 5	27500
12.073 V SKY Calcio 6	27500
12.073 V SKY Calcio 7	27500
12.073 V SKY Calcio 8	27500
12.073 V IEPG Data	27500
12.092 H MCT Asian-Ultra	27500
12.092 H MCT Elegance-Amateur	27500
12.092 H MCT Fantasy-Free	27500
12.092 H MCT Gay-Trans	27500
12.092 H MCT Love-Sext	27500
12.092 H MCT Plus-Glamour	27500
12.092 H MCT Premium	27500
12.092 H MCT Reality-Full	27500
12.092 H MCT Sct	27500
12.092 H MCT Sct2	27500
12.092 H MCT Super-Dream	27500
12.092 H Redlight German	27500
12.092 H Redlight Italy	27500
12.092 H Redlight LATINO	27500
12.092 H Redlight Misx	27500
12.092 H Redlight USA	27500
12.092 H TELEITALIA	27500
12.092 H Musicam 1	27500
12.092 H Musicam 2	27500
12.092 H Musicam 3	27500
12.092 H Musicam 4	27500
12.092 H Musicam 5	27500
12.092 H Musicam 6	27500
12.092 H Relax	27500
12.111 V ACM Channel	27500
12.111 V AL JAZEERA	27500
12.111 V Alzaeera Documentar	27500
12.111 V AlJazeera Mubasher	27500
12.111 V MediterraneoSat	27500
12.111 V Puglia Channel	27500
12.111 V Radio Radio Tv	27500
12.111 V Sicilia Channel	27500
● 12.111 V Telereggio	27500
12.111 V Telemarket 2	27500
12.111 V Telemarket	27500
12.111 V UNOSAT	27500
12.111 V ANNI 60	27500
12.111 V Dimensione Roma	27500
12.111 V DISCORADIO	27500
12.111 V Popolare	27500
12.111 V R Radio	27500
12.111 V R.Italia S.m.t.	27500
12.111 V R.KOLBE-SAT	27500
12.111 V R.Maria	27500
12.111 V R.Speranza	27500
12.111 V Radio Eurospin	27500
12.111 V Radio PADANIA	27500
● 12.111 V Radio Padania IP	27500
12.111 V Radio Radicale	27500
12.111 V Radio ZETA	27500
12.111 V RDS	27500
12.111 V Vietnamese PR	27500
12.111 V OUT IP DATA TS1	27500
12.131 H Magyar 2	27500
12.131 H Radio Radio	27500
12.149 V BLU	27500
12.149 V BLU 3	27500
12.149 V CT4	27500
12.149 V DunaTV	27500
12.149 V Duna2	27500
12.149 V Khabar TV	27500
12.149 V LIDER TV AZE	27500
12.149 V Nessuna TV	27500
12.149 V promocja.tv	27500
● 12.149 V SALENTO CHANNEL	27500
12.149 V STUDIO 100 TV	27500
12.149 V Telelombardia	27500
12.149 V TR2SAT	27500
12.149 V TV1 Tunis	27500
12.149 V Ecoradio	27500
● 12.149 V MR1-Kossuth	27500
● 12.149 V MR2-Petofi	27500
● 12.149 V MR4/MR5	27500
● 12.149 V R.Citta Futura	27500
12.149 V R.Tunisie Culture	27500
12.149 V R.Tunisie Internatio	27500
12.149 V R.Tunisie Nationale	27500
12.149 V Radio 6	27500
12.149 V Radio Azzurra	27500
12.149 V Radio Spazio Aperto	27500
12.149 V ReteSport	27500
● 12.149 V Test	27500
12.149 V AH-EMP4-DATA	27500
12.169 H Cartoon	27500
12.169 H Discovery Channel	27500
12.169 H ET-1	27500
12.169 H ET-3	27500
12.169 H MACEDONIA TV	27500
12.169 H MAD TV	27500
12.169 H MAD TV	27500
12.169 H NCT	27500
12.169 H R10	27500
12.169 H R14	27500
12.169 H R15	27500
12.169 H R7	27500
12.169 H R8	27500
12.169 H R9	27500
12.169 H SKAI TV	27500
12.169 H SuperSport2	27500
12.169 H SuperSport2 Cy	27500
12.169 H SuperSport7	27500
12.169 H SuperSport7 Cy	27500
12.169 H TCM	27500
12.169 H Test TX	27500
● 12.169 H Bouke	27500
12.169 H ERA SPORT	27500
12.169 H ERA1	27500
12.169 H ERA2	27500
12.169 H ERA3	27500

12.169 H MAD MUSIC Hits G	27500
12.169 H Mad Music Seasonal	27500
12.169 H MAD MUSIC Greek	27500
12.169 H Mad Music Greek Cy	27500
12.169 H Mad Music Hits GR	27500
12.169 H MAD MUSIC My Rock	27500
12.169 H Mad Music My Rock Cy	27500
12.169 H MAD MUSIC Rebetico	27500
12.169 H Mad Music Rebetico C	27500
12.169 H MAD MUSIC Seasonal	27500
12.188 V Animal Planet	27500
12.188 V AXN	27500
12.188 V AXN Crime	27500
12.188 V AXN Sci-Fi	27500
12.188 V Cinemax2	27500
12.188 V Discovery	27500
12.188 V ESPN	27500
12.188 V Extreme Sports	27500
12.188 V FoxLife	27500
12.188 V Jetix	27500
12.188 V KINO POLSKA	27500
12.188 V Test_P	27500
12.188 V TVP1	27500
12.188 V TVP2	27500
12.188 V Zone Romantica	27500
12.188 V EpgOpenTV	27500
12.188 V 01 41 01 06	27500
12.188 V 02010015	27500
12.188 V 0202000D	27500
● 12.188 V Samsung2	27500
12.207 H Free-X TV	27500
12.207 H FREE-XTV 2	27500
12.207 H XDream TV	27500
12.207 H 3ABN International	27500
12.207 H Arirang TV	27500
12.207 H Asianet	27500
12.207 H CNL	27500
12.207 H f men	27500
12.207 H Fashion TV	27500
12.207 H KURDsat	27500
12.207 H Newroz	27500
12.207 H Parx TV	27500
12.207 H Rojhelat	27500
12.207 H SAMA FM TV	27500
12.207 H TCT	27500
12.207 H Thai Global Network	27500
12.207 H VTV4	27500
12.207 H 3ABN Radio	27500
12.207 H Christian Voice	27500
12.207 H Horoskrik Sonsla	27500
12.207 H Music Box Radio	27500
12.207 H Overcomer Radio	27500
● 12.207 H Rang-A-Rang radio	27500
12.207 H SWISS MUSIC RADIO	27500
12.207 H TGN Radio	27500
12.207 H VOV Radio	27500
12.226 V Al Hurra-Europe TV	27500
12.226 V IBB OS Download 8	27500
12.226 V IBB OS Download 9	27500
12.226 V IBB TV Dedicated C	27500
12.226 V IBB TV Dedicated C	27500
12.226 V IBB VOA RFERL Rad	27500
12.226 V IBB VOA RFERL Rad	27500
12.226 V IBB VOA RFERL Rad	27500
12.226 V IBB VOA RFERL Rad	27500
12.226 V IBB VOA RFERL Rad	27500
12.226 V IBB VOA RFERL Rad	27500
12.226 V IBB VOA RFERL Rad	27500
12.226 V IBB VOA RFERL Rad	27500
12.226 V IBB VOA RFERL Rad	27500
12.226 V IBB VOA RFERL Rad	27500
12.226 V IBB VOA RFERL Rad	27500
12.226 V IBB VOA RFERL Rad	27500
12.226 V IBB VOA RFERL Rad	27500
12.226 V IBB VOA RFERL Rad	27500
12.226 V IBB VOA RFERL Rad	27500
12.226 V IBB VOA RFERL Rad	27500
12.226 V IBB VOA RFERL Rad	27500
12.226 V VNN TEST 400	27500
12.226 V VOA Music Mix 260	27500
12.226 V VOA Music Mix 261	27500
12.226 V VOA Music Mix 262	27500
12.226 V VOA Music Mix 268	27500
12.226 V VOA Persian TV 295	27500
12.226 V VOA Persian TV 298	27500
12.226 V VOA TV 1 (HR1-8)	27500
12.226 V VOA TV 100 (HR1-4)	27500
12.226 V VOA TV 240 (HR1-8)	27500
12.226 V VOA TV 241 (HR1-2,	27500
12.226 V V

SatcoDX Global Satellite Chart 04/2008

Freq Pol Channel Name	Symbol rate
11.355 V SKY Assist active	27500
11.355 V SNAI	27500
11.373 H Italia 1	27500
11.373 H Rete 4	27500
11.373 H S16	27500
11.373 H S17	27500
11.373 H S20	27500
11.373 H Si Live 24	27500
11.373 H Sportitalia	27500
11.373 H DV	27500
11.373 H Mediashopping	27500
11.373 H S18	27500
11.393 V FILMBOX	27500
11.393 V NONSTOP XINO	27500
11.393 V TVN	27500
11.393 V TVN 24	27500
11.393 V TVN CNBC Biznes	27500
11.393 V TVN METEO	27500
11.393 V TVN Siedem	27500
11.393 V TVN Style	27500
11.393 V TVN TURBO	27500
11.393 V Mango 24	27500
11.393 V TVN Gra	27500
11.393 V test_radio	27500
11.411 H DomoTV	27500
11.411 H MTV IDOL	27500
11.411 H MTV PULSE	27500
11.411 H NAJARA TV	27500
11.411 H APOSTOLIC ONENESS	27500
11.411 H Bethel TV	27500
11.411 H CALARIA	27500
11.411 H Cancao Nova	27500
11.411 H Casa Italia	27500
11.411 H Sat Rai	27500
11.411 H Extra 3	27500
11.411 H Galaxy	27500
11.411 H IPN	27500
11.411 H Mondo Arte	27500
11.411 H NUOVO NOVA	27500
11.411 H One Minute TV	27500
11.411 H RTA	27500
11.411 H SEX HOT CHILI	27500
11.411 H Sexxx	27500
11.411 H TAPESH TV2	27500
11.411 H TUDANA SAT	27500
11.411 H TV2DAY	27500
11.432 V Canale 5	27500
11.432 V Iris	27500
11.432 V Italia 1	27500
11.432 V Rete 4	27500
11.432 V Servizio 21	27500
11.432 V Servizio 23	27500
11.432 V Servizio 24	27500
11.432 V Servizio 25	27500
11.432 V Servizio 26	27500
11.432 V Servizio 27	27500
11.432 V Servizio 28	27500
11.432 V Servizio 29	27500
11.432 V Servizio 30	27500
11.432 V Sportitalia	27500
11.432 V Sportitalia24	27500
11.449 H Discovery HD	27500
11.449 H MGM	27500
11.449 H NK HD	27500
11.449 H nSport	27500
11.449 H nTalk	27500
11.449 H pVOD	27500
11.449 H TVN Lingua	27500
11.449 H Upload	27500
11.449 H Wojna i Pokoj	27500
11.470 V CANAL+ FILM HD	27500
11.470 V Andisheh	27500
11.470 V Jama	27500
11.470 V BET NAHRAIN	27500
11.470 V Channel 6	27500
11.470 V ICC TV	27500
11.470 V IRAN	27500
11.470 V IRAN_MNTV	27500
11.470 V JAAM E JAM	27500
11.470 V Mkhi Sat	27500
11.470 V NAHABAT TV	27500
11.470 V OMID E IRAN	27500
11.470 V OU	27500
11.470 V TV TV	27500
11.470 V PROPHETIC	27500
11.470 V SASAT	27500
11.470 V SALAAM TV	27500
11.470 V TAPESH	27500
11.470 V Tavir Iran	27500
11.470 V THARISANAM	27500
11.470 V Bahai Radio	27500
11.470 V Radiosenko Radio	27500
11.470 V Radio Mojdeh	27500
11.488 H CINEMAX	27500
11.488 H CIVILISATION	27500
11.488 H KINO POLSKA	27500
11.488 H SCIENCE	27500
11.488 H TRAVEL	27500
11.488 H TVP INFO	27500
11.488 H HTV	27500
11.488 H Polonia 1	27500
11.488 H Tele5	27500
11.488 H TV POLONIA	27500
11.488 H TV PULS	27500
11.488 H TVP Kultura	27500
11.488 H TVP4 Ukraina GRY	27500
11.488 H INFO+	27500
11.488 H Music Choice 1	27500
11.488 H Music Choice 2	27500
11.488 H Music Choice Klasyka	27500
11.488 H Music Choice Oldies	27500
11.488 H 5199	27500
11.505 V TVN	27500
11.526 H TSR1	27500
11.526 H TSI2	27500
11.526 H TSR1	27500
11.526 H TSR2	27500
11.526 H SSR-Couleur3	27500
11.526 H SSR-Espace 2	27500
11.526 H SSR-La 1ere	27500
11.526 H SSR-Option Musique	27500
11.526 H SSR-Rete Due	27500
11.526 H SSR-Rete Tre	27500
11.526 H SSR-Rete Uno	27500
11.526 H WRS	27500
11.541 V ESP2 Hungary	27500
11.541 V ESP2 Romania	27500
11.541 V MAG COMEDY	27500
11.541 V LA7	27500
11.541 V 50 Canale	27500
11.541 V BCORIS TV	27500
11.541 V BERGAMOSAT	27500
11.541 V La Nuova TV	27500
11.541 V SUMAUNO	27500
11.541 V Sardegna Channel	27500
11.541 V TeleTimeno	27500
11.541 V Studio TV	27500
11.541 V Toscana Channel	27500
11.541 V TV1 LOMBARDIA	27500
11.541 V Umbria Channel	27500
11.541 V Global-Mir	27500
11.541 V KISS KISS RADIO	27500
11.541 V LifeGate	27500
11.541 V Millennium Radio	27500
11.541 V R.BuonConsiglio	27500
11.541 V R.S.F. in Blu	27500
11.541 V R101	27500
11.541 V Radio 24	27500
11.541 V RADIO CUORE	27500
11.541 V RADIO CUORE DUE	27500
11.541 V RADIO KOLBE	27500
11.541 V Radio Padre Pio	27500
11.541 V RADIO RELAX	27500
11.541 V Radio Torino Intl.	27500
11.541 V ROCK FM	27500
11.541 V VIRGIN RADIO	27500
11.541 V ENVIATEL	27500
11.541 V XSI	27500

11.200 V .Lolita	27500
11.200 V ALL SEX	27500
11.200 V D'ANNA SAT	27500
11.200 V EBC.1	27500
11.200 V ELITE SHOPPING	27500
11.200 V EROS LIVE	27500
11.200 V Hot Point	27500
11.200 V Hot Week	27500
11.200 V Made In Italy	27500
11.200 V MagicTV	27500
11.200 V Mediatel	27500
11.200 V MOTORI TV	27500
11.200 V ODEON SAT	27500
11.200 V PEOPLE TV-RETE7	27500
11.200 V SAT TV ITALIA	27500
11.200 V ROMA SAT	27500
11.200 V Sat8	27500
11.200 V Sat9	27500
11.200 V STARSAT	27500
11.200 V Telenord	27500
11.200 V Test	27500
11.200 V TLC SAT	27500
11.200 V Trentino TV	27500
11.200 V AfgSatanWatandar	30000
11.200 V Global Radio - MIR	27500
11.200 V McDonalds	27500
11.200 V R.Di per Di	27500
11.200 V R.ONDA D'URTO	27500
11.200 V Radio Bilta	27500
11.200 V Radio Expert	27500
11.200 V Radio Intesa	27500
11.200 V Radio Mateo	27500
11.200 V Radio Standa	27500
11.200 V RADIO ZAINET	27500
11.200 V NIS_Intesat	27500
11.523 V test	5000
12.265 V Polsat Sport HD test	27500
12.265 V HBO	27500

Freq Pol Channel Name	Symbol rate
12.265 V HBO 2	27500
12.265 V HBO Comedy	27500

EUTELSAT W2
16.0 East

10.957 H ALSAT NTV	2821
10.962 H TELEMARKET	3150
10.972 V BBC Prime	27500
10.972 V BeoTV	27500
10.972 V FreeXTV 2	27500
10.972 V Hallmark	27500
10.972 V Kanal D	27500
10.972 V Kopernikus	27500
10.972 V Most	27500
10.972 V Stars TV	27500
10.972 V MTV Adria	27500
10.972 V Viasat 3	27500
10.972 V Viasat Explorer	27500
10.972 V Viasat History	27500
10.972 V Viasat TV	27500
10.972 V SW Download	27500
11.010 V AXN	27500
11.010 V Cinemax	27500
11.010 V Diema	27500
11.010 V Diema Family	27500
11.010 V Diema Sport	27500
11.010 V Discovery	27500
11.010 V Eurosport	27500
11.010 V Hallmark	27500
11.010 V HBO	27500
11.010 V HustlerTV	27500
11.010 V N.Geographic	27500
11.010 V TV2	27500
11.010 V TV7	27500
11.010 V Bulgaria TV	27500
11.010 V BNR Horizont	27500
11.010 V Radio Test	27500
11.045 H National TV	10555
11.045 H Favorit TV	10555
11.045 H National 24	10555
11.045 H Favorit FM	10555
11.045 H National FM	10555
11.055 V Bang Bang	27500
11.055 V Cufo Tv	27500
11.055 V Digi+	27500
11.055 V Digifilm 5	27500
11.055 V Digifilm Autor	27500
11.055 V Digifilm Premiere	27500
11.055 V Explorer 1	27500
11.055 V Explorer 2	27500
11.055 V Explorer 3	27500
11.055 V Junior Tv	27500
11.055 V Top News	27500
11.055 V My-Music	27500
11.055 V Top Channel	27500
11.055 V Tvsolo Tv	27500
11.055 V Top Albania Radio	27500
11.055 V Globalteq	27500
11.055 V Opentech	27500
11.062 H Nat Geo Ger	5722
11.062 H Nat Geo Turk	5722
11.078 H Nat Music 5208	
11.078 H Test Voxson	5208
11.078 H Ecoradio	5208
11.078 H Radio 6	5208
11.078 H Radio Citta Futura	5208
11.078 H Radio Dada	5208
11.078 H TMF Radio MCPC	5208
11.092 V D.AIR HD-1	27500
11.092 V D.AIR HD-2	27500
11.092 V 4-X	27500
11.092 V Channel X	27500
11.092 V Digifilm 6	27500
11.092 V Digifilm 7	27500
11.092 V Digifilm 8	27500
11.092 V XXX	27500
11.092 V Cinship	27500
11.096 H DATA	6000
11.132 V Antena 1	14815
11.132 V Antena 2	14815
11.132 V Antena 3	14815
11.132 V Antena International	14815
11.132 V Euforia Lifestyle	14815
11.132 V Radio Newz fm	14815
11.132 V Romantic Radio	14815
11.140 H BBT	27700
11.140 H HTV	27700
11.140 H EK Bulgaria	27700
11.140 H Evrokom NCTV	27700
11.140 H FOX Crime	27700
11.140 H Fox Crime BG	27700
11.140 H Fox Life	27700
11.140 H FOX Life Regional	27700
11.140 H Kanal 1	27700
11.140 H Kanal 1- PP	27700
11.140 H NTV	27700
11.140 H Ring TV	27700
11.140 H Balkanika	27700
11.140 H EvropaTV	27700
11.140 H FANTV	27700
11.140 H Ikonomika TV - EBF	27700
11.140 H AURORA Radio	27700
11.140 H Darik Radio	27700
11.140 H ESP BG	27700
11.140 H EXTVGO SONET Rad	27700
11.140 H JAZZ FM	27700
11.140 H OK RADIO BELGRADE	27700
11.140 H Radio NOVA	27700
11.140 H Radio SRBIJA	27700
11.140 H Radio Veronika	27700
11.140 H Retro Radio	27700
11.140 H Z- ROCK	27700
11.140 H Interactive	27700
11.140 H IT-Test	27700
11.140 H Kanal 5	27700
11.140 H PHILIPS DOWNLOAD	27700
11.140 H Service	27700
11.140 H Strong	27700
11.140 H Subtitles	27700
11.140 H Technisat	27700
11.140 H TV Programs	27700
11.145 V Xbni	8900
11.148 V DKTE	8900
11.148 V Test	8900
11.148 V VIARA	8900
11.164 H GOD Europe	11850
11.164 H Karaoke Channel	11850
11.164 H FeedSchool	11850
11.164 H GOD Channel	11850
11.164 H GOD Europe	11850
11.164 H God's Learning	11850
11.164 H Telemedia 11	11850
11.164 H VICOM RTV	11850
11.164 H Amistad Radio	11850
11.164 H MB MITIC BILJANA	11850
11.164 H Pinki Radio	11850
11.164 H Radio Biser	11850
11.164 H RADIO HAY	11850
11.178 V Pink	27500
11.178 V Pink Action	27500
11.178 V Pink BH	27500
11.178 V Pink Extra	27500
11.178 V Pink Film	27500
11.178 V Pink Kids	27500
11.178 V Pink M	27500
11.178 V Pink Movies	27500
11.178 V Pink Music	27500
11.178 V Pink Plus	27500
11.178 V U2 TV	27500
11.178 V BG-BIL	27500
11.178 V BG-PG	27500
11.178 V BG-SA	27500
11.178 V RADIO INDEX	27500
11.178 V Radio Pink	27500
11.192 H TIM28-CH50	2667
11.276 H Free-X TV	11100
11.276 H CALABRIA	11100
11.276 H Channel 1	11100
11.276 H Channel One	11100
11.276 H DIDAR GLOBAL TV	11100
11.276 H Galaxy Nepal	11100
11.276 H RTA	11100
11.276 H Telemedia 11	11100
11.276 H VIKOM RTV	11100
11.276 H MB MITIC BILJANA	11100
11.294 H GOD Europe	13333
11.294 H Karaoke Channel	13333
11.294 H FeedSchool	13333
11.294 H GOD Channel	13333
11.294 H GOD Europe	13333
11.294 H God's Learning	13333
11.294 H LIFE TV Estonia	13333
11.294 H TBN RUSSIA	13333
11.294 H Amistad Radio	13333
11.294 H Pinki Radio	13333
11.294 H RADIO HAY	13333
11.303 V Animal Planet	30000
11.303 V BTV 1	30000
11.303 V BTV 2	30000
11.303 V BTV	30000
11.303 V Jetix	30000
11.303 V Planeta	30000
11.303 V Premium Digital	30000
11.303 V BTV 3 (RBS)	30000
11.303 V FolklorTV	30000
11.303 V Kanal 3	30000
11.303 V SC Folk	30000
11.303 V TSP Service 311	30000
11.303 V Zdravo	30000
11.325 H ANIMAX	27500
11.325 H ANIMAX eng	27500
11.325 H ANIMAX-ger	27500
11.325 H AXN-CE	27500
11.325 H AXN-CE-bul	27500
11.325 H AXN-CE-cze	27500
11.325 H AXN-CE-eng	27500
11.325 H AXN-CE-hun	27500
11.325 H AXN-Crime	27500
11.325 H AXN-Crime-bul	27500
11.325 H AXN-Crime-cze	27500
11.325 H AXN-Crime-hun	27500
11.325 H AXN-Crime-pol	27500
11.325 H AXN-Crime-rum	27500
11.325 H AXN-Germany	27500
11.325 H AXN-POL	27500

Freq Pol Channel Name	Symbol rate
11.325 H AXN-POL-eng	27500
11.325 H AXN-POL-pol	27500
11.325 H AXN-ROM	27500
11.325 H AXN-ROM-cze	27500
11.325 H AXN-ROM-eng	27500
11.325 H AXN-ROM-hun	27500
11.325 H AXN-ROM-rum	27500
11.325 H AXN-SciFi	27500
11.325 H AXN-SciFi-bul	27500
11.325 H AXN-SciFi-cze	27500
11.325 H AXN-SciFi-hun	27500
11.325 H AXN-SciFi-pol	27500
11.325 H AXN-SciFi-rum	27500
11.325 H SET AFRICA	27500
11.427 V ATV	30000
11.427 V Avala	30000
11.427 V TCM	30000
11.427 V FTV	30000
11.427 V HBO Comedy	30000
11.427 V Metropolis	30000
11.427 V MTS	30000
11.427 V OBN	30000
11.427 V Palma Plus	30000
11.427 V Panonija	30000
11.427 V Sport Klub	30000
11.427 V Sport Klub+	30000
11.427 V Travel	30000
11.427 V Spectrum	30000
11.449 H Big Brother 2	27500
11.449 H Folk TV	27500
11.449 H Kan Tv	27500
11.449 H Koha Tv	27500
11.449 H News 24	27500
11.449 H Premium 1	27500
11.449 H Premium 2	27500
11.449 H Premium 3	27500
11.449 H Premium 4	27500
11.449 H Premium 5	27500
11.449 H TVSH Tokosor	27500
11.449 H Big Brother 1	27500
11.449 H KTV	27500
11.449 H TV 21	27500
11.449 H Vizion+	27500
11.449 H Coship STB	27500
11.449 H Opentech STB	27500
11.471 V TVR1	29950
11.471 V TVR1 PowerVu	29950
11.471 V TVR2	29950
11.471 V TVR2 PowerVu	29950
11.471 V TVR Cluj	29950
11.471 V TVR Craiova	29950
11.471 V TVR Cultural	29950
11.471 V TVR Iasi	29950
11.471 V TVR Timisoara	29950
11.471 V TVRi	29950
11.471 V Romania in Direct	29950
11.471 V Romania Internationa	29950
11.513 V CNNi	29950
11.513 V DDTV	29950
11.513 V Disc.Civilization	29950
11.513 V Disc.Science	29950
11.513 V Disc.Travel	29950
11.513 V Extreme Sports	29950
11.513 V Good Life	29950
11.513 V Reality Tv	29950
11.513 V Trinitas	29950
11.513 V Tv 1000	29950
11.513 V VH 1	29950
11.513 V Viasat Explorer	29950
11.513 V Viasat Nature	29950
11.513 V AlfaOmega	29950
11.513 V Channel	29950
11.513 V Radio Tv	29950
11.513 V Pro Tv Intl	29950
11.513 V Prosat	29950
11.513 V RFI	29950
11.552 V B92	30000
11.552 V Armenia	30000
11.552 V DoQ	30000
11.552 V Enter	30000
11.552 V Film +	30000
11.552 V Happy/Kosava	30000
11.552 V HBO Adria	30000
11.552 V RTS1	30000
11.552 V RTS2	30000
11.552 V SOS	30000
11.552 V Sport Klub	30000
11.552 V Studio B	30000
11.552 V Super Tv	30000
11.552 V Utva TV	30000
11.552 V Radio B92	30000
11.682 V Region 2B Cb5	14468
11.682 V Region 3B Cb5	14468
11.682 V Region 4B Cb5	14468
11.682 V Region 5B Cb5	14468
11.693 V DATA	2570
12.513 V MELOS TV	2156
12.520 V Top Music	2156
12.538 V BN R.Srpska	4340
12.552 V SatTV	2156
12.560 V test	2156
12.568 V BIC INTERNACIONAL	3702
12.597 V DATA	21000
12.600 V test	6771
12.615 V DATA	3350
12.626 V test	4444
12.633 V RTK-SAT	4881
12.642 V Armenia Region	3418
12.642 V Armenia TV	3418
12.648 V BHT 1	5200
12.648 V Radio 1	5200
12.650 H 44-SNAI TV promo	27500
12.650 H CH 20 - U VERDE S	15000
12.650 H CH 7 - SPORTIVE S	15000
12.650 H CH 5 - SNAI SAT/U	15000
12.650 H CH 6 - U GRIGIO S	15000
12.650 H Kanal A	26050
12.650 H CH3 - TELEIPPICA	15000
12.650 H UNIRE 1 - GRIGIO	15000
12.650 H UNIRE 2 - VERDE	15000
12.650 H CH99 - IP Test	15000
12.656 V TVSH-SAT	4881
12.656 V RADIO TIRANA	4881
12.682 H TV7	2892
12.682 H R Tunisie Culture	2892
12.682 H R Tunisie Internatio	2892
12.682 H R Tunisie Nationale	2892
12.703 H M-1	27500
12.719 H BRAVO TV	9000
12.719 H CTC MOLDOVA	9000
12.719 H Prima Chisinau	9000
12.719 H HIT-FM MOLDOVA	9000
12.719 H Micul Samaritean	9000
12.727 H PROVISE.NET UA	3333
12.727 H LUX-FM	3333
12.727 H MELODIYA UA	3333
12.727 H RADIO ROKS	3333
12.727 H STILNOE-FM	3333
12.733 V Kanal A	26050
12.733 V POP TV	26050
12.733 V SportKlub Slovenija	26050
12.733 V TV3 Slovenija	26050
12.733 V ART Channel	26050
12.733 V Duga TV	26050
12.733 V Estate TV	26050
12.733 V MMTV	26050
12.733 V Rtvkoun TV	26050
12.733 V Art Plus	26050
12.733 V TV Pika	26050
12.733 V ALFA RADIO SARAJE	26050
12.733 V GRAND	26050
12.733 V ISTOCNO Sarajevo	26050
12.733 V RADIO ZENICA VLASKI	26050
12.733 V KISS RADIO	26050
12.733 V KISS ROM RADIO	26050
12.733 V MIT Radio	26050
12.733 V LUJEPA NASA	26050
12.733 V MB MITIC BILJANA	26050
12.733 V MIKS RADIO	26050
12.733 V Oldies Radio	26050
12.733 V ORV Valentino BH	26050
12.733 V Radio BEZLJA	26050
12.733 V RADIO BEZLJA - IZ	26050
12.733 V Radio BROD	26050
12.733 V Radio Brod	26050
12.733 V Radio DUKAT	26050
12.733 V Radio Glas Drine	26050
12.733 V Radio KOKTEL	26050
12.733 V RADIO LIPOVAC - S	26050
12.733 V Radio Pink Int	26050
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12.733 V SNOVI U Radio	26050
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12.733 V Vikom RTV	26050
12.733 V WP Radio	26050
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11.486 H BBM TV	29950
11.486 H CC Classic	29950
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11.486 H CC Ecosse	29950
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11.486 H MANGAS	29950
11.486 H Planete Juniors	29950
11.486 H REAL TIME	29950
11.486 H RTL9	29950
11.486 H Sfera Club	29950
11.486 H Sport Evenement	29950
11.486 H Supersport 3	29950
11.486 H TeleReunion	29950
11.486 H Tempo	29950
11.486 H Teva	29950
11.486 H TF6	29950
11.486 H Cherie FM	29950
11.486 H EXO FM	29950
11.486 H Festival	29950
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11.486 H Radio One	29950
11.486 H Chasse et Peche	29950
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11.538 H PARIS PREMIERE	30000
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11.538 H TRACE	30000
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11.575 H ZEE CINEMA	30000
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11.618 H M6 Music Black	29950
11.618 H M6 Music Hits	29950
11.618 H Odyssee	29950
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11.618 H TPS Star	29950
11.618 H TV Breizh	29950
11.618 H W9	29950
11.618 H Europe 1	29950
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11.618 H Nostalgie	29950
11.618 H Radio Classique	29950
11.618 H Radio Plus	29950
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11.618 H RTA Gasy Radio	29950
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11.618 H 24 01 03	29950
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11.658 H EUROSPORT	30000
11.658 H LCI	30000
11.658 H M6	30000
11.658 H PLAYHOUSE DISNEY	30000
11.658 H RTL9	30000
11.658 H TF1	30000
11.658 H TF6	30000
11.658 H BIBI MUZIC	30000
11.658 H FRANCE VIVACE	30000
11.658 H FREQUENCE JAZZ	30000
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11.658 H FRANCE INFO	30000
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11.009 V Phoenix	
11.009 V Z Klassik	
11.009 V Bremen 4	
11.009 V Vera	
11.009 V WDR Funkhaus Europa	
11.053 H WDR	
11.053 H EinsLive	
11.053 H WDR 2	
11.053 H WDR 3	
11.053 H WDR 4	
11.053 H WDR 5	
11.053 H EinsLive	
11.053 H WDR 2	

11.464 H sonnenklar.tv	
11.494 H Das Erste	
11.494 H ARD-Sternpunkt 1 (Su	
11.494 H ARD-Sternpunkt 2 (Su	
11.494 H Bremen 1	
11.494 H DeutschlandRadio Kul	
11.494 H DLF	
11.494 H Nordwest	
11.523 H DSF - Deutsches Sp	
11.523 H Radio Melodie	
11.553 H Tele 5	
11.582 H NDR	
11.582 H N-Joy	
11.582 H NDR 2	
11.582 H NDR Info	
11.582 H NDR Info Spezial (su	
11.582 H NDR Info Spezial (su	
11.582 H NDR Kultur	
11.582 H NDR 2	
11.582 H NDR info	
11.612 H MTV Central (

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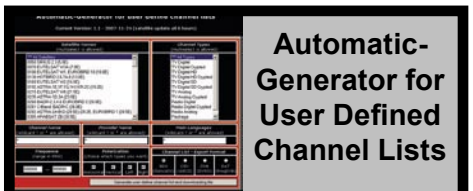
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10.847 V RAD. LATINAS	22000
10.847 V RADIOS	22000
10.847 V TAQUILLA	22000
10.847 V TEST_CSD2	22000
10.847 V TEST_CSD4	22000
10.847 V TEST_CSD5	22000
10.847 V (Empty)	22000
10.847 V RADIOS ESP	22000
10.847 V TEST TECNICO	22000
10.847 V TEST_CSD3	22000
10.862 H TVP1	22000
10.862 H TVP Sport	22000
10.862 H TVP2	22000
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11.097 V TAQUILLA 5	22000
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11.097 V TAQUILLA XX	22000
11.097 V TAQUILLA 8	22000
11.097 V TAQUILLA 9	22000
11.097 V (Empty)	22000
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11.318 V C+ COMEDIA	22000
11.318 V C+ DCINE	22000
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11.318 V DISNEY CH. +1	22000
11.318 V INTERECON TV	22000
11.318 V JETIX	22000
11.318 V PLAYHOUSE	22000
11.318 V TOON DISNEY	22000
11.479 V CANAL EVENEMENT	22000
11.479 V BABY FIRST	22000
11.479 V PLANETE JUSTICE	22000
11.479 V TELEREALITE	22000
11.479 V TEST CSAT PPV	22000
11.479 V VIVOLTA	22000
11.479 V PLAYIN'TV	22000
11.479 V PLAYIN'Tvl	22000
11.479 V 03 01 47	22000
11.479 V 01 03 04 47	22000
11.479 V 01 04 04 47	22000
11.479 V 01 05 04 47	22000
11.479 V 01 06 04 47	22000
11.479 V 01 07 01 47	22000
11.479 V 01 07 04 47	22000
11.479 V 01 08 01 47	22000
11.479 V 01 08 04 47	22000
11.479 V 02 01 01 83	22000
11.479 V 02 01 04 83	22000
11.479 V 02 02 01 83	22000
11.479 V 02 02 04 83	22000
11.479 V 02 04 01 83	22000
11.479 V 02 04 04 83	22000
11.479 V 02 05 01 83	22000
11.479 V 02 05 04 83	22000
11.479 V 02 06 01 83	22000
11.479 V 02 06 04 83	22000
11.479 V DATA SYSTEM 18	22000
11.509 V AL JAZEERA ENG	22000
11.509 V ARIRANG TV	22000
11.509 V BFM TV	22000
11.509 V CUBAVISION	22000
11.509 V DEMAIN TV	22000
11.509 V EXTREMADURA TV	22000
11.509 V POPULAR TV	22000
11.509 V REDERECORD	22000
11.509 V TELIF	22000
11.509 V Extremadura Radio	22000
11.509 V DATA SYSTEM	22000
11.538 V ANDALUCÍA TV	22000
11.538 V DIRECT 8	22000
11.538 V EWTN Europe	22000
11.538 V France 24 (en Franca	22000
11.538 V France 24 (in Englis	22000
11.538 V KTO	22000
11.538 V NRJ Hits	22000
11.538 V Russia Today	22000
11.538 V TELESUR	22000
11.538 V Radio Aragon	22000
11.568 V 2M Maroc	22000
11.568 V Al Jazeera	22000
11.568 V Al Masriya	22000
11.568 V ARTE	22000
11.568 V CANAL ALGERIE	22000
11.568 V RAI 1	22000
11.568 V RTPi	22000
11.568 V TV TRWAM	22000
11.568 V TRT International	22000
11.568 V TVMONDE	22000
11.568 V TV7	22000
11.568 V TVE1	22000
11.568 V DATASYSTEMS TR 24	22000
11.597 V BBC World	22000
11.597 V Best of shopping	22000
11.597 V CNBC Europe	22000
11.597 V DW-TV	22000
11.597 V MEZZO	22000
11.597 V Sky News	22000
11.597 V TVSMONDE EUROPE	22000
11.597 V Data System	22000
11.627 V CNN International	22000
11.627 V CNN Radio	22000
11.667 H Cinemax	22000
11.670 H Film+	22000
11.670 H HirTV	22000
11.670 H M1	22000
11.670 H MTV Hungary	22000
11.670 H RTL Klub	22000
11.670 H Spektrum Int	22000
11.670 H Sport 1 CZE	22000
11.670 H Sport Klub	22000
11.670 H TV2	22000
11.670 H Viva Hungary	22000
11.670 H TV Budapest	22000
11.670 H Bartok Radio	22000
11.670 H Kossuth Radio	22000
11.670 H Petofi Radio	22000
11.685 V C. ESTRELLAS	22000
11.685 V CNN+	22000
11.685 V FAMA 24H	22000
11.685 V PRO TV INT	22000
11.685 V TCM CLASICO	22000
11.685 V ANDALUCÍA TV	22000
11.685 V CANAL CLUB	22000
11.685 V EUSKADI TV	22000
11.685 V PORTADA	22000
11.685 V TM SATLAOTRA	22000
11.685 V TV GALICIA	22000
11.685 V TVC INT.	22000
11.685 V RAD. ROMANIA	22000
11.685 V TAQUILLA	22000
12.544 H kabel eins classics	22000
12.544 H Sat.1 Comedy	22000
12.544 H sLive	22000
12.544 H kabel eins	22000
12.544 H N24	22000
12.544 H ProSieben	22000
12.544 H SAT.1	22000

EUTELSAT W6
21.5 East
EUTOWW6
http://www.SatcoDX2.com/0215/
Coverage Code EUTOW6W6

Service 2	2632
NAHRAIN TV	2170
ALPHA	28780
ALPHA RADIO	28780
IFA DVB-H services	28780
(Empty)	28780
SALAHADDIN TV	2170
AL RAI 1B	2857
CFI PECO PRO	6511
AL ANI	2632

ASTRA 1E,3A
23.5 East
AST01DKH
ASTRA 1D 0i3.0° East
http://www.SatcoDX2.com/0230/
Coverage Code AST01DKH

10.786 V Filepush Demo Servic	22000
10.786 V LYNGSAT 3106 ESN	22000
10.786 V LX5SES	22000
10.786 V MMS04C	22000
10.786 V Proxy 3106	22000
10.786 V Proxy_06B	22000
10.786 V Proxy_08	22000
10.786 V Proxy_10	22000
10.786 V SatSpeed VPN	22000
10.842 V Euro1088 HD2/5	13333
10.862 H Ocko TV	22000
10.862 H AZC-RMT	22000
11.475 V ANN (arab)	28500
11.475 V France 24 (engl)	28500
11.475 V France 24 (fra)	28500
11.475 V GOD TV(engl)	28500
11.475 V Inter+ (uky)	28500
11.475 V OBE TV (engl)	28500
11.475 V Phoenix CNE	28500
11.475 V Phoenix IntoNews	28500
11.475 V Pro TV International	28500
11.475 V RTVi Info (rus)	28500
11.475 V Samanyolu TV	28500
11.475 V The Poker Channel	28500
11.475 V TVR International	28500
11.513 H Ch3 RT + KT	27500
11.513 H Ch2 BPK	27500
11.513 H Ch3 BN	27500
11.513 H Ch4 MAZ	27500
11.513 H SAT1 HH/SH	27500
11.513 H SAT1 National	27500
11.513 H SAT1 NRW	27500
11.513 H SAT1 NS/Bremen	27500
11.513 H SAT1 RhlP/Hessen	27500
11.513 H Test BT	27500
11.513 H TruckRadio	27500
11.515 V Comedy Central	27500
11.515 V Das Vierte	27500
11.515 V Eurosport	27500
11.515 V K1	27500
11.515 V RTL II	27500
11.515 V RTL Television	27500
11.515 V Super RTL	27500
11.515 V Viva	27500
11.515 V VOX	27500
11.515 V MDR1 S-ANHALT	27500
11.515 V MDR1 THÜRINGEN	27500
11.515 V NDR 1 Radio MV	27500
11.515 V NDR 2	27500
11.515 V radioBERLIN 88,8	27500
11.515 V Sat1	27500
11.515 V SR3	27500
11.515 V SWR1 RP	27500
11.515 V SWR2	27500
11.515 V SWR3	27500
11.515 V WDR 5	27500
11.515 V EPG Digital	27500
11.592 V Cartoon Network	28500
11.592 V Club TV	28500
11.592 V Disney Playhouse	28500
11.592 V Disney Toon + 1	28500
11.592 V MTV Dance	28500
11.592 V MTV Dance (engl)	28500
11.592 V MTV Hits	28500
11.592 V MTV Hits (engl)	28500
11.592 V National Geo (engl)	28500
11.592 V National Geographic	28500
11.592 V Playboy TV	28500
11.592 V Relax TV	28500
11.592 V Sailing Channel	28500
11.592 V Sailing Channel (eng	28500
11.592 V SciFi (KD)	28500
11.592 V Spiegel TV Digital	28500
11.592 V The Biography Channe	28500
11.592 V Turner Classic Movie	28500
11.595 V Arte Europe (türk)	28500
11.595 H Euro Star (türk)	28500
11.595 V Kabel Digital Info	28500
11.595 V Kasha Kino (rus)	28500
11.595 V RTL Shop	28500
11.595 V RTP Internacional	28500
11.595 V Shanda (rus)	28500
11.595 V RTVi (rus)	28500
11.595 H TeleTV	28500
11.595 V RTP AFRICA	28500
11.595 V TV Polonia (pol)	28500
11.595 V TVE1 (span)	28500
11.635 H Astro TV	28500
11.635 H Fashion TV	28500
11.635 H Gala Laune TV	28500
11.635 H History Channel	28500
11.635 H Kinowelt TV	28500
11.635 H Motors TV	28500
11.635 H Planet	28500
11.635 V redXclub 1	28500
11.635 V redXclub 2	28500
11.635 V redXclub Info	28500
11.635 V Select Kino 1	28500
11.635 V Select Kino 2	28500
11.635 V Select Kino 3	28500
11.635 V Select Kino 4	28500
11.635 V Select Kino 5	28500
11.635 V Select Kino 6	28500
11.635 V Select Kino 7	28500
11.635 V Select Kino Info	28500
11.635 H sonnenklar.TV	28500
11.635 H Trace TV	28500
11.635 H tv.gusto Premium	28500
11.635 H Wetter Fernsehen	28500
11.635 V 66er Hits	28500
11.635 V 70er Hits	28500
11.635 V 80er Hits	28500
11.635 V 90er Hits	28500
11.635 H Alternative	28500
11.635 H Arabischer Pop	28500
11.635 H Big Band/Swing	28500
11.635 H Blues	28500
11.635 H Brasil	28500
11.635 H Chansons	28500
11.635 H Chillout	28500
11.635 H Classic Rock	28500
11.635 H Country & Western	28500
11.635 H Dance	28500
11.635 H Deutsche Hits	28500
11.635 H Deutsche Schlager	28500
11.635 H Folk Rock	28500
11.635 H Disco & Funk	28500
11.635 H Electronic Trends	28500
11.635 H Evergreens	28500
11.635 H Französische Hits	28500
11.635 H Heavy Metal	28500
11.635 H Hottest Hits	28500
11.635 H Indie Classics	28500
11.635 H Instrumentals	28500
11.635 H Italienische Hits	28500
11.635 H Klassik Hits	28500
11.635 H Klassischer Jazz	28500
11.635 H Klassischer R & B	28500
11.635 H Love Songs	28500
11.635 H Modern Jazz	28500
11.635 H New Age	28500
11.635 H Perfect Dinner Party	28500
11.635 H Pop	28500
11.635 H Power Hits	28500
11.635 H R & B Hip Hop	28500
11.635 H Rap	28500
11.635 H Reggae	28500
11.635 H Rock Anthems	28500
11.635 H Rock'n' Roll Oldies	28500
11.635 H Spanischer Rock	28500
11.635 H Symphonie	28500
11.635 H Türkischer Pop	28500
11.635 H UK Hits	28500
11.635 V Bayern 2	28500
11.635 V Bayern 4 Klassik	28500
11.635 V Bremen Vier	28500
11.635 V Fritz	28500
11.635 V hr2	28500
11.635 V hr3	28500
11.635 V MDR SPUTNIK	28500
11.635 V N-JOY	28500
11.635 V NDR 90,3	28500
11.635 V Nordwestradio	28500
11.635 V radioeins	28500
11.635 V SWR1 BW	28500
11.635 V SWR4 RP	28500
11.635 V WDR 2	28500
11.635 V WDR 3	28500
11.635 V WDR 4	28500

