

MICRO HD

GEOSAT_{pro}

High Definition DVBS2 Satellite DVR Receiver



Owners Manual Installation Guide



Owners Manual

Installation Guide

Version 2012.07.12



microHD - Digital Video Recorder Ready

Congratulations on your purchase of a quality GEOSATpro product, the microHD! This manual contains basic operation and installation instructions for the microHD satellite receiver with digital video recording capability. If you have any programming or operation questions, please contact your reseller for primary support.

GEOSATpro stands behind our resellers and their customers to offer a one year warranty against any factory defect on retail purchases provided with original dated proof of sale invoice or receipt. All warranty issues are to be processed through your reseller.

Optional telephone technical support for your satellite system may be available by GEOSATpro. Single satellite, fixed dish system owners are offered a telephone technical support option for \$19.95 per year for same satellite reception. Motorized or multi-satellite systems owners are offered an advanced support option for \$29.95 per service event with event expiration 30 days from the service initiation.

Note: Save all original boxes, manuals, accessories and packaging materials in case it is necessary to return the merchandise.

Before unpacking or assembly of any item, review the warranty, exchange and refund policies provided by your reseller.

Materials contained in this installation manual are the property of:

GEOSATpro

8801 Washington Blvd., Suite 101

Roseville, CA 95678

888-483-4673

<http://www.GEOSATpro.com>

©2012 Satellite AV, LLC

Table of Contents

Page

FCC Notice and Compliance	2
Important Safeguards	3
microHD Features and Specifications	5
Receiver Front / Rear Panel	8
Remote Control Layout	9
Basic Remote Operation	8
Installation Guide	11
Parts List	12
Site Survey	12
Dish Mounting Options	15
LNBF Installation	17
Dish Aiming	18
Connect Receiver to a TV	19
microHD Install Menu Setup	21
Locate and Peak Satellite Signal	23
Completing the Install and Grounding	26
microHD Features	27
Menu Items	32
Channel Manager	32
Installation	37
System Set-up	53
Tools	59
Media Manager	63
FAQ - Frequently Asked Questions	69
Satellite Elevation Finder - Cut-out	71

FCC Notice

DTV Transition Notice: After June 12th, 2009, a television receiver with only an analog broadcast tuner will require a converter box to receive full power over-the-air broadcasts originating from a United States broadcaster with an antenna because of the Nation's transition to digital broadcasting. Analog-only TVs should continue to work as before to receive low power, Class A or translator television stations, cable, satellite TV services, gaming consoles, VCRs, DVD players, and similar products.

Information about the DTV transition is available from www.DTV.gov or 1-888-CALL-FCC, and from www.dtv2009.gov or 1-888-DTV-2009 for information about subsidized coupons for digital-to-analog converter boxes.

This notice does not affect any programming received by this satellite set-top box. Your digital satellite receiver will continue to receive the digital satellite signals and provide the programming for display on both Analog Televisions and new DTV compatible monitors with composite, Component YUV or S-Video input connections.

This notice complies with Parts 15 and 54 of Title 47 of the Code of Federal Regulations: 15.124 DTV Transition Notices by Manufacturers of Televisions and Related Devices.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/ TV technician for help

Notice: Shielded cables must be used to ensure compliance with Class B FCC limits.

Important Installation Notice: The Federal Communications Commission (FCC) has ruled that local government zoning and homeowner's associations may not prevent the installation of satellite antennas one meter (39") or smaller in diameter within a resident's private use area, unless legitimate safety restrictions such as fire codes are in effect.

For More information: <http://www.fcc.gov/cgb/satellite.html>



FCC Part 15 Compliant



Manufactured under License

Important Safeguards

Important Safety Instructions

- ❶ Read these instructions.
- ❷ Keep these instructions.
- ❸ Heed all warnings.
- ❹ Follow all instructions.
- ❺ Do not use this apparatus near water.
- ❻ Clean only with dry cloth.
- ❼ Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- ❽ Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus(including amplifiers)that produce heat.
- ❾ Do not defeat the safety purpose of the polarized or grounding-type plug.
A polarized plug has two blades with one wider than the other.
A grounding type plug has two blades and a third grounding prong.
The wide blade or third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- ❿ Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- ⓫ Only use attachments/accessories specified by the manufacturer.
- ⓬ Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- ⓭ Unplug this apparatus during lightning storms or when unused for long periods of time.
- ⓮ Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



Caution - These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

WARNING : TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE AND OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHOULD NOT BE PLACED ON THIS APPARATUS

Precautions



CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER(OR BACK). NO USER-SERVICEABLE PARTS ARE INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



This symbol indicates "dangerous voltage" inside the product that presents a risk of electric shock or personal injury.



This symbol indicates important instructions accompanying the product.

Do not install this equipment in a confined space such as a bookcase or similar unit.

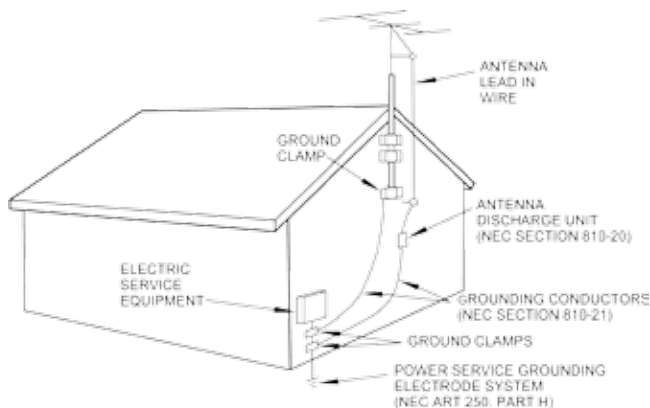
WARNING : To prevent damage which may result in fire or electric shock hazard, do not expose this appliance to rain or moisture.

Notice ① The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

② The mains plug is used as the disconnect device. The disconnect device shall remain readily operable.

Example of Antenna Grounding

NEC, ANSI/NFPA 70



Replacement Parts When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards. Modification to the hardware or software without authorization by the manufacturer will result in voiding any warranty. Service assistance may be arranged by contacting your reseller.

Safety Check Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

microHD Features

- Full HD 1080P
- Fully compliant MPEG-2 MP@HL & MP@ML
- Fully compliant MPEG-4 H.264/AVC Main Profile Level 3 & High Profile Level 4.1
- Fully compliant MPEG-1 Layer I & II & III
- VCM / MIS Capable
- SCPC & MCPC from C/Ku Band Satellites
- USALS/DiSEqC 1.2 Motor Control
- 22KHz/DiSEqC 1.0/DiSEqC 1.1 Switch Control
- Full Screen Signal Meter with Selectable Audio Signal Alert
- Channel Technical Parameter Screen
- Digital Video Recorder (DVR) with Connected USB 2.0 Drive
- 2TB FAT/NTFS Single Partition Drive Support
- Simultaneous Recording of 2 Channels on Transponder, Watch a 3rd or Playback
- Automatic Time Shift with Ability to Convert and Save to a DVR File
- 30 Event Timers for Record and Channel Change
- Timers support Once, Daily, Weekly, Monthly
- 16 Day EPG - Electronic Program Guide
- Auto Time Setting via Satellite
- Manual Time Setting
- Video/Photos/Music Multi-Media Player: Slide Show, Music Lists, Repeat and Favorites
- Firmware Upgrade Through USB2.0 Port
- Channel List Upgrade Through USB2.0 Port
- Manual/Automatic Firmware Upgrade Via G19 KU @97W Satellite
- Manual/Automatic Channel List Upgrade G19 KU @97W Satellite
- Closed Caption Supported on HDMI: EIA-608/EIA-708 via OSD
- Closed Caption Supported on Composite Video Output: EIA-608 via VBI
- Multi-Lingual DVB Subtitle/Teletext
- Teletext/Subtitle Out Through OSD - Teletext Filter Conforms with ETS 300 472 Standard
- Blind Scan with Parameter Limits
- Manual Transponder Scan
- Single and Multi-Satellite Scan
- Direct Channel PID Entry
- Automatic Service Scan
- Parent Lock for Channels and Menu Settings
- ZOOM In/Out Function
- Picture-In-Graphics Function
- OSD Languages: English, Spanish, Russian
- Internal Satellite/ Transponder/Channel - Add/Edit/Delete/Sort
- Two Free PC Based Channel Editors - 1. ALI Editor 2. Mediabox Editor Studio
- Auto Sleep Shut Off

microHD Specifications

Chipset and Memory	
Main Processor	ALI3601S Solution
CPU	Dual Core 396MHz MIPS Processor
Flash	32Mbytes
RAM	DDR2 1G Bit
Operating System	TDS
Capacities	
Satellites	128
Transponders	3000
Channels	5000
Favorites	10
Timers	30
Electronic Program Guide (EPG)	16 days
Front Panel	
LED Status	Power: Red, Green, USB: Connected, Recording
IR Sensor	50 Degree Beam Width @ 15 feet
Rear Panel	
LNB IN	F-Type Female, 13VDC - Vertical, 18VDC - Horizontal 500mA, Current Protection (Thermal Reset)
HDMI	Version 1.3
RCA Video	(Yellow), 1Vp-p @ 75 ohms
Audio	Left (White) / Right (Red) , Unbalanced 1.8V rms, Crosstalk < -60dB via 3.5mm Jack
USB 2.0	500mA, File system: FAT, NTFS (support first partition)
DC IN	12VDC, 2000mA Max Current, 30mA Standby, 6.3mm / 2.0mm Jack
Serial Interface	
Type:	RS-232 Serial bidirectional
Bitrate	115,2 kBit/s max.
Plug Connector Type	4 Pin Connector - Internal PCB Mount
Tuner	
Input Frequency	950~2150MHz
Input Level	-65 ~ -25dBm
Signal-to-Noise Level	12 dB max
AFC	+/- 5 MHz
Input Impedance	75 Ohm
LNB Power	Auto / 14v / 18v / OFF, Max Current 500mA
Demodulation	
Supported Modulation Types	QPSK / 8PSK / H8PSK / 16APSK
Symbol rate QPSK	1 MSPS ~ 45MSPS
Symbol rate 8PSK	1 MSPS ~ 45MSPS
Symbol rate 16APSK	1 MSPS ~ 45 MSPS
Roll Off Factor	DVB-S rolloff 35%, DVB-S2 rolloff: 20%, 25%, 35%
Reed Solomon	188B+16B
Coding (FEC)	CCM
QPSK Viterbirate	1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10, Automatic
8PSK	3/5, 2/3, 3/4, 5/6, 8/9, 9/10
16APSK	2/3, 3/4, 4/5, 5/6, 8/9, 9/10

Switch / Motor Control

22K Tone Frequency	22KHz; 0.4 - 0.9V
DiSEqC Control	DiSEqC 1.0, 1.1, 1.2, USALS
DiSEqC 1.2 Positions	99
USALS Calculation Range	+/- 70 degrees

Satellite Video Decoding

Video Compression Support	MPEG-1, MPEG-2, H.264/AVC
Aspect Ratio	4:3 / 4:3 LB / 4:3 PB / 16:9 / Auto
Video Resolutions - HDMI	480i, 480p, 576i, 576p, 720p, 1080i, 1080P@30, 1080P@60, Source, Native Monitor
Video Resolutions - Composite	480i (continuous)

Satellite Audio Decoding

Audio Compression Support	MPEG Layer I, MPEG Layer II, MPEG1 Layer III, MP3
Audio Modes	Left, Right, Stereo, Mono
Sample Rates	44kHz

Media Player Video Decoding

Video Compression Support	BMP, JPEG, AC3, AAC, AVI, MKV, MP4
Video Formats and Codecs	MPEG1/2/4 (M1V, M2V, M4V); MPEG1/2 PS (M2P, MPG); MPEG2 Transport Stream (TS, TP, TRP), VOB (free), AVI (free); Matroska, (MKV), MOV (H.264), MP4, MPEG1, MPEG2 MP@HL, MPEG4 SP@L3 to ASP@L5, H.264 HP@L4.1, H.263, Xvid
Image Support	JPEG, BMP
Audio Formats and Codecs	AAC, AAC+, HE AAC, MPEG audio (MP1, MP2, MP3, MPA), WAV, OGG, Dolby Digital, LPCM, Dolby Digital (Pass-Through)