AST01EV1
ASTRA 1E 0i9.2° East
http://www.SatcoDX2.com/0192/
Coverage Code AST01EV1

11.739 V rGeschiedenis TV	27500
11.739 V Consumenten TV	27500
11.739 V Discovery Science	27500
11.739 V Discovery Travel	27500
11.739 V Einkaufskanal	27500
11.739 V Holland Doc	27500
11.739 V Humor TV	27500
11.739 V MGM	27500
11.739 V Nederland 4	27500
11.739 V NGC Wild	27500
11.739 V Playboy TV	27500
11.739 V Vitaliteit	27500
11.739 V 100%NL	27500
11.817 V Test H.264	27500
11.817 V ASTRA HD	27500
11.817 V FST 3.113	27500
11.817 V Proxy_10	27500
11.817 V TIC	27500
11.915 H RNN7	27500
11.915 H LIMBURG	27500
11.915 H Omroep Brabant Telev	27500
11.915 H Omroep Gelderland Tel	27500
11.915 H Omroep Fryslan Televi	27500
11.915 H TV Drenthe	27500
11.915 H TV Gelderland	27500
11.915 H TV Noord	27500
11.915 H TV Noord-Holland	27500
11.915 H TV Oost	27500
11.915 H TV Rijnmond	27500
11.915 H LIMBURG Radio	27500
11.915 H Omroep Brabant Radio	27500
11.915 H Omroep Zeeland Radio	27500
11.915 H Omroep Fryslan Radio	27500
11.915 H Radio Drenthe	27500
11.915 H Radio Gelderland	27500
11.915 H Radio Noord	27500
11.915 H Radio Noord-Holland	27500
11.915 H Radio Oost	27500
11.915 H Radio Rijnmond	27500
11.990 H FILMBOX	27500
11.990 H FILMBOX EXTRA	27500
11.990 H HBO	27500
11.990 H JimJam	27500
11.990 H Nova	27500
11.990 H Nova Cinema	27500
11.990 H Spektrum	27500
11.990 H Viasat Explorer / Sp	27500
11.990 H Viasat History	27500
11.990 H CS Link TV	27500
11.990 H Public TV	27500
12.032 H INT PRG	27500
12.032 H INT VID 01	27500
12.032 H INT VID 02	27500
12.032 H INT VID 03	27500
12.070 H SatFlow	27500

AST03AKU
ASTRA 3A 0i3.5° East
http://www.SatcoDX2.com/0215/
Coverage Code AST03AKU

10.758 V Euro1088 HD1 MP4	22000
10.758 V EXQI	22000
11.555 H 9Live	27500
11.555 V ATV AVRUPA-P	27500
11.555 H DSF	27500
11.555 V EURO D-P	27500
11.555 V EURO STAR-P	27500
11.555 H HSE24	27500
11.555 H kabel eins	27500
11.555 V KANAL7 INT-P	27500
11.555 V LIG TV-P	27500
11.555 H N24	27500
11.555 V NTV-P	27500
11.555 V POWER TURK-P	27500
11.555 H ProSieben	27500
11.555 H Sat. 1	27500
11.555 V SHOW TURK-P	27500
11.555 H Tele 5	27500
11.555 V TURKMAX-P	27500
11.555 V FOX TURK-P	27500
11.555 V ALEM FM-P	27500
11.555 V MASAL RADYO-P	27500
11.555 V POWERTURK FM-P	27500
11.555 V RADYO D-P	27500
11.555 H MDR FIGARO	27500
11.555 H MDR1 SACHSEN	27500
11.555 H NDR 1 Niedersachsen	27500
11.555 H NDR 1 Welle Nord	27500
11.555 H EPG Test	27500
11.675 V Al Jazeera Int (engl	28500
11.675 V CH1 Russia (rus)	28500
11.675 V EuroNews (ell)	28500
11.675 V EuroNews (port)	28500
11.675 V EuroNews (rus)	28500
11.675 V EuroNews (span)	28500
11.675 V Fox Turk (türk)	28500
11.675 V France 2 (fra)	28500
11.675 V France 3 (fra)	28500
11.675 V France 5 (fra)	28500
11.675 V ITVN (pol)	28500
11.675 V Kanal 7 Int (türk)	28500
11.675 V LIG TV (türk)	28500
11.675 V Rai 1 (itl)	28500
11.675 V Rai 2 (itl)	28500
11.675 V Rai 3 (itl)	28500
11.675 V Show Turk (türk)	28500
11.675 V Turkmax (türk)	28500
12.525 V CT	27500
12.525 V CT 2	27500
12.525 V CT SPORT	27500
12.525 V Gazaxia Sport	27500
12.525 V Prima TV	27500
12.525 V CS Film/XXX/Test2	27500
12.525 V CT 24	27500
12.525 V Noe TV	27500
12.525 V BBC CZ	27500
12.525 V CRo 1-Radiozurnal	27500
12.525 V CRo 2+6/CRo 7	27500
12.525 V CRo 2-Praha	27500
12.525 V CRo 3-Vltava	27500
12.525 V CRo 4-Radio Wave	27500
12.525 V CRo D-dur	27500
12.525 V CRo Leonardo	27500
12.525 V CRo Radio Cesko	27500
12.525 V CRo Region	27500
12.525 V Proglas	27500
12.565 V 1-2-3.tv	27500
12.565 V BBC World (engl)	27500
12.565 V BibelTV	27500
12.565 V Bloomberg	27500
12.565 V EuroNews	27500
12.565 V Eurosport 2	27500
12.565 H Markiza	27500
12.565 V MTV	27500
12.565 V NICK	27500
12.565 H STV1	27500
12.565 H STV1 TT	27500
12.565 H STV2	27500
12.565 H ST V2 TT	27500
12.565 V TV 5 Monde (fra)	27500
12.565 H TV JOJ	27500
12.565 H TV JOJ_test	27500
12.565 H TA3	27500
12.565 V ERF	27500
12.565 V Radio Horeb	27500
12.565 V Radio-Test	27500
12.565 H SM 1	27500
12.565 H SM 2	27500
12.565 H SM-CS	27500
12.565 V Sunshine Live	27500
12.565 V 1LIVE	27500
12.565 V Antenne Brandenburg	27500
12.565 V Bayern 1	27500
12.565 V Bayern 3	27500
12.565 V Bremen Eins	27500
12.565 H Devin	27500
12.565 H EXPRES 7	27500
12.565 H FUN-R	27500
12.565 V hr1	27500
12.565 H Lumen	27500
12.565 V MDR INFO	27500
12.565 V MDR Kultur	27500
12.565 H OKEY	27500
12.565 H Patria	27500
12.565 V Radio - 7	27500
12.565 H Radio Hey	27500
12.565 H Radio_FM	27500
12.565 V RegionBA	27500
12.565 H ReginaBB	27500
12.565 H ReginaKE	27500
12.565 H Slovakia	27500
12.565 H Slovensko	27500
12.565 H Viva	27500
12.605 V Sat.1 Comedy	28500
12.605 H 13th Street (KD)	28500
12.605 V AXN	28500
12.605 H AXN (engl)	28500
12.605 V BBC Prime (engl)	28500
12.605 V Boomerang	28500
12.605 V Boomerang (engl)	28500
12.605 V CNBC Europe (engl)	28500
12.605 H CNN (engl)	28500
12.605 H Der Schmuckkanal	28500
12.605 V Detski Mir	28500
12.605 H Disney Toon	28500
12.605 V DMAX	28500
12.605 H E! Entertainment	28500
12.605 H ESPN Classic	28500
12.605 H ESPN Classic (engl)	28500
12.605 V Extreme Sports	28500
12.605 V Extreme Sports (engl	28500
12.605 V GemsTV	28500
12.605 V Giga Digital	28500
12.605 V iMusic	28500
12.605 H Jukebox	28500
12.605 V kabel eins classics	28500
12.605 H NASN	28500
12.605 H NASN (engl)	28500
12.605 V Playhouse Disney (en	28500
12.605 H QVC	28500
12.605 V Rock TV	28500
12.605 H Silverline	28500
12.605 V Sky News (engl)	28500
12.605 V TCM Classic Movies (	28500
12.605 V Toon Disney (engl)	28500
12.605 H VH1 Classic	28500
12.605 H VH1 Classic (engl)	28500
12.605 H Voyages Television	28500
12.605 V Wein TV	28500
12.605 V BBC World Service	28500
12.636 V K-TV	2277
12.642 V DONO-TV	5600
12.672 V RTL Hessen	13016
12.672 V RTL MCR (ENEX 8	13016
12.672 V RTL NDS	13016
12.672 V RTL SH	13016
12.685 V arte	27500
12.685 V EinsExtra	27500
12.685 V EinsFestival	27500
12.685 V EinsPlus	27500
12.685 V Phoenix	27500
12.725 V Al Aqariya Real Esta	28500
12.725 V BBN (hollibag)	28500
12.725 V CaspioNet	28500
12.725 V EuroNews (engl)	28500
12.725 V EuroNews (fra)	28500
12.725 V First Musical Channe	28500
12.725 V Iran Music (pers)	28500
12.725 V LTV2 (lett)	28500
12.725 V Tunis 7 (tun)	28500
12.725 V TV Record (port)	28500
12.725 V VsCanaria (span	28500

BADR-3,4/EUROBIRD 2
26.0 East
BADR03KB
BADR-3 026.0° East
http://www.SatcoDX2.com/0260/
Coverage Code BADR03KB

11.746 V A Thurayа	27500
11.746 V Al Jawharа TV	27500
11.746 V Alkawthar	27500
11.746 V Arabsat coming soon	27500
11.746 V ARNshop	27500
11.746 V Eritrea	27500
11.746 V Oman	27500
11.746 V Oman Jeddah	27500
11.746 V Saudi 1	27500
11.746 V Saudi 2	27500
11.746 V Tayba TV	27500
11.746 V Test	27500
11.746 V TV5	27500
11.746 V UBN AFRICA	27500
11.746 V ERITERIA T	27500
11.746 V Kuwait R1	27500
11.746 V Kuwait R2	27500
11.746 V OMAN ENGLISH PROG	27500
11.746 V OMAN GENERAL PROG	27500
11.746 V OMAN YOUTH PROGRA	27500
11.746 V Radio RMC	27500
11.746 V RFI Radio	27500
11.746 V Saudi 2 R1	27500
11.746 V Saudi R1	27500
11.746 V Saudi R2	27500
11.746 V SUDAN R1	27500
11.746 V SUDAN R2	27500
11.766 H Al Zawra	27500
11.785 V Al Shop	27500
11.785 V Al Nasar	27500
11.785 V EL Emarah	27500
11.785 V Escape TV	27500
11.785 V FashionTV Arabia	27500
11.785 V Future	27500
11.785 V Future USA	27500
11.785 V Jaidah TV	27500
11.785 V Jaras TV	27500
11.785 V konouz-Tv	27500
11.785 V LBC	27500
11.785 V NBN	27500
11.785 V Sahan TV	27500
11.785 V Star	27500
11.785 V Strike	27500
11.785 V Tele Liban	27500
11.785 V test	27500
11.785 V Test 12	27500
11.785 V Test 13	27500
11.785 V Test 5	27500
11.785 V Thane Express	27500
11.785 V Al Nour Radio	27500
11.785 V Orient Radio	27500
11.785 V Test 10	27500
11.843 H Rotana Zaman	27500
11.843 H Al-Resala	27500
11.843 H Arabsat Coming Soon	27500
11.843 H Arabsat Promotion Ch	27500
11.843 H Info.Mohammed	27500
11.843 H Rotana Cinema	27500
11.843 H Rotana Clip	27500
11.843 H Rotana Khalijah	27500
11.843 H Rotana Music	27500
11.843 H Rotana Tarab	27500
11.843 H Arab Classical Music	27500
11.843 H Arab Pop Channel	27500
11.843 H News Channel	27500
11.843 H Radio Bahrain	27500
11.843 H Sudan R1	27500
11.843 H Sudan R2	27500
11.843 H Rotana TV	27500
11.843 H Traditional Music Pr	27500
11.862

SatcoDX Global Satellite Chart 04/2008

Freq Pol Channel Name Symbol rate GHz

Coming Soon

● 11.975 V Al Watan Plus 27500
11.975 V Al Watan TV 27500
● 11.975 V Channel 11 27500
● 12.090 V AL HIKMAIN 27500
● 12.090 V AL MOJTAMA 27500
● 12.090 V ARAB TV 27500
● 12.090 V Dunia TV 27500
● 12.090 V Fujairah Media 11 27500
● 12.090 V Fujairah Media 12 27500
● 12.090 V Fujairah Media 6 27500
12.090 V Petrogas TV 27500
● 12.090 V Retrutiment TV 27500
● 12.090 V Shaer al Rasoul 27500
● 12.090 V SMARTSWAY 27500
12.090 V Zoal TV 27500
12.090 V Fujairah FM Radio 27500

C-Band: BADR-C

26.1 East

BADR10CCH

BADR-C 026.0° East

Coverage Code BADR0CCH

3.745 H Yemen TV 3340
3.836 H CNN International
3.836 H CNN Radio
3.836 H Al Jawhara
3.882 H Family TV
● 3.882 H Fluetooth
3.882 H Ghinwa
3.882 H Oyun Jeddah
3.882 H Press TV
3.882 H Qanaa
● 3.882 H Sayedaty
3.882 H Thane TV
3.882 H Thmarya TV
● 3.882 H Wazefaty
● 3.882 H Yara TV
3.916 H Saudi Arabian TV 1
3.916 H Al-Quran Al-Karim
3.916 H Program One
3.956 H Saudi Arabian TV 2
3.956 H Second Program
3.956 H Aljazeera International
4.040 H Al-Ekhbaria 27500
4.040 H Dubai Sport 27500
4.040 H Dubai TV 27500
4.040 H Ethiopia 27500
4.040 H IQRA 27500
4.040 H JCS 27500
4.040 H JCS Sports 1 27500
4.040 H Riyadiyah 27500
4.040 H Saudi-1 27500
4.040 H Saudi-2 27500
4.040 H Ethiopia R1 27500
4.076 H Al Jazeera
4.076 H Qatar Radio
4.076 H Al-Khaleej 100.
4.120 H Abu Dhabi 27500
● 4.120 H Al Arabiya 27500
● 4.120 H Al Hadeera Mubasher 27500
● 4.120 H AL MONOWA 27500
● 4.120 H Future TV 27500
4.120 H Lybia 27500
● 4.120 H MBC 1 TV 27500
● 4.120 H Oman TV 27500
● 4.120 H One TV 27500
● 4.120 H Sudan 27500
● 4.120 H Radio Orient 27500

BADR10CCV

BADR-C 026.0° East

Coverage Code BADR0CCV

3.964 V Alhurra
4.005 V Dubai Arabic AM
4.005 V Dubai FM 92.0
4.045 V MBC FM
4.124 V YEMEM TV

ASTRA 2A-B-C-D

28.2 East

AST02ANO

ASTRA 2A 028.2° East

Coverage Code AST02ANO

11.758 H 1481 27500
11.758 H 1482 27500
11.758 H 1381 27500
11.758 H 1382 27500
11.758 H 1384 27500
11.758 H 1385 27500
11.758 H 1386 27500
11.758 H 1387 27500
11.758 H 1388 27500
11.758 H 1480 27500
11.758 H 1481 27500
11.758 H 1483 27500
11.758 H 1484 27500
11.758 H 1485 27500
11.758 H 1486 27500
11.758 H 1487 27500
11.758 H 1488 27500
11.758 H 1489 27500
11.836 H Sky Action 27500
11.836 H Sky Classics 27500
11.836 H Sky Comedy 27500
11.836 H Sky Drama 27500
11.836 H Sky Family 27500
11.836 H Sky Indie 27500
11.836 H Sky SciFi/Horror 27500
● 11.856 V Fraz TEST1 27500
● 11.856 V Fraz TEST2 27500
● 11.856 V Fraz TEST3 27500
● 11.856 V Fraz TEST4 27500
● 11.856 V Music Choice 27500
11.856 V 60s 27500
● 11.856 V 70s 27500
● 11.856 V 80s 27500
● 11.856 V 90s 27500
● 11.856 V All Day Party 27500
● 11.856 V Arabic 27500
● 11.856 V Bass, Breaks & Beats 27500
● 11.856 V Blues 27500
● 11.856 V Boulevard Hits 27500
● 11.856 V Chansons 27500
● 11.856 V Chillout 27500
● 11.856 V Classic R'n'B & Soul 27500
● 11.856 V Classic Rock 27500
● 11.856 V Classical Calm 27500
● 11.856 V Classical Greats 27500
● 11.856 V Classical Orchestral 27500
● 11.856 V Cocktail Lounge 27500
● 11.856 V Cool Jazz 27500
● 11.856 V Country 27500
● 11.856 V Dance/Floor Fillers 27500
● 11.856 V Drive 27500
● 11.856 V Freedom 27500
● 11.856 V Groove (Disco & Funk 27500
● 11.856 V Harder Than Hell 27500
● 11.856 V Hip Hop 27500
● 11.856 V Indie Classics 27500
● 11.856 V Jazz Classics 27500
● 11.856 V Kids 27500
● 11.856 V New Age 27500
● 11.856 V Reggae 27500
● 11.856 V Revival (60s-70s) 27500
● 11.856 V Rewind (80s-90s) 27500
● 11.856 V Rock 'n' Roll 27500
● 11.856 V Rock Anthems 27500
● 11.856 V Schlager 27500
● 11.856 V Silk (Love Songs) 27500
● 11.856 V The Alternative - UK 27500
● 11.856 V The Alternative-GER 27500
● 11.856 V Total Hits - France 27500
● 11.856 V Total Hits - Germany 27500

● 11.856 V Total Hits - Italy 27500
● 11.856 V Total Hits - NL 27500
● 11.856 V Total Hits - Nordic 27500
● 11.856 V Total Hits - Spain 27500
● 11.856 V Turk Muzik 27500
● 11.856 V Urban 27500
● 11.856 V World Music 27500
● 11.856 V EPG Background Audio 27500
● 11.856 V IEPG data 1 27500
11.856 V SRM-1 27500
11.856 V DCS3 27500
11.914 H TV5 27500
11.914 H DCS5 27500
11.934 V BLs 27500
11.934 V Sky Cust Ch 27500
11.934 V DCS6 27500
● 11.954 H BBC NEWS 24 27500
11.954 H BBC PARLIMNT 27500
● 11.954 H TA STRM-1 27500
11.954 H TA STRM-1 27500
11.954 H Xtra BBC 27500
11.954 H BBC London 27500
11.954 H BBC 6 Music 27500
11.954 H BBC7 27500
11.954 H BBC Asian N. 27500
11.954 H BBC R Cymru 27500
11.954 H BBC R Gael 27500
11.954 H BBC R Scot. 27500
11.954 H BBC R Ulster 27500
11.954 H BBC R Wales 27500
11.955 H BBC R1 27500
11.955 H BBC R2 27500
11.955 H BBC R3 27500
11.955 H BBC R4 FM 27500
11.955 H BBC R5 LW 27500
11.955 H BBC WS 27500
11.954 H ETV3 27500
12.148 H Eurosport2 UK 27500
12.148 H Hallmark 27500
12.148 H ParaComedy 2 27500
● 12.148 H STTest 27500
12.148 H SCI FI 27500
12.148 H Sky Sports 1 27500
12.148 H Sky Sp News 27500
12.148 H Sky Spts Xtra 27500
12.148 H SP News 27500
12.148 H SP Xtra 27500
12.168 V C4L Test 1 27500
12.168 H Channel 4 27500
12.226 H 1837 27500
12.226 H 1840 27500
12.226 H 1841 OSM Test 27500
12.226 H KISS 27500
12.226 H Q 27500
12.226 H Sky One 27500
12.226 H Sky Three 27500
12.226 H Sky Two 27500
12.226 H The Box 27500
12.226 H CommunityChnl 27500
● 12.246 V Shell DAL 27500
12.246 V Sky Bet, Vegas & Sky 27500
12.246 V Vegas Elvis 27500
12.246 V Vegas Diamond Look 27500
12.246 V Vegas Chamber of Gol 27500
12.246 V Vegas Cleopatra 27500
12.246 V Vegas Diamond Compas 27500
12.246 V Vegas DOND 27500
12.246 V Vegas Game 5 27500
12.246 V Vegas Game 6 27500
12.246 V Vegas Golden Doubloo 27500
12.246 V Vegas House of Horro 27500
12.246 V Vegas Kung Fu Cash 27500
12.246 V Vegas Monopoly 27500
12.246 V Vegas Pyramid 27500
12.246 V Vegas Rainbow Riches 27500
12.246 V Vegas Roulette II 27500
12.246 V Vegas Wanted DOA 27500
12.246 V WAP Browser 1 27500
12.246 V WAP Browser 2 27500
12.246 V Way Casino One 27500
12.246 V Wonder Perks 27500
12.246 V Vegas 3 Card poker 27500
12.246 V Vegas Blackjack 27500
12.246 V Vegas Caribbean Stud 27500
12.246 V Vegas Video Poker 27500
12.422 H 3020 27500
12.422 H 7505 27500
12.422 H 7521 27500
12.422 H Five 27500
12.422 H Five Life 27500
12.422 H Five Life +1 27500
12.422 H Five US 27500
12.422 H Five US +1 27500
12.422 H ITV1 Stream 27500
12.422 H Teletext Holidays 27500

AST02ASO

ASTRA 2A 028.2° East

Coverage Code AST02ASO

11.739 V Bravo 27500
11.739 V Bravo 27500
11.739 V Bravo+1 27500
11.739 V Bravo- 27500
11.739 V Challenge 27500
11.739 V Challenge+ 27500
11.739 V LIVING 27500
11.739 V LIVING +1 27500
11.739 V Living+ 27500
11.739 V LIVING+1 27500
11.739 V Living- 27500
11.739 V test~~ 27500
11.739 V Trouble 27500
11.739 V Trouble+ 27500
● 11.798 H Channel 4 HD 29500
● 11.796 H Sky Screen 1HD 27500
11.817 V Dave 27500
11.817 V UK Food- 27500
11.817 V UK Gold 2~ 27500
11.817 V UK Gold~ 27500
11.817 V UK History~ 27500
11.817 V UK SG~ 27500
11.817 V UK Style~ 27500
11.817 V UK Style~~ 27500
11.817 V UKTV Docs 27500
11.817 V Uktv Docs~ 27500
11.817 V UKTV Drama 27500
11.817 V UKTV Food 27500
11.817 V UKTV Food +1 27500
11.817 V UKTV Gardens 27500
11.817 V UKTV Gold 27500
11.817 V UKTV History 27500
11.817 V UKTV Style 27500
11.876 H Animal Planet 27500
11.876 H dix+ 27500
11.876 H Disc.H&H+1 27500
11.876 H Disc.H&Health 27500
11.876 H Disc.Knowledge 27500
11.876 H Disc.RealTime 27500
11.876 H Disc.Science 27500
11.876 H Disc.Travel&L 27500
11.876 H Disc.Turbo 27500
11.876 H Discovery 27500
11.876 H Discovery+1 27500
11.876 H H&I 27500
11.876 H H200 27500
11.876 H TH42 27500
11.895 V Mtv 27500
11.895 V MTV BASE 27500
11.895 V MTV DANCE 27500
11.895 V MTV HITS 27500
11.895 V MTV ONE 27500
● 11.895 V MTV ONE +1 27500
11.895 V MTV Trax 27500
11.895 V MTV TWO 27500
11.895 V MTV® 27500
11.895 V TMF 27500
11.895 V VH1 27500
11.895 V VH1 Classic 27500
11.895 V Boomerang 27500
11.895 V Boomerang +1 27500
12.051 V Cartoon I 27500
12.051 V Cartoon Network 27500
12.051 V CN Too 27500
12.051 V Cni 27500
12.051 V Toonami I 27500
12.051 V CNN 27500
● 12.051 V Nuts TV 27500
12.051 V 5656 27500
12.129 V B4U Movies 27500
12.129 V 7308 27500
12.129 V B4U Music 27500
12.129 V Create & Craft 27500
12.129 V Flix 27500
12.129 V S4C SE 27500
12.129 V S4C2 27500
12.129 V Teletext Holidays 27500
12.129 V Teletext Hols 27500
12.129 V Vitality 27500
12.129 V Teletext Holidays & 27500
12.480 V Channel 4 +1 27500
● 12.480 V Rtd 27500

AST02NO

ASTRA 2A 028.2° East

Coverage Code AST02NO

11.992 H 6103 27500
11.992 H 7360 27500
11.992 H 7601 27500
11.992 H Dave +1 27500
11.992 H UKTV Docs+1 27500
11.992 H UKTV Docs+1~ 27500
11.992 H UKTV Drama+1 27500
11.992 H UKTV Food +1 27500
11.992 H UKTV Gold +1 27500
11.992 H Uktv Gold+1~ 27500
11.992 H UKTV H'tory+1 27500
11.992 H UKTV People 27500
11.992 H UKTV Style +1 27500
● 12.012 V Entertainment Video 27500
12.012 V Portal Video 27500
12.012 V Portal Video 1 27500
12.012 V Portal Video 2 27500
12.012 V Portal Video 5 27500
12.012 V Sky Wonder Perks 27500
12.012 V Cartoon Network Game 27500
12.012 V Cartoon Network Game 27500
12.012 V Cartoon Network Game 27500
12.012 V Cartoon Network Game 27500
12.012 V Games Slot 1 27500
12.012 V Games Slot 10 27500
12.012 V Games Slot 11 27500
12.012 V Games Slot 12 27500
12.012 V Games Slot 13 27500
● 12.012 V Games Slot 14 27500
12.012 V Games Slot 15 27500
12.012 V Games Slot 16 27500
12.012 V Games Slot 17 27500
12.012 V Games Slot 18 27500
12.012 V Games Slot 19 27500
12.012 V Games Slot 2 27500
12.012 V Games Slot 20 27500
12.012 V Games Slot 21 27500
12.012 V Games Slot 22 27500
12.012 V Games Slot 23 27500
12.012 V Games Slot 24 27500
12.012 V Games Slot 25 27500
12.012 V Games Slot 26 27500
12.012 V Games Slot 3 27500
12.012 V Games Slot 4 (catfia 27500
12.012 V Games Slot 5 27500
12.012 V Games Slot 6 27500
12.012 V Games Slot 7 27500
12.012 V Games Slot 8 27500
12.012 V Games Slot 9 27500
12.012 V Sky Customer Organiser 27500
12.012 V Portal Video Applica 27500
12.012 V iSAles 27500
12.012 V Sky Bet on Channel 5 27500
12.012 V Sky Customer Service 27500
12.012 V Sky E Sales CMS 27500
12.012 V Sky Shop Tests 27500
12.012 V WML IA Test 27500
12.070 H FOX News 27500
12.070 H Kerrang! 27500
12.070 H Magic 27500
12.070 H SCI FI +1 27500
12.070 H Sky Arts 27500
12.070 H Sky Sports 1 27500
12.070 H Sky Sports 2 27500
12.070 H Sky Spts News 27500
12.070 H Sky Spts Xtra 27500
12.070 H Smash Hits! 27500
12.070 H The Hits 27500
12.070 H DCS24 27500
12.090 V STAR News 27500
12.090 V STAR Plus 27500
12.090 V DCS8 27500
12.090 V EPG data 8 27500
12.284 V 4609 27500
12.284 V Net Geo 27500
12.284 V Nat Geo+1hr 27500
12.284 V RealmadridTV 27500
● 12.284 V Sky One 27500
● 12.284 V Sky Screen 1 27500
● 12.284 V Sky Screen 2 27500
12.284 V yd1oe6 27500
12.284 V yd2oe6 27500
12.284 V yd3oe6 27500
12.284 V yd4oe6 27500
12.284 V (Empty) 27500
12.284 V Nat Geo App 27500
12.382 H MMS 3 27500
12.382 H MMS 4 27500
12.382 H MMS 7 27500
12.382 H (Empty) 27500
12.382 H 1697 27500
12.382 H 4301 27500
12.382 H Movies Active 27500
12.382 H Sky 27500
12.382 H CH Line-up 27500
● 12.460 H IA Homes Dal 27500
● 12.460 H Portal Video 7 27500
12.460 H WML IA Application 27500
12.460 H WML IA Application 27500
12.460 H WML IA Application 27500
12.460 H WML IA Application 27500
12.460 H launchpad 27500
12.460 H Sky Active 27500
12.460 H Sky Games 27500
12.460 H Sky Upgrade Dal 27500
12.460 H TLM Portal Plug In 27500
12.460 H TLM Portal Redirecto 27500
12.460 H WML Highscores 27500
12.460 H WML IA Application 27500
12.460 H Camelot Info 27500
12.460 H Camelot Main 27500
12.460 H i-Service App 27500
12.460 H Pin Reminder Service 27500
12.460 H Set Top Box Ordering 27500
12.460 H Sky Bet Active 27500
12.460 H Sky Credit Card 1 27500
12.460 H Sky Credit Card 2 27500
12.460 H Sky Customer Service 27500
12.460 H SkyKeys / Internet S 27500
● 12.460 H Virgin105.8 27500
12.460 H TV Picks 27500

AST02BSO

ASTRA 2A 028.2° East

Coverage Code AST02BSO

11.973 V AlphaEtcPun 27500
● 11.973 V MAX 27500
11.973 V Sony TV Asia 27500
● 11.973 V UKTV Style 2 27500
11.973 V Zee Cinema 27500
11.973 V Zee Gujarati 27500
11.973 V Zee TV 27500
● 11.973 V U Save. TV 27500
11.973 V Zee Music 27500
12.032 H Id tv 27500
12.032 H Ideal World 27500
12.032 H price-drop tv 27500
12.032 H Q_1 27500
12.032 H Q_1 dir 27500
12.032 H QVC 27500
12.032 H QVC Barker 27500
12.032 H QVC TSVNOW 27500
12.032 H speedauctionty 27500
12.032 H Teachers TV 27500
12.109 H Sky Sports 1 27500
12.109 H SP3 27500
12.109 H Spts Ufa 27500
12.109 H Cartoonito 27500
12.109 H cx 27500
12.109 H FX 27500
12.109 H SBL 27500
12.109 H Sky Sports 2 27500
12.109 H Sky Sports 3 27500
12.109 H Sky Spts1 test 27500
12.109 H SP3 27500
12.109 H TCM 2 27500
12.109 H DCS2 27500
12.188 H MUTV 27500
12.188 H Chelsea TV 27500
12.188 H El Entertainm 27500
12.188 H Eurosport UK 27500
12.188 H Nat Geo Wild 27500
12.188 H ParaComedy 1 27500
12.188 H TCM 27500
12.188 H HSSNR 27500
12.188 H Sm3 27500
12.207 V Sky News 27500
12.207 V Sky News Eire (Cable 27500
12.207 V Sky News UK (Cable) 27500
12.266 H Jetix +1 27500
12.266 H Nick Jr-Test 27500
12.266 H Nick Jr. 27500
12.266 H Nick Replay 27500
12.266 H Nick Test 27500
12.266 H Nickelodeon 27500
12.266 H Nicktoons 27500
12.266 H Sky Sports 2 27500
12.266 H SkyVenue 27500
12.266 H SP2 27500
● 12.266 H (Empty) 27500
12.266 H 1720 27500
12.304 H 1429 27500
12.304 H 9355 27500
12.304 H Crime 27500
12.304 H Fire T2 Reg 2 27500
12.304 H Jetix 27500
12.304 H Retail Info 27500
12.304 H Sky Vegas 27500
12.304 H SkyPoker.com 27500
● 12.304 H Untraceable Dal 27500
● 12.324 V Discovery HD 29500
● 12.324 V HD Retail Info 29500
● 12.324 V SBO HD2 29500
● 12.324 V Sky Arts HD 29500
12.344 H Sky Box Office HD1 29500
12.344 H Sky One HD 29500
12.344 H Sky Screen 2HD 29500
12.363 V History HD 29500
12.363 V Nat Geo HD 29500
● 12.363 V SBO HD1 29500
12.441 V STREAM-9 27500
12.441 V STREAM-1 27500
12.441 V STREAM-2 27500
12.441 V STREAM-3 27500
12.441 V STREAM-4 27500
12.441 V STREAM-5 27500
12.441 V STREAM-6 27500

AST02DKB

ASTRA 2A 028.2° East

Coverage Code AST02DKB

10.714 H G41 22000
10.714 H ITV1 Anglia S 22000
10.714 H ITV1 Anglia W 22000
10.714 H ITV1 Central SW 22000
10.714 H ITV1 TT N 22000
10.714 H ITV1 TT S 22000
10.714 H ITV2+1 22000
● 10.714 H ITV1 Stream 3/41 22000
10.714 V TTG41 22000
● 10.714 H 10198 22000
10.729 V 8389 22000
10.729 V E4 22000
10.729 V E4+1 22000
10.729 V E4Ad 22000
10.729 V More4 22000
10.729 V More4 +1 22000
10.729 V FF TEST1 22000
10.729 V Film4 22000
10.729 V Film4 +1 22000
10.744 H DW-TV 22000
10.744 H RTE One 22000
10.744 H RTE TWO 22000
10.744 H TG4 22000
10.744 H TV3 22000
10.744 H RTE 2FM 22000
10.744 H RTE Lyric fm 22000
10.744 H RTE R na G 22000
10.744 H RTE Radio 1 22000
10.759 V GTV 22000
10.759 V ITV1 Anglia E 22000
10.759 V ITV1 Central W 22000
10.759 V ITV1 Granada 22000
10.759 V ITV1 London 22000
10.759 V ITV2 22000
10.759 V ITV4 22000
10.759 V Men & Motors 22000
10.773 H BBC 1 London 22000
10.773 H BBC 1 NI 22000
10.773 H BBC 2 England 22000
10.773 H BBC FOUR 22000
10.773 H BBC NEWS 24 22000
10.773 H BBC TES 3 22000
10.773 H BBC THREE 22000
10.773 H CBBC Channel 22000
10.773 H CBeebies 22000
10.773 H ETV 22000
10.787 V BBC 1 E Mids 22000
10.787 V BBC 1 East (E) 22000
10.787 V BBC 1 N West 22000
10.787 V BBC 1 W Mids 22000
10.787 V BBC 1 Yorks 22000
10.787 V BBC 1 Yrks&Lin 22000
10.787 V ETV5 22000
10.803 H BBC 1 Scotland 22000
10.803 H BBC 1 Wales 22000
10.803 H BBC 2 NI 22000
10.803 H BBC 2 Scotland 22000
10.803 H BBC 2W 22000
10.803 H ETV2 22000
10.803 H BBC 3LSport 22000
10.803 H BBC R5 Live 22000
10.803 H ETV3 22000
10.818 V BBC 1 NE & C 22000
10.818 V BBC 1 Oxford 22000
10.818 V BBC 1 S East 22000
10.818 V BBC 1 S West 22000
10.818 V BBC 1 South 22000
10.818 V BBC 1 West 22000
10.818 V ETV6 22000
10.832 H G49 22000
10.832 H ITV1 Border 22000
10.832 H ITV1 Central E 22000
10.832 H ITV1 Central S 22000
10.832 H ITV1 W Country 22000
10.832 H ITV1 Wales 22000
10.832 H ITV1 West 22000
10.832 H ITV1 Stream 2 22000
10.847 V 6945 22000
10.847 V BBC HD 22000
10.847 V BBC 1 CI 22000
10.847 V BBC 1 East (W) 22000
10.862 H DCT Info 22000
10.862 H Disney Chnl 22000
10.862 H Disney Chnl+1 22000
10.862 H Disney Cine 22000
10.862 H Disney Cine+1 22000
10.862 H Play Disney 22000
10.862 H Play Disney+ 22000
10.862 H ArrwRock 22000
10.862 H Gatasy 22000
10.862 H Heart 22000
10.862 H LBC 97.3 22000
10.862 H Oneword 22000
10.862 H Real Radio 22000
10.862 H Smooth 22000
10.862 H sm:Sr 22000
10.862 H talkSPORT 22000
10.862 H Yorr 22000
10.876 V 1356 22000
10.876 V At The Races 22000
10.876 V Fix 22000
10.876 V Sky Real Lives 22000
10.876 V Sky Sports 2 22000
10.876 V Sky Travel 22000
10.876 V SkyRealLive+1 22000
10.876 V SkyRealLives2 22000
10.891 H G53 22000
10.891 H ITV1 BorderSco 22000
10.891 H ITV1 Mer N 22000
10.891 H ITV1 Mer SE 22000
10.891 H ITV1 Meridian E 22000
10.891 H ITV1 Meridian S 22000
10.891 H ITV1 Yorks E 22000
10.891 H ITV1 Yorks W 22000
10.891 H tg53 22000
10.906 V G54 22000
10.906 V ITV Channel Is 22000
10.906 V ITV3 22000
10.906 V ITV3+1 22000
10.906 V stv 22000
10.906 V UTV 22000
10.920 H Current TV 22000
10.920 H NDTV 24x7 22000
10.936 V 1399 22000
10.936 V 1391 22000
10.936 V 1392 22000
10.936 V 1393 22000
10.936 V 1394 22000
10.936 V 1395 22000
10.936 V 1396 22000
10.936 V 1397 22000
10.936 V 1398 22000
10.936 V 1471 22000
10.936 V 1472 22000
10.936 V 1473 22000
10.936 V 1474 22000
10.936 V 1475 22000
10.936 V 1476 22000
10.936 V 1477 22000
10.936 V 1478 22000
10.936 V (Empty) 22000
10.964 H Five 22000
10.964 H Five Life 22000
10.964 H Five Life +1 22000
10.964 H Five US 22000
10.964 H Five US +1 22000

EUB00IKF

EUROBIRD 1 28.50° East

Coverage Code EUB00IKF

● 11.222 H DMAX+1 27500
11.222 H CelebrityShop 27500
11.222 H Chart Box 27500
● 11.222 H Clubland TV 27500
11.222 H Fashion TV 27500
11.222 H Get Lucky TV 27500
11.222 H Golf Pro-Shop 27500
11.222 H ROCKWORLDTV 27500
● 11.222 H SupremeMastr 27500
11.222 H UCB TV 27500
11.222 H Urban TV 27500
11.222 H Wonderful TV 27500
11.222 H YouPlay TV 27500
11.222 H Zone Reality X 27500
11.222 H BFBS Radio 27500
11.222 H Club Asia 27500
11.222 H Sunrise 27500
11.224 V Sahara Filmy 27500
11.224 V Sahara One 27500
11.224 V LivingInSpain 27500
● 11.224 V Mez 27500
11.224 V Movies4Men 2 27500
11.224 V MusFlashTV 27500
● 11.224 V oMusic TV 27500
● 11.224 V Pitch TV 27500
● 11.224 V Pitch World 27500
11.224 V PTV Global 27500
11.260 V AAJ TAK 27500
11.260 V Aapna Channel 27500
11.260 V Audi Channel 27500
● 11.260 V Fight Network 27500
11.260 V Gospel Channel 27500
11.260 V Mana Telugu 27500
11.260 V Open Access 27500
11.260 V Open Access 2 27500
11.260 V Open Access 3 27500
11.260 V Over 18 TV 27500
11.260 V Passion TV 27500
11.260 V SmartLive 27500
● 11.260 V Tease Me 27500
11.262 H Africa Channel 27500
11.262 H Channel 5 27500
11.262 H CNBC 27500
11.262 H DMAX 27500
11.262 H STAR Gold 27500
11.262 H STAR One 27500
11.262 H Business Chn'l 27500
11.262 H DM Digital 27500
11.262 H Gay Network 27500
11.262 H Max TV 27500
11.262 H SportxxxBabes 27500
11.262 H Thane Direct 27500
11.262 H Zone Horror 27500
11.262 H Zone Reality +1 27500
11.262 H Newstalk 27500
11.262 H Panjab Radio 27500
11.307 V Aastha TV 27500
11.307 H Bravo 2 27500
11.307 H Challenge+1 27500
11.307 H LIVING 27500
11.307 V Motors TV 27500
11.307 V Nickelodeon 27500
11.307 H Real Radio +1 27500
11.307 H Virgin 1 27500
11.307 H Virgin 1+1 27500
11.307 V XPLOIT XXX 27500
● 11.307 V 53370 27500
11.307 H Jewellery Ch. 27500
11.307 V JJB Sports TV 27500
11.307 H JML 27500
11.307 V PlayGaming 27500
11.307 H propeller 27500
11.307 V Simply Ideas 27500
11.307 V TV Warehouse1 27500
11.307 H Vinapris 27500
11.307 H Premier 27500
11.343 V ParaComedy2+ 27500
11.343 V Babestation 27500
11.343 V Babeworld.tv 27500
11.343 V Fizz 27500
11.343 V House Of Fun 27500
11.343 V Interplay 27500
11.343 V Lucky Star 27500
11.343 V Mainstreet 27500
11.343 V My Channel 27500
11.343 V Psychic TV 27500
11.343 V Raj TV 27500
11.343 V Sky Direct 27500
11.343 V Sumo TV 27500
11.343 V ZoneRomantica 27500
11.344 H Animal Plet+1 27500
11.344 H Disc.RT+1 27500
11.344 H Discovery+1.5 27500
11.344 H Nick Jr. 2 27500
11.344 H Bangla TV 27500
11.344 H Blue Kiss TV 27500
11.344 H DM Gold 27500
11.344 H Essex Babes 27500
11.344 H LivexxxBabes 27500
11.344 H Price Crash 2 27500
11.344 H Real Estate TV 27500
11.344 H Sumo TV +1 27500
11.344 H Wedding TV 27500
11.389 V Alnitak Channel 27500
11.389 V Climax3 - 1 27500
11.389 V Climax3 - 2 27500
11.389 V Climax3 - 3 27500
11.389 V movies24 27500
11.389 V movies24+ 27500
11.389 H Nick Jr 27500
11.389 V Playboy TV 27500
11.389 V pridtt 27500
11.389 V Spice Extreme 27500
11.389 V ARY The Musik 27500
11.389 V Babestation 27500
11.389 V Dating Channel 27500
11.389 V Entrepreneur 27500
11.389 H Film2 27500
11.389 H Gems TV2 27500
11.389 V MATV National 27500
11.389 H Northern Birds 27500
11.389 H Performance 27500
11.389 V Playboy One 27500
● 11.389 H Sunrise TV 27500
11.389 H The Other Side 27500
11.389 H Travel Ch +1 27500
11.389 V Amrit Bani 27500
11.389 V big L 1395 27500
11.389 V Caroline 27500
11.389 V CC Radio 27500
11.389 V Colourful 27500
11.389 V Desi Radio 27500
11.389 V DutchInt'Sv 27500
11.389 V EWTN 27500
11.389 V Family Radio 27500
11.389 V Gaydarradio 27500
11.389 V InsightRadio 27500
11.389 V MOS Radio 27500
11.389 V Pulse Rated 27500
11.389 V Rasj Radio 27500
11.389 V Radio 27500
11.389 V Rainbow 27500
11.389 V Recordbrazil 27500
11.389 V RTE Europe 27500
11.389 V Spectrum 1 27500
11.389 V Starpoint Radio 27500
11.389 V The Word 27500
11.389 V TWR 27500
11.389 V VIP Radio 27500
11.389 V Virgin Radio 27500
11.389 V Virgin105.8 27500
11.389 V VirginCRock 27500
11.389 V VirginGrve 27500
11.389 V VirginXtrme 27500
11.389 V WRN Europe 27500
11.389 V Yorkshire R 27500
11.426 V Diva TV 27500
11.426 V SouthForYou 27500
11.426 V 52545 27500
● 11.426 V 52555 27500
11.426 V AAG 27500
11.426 V ARY QTV 27500
11.426 V Bloomberg 27500
11.426 V DD-India 27500
11.426 V GEO UK 27500
11.426 V i'Play TV 27500
11.426 V KICC TV 27500
11.426 V OBE 27500
11.426 V Venus TV 27500

EUB00I1S1

EUROBIRD 1 28.50° East

Coverage Code EUB00I1S1

11.469 H MMS 1 27500
11.469 H MMS 2 27500
11.469 H MMS 5 27500
11.469 H MMS 6 27500
11.469 H MMS 8 27500
11.469 H TVEI 27500
11.469 H (Empty) 27500
11.469 H Directgov 27500
11.469 H Sky Customer Service 27500
11.469 H Channel Punjab 27500
11.488 V Channel 'S' 27500
11.488 V Channel S ATN 27500
11.488 V Channel S NTV 27500
11.488 V France 24 27500
● 11.488 V HappyHourGirls 27500
● 11.488 V Info TV2 27500
11.488 V revelation 27500
● 11.488 V Smart Shop TV 27500
● 11.488 V Tease Me 2 27500
11.508 H 1784 27500
● 11.508 H 1787 27500
11.508 H SADT 27500
11.508 H BN2 27500
11.508 H BS28 27500
11.508 H EIA2 Test 27500
11.508 H EIA2 Test 3 27500
11.508 H EIA2 Test 4 27500
11.508 H EIA2 Test 5 27500
11.508 H EIA2 Test 6 27500
● 11.508 H ISM 5+1 27500
11.508 H ISM Sky News v6 27500
11.508 H ISM Sky One v6 27500
11.508 H ISM Sports 1 v6 27500
11.508 H ISM Testt v6 27500
11.508 H Pub Channel 27500
11.508 H STT 27500
11.527 V ParaComedy 1 27500
11.527 V Channel M 27500
11.527 V GayDateTV 27500
11.527 V NHS 13 27500
11.527 V NHS V1 27500
11.527 V NHS V1H 27500
11.527 V NHS V2 27500
11.527 V NHS V2t 27500
11.527 V Thomas Cook 27500
11.527 V NHS A1 27500
11.527 V NHS A2 27500
11.527 V NHS Direct Interacti 27500
11.546 H ARY Digital 27500
11.546 H ParaComedy+1 27500
11.546 H AVAGO (Cable) 27500
11.546 H AvaTest 27500
11.546 H cso 27500
11.546 H cso T 27500
11.546 H Fatih 27500
11.546 H Gala TV 27500
11.546 H GEO News 27500
11.546 H Home&Travel 27500
11.546 H PokerZone 27500
11.546 H Shop on TV 27500
11.546 H Wine TV 27500
11.565 V E4 27500
11.565 V GO Tobacco Dal 27500
11.565 V Film DAL 27500
11.565 V Ford Focus Dal 27500
11.565 V Portal Video 6 27500
11.565 V Sky Games II 27500
11.565 V Subaru Dal 27500
11.565 V Video Application Va 27500
11.565 V Movie Quiz 27500
11.565 V Sky Anytime Dal 27500
11.565 V Camelot Test ABB 27500
11.565 V Camelot Test Info 27500
11.565 V Cinema Guide ABB 27500
11.565 V KOOPID ABB 27500
11.565 V LADBROKES ABB 27500
11.565 V Local authority 27500
11.565 V Sky Bet Channel Fou 27500
11.565 V Sky Bet At The Races 27500
11.585 H Arsenal TV 27500
● 11.585 H LiverpoolFCTV 27500
11.585 H NASN 27500
11.585 H Racing UK 27500
11.585 H Racing World 27500
11.585 H Setanta Ireland 27500
11.585 H Setanta Sports 27500
11.603 V Biography 27500
11.603 V History 27500
11.603 V History +1 hour 27500
11.603 V Sky Mix Greats 27500
11.603 V Sky Pren+1 27500
11.603 V Sky Premiere 27500
11.623 H Rally TV 27500
● 11.623 H 50849 27500
11.623 H Abu Dhabi TV 27500
11.623 H Al Nahar TV 27500
11.623 H Horse & Country 27500
● 11.623 H Live XXX 27500
11.623 H MDNF Chinese 27500
11.623 H PTV Prime 27500
11.623 H Russia Today 27500
11.623 H 5850 27500
11.623 H Heat 27500
11.623 H Nuna 27500
11.623 H Kerrang 27500
11.623 H Kiss 27500
11.623 H Magic 27500
11.623 H MOJO 27500
11.623 H Moto 27500
11.623 H Q 27500
11.623 H Smash Hits! 27500
11.623 H The Hits 27500
11.623 H Wind Ocean 27500
11.642 V Anime Central 27500
11.642 V Bliss 27500
11.642 V Chart Show TV 27500
11.642 V Flavor 27500
11.642 V NME TV 27500
11.642 V POP 27500
11.642 V Pop +1 27500
11.642 V PopGirl 27500
11.642 V Scuzz 27500
11.642 V The Vault 27500
11.642 V Tiny Pop 27500
11.642 V Tiny Pop +1 27500
11.642 V True Movies 27500
11.642 V True Movies 2 27500
11.662 H ESPN Classic 27500
11.662 H CCTV-9 27500
11.662 H Inspiration 27500
11.662 H Live Roulette 27500
11.662 H LOVEWORLD TV 27500
11.662 H mta-muslim tv 27500
11.662 H Weed Network 27500
11.662 H Ladbrokes Roulette 27500
11.662 H PlayJam Games 27500
11.662 H Ladbrokes Betting & 27500
● 11.662 H Ladbrokes Blackjack 27500
11.662 H Ladbrokes test 27500
11.662 H Ladbrokes Test APP2 27500
11.681 V Extreme Sports 27500
11.681 V Fashion One 27500
11.681 V FriendlyTV 27500
11.681 V GOD Channel 27500
11.681 V GOD Europe 27500
11.681 V HollywoodTV 27500
11.681 V Islam Channel 27500
11.681 V Peace TV 27500
11.681 V TBN Europe 27500
● 11.720 H Sky Sports HD1 29500
● 11.720 H Sky Sports HD2 29500

EUB00IS2

EUROBIRD 1 28.50° East

Coverage Code EUB00IS2

● 12.523 H 55013 27500
● 12.523 H AIT Int'l 27500
● 12.523 H Baby Channel 27500
12.523 H BEN 27500
● 12.523 H DAYSTAR 27500
● 12.523 H EWTN 27500
12.523 V Gems TV 27500
12.523 H Genesis 27500
● 12.523 H Information TV 27500
● 12.523 V JML Choice 27500
● 12.523 V JML Innovation 27500
● 12.523 V JML Solutions 27500
12.523 V Life One 27500
● 12.523 H Movies Max 27500
● 12.523 H Nollywood 27500
● 12.523 V Price Crash 27500
● 12.523 V Reality TV 27500
● 12.523 V Record TV 27500
● 12.523 H Simply TV 27500
● 12.523 V Step By Step 27500
● 12.523 V TV SHOP 27500
● 12.523 V TV Warehouse 27500
● 12.523 V TVW Select 27500
● 12.523 V Zone Reality 27500
● 12.523 H 52525 27

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SatcoDX Global Satellite Chart 04/2008

EXPA22K2

EXPRESS-AM22 053.1° East

Ku-Band Beam 3

http://www.SatcoDX3.com/0531
Coverage Code EXPA22K2

Freq Pol	Channel Name	Symbol rate
10.974 H	5 Channel	8150
10.974 H	DVB-RCS Data	8150
11.022 H	SGU Internet	8888
11.031 H	CTPAHA COBETOB	3750
11.044 V	1-Muz BY	44950
11.044 V	CTC+0	44950
11.044 V	CTC+2	44950
11.044 V	Domashny+0	44950
11.044 V	Domashny+2	44950
11.044 V	FNS	44950
11.044 V	MuzTV+Love	44950
11.044 V	World Music Channel	44950
11.044 V	Love Radio	44950
11.044 V	Radio CH59	44950
11.044 V	Radio CH61	44950
11.044 V	Radio CH52	44950
11.044 V	Radio CH53	44950
11.044 V	Radio Max	44950
11.044 V	DATA CTC	44950
11.095 V	NTN	6400
11.095 V	UTR	6400
11.095 V	RUI2	6400
11.095 V	UR1	6400
11.124 V	Data services	7590
11.161 V	STV	5785
11.161 V	Belarus-TV	5785
11.616 V	Allibiya Satellite C	2892
12.631 V	ASHUR TV	2530
12.632 H	Al Salam	2170
12.637 H	Al Masar	2532
12.639 V	AL RAI 1B	2892
12.639 V	TV	2892
12.652 H	Al-Mosulia	2532
12.664 V	ART-Feed	30000
12.664 V	CH1-SCR	30000
12.664 V	CH2-SCR	30000
12.664 V	ERTU	30000
12.664 V	Feed-2	30000
12.664 V	JSC-Feed	30000
12.664 V	OrbitLine1	30000
12.664 V	OrbitLine2	30000
12.664 V	OrbitLine3	30000
12.664 V	Al-Majd Feed	30000
12.664 V	CH5	30000
12.664 V	CH8	30000
12.664 V	ESCA	30000
12.664 V	Feed-4	30000
12.664 V	N DRAMA	30000
12.664 V	HolyQuran Radio	30000
12.741 H	ERTU	7086
12.741 H	Ch-4	7086
12.741 H	Service 2	7086
12.741 H	test-e	7086

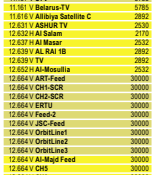
EXPRESS AM22/SESAT 2

53.1 East

EXPA22K1

EXPRESS-AM22 053.1° East

Ku-Band Beam 1



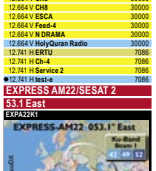
http://www.SatcoDX3.com/0531
Coverage Code EXPA22K1

Freq Pol	Channel Name	Symbol rate
11.682 V	Limar TV	5000
11.682 V	Tele TV	5000

EXPA22K2

EXPRESS-AM22 053.1° East

Ku-Band Beam 2



http://www.SatcoDX3.com/0531
Coverage Code EXPA22K2

Freq Pol	Channel Name	Symbol rate
10.974 H	5 Channel	8150
10.974 H	Kanal 5	8150
10.974 H	DVB-RCS Data	8150
11.022 H	SGU Internet	8888
11.031 H	CTPAHA COBETOB	3750
11.044 V	1-Muz BY	44950
11.044 V	CTC+0	44950
11.044 V	CTC+2	44950
11.044 V	Domashny+0	44950
11.044 V	Domashny+2	44950
11.044 V	FNS	44950
11.044 V	MuzTV+Love	44950
11.044 V	World Music Channel	44950
11.044 V	Love Radio	44950
11.044 V	Radio CH59	44950
11.044 V	Radio CH61	44950
11.044 V	Radio CH52	44950
11.044 V	Radio CH53	44950
11.044 V	Radio Max	44950
11.044 V	DATA CTC	44950
11.095 V	NTN	6400
11.095 V	UTR	6400
11.095 V	RUI2	6400
11.095 V	UR1	6400
11.124 V	Data services	7590
11.161 V	MINSK TV	5785
11.161 V	STV	5785
11.161 V	Belarus-TV	5785
11.616 V	Allibiya Satellite C	2892
12.631 V	ASHUR TV	2530
12.632 H	Al Salam	2170
12.637 H	Al Masar	2532
12.639 V	AL RAI 1B	2892
12.639 V	TV	2892
12.652 H	Al-Mosulia	2532
12.664 V	ART-Feed	30000
12.664 V	CH1-SCR	30000
12.664 V	CH2-SCR	30000
12.664 V	ERTU	30000
12.664 V	Feed-2	30000
12.664 V	JSC-Feed	30000
12.664 V	OrbitLine1	30000
12.664 V	OrbitLine2	30000
12.664 V	OrbitLine3	30000
12.664 V	Al-Majd Feed	30000
12.664 V	CH5	30000
12.664 V	CH8	30000
12.664 V	ESCA	30000
12.664 V	Feed-4	30000
12.664 V	N DRAMA	30000
12.664 V	HolyQuran Radio	30000
12.741 H	ERTU	7086
12.741 H	Service 2	7086
12.741 H	Ch-4	7086
12.741 H	test-e	7086

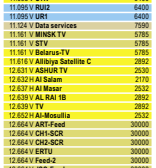
C-Band: INSAT 3E

55.0 East

INS03ECI

INSAT 3E 055.0° East

C-Band Beam 1



http://www.SatcoDX3.com/0550
Coverage Code INS03ECI

Freq Pol	Channel Name	Symbol rate
3.970 V	Test	4250
4.000 V	DDK-HISAR	4250

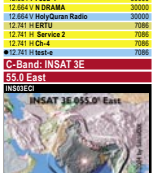
BONUM 1

56.0 East

BON001KU

BONUM 1 056.0° East

Ku-Band Beam 1



http://www.SatcoDX3.com/0560
Coverage Code BON001KU

Freq Pol	Channel Name	Symbol rate
12.345 R	NTV Plus	27500
12.303 L	Ermak	27500
12.322 R	NTV Plus	27500
12.456 L	Sverdsryny Dozhd	5000
12.476 R	NTV Plus	27500

NSS 703

57.0 East

NSS703EH

NSS-703 057.0° East

Ku-Band Beam 3

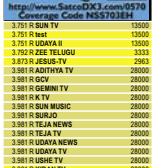
http://www.SatcoDX3.com/0570
Coverage Code NSS703EH

Freq Pol	Channel Name	Symbol rate
3.751 R	SUN TV	13500
3.751 R	test	13500
3.751 R	UDAYA II	13500
3.792 R	ZEE TELUGU	3333
3.873 R	JESUS-TV	2963
3.981 R	ADITHYA TV	28000
3.981 R	GCV	28000
3.981 R	GEMINI TV	28000
3.981 R	K TV	28000
3.981 R	SUN MUSIC	28000
3.981 R	SURJO	28000
3.981 R	TEJA NEWS	28000
3.981 R	TEJA TV	28000
3.981 R	UDAYA NEWS	28000
3.981 R	UDAYA TV	28000
3.981 R	USHE TV	28000
3.981 R	KIRAN TV	28000
3.981 R	SUN NEWS	28000
3.981 R	SUN TV	28000
3.981 R	SURYA TV	28000
3.981 R	SURYAN FM	28000

NSS703GU

NSS-703 057.0° East

Ku-Band Beam 2



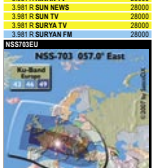
http://www.SatcoDX3.com/0570
Coverage Code NSS703GU

Freq Pol	Channel Name	Symbol rate
11.507 V	B-SKY-B	2917
12.551 V	MTV	9404
12.551 V	eUrotic ASTRA	9404
12.551 V	VTK	9404
12.551 V	BRAVO Radio	9404

NSS703GL

NSS-703 057.0° East

Ku-Band Beam 1



http://www.SatcoDX3.com/0570
Coverage Code NSS703GL

Freq Pol	Channel Name	Symbol rate
4.055 R	AETN TV 340	25594
4.055 R	Al Hurra TV 150	25594
4.055 R	Ch. 1 - Default	25594
4.055 R	IBB OS Download 8	25594
4.055 R	IBB OS Download 9	25594
4.055 R	VOA IOR TV 420	25594
4.055 R	Farda Radio 448	25594
4.055 R	Farda Radio 456	25594
4.055 R	IBB VOA RFE/RL Ra	25594
4.055 R	IBB VOA RFE/RL Ra	25594
4.055 R	IBB VOA RFE/RL Ra	25594
4.055 R	IBB VOA RFE/RL Ra	25594
4.055 R	IBB VOA RFE/RL Ra	25594
4.055 R	IBB VOA RFE/RL Ra	25594
4.055 R	RFA Radio 436	25594
4.055 R	RFA/VOA Radio 437	25594
4.055 R	Sawa Djibouti 421	25594
4.055 R	Sawa Egypt Radio 452	25594
4.055 R	Sawa Egypt/Gulf Radi	25594
4.055 R	Sawa Gulf Radio 453	25594
4.055 R	Sawa Gulf/VOA Djib	25594
4.055 R	Sawa Iraq / Iraq N-S	25594
4.055 R	Sawa Iraq Radio 451	25594
4.055 R	Sawa Lebanon Radio 4	25594
4.055 R	Sawa Levant Radio 45	25594
4.055 R	Sawa S.Africa Radio	25594
4.055 R	Sawa Sudan Radio 455	25594
4.055 R	VOA Djibouti/Farda	25594
4.055 R	VOA/Sawa Iraq/Radi	25594
4.055 R	VOA/Sawa Lebanon R	25594
4.055 R	VOA/Sawa Levant Ra	25594
4.066 L	AL HURRA IRAQ	6600
4.066 L	MPEG TEST SERVICE	6600

NSS703NW

NSS-703 057.0° East

C-Band Beam 1

http://www.SatcoDX3.com/0570
Coverage Code NSS703NW

Freq Pol	Channel Name	Symbol rate
3.910 L	TV	2894
3.910 L	RTV	2894

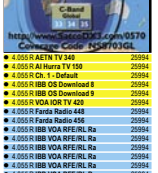
INTELSAT 904

60.0 East

INT904KI

INTELSAT 904 060.0° East

Ku-Band Spot 1



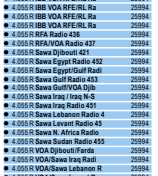
http://www.SatcoDX3.com/0600
Coverage Code INT904KI

Freq Pol	Channel Name	Symbol rate
11.093 V	Nika TV	3980
11.093 V	Milicejskaya Volna	3980
11.451 V	RTV Radio	5787
11.491 V	Mayak Kubani	5787
11.491 V	Radio Roks-Region	5787
11.514 V	test	7600
11.529 V	Belarus TV	2893
11.554 V	Data service	27500

INT904K2

INTELSAT 904 060.0° East

Ku-Band Spot 2



http://www.SatcoDX3.com/0600
Coverage Code INT904K2

Freq Pol	Channel Name	Symbol rate
11.555 H	Animal Planet Europe	29270
11.555 H	BBC World	29270
11.555 H	Discovery Travel & A	29270
11.555 H	El Anio	29270
11.555 H	Fox Kids Russia & Tu	29270
11.555 H	Hallmark Channel (Ru	29270
11.555 H	KTK TV	29270
11.555 H	MTV Russia	29270
11.555 H	MTK	29270
11.555 H	NTV	29270
11.555 H	Rakhat TV	29270
11.555 H	TV XXI	29270
11.555 H	Europa Plus Kazakhst	29270
11.595 H	Discovery Channel Ru	29270
11.595 H	EuroNews	29270
11.595 H	Eurosport Russia	29270
11.595 H	Kazakhstan TV	29270
11.595 H	Khabar TV	29270
11.595 H	MCM Europe	29270
11.595 H	ORT Kazakhstan	29270
11.595 H	Telekanal Rossiya	29270
11.595 H	Kazakhstan RV	29270
11.595 H	Russkoe Radio - Asia	29270

INT904WH

INTELSAT 904 060.0° East

C-Band Beam 2

http://www.SatcoDX8.com/0600
Coverage Code INT904WH

Freq Pol	Channel Name	Symbol rate
3.655 R	ETC ALPHA PUNJABI	27500
3.655 R	ETC Alpha Punjabi	27500
3.655 R	ZEE CINEMA - UK	27500
3.655 R	ZEE GUJARATI - UK	27500
3.655 R	ZEE GUJARATI - USA	27500
3.655 R	ZEE MUSIC- UK	27500
3.655 R	ZEE RUSSIA	27500
3.655 R	ZEE TV - South Afr	27500
3.655 R	ZEE TV - USA	27500
3.655 R	ZEE TV- UK	27500

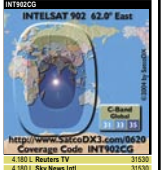
INTELSAT 902

62.0 East

INT902CG

INTELSAT 902 62.0° East

C-Band Beam 1



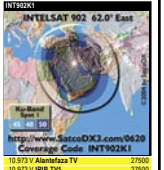
http://www.SatcoDX3.com/0620
Coverage Code INT902CG

Freq Pol	Channel Name	Symbol rate
4.180 L	Reuters TV	31530
4.180 L	Sky News Intl	31530
4.180 L	ABC	31530
4.180 L	Arqiva OU ch 2	31530
4.180 L	Arqiva OU ch1	31530
4.180 L	Intelsat 2	31530
4.180 L	Taiwan Radio	31530

INT902K1

INTELSAT 902 62.0° East

Ku-Band Beam 1



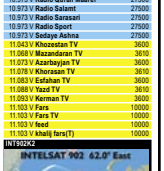
http://www.SatcoDX3.com/0620
Coverage Code INT902K1

Freq Pol	Channel Name	Symbol rate
10.973 V	Antalfaza TV	27500
10.973 V	IRIB TV1	27500
10.973 V	IRIB TV2	27500
10.973 V	IRIB TV3	27500
10.973 V	IRIB TV4	27500
10.973 V	IRIB TV5	27500
10.973 V	Jam-e-Jam Internati	27500
10.973 V	IRIB Radio 1	27500
10.973 V	Radio Farhang	27500
10.973 V	Radio Farhang Varzes	27500
10.973 V	Radio Javan	27500
10.973 V	Radio Maaref	27500
10.973 V	Radio Payam	27500
10.973 V	Radio Quran	27500
10.973 V	Radio Quran Maaref	27500
10.973 V	Radio Salamt	27500
10.973 V	Radio Sarasari	27500
10.973 V	Radio Sport	27500
10.973 V	Sedaye Ashna	27500
11.043 V	Khorzestan TV	3600
11.058 V	Mazandaran TV	3610
11.073 V	Azarbayjan TV	3600
11.078 V	Khorasan TV	3610
11.083 V	Esfahan TV	3600
11.088 V	Yazd TV	3610
11.093 V	Kerman TV	3600
11.098 V	Fars	10000
11.103 V	Fars TV	10000
11.103 V	feed	10000
11.103 V	khalij fars(T)	10000

INT902K2

INTELSAT 902 62.0° East

Ku-Band Beam 2



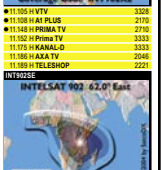
http://www.SatcoDX3.com/0620
Coverage Code INT902K2

Freq Pol	Channel Name	Symbol rate
11.105 H	VTV	3328
11.108 H	AI PLUS	2170
11.148 H	PRIMA TV	2170
11.152 H	Prima TV	3333
11.176 H	KANALI-D	3333
11.186 H	AXA TV	2046
11.189 H	TELESHOP	2221

INT902SE

INTELSAT 902 62.0° East

C-Band Beam 3



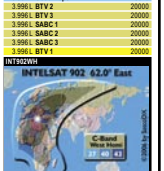
http://www.SatcoDX3.com/0620
Coverage Code INT902SE

Freq Pol	Channel Name	Symbol rate
3.814 L	NTN (Kenya)	3852
3.814 L	Nation Radio	3852
3.837 L	Citizen TV	2466
3.927 L	M-Net	
3.967 L	E.TV	9326
3.967 L	Akermans	9326
3.967 L	Good Hope FM	9326
3.996 L	BTV 2	20000
3.996 L	BTV 3	20000
3.996 L	SABC 1	20000
3.996 L	SABC 2	20000
3.996 L	SABC 3	20000
3.996 L	STV 1	20000

INT902WH

INTELSAT 902 62.0° East

C-Band Wide Beam



http://www.SatcoDX3.com/0620
Coverage Code INT902WH

Freq Pol	Channel Name	Symbol rate
3.938 R	MBC (Mauritius)	2964

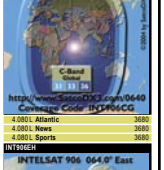
C-Band: INTELSAT 906

64.0 East

INT906CG

INTELSAT 906 064.0° East

C-Band Beam 1



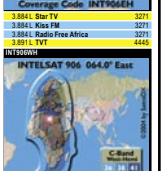
http://www.SatcoDX3.com/0640
Coverage Code INT906CG

Freq Pol	Channel Name	Symbol rate
4.080 L	Atlantic	3680
4.080 L	News	3680
4.080 L	Sports	3680

INT906EH

INTELSAT 906 064.0° East

C-Band Beam 2



http://www.SatcoDX3.com/0640
Coverage Code INT906EH

Freq Pol	Channel Name	Symbol rate
3.884 L	Star TV	3271
3.884 L	Kiss FM	3271
3.884 L	Radio Free Africa	3271
3.891 L	TVT	4445

INT906WH

INTELSAT 906 064.0° East

C-Band Wide Beam

Freq Pol	Channel Name	Symbol rate
3.642 R	CN 10	13330
3.642 R	EATV	13330
3.642 R	TV1	13330
3.642 R	PULSE	13330
3.653 R	TVM MZ	5632
3.721 R	MOI	4882
3.790 R	AGAPE TV	3000
3.968 R	CHILD	10162
3.968 R	JCTV	10162
3.968 R	TBN	10162
3.968 R	TCC	10162

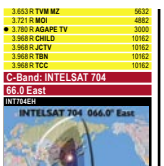
C-Band: INTELSAT 704

66.0 East

INT704EH

INTELSAT 704 066.0° East

C-Band Beam 1



http://www.SatcoDX3.com/0660
Coverage Code INT704EH

Freq Pol	Channel Name	Symbol rate
4.055 R	CFI ASIE PRO	27500
4.055 R	TV5 ASIE	27500
4.055 R	CFI Audio 1	27500
4.055 R	CFI Francais	27500
4.055 R	RI AS Langues	27500
4.055 R	RFI Cambodge	27500
4.055 R	RFI China	27500
4.055 R	RFI Francais	27500
4.055 R	RFI French-Eng	27500
4.055 R	RFI Kaboul	27500
4.055 R	RFI Langues1	27500
4.055 R	RFI Langues2	27500
4.055 R	RFI Musique	27500
4.055 R	RFI Palapa	27500
4.055 R	RFI Russia	27500
4.055 R	RFI WS Ouest	27500
4.055 R	RFI WS Sud	27500
4.055 R	TV5 DASSAULT-IS704	27500
4.055 R	KATELCO-ALA	27500
4.055 R	KATELCO-ASIA	27500

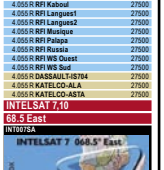
INTELSAT 7,10

68.5 East

INT007SA

INTELSAT 7 068.5° East

C-Band Beam 1



http://www.SatcoDX3.com/0685
Coverage Code INT007SA

Freq Pol	Channel Name	Symbol rate
10.970 V	AlMag	30000
10.970 V	CNN	30000
10.970 V	CSN	30000
10.970 V	HotNN	30000
10.970 V	Home	30000
10.970 V	KykNT	30000
10.970 V	Rhema	30000
10.970 V	SkyN	30000
10.970 V	SS6	30000
10.970 V	SS7	30000
10.970 V	SSupd	30000
10.970 V	ZeeTV	30000
10.970 V	JAC	30000
10.970 V	Kosmos	30000
10.970 V	Venus	30000
10.970 V	Decoder Care	30000
10.970 V	INT2	30000
10.970 V	iSZone	30000
10.970 V	SSVirtual	30000
11.010 H	3SAT	30000
11.010 H	ANIMAX	30000
11.010 H	ARD	30000
11.010 H	Auto	30000
11.010 H	B4U	30000
11.010 H	BBC F	30000
11.010 H	DW	30000
11.010 H	ERT	30000
11.010 H	FIN24	30000
11.010 H	FTV	30000
11.010 V	Fut	30000
11.010 H	Games	30000
11.010 H	IQRAA	30000
11.010 V	Learn	30000
11.010 V	MK	30000
11.010 V	NEW24	30000
11.010 H	PRO7	30000
11.010 H	RTL	30000
11.010 H	RTPI	30000
11.010 H	SABC1	30000
11.010 H	SABC2	30000
11.010 H	SABC3	30000
11.010 H	SAT1	30000
11.010 H	ZDF	30000
11.010 H	ZNBC	30000
11.010 V	adhoc2	30000
11.010 V	Even2	30000
11.010 V	Fut5-	30000
11.010 V	Guide	30000
11.010 H	IA virtual 8	30000
11.010 H	IA Virtual 9	30000
11.010 V	MNET Extra	30000
11.010 V	Regis	30000
11.010 V	-	30000
11.010 H	BAY1	30000
11.010 H	BAY3	30000
11.010 V	CH 7	30000
11.010 V	Ch 73	30000
11.010 H	DW-R	30000
11.010 V	adhoc1	30000
11.010 V	Extended EPG	30000
11.010 H	IA Virtual 10	30000
11.010 H	IA Virtual 12	30000
11.010 H	IA Virtual 6	30000
11.010 H	IP_Mart	30000
11.010 V	Theme Search	30000
11.010 H	TouchPids19	30000
11.010 V	BBC P	30000
11.010 V	Boom	30000
11.010 V	Ch2	30000
11.010 V	Event	30000
11.010 V	Fut	30000
11.010 V	go	30000
11.010 H	IA Virtual 1	30000
11.010 V	KAIDy	30000
11.010 V	NoGeo	30000
11.010 V	NBC	30000
11.010 V	SunTV	30000
11.010 V	TV5	30000
11.010 V	ZnRea	30000
11.010 V	HIST	30000
11.010 V	108FM	30000
11.010 V	702	30000
11.010 V	ASAT1	30000
11.010 V	CII	30000
11.010 V	CRI	30000
11.010 V	HEAT	30000
11.010 V	Hyper	30000
11.010 V	Im	30000
11.010 V	VOA	30000
11.010 V	Wave	30000
11.010 V	WRN	30000
11.010 V	BR1	30000
11.010 V	BR2	30000
11.010 V	TWR	30000
11.010 V	IP_TV	30000
11.010 V	ORB1	30000
11.010 V	ORB2	30000
11.077 H	Learn	14876
11.077 H	Health	14876
11.077 H	Mindset Buss	14876
11.087 V	BBC W	30000
11.087 V	Bloom	30000
11.087 V	CN	30000
11.087 V	Dany	30000
11.087 V	ESPN	30000
11.087 V	KTV	30000
11.087 V	MTV	30000
11.087 V	MTV B	30000
11.087 V	SET	30000
11.087 V	Sun	30000
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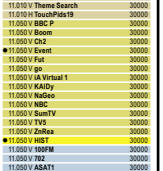
11.087 V	Travl	30000
11.087 V	VH1	30000
11.087 V	BBC1	30000
11.087 V	BBC2	30000
11.087 V	BBC3	30000
11.087 V	Fut2	30000
11.087 V	Fut15	30000
11.090 V	TouchPids4	30000
11.096 H	Cartoon Network	5400
11.096 H	Channel O	5400
11.096 H	CNN	5400
11.096 H	El Entertainment	5400
11.096 H	EGG CBMS	5400
11.096 H	EGG Sagem	5400
11.096 H	Int Table	5400
11.096 H	MagicWorld	5400
11.096 H	MTV	5400
11.096 H	Nat Geo	5400
11.096 H	SABC 1	5400
11.096 H	SABC 2	5400
11.096 H	SuperSport 1	5400
11.096 H	SuperSport 2	5400
11.096 H	SuperSport 3	5400
11.100 H	Animal Planet	5400
11.100 H	Cartoon Network	5400
11.100 H	CBMS ESG	5400
11.100 H	Channel O	5400
11.100 H	CNN	5400
11.100 H	El Entertainment	5400
11.100 H	ESG CBMS	5400
11.100 H	ESG Sagem	5400
11.100 H	ESG Sagem	5400
11.100 H	FashionTV	5400
11.100 H	Int Table	5400
11.100 H	MagicWorld	5400
11.100 H	MTV	5400
11.100 H	Nat Geo	5400
11.100 H	Network	5400
11.100 H	Pisys EMM	5400
11.100 H	SABC 1	5400
11.100 H	SABC 2	5400
11.100 H	Summit TV	5400
11.100 H	SuperSport 1	5400
11.100 H	SuperSport 2	5400
11.100 H	SuperSport 3	5400
11.170 V	SEN1	26660
11.170 V	SEN2	26660
11.170 V	SEN3	26660
11.170 V	SEN4	26660
11.170 V	SEN5	26660
11.170 V	SEN6	26660
11.170 V	FusFM	26660
11.170 V	MetFM	26660
11.170 V	SPUR	26660
11.170 V	Star2	26660
11.170 V	Star3	26660
11.170 V	Ack	26660
11.170 V	AdSat1	26660
11.170 V	AdSat2	26660
11.170 V	AdSat3	26660
11.170 V	AdSat4	26660
11.170 V	AdSat5	26660
11.170 V	Clicks	26660
11.170 V	FreshFM	26660
11.170 V	MRAIL	26660
11.170 V	NCRF	26660
11.170 V	ORIO1	26660
11.170 V	ORIO2	26660
11.170 V	ORIO3	26660
11.170 V	ORIO4	26660
11.170 V	ORIO5	26660
11.170 V	ORIO6	26660
11.170 V	PEP	26660
11.170 V	PnP_G	26660
11.170 V	Red1	26660
11.170 V	Red2	26660
11.170 V	SFM	26660
11.170 V	Spare2	26660
11.170 V	Spare4	26660
11.170 V	Star1	26660
11.170 V	Test2	26660
11.170 V	Test3	26660
11.170 V	Test4	26660
11.170 V	Test5	26660
11.170 V	AIR63	26660
11.170 V	InfoSatA12	26660
11.170 V	UEC_DOWN2	26660
11.589 V	ChO	27500
11.589 V	Disc	27500
11.589 V	HallM	27500
11.589 V	M-Net	27500
11.589 V	MM1	27500
11.589 V	SABCA	27500
11.589 V	Serie	27500
11.589 V	SS1	27500
11.589 V	SS2	27500
11.589 V	SS3	27500
11.589 V	SSmax	27500
11.589 V	ASAT2	27500
11.589 V	Kaya	27500
11.589 V	KL	27500
11.589 V	KAI R	27500
11.589 V	TAR	27500
11.589 V	VFM	27500
11.589 V	Lotto App	27500
11.589 V	VRFY	27500
11.594 V	ChO	30000
11.594 V	Disc	27500
11.594 V	HallM	27500
11.594 V	M-Net	27500
11.594 V	MM1	27500
11.594 V	SABCA	27500
11.594 V	Serie	27500
11.594 V	SS1	27500
11.594 V	SS2	27500
11.594 V	SS3	27500
11.594 V	SSmax	27500
11.594 V	ASAT2	27500
11.594 V	Jhank	27500
11.594 V	Kaya	27500
11.594 V	KL	27500
11.594 V	KAI R	27500
11.594 V	TAR	27500
11.594 V	YFM	27500
11.594 V	Lotto App	27500
11.594 V	VRFY	27500
11.627 V	BOTSWANA TELEVISI	15000
11.674 V	F24	26653
11.674 V	Feed1	26653
11.674 V	SABC1	26653
11.674 V	SABC2	26653
11.674 V	SABC3	26653
11.674 V	GodCh	26653
11.674 V	ITV	26653
11.674 V	SFM	26653
11.674 V	Cli	26653
11.674 V	ClassicFM	26653
11.674 V	DWRadio	26653
11.674 V	Future1	26653
11.674 V	Future2	26653
11.674 V	Future3	26653
11.674 V	Future_13	26653
11.674 V	GHFM	26653
11.674 V	Hewkewzi	26653
11.674 V	Islam	26653
11.674 V	Lesedi	26653
11.674 V	Ligwalagwala	26653
11.674 V	Lotus	26653
11.674 V	Metro	26653
11.674 V	MM	26653
11.674 V	Motsweding	26653
11.674 V	Munghana	26653
11.674 V	Phalaphala	26653
11.674 V	Pulpit	26653
11.674 V	R2000	26653
11.674 V	Rad1	26653
11.674 V	RSG	26653
11.674 V	SAFM	26653
11.674 V	SERON	26653
11.674 V	Spare3	26653
11.674 V	Thobela	26653
11.674 V	Ukhozi	26653
11.674 V	Umhlobo	26653
11.674 V	Guide	26653
11.674 V	INFOSAT_B6	26653
11.674 V	Radio_Down	26653

INT010AV

INTELSAT 10 068.5° East

C-Band Beam 1



http://www.SatcoDX3.com/0685
Coverage Code INT010AV

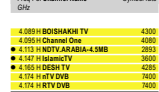
Freq Pol	Channel Name	Symbol rate
12.522 H	Arsenal/Setanta News	26657
12.522 H	Fox Sports	26657
12.522 H	Sport Extra	26657
12.522 H	Zee Cinema	26657
12.522 H	3ABN	26657
12.522 H	Apostolic Oneness Ne	26657
12.522 H	Ben TV	26657
12.522 H	DBN	26657
12.522 H	France 24	26657
12.522 H	Huda TV	26657
12.522 H	NTA+	26657
12.522 H	Press TV	26657
12.522 H	Supreme Master TV	26657
12.522 H	ViewAfrica	26657
12.522 H	Word Network	26657
12.562 H	3ABN	26657
12.562 H	Adonai	26657
12.562 H	Apostolic Oneness Ne	26657
12.562 H	Ben TV	26657
12.562 H	CCTV	26657
12.562 H	Day*	26657
12.562 H	DBN	26657
12.562 H	Divine	26657
12.562 H	Emmanuel TV	26657
12.562 H	Hope Channel	26657
12.562 H	Huda	26657
12.562 H	Huda TV	26657
12.562 H	John 3v16	26657
12.562 H	LoveWorld	26657
12.562 H	Noor TV	26657
12.562 H	Press TV	26657
12.562 H

Freq Pol Channel Name Symbol rate GHz

4.089 H BOISHAKHI TV 4300
4.095 H Channel One 4080
4.113 H NDTV ARABIA-4.5MB 2853
4.147 H IslamicTV 3600
4.165 H DESH TV 4285
4.174 H HTV DVB 7400
4.174 H RTV DVB 7400