Remote Control Unit

IR Carrier Frequency	38KHz
Batteries	2 x 1.5V AAA

Environment

AC Adapter Input	100 ~ 240VAC, 50 / 60Hz
AC Adapter Output	12Vdc, 2000mA
AC Adapter Max Power Draw	24W Operation / 0.3 W Standby
Ambient Operational Temperature	0 ~ 40°C
Humidity Max Operational	< 95%

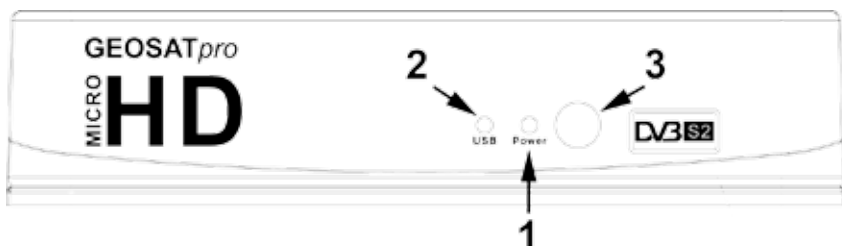
Physical Specification

STB Size	5.5 in / 130mm (W) x 4.3 in / 110mm (D) x 1.3 in / 33mm (H)
STB Weight	10.6oz / 0.3Kgs

Certification & Licenses

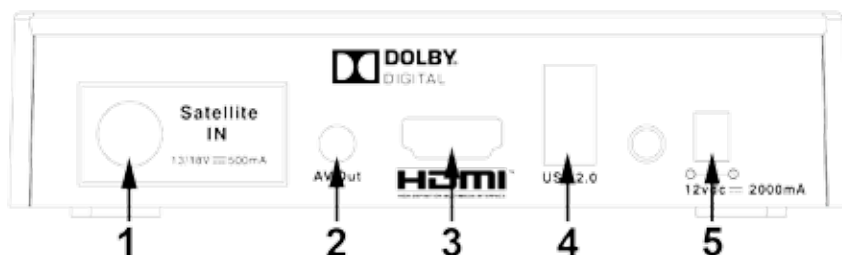
FCC Part 15 Compliance	
Dolby	
HDMI	
ETL Safety	

Front Panel



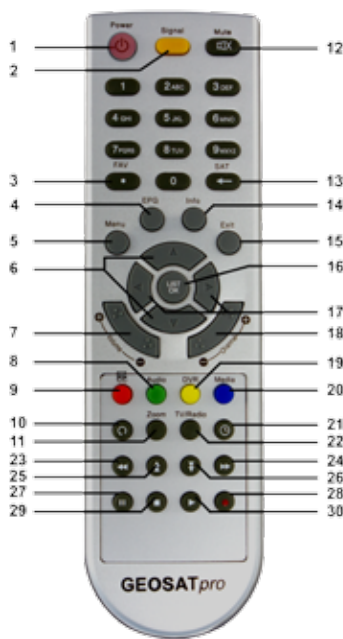
- 1 Power Indicator LED: Green - Operation / Red - Standby mode
- 2 USB Indicator LED: Green - Connected / Red - Recording
- 3 IR Sensor - Remote Control Signal Receptor

Rear Panel



- 1 Connect the satellite dish LNBF coax cable to Satellite IN
- 2 Connects composite VIDEO and L/R Audio to TV or other equipment
- 3 Connects HDMI Video Audio to TV or other equipment
- 4 Connects USB 2.0 memory device for DVR / multi-media / upgrade of Firmware or Channel List 5V/500mA
- 5 DC power plug connection (12VDC, 2000mA)

Remote Control Unit



- 1 Select Standby or Operation Mode
- 2 Display Signal Meter
- 3 Select the Favorite Channel List Mode
- 4 Display Electronic Program Guide
- 5 Display the Main Menu Screens
- 6 Change Channels or Navigate the Menu
- 7 Increase / Decrease the Volume
- 8 Select Alternative Language / Audio Mode or Sound Tracks
- 9 Select Closed Caption On/Off
- 10 Return to Last Channel
- 11 Magnify an Area of the Screen
- 12 Mute or Enable Audio
- 13 Select Satellite for Channel Availability
- 14 Display the Information Program Banner or 2x for Channel Information
- 15 Return to the Previous Menu Screen or Exit to Channel Viewing Mode
- 16 Display the Channel List or to Accept an Item in the Menu
- 17 Adjust Volume, Navigate the Menu Cursor
- 18 Change Channels Selection Up / Down
- 19 Display DVR Recordings List
- 20 Select Media Player Mode for Videos, Photos, Music
- 21 Display Event Timer List
- 22 Select to View TV or Listen to Radio Channels
- 23 DVR: Scan Rewind in 2x, 4x, 8x, 16x, 32x speeds
- 24 DVR: Scan Forward in 2x, 4x, 8x, 16x, 32x speeds
- 25 List Page Up and DVR:
- 26 List :Page Down and DVR:
- 27 Freeze Video and DVR Pause
- 28 DVR: Start Record Function
- 29 DVR: Stop Playback or Stop Record Function
- 30 DVR: Play Recording or Play File Function

Basic Remote Operation

Turn the microHD On or Off using the **POWER** button.

Change channels by entering the channel on the numeric keypad or by pressing **UP/DOWN** keys. Press the **PREVIOUS CHANNEL** key to return to the last channel.

Select to view TV or to listen to Radio by pressing the **TV/Radio** key.

Adjust the volume by pressing the **VOLUME UP/DOWN** key. *Volume is also controlled by the TV.*

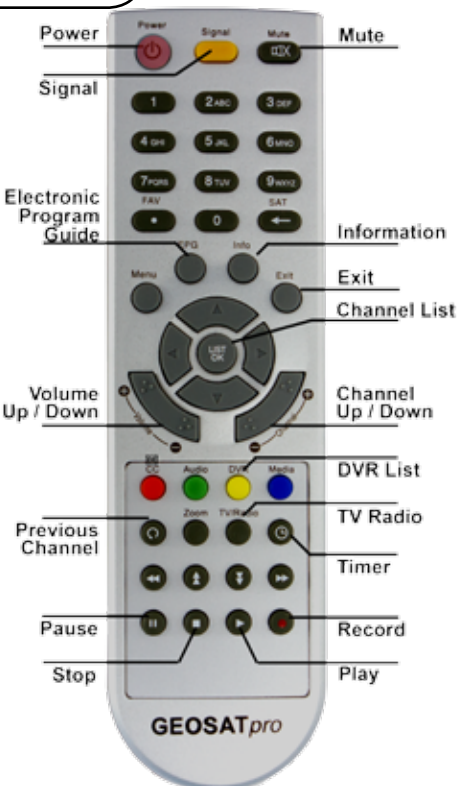
Mute the volume by pressing the **MUTE** key. Return to normal volume setting by pressing **MUTE** or the **VOLUME UP/DOWN** key.

View a Programming Guide (if available by the broadcaster) with program listings and descriptions by pressing the **EPG (ELECTRONIC PROGRAMMING GUIDE)** button.

View the Channel Banner displaying the channel name, channel number, program information, by pressing the **INFO**

button. View a list of available channels by pressing the **LIST/OK** button.

View a full screen meter by pressing the **SIGNAL** button.



Recording

Connect an USB drive to provide the DVR recording and Timeshift feature.

Start recording by pressing the **RECORD** key, **PAUSE** key

To set up a future recording using the **TIMER** key. If the channel provides EPG, press the **EPG** key, highlight the desired program and press the **GREEN** record button. The program record date, start and duration times will be automatically set.

Stop recording by pressing the **STOP** key.

To watch a previously recorded program, press the **DVR List**. Select the program to view and press the **OK** key.



Navigation Buttons

Installation Guide

Save all original boxes, manuals, accessories and packaging materials in case it is necessary to return the merchandise.

Before unpacking, assembly or operation of any item, review the reseller's warranty, exchange and refund policy.

This guide is intended for an individual experienced in performing the various tasks described, including:

- Determining an antenna location with a view of the satellites positions.
- Climbing a ladder and working on your roof.
- Observing safe working practices around heights and electrical hazards.
- Determining if water pipes, gas lines or wires are hidden before drilling.
- Using a power drill to drill holes into your house.
- Routing cable through walls, crawl spaces or attics.
- Safely lifting and securing the 25 lb. antenna assembly.
- Grounding the system as recommended in the National Electric Code.

If you don't feel completely comfortable with these tasks, you may consider contracting the installation with a local satellite technician.

Web site <http://www.FTAinstall.com> provides a free referral service for local installers. Please visit today!



To simply a first-time install, do not use pre-wire or previously used coax cables and unknown switches. Do not attempt to use splitters for simultaneous viewing on multiple receivers. Splitters typically do not support multiple FTA receivers.

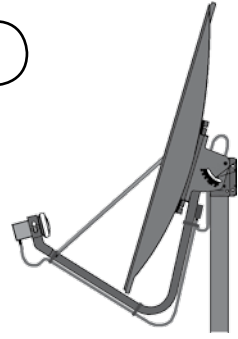
Free To Air System Parts List



Satellite Receiver



Installation Kit



90cm Dish and LNB

Tools Required



Socket Set



Drill and Bits



Phillips Screwdriver



Hammer



Tape Measure

Site Survey

If you feel comfortable with drilling holes in the walls and/or roof of your home, climbing ladders, attaching wires to the ground according to NEC and local codes and following step-by-step instructions, you might consider installing your own system.

The installation does require precise tuning and a great deal of patience to correctly install.

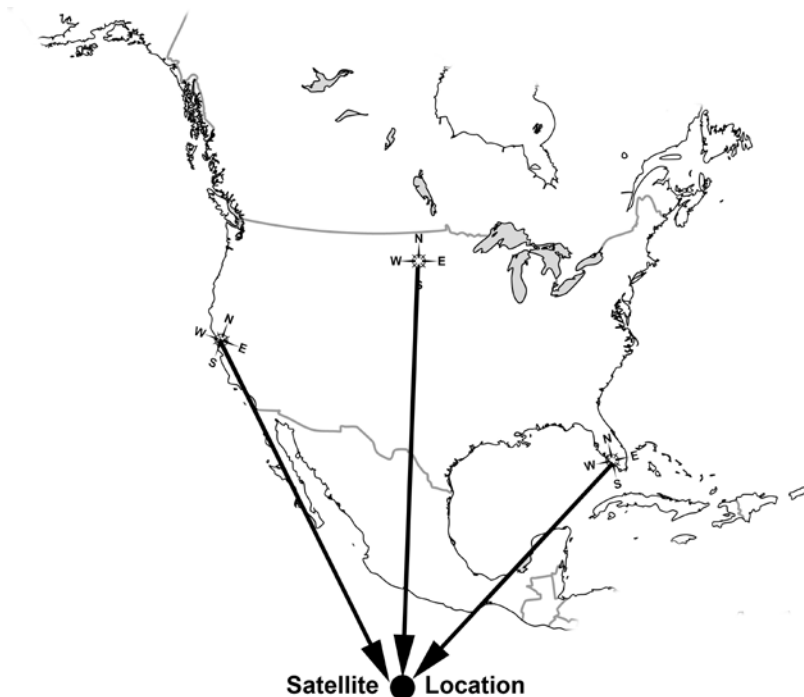
Have you recently installed a light switch, ceiling fan, basketball hoop and programmed a VCR? If not, this project might not be a good time to hone your mechanical and electrical skills!