TELE10KB

TELSTAR 10 076.5° East



12.280 V AD-HOC[UB05] 22425
12.280 V IPTV 人民數碼 [UB02] 22425
12.280 V CONGRESS 國會衛星 [UB02] 22425
12.280 V HZ 華夏 [UB07] 22425
12.280 V LIFE TV 生命電視台 [UB04] 22425
12.280 V MAC TV 安聯 [UB10] 22425
12.280 V TZUCHI 慈濟大愛 [UB01] 22425
12.280 V USTV 法界衛星 新紀 [UB03] 22425
12.280 V 大和電視台 [UB06] 22425
12.280 V 慧日衛星台 [UB09] 22425
12.308 V CSN *#60[UB306] 15000
12.308 V EF TV 恩[UB304] 15000
12.308 V HB 每個家 [UB303] 15000
12.308 V HS 4米[UB307] 15000
12.308 V TACT 和人[UB301] 15000
12.308 V FINANCE 了下1_gK+ 15000
12.308 V SBN 说气[UB308] 15000
12.308 V World 电台[UB302] 15000
12.308 V 3001_KFC 30000
12.308 V 3001_US New songs & 22425
12.308 V 3002_US Popular Song 22425
12.308 V 3003_Sweet Love Song 22425
12.308 V 3004_50 & 60 Popular 22425
12.308 V 3005_R&B 22425
12.308 V 3006_Hip Hop 22425
12.308 V 3007_Party Music 22425
12.308 V 3008_Rock Music 22425
12.308 V 3009_Jazz Vocal 22425
12.308 V 3010_Jazz Main Strea 22425
12.308 V 3011_Lounge 22425
12.308 V 3012_Enka 22425
12.308 V 3013_Japanese Popular 22425
12.308 V 3014_J&T Station 22425
12.308 V 3015_Bossa Nova 22425
12.308 V 3016_Classical 22425
12.308 V 3017_Piano Easy List 22425
12.308 V 3018_Crystal Music 22425
12.308 V 3019_Soft Hearing 22425
12.308 V 3020_Season Music 22425
12.308 V 3021_Old Deck 22425
12.308 V 3022_Chinese Best Se 22425
12.308 V 3023_Chinese Soft So 22425
12.308 V 3024_Chinese Classic 22425
12.308 V 3025_Children Music 22425
12.308 V 3026_Easy Listening 22425
12.308 V 3027_Birthday Songs 22425
12.308 V 3028_Wedding And Goo 22425
12.308 V 3029_Sweet Love Chan 22425
12.308 V 3030_Pop Music Pop 22425
12.308 V 3031_3357 22425
12.308 V 3032_Napoli 22425
12.308 V 3034_Audrey 22425
12.308 V 3035_KF 22425
12.308 V 3036_Crystal &Piano 22425
12.308 V 3037_Fashion Music 22425
12.308 V 3038_Soft Music 22425
12.308 V 3039_KG 22425
12.308 V 3040_Asia Radio 22425
12.406 V afa TV 卫星HD 人体[UB01 22425
12.406 V GOLDSUN TV 飞行[U 22425
12.406 V HOLLYWOOD 为u1[U 22425
12.406 V JET[UB06] 22425
12.406 V PTV-1 ###卡[UB6 22425
12.406 V PTV-2 ###卡[UB6 22425
12.406 V PTV-3 ###卡[UB6 22425
12.406 V TV 卫星HD 卫星[UB6 22425
12.406 V GOOD2 人in能创&G#x[U 22425
12.406 V Null 'w'#EAW'D[UB600] 22425
12.406 V Null 'w'#EAW'D[UB604] 22425
12.406 V +ax[UB612] 22425
12.406 V 133_KFC 30000
12.406 V 101_US New songs & C 22425
12.406 V 102_US Popular Songs 22425
12.406 V 103_Sweet Love Songs 22425
12.406 V 104_50 & 60 Popular 22425
12.406 V 105_R&B 22425
12.406 V 106_Hip Hop 22425
12.406 V 107_Party Music 22425
12.406 V 108_Rock Music 22425
12.406 V 109_Jazz Vocal 22425
12.406 V 110_Jazz Main Stream 22425
12.406 V 111_Lounge 22425
12.406 V 112_Enka 22425
12.406 V 113_Japanese Popular 22425
12.406 V 114_J&T Station 22425
12.406 V 115_Bossa Nova 22425
12.406 V 116_Classical 22425
12.406 V 117_Piano Easy Liste 22425
12.406 V 118_Crystal Music 22425
12.406 V 119_Soft Hearing 22425
12.406 V 120_Season Music 22425
12.406 V 121_Old Deck 22425
12.406 V 122_Chinese Best Sel 22425
12.406 V 123_Chinese Soft Son 22425
12.406 V 124_Chinese Classica 22425
12.406 V 125_Children Music 22425
12.406 V 126_Easy Listening 22425
12.406 V 127_Birthday Songs 22425
12.406 V 128_Wedding And Good 22425
12.406 V 129_Sweet Love Chan 22425
12.406 V 130_Pop Music Pop 22425
12.406 V 131_3357 22425
12.406 V 132_Napoli 30000
12.406 V 134_Audrey 30000
12.406 V 135_KF 30000
12.406 V 136_Crystal &Piano M 30000
12.406 V 137_Fashion Music 30000
12.406 V 138_Soft Music 30000
12.406 V 139_KG 30000
12.406 V 140_Asia Radio 30000
12.434 H DVB 10000
12.434 H ZHONGGUANG 10000
12.462 H Rock Golf 22425
12.462 V CTS 華視 22425
12.462 V CTV 中視 22425
12.462 V FTV 民視 22425
12.462 V PTS 公視 22425
12.462 V TVBS 22425
12.462 V 3a1_Nave 亞洲旗遊 22425
12.462 V PR-CH 公告頻道 22425
12.462 V TTV台視 22425
12.491 V Desire TV 22425
12.491 V DISNEY 迪士尼 22425
12.491 V GAPTV 22425
12.491 V SETI 三立國際 22425
12.491 V TVBS-G 22425
12.491 V TVBS-N 22425
12.491 V UNTV 22425
12.491 V FTV News 22425
12.530 V ET Variety 東森綜合台 30000
12.530 V ETtoday 財經生活台 30000
12.530 V ETTV ASIA 東森亞洲衛視 30000
12.530 V ETTV Drama 東森戲劇台 30000
12.530 V ETTV MOVIE 東森電影台 30000
12.530 V ETTV News 東森新聞台 30000
12.530 V ETTV SERVICE 12 30000
12.530 V ETTV SERVICE 6 30000
12.530 V STV 2 30000
12.530 V STV 華視台 30000
12.530 V Yo Yo TV 東森幼幼台 30000
12.530 V ET ASIA NEWS 東森亞洲新聞 30000
12.530 V ETTV SERVICE 10 30000
12.530 V ETTV SERVICE 11 30000
12.700 V Xizang TV1 5656
12.700 V Xizang TV2 5656

THAICOM 2.5

78.5 East

THA005KI

12.271 H DLTV1 30000
12.271 H DLTV10 30000
12.271 H DLTV11 30000
12.271 H DLTV12 30000
12.271 H DLTV13 30000
12.271 H DLTV14 30000
12.271 H DLTV15 30000
12.271 H DLTV2 30000
12.271 H DLTV3 30000
12.271 H DLTV4 30000
12.271 H DLTV5 30000
12.271 H DLTV6 30000
12.271 H DLTV7 30000
12.271 H DLTV8 30000
12.271 H DLTV9 30000
12.271 H HI 30000
12.271 H MONY 30000
12.271 H NSPS 30000
12.271 H RS98 30000
12.271 H TGN 30000
12.271 H YM52 30000
12.313 H CH11 30000
12.313 H EarthOne 30000
12.313 H FilMagix 30000

12.313 H KIDS CLUB 30000
12.313 H Modern9 TV 30000
12.313 H Nation 30000
12.313 H Newsline 30000
12.313 H Thai TV3 30000
12.313 H TPBS 30000
12.313 H TV5 30000
12.313 H TV7 30000
12.313 H Vacant2 30000
12.313 H Vacant3 30000
12.313 H Dhamma 30000
12.313 H Parliament TV 30000
12.313 H Test 30000
12.313 H TV1 30000
12.313 H Vacant 30000
12.313 H FM 101.0 MHz 30000
12.313 H FM 91.75 MHz 30000
12.313 H FM 102.5 MHz 30000
12.313 H FM 103.5 MHz 30000
12.438 H CH-3 30000
12.438 H CH-5 30000
12.438 H CH-7 30000
12.438 H CH-9 30000
12.438 H CH11 30000
12.438 H CINM 30000
12.438 H FL A 30000
12.438 H HALL 30000
12.438 H HBO 30000
12.438 H MCTN 30000
12.438 H MOVH 30000
12.438 H NEWS 30000
12.438 H PREV 30000
12.438 H RS99 30000
12.438 H SMES 30000
12.438 H STWV 30000
12.438 H TCM 30000
12.438 H TITV 30000
12.438 H TNN2 30000
12.438 H TPBS 30000
12.438 H TV5 30000
12.438 H 80'S 30000
12.438 H BLUE 30000
12.438 H CLAS 30000
12.438 H CLRK 30000
12.438 H CONT 30000
12.438 H DISC 30000
12.438 H ESPN 30000
12.438 H INST 30000
12.438 H JAZZ 30000
12.438 H JVOC 30000
12.438 H LOVE 30000
12.438 H R&B 30000
12.438 H R&R 30000
12.438 H RATP 30000
12.438 H SOFT 30000
12.438 H TNN2

Freq Pol Channel Name Symbol rate GHz

● 11.110 V Shalom TV 27500
● 11.110 V Star Majaa 27500
● 11.110 V Sun Music 27500
● 11.110 V Sun News 27500
● 11.110 V TV5 Telugu 27500
● 11.110 V TV9 27500
● 11.110 V World Movies 27500
● 11.150 V AASTHA 27500
● 11.150 V SKM 27500
11.150 V ETC 27500
● 11.150 V KAIRALI TV 27500
● 11.150 V MAKKAL TV 27500
● 11.150 V PTC NEWS 27500
● 11.150 V SMILE TV 27500
● 11.150 V TIME TV 27500
● 11.150 V TOTAL TV 27500
● 11.150 V ZEE JAGRAN 27500
● 11.150 V AIR BANGLA 27500
● 11.150 V AIR HINDI 27500
● 11.150 V AIR KANNADA 27500
● 11.150 V AIR N E 27500
● 11.185 V DW TV 20000
● 11.185 V DW Urdu 20000
● 11.185 V Insan TV 20000
● 11.185 V Kairali 20000
● 11.185 V Makkal TV 20000
● 11.185 V Mega TV 20000
● 11.185 V Prabhjagi 20000
● 11.185 V Sahara 20000
● 11.185 V Star Utsav 20000
● 11.185 V Win TV 20000
● 11.185 V Yo Music 20000
● 11.185 V SFM - B'lore 20000
● 11.185 V SFM Hyderabad 20000
● 11.185 V SuryanFM 20000
● 11.490 V DW TV 27500
11.490 V TEST -16 27500
11.490 V TEST -17 27500
11.490 V TEST -18 27500
11.490 V TEST -19 27500
11.490 V TEST -20 27500
11.490 V TEST -13 27500
11.490 V TEST -12 27500
11.490 V TEST -14 27500
11.490 V TEST -15 27500
11.490 V AIR ASSAMESE 27500
11.490 V AIR MALAYALAM 27500
● 11.490 V AIR O&D-MUM 27500
● 11.490 V FM R'BOW-CHN 27500
● 11.490 V RADIO KASHMIR 27500
● 11.530 V 9X 27500
11.530 V 9XM 27500
11.530 V Asianet Suvarna 27500
11.530 V ETV Kannada 27500
11.530 V K TEST 27500
11.530 V MI Marathi 27500
11.530 V N TV 27500
11.530 V NDTV Good Times 27500
11.530 V NE TV 27500
11.530 V Nepal TV 27500
● 11.530 V TV 9 Kannada 27500
11.530 V Udaya 2 27500
11.530 V Udaya Varthegalu 27500
● 11.570 V BAU Music 27500
11.570 V DD URDU 27500
11.570 V GYANDARSHAN-1 27500
11.570 V GYANDARSHAN-2 27500
● 11.570 V JAIHIND TV 27500
11.570 V Kalaignar TV 27500
● 11.570 V MEGA TV 27500
● 11.570 V MUSIC INDIA 27500
● 11.570 V STAR UTSAV 27500
11.570 V WIN TV 27500
● 11.610 V AIR ORIYA 27500
● 11.610 V AIR RAGAM 27500
● 11.610 V AIR URDU 27500
● 11.610 V FM R'BOW-BLR 27500
● 11.610 V Akash bangla 27500
11.610 V Amrita 27500
● 11.610 V Angel TV 27500
● 11.610 V Asianet 27500
● 11.610 V Asianet News 27500
● 11.610 V Asianet Plus 27500
● 11.610 V Bindass 27500
● 11.610 V ETV Marathi 27500
● 11.610 V God TV 27500
● 11.610 V India Vision 27500
11.610 V Jeevan 27500
● 11.610 V Kairali People 27500
● 11.610 V Kairali We 27500
11.610 V O TV 27500
● 11.610 V Sanskar 27500
● 11.610 V Shakthi TV 27500
11.644 V 7 Star Care 20000
11.644 V CCTV 9 20000
● 11.644 V Daystar 20000
● 11.644 V Manorama news 20000
● 11.644 V NDTV 24x7 20000
● 11.644 V NDTV India 20000
● 11.644 V NDTV Profit 20000
● 11.681 V Mosaic Test 9500
● 11.681 V SN 9500

NSS 6
95.0 East
NSS909IN

● 3.638 H JWay 5400
● 3.638 H PCR 5400
3.650 H CH_2 4000
3.650 H CH_3 4000
3.650 H CH_4 4000
3.650 H CH_5 4000
3.650 H CH_6 4000
3.650 H CH_7 4000
3.650 H CH_8 4000
3.650 H CH_9 4000
3.650 H ESG 4000
3.650 H Service_name 40000
3.660 V AL EMARAT 27500
3.660 V AL-ALAM 27500
3.660 V ALKASS 27500
3.660 V IRIB3 27500
3.660 V KUWAIT SPACE CHAN 27500
3.660 V NILE NEWS 27500
3.660 V PRESS TV PROMO 27500
3.660 V EL BERNAMEG 27500
3.660 V EL-QURAN EL-KARIM 27500
3.660 V RADIO MAAREF 27500
3.660 V RADIO QURAN 27500
3.660 V RADIO SARASARI 27500
3.660 V RES-ASIASAT2 27500
● 3.705 V FEED 3 5630
3.705 H UP4 4165
3.760 H E! Asia 27500
3.760 H E! Middle East 27500
3.767 V AsiaPacific 6525
3.773 V Test New DTO 3333
● 3.787 H RTB INTERNATIONAL 6000
3.791 V Shamshad TV 2444
3.796 V Service 2 2963
● 3.801 H APTN1 GVW +4420748 5630
3.820 V Abu Dhabi TV 27500
3.820 V Alzaeara Channel 27500
● 3.820 V KUWAIT 27500
3.820 V Ubiya TV 27500
3.820 V Oman TV 27500
3.820 V Qatar TV 27500
3.820 V Saudi Arabian TV 2 27500
3.820 V Sharjah TV 27500
3.820 V Sudan TV 27500
3.820 V Syria TV 27500
3.820 V Yemen TV 27500
3.820 V EUROSPORTS FM 27500
3.820 V Main General Program 27500
3.820 V Oman Holy Quran 27500
3.820 V Oman Radio 27500
3.820 V Qatar Radio 27500
3.820 V Radio Omdurman Holy 27500
3.820 V Radio Quran 27500
3.820 V Saudi Radio 1 27500
3.820 V Sharjah FM 27500
3.820 V Sudan Radio 27500
3.820 V Voice of people 27500
3.820 V Voice of Youth 27500
3.820 V Yemen Radi 2 27500
3.820 V Yemen Radio 1 27500
3.840 H 321 Tata 1 26840
3.840 H 323 Timecode 26840
3.905 H Reuters WNS 4000
3.945 H Opportunistic Data 4000
● 3.960 H TRACE TV 27500
3.960 H VISION2 27500
3.960 H Warraco Nova 27500
● 3.960 H DAYSTAR 27500
3.960 H SATLINK 27500
● 3.960 H Supreme Master TV 27500
● 3.960 H TRACE TV 27500
3.960 H Flix W3 27500
3.960 H PMI streaming W3 27500
3.980 V 800 Vijay India 28100
3.980 V 9XM 28100
3.980 V 702 STAR PLUS 28100
3.980 V 704 STAR Movies 28100
3.980 V 707 STAR GOLD 28100
3.980 V 736 Adventure 28100
3.980 V 737 Adventure 28100
3.980 V 741 History/Adventur 28100
3.980 V 751 Star World India 28100
3.980 V 752 Channel [V] Indi 28100
3.980 V 754 STAR Plus Paki 28100
3.980 V 777 STAR One India 28100
3.980 V 800 Vijay India 28100
3.980 V Adventure 28100
3.980 V CHannel. [V] 28100
3.980 V History/Adventure 28100
3.980 V STAR Gold 28100
3.980 V STAR Movies 28100
3.980 V STAR One India 28100
3.980 V STAR Plus 28100
3.980 V STAR World 28100
3.980 V Star World India 28100
3.980 V Sun TV 28100
3.980 V Sun TV HD 28125
4.000 H Cubavision 28125
4.000 H LUXE-TV-SD 28125
4.000 H RAI International 28125
4.000 H RTPI 28125
4.000 H RTR Planeta 28125
4.000 H TVE 28125
4.000 H RAI International As 28125
4.000 H RAIRadio 28125
4.000 H RDP Antena 1 28125
4.000 H RDP Internacional 28125
4.000 H REE 28125
4.000 H RFI Cambodge 28125
4.000 H RFI Francais 28125
4.000 H RFI Kaboul 28125
4.000 H RFI Langues1 28125

Freq Pol Channel Name Symbol rate GHz

12.597 V ZEE NEWS 40687
12.597 V ZEE TALKIES 40700
12.597 V ZEE TELUGU 40700
● 12.597 V ZONE REALITY 40700
12.597 V AAKAASH BANGLA 40700
12.597 V games ACTIVE 40687
● 12.597 V PLAY TV 40700
● 12.597 V OTA 40700
12.647 H ANIMAL PLANET 27500
12.647 H ANIMAX 27500
12.647 H AXN 27500
12.647 H DISCOVERY 27500
● 12.647 H DISCOVERY TALIVIN 27500
12.647 H ENCAVISION 27500
12.647 H MAX 27500
12.647 H MTV 27500
12.647 H NICKELODEON 27500
12.647 H PIX 27500
● 12.647 H SAB TV 27500
● 12.647 H SONY 27500
● 12.647 H TEN SPORTS 27500
● 12.647 H OTA 27500
● 12.669 H CHUTTI TV 27500
● 12.689 H GEMINI MUSIC 27500
● 12.689 H GEMINI TV 27500
12.689 H KTV 27500
● 12.689 H KIRAN TV 27500
● 12.689 H SUN MUSIC 27500
12.689 H SUN NEWS 27500
12.689 H SUN TV 27500
12.689 H SURYA TV 27500
12.689 H TEJA TV 27500
12.689 H U2 27500
● 12.689 H UDAYA MOVIES 27500
12.689 H UDAYA TV 27500
● 12.689 H UDAYA VARTHEGALU 27500
12.692 V MGM 27500
● 12.692 V ZEE BANGLA 27500
● 12.692 V ZEE CAFE 27500
● 12.692 V ZEE KANNADA 27500
● 12.692 V ZEE MARATHI 27500
● 12.692 V ZEE MUSIC 27500
● 12.692 V ZEE PUNJABI 27500
12.692 V ZEE STUDIO 27500
● 12.692 V ZEE TV 27500
● 12.692 V playjam 27500
12.692 V EURO 27500
12.692 V iGuide 27500
● 12.692 V Minikids 27500
● 12.692 V Quizzy 27500
12.692 V test1 27500
12.692 V test2 27500
● 12.729 V ZEE BUSINESS 27500
● 12.729 V ZEE NEXT 27500
● 12.729 V CARTOON NETWORK 27500
● 12.729 V CNBC TV 18 27500
● 12.729 V STAR CRICKET 27500
● 12.729 V ZEE CINEMA 27500
● 12.729 V ZEE SPORTS 27500
● 12.729 V ZEE TRENDZ 27500

NSS806SE

11.676 H Body and Mind 27500
11.676 H e-San Discovery 27500
11.676 H For the Earth TV 27500
11.676 H News 1 27500
11.676 H Suwannabhumi Channel 27500
11.676 H TOC 27500
11.676 H Variety 27500
11.676 H ASTV Radio 1 27500
11.676 H ASTV Radio 2 27500
11.676 H ASTV Radio 3 27500
11.676 H ASTV Radio 4 27500
11.676 H ASTV Radio 5 27500
11.676 H ASTV Radio 6 27500
11.676 H Test Channel 27500

C-Band: ASIASAT 2
100.5 East
ASI002CB

11.037 H CHANNEL V 40690
11.037 H CNBC AWAAZ 40690
11.037 H DAAST 40690
11.037 H DISNEY CHANNEL 40690
11.037 H ETV 2 40690
11.037 H ETV BANGLA 40690
11.037 H ETV GUJARATI 40690
11.037 H ETV KANNADA 40690
11.037 H ETV ORIYA 40690
11.037 H ETV TELUGU 40690
11.037 H ETV UP 40690
11.037 H ETV URDU 40690
11.037 H HISTORY CHANNEL 40690
11.037 H HUNGAMA 40690
11.037 H KHEL ACTIVE 40690
11.037 H KIDS ACTIVE 40690
11.037 H NAT GEO 40690
11.037 H NE TV 40690
11.037 H SANSKAR TV 40690
11.037 H SUR UTSAV 40690
11.037 H TOON DISNEY 40690
11.037 H VIVE INDIA 40690
11.037 H OTA 40690
11.091 H CGNTV 29500
11.173 H AAJ TAK 27500
11.173 H ACTION CINEMA 27500
11.173 H Cinema Active 27500
11.173 H CLASSIC CINEMA 27500
11.173 H HOGO 27500
11.173 H PREMIER CINEMA 27500
11.173 H STAR GOLD 27500
11.173 H STAR MOVIES 27500
11.173 H STAR NEWS 27500
11.173 H STAR SPORTS 27500
11.173 H STAR WORLD 27500
11.173 H TIMES NOW 27500
11.173 H VH1 27500
11.173 H ETC PUNJABI 27500
12.538 V ASIANET 40690
12.538 V BBC WORLD 40690
12.538 V BOOMERANG 40690
12.538 V ESPN 40690
● 12.538 V FASHION TV 40690
12.538 V GEMINI NEWS 40690
12.538 V INDIA TV 40690
12.538 V MAA TV 40690
12.538 V MANORAMA NEWS 40690
● 12.538 V NDTV 24X7 40690
● 12.538 V SUN TV 40690
● 12.538 V STAR CRICKET 40690
● 12.538 V STAR ONE 40690
12.538 V STAR PLUS 40690
12.538 V ZEE 24 TAAS 40690
12.538 V ZEE GUJARATI 40690
● 12.538 V ZOOM TV 40690
12.538 V DISH INTERACTIVE 40690
● 12.538 V ISAI ARUVI 40690
● 12.538 V ZEE JAGRAN 40690
12.538 V OTA 40690
● 12.597 V 24 GHANTA 40700
● 12.597 V AMRITA TV 40700
12.597 V ASIANET NEWS 40687
12.597 V ASIANET PLUS 40687
12.597 V CNN 40700
● 12.597 V dish News Active 40687
● 12.597 V dish Sports Active 40687
12.597 V ETV MARATHI 40687
12.597 V HBO 40700
12.597 V MARATHI 40687
12.597 V Movie Active 40700
12.597 V MOVIE ON DEMAND 1 40687
12.597 V MOVIE ON DEMAND 2 40687
12.597 V MOVIE ON DEMAND 3 40687
12.597 V MOVIE ON DEMAND 4 40687
12.597 V MOVIE ON DEMAND 5 40687
12.597 V MOVIE ON DEMAND 6 40687
12.597 V NDTV INDIA 40700
12.597 V NDTV PROFIT 40687
12.597 V NEPAL 1 40700
12.597 V RAJ DIGITAL 40700
12.597 V SAHARA FILMY 40700
12.597 V SAHARA ONE 40700
● 12.597 V SAHARA SAMAY 40700
12.597 V STAR VIJAY 40687
12.597 V TCM 40700
12.597 V TEST SP 40687
● 12.597 V TV 5 Monde 40700
12.597 V VOYAGES 40700
● 12.597 V ZEE CINEMA 40700

Freq Pol Channel Name Symbol rate GHz

4.000 H RFI Langues2 28125
4.000 H RFI Musique 28125
4.000 H RFI Worldspace 28125
4.000 H RFI WS Ouest 28125
4.000 H RFI WS Sud 28125
4.000 H RNE Contribucion 28125
4.000 H RNW 28125
4.000 H WRN 28125
4.000 H WRN Mul AAP 28125
4.000 H YLESAT1 28125
4.000 H YLESAT2 28125
● 4.050 V CVCyBC_ASTX1 6665
● 4.050 V WELSH SN00KER 6665
● 4.061 V SELDING PORH13 6665
● 4.061 V CVCyBC_ASTX1 6665
● 4.072 V Australian Domestic 6665
● 4.072 V IRNAI 2 6665
● 4.083 V FI07WSHT 6665
● 4.083 V KDDI 10.75?M 625P 6665
● 4.094 V ITA-35B CH1 6665
● 4.094 V WELSH SN00KER 6665
● 4.105 V CELCOM FEED CENTE 6665
● 4.105 V GBBBC 1x4 6665

ASIASAT 2
100.6 East
ASI002KU

12.267 V XNTV 5400

EXPRESS A2 KAZSAT 1
103.0 East
EXPA02C2

3.675 R Dubb-I+RRD1 31100
3.675 R Dubb-I+RRD2 33469
3.675 R FNS 31100
3.675 R Orbita-1+Mayak 33469
3.675 R Orbita-2+Yunost 33469
3.675 R Kultura-1 31100
3.675 R MuzTV Love 31100
3.675 R Radio Love 31100
3.675 R Radio Maximum 31100
3.675 R Radio Mayak 31100
3.675 R Radio RussiaD1 31100

EXPA02KS

11.475 R FNS 29800
11.475 R MuzTV_Love 29800
11.475 R Radio Love 29800
11.475 R Radio Mayak 29800

C-Band: ASIASAT 3S
105.5 East
ASI03SCB

3.680 H cqp download 26666
3.680 H CH 2 625 26666
3.680 H CH 3 625 26666
3.680 H CH 5 625 26666
3.680 H CETV-1 26666
3.680 H CH 6 625 26666
3.680 H Maharishi 26666
3.700 V MGM 27500
3.700 V Test 2 27500
3.700 V Z STUDIO 27500
3.700 V Z TRENDZ 27500
3.700 V ZEE CAFE 27500
3.700 V ZEE M E 27500
3.700 V ZEE MALAY 27500
3.700 V Zee S E A 27500
3.706 H CNAI NTSC 6000
3.706 H CNAI PAL 6000
3.716 H AD-HOC2 7000
3.716 H AZIO_TV 7000
3.725 H BTV WORLD 4400
3.730 H Celestial CMV 13650
3.730 H TVB8 13650
3.733 H ACTION Cinema DTO 6500
3.733 V CLASSIC Cinema DT 6500
3.733 V PREMIER Cinema DT 6500
3.733 V Test New DTO 6500
3.745 V FASHION TV 2625
3.749 V AAJ TV 2821
3.755 V Aryrag1 4418
3.760 H Eurosport Asia 26000
3.760 H EurosportNews 26000
3.760 H Al Sonora Internati 26000
3.760 H Bloomberg 26000
3.760 H DW TV ASIA 26000
3.760 H Muslim TV1 26000
3.760 H Muslim TV2 26000
3.760 H NOW 26000
3.760 H Russia Today 26000
● 3.760 H Supreme Master TV 26000
3.760 H TV5 26000
3.760 H DW-M 26000
3.760 H DW01 26000
3.760 H DW02 26000
3.760 H DW04 26000
3.760 H DW05 26000
3.760 H DW06 26000
3.760 H DW08 26000
3.760 H DW09 26000
3.760 H RFI Francais 26000
3.760 H RFI Langues1 26000
3.780 H TV1 28100
3.780 V 701 FOX Sports 28100
3.780 V 708 Nat. Geo 28100
3.780 V 709 World 28100
● 3.780 V 710 Fox Crime 28100
3.780 V 764 StarGold 28100
3.780 V 767 Movies ME 28100
3.780 V 773 Movies ME 28100
3.780 V 779 World ME 28100
3.780 V 780 World PH 28100
● 3.780 V 793 STAR Chinese M 28100
3.780 V Nat. Geo 28100
3.780 V STAR 28100
3.780 V STAR Movies ME 28100
3.780 V STAR World 28100
3.780 V 769 STAR Utsav 28100
3.791 V STAR UTSAV 28100
● 3.786 H Neon One 5700
● 3.786 H Tv One 5700
● 3.786 H WASEB_TV 5700
3.792 H Service 2 3000
● 3.816 H Eurosport Pacific 2515
3.840 H 759 [V] Taiwan 26850
3.840 H 760 STAR Chinese I 26850
3.840 H 609 Sky News 26850
3.840 H 610 Fox News 26850
3.840 H 756 STAR Chinese C 26850
3.840 H 757 Star Chinese Mov 26850
3.840 H 758 Star Movies 26850
3.840 H 759 Nat Geo T 26850
3.840 H 760 [V] TAIWAN 26850
3.840 H 761 Sky News 26850
3.840 H 762 Fox News 26850
3.840 H FOX News 26850
3.840 H Sky News 26850
3.860 V 401 ESPN Taiwan 27500
3.860 V 402 ESPN Taiwan 27500
3.860 V 405 ESPN Asia 27500
3.860 V 406 ESPN Asia 27500
3.860 V 407 ESPN Asia 27500
3.860 V 408 ESPN Asia 27500
3.860 V 409 STAR Sports Sc 27500
3.860 V 410 STAR Sports So 27500
3.860 V 411 STAR Sports In 27500
3.860 V 412 STAR Sports In 27500
3.860 V 413 STAR Sports Ta 27500
3.860 V 414 STAR Sports Ta 27500
3.860 V 420 STAR Sports So 27500
3.860 V 421 STAR Cricket 27500
3.860 V 424 STAR Cricket 27500
3.860 V 441 STAR Sports 27500
3.860 V 442 STAR Sports 27500
3.860 V 481 STAR Sports 27500
3.860 V 482 STAR Sports 27500
3.860 V 705 STAR Sports 27500
3.860 V 706 STAR Sports 27500
3.860 V 717 STAR Cricket 27500
3.860 V 718 STAR Cricket 27500
3.860 V 719 ESPN India 27500
3.860 V 720 ESPN India 27500
3.860 V 723 STAR Sports 27500
3.860 V 742 STAR Sports 27500
3.860 V 755 ESPN 27500
3.860 V 763 STAR Sports 27500
3.860 V 772 ESPN India 27500
3.860 V 792 ESPN India 27500
3.860 V ESPN Asia 27500
3.860 V ESPN India 27500
3.860 V ESPN Philippines 27500
3.860 V STAR Cricket 27500
3.860 V STAR Sports 27500
3.860 V STAR Sports SEA 27500
3.920 V 480 CUE 27500
3.920 H 20 STAR SPORTS AS 26850
3.920 H 201 ESPN Malaysia 26850
3.920 H 202 ESPN ASIA 26850
3.920 H 207 Star Sports Mala 26850
3.920 H 208 STAR Sports SE 26850
3.920 H 220 ESS CONT1 26850
3.920 H 222 ESPN CHINA 26850
3.920 H 224 ESS CONT2 26850
3.940 V 703 STAR PLUS ME 28100
● 3.940 V 711 FX 28100
● 3.940 V 712 Nat Geo Phil 28100
● 3.940 V 714 STAR ONE ME 28100
● 3.940 V 725 STAR Gold Int' 28100
3.940 V 785 STAR Plus ME 28100
3.940 V 786 STAR One 28100
3.940 V 787 Vijay US 28100
3.940 V 788 STAR Chinese M 28100
3.940 V 789 STAR News HK 28100
3.940 V 791 STARCon 28100
3.940 V STAR News 28100
3.940 V STAR Plus 28100
3.960 H Boomerang 27500
3.960 H Boomerang SE Asia 27500
3.960 H Cartoon Asia 27500
3.960 H Cartoon Australia 27500
3.960 H Cartoon Macau 27500
3.960 H Cartoon Philippines 27500
3.960 H Cartoon Taiwan 27500
3.960 H CNNI Asia 27500
3.960 H Newsource DNEW 27500
3.960 H TCM Asia 27500
3.960 V VIJAY 28100
3.960 V 511 28100
3.980 V 702 STAR PLUS 28100
3.980 V 704 STAR Movies 28100
3.980 V 707 STAR GOLD 28100
3.980 V 736 Adventure 28100
3.980 V 737 Adventure 28100
3.980 V 741 History/Adventur 28100
3.980 V 751 Star World India 28100
3.980 V 752 Channel [V] Indi 28100
3.980 V 754 STAR Plus Paki 28100
3.980 V 777 STAR One India 28100
3.980 V 800 Vijay India 28100
3.980 V Adventure 28100
3.980 V CHannel. [V] 28100
3.980 V History/Adventur 28100
3.980 V STAR Gold 28100
3.980 V STAR Movies 28100
3.980 V STAR One India 28100
3.980 V STAR Plus 28100
3.980 V STAR World 28100
3.980 V Star World India 28100
3.980 V Sun TV 28100
3.980 V Sun TV HD 28125
4.000 H Cubavision 28125
4.000 H LUXE-TV-SD 28125
4.000 H RAI International 28125
4.000 H RTPI 28125
4.000 H RTR Planeta 28125
4.000 H TVE 28125
4.000 H RAI International As 28125
4.000 H RAIRadio 28125
4.000 H RDP Antena 1 28125
4.000 H RDP Internacional 28125
4.000 H REE 28125
4.000 H RFI Cambodge 28125
4.000 H RFI Francais 28125
4.000 H RFI Kaboul 28125
4.000 H RFI Langues1 28125

ASIASAT 3S
105.6 East
ASI03SSA

● 12.351 V IRIB AMOOZESH 30000
● 12.351 V IRIB QURAN 30000
● 12.351 V IRIB3 30000
● 12.351 V IRIBAMOOZESH 30000
● 12.351 V IRIBQURAN 30000
● 12.351 V IRIBTV1 30000
● 12.351 V IRIBTV2 30000
12.351 V IRIBTV3 30000
● 12.351 V IRIBTV4 30000
● 12.351 V IRIBTV5 30000
● 12.351 V IRINN 30000
● 12.351 V PRESS TV 30000
● 12.351 V SAHAR 30000
● 12.351 V RADIO MAAREF 30000
● 12.351 V RADIO FARHANG 30000
12.351 V RADIO IRAN 30000
● 12.351 V RADIO JAVAN 30000
● 12.351 V RADIO MAAREF 30000
● 12.351 V RADIO PAYAM 30000
● 12.351 V RADIO QURAN 30000
● 12.351 V RADIO SARASARI 30000
● 12.351 V RADIO SEDAYE ASHN 30000
● 12.351 V RADIO VARZESH 30000
12.378 V IRIB TABAN 3100
● 12.382 V HAMOON 3100
● 12.388 V ZAHEDAN 3100
● 12.458 V KERMAN FEED 7600
● 12.458 V IRIB KERMAN 7600
● 12.458 V IRIB KHALIJEFARS 7600
● 12.458 V RADIO BANDARABAS 7600
● 12.458 V RADIO KERMAN 7600
● 12.465 V TCP TEST 2895
12.469 V TAMADON TV 2900
● 12.685 V PTV-Pash DSNG Ku 2140

CAKRAWARTA 1
107.7 East
CAK001SB

2.535 H AFC 20000
2.535 H Animax 20000
2.535 H Australia Network 20000
2.535 H Cartoon Network 20000
2.535 H Celestial Movies 20000
2.535 H Channel [V] 20000
2.535 H Channel NewsAsia 20000
2.535 H Disc. Travel & Livin 20000
2.535 H ESPN 20000
2.535 H Indosiar 20000
2.535 H KBS World 20000
2.535 H MNC Music Channel 20000
2.535 H MTV Asia 20000
2.535 H NGC 20000
● 2.535 H Nickelodeon 20000
2.535 H Playhouse Disney 20000
2.535 H Quick Channel 20000
2.535 H RCTI 20000
2.535 H STAR World 20000
2.535 H Swara 20000
2.535 H TBN/U Chnl Trial 20000
2.535 H Test Channel 20000
2.535 H TVRI 20000
● 2.535 H Vision3 Baby 20000
2.535 H BBC World Service 20000
2.535 H Radio Kis FM 20000
2.535 H Radio Woman 20000
2.535 H RadioNet Mandiri 20000
2.566 V Australia Network 20000
2.566 V Cartoon Network 20000
2.566 V Channel NewsAsia 20000
2.566 V KBS World 20000
2.566 V Nickelodeon 20000
2.566 V Playhouse Disney 20000
2.566 V Quick Channel 20000
2.566 V Swara 20000
2.566 V TBN/U Chnl Trial 20000
2.566 V TVRI 20000
2.566 V Vision3 Baby 20000
2.596 V AXN 20000
2.596 V BBC World 20000
2.596 V CNBC Asia 20000
2.596 V CNNI 20000
2.596 V Discovery 20000
2.596 V Eurosport 20000
2.596 V Hallmark 20000
2.596 V HBO 20000
2.596 V HBO Signature 20000
2.596 V NHK 20000
● 2.596 V Stock Watch 20000
2.596 V Vision1 Sports 20000
2.596 V Vision2 Drama 20000
2.596 V Radio ARH Global 20000
2.596 V Radio Mustang 20000
2.596 V Radio PAS FM 20000
2.596 V Radio Pelita Kasih 20000
2.596 V Radio Ramako 20000
2.596 V Radio SMART FM 20000
2.596 V Radio Trijaya 20000
2.625 H Animal Planet 20000
2.625 H ANTV 20000
2.625 H Asia Plus 20000
2.625 H Cinemax 20000
2.625 H Disney 20000
2.625 H E! 20000
2.625 H NNG Ent. 20000
2.625 H SETI 20000
2.625 H STAR Movies 20000
2.625 H STAR Sports 20000
2.625 H Trans 7 20000
2.625 H TVB Xing Ho 20000
2.625 H Vision1 Sports 20000
2.625 H Radio Australia 20000
2.625 H Radio Ei-Shinta 20000
2.625 H Radio Sonora 20000
2.625 H Voice of America 20000

C-Band: TELKOM 1
108.0 East
TEK001CB

3.460 H 410 STAR Sports So 28000
3.460 H Al Jazeera International 28000
3.460 H APL South East Asi 28000
3.460 H Bloomberg 28000
3.460 H CH1 REGIONAL 28000
3.460 H DTL South East Asi 28000
3.460 H Hallmark 28000
3.460 H MTV Asia 28000
3.460 H Nick NZ 28000
3.460 H STAR World 28000
3.500 H AFC 28000
3.500 H Animax 28000
3.500 H AXN 28000
3.500 H BBC 28000
3.500 H Celestial 28000
3.500 H Discovery RT 28000
3.500 H Discovery Travel 28000
3.500 H E! 28000
3.500 H ESPN 28000
3.500 H Fashion TV 28000
3.500 H Hallmark 28000
3.500 H HBO Signature 28000
3.500 H Phoenix 28000
3.500 H Ten Sport 28000
3.500 H Teleuniversion 28000
3.509 V RCTI 4465
3.520 H Animal Planet 28000
3.580 H Cartoon 28000
3.580 H Channel [V] 28000
3.580 H Cinemax 28000
3.580 H CNBC 28000
3.580 H CNN 28000
3.580 H Discovery 28000
3.580 H HBO 28000
3.580 H MGM 28000
3.580 H MTV 28000
3.580 H NGC 28000
3.580 H NHK 28000
3.580 H Nickelodeon 28000
3.580 H Star Movie 28000
3.580 H Star Sports 28000
3.580 H Star World 28000
3.580 H Radio Test 28000
3.600 V Data Service 20345
3.620 H AFC 28000
3.620 H Animax 28000
3.620 H AXN 28000
3.620 H BBC 28000
3.620 H Celestial 28000
● 3.620 H Channel 2 28000
3.620 H Discovery RT 28000

● 3.620 H Discovery TL 28000
3.620 H Discovery 28000
3.620 H ESPN 28000
3.620 H Fashion TV 28000
3.620 H Hallmark 28000
3.620 H HBO Signature 28000
3.620 H Ten Sport 28000
3.620 H Teleuniversion 28000
3.776 H Feeds 4285
3.786 H Feeds (TV E) 3000
3.795 H Feeds (TELKOM IND 3000
3.898 H Trijaya FM Network 2000
3.985 H Feeds (SWIs; PAL 6000
3.990 H News Feeds (Tandberg 6000
● 4.005 H Feeds (GlobalVision 6000
4.014 H RCTI MENA ACES 6000
4.027 H Feeds (DSNG BIRO 3000
4.066 H LATIVI NETWORK 4685
4.075 H TV7-Network 6000
4.085 H TransTV_Test1 6000
4.095 H JTV Soeroboyo Rek 3123
4.130 V Service Name 2100

NSS 11
108.2 East
NSS011NE

12.316 V MYUNG SUNG 3680
● 12.411 V Baro-TV 11110
● 12.411 V JBS 11110
12.411 V ZAMJARI 1 11110
12.411 V ZAMJARI 2 11110
● 12.411 V LGCC-DigitalNlink 11110

NSS011SA

12.273 H ASHIRWAD 30000
12.273 H (Empty) 30000
12.327 H ASHIRWAD 5000
● 12.435 H one 2000
12.474 H DVB Service 900 3355
12.474 H RCS Map Table 60 3355

BSAT 1A, 2A
110.0 East
BSA01AKB

11.804 R Wowow 27500
11.843 H NHK BS-1 27500
11.881 H NHK Hi-Vision 27500
11.919 R NHK BS-2 27500

BSA02AKB

11.727 R BS Asahi (Ch 151) 27500
11.727 R BS Asahi (Ch 152) 27500
11.727 R BS Asahi (Ch 153) 27500
11.727 R BS-i 27500
11.766 R Wowow 27500
11.766 R Wowow 2 27500
11.766 R BS-i Hybrid 27500
11.766 R St.Giga 27500
11.766 R BSJ Radio 27500
11.958 R BS Fuji 27500
11.958 R BS Nippon 27500
11.958 R BS NTV Radio 2 27500
11.958 R BS Asahi 489 27500
11.958 R Healing Station 27500
11.958 R BS-4 488 27500
11.958 R BS Asahi 27500
11.996 R Star Channel 27500
11.996 R NHK BS-1 27500
11.996 R NHK BS-2 27500
11.996 R B & M 318 27500
11.996 R Blooming 316 27500
11.996 R JFN Satellite Radio 27500
11.996 R Opera My Seat 27500
11.996 R World Tour Station 27500

N-SAT 110
110.1 East
JCS110KB

12.291 R Plat One Promo
12.291 R 60s/70s Rock & Pops
12.291 R 80s/90s Rock & Pops
12.291 R Beatles
12.291 R Borderless
12.291 R C&W
12.291 R Cafes Sound
12.291 R Classic
12.291 R Healing
12.291 R J-Pop Classic
12.291 R J-Pop Hits
12.291 R Kids
12.291 R Latin
12.291 R Love Song
12.291 R R&B Soul
12.291 R Reggae Classic
12.291 R Rock & Pops Best Hit
12.291 R Soundteria
12.291 R Soundtrack
12.291 R Strings
12.291 R Swing
12.331 R Cartoon Network Japa
12.331

Freq Pol Channel Name GHz	Symbol rate

12.688 V Paradise TV 21096
12.688 V Pink Cherry Bomb 21096
12.688 V Sakura Channel 21096
12.688 V Yellow Cherry Bomb 21096
12.688 V Data Service 21096
12.703 H Sky PerfecTV 21096
12.703 H Data Service 21096
12.718 V Classica Japan 21096
12.718 V Coming Soon TV 21096
12.718 V The Mistery Channel 21096
12.718 V Japanet Studio J42 21096
12.718 V Reform Senmon Channe 21096
12.718 V VITV 21096
12.733 H Sky PerfecTV 21096

C-Band: JCSAT 3

128.1 East

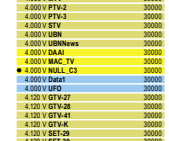
JCS003CA

3.960 V AZIO 30000
3.960 V CTI-H 30000
3.960 V ERA News 30000
3.960 V MUCH TV 30000
3.960 V PILI 30000
3.960 V J 30000
3.960 V ZZ 30000
3.960 V AD-HOC 30000
3.960 V BLTV-I 30000
3.960 V GOODZ 30000
3.960 V NULL_C1 30000
3.960 V 01_US New Songs & Ch 30000
3.960 V 02_US Popular Songs 30000
3.960 V 03_Sweet Love Songs 30000
3.960 V 04_50&60 Popular Hit 30000
3.960 V 05_R&B 30000
3.960 V 06_HIPHOP 30000
3.960 V 07_Party Music 30000
3.960 V 08_Rock Music 30000
3.960 V 09_Jazz Vocal 30000
3.960 V 10_Jazz Main Stream 30000
3.960 V 11_Lounge 30000
3.960 V 12_Enka 30000
3.960 V 13_Japanese Popular 30000
3.960 V 14_JAT Station 30000
3.960 V 15_Bossa Nova 30000
3.960 V 16_Classical 30000
3.960 V 17_Piano Easy Listen 30000
3.960 V 18_Crystal Music 30000
3.960 V 19_Soft Hearing 30000
3.960 V 20_Season Music 30000
3.960 V 21_Old Deck 30000
3.960 V 22_Chinese Best Sell 30000
3.960 V 23_Chinese Soft Song 30000
3.960 V 24_Chinese Classical 30000
3.960 V 25_Chinese Music 30000
3.960 V 26_Easy Listening 30000
3.960 V 27_Birthday Songs 30000
3.960 V 28_Wedding & Goodbye 30000
3.960 V 29_Sweet Love Chanse 30000
3.960 V 30_POP Music 30000
3.960 V 31_3375 30000
3.960 V 32_Napoli 30000
3.960 V 33_KFC 30000
3.960 V 34_Audrey 30000
3.960 V 35_KF 30000
3.960 V 36_Crstal & Piano Mu 30000
3.960 V 37_Fashion Music 30000
3.960 V 38_Soft Music 30000
3.960 V 39_KG 30000
3.960 V 40_Asia Radio 30000
4.000 V CTINews 30000
4.000 V ETVNews 30000
4.000 V JET_I 30000
4.000 V MEGA 30000
4.000 V MWV 30000
4.000 V PTV-2 30000
4.000 V PTV-3 30000
4.000 V STV 30000
4.000 V UBN 30000
4.000 V UDNNews 30000
4.000 V DAAI 30000
4.000 V MAC_TV 30000
4.000 V NULL_C3 30000
4.000 V Data1 30000
4.000 V UFO 30000
4.120 V GTV-27 30000
4.120 V GTV-28 30000
4.120 V GTV-41 30000
4.120 V GTV-K 30000
4.120 V SET-29 30000
4.120 V SET-39 30000
4.120 V SET-54 30000
4.120 V SET-I 30000
4.120 V FTV 30000
4.120 V FTVN 30000
4.154 H Service 1 6110

C-Band: APSTAR 6

134.0 East

AP5006CB



3.840 H Media Bridge 27500
3.840 H TIME TV 27500

APSTAR 6

134.1 East

AP5005K2

12.275 V CCTV-1 27500
12.275 V CCTV-10 27500
12.275 V CCTV-11 27500
12.275 V CCTV-12 27500
12.275 V CCTV-2 27500
12.275 V CCTV-5 27500
12.275 V CCTV-6 27500
12.275 V CCTV-7 27500
12.275 V CCTV-8 27500
12.275 V CCTV-9 27500
12.275 V CNR-1 27500
12.275 V CNR-2 27500
12.275 V CNR-3 27500
12.275 V CNR-4 27500
12.275 V CNR-5 27500
12.275 V CNR-6 27500
12.275 V CNR-7 27500
12.275 V CRI 27500
12.302 V GW L13R14 5990
12.302 V GW L15R16 5990
12.302 V GW L17R18 5990
12.302 V GW L19R20 5990
12.302 V GW L21R22 5990
12.302 V GW L23R24 5990
12.302 V GW L25R26 5990
12.302 V GW L27R28 5990
12.302 V GW L29R30 5990
12.302 V GW L11R31 5990
12.302 V K1S stereo 5990
12.302 V K1S Rch6 5990
12.302 V Lzh6 Rdy 5990
12.302 V SW1 stereo 5990
12.302 V SW2 stereo 5990
12.302 V ZH1 stereo 5990
12.302 V ZH2 stereo 5990
12.302 V ZH3 stereo 5990
12.302 V ZH7 stereo 5990
12.302 V ZH8 stereo 5990
12.355 V CQTV 27500
12.355 V GSTV 27500
12.355 V GZTV 27500
12.355 V HENTV 27500
12.355 V HUNTV 27500
12.355 V LIVE1 27500
12.355 V NMTV 27500
12.355 V QHTV 27500
12.355 V SCTV 27500
12.355 V SHXTV 27500
12.355 V YNTV 27500
12.355 V NMHR 27500
12.355 V NMMR 27500
12.355 V RAD_1 27500
12.355 V RAD_2 27500
12.355 V XJHR 27500
12.355 V XJMR 27500
12.355 V XZHR 27500
12.355 V XZMR 27500
12.355 V BisData 27500
12.395 V CETV-1 27500

Freq Pol Channel Name GHz	Symbol rate

12.395 V CETV-2 27500
12.395 V CETV-Sky 27500
12.395 V Reserve 27500
12.435 V AXN 27500
12.435 V CIN 27500
12.435 V CNBC 27500
12.435 V CNN 27500
12.435 V DIS 27500
12.435 V EAST 27500
12.435 V ESPN 27500
12.435 V HALL 27500
12.435 V HBO 27500
12.435 V NGC 27500
12.435 V STAR1 27500
12.515 V BBC 27500
12.515 V CELES 27500
12.515 V CETV 27500
12.515 V CNAI 27500
12.515 V CUBA 27500
12.515 V HOR 27500
12.515 V NHK 27500
12.515 V NOW 27500
12.515 V PHOE1 27500
12.515 V TVB 27500
12.515 V TVBS 27500
12.595 V [V] 27500
12.595 V BLOOM 27500
12.595 V EUROS 27500
12.595 V MAS 27500
12.595 V MTV 27500
12.595 V PHOEC 27500
12.595 V PHOEN 27500
12.595 V STARS 27500
12.595 V SUN 27500
12.595 V TVS 27500
12.595 V XINGK 27500
12.621 V DVB-Server 5632
12.621 V XINGGUANG-SAT 5632
12.675 V CUBA 27500
12.675 V EAST 27500
12.675 V KBS 27500
12.675 V SUN 27500

TELSTAR 18

138.0 East

TES018K1

12.302 V A1 30000
12.302 V A10 30000
12.302 V A11 30000
12.302 V A12 30000
12.302 V A13 30000
12.302 V A14 30000
12.302 V A2 30000
12.302 V A3 30000
12.302 V A4 30000
12.302 V A5 30000
12.302 V A6 30000
12.302 V A7 30000
12.302 V A8 30000
12.355 V ZY-LUXE-TV-HD 43000
12.355 V 01-CCTV-1 43000
12.355 V 02-PHOENIX INFO 43000
12.355 V 03-PHOENIX CHANNE 43000
12.355 V 04-FASHION TV 43000
12.355 V 05-SUN TV 43000
12.355 V 06-MASTV 43000
12.355 V 07-ATV 43000
12.355 V 08-ATV 43000
12.355 V 09-TVBS 43000
12.355 V 10-TVB XINGHE 43000
12.355 V 11-TVBS 43000
12.355 V 12-TVBSG 43000
12.355 V 13-TVBSN 43000
12.355 V 14-MEGA MOVIE 43000
12.355 V 15-HALLMARK CHAN 43000
12.355 V 16-ZHUJIANG 43000
12.355 V 17-CCTV-NEWS 43000
12.355 V 18-CMC 43000
12.355 V 19-CETV 43000
12.355 V 20-MTV 43000
12.355 V 21-CCTV-10 43000
12.355 V 22-LOVE TV 43000
12.355 V 23-CCTV 43000
12.355 V 24-CELESTIAL TV 43000
12.401 V B1 22425
12.401 V B10 22425
12.401 V B2 22425
12.401 V B3 22425
12.401 V B4 22425
12.401 V B5 22425
12.401 V B6 22425
12.401 V B7 22425
12.401 V B8 22425
12.401 V B9 22425
12.430 V C1 22425
12.430 V C10 22425
12.430 V C4 22425
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12.430 V C7 22425
12.430 V C8 22425
12.430 V C9 22425
12.430 V CK2 22425
12.430 V C3 22425
12.490 V 25-CCTV 21593
12.490 V 26-CCTV 21593
12.490 V 27-GOAL TV 21593
12.490 V 28-TVBJ 21593
12.490 V 29-MBC 21593
12.490 V 30-CHINA FOOD CHA 21593
12.490 V 31-CHANNEL NEW AS 21593
12.490 V 32-CCTV FINANCE C 21593
12.490 V 33- 21593
12.490 V 00-BILLBOARD 21593
12.538 V BEIJING 41250
12.538 V CCTV 4 41250
12.538 V CCTV 9 41250
12.538 V CCTV OPERA 41250
12.538 V FUJIAN 41250
12.538 V GUANGDONG 41250
12.538 V HUNAN 41250
12.538 V JIANGSU 41250
12.538 V SHANGHAI 41250
12.538 V SHENZHENG 41250
12.538 V XIAMEN 41250
12.598 V Asia Plus 43000
12.598 V AXN 43000
12.598 V Cartoon NetWk 43000
12.598 V CEN 43000
12.598 V Channel 18 43000
12.598 V Discovery 43000
12.598 V Entertainment 43000
12.598 V Finance Info Ch 43000
12.598 V Live News Ch 43000
12.598 V Movies 1 43000
12.598 V News Channel 43000
12.598 V NGC 43000
12.598 V Odds Express 43000
12.646 V P10 22425
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12.646 V P2 22425
12.646 V P3 22425
12.646 V P4 22425
12.646 V P5 22425
12.646 V P6 22425
12.646 V P7 22425
12.646 V P8 22425
12.646 V P9 22425
12.720 V BBC World 43000
12.720 V Ch13 43000
12.720 V CNBC HK 43000
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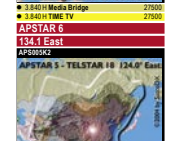
12.720 V Discovery T&L 43000
12.720 V HMC-1 43000
12.720 V I-CABLE Sports 43000
12.720 V KBS World 43000
12.720 V Macau Channel 43000
12.720 V NBA TV 43000
12.720 V PGA Tour 43000
12.720 V Soccer Betting 43000
12.720 V Super Soccer 43000
12.720 V HUMAX-DOWNLOAD SV 43000

C-Band: TELSTAR 18

138.1 East

APS005CB



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3.600 V 15 PTS 公視 30000
3.600 V 16 MEGA 電影台 30000
3.600 V 17 ETTV-N 東森新聞台 30000
3.600 V 18 ETTV-Asia 東森亞洲台 30000
3.600 V 19 TTV WORLD 台視國際台 30000
3.600 V 20 JET日本台 30000
3.600 V 21 ETYoYo 東森幼幼美洲台 30000
3.600 V 22 Test 1 30000
3.600 V 23 Test2 30000
3.600 V 24 Test3 30000
3.600 V 25 Test4 30000
3.600 V 14 TZUCHI 慈濟大愛 30000
3.600 V 01 ANT1華人娛樂TTV台視 30000
3.600 V 02 CTV 中視 30000
3.600 V 03 CTS 華視 30000
3.660 V 04 FTV 民視 30000
3.660 V 05 FTVN 民視新聞 30000
3.660 V 06 Uplink 1 30000
3.660 V 07 Uplink 2 30000
3.660 V 08 Uplink 3 30000
3.660 V 09 中視my life 亞洲旅遊 30000
3.660 V 10 SETI 三立國際 30000
3.660 V 11 CTI-H中天亞洲台 30000

Freq Pol Channel Name GHz	Symbol rate

3.660 V 12 HollywoodMovie好萊塢 30000
3.664 H Channel 11 3617
3.664 H Test Channel 3617
3.804 V LTV 3034
3.867 H vast 4290
3.867 H ąĆąĎąĺąĺ101 4290
3.867 H prg3 4290
3.867 H ąĆąĎąĺąĺ102 4290
3.867 H ĐĐ»ĐµÑĺ 4290
4.124 V Test Channel 3255
4.124 V BBC Arabic 3255
4.124 V BBC English 1E Asi 3255
4.124 V BBC English S Asi 3255
4.124 V BBC English Aus NZ 3255
4.124 V BBC English News 3255
4.124 V BBC Mandarin 3255
4.124 V BBC Pac Feed 1 3255
4.124 V BBC Pac Feed 2 3255
4.124 V BBC Pac Feed 3 3255
4.124 V BBC Pac Feed 4 3255

EXPRESS AM3

140.0 East

EXPAM3CE

3.576 R Magadan 4285
3.627 R Duble2+GTRK CAXA 4340
3.633 R AZIMUT-V 4340
3.675 R Duble-1+RRD1 33470
3.675 R Duble-2+RRD2 33470
3.675 R Orbita-1R+Mayak 33470
3.675 R Orbita-2R+Yunost 33470
3.675 R Sport 33470
3.675 R Kultura-1 33470
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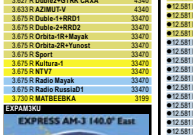
3.675 R Radio Mayak 33470
3.675 R Radio RussiaD1 33470
3.730 R MATBEEBKA 3199

EXPAM3KU



10.962 V TV 7726
10.981 V FNS 29812
10.981 V MuzTV_Love 29812
11.090 V TV 4996
11.104 V Yakutia 5789

MEASAT 2

148.0 East

MEA002CB

3.725 V GMA7 Manila 13432
3.725 V International 1 13432
3.725 V International 1 - AC 13432
3.725 V International 2 13432
3.725 V QTV 11 13432
4.113 V TV NATIN 2170
4.113 V BEAT 2170
4.113 V DZRH 2170
4.113 V HOT FM 2170
4.113 V KIDS FM 2170
4.113 V LOVE 2170
4.113 V RN 2170
4.113 V YES FM 2170

MEA002KM

11.537 H AUSTRALIAN NW 35500
11.537 H BIBI 35500
11.537 H DISNEY 35500
11.537 H GOALTV1 35500
11.537 H GOALTV2 35500
11.537 H HALLING 41250
11.537 H HTV 35500
11.537 H INFO-TV 35500
11.537 H MTV ASIA 35500
11.537 H THIEN ANH 35500
11.537 H VCTV1 35500
11.537 H VCTV2 35500
11.537 H VCTV3 35500
11.537 H VCTV4 35500
11.537 H VCTV5 35500
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11.537 H VCTV7 35500
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11.537 H VTV2 35500
11.537 H VTV3 35500
11.537 H VTV4 35500
11.537 H VTV5 35500
11.537 H VTV6 35500
11.537 H VOV1 35500
11.537 H VOV3 35500
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11.537 H STB Opentech 35500
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12.407 H ASTRO WAH LAI TOI 30000
12.407 H ASTRO XPRESI 30000
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12.407 H CCTV-9 30000
12.407 H DISNEY 30000
12.407 H GOAL TV1 30000
12.407 H HBO 30000
12.407 H PLAYHOUSE 30000
12.407 H STAR WORLD 30000
12.407 H TVB XING HE 30000
12.407 H ZEE 30000
12.470 H ASTRO ARUNA 30000
12.470 H ASTRO KIRANA 30000
12.470 H ASTRO TVIQ 30000
12.470 H GOAL TV2 30000
12.470 H NATIONAL GEOGRAPH 30000
12.470 H NHK WORLD 30000
12.470 H OMNIX 30000
12.470 H STAR MOVIES 30000
12.470 H STAR SPORTS 30000
12.470 H ZHEJIANG TV INTERNA 30000
12.470 H ASTRO SHUANG XING 30000
12.470 H DISCOVERY 30000
12.532 H ASTRO AWANI 30000
12.532 H ASTRO CERIA 30000
12.532 H ASTRO OASIS 30000
12.532 H BLOOMBERG 30000
12.532 H CELESTIAL MOVIES 30000
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12.532 H INDOSIAR 30000
12.532 H WA TV 30000
12.532 H WIN 30000
12.594 H BBC WORLD 30000
12.594 H CCTV-4 30000
12.594 H CNN 30000
12.594 H DISCOVERY TRAVEL 30000
12.594 H E! ENTERTAINMENT 30000
12.594 H METRO TV 30000
12.594 H MTV ASIA 30000
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12.594 H TRANS 7 30000
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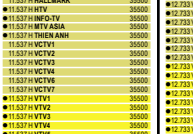
12.594 H TVRI 30000

OPTUS D2

152.0 East

OPT002KA



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12.581 H FERA 22500
12.581 H MELO 22500
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12.581 H THES 22500
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12.706 V Narodni Radio 22500
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12.706 V Cronat Radio 22500
12.706 V IFB 22500
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12.706 V Tamil Radio 22500
12.743 V Deepam 22500
12.743 V ITVN 22500
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12.743 V Setanta Sports 22500
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12.743 V TV Polonia 22500
12.743 V TVK 1 22500
12.743 V TVK 2 22500
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12.743 V Abu Dhabi 22500
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12.743 V Al Forat 22500
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12.743 V DUNA 22500
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OPT002KH

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12.425 H MAZZ 22500
12.425 H AGPY 22500
12.425 H ITN 22500
12.644 V CNC 27500
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12.644 V Inspiration 22500
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12.644 V TRT Int 22500
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12.644 V Raw FM 22500
12.644 V RNW1 22500
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12.644 V RVI-1 22500
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Coming Soon

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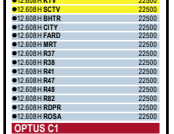
OPTUS C1

156.0 East

OPTOC1NA



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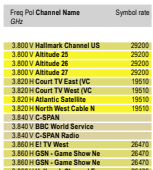
12.647 V Adults Only 1 27800
12.647 V Adults Only 2 27800
12.647 V Classic 27800
12.647 V CNBC 27800
12.647 V EXPO 27800
12.647 V FB09 27800
12.647 V FB10 27800
12.647 V FB11 27800
12.647 V FB12 27800
12.647 V FB25 27800
12.647 V FB26 27800
12.728 V ABC TV NT 24450
12.728 V ABC TV Q 24450
12.728 V ABC TV SA 24450
12.728 V ABC TV SE 24450
12.728 V ABC FM NT 24450
12.728 V ABC FM Q 24450
12.728 V ABC FM SA 24450
12.728 V ABC FM SE 24450
12.728 V ABC JJJ 24450
12.728 V ABC PNN 24450
12.728 V ABC RN NT 24450
12.728 V ABC RN Q 24450
12.728 V ABC RN SA 24450
12.728 V ABC RN SE 24450
12.728 V ABC RR AS 24450
12.728 V ABC RR NQ 24450
12.728 V ABC RR NT 24450
12.728 V ABC RR Q 24450
12.728 V ABC RR SA 24450
12.728 V ABC RR SE 24450
12.728 V ABC RR V 24450
12.728 V [...] 24450

OPTOC1N

12.518 H ARENA +2 27800
12.518 H Classics +2 27800
12.518 H Comedy +2 27800
12.518 H FOX8 +2 27800
12.518 H LifeStyle +2 27800
12.518 H Movie Two 27800
12.518 H Showtime +2 27800
12.518 H Spr 27800
12.518 H TV1 +2 27800
12.518 H UKTV +2 27800
12.518 H W2 27800
12.527 V ABC TV WA 27800
12.527 V GWN TV 27800
12.527 V IMP TV 27800
12.527 V SBS SA 27800
12.527 V WIN 27800
12.527 V WLK 27800
12.527 V NITV 27800
12.527 V 2CUZ 27800
12.527 V SPY 27800
12.527 V BHA 27800
12.527 V 999 AM 27800
12.527 V ABC FM WA 27800
12.527 V ABC RN WA 27800
12.527 V ABC RR WN 27800
12.527 V ABC RR WS 27800
12.527 V Caama 27800
12.527 V GUM- ALA 27800
12.527 V GUM- AM 27800
12.527 V PAW 27800
12.527 V SBS R SA 27800
12.527 V Teds ba 27800
12.527 V ARDS 27800
12.527 V Arena 27800
12.527 V Mulba 27800
12.527 V RABS TONE 27800
12.527 V SBA BUS6 27800
12.527 V SMA BUS7 27800
12.527 V 27800
12.558 H AREN 27800
12.558 H ARENA 27800
12.558 H Comedy 27800
12.558 H Disney 27800
12.558 H FOX Classics 27800
12.558 H FOX8 27800
12.558 H LifeStyle 27800
12.558 H Movie One 27800
12.558 H Showtime 27800
12.558 H Spare 27800
12.558 H TV1 27800
12.558 H UKTV 27800
12.558 H W 27800
12.567 V AURORA 27800
12.567 V FB01 27800
12.567 V FB02 27800
12.567 V FB02 test 27800
12.598 H BBC World 27800
12.598 H Channel [V] 27800
12.598 H CI 27800
12.598 H FUEL TV 27800
12.598 H How To 27800
12.598 H MAX 27800
12.598 H MTV 27800
12.598 H SCI FI 27800
12.598 H Sky News 27800
12.598 H SkyN 27800
12.598 H TCM 27800
12.598 H VH1 27800
12.598 H (Empty) 27800
12.607 V FB05 27800
12.638 H BOX 27800
12.638 H Box Office 27800
12.638 H Channel [V]2 27800
12.638 H Country Music 27800
12.638 H Disc Health 27800
12.638 H Disc Science 27800
12.638 H Disc Travel 27800
12.638 H E! 27800
12.638 H Eurosportnews 27800
12.638 H FTV 27800
12.638 H NG Adventure 27800
12.638 H Nick Jr 27800
12.638 H AR01 27800
12.638 H AR02 27800
12.638 H AR03 27800
12.638 H AR04 27800
12.638 H AR05 27800
12.638 H AR06 27800
12.638 H AR07 27800
12.638 H AR08 27800
12.638 H AR09 27800
12.638 H AR10 27800
12.638 H AR11 27800
12.638 H AR12 27800
12.638 H AR13 27800
12.638 H AR14 27800
12.638 H AR15 27800
12.638 H AR16 27800
12.638 H AR17 27800
12.638 H AR18 27800
12.638 H AR19 27800
12.638 H AR20 27800
12.638 H AR21 27800
12.638 H AR22 27800
12.638 H AR23 27800
12.638 H A

SatcoDX Global Satellite Chart 04/2008



Freq Pol Channel Name GHz	Symbol rate
11.720 H Asia After Dark	26800
11.720 H CCTV 4	26800
11.720 H Chongqing TV	26800
11.720 H CQTV	26800
11.720 H CSFJ	26800
11.720 H CSGD	26800
11.720 H CSLN	26800
11.720 H DAAI	26800
11.720 H Fujian TV	26800
11.720 H Guangdong TV	26800
11.720 H HNTV	26800
11.720 H HOTS	26800
11.720 H IFTV	26800
11.720 H ITV	26800
11.720 H Liaoning TV	26800
11.720 H NEWS	26800
11.720 H PAC2	26800
11.720 H SKL1	26800
11.720 H SKL2	26800
11.720 H SNOM	26800
11.720 H SNOT	26800
11.720 H SXTV	26800
11.720 H AAD	26800
11.720 H Pacvia TV	26800
11.720 H PiTV	26800
11.720 H Sky Link TV	26800

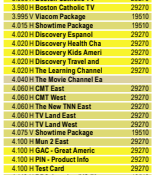
C-Band: GALAXY 14
235.0 East (125.0 West)

GXY914CB

Freq Pol Channel Name GHz	Symbol rate
3.760 H TBN – Trinity Broa	
3.760 H KTBN - Trinity Bro	
3.760 V Wuhan Channel US	3600
3.800 H CNN USA	
3.800 H CNN Radio News	
3.800 H TBS Superstation (	
3.820 V Brother Stair	
3.820 V WRN 1 North America	
3.820 V WRN 2 North America	
3.840 H The Disney Channel E	
3.860 V HBO West	
3.860 V WCPC	
3.880 H ESPN	
3.920 H ABC Family East	
3.940 V Discovery Channel We	
3.960 H CNBC US	
3.980 H ESPN 2	
4.000 H HBO East	
4.020 V Cinemax West	
4.040 H TNT East	
4.040 H CNN Radio Noticias	
4.060 V Sci Fi East	
4.080 H USA Network East	
4.100 V BET - Black Entert	
4.100 H Lifetime East	29270
4.120 H Lifetime Movie	29270
4.120 H Lifetime West	29270
4.120 H Lifetime Women	29270
4.140 V CNN Headline News	
4.140 V CNN Radio	
4.160 H A&E East	
4.180 V Showtime East	

GALAXY 10R
237.0 East (123.0 West)

GXY10RCB



Freq Pol Channel Name GHz	Symbol rate
3.740 H Feeds	
3.795 V Flix West	19510
3.795 V Showtime Beyond West	19510
3.795 V Showtime Extreme Wes	19510
3.795 V Showtime Showcase We	19510
3.795 V Showtime Too West	19510
3.795 V Showtime West	19510
3.795 V Sundance Channel Wes	19510
3.795 V The Movie Channel We	19510
3.795 V The Movie Channel Xt	19510
3.812 V Showtime Family West	9760
3.812 V Showtime Next West	9760
3.812 V Showtime Women West	9760
3.837 V TVN 2	19510
3.837 V TVN 3	19510
3.837 V TVN 4	19510
3.837 V TVN 5	19510
3.837 V TVN 6	19510
3.837 V TVN 7	19510
3.837 V TVN 8	19510
3.837 V TVN 9	19510
3.840 V unknown	26470
3.880 V 70s Oldies	27670
3.880 V 80s Hits	27670
3.880 V 90s Hits	27670
3.880 V Acid Jazz	27670
3.880 V Adult Alternative	27670
3.880 V Adult Contemporary	27670
3.880 V Album Rock	27670
3.880 V Alternative Rock	27670
3.880 V Beautiful Instrument	27670
3.880 V Bluegrass	27670
3.880 V Children's	27670
3.880 V Classic R&B	27670
3.880 V Classic Rock	27670
3.880 V Contemporary Christi	27670
3.880 V Dance	27670
3.880 V Easy Tropical	27670
3.880 V Flashback New Wave	27670
3.880 V Folk Rock	27670
3.880 V Golden Oldies	27670
3.880 V Gospel	27670
3.880 V Great Standards	27670
3.880 V Hard Rock	27670
3.880 V Holiday Happenings	27670
3.880 V Hot Country	27670
3.880 V Jazz	27670
3.880 V Latin Contemporary	27670
3.880 V Latin Oldies	27670
3.880 V Latin Tropical Hits	27670
3.880 V Modern Country	27670
3.880 V New Age	27670
3.880 V Pop	27670
3.880 V Reggae	27670
3.880 V Retro Dance	27670
3.880 V Rock 'n' Blues	19510
3.880 V Rock 'n' Roll Oldies	19510
3.880 V Salsa	19510
3.880 V Show Tunes	19510
3.880 V Smooth Jazz	19510
3.880 V Soft Hits	19510
3.880 V Swing	19510
3.880 V Symphonic	19510
3.880 V Traditional Country	19510
3.880 V Urban Adult Contempo	19510
3.880 V Urban Beat	19510
3.880 V Vocal Blends	19510
3.880 V Vocal Jazz	19510
3.880 V Vocal Standards	19510
3.880 V World Beat	19510
3.880 V World Fusion	19510
3.880 V World Jazz	19510
3.880 V World Roots	19510
3.880 V World Urban	19510
3.880 V Yesterday's Hits	19510
3.880 V Yesterday's Rock	19510
3.880 V Yesterday's Standard	19510
3.880 V Yesterday's Top 40	19510
3.880 V Yesterday's Traditio	19510
3.880 V Yesterday's Urban	19510
3.880 V Yesterday's Vocal	19510
3.880 V Yesterday's World	19510
3.880 V Zydeco	19510
3.880 V Feeds (Empty)	19510
3.880 V Feeds (Empty)	19510
3.880 V Feeds (Empty)

Freq Pol Channel Name GHz	Symbol rate
12.060 H 08-A E History	26700
12.060 H 09-A E Biography	26700
12.060 H 10-A E Style	26700
● 12.060 H Enc 11 Test	26700
● 12.060 H Enc 12 Test	26700
12.120 V CMC	30000
12.120 V ETN	30000
12.120 V HRT	30000
12.120 V Planeta	30000
12.120 V BVN	30000
● 12.120 V CGN TV	30000
12.120 V HRT TV	30000
12.120 V Lawyers TV	30000
12.120 V Sonyo	30000
12.120 V TRWAM	30000
12.120 V Vietnam TV	30000
12.120 V CMN Radio	30000
12.120 V HRT Radio	30000
12.120 V BVN RNW 1 Radio	30000
12.120 V BVN RNW 2 Radio	30000
12.120 V BVN RNW 3 Radio	30000
12.120 V BVN RNW 5 Radio	30000
12.120 V BVN RNW 6 Radio	30000
12.120 V BVN Rvi 1 Radio	30000
12.120 V Radio Maryja	30000
12.120 V STDM Radio	30000
12.120 V TNT Radio	30000
12.120 V VPRadio 1	30000
12.120 V VPRadio 2	30000
12.169 H RTP Internacional	3003

AMC2/4G

11.654 V CGN TV	30000
11.654 V DoveVision	30000
11.654 V GCN TV	30000
11.654 V HRT TV	30000
11.654 V SBS	30000
11.654 V SES Americom Promo	30000
11.654 V TAN TV	30000
11.654 V TAN TV 2	30000
11.654 V HRT Radio	30000
11.704 V KUL TV FOX64	2170

DIRECTV 4_8

259.1 East (100.9 West)

DTV148KB

12.224 R DirectTV USA	20000

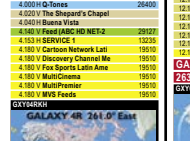
GALAXY 16

261.0 East (99.0 West)

GX11H40K

3.742 V Adhoc Ch 1	28340
3.742 V Adhoc Ch 3	28340
3.742 V Adhoc Sig 1 Ch 2	28340
3.742 V Ch 30	28340
3.742 V Open Ch 4	28340
3.744 H SNG	1953
3.776 H (Empty)	3255
3.780 V WB Los Angeles Fe	26000
3.786 H FAMILYNET	5000
3.790 H KCHF-TV	3256
3.811 H SNG	3256
3.820 V WB Los Angeles Fee	26000
3.825 H DUPUS-NET-TECH	2604
3.825 H Telesur Campeche	2604
3.880 H Red Canal 2	29688
3.880 H Red Canal 5	29688
3.880 H Red Canal 9	29688
3.917 H TELEPUERTO TUXTLA	3124
3.928 H TELEVER	3124
3.952 H (Empty)	12299
4.000 H AMEA Network	26400
4.000 H WHT - 1	26400
4.000 H WHT - 2	26400
4.000 H Adagio 1&2	26400
4.000 H Adagio 1&2 - 2	26400
4.000 H Adagio 3&4	26400
4.000 H Adagio 3&4 - 2	26400
4.000 H Adagio 4&5	26400
4.000 H Adagio 4&5 - 2	26400
4.000 H Future 1	26400
4.000 H Future 1 - 2	26400
4.000 H Future 2	26400
4.000 H Future 2 - 2	26400
4.000 H Future 3	26400
4.000 H Future 3 - 2	26400
4.000 H Pulse FM	26400
4.000 H Pulse FM - 2	26400
4.000 H Tones	26400
4.020 V The Shepard's Chapel	6040
4.040 H Nova Vista	3124
4.140 V Feed (ABC HD NET-2	29127
4.153 H SERVICE 1	13235
4.160 V Cartoon Network Latl	19510
4.180 V Discovery Channel Me	19510
4.180 V Fox Sports Latin Ame	19510
4.180 V MultiCinema	19510
4.180 V MultiPremier	19510
4.180 V MVS Feeds	19510

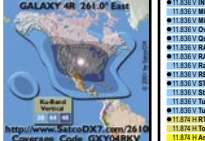
GX11H40K



11.800 H America's Voice	19510
11.800 H ESPN Extra PPV	19510
● 11.800 H ESPN PPV 1	3426
● 11.800 H ESPN PPV 2	3426
● 11.800 H ESPN PPV 3	19510
11.800 H ESPN PPV 4	19510
11.800 H ESPN PPV 5	19510
11.800 H ESPN PPV 6	19510
11.800 H ESPN Now	19510
11.840 H Bravo UB	19510
11.840 H HBO 2 West	19510
11.840 H HBO Signature West	19510
11.840 H HGTV UB	19510
11.840 H Love Stories West	19510
11.840 H Starz! West	19510
11.840 H Showtime Too West	19510
11.840 H Starz! Theater West	19510
11.840 H The History Channel	19510
11.840 H The Movie Channel We	19510
11.840 H Westerns West	19510
11.920 H BBC America	19510
11.920 H Discovery Health	19510
11.920 H Discovery Kids	19510
11.920 H ESPNews	19510
11.920 H Fox Sports World	19510
11.920 H Home Show Network	19510
11.920 H IFC US	19510
11.920 H Noggin	19510
11.920 H Playboy TV	19510
11.920 H The Golf Channel	19510
11.920 H The Science Channel	19510
11.920 H Turner Classic Movie	19510
11.960 H Feed	26000
12.060 V Action West	19510
12.060 V Cinemax West	19510
12.060 V Encore West	19510
12.060 V HBO Family West	19510
12.060 V HBO West	19510
12.060 V MoreMax West	19510
12.060 V Showtime Extreme Wes	19510
12.060 V Showtime Showcase We	19510
12.060 V Showtime West	19510
12.060 V Starz! West	19510
12.060 V The Movie Channel Xt	19510
12.060 V True Stories West	19510
12.061 H USPS TV	3125
12.077 H PSTN 15	9000
12.077 H PSTN 17	9000
12.077 H PSTN 19	9000

Freq Pol Channel Name GHz	Symbol rate
12.077 H PSTN 23	9000
12.160 H DIY - Do It Yourse	19510
12.160 H Fox Gold Atlantic	19510
12.160 H Fox Gold Central	19510
12.160 H Fox Gold Pacific	19510
12.160 H Great American Count	19510
12.160 H MBC Network	19510
12.160 H NET 5	19510
12.160 H The Word Network	19510

GXY04RKV



11.780 V A&E History Internat	19510
11.780 V Lifetime Movie Netwo	19510
11.780 V MTV 2 US	19510
11.780 V MuchMusic USA	19510
11.780 V Nick Gas	19510
11.780 V Style	19510
11.780 V The Biography Channe	19510
11.780 V Toon Disney	19510
11.780 V TRIO	19510
11.820 V Discovery Civilizati	19510
11.820 V Discovery Home & Lei	19510
11.820 V Discovery Wings	19510
11.820 V ESPN 2	19510
11.820 V ESPN Alternate	19510
11.820 V National Geographic	19510
11.820 V Speed Channel	19510
11.820 V VH1 Classic	19510
11.820 V VH1 Country	19510
11.820 V 50's Golden Oldies	19510
11.820 V 70's Oldies	19510
11.820 V 80's Hits	19510
11.820 V Acid Jazz	19510
11.820 V Album Rock	19510
11.820 V Children's	19510
11.820 V Classic Hits Blend	19510
11.820 V Coffee House Rock	19510
11.820 V Contemporary Christi	19510
11.820 V Contemporary Instrum	19510
11.820 V Dance	19510
11.820 V Great Standards	19510
11.820 V Holidays and Happeni	19510
11.820 V Hot Country	19510
11.820 V Lite Jazz	19510
11.820 V New Age	19510
11.820 V R&B Rap Hits	19510
11.820 V Reggae	19510
11.820 V Retro Dance	19510
11.820 V Soft Hits	19510
11.880 H Bravo US	19510
11.880 H ESPN Classic	19510
11.880 H HBO 2 East	19510
11.880 H HBO Signature East	19510
11.880 H HGTV US	19510
11.880 H Love Stories East	19510
11.880 H Mystery East	19510
11.880 H Showtime Too East	19510
11.880 H Starz! Theater East	19510
11.880 H The History Channel	19510
11.880 H The Movie Channel Ea	19510
11.880 H Westerns East	19510
11.880 H 60's Oldies	19510
11.880 H Adult Contemporary	19510
11.880 H Classic Rock	19510
11.880 H Lite Classical	19510
11.880 H Urban Beat	19510
11.900 V In Demand 1	19510
11.900 V In Demand 2	19510
11.900 V In Demand 3	19510
11.900 V In Demand 4	19510
11.900 V In Demand 5	19510
11.900 V In Demand 6	19510
11.900 V Outdoor Life Network	19510
11.900 V Sci Fi	19510
11.900 V The Hot Network	19510
11.900 V TV Land	19510
11.900 V WE - Women's Enterta	19510
11.900 V Alternative Rock	19510
11.900 V Hottest Hits	19510
11.900 V Jazz Vocal Blends	19510
11.900 V Listening Room	19510
11.900 V Modern Country	19510
11.900 V Smooth Jazz	19510
11.940 V BET on Jazz	19510
11.940 V Black Starz! East	19510
11.940 V Classworld Internatio	19510
11.940 V Ovation - The Arts N	19510
11.940 V Spice 2	19510
11.940 V Sundance Channel Wes	19510
11.940 V The Box Edge	19510
11.940 V The International Ch	19510
11.940 V VH1 Soul	19510
11.940 V Blues	19510
11.940 V Classic Jazz	19510
11.940 V Gospel	19510
11.940 V Lite Classical	19510
11.940 V Rap	19510
11.940 V Symphonic	19510
11.940 V Trends	19510
11.940 V Urban Adult Contempo	19510
12.040 H Action East	19510
12.040 H Cinemax East	19510
12.040 H Encore East	19510
12.040 H HBO East	19510
12.040 H HBO Family East	19510
12.040 H MoreMax East	19510
12.040 H Showtime East	19510
12.040 H Showtime Extreme Eas	19510
12.040 H Showtime Showcase Ea	19510
12.040 H Starz! East	19510
12.040 H The Movie Channel Xt	19510
12.040 H True Stories East	19510
12.120 H DirecWay	30000
12.140 V Bloomberg TV US	19510
12.140 V Fox Movie Channel	19510
12.140 V GoodLife TV Network	19510
12.140 V Spice	19510
12.140 V Tech TV	19510
12.140 V The Inspirational Lif	19510
12.140 V The Outdoor Channel	19510
12.140 V Trinity Broadcasting	19510
12.187 V 01-CNN	8500
12.187 V 02-MSNBC	8500
12.187 V 03-CNBC	8500
12.187 V Alt 01-CNN	8500
12.187 V IdeaCast	8500
12.187 V 04-Channel 4	8500

GALAXY 25

263.0 East (97.0 West)

GXY025CB

3.762 V TCT NETWORK	4615
3.762 V TCT WORLD	4615
3.796 V LDS feed (AsiaPacific	6898
● 3.796 V LDS feed ((Empty Nam	3333
3.923 V LDS feed (North Amer	3426
● 4.027 V LDS feed (NorthAme	3426
● 4.027 V LDS feed ((Empty Nam	3426
4.055 V LDS Feeds ((Empty	3750

GXY025KB

● 11.716 V Al Anwar	22000
● 11.716 V DIDAR GLOBAL TV	22000
● 11.716 V Emmanuel TV	22000
● 11.716 V FEED	22000
● 11.716 V Rang-A-Rang	22000
● 11.716 V RTA	22000
● 11.716 V Supreme Master TV	22000
● 11.716 V SUROYO TV	22000
● 11.716 V Accent Radio	22000
● 11.716 V American Liberty Rad	22000
● 11.716 V KNLB FM Christian	22000
● 11.716 V Radio Tondar	22000
● 11.716 V VBS Radio	22000
● 11.775 H PIT	3979
11.775 H RTA	3979
● 11.778 H PIT	3979
11.778 H RTA	3979
11.789 V Ad Hoc	28125
11.789 V BN BOSNIA	28125
11.789 V Globecast 218	28125
11.789 V Globecast 63	28125
11.789 V Israel Plus	28125
11.789 V TVK	28125
11.789 V Al Karma	28125
11.789 V AL MAGHRIBIA	28125
11.789 V Canal Algerie	28125
11.789 V Mhc Worldview	28125
● 11.789 V Orange TV	28125
11.789 V Peace TV	28125
11.789 V RN Bosnia Radio	28125
11.789 V Al Maghiribia Radio	28125
11.789 V Radio Internationale	28125
11.789 V TDA-1	28125
● 11.836 V AL-ALAM	20765
● 11.836 V APPADANA INT	20765