To contract a local installer visit: www.FTAinstall.com

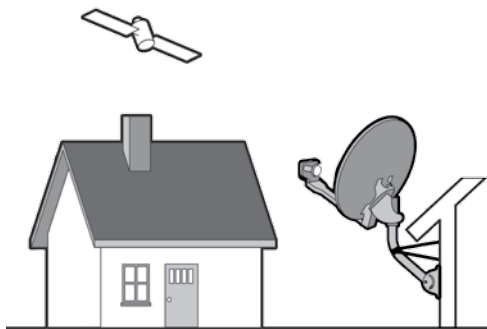
Where Are The Satellites?

Before assembling any equipment it is important to verify that the installation location has a suitable area to safely and securely mount the satellite dish and have a clear line of site to receive the satellite signal. The satellite dish must be pointed directly at the satellite, with NO obstructions between the two. This means NO trees and NO buildings. Satellite signals will not pass through leaves, limbs, so consider future tree growth, house remodeling or additions and new construction in your area. The dish cannot be installed indoors!



In North America, the satellite dish will be pointed towards the South, Southeast or Southwest. Satellites are located directly over the equator and are approximately 23,000 miles away! Before you start, you will need to decide what satellite that you wish to receive and if it possible to “see” the satellite from your location. If you wish to receive a specific channel, often the broadcaster’s web site will provide the satellite information.

If you are unsure what satellite to aim at, use a web site such as www.lyngsat.com or other satellite channel list to find channels that you are interested in receiving. Many satellite systems are installed to receive channels from Galaxy 19 KU at orbital position 97W. This is the most popular satellite in North America with hundreds of free TV and Radio channels from around the world.

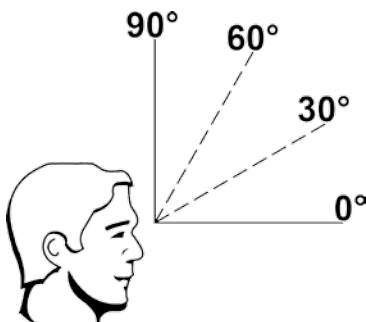


Please note: 97W is not the compass reading! 97W is the assigned orbital slot which corresponds with the earth's Longitude. The Galaxy 19 satellite is just east of DirecTV's main satellite at 101W.

Target Satellite Compass (Azimuth) Reading: _____

How High Up in the Sky are the Satellites?

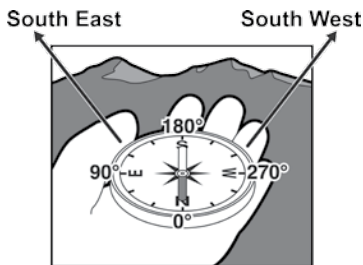
Depending on where you live, most North American satellites will be at an elevation angle between 30 and 60 degrees in North America. Northern Canada and Hawaiian elevations can be as low as 10 degrees, but in Central American and the Caribbean, the dishes are often aimed almost straight up between 70 - 90 degrees!



Target Satellite Dish Elevation Angle: _____

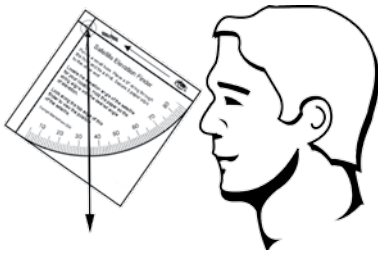
Where to Mount the Dish?

Use the aiming coordinates included with this system or found at <http://www.GeoSatFinder.com> along with a compass and the Site Check Angle Finder found on the last page of this manual to locate a suitable area for mounting the dish.



Compass

While facing south, hold the compass level in the palm of your hand. With the red needle pointed exactly at North, reference the compass reading for your target satellite. Are there any obvious obstructions? If the line of sight appears clear, continue to the check the elevation angle.



Elevation Angle Finder

Sight along the top edge of the elevation angle finder with the weighted string registering the correct elevation angle for your target satellite. Is the line of sight clear with no branches, limbs or tall buildings?

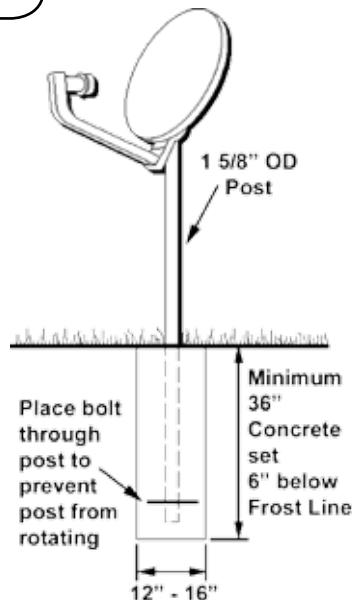
If you are mounting your dish on a motor, consult with the motor installation manual for recommendations on dish placement and mounting.



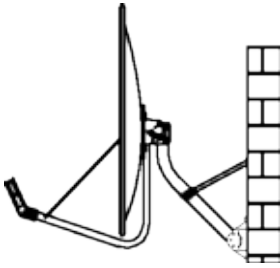
Be sure to perform a site survey to determine the best location to see as many satellites as possible. The satellites are in an arc that begins at the eastern horizon reaching to the highest point directly south then extending to the western horizon.

Dish Mounting Options

We recommend ground mounting a fixed satellite dish on a 1 5/8" heavy wall galvanized post set in cement. Attach a bolt or muffler clamp to the bottom of the post to prevent the post from twisting in the hardened cement. These items are readily available at any hardware store. Filling the post with a wet cement mixture will provide greater rigidity. The post must be perfectly plumb, level on all sides. Posts standing higher than 7 feet should be stabilized to prevent movement during high winds. The post should be installed in advance of the install as the cement can take 24 - 48 hours to set. **DO NOT** install the dish on a wooden 4" x 4" post or on a tree. The grain of the wood will twist during dry and rainy seasons causing the dish to swing off of the satellite causing reduced or loss of signal. Take proper precautions to protect the dish from being bumped during yard care or damaged by children at play.



Ground Post Mount



Wall Mount



Roof Mount

The GEOSATpro 90cm dish assembly includes a heavy duty universal wall / roof post mount. This mount can be attached at almost any angle and provides a stable secure mount even in high wind regions if properly attached. The tripod legs **MUST** be installed. The universal post will fail under moderate wind load if the tripod legs have not been installed to support the larger wind load area of a 36" dish. The dish and mount are designed to remain operational in winds up to 80+ mph and survive wind gusts over 110+ mph.

Dish Assembly

Before assembling a metal dish it is **Extremely Important** to verify that the reflector was not warped or bent during shipping. Failure to check for dish warping or damage could lead to many frustrating hours of trying to locate the satellite. This simple test may be the most important step in a successful installation!



Bad - Warped Reflector



Good - Reflector

Find a perfectly flat surface such as a garage cement floor and lay the reflector face down. Are the edges of the reflector laying perfectly flat? If any area of the edge is raised by even an 1/8th of an inch reception of the satellite signal will be affected!

If you cannot find a perfectly flat surface or if the dish is already installed, perform the string test.

Tape a string horizontally from edge to edge across the center of the dish. Tape a second string vertically from top to bottom on the edges of the dish.

If the strings do not lightly touch in the center, the dish is warped and it must be corrected before aiming the dish.



Fixing a Warped Reflector

To correct a warped reflector, hold the dish like a steering wheel and quickly thrust the reflector away from your body like the motion of passing a basketball. This quick action will cause the reflector to slightly flex and spring back into the factory pressed shape.

Check for correction with the string test. It may be necessary to repeat the flexing process several times until the reflector edges are uniformly flat.



LNBF Installation

The LNBF catches the satellite signals reflected from the dish and send the signal down the coax to the receiver. It is important to properly install the LNBF. Insert the LNBF into the clamp then lightly tighten the two screws to secure the LNBF.

Set the LNBF Rotation (Skew Angle) to the setting specified in the aiming instructions provided with your system. The LNBF rotates in the circular clamp until the centering line aligns with the LNBF Rotation angle. Failure to set the correct LNBF Rotation will result in not finding the satellite!



LNBF Rotation: _____

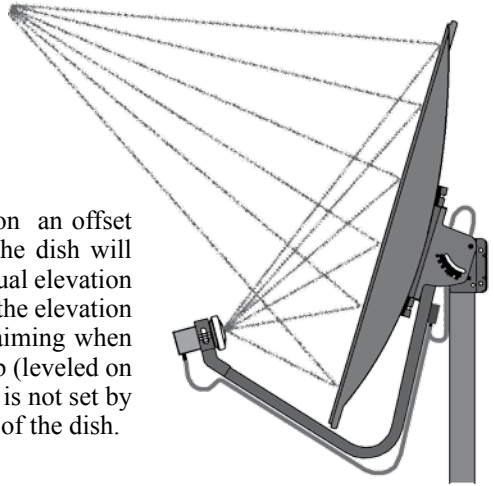


When standing in front of the dish and looking at the back of the LNBF and towards the reflector, rotate the LNBF counter clockwise (left) for a positive (+) LNBF Rotation (Skew) setting and Clockwise (right) for a negative (-) LNBF Rotation (Skew) setting.

Start with the LNBF slid back as far away from the reflector as possible. Tighten the screws to secure the LNBF from rotating. No need to overtighten and break the clamp.

Dish Aiming

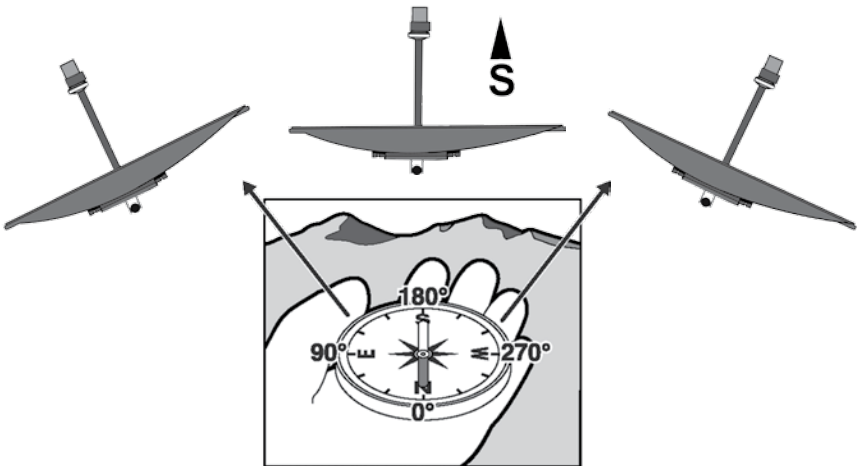
When setting the elevation angle on an offset dish, it is important to note that the dish will appear to be aimed lower than the actual elevation angle to the satellite. The scale on the elevation bracket is calibrated for accurate aiming when the post is installed perfectly plumb (leveled on all sides). The dish elevation angle is not set by the angle of the LNB arm or face of the dish.



Compass Azimuth Reading: _____

In North America, satellites are always located South of your location. To correctly aim the dish you must first accurately determine the exact compass reading angle (azimuth). Metals, electricity and other magnetic disturbances can cause the compass to point incorrectly.

Compass readings should be made at least 10 feet in front of or behind the metal satellite dish and away from any large metal object such as metal buildings, air conditioners, vehicles, utility and power lines or electrical panels. Check compass reading several times to reduce install time and the need to hunt the entire southern sky for the satellite signal.



Identify a reference point on the horizon like a tree, utility pole or other landmark that lines up with the compass reading. Installers often find it easier to align the dish if they can reference an object that has been identified with the compass reading. If you cannot locate a visual reference, stretch a 10 - 20 foot rope out in front of the dish in the direction of the compass reading pointing towards the satellite.

Move directly behind the dish and align the dish so that the LNBF arm is aimed directly at the reference landmark or in line with the rope. Semi-tighten the post clamp nuts, but allow the dish to be just loose enough to be rotated left or right by applying light pressure.