Freq Pol Channel Name GHz	Symbol rate
● 11.836 V Daystar TV	20765
11.836 V IRIB 2	20765
11.836 V IRINN	20765
11.836 V NTD	20765
● 11.836 V OPEN	20765
● 11.836 V Payam E Azadi	20765
● 11.836 V TV 7 TUNIS	20765
● 11.836 V TV Nejat	20765
● 11.836 V INT 1	20765
● 11.836 V INT 3	20765
● 11.836 V INT 4	20765
● 11.836 V Micro Effect	20765
● 11.836 V Micro Effect/CTR	20765
● 11.836 V Overcomer/Start	20765
● 11.836 V Quran Radio	20765
● 11.836 V RADIO MAAREF	20765
● 11.836 V RADIO SABABRI	20765
● 11.836 V Radio Seday-a Ashna	20765
● 11.836 V RIBN radio	20765
● 11.836 V STAR1&2	20765
● 11.836 V Star5 and AVR	20765
● 11.836 V Tunis Radio1	20765
● 11.836 V Tunis Radio2	20765
● 11.874 H RTV21	22000
● 11.874 H Tep Channel	22000
● 11.874 H Ariana Afghan	22000
● 11.874 H DMC	22000
● 11.874 H Globecast 201	22000
● 11.874 H Globecast 213	22000
● 11.874 H Globecast 215	22000
● 11.874 H KJC TV	22000
● 11.874 H LTV World	22000
● 11.874 H Telespace	22000
● 11.874 H GLR Radio 1	22000
● 11.874 H GLR Radio 2	22000
● 11.874 H RTV21 Radio	22000
● 11.874 H DZAR radio	22000
● 11.874 H Fatbol DP	22000
● 11.898 H Top Albanian Radio	22000
● 11.898 V Amrita TV	22000
● 11.898 V Asianet	22000
● 11.898 V Asianet News	22000
● 11.898 V Asianet Plus	22000
● 11.898 V RTR Planeta	22000
● 11.898 V RTR Sport	22000
● 11.898 V SetantaSports	22000
● 11.898 V Shalom TV	22000
● 11.898 V ARTN TV	23000
● 11.898 V Globecast 755	22000
● 11.898 V NTA	22000
● 11.936 H Armenian TV	20000
● 11.936 H Bostel TV	20000
● 11.936 H DFH-2	20000
● 11.936 H DFH-3	20000
● 11.936 H DFH-4	20000
● 11.936 H DFH-5	20000
● 11.936 H DFHSports	20000
● 11.936 H DFH-1	20000
● 11.936 H TV Orient	20000
● 11.936 H TV Romania	20000
● 11.936 H Armenian Radio	20000
● 11.936 H Bostel Radio	20000
● 11.936 H DFHFM-2	20000
● 11.936 H DFHFM-3	20000
● 11.936 H Romanian Radio	20000
● 11.966 H Kurdsat	22000
● 11.966 H MRTV Al Jareeah	22000
● 11.966 H RODNOY	22000
● 11.966 H Russia Today	22000
● 11.966 H TGN	22000
● 11.966 H TQTV	22000
● 11.966 H TRT	22000
● 11.966 H VTV-4	22000
● 11.966 H TGN Radio	22000
● 11.991 V CTN	22000
● 11.991 V ERI TV	22000
● 11.991 V Pink Plus	22000
● 11.991 V Setanta 2	22000
● 11.991 V Globecast 710	22000
● 11.991 V Kuwait TV	22000
● 11.991 V M2 Morocco	22000
● 11.991 V Setanta Adhoc	22000
● 11.991 V Simay Azadi	22000
● 11.991 V ERI Radio-T	22000
● 11.991 V Radio Pink	22000
● 11.991 V ERI Radio A	22000
● 11.991 V Globecast 711	22000
● 11.991 V M2 Morocco Radio	22000
● 11.991 V Test 243	22000
● 11.999 H KISB-501	20000
● 11.999 H KISB-502	20000
● 11.999 H KISB-503	20000
● 11.999 H KISB-504	20000
● 11.999 H KISB-505	20000
● 11.999 H KISB-506	20000
● 11.999 V Al Jazeera English	20000
● 11.999 H KISB-507	20000
● 11.999 H Saudi TV2	20000
● 11.999 V TV Cancao Nova	20000
● 11.999 H KISB Radio-501	20000
● 11.999 H Radio Cancao Nova	20000
12.008 V Knowledge Channel	3000
12.053 V Bridges TV	22000
12.053 V NTV Hayat	22000
12.053 V Pink Extra	22000
12.053 V RSC 1 Romania	22000
12.053 V RSC 2 Romania	22000
12.053 V RSC3 PROTV INT	22000
12.053 V Al Forat	22000
12.053 V Press TV	22000
12.053 V 70s	22000
12.053 V 80s	22000
12.053 V Adult Alt.	22000
12.053 V Adult Top 40	22000
12.053 V Arena Rock	22000
12.053 V Big Band	22000
12.053 V Bluegrass	22000
12.053 V Blues	22000
12.053 V Christian	22000
12.053 V Class/Master	22000
12.053 V Classic R&B	22000
12.053 V Classic rock	22000
12.053 V Classic/Ctry	22000
12.053 V Cont/Instrum	22000
12.053 V Dance	22000
12.053 V Easy/Listen	22000
12.053 V Hip Hop / R&B	22000
12.053 V Hit List	22000
12.053 V Int'l/Love	22000
12.053 V Jazz	22000
12.053 V Light/Class	22000
12.053 V Lite Hits	22000
12.053 V Mexicana	22000
12.053 V Oldies	22000
12.053 V Party/Favs	22000
12.053 V Pop Latino	22000
12.053 V R&B Soul	22000
12.053 V Reggae	22000
12.053 V Reggaeton	22000
12.053 V Retro-Active	22000
12.053 V Rock	22000
12.053 V Rock/Espanol	22000
12.053 V Salsa/Mereng	22000
12.053 V Seasons	22000
12.053 V Singer/Band	22000
12.053 V Smooth Jazz	22000
12.053 V Soundscapes	22000
12.053 V Taste/Italy	22000
12.053 V Tejano	22000
12.053 V Today's/Ctry	22000
● 12.053 V Al Forat Radio	22000
● 12.053 V RFI /MC M O	22000
● 12.053 V RFI Fonacabe	22000
12.084 V ASC Flix	22000
12.084 V ASC Xtra	22000
12.084 V Polsat	22000
12.084 V Tele5	22000
12.084 V TV Polonia	22000
12.084 V TVP 3	22000
12.084 V AZ TV	22000
12.084 V EBRU TV	22000
12.084 V Samanyolu TV	22000
12.084 V Latino Broadcasting	22000
12.084 V AZ Radio	22000
12.084 V PolskieRadio1	22000
12.084 V PolskieRadio3	22000
12.090 V DRAMA	20000
12.090 V IPTV NEWS	20000
12.090 V IPTV VARIETY	20000
12.090 V ZHONG	20000
12.090 V ABN	20000
12.090 V ANDISHEH TV	20000
12.090 V ARIA INTERNATIONA	20000
12.090 V CHANNEL ONE	20000
12.090 V HDTV	20000
12.090 V IPTV SHOPPING	20000
12.090 V ISHTAR TV	20000
12.090 V LAO Champa TV	20000
12.090 V Lao TV5	20000
12.090 V LIVE CHANNEL	20000
12.090 V NAT TV	20000
12.090 V PARS TV	20000
12.090 V TAMASHA	20000
12.090 V TV3 Cambodia	20000
12.090 V DWRR	20000
12.090 V DZMM	20000
12.090 V RSS	20000
● 12.115 V BENIESH	22425
● 12.115 V CTV 1	22425
● 12.115 V E2 Channel	22425
● 12.115 V HORIZON ARMENIAN	22425
● 12.115 V IMPACT TV	22425
● 12.115 V ITC	22425
● 12.115 V NEWS1	22425
● 12.115 V OPEN 1	22425
● 12.115 V OPEN2	22425
● 12.115 V SPIRIT TV	22425
● 12.115 V Tari-Lao	22425
● 12.115 V TEN TV	22425
● 12.115 V Variety	22425
● 12.115 V VISION TV	22425
● 12.115 V Access Amer.	22425
● 12.115 V ERZA radio	22425
● 12.115 V open	22425
● 12.115 V MPEG 4	22425
● 12.115 V SAT.1/V.	22425
12.122 H Affiliate Channel	20000
12.122 H RTS	20000
12.122 H DA-AI	20000
12.122 H KAFGTV	20000
12.122 H LOVEWORLD	20000
12.122 H Markazi TV	20000
12.122 H NOORTV	20000
12.122 H Payam-E-Afghan	20000
● 12.122 H Persian Bazaar TV	20000
12.122 H RSI	20000
12.122 H TBN	20000
12.146 V Abu Dhabi sport	22000
12.146 V Al-Iraqiya	22000
12.146 V CTV	22000
● 12.146 V Jamahirya TV	22000
● 12.146 V Jordan TV	22000
● 12.146 V Oman TV	30000
● 12.146 V Qatar TV	22000

Freq Pol Channel Name GHz	Symbol rate
● 12.146 V Saudi TV1	22000
● 12.146 V Sharjah TV	22000
● 12.146 V Sudan TV	22000
● 12.146 V Syrian TV	22000
● 12.146 V YEMEN TV	22000
● 12.146 V Aden Radio	22000
● 12.146 V Emirates FM	22000
● 12.146 V Main General Program	22000
● 12.146 V Oman radio	22000
● 12.146 V Oman-Holy Quran	22000
● 12.146 V Program One	22000
● 12.146 V Quatar radio	22000
● 12.146 V Radio Omduman Holy K	22000
● 12.146 V Radio Qoran	22000
● 12.146 V Republic Of Iraq Rad	22000
● 12.146 V Sana'a radio	22000
● 12.146 V Sharjah FM	22000
● 12.146 V Sudan Radio	22000
● 12.146 V Voice Of People	22000
● 12.146 V Voice of Youth	22000
● 12.152 H ETV	20000
● 12.152 H Globecast 1	20000
● 12.152 H Iran TV	20000
● 12.152 H Jaam-E-Jam	20000
● 12.152 H Omid-E-Iran	20000
● 12.152 H PEN TV	20000
● 12.152 H Persian TV	20000
● 12.152 H Tapesh TV	20000
● 12.152 H Tasvir Iran	20000
● 12.152 H Test TV	20000
● 12.152 H Bahai Radio	20000
● 12.152 H EthiopianRadio	20000
● 12.152 H Globecast 12	20000
● 12.152 H KWIL/KWIR	20000
● 12.152 H KWZ/KW2R	20000
● 12.152 H Radio Soul	20000
● 12.152 H Test Radio	20000
● 12.177 V CCN	23000
● 12.177 V BTV	23000
● 12.177 V CHURCH CHANNEL	23000
● 12.177 V Emmanuel TV	23000
● 12.177 V FTV	23000
● 12.177 V GODS LEARNING CH	23000
● 12.177 V JCTV	23000
● 12.177 V KURD TV	23000
● 12.177 V OPEN	23000
● 12.177 V SOAC	23000
● 12.177 V TBN	23000
● 12.177 V TBN ENLACE	23000
● 12.177 V TBN Russia	23000
● 12.177 V TCS-TV	23000
● 12.177 V AFN IRAN	23000
● 12.177 V Asian FM	23000
● 12.177 V Best NCE	23000
● 12.177 V Glas Drine BiH	23000
● 12.177 V KNLB FM Christian	23000
● 12.177 V Radio Hmong	23000
● 12.177 V Rainbow Radio	23000
● 12.177 V WRN Eng NAM	23000
● 12.177 V WRN Fra EUR	23000
● 12.177 V WRN Mul NAM	23000

GALAXY 3C

265.0 East (95.0 West)

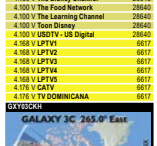
GX03SCH

3.842 H NPS - AB	11000
3.842 H NPS - CB	11000
3.842 H NPS - FO	11000
3.842 H NPS - NB	11000
3.914 H Horse/Dog Racing F	3074
3.963 H Horse/Dog Racing F	3074
3.968 H Horse/Dog Racing F	3074

GX03SCV

3.730 V LATV HOUSTON	8825
3.730 V Fusion TV	8825
3.730 V INN News	8825
3.745 V FAITHTV	2206
3.754 V INN News	3073
3.767 V Service 2	6111
3.885 V Horse/Dog Racing F	3074
3.908 V Horse/Dog Racing F	3074
3.925 V Horse/Dog Racing F	3074
3.929 V Horse/Dog Racing F	3074
3.934 V Horse/Dog Racing F	3074
3.969 V Horse/Dog Racing F	3074
3.979 V Horse/Dog Racing F	3074
4.040 H DAYSTAR-C	29110
4.040 H KUUK C	29110
4.040 H WBTW	29110
4.040 H WJMF	29110
4.040 H WNGS-C	29110
4.040 H WSAV	29110
4.040 H WUDT	29110
4.040 H WUVF C	29110
4.100 V ESPN	28640
4.100 V ESPN 2	28640
4.100 V Fox News Channel	28640
4.100 V HGTV	28640
4.100 V Lifetime	28640
4.100 V Lifetime Movie Netwo	28640
4.100 V Starz! East	28640
4.100 V The Discovery Channe	28640
4.100 V The Disney Channel	28640
4.100 V The Food Network	28640
4.100 V The Learning Channel	28640
4.100 V Toon Disney	28640
4.100 V USDTV - US Digital	28640
4.168 V LPTV1	6617
4.168 V LPTV2	6617
4.168 V LPTV3	6617
4.168 V LPTV4	6617
4.168 V LPTV5	6617
4.176 V CATV	6617
4.176 V TV DOMINICANA	6617

GX03SCH

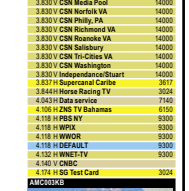


11.780 H CCTV 4	20759
11.780 H CCTV 9	20759
● 11.780 H CCTV E	20759
● 11.780 H CCTV F	20759
11.810 H HRTV	20000
11.810 H QTBED	20000
11.810 H QTBHP	20000
11.810 H RTN1	20000
11.810 H RTN11	20000
11.810 H RTN12	20000
11.810 H RTN13	20000
11.810 H RTN14	20000
11.810 H RTN15	20000
11.810 H RTN16	20000
11.810 H RTN17	20000
11.810 H RTN18	20000
11.810 H RTN19	20000
11.810 H RTN2	20000
11.810 H RTN20	20000
11.810 H RTN22	20000
11.810 H RTN3	20000
11.810 H RTN4	20000
11.810 H RTN41	20000
11.810 H RTN5	20000
11.810 H RTN6	20000
11.810 H RTN7	20000
11.810 H RTN8	20000
11.810 H RTN9	20000
11.810 H RTN24	20000
11.810 H RTN25	20000
11.810 H RTN26	20000
11.810 H RTN27	20000
11.810 H RTN28	20000
11.810 H RTN29	20000
11.810 H RTN30	20000
11.810 H RTN31	20000
11.810 H RTN32	20000
11.810 H RTN33	20000
11.810 H RTN34	20000
11.810 H RTN35	20

SatcoDX Global Satellite Chart 04/2008

Freq Pol Channel Name GHz	Symbol rate
3.744 H Michigan Government	3520
3.810 V A copy of A copy of	14000
3.810 V A copy of Test Chanon	14000
3.810 V FSN alt programming	14000
3.810 V MSC m	14000
3.810 V MSC w	14000
3.830 V BALT DMA Blackout	14000
3.830 V CSN Alternate Channe	14000
3.830 V CSN Alternate Channe	14000
3.830 V CSN Baltimore	14000
3.830 V CSN Baltimore 282	14000
3.830 V CSN Beckley/Bluefi	14000
3.830 V CSN Charlottesvill	14000
3.830 V CSN Harrisburg Wiz	14000
3.830 V CSN Harrisburg/Yor	14000
3.830 V CSN Harrisonburg V	14000
3.830 V CSN International/Ph	14000
3.830 V CSN Media Pool	14000
3.830 V CSN Norfolk VA	14000
3.830 V CSN Philly, PA	14000
3.830 V CSN Richmond VA	14000
3.830 V CSN Roanoke VA	14000
3.830 V CSN Salisbury	14000
3.830 V CSN Tri-Cities VA	14000
3.830 V CSN Washington	14000
3.830 V Independence/Stuart	14000
3.837 H Supercanal Caribe	3617
3.844 H Horse Racing TV	3024
4.043 H Data service	7140
4.106 H ZNS TV Bahamas	6150
4.118 H NBS NY	9300
4.118 H WPIX	9300
4.118 H WWOR	9300
4.118 H DEFAULT	9300
4.132 H WNET-TV	9300
4.140 V CNBC	
4.174 H SG Test Card	3024

AMC003KB



● 11.723 H	3675
11.736 V AR/FRN	6102
11.736 V ENGLISH	6102
11.736 V INFO	6102
11.736 V UREMG	6102
11.736 V URDU	6102
11.800 H Unknown	30000
11.821 V AR/FRN	4232
11.956 H Entertainment,Reques	21000
11.956 H Live Events	21000
11.956 H Marketsource	21000
11.956 H Newsource Main	21000
11.974 H GPTV feeds (Channe	6000
12.009 V AR/FRN	5000
12.098 V Service 2	4340
12.142 V Unknown	30000
12.144 H Montana PBS Feed (	4340
12.157 H Unknown	4444
12.166 H Service 2 SD	4444
12.180 V Unknown	30000

AMC 2
275.0 East (85.0 West)
AMC002KB

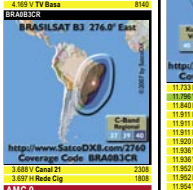
12.196 H Echostar Test Card	3979

C-Band: BRASILSAT B3
276.0 East (84.0 West)
BRAB3CN

3.698 V TV Catolica Cancao N	4280
3.698 V Radio Cancao Nova	4280
3.700 V TV Sul America	3333
3.705 H TV SERRA DOURADA	4278
3.705 H TV Serra Dourada	4278
3.710 V Assembleia Sao Paulo	12960
3.710 V Cine Brasil TV	12960
3.710 V Teleconferencia Chan	12960
3.710 V TV Cultura Sao Paulo	12960
3.710 V TV Ra-Tim-Bum	12960
3.710 V Radio Cultura AM	12960
3.710 V Radio Cultura FM	12960
3.716 H TV Grande Minas	4000
3.724 V Radio Pentecostal De	20175
3.724 H TV Mirante	4412
3.724 H Mirante FM	4412
3.724 H Disable AI	4412
3.724 H Disable Vide	4412
3.724 H MnSa	4412
3.732 V Radio 21	3214
3.732 V TV Radio Clube	3214
3.736 H TV Sul Fluminense	3330
3.736 H Radio Sul Fluminense	3330
3.738 V TV Morena	4708
3.745 V Net Cable TV promo	3110
3.747 H Canal Audio	4299
3.747 H Rede Nacional	4299
3.753 H RBA Sat	3563
3.753 H Radio Clube - Belem	3563
3.754 V Data service	5000
3.757 H TV Cidade Verde	3563
3.765 H TV Net	4285
3.765 H TVE Bahia	4285
3.765 H Radio Educadora FM	4285
3.765 H Decoder OS Download	4285
3.768 H Test Card	8000
3.768 V Rede STV	8000
3.768 V Teleconferencia	8000
3.769 H TV Horizonte	3333
3.769 H Radio Cultura AM	3333
3.776 H TV Palmas	3327
3.781 V TV Tamba	3330
3.791 V TV Assembleia Legi	3330
3.825 H Rede Mundial TV	3002
3.844 H Feeds (NoName)	3210
3.848 H Internacional	10127
3.848 H Nacional	10127
3.848 H Regional	10127
3.848 H TV Cancao Nova (Inte	10127
3.848 H TV Cancao Nova (Naci	10127
3.848 H TV Cancao Nova (Regi	10127
3.856 H Canal Audio	4295
3.856 H Rede Nacional	4295
3.858 V KTV	4289
3.858 V Rio de Janeiro	4289
3.858 V VIDEOCOM	4289
3.866 H Record Belem	4423
3.866 H Rede Record-PA	4423
3.871 H Rede Record-RJ	4433
3.877 H Rede Familia	4450
3.889 H Rede Record-BA	4430
3.895 H Rede Record-GO	4430
3.906 H TV Gazeta	3929
3.911 V TV Sul Bahia	3255
3.912 H RDI IELF-1	3617
3.912 H RDI IELF-2	3617
3.916 H TV Campo Grande MS	3255
3.921 H TV Genesis	3255
3.924 V TV Damasio	1808
3.926 V TV Aratu Da Bahia	3255
3.931 H Galeria de Artes	3255
3.931 H Bandeirantes - Bahia	3255
3.936 H Medalhao Persa-Pe	3255
3.936 H MEDALHAO PERSA-PE	3255
3.936 H TV Exclusiva	3255
3.941 V REDE SUPER	3255
3.941 V Rede Super	3255
3.944 V TV Assembleia Gaucha	1808
3.951 V Rede Brasileira de I	4340
3.955 V TV Tribuna	4340
3.967 V Mix TV Regional	2170
3.970 V 5	4445
3.970 V TV Educativa do Ri	4445
3.970 V Radio FM Cultura 107	4445
3.986 V Cine Brasil	3255
3.989 V GBS TV	2666
4.013 V TV Educativa	3255
4.054 V Teve Shop Cachoeria	1287
4.060 V TV Justica	3330
4.075 V CNT	4444
4.087 H Band 1	17200
4.087 H Band 2	17200
4.087 H Band News	17200
4.087 H Band Sports	17200
4.087 H Rede 21	17200
4.087 H Band AM	17200

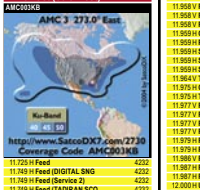
Freq Pol Channel Name GHz	Symbol rate
4.087 H Band FM	17200
4.087 H RADIO A	17200
4.087 H RADIO B	17200
4.087 H RADIO C	17200
4.087 H RADIO D	17200
4.133 V TV Assembleia Legi	2531
4.151 H Pucsat Rio Grande do	1808
4.153 V Terrorism Sat	1851
4.155 V Sexy TV	2169
4.155 V SEXY TV	2169
4.167 H TV Educon	3255
4.169 V TV Basa	8140

BRAB3CH



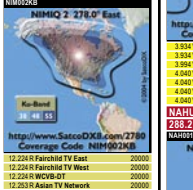
3.688 V Canal 21	2308
3.688 H Rede Cig	1808

AMC 9
277.0 East (83.0 West)
AMC003KB



11.725 H Feed	4232
11.749 H Feed (DIGITAL SNG	4232
11.749 H Feed (Service 2)	4232
11.749 H Feed (TADIRAN SCO	4232
11.752 H Feed (DIGITAL SNG	4232
11.752 H Feed (Service 2)	4232
11.752 H Feed (Tandberg Servi	4232
11.756 H Feed (DIGITAL SNG	4232
11.756 H Feed (WHDH DSNG)	4232
11.756 H Feed (WSMV)	4232
● 11.756 H Feed (Empty Name))	4232
11.762 H Feed (DIGITAL SNG	4232
11.762 H Feed (FOX)	4232
11.762 H Feed (KXAS SNG PA	4232
11.768 H Feed (AMC 1 5 9 GA	4232
11.768 H Feed (DIGITAL SNG	4232
11.768 H Feed (SCOPUS-NET-	4232
11.768 H Feed (VIDEO LOSS)	4232
● 11.768 H Feed ((Empty Name))	4232
● 11.772 H Feed (AMC 9/3F)	4232
11.772 H Feed (DIGITAL SNG	4232
11.778 H Feed (AMC 9/3F)	4232
11.778 H Feed (DIGITAL SNG	4232
11.780 H Feed (Tandberg Servi	4232
11.780 H Feed (WHDH DSNG)	4232
11.845 H Feed	17800
● 12.040 H Feed ((Empty Name))	30000

NIMIQ 2
278.0 East (82.0 West)
NIM002KB

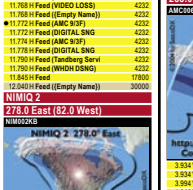


12.224 R Fairchild TV East	20000
12.224 R Fairchild TV West	20000
12.224 R WCVB-DT	20000
12.253 R Asian TV Network	20000
12.253 R DW-TV	20000
12.253 R Pridefreedom TV	20000
12.253 R WBZ-DT	20000
12.282 R The Racing Network	20000
12.282 R VH 1	20000
12.282 R WHDH-DT	20000
12.282 R Polskie Radio	20000
12.311 R EWTN	20000
12.311 R WFXT-DT	20000
12.326 L Vu HD3	20000
12.326 L Vu HD4	20000
12.341 R WGBH-DT	20000
12.370 R KOMO-DT	20000
12.370 R Test Card	20000
12.399 R KIRO-DT	20000
12.399 R Mango	20000
12.413 R TV SERRA DOURADA	4278
12.428 R XPRS 2	20000
12.443 L BTV	20000
12.443 L CPJC-TV	20000
12.443 L XPRS 4	20000
12.443 L DW Radio 1	20000
12.443 L DW Radio 2	20000
12.443 L Galaxia CelticCeltA	20000
12.443 L Galaxie Electronic	20000
12.443 L Galaxie Latino Tropi	20000
12.443 L Galaxie Opera Plus	20000
12.443 L Galaxie Standards	20000
12.443 L Pharmacie Jean Coutu	20000
12.457 R XPRS Testis	20000
12.457 R Alpha	20000
12.457 R RCPQ-DT	20000
12.457 R XPRS Testis	20000
12.486 R KCTS-DT	20000
12.486 R OMNI2	20000
12.486 R Saskatchewan Legisla	20000
12.516 R CH Montreal	20000
12.516 R Channel M	20000
12.516 R Vu HD 2	20000
12.545 R B4U	20000
12.545 R CITY-DT	20000
12.545 R TV Polonia	20000
12.574 R M-HD	20000
12.574 R MC-HD	20000
12.574 R Tamil TV	20000
12.574 R Vu HD 1	20000
12.604 R DIS HD	20000
12.604 R TSN HD	20000
12.617 L CITY-TV	20000
12.677 L Oddssy 1	20000
12.677 L Oddssy 2	20000
12.677 L Skyegy	20000
12.677 L Talentvision	20000
12.677 L TRN Vu	20000

GALAXY 17
286.0 East (74.0 West)
SBS006VB

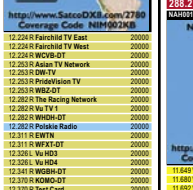
11.733 H Service 1	6616
11.796 V SUDAN PRIMARY	30681
11.840 H Unknown	30000
11.911 H ENC 1	13235
11.911 H ENC 2	13235
11.911 H UFC64	13235
11.920 H Feed	14143
11.936 V Feed (Tribune 5/6)	4297
11.936 V Feed ((Empty Name))	4297
11.952 H Feed	3978
11.952 H Feed (NEWS 12 WE	3978
11.954 V Feed (KTLA Single	4297
11.954 V Feed (KTLA/KJ 2 SA	4297
11.954 V Feed ((Empty Name))	4297
11.958 V Feed (Tribune 5/6)	4297
11.958 V Feed (WPIX_TV)	4297
11.958 V Feed ((Empty Name))	4297
11.959 H CHEESESTEAK 1	13235
11.959 H PBSI	13235
11.959 H SCOPUS-NET-TECH	13235
11.959 H Signal 3 Channel 3	13235
11.959 H SURE SHOT ENC1	13235
11.964 V Tribune DC	4297
11.975 V Corfio Test TS_A	13235
11.975 H Tandberg Service	13235
11.977 V Feed	6111
11.977 V Feed (Service 2)	6111
11.977 V Feed (WTVT TAMPA)	3978
11.977 V Feed ((Empty Name))	6111
11.979 H Feed (NEWS 12 LI1	3978
11.979 H Feed (NEWS_12 _NJ)	3978
11.986 V Feed	6111
11.987 H Feed (NEWS 12 CT)	3978
11.987 H Feed (WDAF SNG)	3978
12.000 H Unknown	30000
12.002 V NEW ORLEANS PATH	30000
12.009 V SATOPS NETU15	6890
12.009 V SATOPS NETU16	6890
12.009 V SATOPS NETU18	6890
12.009 V SATOPS NETU19	6890
12.029 V Feed (Auto 8MHz)	4492
12.033 V NBC Feed (AMC-1/9	4232
12.033 V NBC Feed (NBC SAT	4232
12.033 V NBC Feed (PEAK)	4232
12.033 V NBC Feed (SATELLI	4232
12.037 H Feed (DIRECT BIRA	4492

AMC 6
288.0 East (72.0 West)
AMC006CB



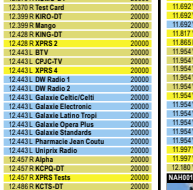
3.934 V WRBJ-TV	8681
3.934 V WZRB-TV	8681
3.994 V PA CABLE NETWORK	4167
4.040 V NASA Education Ser	26665
4.040 V NASA Media Service	26665
4.040 V NASA MissionOperat	26665
4.040 V NASA Public Servic	26665

NAHUEL 1A
288.2 East (71.8 West)
NAH001KI



11.649 V Canal 7	3700
11.680 V La Pampa	3385
11.692 V Canal 9	3385
11.692 V TV Santa Cruz	3385
11.692 V Radio Provincia Del	3385
11.817 V Canal Rural Satelita	4000
11.869 H Valparaiso Sporting	3000
11.954 V Canal 10	17910
11.954 V Monte Cario TV	17910
11.954 V Red de TV Color	17910
11.954 V Teledoce	17910
11.954 V TVE Internacional Am	17910
11.954 V TV Nacional	17910
11.954 V Concierto FM	17910
11.954 V CX 6 Sodre	17910
11.954 V Radio Carve	17910
11.954 V Radio Cero	17910
11.954 V X FM	17910
11.997 V CM El Canal de la Mu	8476
11.997 V Cronica TV	8476
12.180 V Canal 7 Santiago	4201

NAH001KJ

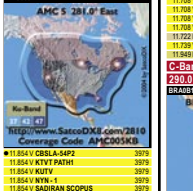


11.478 V TV Libre	2220
11.585 V Canal 11	3700
11.603 V Canal 27 Guatemala	3600
11.611 V Unsion Esquipulas	3400
11.626 V Canal 48 Honduras	3600
11.634 V Canal Conexion 31 Honduras	3600
11.633 V Nahuel Promos	3600
11.675 V TV Libre Uruguay	3600
11.692 V Canal Rural Satelita	10000
11.708 V Conexion Educativa	12000
11.708 V Nahuel Promos	12000
11.708 V SMSAT - Sembrando	12000
11.722 H IPIDVB	14403
11.739 V Red Media Educativa	1482
11.919 H Hispasat	4688

C-Band: BRASILSAT B4
290.0 East (70.0 West)
BRAB3CN

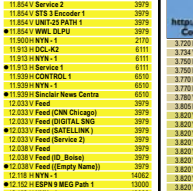
3.628 H TV Camara	3000
3.628 H Radio Camara FM	3000
3.634 H TV Senado 21	4500
3.642 H NGT	3263
3.645 V TV Senado	3213
3.645 V Radio Senado FM	3213
3.648 H TV Liberal	4285
3.648 H Radio Cidade (AM/FM)	4285
3.648 H Radio Liberal AM	4285
3.648 H Radio Liberal FM	4285
3.650 V Mix Transporte	4400
3.656 H TV Brasil Central	3392
3.656 V TV Meio Norte	4463
3.656 H Radio Globo channel	3392
3.656 V Radio Brasil Sat	4463
3.656 V Radio Brasil Sat FM	4463
3.656 V Disable AI	4463
3.656 V Disable Vide	4463
3.656 V MnSa	4463
3.663 V Unnamed	4607
3.663 V TV Bahia	4607
3.663 V Rede Tropicalsat	4607
3.665 H Rede Bandeirantes Mi	4700
3.665 H Band FM de Minas Ger	4700
3.672 V TV Alterosa	8454
3.672 H TV Centro America	4713
3.672 V Radio Guarani FM	8454
3.672 V canal 4 and 2	8454
3.672 V Data Service	8454
3.680 H Rede Globo Minas Ger	6000
3.685 H Rede Vida Feeds	4500
3.688 H Rede Globo Sao Paolo	6000
3.696 H Rede Minas	3598
3.696 H Radio Inconfidencia	3598
3.703 V TV Difusora do Maran	3250
3.703 V TV FM-AM	3250
3.708 V TV Mirante	3250
3.708 V Radio Mirante AM	3250
3.708 V Radio Mirante FM	3250
3.708 V COMSAT DVS	3250
3.714 V Rede Record Minas Ge	4400
3.714 V Service 1	4400
3.714 V Rede Aleluia Minas G	4400
3.763 V SBT	6220

C-Band: BRASILSAT B2
295.0 East (65.0 West)
BRAB2CN



3.706 H BAND Pres.Prudente	2462
3.721 H TV BB 1	2963
3.721 H TV Banco do Brasil C	2963
3.736 H Service 2	4285
3.736 H Radio Boas Novas	4285
3.746 H RBN-REDE	3540
3.746 H Rede Boas Novas	3540
3.766 H Canal Futura	3335
3.766 H Service 1	3335
3.792 V Radio Gazeta	3393
3.792 V TV Gazeta MT	3393
3.847 H TV Tiraqui	4688
3.864 H Canal do Boi Sertaoz	3214
3.876 V NBR TV	4688
3.876 V Radio Nacional AM	4688
3.876 V Radio Nacional FM	4688
3.877 V TV Senado	2740
3.884 H BAND Presidente Pr	2800
4.008 H TV Rodolink	3332
4.012 V ADL	4000
4.105 V CANAL DO BOI - 2T	4285
4.112 V NoName	4285

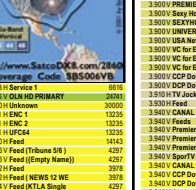
ESTRELA DO SUL 1
297.0 East (63.0 West)
EST001KB



11.955 H CPC - Curso Prepar	2199
12.088 H LORAL BR	3214

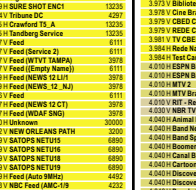
Freq Pol Channel Name GHz	Symbol rate
3.870 H Canal Do Boi	
3.870 H Radio Boa Nova	
3.875 V TV RECORD SP	5926
3.890 H Rede Vida	
3.900 V BRASIL	27500
3.900 V Canal Brasil	27500
3.900 V feeds	27500
3.900 V Feeds	27500
3.900 V Globo News	27500
3.900 V GLOBONEWS	27500
3.900 V GNT	27500
3.900 V PREMIERES	27500
3.900 V PREMIERE6	27500
3.900 V Sexy Hot	27500
3.900 V SEXYHOT	27500
3.900 V UNIVERSAL	27500
3.900 V USA Network Brazil	27500
3.900 V VC for ENC2P10	27500
3.900 V VC for ENC2P8	27500
3.900 V VC for ENC2P9	27500
3.900 V CCP Download (sistem	27500
3.900 V DCP Download (sistem	27500
3.910 V Jockey	27500
3.930 H Feed	
3.940 V CANAL 7	27500
3.940 V Feeds	27500
3.940 V Premiere 1	27500
3.940 V Premiere 2	27500
3.940 V Premiere 3	27500
3.940 V SportTV	27500
3.940 V CANAL 6	27500
3.940 V CCP Download (sistem	27500
3.940 V DCP Download (sistem	27500
3.940 V CCP Download	27500
3.940 V DCP Download (sistem	27500
3.940 V BSR - HESR Download	27500
3.940 V CCP Download	27500
3.940 V DCP Download (sistem	27500
3.955 H TV Cesta-Educativa	4400
3.964 H TV MUNDO MAIOR	1320
3.965 V TV ESCOLA	2930
3.965 V TV Escola	2930
3.973 V Biblioteca Digital M	4032
3.978 V Cine Brasil	1220
3.979 V CBEJ CH2	3616
3.979 V REDE CBEJ	3616
3.981 V TV CBEJ	1808
3.984 H Rede Nacional	1808
3.984 H Test Card	1808
4.010 H ESPN Brasil	13021
4.010 H ESPN Brasil Altern	13021
4.010 H MTV 2	13021
4.010 H MTV Brasil	13021
4.010 V RIT - Rede Interna	
4.030 V NBR TV	
4.040 H Animal Planet	30000
4.040 H Band News	30000
4.040 H Band Sports	30000
4.040 H Boomerang	30000
4.040 H Canal Brasil	30000
4.040 H Cartoon Network	30000
4.040 H Discovery Channel	30000
4.040 H Discovery Kids	30000
4.040 H People & Arts	30000
4.040 H TCM	30000
4.040 H Teste	30000
4.040 H TNT	30000
4.040 H Climatempo	30000
4.047 V TV Amazonas	7150
4.047 V Amazon Sat	7150
4.047 V Amazonas FM	7150
4.066 V TV Cancao Nova	
4.066 V Radio Cancao Nova	
4.070 H TV Diario	
4.090 V Canal Futura	
4.090 H TV Camara	
4.110 V ShopTime	
4.110 H TV Gazeta	
4.130 V TV Cultura	
4.130 H TV Senado	
4.130 H Radio Cancao Nova	
4.150 V Rede Mulher	
4.150 H TV Seculo 21	
4.170 V Amazon Sat	
4.170 H Canal Rural	
4.170 H Radio Rural AM	
4.190 V Agro Canal Tests	

BRAB3CR



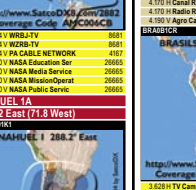
3.628 H TV Camara	3000
3.628 H Radio Camara FM	3000
3.634 H TV Senado 21	4500
3.642 H NGT	3263
3.645 V TV Senado	3213
3.645 V Radio Senado FM	3213
3.648 H TV Liberal	4285
3.648 H Radio Cidade (AM/FM)	4285
3.648 H Radio Liberal AM	4285
3.648 H Radio Liberal FM	4285
3.650 V Mix Transporte	4400
3.656 H TV Brasil Central	3392
3.656 V TV Meio Norte	4463
3.656 H Radio Globo channel	3392
3.656 V Radio Brasil Sat	4463
3.656 V Radio Brasil Sat FM	4463
3.656 V Disable AI	4463
3.656 V Disable Vide	4463
3.656 V MnSa	4463
3.663 V Unnamed	4607
3.663 V TV Bahia	4607
3.663 V Rede Tropicalsat	4607
3.665 H Rede Bandeirantes Mi	4700
3.665 H Band FM de Minas Ger	4700
3.672 V TV Alterosa	8454
3.672 H TV Centro America	4713
3.672 V Radio Guarani FM	8454
3.672 V canal 4 and 2	8454
3.672 V Data Service	8454
3.680 H Rede Globo Minas Ger	6000
3.685 H Rede Vida Feeds	4500
3.688 H Rede Globo Sao Paolo	6000
3.696 H Rede Minas	3598
3.696 H Radio Inconfidencia	3598
3.703 V TV Difusora do Maran	3250
3.703 V TV FM-AM	3250
3.708 V TV Mirante	3250
3.708 V Radio Mirante AM	3250
3.708 V Radio Mirante FM	3250
3.708 V COMSAT DVS	3250
3.714 V Rede Record Minas Ge	4400
3.714 V Service 1	4400
3.714 V Rede Aleluia Minas G	4400
3.763 V SBT	6220

C-Band: BRASILSAT B2
295.0 East (65.0 West)
BRAB2CN



3.706 H BAND Pres.Prudente	2462
3.721 H TV BB 1	2963
3.721 H TV Banco do Brasil C	2963
3.736 H Service 2	4285
3.736 H Radio Boas Novas	4285
3.746 H RBN-REDE	3540
3.746 H Rede Boas Novas	3540
3.766 H Canal Futura	3335
3.766 H Service 1	3335
3.792 V Radio Gazeta	3393
3.792 V TV Gazeta MT	3393
3.847 H TV Tiraqui	4688
3.864 H Canal do Boi Sertaoz	3214
3.876 V NBR TV	4688
3.876 V Radio Nacional AM	4688
3.876 V Radio Nacional FM	4688
3.877 V TV Senado	2740
3.884 H BAND Presidente Pr	2800
4.008 H TV Rodolink	3332
4.012 V ADL	4000
4.105 V CANAL DO BOI - 2T	4285
4.112 V NoName	4285

ESTRELA DO SUL 1
297.0 East (63.0 West)
EST001KB



11.955 H CPC - Curso Prepar	2199
12.088 H LORAL BR	3214

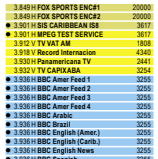
ECHOSTAR 3, RAINBOW 1
298.5 East (61.5 West)
ECH003KB

12.239 L BSN - Busch Satell	20000
12.239 L WGGS-TV (TBN)	20000
12.239 L WNTV-TV Greenville	20000
● 12.297 L Phoenix Chinese	20000
12.326 L ARYDI	20000
12.326 L BAUMU	20000
● 12.326 L CCTV4	20000
12.326 L DUBAI	20000
12.326 L ESC-1	20000
12.326 L FPCHN	20000
12.326 L FUTUR	20000
12.326 L IQRAA	20000
12.326 L ITVN	20000
12.326 L LOUHD	20000
12.326 L NILE	20000
12.326 L PTV	20000
12.326 L RAI	20000
12.326 L SPORT	20000
12.326 L RADIO	20000
12.326 L SABN	20000
12.355 L ALMA	20000
12.355 L ARTS	20000
12.355 L EDUCA	20000
12.355 L GLBL1	20000
12.355 L GSN	20000
12.355 L HHS	20000
12.355 L ISMOV	20000
12.355 L NBN	20000
12.355 L PFC	20000
12.355 L STARF	20000
12.355 L WOWTV	20000
12.384 L AAJTK	20000
12.384 L ANTEN	20000
12.384 L ANTGO	20000
12.384 L APUNJ	20000
12.384 L ARTSP	20000
12.384 L FPCHN	20000
12.384 L HT	20000
12.384 L INDMU	20000
12.384 L INDVI	20000
12.384 L JSTV	20000
12.384 L KTV	20000
12.384 L SAMAY	20000
12.384 L SHARA	20000
12.384 L TELSD	20000
12.384 L TRACE	20000
12.384 L ZEESA	20000
12.414 L ANTRA	20000
12.414 L ARANG	20000
12.414 L BSN	20000
12.414 L BTN	20000
12.414 L ERT	20000
12.414 L EURNS	20000
12.414 L HTRA	20000
12.414 L KINO	20000
12.414 L LEOWD	20000
12.414 L MOVE3	20000
12.414 L NEWTV	20000
12.414 L ONGME	20000
12.414 L RAI	20000
12.414 L RT

Freq Pol Channel Name GHz	Symbol rate
3.848 H FOX SPORTS ENC#1	20000
3.848 H FOX SPORTS ENC#2	20000
3.901 H SIS CARIBBEAN ISI	3617
● 3.901 H MPEG TEST SERVICE	3617
3.912 V TV VAT AM	1808
3.918 V Record Interacion	4340
3.930 H Panamericana TV	2441
3.932 V TV CAPIXABA	3254
● 3.936 H BBC Amer Feed 1	3255
● 3.936 H BBC Amer Feed 2	3255
● 3.936 H BBC Amer Feed 3	3255
● 3.936 H BBC Amer Feed 4	3255
● 3.936 H BBC Arabic	3255
● 3.936 H BBC Brazil	3255
● 3.936 H BBC English (Amer.)	3255
● 3.936 H BBC English (Carib.)	3255
● 3.936 H BBC English News	3255
● 3.936 H BBC Spanish	3255
3.936 H RPP	3255
● 3.940 H Cool TV	2575
3.940 H Red Global	2575
3.940 H Radio 1160 noticias	2829
● 3.999 V Telemedia 1	5200
● 3.999 V Telemedia 2	5200
● 3.999 V (Empty)	5200
● 4.000 V Unknown	3700
● 4.027 V CANAL 1 ECUADOR	3000
4.027 V Unknown	3000
● 4.080 V RTPi America	4340
4.080 V Globo	4340
● 4.080 V Globo RDP Internacio	4340
4.084 H CANAL 3 GUATEMALA	10318
● 4.084 H Feed Guatemala	10318
● 4.084 H TELE-ONCE	10318
● 4.084 H TELEVISIETE	10318
● 4.084 H TRECEVISION	10318
● 4.084 H RADIO ALFA	10318
● 4.084 H RADIO FIESTA	10318
● 4.084 H RADIO GALAXIA	10318
● 4.084 H RADIO RANCHERA	10318
● 4.084 H RADIO SONORA	10318
● 4.084 H RADIO TROPICALIDA	10318
● 4.097 H CANAL 10	5247
● 4.097 H CANAL 4	5247
● 4.105 H Canal 6 CR	5062
● 4.105 H Canal 11	5062
● 4.105 H Radio Z FM	5062
4.111 H Telesistema	3333
4.116 H Unknown	1627
● 4.135 H GI UPDD S/W	6111
● 4.135 H GLOBO INTERNACION	6111
● 4.135 H GLOBO MTV BRASIL	6111
● 4.135 H GLOBO INTERNATION	6111
● 4.140 V AUDIO TEST	4700
● 4.140 V FRECUENCIA LATINA	4700
4.159 H PEREYRA QP	1440
● 4.177 V MTV H	27690
● 4.177 V MTV J	27690
● 4.177 V MTV NORTH (MEXICO	27690
● 4.177 V MTV SOUTH (ARGENT	27690
● 4.177 V NICK NORTH (MEXIC	27690
● 4.177 V NICK NORTH - COPY	27690
● 4.177 V NICK NORTH - COPY	27690
● 4.177 V NICK NORTH - COPY	27690
● 4.177 V NICK NORTH - COPY	27690
● 4.177 V NICK SOUTH (ARGEN	27690
● 4.177 V NICK SOUTH (CHILE	27690
● 4.177 V NICK SOUTH -COPY	27690
● 4.177 V VH1 Latino South (	27690
● 4.177 V VH1 SU	27690
● 4.177 V London HD Test Feed	27690
● 4.177 V MTV CENTRAL	27690
● 4.177 V MTV CENTRAL - COP	27690
● 4.177 V MTV CENTRAL - COP	27690
● 4.177 V MTV CENTRAL - COP	27690
● 4.177 V MTV CENTRAL - COP	27690
● 4.177 V MTV CENTRAL CHILE	27690
● 4.177 V NICK (BRAZIL)	27690
● 4.177 V Test 9	27690
● 4.177 V VH-1 LATINO (PANR	27690
● 4.177 V VH1 S	27690
4.195 H SCOPUS-NET-TECH	4444

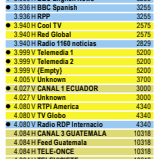
INTELSAT 707
307.0 East (53.0 West)

INT707CA



4.135 L Alef Network	4300

INT707EH



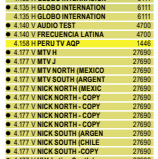
3.831 F ORTB	2711
3.856 R AFRICABLE	3900

INT707KA

3.820 R Sports Max	3255

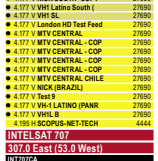
C-Band: INTELSAT 705
310.0 East (50.0 West)

INT705CG



4.126 L RCTV Venezuela	6113
4.126 L Radio Caracas	6113

INT705EH



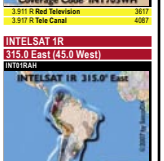
4.071 L TVes	4600

INT705WH

3.917 R Tele Canal	4087

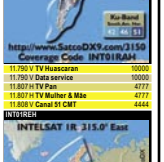
INTELSAT 1R
315.0 East (45.0 West)