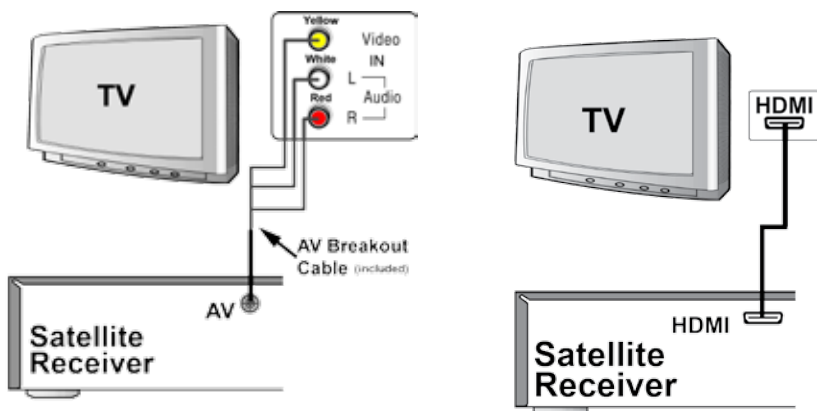
Connect Receiver to a TV



CAUTION: DO NOT ATTEMPT TO OPERATE ELECTRONIC DEVICES IN AN UNSAFE LOCATION OR IN VIOLATION OF SAFEGUARDS PROVIDED IN THIS MANUAL OR ANY OTHER EQUIPMENT MANUAL PROVIDED WITH THIS SATELLITE SYSTEM.

Remove the satellite receiver and remote control from the packaging. Inspect the unit before operation. If any equipment is damaged or if you have any questions, please immediately contact your reseller. Install the two included AAA batteries into the remote control battery compartment.

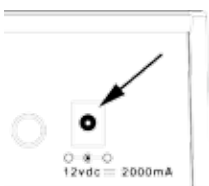
The easiest method to aim the satellite dish is to temporarily place the satellite receiver and a small television near the satellite dish. This method allows the installer to see the signal changes that occur with small dish movements. It is extremely difficult to install the satellite system if the TV is inside the home and out of the view of the installer. Attempting to communicate the signal readings with a second person viewing the TV will complicate the aiming process!



A basic connection for standard definition SD TV viewing is to connect the to the TV with the included AV cable. Place the 1/8th inch plug into the receiver's AV Out port and connect the yellow/white/red RCA plugs to the TV's AV IN jacks. To view high definition video in HD, connect a HDMI cable between the receiver and TV.

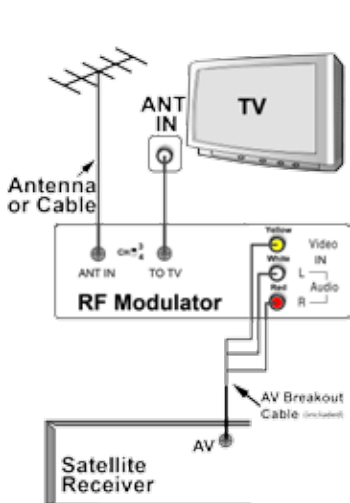
Plug the television power plug into a surge protected AC power strip. Turn the TV power ON and set the TV to the AV input. The TV is now ready to view the satellite receiver.

Connect a short RG6 coax cable from the LNB on the satellite dish to the SAT IN port on the rear panel of the microHD.

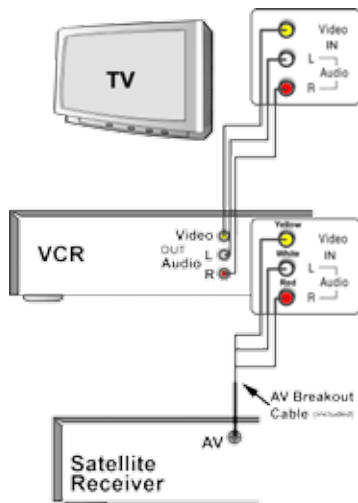


Plug the satellite receiver's power supply into the 12VDC port on the rear panel of the microHD. Plug the microHD power supply AC plug into the surge protected power strip.

Standard Definition Connections (opt.)



Older TV: Only Antenna Jack



VCR - Standard Definition

Consult the owners manual provided with TV, VCR or other device that will be connected to the GEOSATpro satellite receiver. Questions regarding the connection to any other equipment should be directed to the manufacturer of that device.

microHD Installation Menu Setup

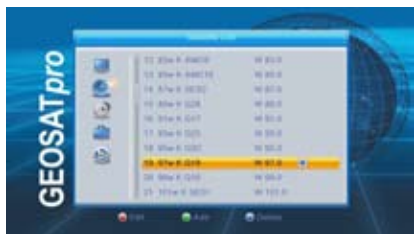
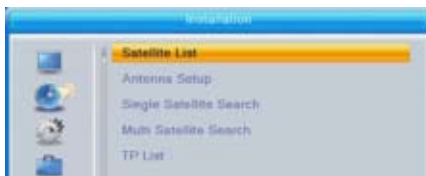
To receive Free To Air (FTA) programming, the receiver menus must be configured and the dish aimed for the satellite that you wish to receive and for the satellite equipment that is connected.

Before programming the receiver you will need to know what satellite carries the channels that you wish to receive. If you do not know the name of the satellite, visit www.lyngsat.com for a list of satellites and the available channels. The majority of free channels in North America are found on satellite Galaxy 19. For this installation example, we will be setting up to receive satellite Galaxy 19 - 97W KU G19 with an active transponder, 11842MHz.



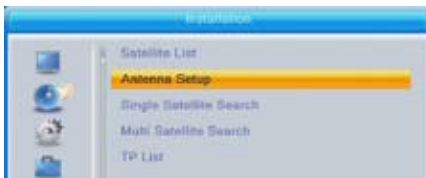
1. Highlight Installation icon. Press **OK** to enter.

2. Highlight Satellite List. Press **OK** to enter.



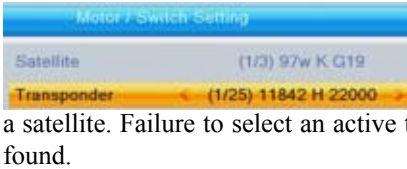
3. Highlight the target satellite using the **UP / Down** navigation arrows. Press **OK** to activate. Press **EXIT** to return to the Installation menu.

4. Highlight Antenna Setup. Press **OK** to enter.



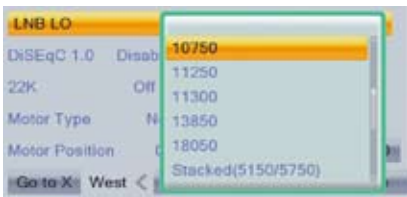
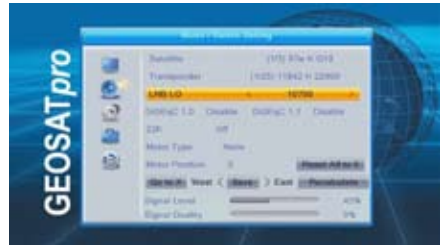
5. Highlight Motor / Switch Setting. Press **OK** to enter.

6. The one activated satellite will be displayed. Press the **Down** arrow to highlight Transponder. Press **OK** to list the Pre programmed transponders.



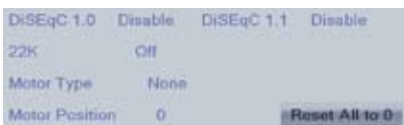
8. Highlight LNB LO using the **UP / Down** navigation arrows. Press **OK** to list the available LNB Local Oscillation frequencies (LO) for the connected LNB or LNBF.

7. Highlight the target transponder using the **UP / Down** navigation arrows. Press **OK** to select. An active transponder (TP) must be selected in order to detect a satellite. Failure to select an active transponder will result in no satellite being found.



9. Highlight the correct LO using the **UP / Down** navigation arrows. Press **OK** to select. The LNB LO frequency is normally printed on the LNBF label or packaging. A Standard type LNBF LO frequency is 10750 and an Universal type LNBF LO frequency is 9750/10600). For this example we will use a Standard type LO 10750.

10. The remainder of the Installation menu items will remain in default settings.



- DiSEqC 1.0 - Disable
- DiSEqC 1.1 - Disable
- 22K - Off
- Motor Type - Off
- Motor Position - 0

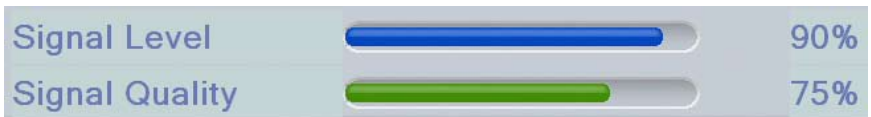
Meter Readings



This meter displays a reading for a receiver that is not properly connected to the dish LNBF or a menu setting is incorrect. A **Signal Level** reading of 0% could indicate that there is bad connection between the receiver and the LNBF. Verify that a coax cable is directly attached from the SAT IN port on the rear of the satellite receiver to the LNBF on the satellite dish.



A Grey color **Signal Level** reading of 45% or better indicates that the receiver is connected to a working LNBF. The low **Signal Quality** reading at or below 30% indicates that the dish is not properly aimed or the LNBF is not properly rotated to receive the satellite signal.



A Blue color **Signal Level** reading of 45% or better indicates that the receiver is connected to a working LNBF. The Green **Signal Quality** reading at 50% or higher indicates that the dish is properly aimed.

The Signal Level (S) is important when determining if the receiver is connected to a working LNBF. A Signal Level reading of 45% or higher indicates a connection to a working LNBF, but does not indicate finding the correct satellite.

11. While watching the Signal Quality reading, SLOWLY pan the dish towards the east approximately 15 degrees away from the starting compass reading provided for the target satellite. If the Signal Quality reading does not increase, SLOWLY pan the dish back to the starting point then SLOWLY pan the dish to the west approximately 15 degrees. If no Signal Quality reading is displayed, increase or decrease the dish elevation by one degree increments and repeat the slow panning of the dish. Once the correct satellite is detected, the meter will display a higher Blue color Signal Level reading and the Green Signal Quality reading will appear.



Example of Low Signal Quality reading that might be displayed as the satellite signal is found, but aiming is not optimized.

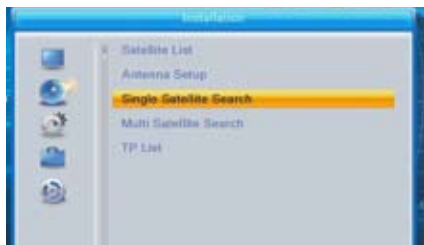
12. Continue to optimize the dish aiming by making very small changes to the elevation (up/down) and azimuth (left/right) to peak the Signal Quality reading. Failure to optimize and maximize the Signal Quality reading may result in the loss of programming during inclement weather.



Example of optimized Signal Quality reading when dish aiming is correct.

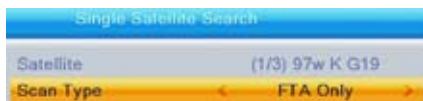
Slight clockwise or counter clockwise adjustments to the LNBF rotation or sliding the LNBF towards the reflector or away from the reflector may also provide increased Signal Quality readings.

The higher the Signal Quality reading, the better the reception. If the Signal Quality reading is too low, the picture will break up into little squares and the sound may become garbled, out of sync, choppy or disappear completely!



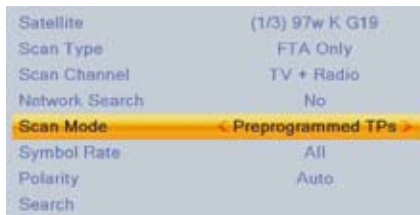
13. Press **Exit** two times to return to the main Installation menu. Highlight Single Satellite Search. Press **OK** to enter.

14. Highlight Scan Type. Press either the **LEFT** / **Right** navigation arrow to select All Channels or FTA Only. FTA Only mode searches only for free channels and not scrambled.



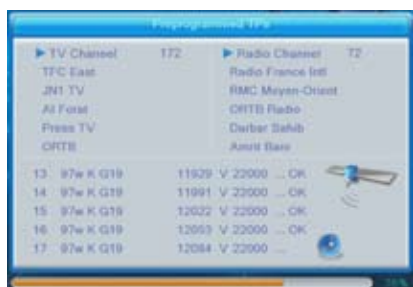
15. Highlight Scan Channel. Press either the **LEFT** / **Right** navigation arrow to select the type of channels that you wish to scan. TV + Radio, TV Channel, Radio.

16. Highlight Scan Mode. Press the **LEFT** or **Right** navigation arrow to select either to scan the satellite by using the Pre programmed TP's (transponders) list, Blind Scan - Normal to search the entire satellite for new transponders and channels at a normal speed or Blind Scan - Detailed to search the entire satellite for new transponders and channels at a slower speed with more detail and accuracy. For this example scan, use Pre programmed TP's mode.



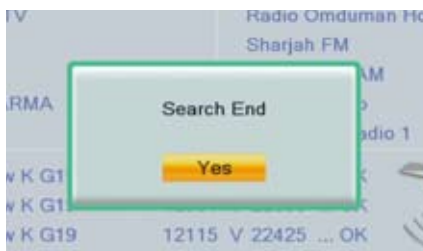
17. Highlight Symbol Rate. Press the **LEFT** or **Right** navigation arrow to select if you wish to limit the range of channels scanned by their Symbol Rate. Select All, High, Medium or Low.

18. Highlight Polarity. Press the **LEFT** or **Right** navigation arrow to select if you wish to limit the polarity scanned from All to Horizontal or Vertical.



19. Highlight Search. Press **OK** to start scanning. The scan window will display a list of transponders scanned and a list of channels found sorted by TV and a Radio.

20. When the scan is complete, Search End prompt is displayed. Press **OK** to exit the search screen, then **Exit** three times to exit the installation menus.

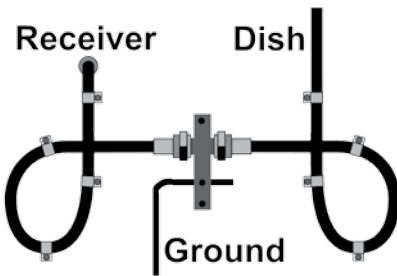
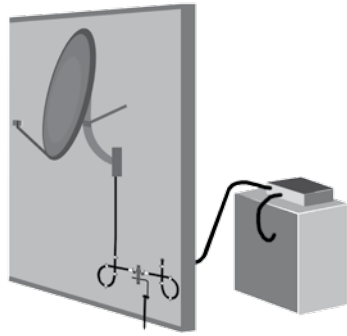


Congratulations! The installation is now complete. Now you may start watching hundreds of free TV and listening to free Radio stations!

If any channel displays a Signal Quality reading below 50%, additional fine tuning adjustments must be made.

Completing the Install and Grounding

Carefully route the coax cable from the dish to the ground block then to the satellite receiver. Secure all cables using appropriate cable clips and nylon zip ties. Avoid using wire staples as they can dimple or penetrate the cable and can cause loss of signal! Form drip loops and cable loops as needed to prevent water from running down the cables and entering cable connection fittings or into wall penetrations. Remember to seal all exterior wall and/or roof holes with a quality sealant or silicone caulking.

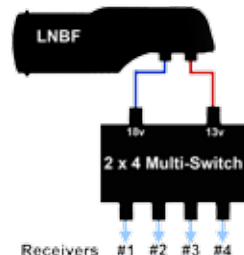
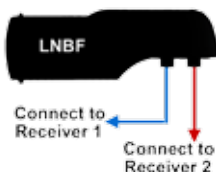


Install the grounding block and wire while observing all NEC, National Electrical Code and local codes. Connect the ground wire to the structure ground. If you are unsure of how to properly ground your satellite system, please consult with a local professional. Copies of the NEC are available at your local library or online.

Important Notice: GEOSATpro recommends that you **DO NOT** use existing coaxial cabling that has been pre-wired or previously used in your home. Often these cables are low quality RG-59, not rated for satellite applications or have splitters and other devices that are not compatible. Always connect the RG-6 type coax cable directly from the satellite dish LNB through the grounding block and attach to the Satellite IN connection on the rear of the satellite receiver.

Cable splitters and other devices in the coax line may cause the satellite receiver to shut down or malfunction. Do not use any device in the coax line unless approved for satellite installation. Multiple receiver installations must use a multiple output LNB to avoid tuning conflicts between the receivers. Splitters will not work!

Multiple Room Install



Receiver Features

Channel Information

The channel banner appears at the bottom of the TV screen and provides basic channel information about the displayed after each channel change. Press the INFO key to recall the display.



Channel	Ebru TV
Satellite	97w K G19
Transponder	12084/V/22000
PID	V 4027/ A 4037/ P 4027
FEC	3/4
Modulation	DVB-S(QPSK)
Video Resolution	480i
Signal Level	<div><div></div></div> 90%
Signal Quality	<div><div></div></div> 75%

Press INFO key two times to display extended technical information.

Press EXIT key to remove the display.

TV or Radio

The microHD receives both TV and Radio stations.

Press TV/RADIO key to select either TV channel or Radio stations.

In the TV mode, only TV channels are available in the Channel List and for channel viewing. In the Radio mode, only Radio stations will be available in the Channel List and a Radio background image will display on the video output.





Channel Lists

To display the Channel List of saved channels, press LIST/OK key

If connected to a Multi Satellite System - Press LEFT or RIGHT NAV key to select a satellite

Press UP or DOWN NAV key to highlight a new channel

Press OK key to go to the channel. Press OK key a second time or press EXIT key to remove the Channel List display

To search the Channel List for a specific channel, press the RED color key.

Press LEFT or RIGHT NAV key to select a character of the channel name and press OK key. Repeat for several characters.

A list of matching channel names appears to the left. Press the BLUE color key to exit the find screen and press DOWN NAV key to highlight the target channel.

Press OK key to go to the channel.



Favorites Lists - FAV

Organize your favorite channels into easy to manage lists. The FAV List is also included along with satellite sorted lists in the Channel List mode. See Channel Manager, Menu section 1.1/ 1.2

Press FAV * key to display a list of active favorites lists.

Press UP or DOWN NAV key to highlight the target favorite list

Press OK key to Select

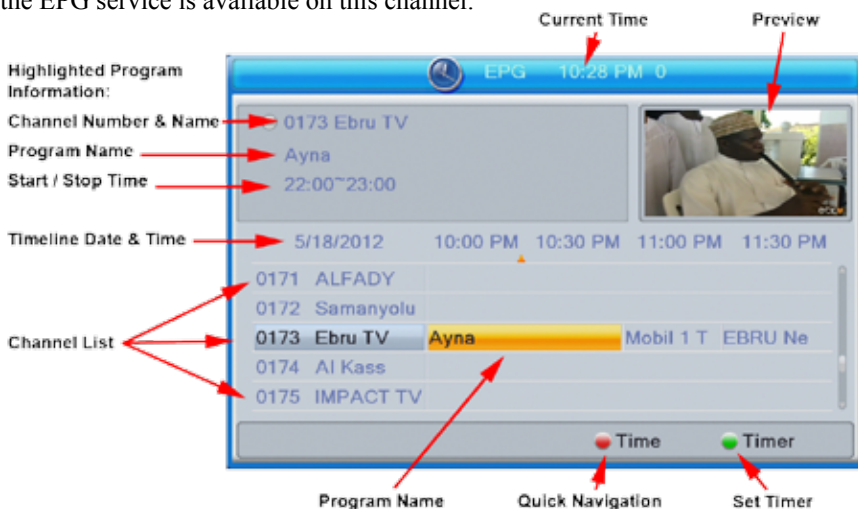
Press OK a second time to hide the FAV List



Electronic Program Guide - EPG

The Electronic Program Guide service provides schedule information about the current and upcoming programs. Only a few Free To Air broadcasters in North America provide this service. When available, EPG greatly enhances the viewers experience. Know in advance when a program will be airing and easily schedule DVR recordings.

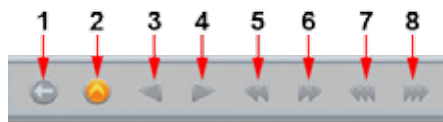
If the Channel Banner displays the EPG icon and program information is displayed, the EPG service is available on this channel.



Navigate the EPG screen using the UP/DOWN/RIGHT/LEFT NAV keys.

Highlight a program name and press OK key to display a program description.

Press the RED color key to return to the EPG schedule.



1 - Return to main EPG screen

2 - Jump to current time

3 - Go back one program

4 - Advance one program

5 - Go Back 2 hours

6 - Jump forward two hours

7 - Go back one day

8 - Jump forward one day

Press the RED color key to allow quick navigation within the schedule.

Press LEFT or RIGHT NAV key to select the navigation icons at the bottom of the screen.

Press OK key to apply the navigation function.

Setting an EPG Timer

Timers may be set to tune a channel at a selected time or to Record the program for future viewing.

This example is for setting a DVR recording. Note: A USB drive must be connected to the microHD to enable the DVR recording function.

Highlight the program to record then press the GREEN color key to set a timer.

Press LEFT or RIGHT NAV key to select Once

Press DOWN NAV key to highlight Timer Service

Press LEFT or RIGHT NAV key to select Record

Press DOWN NAV key to highlight Save.

Press OK key to save the timer



Closed Captioning - CC

Closed Captioning is a service that provides on screen text display of the program's audio. The microHD is capable of decoding and displaying CC on both the HDMI and composite video outputs. At the time of printing, the microHD is the only HD FTA receiver available anywhere in the world that provides internal Closed Captioning for display on High Definition televisions connected via the digital HDMI cable. DVR recordings preserve the closed caption data and the on-screen text can be turned On or Off at any time.



Closed Captioning can only be activated when a receiver is tuned to a channel providing the CC service. Once activated, Closed Captioning will be displayed on any channel providing the service.

Press the CC- RED color key to display the Closed Captioning menu. Note: If the broadcaster does not provide CC, a "No Data" prompt will be displayed.

Press UP or DOWN NAV key to select a closed caption source

Press OK key to activate Closed Captioning.

Audio or Language Selection

Often a channel may transmit several audio choices and the viewer may select between standard, Dolby, multiple languages or select a mono, stereo channel.



Press the GREEN colored – AUDIO key

Press UP or DOWN NAV key to select an alternative audio, language or Digital Dolby AC3

Press LEFT or RIGHT NAV key to select: Stereo, Mono, Left or Right

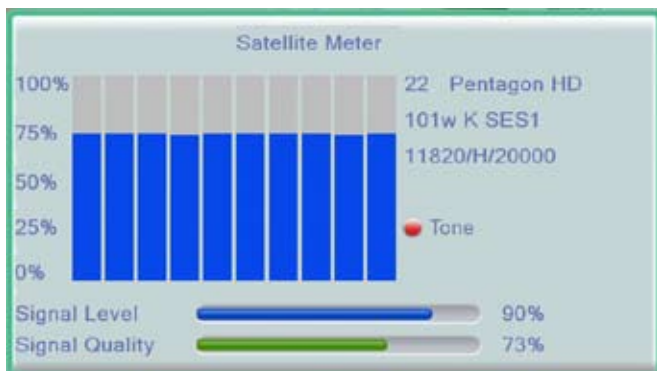
Press EXIT key to remove the display

Full Screen Signal Meter

The micro HD features a large and easy to read Signal meter with 10 bar graphic Signal Quality reading display and a selectable tone signal indicator.

The graphing meter is sampled in .5 second intervals and provides a five second history. It is simple to install or adjust a satellite dish with this unique histogram graphing meter. If the graph displays an increase over the five second comparison, the adjustment is optimizing the signal. If the graph is falling, the aiming is moving in the wrong direction.