INT01RAH



11.790 V TV Huascaran	10000
11.790 V Data service	10000
11.807 H TV Pan	4777
11.807 H TV Mulher & Mãe	4777
11.808 V Canal 51 CMT	4444

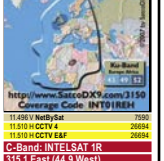
INT01REH



11.496 V NetBySat	7590
11.510 H CCTV 4	26694
11.510 H CCTV E&F	26694

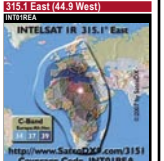
C-Band: INTELSAT 1R
315.1 East (44.9 West)

INT01REA



3.825 H Deus e amor Infocard	2075
3.825 H Deus e amor Radio	2075
3.940 H Data service	14280

INT01RUV



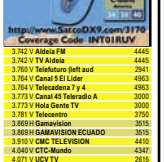
3.742 V Aldeia FM	4445
3.742 V TV Aldeia	4445
3.760 V Telefuturo (left aud	2941
3.764 V Canal 5 El Lider	4963
3.764 V Telecentro 7 y 4	4963
3.773 V Canal 45 Teleradio A	3000
3.773 V Hola Gente TV	3000
3.781 V Telecentro	3750
3.868 H Gamavision	3515
3.868 H GAMAVISION ECUADO	3515
3.910 V CMC TELEVISION	4410
4.040 V CTC-Mundo	4347
4.121 V ATV	2615
4.096 H Education A Distanci	8102
4.096 H Radio Nacional del P	8102
4.106 V Televicentro	14450
4.106 V Tu Universo Televisi	14450
4.106 V WKAQ-TV	14450
4.106 V WLII-TV	14450
4.192 H Deus e Amor	2075

INTELSAT 3R.11
317.0 East (43.0 West)

INT03REU

12.568 H Aapna Desi	2170
12.584 V Discovery TV	27500
12.584 V De Pelicula	27500
12.584 V Televicine	27500
12.584 V Promocion	27500
12.584 V Ritmoson	27500
12.584 V Telehit	27500
12.584 V Telenovelas	27500
● 12.607 V Tvsa Int Europa	6250
12.618 V XEW-TV-2	1560
12.651 H Fox News	30800
12.651 H Fox sports	30800
12.651 H ADHOC 23	30800
12.651 H ADHOC 24	30800
12.651 H El Sembrador	30800
12.651 H EWTN	30800
12.651 H EWTN 2	30800
12.659 V Buzz	28665
12.659 V Cinemark	28665
12.659 V CineStar	28665
12.659 V Dark	28665
12.659 V Kitz	28665
12.659 V MGM	28665
12.659 V Natura	28665
12.659 V Pacha	28665
12.659 V Somos	28665
12.659 V Utilisima	28665
12.659 V THE AUTISM CH	28665
12.715 H Peru TV	6355

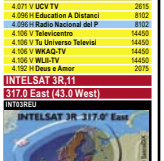
INT06BBR



10.722 H Antaer Virtual 1	30000
10.722 H Antaer Virtual 2	30000
10.722 H Antaer Virtual 3	30000
10.722 H Canal 10 Roca	30000
10.722 H Canal 13	30000
10.722 H EPTV	30000
10.722 H ESPN Brasil	30000
10.722 H Magazine	30000
10.722 H Radio UFC	30000
10.722 H RBS TV	30000
10.722 H Rede Globo	30000
10.722 H Sbt Feminino	30000
10.722 H TC Classic	30000
10.722 H The Weather Channel	30000
10.722 H Tvsa Noticias	30000
10.722 H TV Bahia	30000
10.722 H TV Escola	30000
10.722 H TV Vanguarda	30000
10.722 H Tvc Inter. NTSC	30000
10.722 H Tvc Inter. PAL	30000
10.722 H TyC Max	30000
10.722 H TyC Sports	30000
10.722 H TyC Virtual	30000
10.722 H Volver	30000
10.722 H Globo AM	30000
10.722 H Radio France Interna	30000
10.722 H Radio Mitre	30000
10.722 H 1626DL	30000
10.722 H 885	30000
10.722 V Data service	30000
10.722 V Esoterico	30000
10.722 H GalerYKS	30000
10.722 H FUTEBOL	30000
10.722 H ITV GAMES	30000
10.722 H ITV Loterias	30000
10.722 H MOSAICO ITV	30000
10.722 H SKY	30000
10.722 H SKY Store	30000
10.802 V Futura	30000
10.802 V Globo News	30000
10.802 V Globo RJ	30000
10.802 V GNT	30000
10.802 V Multishow	30000
10.802 V Shoptime	30000
10.802 H Sky	30000
10.802 H Sky Premiere	30000
10.802 H SportTV	30000
10.802 H Telecine Happy	30000
10.802 V Telecine Premium	30000
10.802 H TV Senado	30000
10.802 V USA Network	30000
10.802 H Sky Premiere	30000
10.802 V Axxe 60	30000
10.802 V Axe	30000
10.802 H Baladas Romanticas	30000
10.802 H Blues	30000
10.802 H Bossa Nova	30000
10.802 H Country	30000
10.802 V Disco	30000
10.802 V Globo FM	30000
10.802 H Grandes Interpretes	30000
10.802 H Heavy Metal	30000
10.802 H Jazz Classico	30000
10.802 H Pop Teen	30000
10.802 H Rhythm & Blues	30000
10.802 H Rock	30000
10.802 V Samba e Pagode	30000
10.802 V Sucessos	30000
10.802 H Tilhas Sonoras	30000
10.802 H Data Service	30000
10.802 V Data service	30000
10.802 H Data Service	30000
10.802 V ITV-Esportes	30000
10.802 H MOSAICO	30000
10.802 H MOSAICO 1	30000
10.802 V MOSAICO ESPECIAL	30000
10.882 V Boomerang	30000
10.882 V Canal Brasil	30000
10.882 V Canal Rural	30000
10.882 H Central Nacional de	30000
10.882 H Globo SP	30000
10.882 H MTV Brasil	30000
10.882 V National Geographic	30000
10.882 H Rede STV	30000
10.882 H Rede Vida	30000
10.882 V Sexy Hot	30000
10.882 H Telecine Action	30000
10.882 H Telecine Emotion	30000
10.882 V TV Camara	30000
10.882 V TV Escola	30000
10.882 V TV Justica	30000
10.882 V TV Senado	30000
10.882 V Anos 70	30000
10.882 V Discovery World Service	30000
10.882 V Gospel	30000
10.882 V Hip Hop	30000
10.882 H Sveem Pan 2 FM	30000
10.882 H Jovem Pan AM	30000
10.882 V MPB	30000
10.882 H Radio Clube do Para	30000
10.882 H Radio Gaucha	30000
10.882 V Rave	30000
10.882 V Reggae	30000
10.882 V Rock Classico	30000
10.882 V Sertanejo	30000
10.882 V Voice of America	30000
10.882 H Data service	30000
10.882 H MOSAICO	30000
10.882 H MOSAICO 2	30000
10.882 H MOSAICO 4	30000
10.882 V YKS	30000

C-Band: INTELSAT 3R
317.1 East (42.9 West)

INT03RAM



3.719 V Fox Sports feeds (ch	19845
3.719 V Fox Sports feeds (ch	19845
3.719 V Fox Sports feeds (ch	19845
3.719 V Fox Sports feeds (Do	19845
3.744 V Canal Fox	21259
3.744 V CC Aniversario	21259
3.744 V Cinecanal (East)	21259
3.744 V Movie City (East)	21259
3.744 V Sony Film Zone	21259
3.744 V Cinecanal (East)	21259
3.744 V MKT Channel	21259
3.744 V DCP Download	21259
3.744 V DCP Download	21259
3.785 H Boomerang (Brazil)	30800
3.785 H Boomerang (Latin Ame	30800
3.785 H Boomerang (Latin Ame	30800
3.785 H TCM LA	30800
3.785 H TEN Confidence Feed	30800
3.785 H TNT (Brazil)	30800
3.785 H TNT (Chile)	30800
3.785 H TNT (Latin America	30800
3.785 H TNT (Latin America	30800
3.785 H TNT (Latin America	30800
3.785 H TNT (Latin America	30800
3.785 H TNT (Latin America	30800
3.785 H Toon-Tina	30800
3.785 H Toon-Tina (left audi	30800
3.785 H Toon-Tina (right aud	30800
3.785 H CCP download Channel	30800
3.785 H DCP download Channel	30800
3.840 H Fashion TV	27684
3.840 H Fashion TV (Latin Am	27684
3.840 V I-sat	27684
3.840 V Infinito	27684
3.840 V MuchMusic	27684
3.840 V Retro	27684
3.840 V Space	27684
3.840 V Utilisima Satelital	27684
3.840 V Venus	27684
3.840 V Venus Latino	27684
3.840 V LunaVision	27684
3.840 V PRUEBA	27684
3.840 V UTILISIMA CUE	27684
3.846 H Test card	30800
3.846 H Boomberg TV Brasil	30800
3.846 H CNBC	30800
3.846 H Feeds (Adhoc)	30800
3.846 H Feed I	30800
3.846 H Test card	30800
3.846 H TYC Sports - MM#2	30800
3.846 H BBC Radio Service	30800
3.846 H CCP Upgrade	30800
3.846 H DCP Upgrade	30800
3.846 H ReVue Data	30800
3.846 H Test channel	30800
3.856 V Boomerang (Brazil)	30800
3.856 V Boomerang (Latin Ame	30800
3.856 V TCM (Latin America)	30800
3.856 V TNT (Brazil)	30800
3.856 V TNT (Chile)	30800
3.856 V TNT (Latin America	30800
3.856 V TNT (Latin America)	30800
3.856 V TNT (Mexico)	30800
3.856 V Toon-Tina	30800
3.856 V Toon-Tina (Brazil)	30800
3.856 V Toon-Tina (Latin Ame	30800
3.856 V Toon-Tina (Mexico)	30800
3.856 V Test card	30800
3.856 V CCP Download	30800
3.856 V DCP Download	30800
3.868 V Feeds (Adhoc)	6620
3.872 H Panamast test card	6620
3.872 H CCP Upgrade	6620
3.872 H Channel 101 alternat	6620
3.872 H DCP Upgrade	6620
3.887 H Televisa Feed	5715
3.889 H Protele	7872
3.891 V Feeds	6111
3.910 V Azteca	13239
3.910 V Globocast feeds	5632
3.910 V Feeds (DTN)	25000
3.937 H Feeds (TELEVISA F	3906
3.944 H Feeds (Service 1)	5710
3.944 H Feeds (Service 2)	5692
3.958 V TV 5 Amerique Latine	6500
3.968 H De Pelicula	21090
3.968 H Estrellas	21090
3.968 H Ritmoson	21090
3.968 H Telehit	21090
3.968 H Telenovelas	21090
3.968 H Data service	21090
3.969 H Sony3p1 dig Port	13800
3.969 H Sony3p1 dig Sp	13800
3.969 H Sony3p1 Port	13800
3.969 H Sony3p1 Sp	13800
3.969 H Sony3p2 dig Port	13800
3.969 H Sony3p2 dig Sp	13800
3.969 H Sony3p2 Port	13800
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3.969 H Sony3p3 Port	13800
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3.969 H Sony3p5 Port	13800
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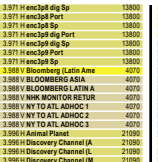
3.969 H Sony3p7 dig Port	13800
3.969 H Sony3p7 dig Sp	13800
3.969 H Sony3p7 Port	13800
3.969 H Sony3p7 Sp	13800
3.969 H Sony3p8 dig Port	13800

C-Band: NSS 806
319.5 East (40.5 West)

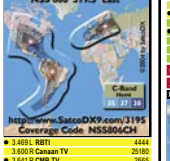
NSS806CH



3.468 L RBTI	4444
3.600 R Canaan TV	25180
● 3.641 R CMB TV	2665
● 3.644 L TV NAZAR	2534
3.646 R BODY CHANNEL	4444
3.646 R MINOR CHANNEL	4444
3.653 L HBO	3040
3.654 R TV ASA BRANCA	5924
3.660 L America Television	4300
3.663 R TV	2170
3.674 L EXECUTIVO	8800
3.674 L NOVOTEMPO	8800
3.674 L NUEVOTIEMPO	8800
● 3.676 R Tandberg Service	3010
● 3.676 R TV-PRENSA	3010
3.684 R TELEGRACIA	2220
3.685 L default program	6500
3.688 R M MUSIC	4444
3.688 R TV CENTRO	4444
3.709 L UTILISIMA	3000
3.725 R A 24	26667
3.725 R A.Sports	26667
3.725 R America Int	26667
3.725 R America Rep	26667
3.725 R America2	26667
3.725 R Canal 9	26667
3.725 R El Garage TV	26667
3.725 R Europa	26667
3.725 R Eventos	26667
3.725 R Feed 1	26667
● 3.727 L Baby TV	26670
● 3.727 L FOX Life Latin	26670
● 3.727 L FX Central	26670
● 3.727 L FX Latin	26670
● 3.727 L FX PAL	26670
● 3.727 L ManagementTV Bra	26670
● 3.727 L Utilisima Cue	26670
● 3.727 L Utilisima Satelital	26670
● 3.727 L Management TV Latam	26670
● 3.727 L NAT GEO Music	26670
● 3.727 L Universal Channel PA	26670
3.740 L FOX NEWS LATIN	6670
3.740 L UNIVERSAL ARGENTI	6670
3.758 R Canal (a)	26667
3.758 R Cosmo NTSC	26667
3.758 R Cosmo Pal	26667
3.758 R ElGarage TV	26667
3.758 R ElGourmet NTSC	26667
3.758 R ElGourmet PAL	26667
3.758 R Europa-Europa	26667
3.758 R Feed I	26667
3.758 R Film&Arts Por	26667
3.758 R Film&Arts Spa	26667
3.758 R Reality TV	26667
3.758 R Rock & Pop	26667
● 3.758 L ESPN +	20000
● 3.758 L ESPN INet	20000
● 3.758 L ESPN INet South	20000
3.758 L Virtual Channel 2	20000
● 3.758 L Virtual Channel 4	20000
3.774 L Argentisima	6670
3.774 L La Red	6670
3.774 L Libre	6670
3.774 L Radio Del Plata	6670
3.774 L Sist. Nac. Medios Pu	6670
3.774 L Test	6670
3.803 L SIC TV	27500
3.803 L WSG 1	27500
3.803 L WSG 2	27500
3.803 L WSG 3	27500
3.803 L WSG 4	27500
3.803 R AdHoc	26855
3.803 R AdHoc 02	26855
● 3.803 R AdHoc 03	26855
3.803 R CLIJSE	26855
3.803 R Hipstar	26855
3.803 L DUNA TV	27500
3.803 L ERT	27500
3.803 R GOL TV	26855
3.803 R Maharishi University	26855
3.803 L RFI Espanol-Fran	27500
3.803 L RFI Espanol-Mus	27500
3.803 L RFI Francais	27500
3.803 L RFI La Paz	27500
3.803 L RFI Langues-Div	27500
3.803 L RFI Langues1	27500
3.803 L RFI Langues2	27500
3.803 L RFI Music	27500
3.803 L RFI Portugues-Fran	27500
3.803 L RFI Portugues-Mus	27500
3.803 L Russia Today	27500
3.803 R CCP Download	26855
3.803 R DS225 Download	26855
3.803 R DCP Download	26855
3.803 R MetOpen	26855
3.803 L RFI Afrique	27500
3.803 L RFI Antilles	27500
3.803 L RFI Bogota	27500
3.803 L RFI Canada	27500
3.803 L RFI Cuenca	27500
3.803 L RFI Direct Brazil	27500
3.803 L RFI Direct Latin	27500
3.803 L RFI Jamaique	27500
3.803 L RFI Langues3	27500
3.803 L RFI Langues4	27500
3.803 L RFI RMC	27500
3.803 L RFI St Dominique	27500
● 3.803 L RFI Test	27500
3.803 L SUMETSAT	27500
3.803 L FILEAS Amerique	27500
3.803 L LOREAL Amerique	27500
3.803 L PMI NSS File	27500
3.803 L PMI NSS streaming	27500
3.855 L FOX NEWS LATIN	5900
3.855 L UNIVERSAL ARGENTI	5900
● 3.859 L SCOPUS-NET-TECH	2600
3.861 R COLOMBEIA	2711
3.861 R SCOPUS-NET-TECH	2711
3.879 R Venevision Venezuela	22115
3.879 R CANAL DE NOTICIAS	22115
● 3.879 R DAILY JOURNAL	22115
● 3.879 R IMPSAT DISPONIBLE	22115
3.879 R Meridiano TV	22115
3.879 R Programacion Globovi	22115
3.879 R Programacion VTV	22115
3.879 R PUMA TV	22115
3.879 R Vision Venezuela V	22115
● 3.879 R Circuito Allanza	22115
● 3.879 R Circuito CNN FM 10	22115
3.879 R Circuito Triple F	22115
3.879 R CNB Deportes	22115
● 3.879 R CNN VOZ CRISTIANA	22115
3.879 R Download Upgrade	22115
3.879 R Radio Planeta 105.3	22115
3.879 R Radio Rumbera Caraca	22115
3.879 R RNV Clasico	22115
3.879 R RNV Informativo	22115
3.879 R RNV Juvenil	22115
3.894 R TV A COLOR CANAL	2000
3.895 R Radio La Ricuenda	4195
● 3.899 R INH VALENCIA	4195
3.923 L FORMAN	27500
3.923 L GLOBOSAT 11 ENC2P	27500
3.923 L GLOBOSAT 13 ENC2P	27500
3.923 L PFCI	27500
3.923 L TVGI EUROPA	27500
3.923 L GLOBOSAT 12 ENC2P	27500
3.923 L GLOBOSAT 17 ENC2P	27500
● 3.965 L Golf Channel	3330
3.965 R COSMOVISION	2170
3.972 L Cadena-1	3330
3.978 L TV BRASIL	3979
3.982 L CANAL 26	2222
3.986 L INTERNACIONAL	3180
3.986 L RADIO AM	3180
3.991 L San Isidro feeds (Sa	3578
3.997 L Telepacifico	2450
4.002 L TELE CAFE	2450
4.002 L TELECAFE	2450
4.005 L SCOPUS-NET-TECH	2450
4.009 L TELEANTIOQUIA COL	2450
4.016 R RCN TV	5712
4.021 L C. CONGRESO	16025
4.021 L CANAL 1	16025
4.021 L CANAL CAPITAL	16025
4.021 L CANAL INSTITUCION	16025
4.021 L CANAL OCASIONAL	16025
4.021 L SENAL COLOMBIA	16025
4.021 L TV. ANDINA	16025
4.022 R TV Colombia	3800
● 4.022 R TV Colombia	3800
4.038 R SUN CHANNEL	2480
4.043 L Eibi Europe By Satbil	8681
4.043 L EU Test	8681
4.044 R Canal Noticias	2604
4.044 L Casa Club TV	7234
4.054 L MGM Latin America	7234
4.063 R Hipodromo Maronas	8500
4.063 R VTV	8500
4.063 R Ocasional	8500
4.065 L FOX Life Brazil	8400
4.065 L FOX TV	8400
4.065 L FX Brazil	8400
4.065 L Sofi Brazil	8400
4.081 R Bloomberg	6511
4.090 R ContacTV APURE	2515
4.090 R ContacTV CRISTIAN	2515
4.100 R default program	6111
4.100 R Televen Cable	6111
4.100 R Transmision Internac	6111
4.100 R (Empty)	6111
4.108 R Service 1	3280
4.108 R Telesur	2960
4.123 L Casablanca	3500
● 4.140 R CABLE_NOTICIAS	2220
4.142 L JBN	4444
4.143 R CCP D/L	4800
4.143 R CCP D/L	4800
4.143 R DEFAULT	4800
4.143 R TV Marti	4800
4.146 L Tele Amiga	2571
4.163 L HBC CH 1	7200
4.163 L HBC CH 2	7200
4.163 L HBC CH 3	7200
4.163 L RBTI	7200
4.163 L M Mensag	7200
● 4.163 L Canal SP	2400
● 4.168 L N Mensagem	2400
● 4.170 L CANAL ADULTO	2222
● 4.170 L RADIO	2222
4.185 L Kamasutra	6140
● 4.185 L Life Design TV	6140
● 4.185 L Rumba TV	6140
4.185 L Tele Nostalgia	6140
4.185 L TV Apoio	6140

C-Band: NSS 10
322.6 East (37.4 West)

NSS010HA



3.805 H (Empty)	2143

INTELSAT 903
325.5 East (34.5 West)

INT903KA

11.095 V Canal Satellite Cara	30000

INT903NE

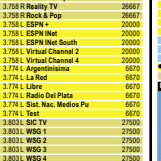
3.711 L Tele Groenland fee	2915
3.715 L KNR TV	2915
3.858 L ARTE! France 5	16300
3.870 L Channels TV	16300
3.875 L NTA2	16300
3.875 L Ray Power	16300
3.875 L Rhythm FM	16300
3.878 L Star FM	16300
● 3.908 L RTI INTERNATIONAL	3040
4.178 R Data Services	32953

INT903ZE

3.743 R RTI premiere	3220

INTELSAT 801
328.5 East (31.5 West)

INT801EH



3.645 R ORTM	5750
3.645 R RADIO MALI	5750
3.716 R RTS1	4881

INT801EU

SatcoDX Global Satellite Chart 04/2008

12.226 V Contactanos 27500
12.226 V Paquetes 27500
12.226 V Recibo 27500
12.226 V Tu mando 27500
12.303 V BOOMERANG 27500
12.303 V CARTOON NET. 27500
12.303 V NICK 27500
12.303 V TAQUILLA 1 27500
12.303 V TAQUILLA 2 27500
12.303 V TAQUILLA 3 27500
12.303 V TAQUILLA 4 27500
12.303 V TAQUILLAXY 27500
12.303 V TAQUILLA 10 27500
12.380 V ANIMAL...39 27500
12.380 V 40 LATINO 27500
12.380 V C+ DEPORTES 27500
12.380 V C+ FUTBOL 27500
12.380 V FOX NEWS 27500
12.380 V GOLF+ 27500
12.380 V NAT GEOGRAPH 27500
12.380 V PLAYBOY TV 27500
12.380 V CompraSMS 27500
12.380 V 02610053 27500
12.380 V 02620053 27500
12.380 V 02640053 27500
12.380 V EDC 27500
12.380 V IPLUS 27500
12.380 V TEST 27500
12.380 V TEST2 27500
12.380 V (Empty) 27500
12.456 V 24 HORAS 30000
12.456 V CLAN TVE 30000
12.456 V CLASICO 30000
12.456 V CUATRO 30000
12.456 V EUROSPORT 30000
12.456 V HISTORIA 30000
12.456 V HOLLYWOOD 30000
12.456 V TELENOVELAS 30000
12.456 V TNT 30000
12.456 V ABONO F+ 30000
12.456 V Amigos+ 30000
12.456 V Contactanos 30000
12.456 V EHS 30000
12.456 V GUIADIGITAL+ 30000
12.456 V Paquetes 30000
12.456 V Recibo 30000
12.456 V Tu mando 30000
12.456 V TV CANARIA 30000
12.456 V (Empty) 30000
12.456 V Contrato 30000
12.458 V 0204aa04 27500
12.522 V LA SEXTA 7400
12.522 V RED VOCENTO 7400
12.522 V COM Radio 7400
12.547 V 65_TEST 30000
12.547 V CANARIAS CANARIAS 30000
12.547 V ANTENA 3 30000
12.547 V Backup_Algeciras 30000
12.547 V Canal 30000
12.547 V SEXTA CANARIAS 30000
12.547 V TELE 5 30000
12.547 V TELE 5 CANARIAS 30000
12.547 V TVE 1 30000
12.547 V TVE 2 30000
12.547 V 65_OCS-3 30000
12.547 V REG C+ 30000
12.547 V Test download 30000
12.547 V EFE RADIO 30000
12.547 V EXTREMADURA FM 30000

INTELSAT 907
332.5 East (27.5 West)

INT907EH

11.488 H STV_USA 2170
11.563 H INS Europe Interna 6111
11.600 H Reuters WNS 4000
11.605 H Opportunistic Data 4000
11.620 H ITA SIR1 2000
11.620 H RTE Crypted 2000
11.622 H ITA SIR1 2000
11.622 H ROMA UNO 2000
12.735 H BOUCHAOUI_TDA3 16638
12.735 H PROGRAMME NATIONA 16638
12.735 H A3 16638
12.735 H CANAL ALGERIE 16638
12.735 H ADRAR 16638
12.735 H AHAGGAR 16638
12.735 H BATNA 16638
12.735 H CHAINE 1 16638
12.735 H CHAINE 2 16638
12.735 H CHAINE 3 16638
12.735 H ELWAHAT 16638
12.735 H GHARDAIA 16638
12.735 H ILLIZI 16638
12.735 H JIJEL 16638
12.735 H NAAMA 16638
12.735 H RADIO INTERNATION 16638
12.735 H Radio20 16638
12.735 H SAHEL 16638
12.735 H SAIDURA 16638
12.735 H SOUF 16638
12.735 H SOUK AHRAS 16638
12.735 H TINDOUF 16638
12.735 H TLEMCEN 16638
12.735 H Opp Data 16638
3.715 H Ch. 30 - AF 1-2, AF 8448
3.715 H Ch. 51 - AF 1-2, AF 8448
3.715 H Ch. 52 - AF 1-2, AF 8448
3.715 H Ch. 53 - AF 3-4, AF 8448
3.715 H Ch. 58 - AF 1-8 8448
3.715 H Ch. 59 - AF 1-2, AF 8448
3.715 H Ch. 61 - AF 1-2, AF 8448
3.715 H Ch. 62 - AF 1-2, AF 8448
3.715 H Ch. 63 - AF 5-6, AF 8448
3.715 H Ch. 64 - AF 3-4, AF 8448
3.715 H Ch. 65 - AF 3-4, AF 8448
3.715 H Ch. 66 - AF 5-6, AF 8448
3.715 H Ch. 67 - AF 9-10, AF 8448
3.715 H Ch. 68 - AF 13-14, A 8448
3.715 H Ch. 8 - OS Downloa 8448
3.715 H Ch. 9 - OS Downloa 8448
3.715 H Channel 1 8448
3.762 H Alhurra 30491
3.762 H Feeds 30491
3.762 H WorldNet 30491
3.762 H Radio Farda 30491
3.762 H RFE/Radio Liberty 30491
3.762 H VOA News Now 30491
3.762 H Voice of America 30491
3.849 H RTP Mux 10050
3.872 H Data services 50000
3.898 H NTA 2892
3.938 H 4550
4.050 H Service 1 7000

INT907KE

11.516 V NBA TV Europe 5632
11.665 V Region 2A Ch5 13020
11.665 V Region 3A Ch5 13020
11.665 V Region 4A Ch5 13020
11.665 V Region 5A Ch5 13020

INT907WH

3.732 H FREE-TV 14000
3.732 H Fashion TV 14000
3.732 H Kurdsat 14000
3.732 H Sat promo 14000
3.732 H TGN 14000
3.732 H The God Channel 14000
3.732 H TV 4 14000
3.732 H TGN Radio 14000
3.732 H TRT FM 14000
4.065 L NTA 0

INTELSAT 905
335.5 East (24.5 West)

INT905CG

11.521 V ITA 340- 3333
11.674 V Aaj Tak 27500
11.674 V Channel Punjab 27500
11.674 V GEO 27500
11.674 V UGO News 27500
11.674 V NDTV 24x7 27500
11.674 V Sahara Filmy 27500
11.674 V Sahara One 27500
11.674 V SET Europe 27500
11.674 V SET Max UK 27500
11.674 V Star Gold 27500
11.674 V Star One 27500
11.674 V Star Plus 27500
11.674 V NTA 27500
11.674 V PTV Global 27500

INT905WH

INT905KH

INT905KE

C-Band: NSS 7
338.1 East (21.9 West)

NSS007CG

3.729 R Al Arabiya 13333
3.729 R Al Jazeera 13333

NSS 7
338.0 East (22.0 West)

NSS007CA

12.077 V Reuters World News S 4000

NSS007EM

NSS007KA

NSS007WH

11.648 H SERCOM MOSCOW 1 6926
11.648 H TPA2 5926
11.779 H Reuters World News S 4000
11.779 H Opportunistic Data 4000
11.861 H Dtcom tests (Boticar 35000
11.861 H Dtcom tests (Boticar 35000
11.861 H Dtcom tests (Boticar 35000
11.861 H Dtcom tests (Boticar 35000
11.861 H Dtcom tests (Boticar 35000
11.861 H EasyBand 30000
12.140 H BibNac 7324
12.140 H Global_uni 7324
12.140 H Satmeeting 7324
12.140 H Star One 7324
12.140 H Star One HSI 7324
12.140 H Unopar 7324

NSS007WA

10.986 V 13 Eme Rue 30000
10.986 V ABI 30000
10.986 V Action 30000
10.986 V Canal+ Horizons 30000
10.986 V Canal+ Horizons Jaun 30000
10.986 V Cine Cinemas 30000
10.986 V Cine Cinemas Rose 30000
10.986 V EuroNews 30000
10.986 V France 2 30000
10.986 V ITV 30000
10.986 V Motors TV 30000
10.986 V MTV France 30000
10.986 V RTL 9 30000
10.986 V Sport 30000
10.986 V TF1 30000
10.986 V Trace TV 30000
10.986 V TV5 Afrique 30000
11.491 V CRTV 30000
11.491 V EuroSport 30000
11.491 V France 3 Sat 30000
11.491 V France 5 30000
11.491 V InfoSport 30000
11.491 V Mangas 30000
11.491 V Odyssée 30000
11.491 V ORTM 30000
11.491 V Paris Premiere 30000
11.491 V Planete France 30000
11.491 V RFM TV 30000
11.491 V RTS 1 30000
11.491 V TF 6 30000
11.491 V TiJi 30000
11.491 V CFI TV promo 30000
11.491 V Europe 1 30000
11.491 V Europe 2 30000
11.491 V NRJ 30000
11.491 V Paris Jazz 30000
11.491 V RFI Afrique 30000
11.551 V 3A Telesud 30000
11.551 V CANAL EVENEMENT 30000
11.551 V EUROSPORT 2 30000
11.551 V LCI 30000
11.551 V National Geographic 30000
11.551 V NT1 30000
11.551 V Serie Club 30000
11.551 V TEMPO 1 30000
11.551 V TEMPO 2 30000
11.551 V Test 30000
11.551 V TEVA 30000
11.551 V Voyage 30000
11.551 V BBC ARABIC 30000
11.551 V BBC WORLD 30000
11.551 V BFM 30000
11.551 V RADIO LATINA 30000
11.551 V RANDE-C 30000
11.551 V Data service 30000
11.551 V SAV 30000

INT905KE

INTELSAT 901
342.0 East (18.0 West)

INT901CG

3.751 R Service 2 4340
3.798 R AIT - LAGOS. 4340
3.803 R AIT LAGOS 2892
3.809 R DAAR New York 4340

INT901K1

INT901K2

11.056 H TELEREPORTER SUD 1950
11.156 H CONADTV 1600
11.678 H NBA TV 28570
11.678 H NBA Path 2 28570
11.678 H NBA Path 3 28570
11.678 H NBA TV Europe 28570
11.678 H Opportunistic Data 28570

INT901KE

10.975 V NBA feeds (NBA Pat 14571
10.975 V NBA Path 2 14571
10.975 V NBA TV Europe 14571

TELSTAR 12
345.0 East (15.0 West)

TES012ES

11.063 H CNBC 19275
11.063 H EI EMEA 19275
11.063 H The Sale Network 19275
11.123 H Club Europe 18386
11.123 H Extreme Sports 18386
11.123 H Nat Geo Poland 18386
11.123 H Reality TV 18386
11.150 H Club / Irisz 18386
11.150 H Club CE 18386
11.150 H Extreme France 18386
11.150 V JimJam EMEA 19275
11.150 V Nat Geo RUM 19275
11.150 V NatGeo Wild 19275
11.150 H Playboy TV NL 18386
11.150 H Reality Asia 18386
11.150 V Reality EMEA3 19275
11.150 H Reality TV EMEA2 18386
11.150 H ASDA EMG 18386
11.150 H ASDA SCO 18386
11.150 H CarpetRight FM 18386
11.150 H Makro FM 18386
11.150 H PC World FM 18386
11.150 V 01 02 15 88 19275
11.150 V 01 04 15 88 19275
11.150 V 01 05 15 88 19275
11.150 V 01 62 15 88 19275
11.150 V Cablebox HD Sagem 19275
11.150 V Cablebox Philips SD 19275
11.150 V DOWNLOAD 11 19275
11.150 V DOWNLOAD 9 19275
11.150 H Eye on UPC 18386
11.150 V Philips S9 19275
11.565 H EuropeSoAfrica 5625
12.545 H ATN 1 15000
12.545 H ATN 2 15000
12.545 H CNN HDLN 15000
12.545 H CNN LIVE 15000
12.545 H FOX 15000
12.545 H KFOR AIRSCAN 15000
12.545 H Pentagon 15000
12.545 H QUAD ISR 15000
12.608 H ADTH COMBO 19276
12.608 H ETV 19276
12.608 H Phoenix InfoNews 19276
12.608 H AGHAPY TV 19276
12.608 H Gunaz TV 19276
12.608 H Hwazan 19276
12.608 H MAC TV 19276
12.608 H TZUCHI 19276
12.608 H VOA Persian 19276
12.608 H Baku Radio 19276
12.608 H Farda Radio 19276
12.608 H Kol Haneshama 19276
12.608 H Radio Sedaye Iran 19276
12.608 H VOA Radio 19276
12.645 H EARTH TV 3254

TES012KA

11.361 V American Cinema Feed 3255
11.741 V Racing International 3255
11.806 V AL- ALAM 7596
11.806 V IRINN 7596
11.806 V JAM-E-JAME2 7596
11.806 V IRIB1 7596
11.806 V IRIB4 7596
11.806 V IRIB5 7596
11.806 V RADIO MAAREF 7596
11.806 V RADIO QURAN 7596
11.806 V RADIO SARASARI 7596
11.806 V RADIO SEDAYE ASIN 7596
11.964 H BULGARIAN NATIONA 14714
11.964 H SP TV 14714
11.964 H TRACE TV 14714
11.964 H HIT RADIO 14714
11.974 V BVN 3400
11.974 V RNW1 (dut) 3400
11.974 V RNW2 (eng) 3400
11.974 V RNW3 (spa/por) 3400
11.974 V RNW5 3400
11.974 V RNW6 3400
11.974 V RWI 1 (vl) 3400
11.984 H IR-Roaming 13570
11.984 H PCR 13570
11.984 H T12 Linkstar Service 13570
12.083 H Latin America 3935
12.111 H Unknown Channel 2061
12.126 H IPDVB Service 3800
12.126 H RCS Map Table 3800
12.168 H Channel 11 3503
12.175 H TVPAMPA-SM 3504
12.185 H TeliStar 4216

TES012KE

11.150 V History Channel 19275
11.150 V EPG 19275
11.150 V Nagra Guide 19275
11.150 V 01 02 15 88 19275
11.150 V 01 05 01 8A 19275
11.150 V 02 01 15 8A 19275
11.150 V 02 02 15 88 19275
11.150 V France HITS NIT 19275
11.150 V France HITS SDT 19275
12.524 V Atlantic 26470
12.524 V ESPN 26470
12.524 V ESPN2 26470
12.524 V ESPN2 Caribbean 26470
12.524 V Latin Caribbean 26470
12.524 V Pac Rim 26470
12.524 V VOAccessional Pal 26470
12.589 V Simaye-Azadi 4503
12.615 V Gunaz TV 11939
12.615 V PAYAM 11939
12.615 V Rang A Rang 11939
12.615 V Soccos Net Tech 11939
12.615 V Tasvir Iran 11939

EXPRESS A4
346.0 East (14.0 West)

Coming Soon

11.514 V Newroz TV 2960
11.534 V Vin 2970
11.552 V Gali 3003

ATLANTIC BIRD 1
347.5 East (12.5 West)

EUTAB1EU

11.099 H LIFE CHANNEL 2000
11.132 H BH-Tot1 3254
11.132 H BH-Radio1 3254
11.143 H Radio Stari Grad 5062
11.177 V TV Crime 2857
11.177 H FOX TV 7596
11.177 H SVET PLUS 7596
11.177 H ROADSTAR RADIO 7596
11.331 H Exotica Channel 6000
11.331 H Touch TV 6000
11.339 H CCTV 9 1923
11.340 H Cancao Nova Internac 2279
11.355 H CANAL+ FILM HD 11781
11.355 H ESP2 Hungary 11781
11.355 H ESP2 Romania 11781
11.355 H promocija.tv 11781
11.387 H Dorcel TV 27500
11.387 H HBO COMEDY 27500
11.387 H MTV BASE 27500
11.387 H MTV IDOL 27500
11.387 H MTV PULSE 27500
11.387 H TRACE-TV 27500
11.387 H BETHEL TV 27500
11.387 H France 24 (in Arabic 27500
11.387 H Italy&Italy 27500
11.387 H RIT-TV 27500
11.387 H World Fashion Channe 27500
11.387 H GRAND 27500
11.387 H Lijepa nasa (LINA) 27500
11.387 H MB Radio PARIS 27500
11.387 H MegaRadio 27500
11.387 H PEIRAIKI EKKLISIA 27500
11.387 H RADIO FILOS 27500
11.387 H RADIO IZVOR 27500
11.387 H RADIO S BEOGRAD 27500
11.387 H Radio SRNA-BOSANK 27500
11.387 H Radio SvetPLUS 27500
11.387 H RAM RAJ RADIO 27500
11.387 H Srce Lijepe Nase 27500
11.387 H TREF Radio 27500
11.387 H VULKAN radio 27500
11.387 H YU PLANET BEC 27500
12.515 H LATCartaplu' A 17452
12.515 H LATCartaplu' B 17452
12.515 H LATCartaplu' C 17452
12.515 H LATCartaplu' D 17452
12.515 H LATCartaplu' E 17452
12.515 H FacileTV 17452
12.515 H LA7 17452
12.515 H Puntoshop Channel 17452
12.515 H QOOB 17452
12.515 H PSF SERVIZI 17452
12.515 H TEST TIMB 2 17452
12.515 H tvtv DIGITAL 17452
12.529 V DAS TV 1550
12.546 H LA7 17454
12.546 H MTV ITALIA 17454
12.546 H Sardegnauno 17454
12.546 H LATCartaplu' X 17454
12.546 H LATCartaplu' Y 17454
12.546 H OrientaUnitb 17454
12.546 H Regione FVG 17454
12.578 V WINDMELT TV 5860
12.578 V SSN TV 5860
12.578 V Radio Azadegan 5860
12.578 V Radio Dija 5860
12.597 H Extra 3 1910
12.632 V RIT-TV 2141
12.647 V Record Internacional 4285
12.696 H QOOB International 6400

EXPRESS A3
349.0 East (11.0 West)

EXPA3GL

3.675 R TIVRUS zapad 29615
3.675 R RTR Planeta+HR 29615

EXPA3KZ

11.516 V ATV BL 7780
11.516 V FTV 7780
11.516 V RTRS 7780

ATLANTIC BIRD 2
352.0 East (8.0 West)

EUTAB2AB

10.976 V Dubai Business Chann 30000
10.976 V Dubai Sports Channe 30000
10.976 V EDTV Channel Europ 30000
10.976 V EDTV Radio 1 30000
10.976 V EDTV Radio 2 30000

EUTAB2KE

10.970 H AL RIYADH TAM 27500
10.970 H AL SAFWA 27500
10.970 H AL YAWM 27500
10.970 H AMERICA PLUS 27500
10.970 H CINEMA 1 27500
10.970 H CINEMA 2 27500
10.970 H CNBC-US 27500
10.970 H FANN 27500
10.970 H GMA Pinoy TV 27500
10.970 H HISTORY CHANNEL 27500
10.970 H HOLLYWOOD 27500
10.970 H MUSIC NOW 27500
10.970 H NBA TV 27500
10.970 H NBN PINOY NEWS 27500
10.970 H PBO 27500
10.970 H SERIES+4 27500
10.970 H SUPER COMEDY 27500
10.970 H SUPER MOVIES+1 27500
10.970 H TCM 27500
10.970 H MARHABA 27500
10.970 H BBC ARABIC 27500
10.970 H BBC ENGLISH 27500
10.970 H CLASSICAL 27500
10.970 H COUNTRY OF BLUES 27500
10.970 H DANCE 27500
10.970 H GMA DZBB 27500
10.970 H HITS 27500
10.970 H JAZZ 27500
10.970 H KHALIJYA7 27500
10.970 H LITE FM 27500
10.970 H LOVE SONGS 27500
10.970 H MONAWA'T 27500
10.970 H MONTE CARLO 27500
10.970 H MOTOWN 27500
10.970 H POP 27500
10.970 H R&B 27500
10.970 H ROCK 27500
10.970 H SUPER GOLD 27500
10.970 H TARABIYA'T 27500
10.970 H VIRGIN RADIO 27500
10.970 H EPG 27500
10.970 H HUMAX OTA 27500
10.970 H RADIO MOSAIC 27500
10.970 H SDSJ-1 27500
10.970 H SDSJ-2 27500
10.972 V Body in Balance 27500
10.972 V Bundesliga 9 - Kabel 27500
10.972 V Channel One Russia 27500
10.972 V Euro Star 27500
10.972 V Euronews English 27500
10.972 V Euronews French 27500
10.972 V Euronews Italy 27500
10.972 V Euronews Portugese 27500
10.972 V Euronews Russia 27500
10.972 V Euronews Spain 27500
10.972 V Kinowelt 27500
10.972 V LigTV 27500
10.972 V PinkPlus 27500
10.972 V RTR Planeta 27500
10.972 V Al Jazeera 27500
10.972 V France 24 27500
11.008 H AMERICA PLUS +2 27500
11.008 H ANIMAL PLANET 27500
11.008 H BBC PRIME 27500
11.008 H BOOMERANG 27500
11.008 H CARTOON NETWORK 27500
11.008 H CINEMA CITY +1 27500
11.008 H DISCOVERY CHANNEL 27500
11.008 H DISCOVERY SCIENCE 27500
11.008 H DISCOVERY TAL 27500
11.008 H DISNEY CHANNEL 27500
11.008 H ORBIT ESPN 27500
11.008 H ORBIT NEWS 27500
11.008 H SUPER COMEDY +2 27500
11.008 H TOON DISNEY 27500
11.008 H CNN 27500
11.008 H SDSJ2 27500
11.012 V ATV Avrupa 27500
11.012 V Euro2 27500
11.012 V FOX Turk 27500
11.012 V Kanal Inat 27500
11.012 V Rai Due 27500
11.012 V Rai Tre 27500
11.012 V Rai Uno 27500
11.012 V Show Turk 27500
11.012 V TRT Int 27500
11.012 V TurkMax 27500
11.012 V TV Polonia 27500
11.057 H AL SAFWA 27500
11.057 H AL YAWM 27500
11.057 H CINEMA 1 27500
11.057 H CINEMA 2 27500
11.057 H FANN 27500
11.057 H FUN CHANNEL 27500
11.057 H GMA Pinoy TV 27500
11.057 H HISTORY CHANNEL 27500
11.057 H HOLLYWOOD 27500
11.057 H NBA TV 27500
11.057 H NBN PINOY NEWS 27500
11.057 H PBO 27500
11.057 H SERIES 27500
11.057 H SERIES+4 27500
11.057 H SUPER MOVIES+1 27500
11.057 H TCM 27500
11.057 V SDSJ3 27500
11.092 V Rotana Europe 10000
11.092 H STILL 10000
11.092 V XLnt Arabian Nights 10000
11.092 V XLnt Comedy 10000
11.092 V XLnt Hits 10000
11.092 V XLnt HotPop 10000
11.092 V XLnt HotPop Gold 10000
11.092 V XLnt Kiddo FM 10000
11.092 V XLnt Lite 10000
11.092 V XLnt NederPop Gold 10000
11.092 V XLnt NederPop Nu 10000
11.092 V XLnt Nostalgie 10000
11.092 V XLnt PiratenHits 10000
11.092 V XLnt Radiobook 10000
11.092 V XLnt Romantic 10000
11.093 H STILL 10000
11.093 H XLnt Arabian Nights 10000
11.093 H XLnt Comedy 10000
11.093 H XLnt Hits 10000
11.093 H XLnt HotPop 10000
11.093 H XLnt HotPop Gold 10000
11.093 H XLnt Kiddo FM 10000
11.093 H XLnt Lite 10000
11.093 H XLnt NederPop Gold 10000
11.093 H XLnt NederPop Nu 10000
11.093 H XLnt Nostalgie 10000
11.093 H XLnt PiratenHits 10000
11.093 H XLnt Radiobook 10000
11.389 H 4Sat 24800
11.389 H AXN 24800
11.389 H Boomerang 24800
11.389 H Cartoon Network 24800
11.389 H Motors TV Deutschlan 24800
11.389 H NASN 24800
11.389 H National Geographic 24800
11.389 H Sci Fi Deutschland 24800
11.389 H Silverline 24800
11.389 H The Biography Channe 24800
11.389 H The History Channel 24800
11.389 H Xtrem Classic Movie 24800
12.530 V sky0SL/cableDSL 27500
12.537 H K3 Kulturkanal 3038
12.570 V Al-Arabi 27500
12.570 V Al-Kheel 27500
12.570 V Al-Sahraa-TV 27500
12.570 V BARAI 27500
12.570 V ATLAS TV Orig 27500
12.570 V NAT TV 27500
12.570 V NART 27500
12.570 V New-TV 27500
12.570 V Tawasul 27500
12.606 V Canal+ 27500
12.649 V Bundesliga 7 - Kabel 27500
12.649 V Bundesliga 8 - Kabel 27500
12.649 V Adult Channel 27500
12.649 V Blue Hustler 27500
12.649 V Bundesliga 1 - Kabel 27500
12.649 V Bundesliga 2 - Kabel 27500
12.649 V Bundesliga 3 - Kabel 27500
12.649 V Bundesliga 4 - Kabel 27500
12.649 V Bundesliga 5 - Kabel 27500
12.649 V Bundesliga 6 - Kabel 27500
12.649 V Bundesliga home - Ka 27500
12.649 V Bundesliga info - Ka 27500
12.649 V ESPN Classic 27500
12.649 V Extreme Sports 27500
12.649 V Sailing Channel 27500
12.649 V Super Sports Network 27500
12.649 V TVN I Europe 27500
12.649 V KabelKiosk - Infokan 27500

EUTAB2KM

10.719 V Al Jazeera Children 27500
10.719 V Hannibal Orient 27500
10.719 V Test 10 27500
10.719 V Test 11 27500
10.719 V Test 12 27500
10.719 V Test 3 27500
10.719 V Test 4 27500
10.719 V Test 5 27500
10.719 V Test 6 27500
10.719 V Test 7 27500
10.719 V Test 8 27500
10.719 V Test 9 27500
10.728 V LIBYA-EDU 38500
10.758 V Al Masah 27500
10.758 V Al Rayah 27500
10.758 V Al Saeeda 27500
10.758 V Al Saha 2 27500
10.758 V Al-Atheer 27500
10.758 V Al-Shoroq 27500
10.758 V MAJD9 27500
10.758 V Falla 27500
10.758 V Nessma TV 27500
10.758 V Mersal 27500
10.758 V OK TV 27500
10.758 V Omnia 27500
10.758 V Rabet Alsher 27500
10.758 V Sada TV 27500
10.758 V Sabour 27500
10.758 V Test 27500
10.758 V ALKawther FM92 27500
10.795 V Addounia 27500
10.795 V Al Amaken 27500
10.795 V Al Mukhtalif 27500
10.795 V Al Tajdah 27500
10.795 V Fanoos 27500
10.795 V Hannibal 27500
10.795 V Khalijiah 27500
10.795 V KuruSat 27500
10.795 V Nessma 27500
10.795 V Melody Tunes 27500
10.795 V Oman TV2 27500
10.795 V Test 27500
10.795 V Tunis 7 27500
10.795 V Zagros 27500
10.795 V Tunisian Culture 27500
10.795 V Tunisi International 27500
10.795 V Tunisia National 27500
10.834 V Al Ahd 27500
10.834 V Al Badr 27500
10.834 V Al Furqan 27500
10.834 V Al Iraqia 27500
10.834 V Alsaha Waljamal 27500
10.834 V Alsharqiah 27500
10.834 V Iraqia Afyaf 27500
10.834 V Iraqia Mubasher 27500
10.834 V Iraqia Sport 27500
10.834 V Najah 2 27500
10.834 V Temp1 27500
10.834 V Temp2 27500
10.834 V Tunisie 21 27500
10.834 V Alsharqiah Radio 27500
10.834 V Baghdad Radio 27500
10.834 V Iraqia Quran 27500
10.834 V Alsharqiah Radio 27500
10.853 H 2M Plus 27500
10.853 H Asmal 27500
10.853 H Atak 27500
10.853 H Al Hekma 27500
10.853 H Al Rahma 27500
10.853 H Assas 27500
10.853 H Dream Sport 27500
10.853 H LaSept TV 27500
10.853 H Marina TV 27500
10.853 H Melody TRIX 27500
10.853 H Nessma 27500
10.853 H Modern Sport 27500
10.853 H Test 27500
10.872 V Alfar Wa Nawaheb 27500
10.872 V Afrah 27500
10.872 V Al-Maaref 27500
10.872 V Al-Tawasol 27500
10.872 V Fatwa 27500
10.872 V Layalina 27500
10.872 V Noorsat Test 27500
10.872 V Noorsat test 27500
10.872 V Noorsat-Test 27500
10.872 V Qadhara TV 27500
10.872 V Soon-Emirates 27500
10.872 V Soon-Kuwait 27500
10.872 V Soon-Saudi 27500
10.872 V Soon-Al-Janah 27500
10.872 V Zameen 27500
10.892 H AL-Qaithara 27500
10.892 H Al-Watan-TV 27500
10.892 H ALhayet TV 27500
10.892 H Almadina TV 27500
10.892 H FEED 27500
10.892 H Karbala 27500
10.892 H QTV 27500
10.892 H Rusiya Al-Yaum 27500
10.892 H VIN TV 27500
10.892 H WTV 27500
10.892 H 93.6 RAM FM 27500
10.910 V Al-Aqsa 27500
10.910 V Ayhaa 27500
10.910 V Al-Mustakila 27500
10.910 V Alittihad 27500
10.910 V Arraj 27500
10.910 V Atlas~Starac 27500
10.910 V Euronews 27500
10.910 V Iqraa 27500
10.910 V noorsat test 27500
10.910 V Noorsat Test 27500
10.910 V OSCAR 27500
10.910 V Shada TV 27500
10.930 H Aaj TV 27500
10.930 H INDUS VISION 27500
10.930 H Monasbat 27500
10.930 H VIP 1 27500
10.930 H Aghanina 27500
10.930 H AL-BABELEYA 27500
10.930 H Alfajr TV 27500
10.930 H ARAB TV 27500
10.930 H Live TV 27500

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11.747 V A.B.C.ADTSADIA TV 27500
11.747 V Abu Dhabi TV 27500
11.747 V Al Forat 27500
11.747 V Al Manara.(sci.ch) 27500
11.747 V AlWasta 27500
11.747 V Beladi 27500
11.747 V EDUC 1 27500
11.747 V EDUC 2 27500
11.747 V EDUC 3 27500
11.747 V EDUC 4 27500
11.747 V Huda TV 27500
11.747 V Quran Karim 27500
11.747 V Salah EL-Din 27500
11.747 V Sehaty 27500
11.747 V Tamima 27500
11.747 V Test 27500
11.747 V UNV 1 27500
11.747 V Abu Dhabi Radio 27500
11.747 V Radio Alforat 27500
11.747 V SGMIN 27500
11.766 H AL HIDAYAH 27500
11.766 H AL Hurra Iraq 27500
11.766 H Alra TV 27500
11.766 H AL MONOWA 27500
11.766 H Al-Resala 27500
11.766 H Alra TV 27500
11.766 H BBCW 27500
11.766 H Ch 1 27500
11.766 H ESC 1 27500
11.766 H Jaras TV 27500
11.766 H NileTV 27500
11.766 H SARIAN Nature Cinema 27500
11.766 H Selevision TV 27500
11.766 H TBN 27500
11.766 H AL-Aghani 27500
11.766 H AL-Akhbar 27500
11.766 H AL-bernamej AL-aam 27500
11.766 H AL-bernamej AL-Abery 27500
11.766 H AL-Bernamej AL-mouss 27500
11.766 H AL-bernamej AL-orobi 27500
11.766 H AL-Kahera Al-Kobra 27500
11.766 H AL-Kebar 27500
11.766 H AL-Nahar 27500
11.766 H AL-Quran AL_Karem 27500
11.766 H Alshabab Wa ALraya 27500
11.766 H AL-Sharq AL-awsat 27500
11.766 H Matroub 27500
11.766 H Mowagahat-3 27500
11.766 H Mowagahat-4 27500
11.766 H Mowagahat-5 27500
11.766 H Sat AL-arab 27500
11.766 H Wadi Al-neil & Phala 27500
11.766 H Wasat-ALdeita 27500
11.766 H Wesal Al-Alam 27500
11.766 H Humax Data Broadca 27500
11.766 H HUMAX DOWNLOAD SV 27500
11.766 H HUMAX OTA 27500
11.785 V AL EQTISADIA TV 27500
11.785 V DHABIJAH 27500
11.785 V CNBC-ARABIYA 27500
11.785 V Dubai One 27500
11.785 V Dubai Sports 27500
11.785 V Dubai TV 27500
11.785 V MUSICPLUS 27500
11.785 V NOJOOM 1 27500
11.785 V Sama Dubai 27500
11.785 V SHARQIYA 27500
11.785 V Space Toon Arabic 27500
11.785 V ALSHARJAH RADIO 27500
11.785 V EDTV Radio E 27500
11.785 V EDTV Radio 1 27500
11.823 V AL HIWAR 27500
11.823 V BAGHDRIBA 27500
11.823 V Alhurra 27500
11.823 V AlThuraya 27500
11.823 V Assafir 27500
11.823 V Kuwait 27500
11.823 V Kuwait Sport & + 27500
11.823 V Nahwet 27500
11.823 V Oman 27500
11.823 V PSC 27500
11.823 V Sudan 27500
11.823 V Syria 27500
11.823 V Tarbia 27500
11.823 V KW Radio 27500
11.823 V Kw Sp Radio 27500
11.823 V NEW FM Oman 27500
11.823 V Oman -Quran 27500
11.823 V Oman Arabic Radio 27500
11.823 V Oman English Radio 27500
11.823 V Syria R1 27500
11.823 V Syria R2 27500
11.823 V Syria R3 27500
11.843 H Nile Drama 27500
11.843 H Nile Sport 27500
11.843 H Nile Variety 27500
11.843 H AL Jamahirya 27500
11.843 H AL Saha 2 27500
11.843 H Cham TV 27500
11.843 H Dream 2 27500
11.843 H MOTOWN 27500
11.843 H FNON 27500
11.843 H Nile Culture 27500
11.843 H Nile Family 27500
11.843 H Nile News 27500
11.843 H Sowaif 27500
11.843 H Tanweer 27500
11.843 H AlWadi AlGaded 27500
11.843 H ART AlTeker 27500
11.843 H BBC (A) 27500
11.843 H BBC (E) 27500
11.843 H Progg1 27500
11.843 H Progg2 27500
11.843 H Progg23 27500
11.843 H Progg24 27500
11.843 H Progg25 27500
11.843 H Progg27 27500
11.843 H Progg28 27500
11.843 H Radio Farda 27500
11.843 H Radio Sawa Iraq 27500
11.843 H Radio Sawa Levant 27500
11.843 H Radio Sawa Sudan 27500
11.843 H Radio VOA Iraq 27500
11.843 H RMCMO 27500
11.843 H Umdorman radio 27500
11.861 V Disney Channel 27500
11.861 V EI Entertainment 27500
11.861 V Extreme Sports 27500
11.861 V Nat Geo Wild 27500
11.861 V ShowComedy Extra 27500
11.861 V ShowShasha 27500
11.861 V ShowShasha Extra 27500
11.861 V Al Waha 27500
11.861 V Cine 27500
11.861 V City 7 TV 27500
11.861 V Nojoom 3 27500
11.861 V ShowToday 27500
11.861 V TXT 27500
11.881 V Arabic EPG 27500
11.881 V EEPG 27500
11.881 H AIFN 27500
11.881 H GEO TV 27500
11.881 H GOLD 27500
11.881 H JAYA 27500
11.881 H MDV 27500
11.881 H NAGE 27500
11.881 H NDTV 27500
11.881 H PLUS 27500
11.881 H SET 27500
11.881 H SETMX 27500
11.881 H VINCI 27500
11.881 H VINT 27500
11.881 H WLD 27500
11.881 H ZMOV 27500
11.881 H ZTV 27500
11.881 H SPARE1 27500
11.881 H SPARE2 27500
11.881 H Amman Net Radio 27500
11.900 V ASHshop 27500
11.900 V Dream 27500
11.900 V DW-TV ARABIA 27500
11.900 V ETV 27500
11.900 V Kuwait Ch.2 27500
11.900 V Majd 27500
11.900 V Mazzika 27500
11.900 V Melody Hits 27500
11.900 V Oyoun TV 27500
11.900 V Sahm TV 27500
11.900 V Xpress Shop 27500
11.900 V Zoom 27500
11.900 V DW Al 27500
11.900 V DW Al2 27500
11.900 V NILE 1 27500
11.900 V Nogoom Radio Ch 27500

NIL102KG

NIL102KE

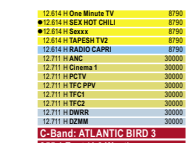
11.919 H AI NAS TV 27500
11.919 H Al Saha TV 27500
11.919 H Al-Kawthar 27500
11.919 H ALBAGHDADIA 27500
11.919 H ALRAFIDEN 27500
11.919 H BAGHDAD TV 27500
11.919 H Flash TV 27500
11.919 H Iraqia TV 27500
11.919 H Poet 27500
11.919 H SPCY 27500
11.919 H Test 27500
11.919 H Yemen R1 27500
11.919 H Yemen R2 27500
11.919 H MENA 27500
11.919 H Mubasher 27500
11.919 H NileNet1 27500
11.919 H NileNet2 27500
11.919 H NileNet3 27500
11.919 H NileNet4 27500
11.936 V AL AQARIYA 27500
11.936 V Alarabiya 27500
11.936 V CITRUSS TV 27500
11.936 V HAWAS TV 27500
11.936 V MBC Action 27500
11.936 V MBC1 27500
11.936 V MBC2 27500
11.936 V MBC3 27500
11.936 V MBC4 27500
11.936 V ZEE ARABIYA 27500
11.936 V Jeddah FM 27500
11.936 V MBC FM 27500
11.936 V MBC FM ER 27500
11.936 V Panjordan 27500
11.936 V Panorama FM 27500
11.936 V Riyadh FM 27500
11.957 H PrSPR 27500
11.957 H SPRT1 27500
11.957 H SPRT2 27500
11.957 H SPRT3 27500
11.957 H SPRT4 27500
11.957 H SPRT5 27500
11.957 H SPRT6 27500
11.957 H SPRT7 27500
11.957 H SPRT8 27500
11.957 H SPRT9 27500
11.957 V BBO 27500
11.977 V Bloomberg 27500
11.977 V Fashion TV 27500
11.977 V ShowCinema 1 27500
11.977 V ShowCinema 2 27500
11.977 V ShowCinema 3 27500
11.977 V ShowCinema 4 27500
11.977 V SOD 27500
11.977 V Spare 27500
11.977 V Future News 27500
11.977 V Maktoob TV 27500
11.977 V MTV Arabia 27500
11.977 V Sharjah TV2 27500
11.977 V Spare

Freq Pol Channel Name Symbol rate

12.614 H One Minute TV 8790
● 12.614 H SEX HOT CHILI 8790
● 12.614 H Sexxx 8790
12.614 H TAPESH TV2 8790
12.614 H RADIO CAPRI 8790
12.711 H ANC 30000
12.711 H Cinema 1 30000
12.711 H PCTV 30000
12.711 H TFC PPV 30000
12.711 H TFC1 30000
12.711 H TFC2 30000
12.711 H DWRR 30000
12.711 H DZMM 30000

C-Band: ATLANTIC BIRD 3
355.1 East (4.9 West)

EUTABIT1a



3.633 R Tele Guyane 5656
3.641 R Tele Reunion 2480
● 3.646 R Tele Sahel 2170
3.656 R NGONG ENC A 2852
3.661 R 2M MAROC 2170
3.661 R RADIO 2M 2170
3.711 L Delta 2170
3.727 R CFIARFPRO1 29950
3.727 R CFIARFPRO2 29950
3.727 R CFIAMEPRO 29950
3.727 R DOM 1 29950
3.727 R DOM 2 29950
3.727 R DOM 4 29950
3.727 R DOM 5 29950
3.727 R DOM 6 29950
3.727 R DOM 7 29950
3.727 R DOM 8 29950
3.727 R DOM 9 29950
3.727 R RCI 3 29950
3.727 R RFI AF Centrale 29950
3.727 R RFI Bissau 29950
3.727 R RFI Cameroun 29950
3.727 R RFI Cap Vert 29950
3.727 R RFI Divers 1 29950
3.727 R RFI Divers 2 29950
3.727 R RFI Divers 3 29950
3.727 R RFI Gambie 29950
3.727 R RFI Ghana 29950
● 3.727 R RFI Haussa 29950
3.727 R RFI Kenya 29950
3.727 R RFI Langues 1 29950
3.727 R RFI Langues 2 29950
3.727 R RFI Lesotho 29950
3.727 R RFI Liberia 29950
3.727 R RFI Madagascar 29950
3.727 R RFI Malabo Pico 29950
3.727 R RFI Malabo Ville 29950
3.727 R RFI Mozambique 29950
3.727 R RFI Musique 29950
3.727 R RFI Namibie 29950
3.727 R RFI Niamey 29950
3.727 R RFI Niger 29950
3.727 R RFI Nord Cameroun 29950
3.727 R RFI Ocean Indien 29950
3.727 R RFI Ouganda 29950
3.727 R RFI Rmc 29950
3.727 R RFI Rwanda 29950
3.727 R RFI Sao Tome 29950
3.727 R RFI Senegal 29950
3.727 R RFI Sierra Leone 29950
3.727 R RFI Tanzanie 29950
3.727 R RFI Tchad 29950
3.727 R RFI WS Ouest 29950
3.727 R RFI WS Sud 29950
3.727 R RFI Zambie 29950
3.727 R FILEAS-AFRIQUE 29950
3.727 R Meteo France AB3 29950
● 3.727 R Service IP ION 29950
4.023 R TELE. CONGO 2018
● 4.157 L RTN GABON 8010
4.157 L TV1 GABON 8010
● 4.157 L TV2 GABON 8010
● 4.157 L RADIO AFRICA+ 8010
● 4.157 L RADIO AFRICA1 8010
4.157 L RADIO GABON 8010
4.160 R AL BADEEL 20325
4.160 R AL HEDAYA 20325
4.160 R AL-MONOWA 20325
4.160 R ALMADI 20325
4.160 R ATTAWASUL 20325
4.160 R Jamahiriya Sat Chann 20325
4.160 R Sea Sport (Riad 20325
4.160 R LY LJB 20325

AMOS 1,2
350.0 East (4.0 West)

AMO001EA

10.972 V BBC Prime 27500
10.972 V CNN 27500
10.972 V DVDbox 27500
10.972 V Star World 27500
10.972 V Test Channel 27500
10.972 V Viva Platina 27500
10.972 V Yes Divas 27500
10.972 V 90 FM 27500
10.972 V Arabic IBA 27500
10.972 V Radio 102FM 27500
10.972 V Radio 103FM 27500
10.972 V RADIO 88 FM 27500
10.972 V Radio 98sec 27500
10.972 V Radio darom 27500
10.972 V Radio Galaz 27500
10.972 V Radio Galgalaz 27500
10.972 V Radio Jerusalem 27500
10.972 V Radio K. Hamuzika 27500
10.972 V Radio Kol Hai 27500
10.972 V Radio Kol Haiam Hado 27500
10.972 V RADIO LEV HAMEDIN 27500
10.972 V Radio Melodia 27500
10.972 V Radio Reka 27500
10.972 V Radio Reshet Alef 27500
10.972 V Radio Reshet Bet 27500
10.972 V Radio Reshet Gimel 27500
10.972 V Radio rishon 27500
10.972 V Radio Select 27500
10.972 V Radio 100 FM 27500
10.972 V Rodio Monitor 27500
10.972 V vod 27500
10.986 H BTV 6666
10.986 H METV 6666
10.986 H RADIO 3 6666
10.986 H RADIO 4 6666
10.986 H RADIO 5 6666
10.986 H RADIO 6 6666
10.986 H RADIO 7 6666
10.986 H Radio Love 6666
10.986 H The Word 6666
10.993 H Baki TV 4850
10.993 H RR Sat Promo 4850
11.008 V Music Channel 27500
11.008 V Our Song 27500
11.008 V Sport One 27500
11.008 V Tech TV 27500
11.008 V Testcard 27500
11.008 V The Adult Channel 27500
11.008 V TeVi'S 27500
11.008 V TV5 27500
11.008 V Yes Casino 27500
11.008 V Yes Play 27500
11.008 V Yes Pulse 27500
11.008 V Yes Weather 27500
11.008 V GAME ONE 27500
11.008 V Logic games 27500
11.008 V Sosa services 27500
11.008 V Games Portal 27500
11.008 V Hop! Lomdim 27500
11.008 V Millionaire 27500
11.008 V Power play 27500
11.008 V Sponge bob 27500
11.008 V Yes GAMES 27500
11.008 V Yes Info 27500
11.008 V Yes store 27500
11.008 V Yes Weekend 27500
11.132 V KURDSAT 3254
11.177 V IBA 10 8520
11.177 V IBA 2 8520
11.474 V DVDBox 27500
11.474 V English League 27500
11.474 V Hatchelet 27500
11.474 V ISR WGames 27500
11.474 V Music Box Rusia 27500

11.474 V SAT 1 27500
11.474 V Yes Promo 27500
11.474 V Xtreme play 27500
11.474 V Data services 27500
11.474 V iPortla test 27500
11.474 V Videobox 27500
11.510 V Biography 27500
11.510 V DVDbox 27500
11.510 V Good Life TV Network 27500
11.510 V History Channel 27500
11.510 V Israel Plus 27500
11.510 V Sports 5+ 27500
11.510 V TV Mall 27500
11.510 V Yes news 27500
11.510 V Yes Y 27500
11.510 V Yesababa 27500
11.558 V Adventure One 27500
11.558 V Animal Planet 27500
11.558 V Channel 3 27500
11.558 V Daystar 2 27500
11.558 V E! 27500
11.558 V English League 27500
11.558 V Kids Channel 27500
11.558 V M2 27500
11.558 V MCM TOP 27500
11.558 V Nickelodeon 27500
11.558 V Sat 3 27500
11.558 V Shopping 27500
11.558 V TCM 27500
11.558 V Yes Sport 27500
11.558 V Yes Weekend 27500
11.558 V Yes+ 27500
11.558 V yes IMPACT 27500
11.592 V Channel 5 27500
11.592 V Disc-Science 27500
11.592 V DVDbox 27500
11.592 V EGO 27500
11.592 V Eurosport 27500
11.592 V Extreme Sport Channe 27500
11.592 V Fox News 27500
11.592 V Israeli Game 27500
11.592 V Music 24 27500
11.592 V N. Geographic 27500
11.592 V The Discovery Channe 27500
11.592 V VHI Classic 27500
11.592 V Yes 2 27500
11.592 V Zee TV 27500
11.677 V DVDbox 27500
11.677 V Education Channel 33 27500
11.677 V ESPN 27500
11.677 V MTV Base 27500
11.677 V Open Channel 27500
11.677 V Music Monitor 27500
11.677 V Music Select 27500
11.677 V Data services 27500

AMO001EI

10.842 H Cinema 1 27500
10.842 H Israel Plus 27500
10.842 H Antena 1 27500
10.842 H AXN Sci-Fi 27500
10.842 H Boomerang 27500
10.842 H CIMV Romania 27500
10.842 H Discovery 27500
10.842 H Eurosport 2 27500
10.842 H MTV Base 27500
10.842 H MTV Hits 27500
10.842 H National TV 27500
10.842 H Prima TV 27500
10.842 H Realitatea TV 27500
10.842 H Science 27500
10.842 H Travel & Liv. 27500
10.842 H UTV 27500
10.842 H VH 1 27500
10.842 H Boom Music 27500
10.842 H Boom Action 27500
10.842 H Radio Deea 27500
10.842 H Games 27500
10.842 H Boom Cinema1 27500
10.842 H Boom Classic 27500
10.842 H Boom Comedy 27500
10.842 H Boom Drama 27500
10.842 H Boom Hogl 27500
10.842 H Boom Indian 27500
10.842 H Boom Secrets 27500
10.842 H Boom Sport 27500
10.924 H Favorit TV 27500
10.924 H Kanal D 27500
● 10.924 H MTV Romania 27500
10.924 H Nat. Geographic 27500
10.924 H TVR Cultural 27500
10.924 H (Empty) 27500
● 11.122 H TV Amna RA x 1852
11.165 H Fashion TV 8888
● 11.165 H PLAY TV 8888
● 11.165 H TEST MKD 1 8888
11.165 H WORLD SPORT TRANS 8888
11.260 H a, a storytevee 27500
11.260 H anime+ Hungary 27500
11.260 H anime+ Romania 27500
11.260 H Filmmuzeum 27500
11.260 H hirTV 27500
11.260 H Minimax Hun/A+ 27500
11.260 H Minimax Rom/A+ 27500
11.260 H Pax TV 27500
11.260 H Minimax Hungary 27500
11.260 H Minimax Romania 27500
11.260 H Minimax Serbia 27500
11.260 H Musicmax 27500
11.260 H Musicmax Adult 27500
11.260 H Musicmax/Mix+Adult 27500
11.260 H Telemedia 2 27500
11.260 H Telemedia 3 27500
11.260 H Telemedia 5 27500
11.260 H Gong Radio 27500
11.260 H Juventus Radio 27500
11.260 H jazzradio.hu 27500
11.303 H ATV 19540
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11.303 H SK PL + 19540
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11.303 H Radio1 19540
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11.328 H NET TV 3350
11.328 H TV3 SLOVENJA 3350
11.332 H HTV-RT 3500
11.347 H TMT 2800
11.352 H OBN 3350
● 11.359 H NOVA TV 3350
11.362 H SKANALAS 2892
● 11.427 H NTV HAYAT BIH 5926
● 11.427 H NTV HAYAT SAT 5926
● 11.427 H Radio Stari Grad 5926
● 11.435 H TV Oltenia 2089
● 11.443 H TVRM 4164
● 11.443 H TVRM-DSNG1-ROM 4164
11.560 H BBC World 13400
11.560 H CNN 13400
11.560 H Duna TV 13400
11.560 H Money Channel 13400
11.560 H Sickeldown 13400
11.560 H OTV 13400
11.560 H ProTV Intl 13400
11.560 H SKY News 13400
11.560 H Taraf TV 13400
● 11.575 H CNL Ukraina 8888
● 11.575 H CNL Ukraine 8888
● 11.575 H FEED 8888
● 11.575 H LIFE TV Estonia 8888
● 11.586 H Carli TV 7957
● 11.586 H Golica 7957
● 11.586 H MTV Adria 7957
● 11.586 H (Empty) 7957

AMO002EU

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10.723 H 1PLUS1 27500
10.723 H 1PLUS1 CINEMA 27500
10.723 H K1 27500
10.723 H K2 27500
10.723 H OTV 27500
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10.759 H KIEV STB 30000
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10.759 H M2 30000
10.759 H MTV_UKRAINE 30000
10.759 H NEWS 24 30000
10.759 H TONIS 30000
● 10.805 H Eparhia 27500
● 10.805 H Transmission 27500
10.805 H OS Download 27500
10.805 H Pavlos TV 27500
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● 10.890 H Euphoria 27500
● 10.890 H Eurosport 27500
● 10.890 H HBO Romania 27500
● 10.890 H Jetix 27500
● 10.890 H Pro Cinema 27500
● 10.890 H PRO TV 27500
● 10.890 H TCM 27500
● 10.890 H TV 1000 27500
● 10.890 H TVR 1 27500
● 10.890 H TVR 2 27500
● 10.890 H Viasat Explorer 27500
● 10.924 H Extreme Sports 27500

10.924 H Sport Klub Ro 27500
10.924 H Viasat History 27500
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● 11.413 H HBO Pol Orig 7925
● 11.413 H HBO Poland 7925
● 11.413 H HBO Poland (AC3) 7925
● 11.413 H HBO Poland for STB 7925
● 11.413 H HBO2 Poland 7925
● 11.413 H HBO2 Poland for ST 7925
● 11.413 H HBO2 Poland Origin 7925
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11.626 H RCS Map Table 4000
● 11.650 H Telesport 21350
● 11.650 H B1 TV 21350
● 11.650 H Ginx TV 21350
● 11.650 H Good Life Channel 21350
● 11.650 H Senso 21350
● 11.650 H Trinitas TV 21350
● 11.650 H TV Neptun 21350
● 11.650 H Radio Logos 21350
● 11.650 H Radio Reintregirea 21350
● 11.650 H Trinitas 21350
● 11.650 H MUSIC BOX 7200

AMO002ME

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10.720 V Cartoon Network 27500
10.720 V DVDbox 27500
10.720 V Eurosport News 27500
10.720 V Interstar 27500
10.720 V MDC 27500
10.720 V METV 27500
10.720 V Planeta sport 27500
10.720 V Private Blue 27500
10.720 V Pro TV 27500
10.720 V RTM 27500
10.720 V TVE 27500
10.720 V Yes Anime 27500
10.758 V ARTE 27500
● 10.758 V CCTV 9 27500
10.758 V Channel 33 27500
10.758 V DVDbox 27500
10.758 V Game One 27500
10.758 V LBC 27500
10.758 V Nashe Kino 27500
10.758 V RTL 27500
10.758 V RTR 27500
10.758 V RTV International 27500
10.758 V TVR International 27500
10.758 V Yes Telechub 27500
10.803 V BBC Prime 27500
10.803 V Channel 1 27500
10.803 V Channel 2 27500
10.803 V emtv test 27500
10.803 V Fox News 27500
10.803 V IAD 27500
10.803 V Israel 10 27500
10.803 V Israel Plus 27500
10.803 V Israeli Cinema 27500
10.803 V ITV 27500
10.803 V KIDS CHANNEL 27500
10.803 V Nickelodeon 27500
10.803 V Playboy 27500
10.803 V Testcard 27500
10.803 V VIVA PLATINA 27500
10.803 V Yes + 27500
10.803 V Yes Docu 27500
10.803 V Yes Stars 27500
10.803 V Data services 27500
10.841 V Baby 27500
10.841 V Good life TV Network 27500
10.841 V Hallmark Israel 27500
10.841 V HOP! 27500
10.841 V Jetix 27500
10.841 V MGM 27500
10.841 V Open Channel 27500
10.841 V Russian Music Box 27500
10.841 V Shabat Soccer 27500
10.841 V Sky NEws 27500
10.841 V Sport 5 27500
10.841 V Viva Platina 27500
10.841 V Yes 1 27500
10.841 V Yes 2 27500
10.841 V Yes 3 27500
10.841 V Yes 4 27500
10.889 V Abu-Dhabi 27500
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10.924 V Jordan channel 27500
10.924 V Karaoke Channel 27500
10.924 V Mezzo 27500
10.924 V NTV MIR 27500
10.924 V Ntanza 27500
10.924 V Test RR sat 27500
10.924 V The Adult channel 27500
10.924 V TV5 27500
10.924 V VH1 27500
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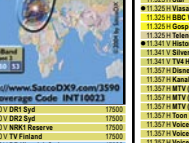
11.432 V Nonstop Kino 4500

INTELSAT 10-02, THOR 2.3
359.0 East (1.0 West)

IN10023



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12.520 V DR P2 Syd 17500
12.520 V DR P3 Syd 17500
12.520 V DR P4 KBH Syd 17500
12.520 V NRK AN Reserve 17500
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12.520 V Viasat 1 17500
12.520 V Ylesat 2 17500
12.520 V FLS Service 3t0x low 17500
12.520 V RCS Map Service 3t0x 17500
12.527 H Antena 3 27500
12.527 H ATV 27500
12.527 H Cartoon Network 27500
12.527 H Duna TV 27500
12.527 H Eurosport SW 27500
12.527 H Favorit TV 27500
12.527 H Hallmark CE 27500
12.527 H Romantica Ro 27500
12.527 H Sport Klub HU 27500
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12.527 H TVR2 27500
12.527 H VH1 27500
12.527 H InfoPRO 27500
12.527 H Europa FM 27500
12.527 H Guerrilla 27500
12.527 H SW DL 1160 27500
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12.563 H HBO 2 27500
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12.563 H Jetix CE 27500
12.563 H M1 27500
12.563 H M2 27500
12.563 H Minimax 27500
12.563 H MTV Hungary 27500
12.563 H Romantica Hu 27500
● 12.563 H Spektrum 27500
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12.607 V DM SAT 27500
12.607 V Galaksija 27500
12.607 V Hbo Adria 27500
12.607 V MTV Adria 27500
12.607 V NOVA TV 27500
12.607 V OBN 27500
12.607 V Otvorena TV 27500
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12.607 V RTS 2 27500
12.607 V Z 1 27500
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12.643 H Radio S 27500
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12.687 H CT2 27500
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12.687 H Minimax RO A+ 27500
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12.687 H N 24 27500
12.687 H National TV 27500
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12.687 H Realitatea TV 27500
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12.687 V SPORT SK-CZ 27500
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12.687 V TV5 Oradea 27500
12.687 V CT24 27500
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12.722 H Antena 1 27500
12.722 H Cinemax 27500
● 12.722 H Discovery CE 27500
12.722 H Discovery Civ 27500
12.722 H Discovery Sci 27500
12.722 H Discovery T&L 27500
12.722 H Hallmark 27500
12.722 H HBO Romania 27500
12.722 H Private Spice 27500
12.722 H Reality TV 27500
12.722 H TV 1000 27500
12.722 H Viasat History 27500
12.722 H ProFM 27500
12.722 H SW DL 1170 27500
12.722 H SW DL 5170 27500
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11.216 V Barnkanalen 24500
11.216 V Kunskapskanalen 24500
11.216 V SVT Extra 24500
11.216 V TV4 24500
11.216 V TV4 Fakta 24500
11.216 V TV4 Film 24500
11.216 V TV4 plus 24500
11.216 V TV4 Sport 24500
11.216 V TV400 24500
11.216 V ScrTxt 24500
11.247 V TV 2 Sport 24500
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11.247 V TV 2 Nyhetskanalen 24500
11.247 V TV 2 Zebra 24500
11.247 V BTV-1 24500
11.247 V On Satellite 24500
11.247 V Swedbank 24500
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11.325 H FEM 24500
11.325 H History Channel 24500
11.325 H Showtime 24500
11.325 H Sk-Sh TS 24500
11.325 H Star 24500
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11.325 H BBC World 24500
11.325 H Gospel Channel Europ 24500
11.325 H Telenor SE 24500
● 11.341 V History Chnl HD 25000
11.341 V Silver HD 25000
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11.357 H MTV (D) 24500
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11.372 V NRK1 Tegnspråk 24500
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11.372 V NRK Gull 24500
11.372 V NRK Klassisk 24500
11.372 V NRK mP3 24500
11.372 V NRK Nyheter 24500
11.372 V NRK P1 24500
11.372 V NRK P2 24500
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12.380 V Radio Romania Muzica 28000
12.380 V Radio Timisoara 28000

THO003KU

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4.025 R BBC Afr Feed 2 7323
4.025 R BBC Afr Feed 3 7323
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4.025 R BBC Portuguese 7323
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4.025 R BBC Swahili 7323
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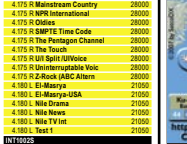

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3.977 R CH7 OWA L 17777
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3.977 R FREE 19 17777
3.977 R FREE 8 17777
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3.977 R NATIONAL 17777
3.977 R OKC/TSWANA 17777
3.977 R RADSKUDU 17777
3.977 R REMsw 17777
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INTELSAT 10-02
359.0 East (1.0 West)

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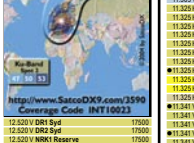

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12.520 V DR Klassisk Syd 17500
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12.520 V DR P2 Syd 17500
12.520 V DR P3 Syd 17500
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12.687 H Kiss TV 27500
12.687 H Minimax RO A+ 27500
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12.687 H MTV Romania 27500
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12.687 H Prima TV 27500
12.687 V PRIMA_CZ 27500
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Exhibition Preview

- **26 - 28 May 2008: MECOM**
  2nd Middle East International Telecommunications and Communications Exhibition
  Abu Dhabi National Exhibiton Center, UAE
  www.mecom.expo.com

- **27 - 29 May 2008: ANGA Cable**
  Trade Fair for Cable, Broadband & Satellite
  KoelnMesse, Cologne, Germany
  www.angacable.de

- **17 - 20 June 2008: CommunicAsia 2008**
  19th International Communications and Information Technology Exhibition & Conference
  Singapore Expo, Singapore
  www.communicasia.com

- **18 - 19 June 2008: CAI Trade Fair 2008**
  29th Annual CAI Trade Fair
  Warwickshire Show Ground, Stoneleigh Park, Coventry, UK
  www.cai.org.uk

- **12 - 16 September 2008: IBC 2008**
  The World of Content
  RAI Exhibiton Center, Amsterdam, Netherlands
  www.ibc.org

- **7 - 12 October 2008: CeBIT Bilişim Eurasia**
  ICT trade show
  TUYAP Fair and Congress Center, Istanbul, Turkey
  www.cebitbilisim.com

- **11 - 17 October 2008: Taitronics**
  Taipei International Electroncis Show
  TWTC Nangang Exhibition Hall, Taipei, Taiwan
  www.taitronics.org

- **29 - 31 October 2008: EEBC 2008**
  6th Eastern Europe Exhibition and Conference
  Kiev Expo Plaza, Kiev, Ukraine
  www.eebc.net.ua

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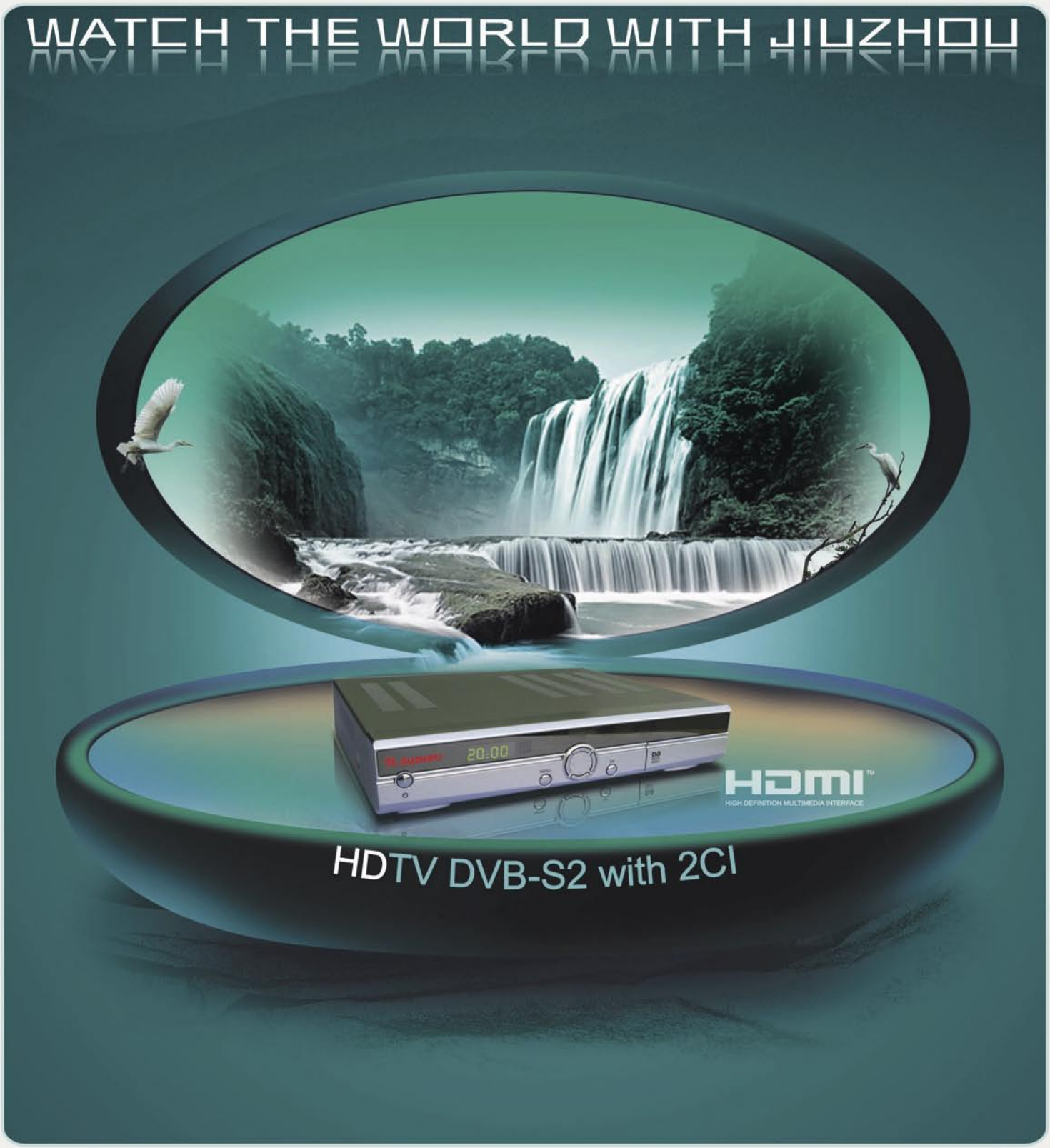

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