A Signal Quality ready of 75% is excellent. Minimum ripple indicates an optimized signal. A jagged or jumping graph indicates poor signal stability. This could be the result or poor aiming, interference, bad cable or failing components.



Press the ORANGE color SIGNAL key to display a full screen Signal Meter

Press the RED color key to toggle the Signal Quality Tone ON or OFF

Press EXIT key to remove the display

Zoom Function

The zoom key magnifies and enlarges a portion of the screen in steps of 2x, 4x, 6x, 8x, 12x and 16x settings.



Press ZOOM key to activate

Repeat pressing Zoom key to increase the magnification

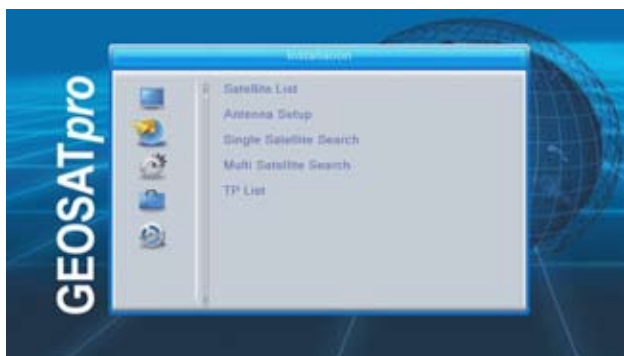
Press LEFT/RIGHT/UP/DOWN NAV keys to select the area of the screen to magnify.

Press EXIT key to return to normal viewing.

Receiver Menu Items

To enter the microHD Menu screens, press MENU key. Five Sub Menu icons will appear on the left side of the screen. Use the UP/DOWN/LEFT/RIGHT NAV keys.

1. Channel Manager
2. Installation
3. System Setup
4. Tools
5. Media Manager



Main Page

1. Channel Manager



- 1.1 TV Channel List
- 1.2 Radio Channel List
- 1.3 Delete All Channels
- 1.4 Save as Default



1.1 / 1.2 TV or Radio Channel List

Press LEFT or RIGHT NAV key to select the satellite, All Satellites or Favorites List. Press UP or DOWN NAV key to select a channel. Press OK key to preview.



In the TV or Radio List menu screen there are five tabs:

FAV – Favorite Channel List

Lock –Parental Control Password

Skip – Channel skipped in regular viewing mode

Move – Change the order of the channels

Edit – Sort, Rename or Delete channels

FAV – Favorite Channels

Press FAV key to select the function to add or delete channels appearing in one of the ten available Favorites Lists. The FAV tab will pop up when this function is selected.

Press UP or DOWN NAV key to select a channel

Press OK key to display the ten Favorites Lists

Press UP or DOWN NAV key to select the list to add or delete the selected channel

Press OK key to alternate between displaying a heart icon to indicate that the channel has been added to the list or no heart icon displayed indicates that the channel is not included in the list.

The channel may be included in multiple Favorites Lists by selecting additional a Favorite list and pressing OK key to add

Repeat steps to add additional channels to a list or multiple lists.



Press Exit several times to display “Confirm Save”. If you wish to save the changes, select Yes and press OK key. To exit without saving changes, select No and press OK key.



Lock – Parental Control Password

Press the RED color key to select the function to add or delete channels that are unavailable unless the Parental Password is entered. The Lock tab will pop up when this function is selected.

Press UP or DOWN NAV key to highlight a channel to add or delete the Parental Code lock

Press OK key to select

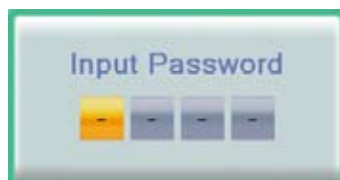
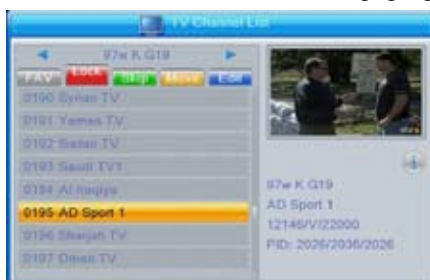
A window prompt will request the input of the Parental Code.

Input the four digit numerical code (default 0,0,0,0).

Press OK key to alternate between displaying a lock icon to indicate that the channel has been locked or no lock icon displayed indicates that the channel password protected

Press UP or DOWN NAV key to select additional channels to lock or unlock.

Press Exit several times to display “Confirm Save”. If you wish to save the changes, select Yes and press OK key. To exit without saving changes, select No and Press OK key.



Skip – Channels Skipped in Channel Viewing

Press the GREEN color key to select the function to add or delete channels that are skipped over during regular channel viewing mode. The Skip tab will pop up when this function is selected.

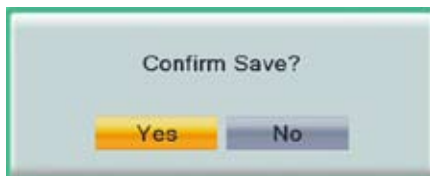
Press UP or DOWN NAV key to highlight a channel to skip

Press OK key to select

Press OK key to alternate between displaying a skip icon to indicate that the channel will be skipped over or no skip icon displayed indicates that the channel will be available.

Press UP or DOWN NAV key to select additional channels skip or make available

Press Exit several times to display “Confirm Save”. If you wish to save the changes, select Yes and press OK key. To exit without saving changes, select No and Press OK key.



Channel Edit

The Channel Edit menu has four tabs:

Sort – Alphabetical, Free/Scrambled, Lock, Polarity

Edit – Rename Channel

Del All – Delete all channels on selected satellite

Delete – Delete selected channels on selected satellite



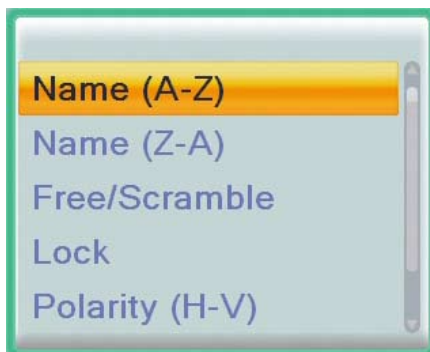
Sort – Sorting Channel Lists

Press the RED color key to select the function to sort how channels are displayed. The Sort menu has five selections:

Name (A-Z) - Channel List starts with beginning of the alphabet

Name (Z-A) - Channel List starts with end of the alphabet

Free/Scramble – Channel List starts with Free (unscrambled) then Scrambled channels. Channels could display a scrambled \$ icon, but actually be available due to an incorrect encryption flag by the broadcaster.



Lock – Channel List starts with Parental Lock protected channels

Polarity (H-V) - Channel List starts with channels on horizontal transponders then vertical transponders

Polarity (V-H) - Channel List starts with channels on vertical transponders then horizontal transponders

Edit – Channel Rename

Press the GREEN color key to select the function to rename channels. The Edit tab will pop up when this function is selected. Type the new name using the numeric keys. RED color key selects capitalization On/Off, GREEN color key deletes, YELLOW color key accepts new text, BLUE color key cancels rename process.



Del All – Delete All Channels by Satellite or TV/Radio Mode

Press the YELLOW color key to select the function to delete channels on selected satellite, all satellites or selected favorites list. If you wish to delete the channels, select Yes and press OK key. To exit without deletion, select No and Press OK key.



Delete – Delete Selected Channel

Press the BLUE color key to select the function to delete. The Delete tab will pop up when this function is selected.

Press UP or DOWN NAV key to highlight a channel to delete

Press OK key to select

Press OK key to alternate between displaying a delete icon to indicate that the channel will be deleted or no delete icon. Press UP or DOWN NAV key to select additional channels to delete



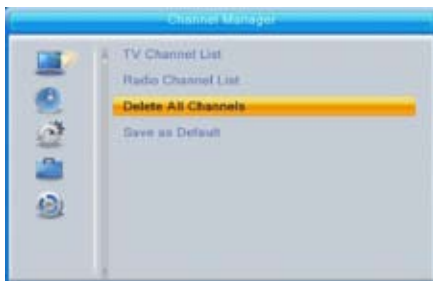
Press Exit several times to display "Confirm Save". To save the changes, select Yes and press OK key. To exit without saving changes, select No and Press OK key.



1.3 Delete All Channels - TV & Radio

Press OK key to delete all TV and Radio Channels.

If you wish to delete all channels, select Yes and press OK key. To exit without deletion, select No and Press OK key

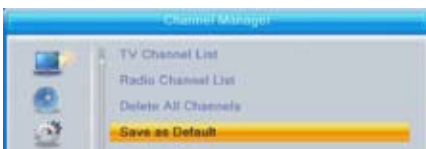


1.4 Save as Default

The receiver can be restored to a default profile by performing a Factory Reset. Save as Default makes the current the Satellite list (including motor and switch settings), Channels list, Favorites lists to be the new default file. Note: The Default file does not automatically save during a firmware upgrade. See 4.6.5, how to save the Default file to external USB.

Press OK key to save the Satellite list.

If you wish to replace the current default data base, select Yes and press OK key. To exit without saving the current profile as the default, select No and Press OK key.



2.1 Satellite List

2.2 Antenna Setup

2.3 Single Satellite Search

2.4 Multi Satellite Search

2.5 TP List / Search

2. Installation Menu



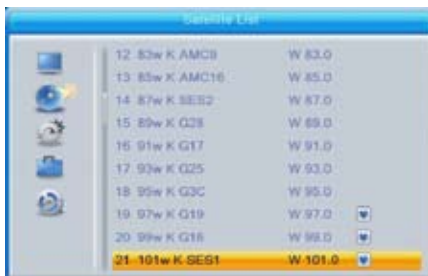
2.1 Satellite List

Activate a Satellite for Set-up and Searches

Press UP or DOWN NAV key to highlight a satellite



Press OK key to alternate between displaying a heart icon to indicate that the satellite has been activated to make available for Motor/Switch Set-up and Channel Searches. No heart icon displayed indicates that the channel is not activated and available for Motor/Switch Set-up and Channel Searches.

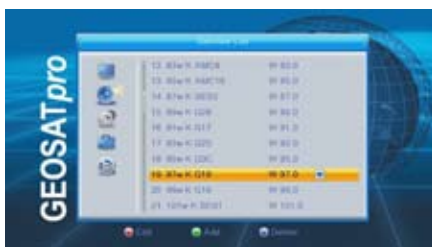


Rename Existing Satellite or Change Orbital Position

Press UP or DOWN NAV key to highlight a satellite

Press the RED color key

Type the new satellite name using the numeric keys. RED color key selects capitalization On or Off, GREEN color key deletes text



To change the orbital position referenced by the USALS calculation and motor positioning program, highlight Longitude and press LEFT or RIGHT NAV key for East or West orbital position (satellites over North America are typically referenced as West orbital positions). Use the numeric keypad to enter the satellite's orbital position in this format xxx.x. Example 97W satellite is inputted as 097.0W. YELLOW color key accepts changes to the satellite name and/or position, BLUE color key cancels.



Add New Satellite and Position

Press the GREEN color key

Type the new satellite name using the numeric keys. RED color key selects capitalization On or Off, GREEN color key deletes text



The orbital position is referenced by the USALS calculation and motor positioning program, highlight Longitude and press LEFT or RIGHT NAV key for East or West orbital position. Use the numeric keypad to enter the satellite's orbital position. YELLOW color key accepts changes to the satellite name and/or position, BLUE color key cancels.

Delete Satellite

Press UP or DOWN NAV key to highlight the satellite to delete from the Default Satellite List.

Press the BLUE color key

If you wish to delete the highlighted satellite, select Yes and press OK key. To exit without deleting the satellite, select No and Press OK key.

Press EXIT key to save and return to the main Installation menu



2.2 Antenna Setup

2.2a Motor/Switch Setting

2.2b Limit Setup

2.2a Motor/Switch Setting

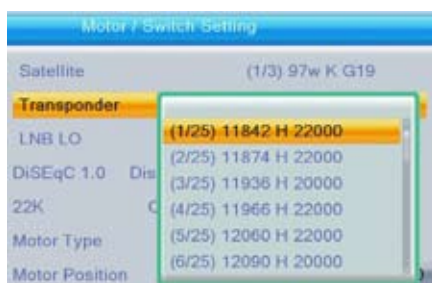
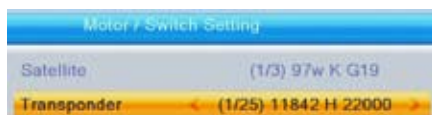
Configure the satellite receiver to work with connected equipment.



Satellite- A list of activated satellites are displayed. Press the LEFT or RIGHT NAV key or press List/OK key to display scroll list. If the target satellite is not displayed, return to Satellite List 2.1 and activate the satellite.



Transponder (TP) - A list of pre programmed transponders is available for each satellite. Press LEFT or RIGHT NAV key or press List/OK key to display scroll list. If the target transponder is not displayed, go to TP List 2.5 and add a transponder. Note: An active transponder must be selected for the target satellite, Failure to select an active transponder will result in no valid signal for locating and identifying the satellite. You may find a list of satellites and active transponders at www.lyngsat.com.



LNB LO (Local Oscillation) – A list of typical LNB LO frequencies is available for each satellite. Press LEFT or RIGHT NAV key or press List/OK key to display scroll list. Select the LO frequency that corresponds with the LO Frequency printed on the connected LNB or LNB. Note: The correct LNB LO must be selected for the connected LNB, Failure to select the correct LNB LO frequency will result in no valid signal for locating and identifying the satellite.



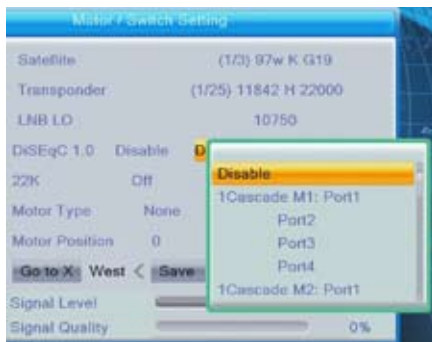
DiSEqC 1.0 – Switch Setting. If multiple satellite dishes or multiple LNB(f)s are connected to your receiver (up to 4 inputs), determine if the switch type is DiSEqC 1.0. If so, press LEFT or RIGHT NAV key or press List/OK key to display scroll list. Select the switch port that is connected to the target satellite.



Failure to select a correct port if a switch is inline will result in no valid signal for locating and identifying the satellite. The correct switch port must be selected for the receiver to “see” the connection to the LNB.



DiSEqQ 1.1 – Switch Setting. If multiple satellite dishes or multiple LNB(f)s are connected to your receiver (up to 16 inputs), determine if the switch type is DiSEqQ 1.1. If so, press LEFT or RIGHT NAV key or press List/OK key to display scroll list. Select the switch port that is connected to the target satellite.

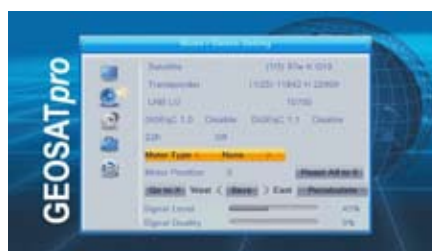


22KHz – Switch Setting. If a Universal type LNBf is used, the 22KHz switch setting will be automatically set to AUTO and a 22KHz switch is not used due to switching control conflicts. If the system does not have a universal type LNB(f) installed and multiple satellite dishes or multiple LNB(f)s are connected to your receiver (from 2 to 32 inputs with cascaded DiSEqC1.1 switches), determine if the switch type is 22KHz. If so, press LEFT or RIGHT NAV key or press List/OK key to display scroll list. Select the switch port that is connected to the target satellite



Motor Type – If installing a fixed dish system, leave the setting to the default None. If the system has a motorized dish, press LEFT or RIGHT NAV key to select USALS or DiSEqC 1.2. If the motor is for a medium size KU-band dish, typically the motor is USALS compatible. If you will be using a large motorized C-band dish, select the DiSEqC 1.2 mode to communicate with the antenna positioner and control unit.

If using USALS motor type, follow these steps to configure the receiver's calculator to automatically drive the dish into the correct satellite positions once the motor is correctly installed.



Motor Type < None >

Motor Type < USALS >

Motor Type < DiSEqC 1.2 >

USALS Motor Type - With USALS selected, Press OK key

Use LEFT or RIGHT NAV key to select if the install location's Longitude is East (E) or West (W). North America is typically referenced as the western hemisphere so select W. Use the Numeric keys to enter the install location's Longitude as xxx.xx.

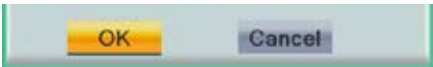


Press UP or DOWN NAV key to select Local Latitude.

Press LEFT or RIGHT NAV key to select if the install location's Latitude is North (N) or South (S). North America's Latitude is referenced as North, so select N. Use the numeric keys to enter the install location's Latitude as xx.xx.



Press UP or DOWN NAV key to highlight OK or Cancel. If you wish to save the current location coordinates, select OK and press OK key. To exit without adding new TP, select Cancel and Press OK key.



Once the dish has been installed and properly aligned using USALS, the receiver will automatically drive the motor to each satellite position when the satellite is selected in the menus or when changing between channels located on different satellites.

DiSEqC 1.2 Motor Type - Follow these steps to configure the receiver to return to the user assigned satellite positions once the motor is correctly installed. DiSEqC 1.2 does not calculate the satellites position and the user must manually locate and save each satellite's position.

Select Motor Type: DiSEqC 1.2

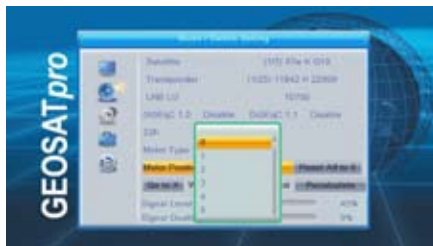
Press DOWN NAV to highlight Motor Position



Press LEFT or RIGHT NAV key or press List/OK key to display scroll list. Select a motor position number (1 – 99) to save the satellite position both the microHD and in the motor memory or controller memory. The motor position will be saved to this assignment number in order for the receiver to communicate with the motor to return to the a specific position.

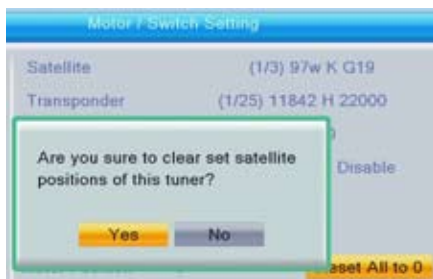
Multiple satellites may be assigned to the same motor position number. Example C and KU band bands of the same satellite position.

Press DOWN NAV key to select West < Save > East. Press LEFT NAV key to drive the motor West. Press RIGHT NAV key to drive the motor East. Once the signal confirms that the dish is aimed at the correct target satellite and is optimized, press OK key to save. This DiSEqC 1.2 manual dish positioning and saving must occur for each DiSEqC 1.2 type motorized satellite in the activated list.



Reset All to 0 – To clear all saved DiSEqC 1.2 motor position and reset the microHD motor position assignments to 0 (zero), highlight and press OK key

To clear and reset all DiSEqC 1.2 motor position assignments, select Yes and press OK key. To exit without deleting the DiSEqC 1.2 position settings, select No and Press OK key.



Go to X – Drive the motor to the Reference 0 (zero) position or to any saved DiSEqC 1.2 motor position assignments.

Press UP or DOWN NAV key to select Local Latitude.

Press OK key and motor will drive to the saved satellite position.



Recalculate – Allows the user to assign new offset 0 (zero) reference for motor control center point.

Highlight Recalculate and press OK key.

To clear and set a new 0 (zero) reference position, select Yes and press OK key. To exit without setting a new 0 (zero) reference, select No and Press OK key.

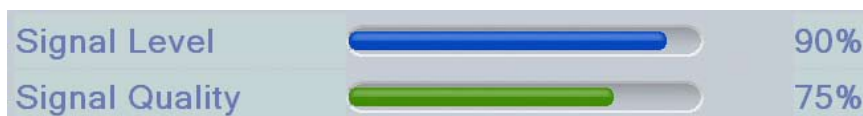


Not Connected to Working

Signal Level Reading is a measurement of electronic noise. The readings will help determine if the receiver is correctly configured, connected to a working LNB or LNBF and if the dish is aimed at a satellite. 0% Signal Level reading = not connected to an LNB, receiver is incorrectly configured or connected to a defective LNB, 45% = connected to a LNB, but dish might be misaimed, receiver configured incorrectly or defective LNBF.



Connected to LNBF / Not Aimed



Connected to LNBF / Good Aiming

Signal Quality Meter reading above 40% indicates the receiver is correctly configured and the dish is aimed at the target satellite. The Signal Quality reading should be as high as possible to provide reliable reception.

2.2b Limit Setup

Set East/West Motor Limits

Prevent damage to the motor or the dish. Set a limit on the distance that the motor travels to avoid hitting any object if the motor is allowed to rotate too far.

Press RIGHT or LEFT NAV key to select one of three modes:

Disable Limit – No electronic limits are set by the receiver

West Limit- For setting an electronic limit on the motor movement toward the West

East Limit- For setting an electronic limit on the motor movement toward the East

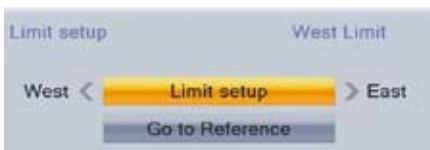
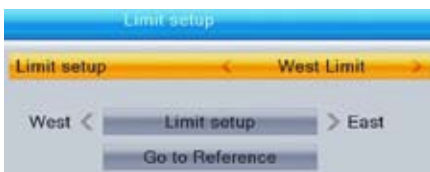
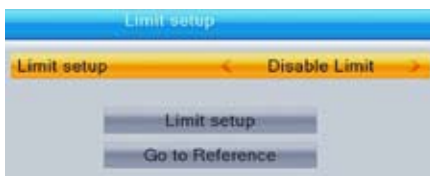
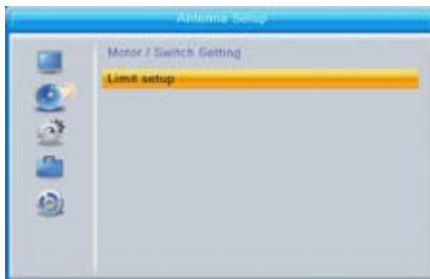
Setting West Limit

Press UP or DOWN NAV key to highlight Limit Set-up

Press RIGHT NAV key to select West Limit

Press UP or DOWN NAV key to select <West Limit Setup East> While watching the motor, drive the motor towards the West using LEFT NAV key and release to stop the movement before striking any object or reaching the maximum physical limit of the motor rotation

Press OK key to save limit



Setting West Limit

Press UP or DOWN NAV key to highlight Limit Set-up

Press RIGHT NAV key to select East Limit

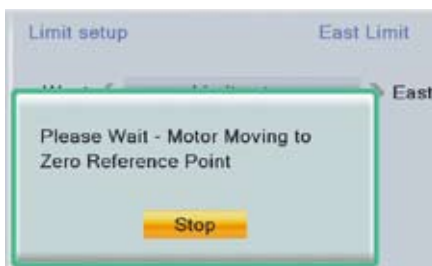
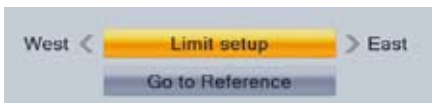
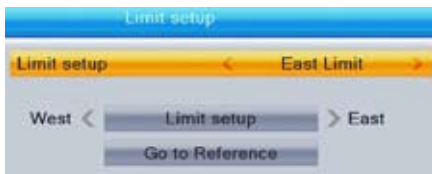
Press UP or DOWN NAV key to select <West Limit Setup East> While watching the motor, drive the motor towards the East using RIGHT NAV key and release to stop the movement before striking any object or reaching the maximum physical limit of the motor rotation

Press OK key to save limit

Move Motor to Reference Position

Press UP or DOWN NAV key to select <Go to Reference>

Press OK key to move the motor to the centered 0 (zero) position.



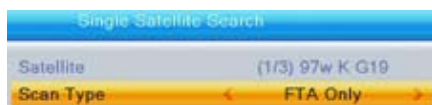
2.3 Single Satellite Search

Search for satellite TV and/or Radio channels on a single satellite using a fixed, motorized or multiple satellite system.

Satellite - A list of activated satellites are displayed. Press LEFT or RIGHT NAV key or press List/OK key to display scroll list. If the target satellite is not displayed, return to Satellite List 2.1 and activate the satellite and configure in the Antenna Setup 2.2a

Scan Type – Press LEFT or RIGHT NAV key to select to either scan and log All Channels (both free and scrambled) or only Free Channels

Scan Channel - Press LEFT or RIGHT NAV key to select to either scan and log TV and Radio, TV only or Radio only.



Network Search – Scans the Network Information Table and logs any services that the uplinker identified. Note: Active only when scanning pre programmed transponders.

Network Search < Yes >

Scan Mode - Press LEFT or RIGHT NAV key to select to either scan and log channels using the pre programmed transponder list, Blind Scan – Normal search of the entire satellite with user defined parameters for new transponders and channel logging with normal analysis, Blind Scan – Detailed search of the entire satellite with user defined parameters for new transponders and channel logging with extended analysis.

Scan Mode < Preprogrammed TPs >

Scan Mode < Blind Scan - Normal >

Scan Mode < Blind Scan - Detailed >

Symbol Rate – Define the type of transponders and channels logged by limiting the symbol rate range. Press LEFT or RIGHT NAV key to select All symbol rates, High (>20K), Medium (10K – 20K), Low (<10K).

Symbol Rate < All >

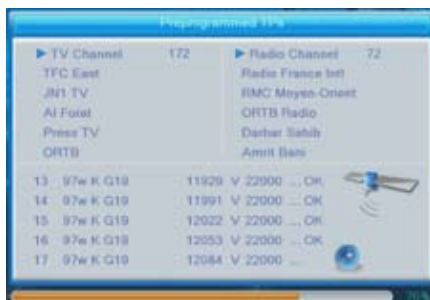
Polarity- Select the polarity to scan. Press LEFT or RIGHT NAV key to select All polarities, Horizontal (Left) only, Vertical (Right) only

Polarity < Auto >

Search - Press List/OK key to start.

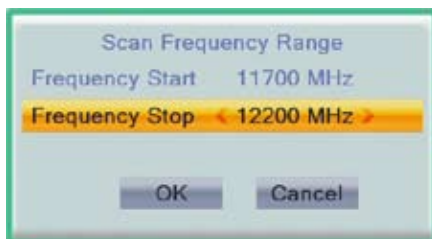
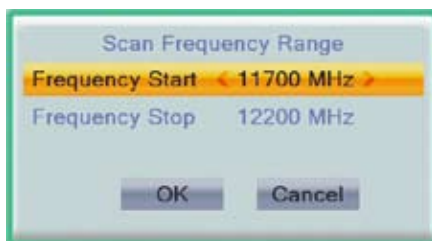
Search

Pre programmed TP: Scan searches the pre programmed transponder list and logs all channels found to the TV and Radio Channel Lists. This mode will not find new transponders or occasional use transmissions that are not pre programmed into the receiver.



Blind Scan - Normal or Detailed:

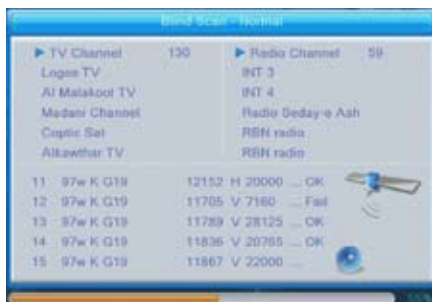
Scan Frequency Range menu allows the user to change the default settings and define the start and stop frequency range to log new transponders and channels. Highlight Frequency Start and use the numeric keys to enter the start frequency. Press UP or DOWN NAV key to highlight Frequency Stop and use the numeric keys to enter the stop frequency. The available start/stop frequency range will be defined by the LNB that is connected. If the LNB states 11.7 – 12.2, channels will not be found by extending the start or stop frequency.



Press UP or DOWN NAV key to select Cancel and press OK key to exit without scanning or Select OK to continue to the Blind Scan search. Press OK key to start the search.



Blind Scan searches may take a very long time to analyze the incoming satellite signals and log the channels. Some satellites may only take a minute, but other satellites with many services, data services or poorly configured information tables may take up to 10 minutes.



When the scan is complete the number of Transponders, TV and Radio channels will be displayed with a prompt “Search End” or “No Program Found”

Press OK key to exit the Search screen



2.4 Multi Satellite Search

Search multiple satellites with a motorized or switched multiple satellite system.

See Single Satellite Search Description (2.3). All functions are identical to those in the Single Satellite Search with an additional function allowing the microHD to automatically control the switches and/or motors to scan multiple satellites. The scan will search the list of Activated Satellite List (2.1).

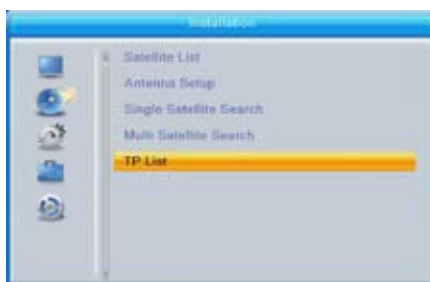


A list of satellites to be scanned is displayed at the bottom of the menu screen. Multi Satellite Search may take many hours to complete. The duration is dependent on the complexity and number of satellites activated and configured. Many hobbyists will start a Multi Satellite Search before leaving for work or going to bed. Next time the system is used, the channel list will be updated with every new found channel!



2.5 TP List / Search

Manage the pre programmed (TP) transponder list, search one transponder for all available channels or manually enter the channel's PIDs to scan for only a single channel.



Press UP or DOWN NAV key to highlight a transponder

The Signal Level and Signal Quality readings are displayed for the selected TP



Edit TP

Modify Existing Transponder Frequency, Symbol Rate, and Polarity

Press the RED color key

Type the new Frequency using the numeric keys

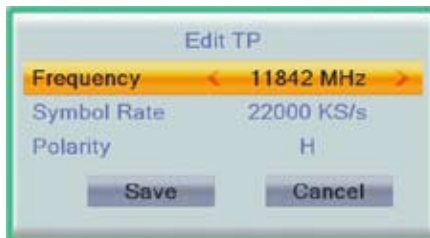
Press UP or DOWN NAV key to highlight Symbol Rate

Type the new Symbol Rate using the numeric keys

Press UP or DOWN NAV key to highlight Polarity

Press LEFT or RIGHT NAV key to select either Horizontal (Left) or Vertical (Right)

Press UP or DOWN NAV key to highlight Save or Cancel. To save the modified TP, select SAVE and press OK key. To exit without modifying, select Cancel and Press OK key.



Add New Transponder

Press the GREEN color key

Type the new Frequency using the numeric keys

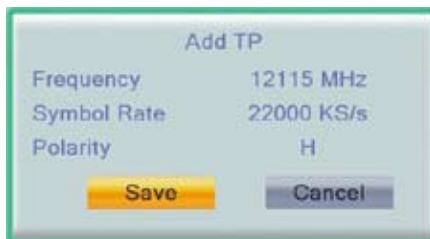
Press UP or DOWN NAV key to highlight Symbol Rate

Type the new Symbol Rate using the numeric keys

Press UP or DOWN NAV key to highlight Polarity

Press LEFT or RIGHT NAV key to select either Horizontal (Left) or Vertical (Right)

Press UP or DOWN NAV key to highlight Save or Cancel. To save the new TP, select SAVE and press OK key. To exit without adding new TP, select Cancel and Press OK.



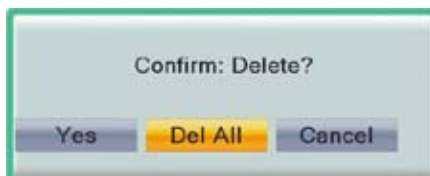
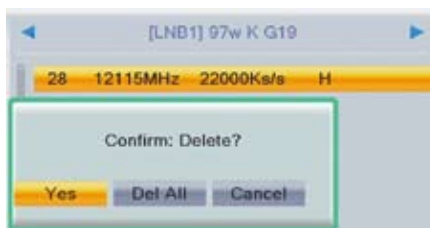
Delete Transponder

Press UP or DOWN NAV key to highlight the transponder to delete from the Pre programmed TP List.

Press the YELLOW color key

Press LEFT or RIGHT NAV key to select Yes to delete only the selected TP or Del All to delete all transponders from the selected satellite.

Press Exit several times and a prompt appears requesting a confirmation to delete. If you wish to delete the TPs, select Yes and press OK key. To exit without deleting the transponders, select No and Press OK key.



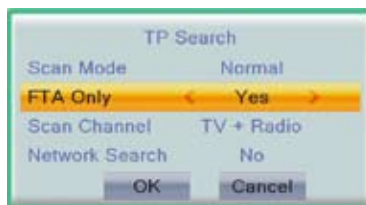
TP Search

Transponder Search for All Channels or Manual PID Entry

Press the BLUE key

Press UP or DOWN NAV key to highlight Scan Mode

Press LEFT or RIGHT NAV key to select Normal: Search TP for available channels or PID to Manually add a single channel defined by the User entered PIDs



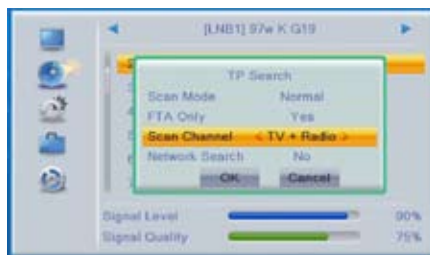
Normal Mode

Press UP or DOWN NAV key to highlight FTA Only

Press LEFT or RIGHT NAV key to select Yes or No

Press UP or DOWN NAV key to highlight Scan Channel

Press LEFT or RIGHT NAV key to select TV + Radio, TV only, Radio only



Press UP or DOWN NAV key to highlight Network Search

Press LEFT or RIGHT NAV key to Yes or No

Press UP or DOWN NAV key to highlight OK or Cancel. If you wish to scan the TP for new channels, select OK and press OK key. To exit without searching, select Cancel and Press OK key



PID Mode - Manual Channel Entry

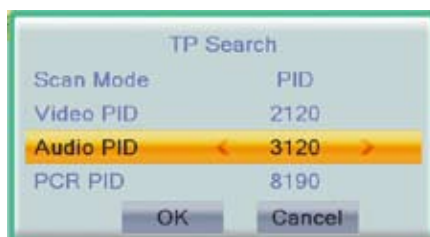
Press UP or DOWN NAV key to highlight Video PID

Use Numeric keys to manually enter the Video PID. If scanning for a radio service leave the VPID at the default 8190



Press UP or DOWN NAV key to highlight Audio PID

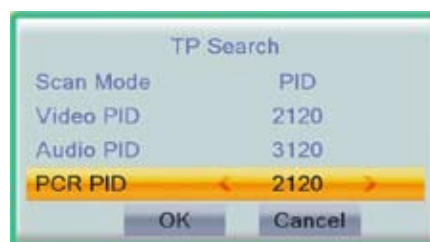
Use Numeric keys to manually enter the Audio PID. If no audio is available leave at default 8190



Press UP or DOWN NAV key to highlight PCR PID

Use Numeric keys to manually enter the PCR PID. If no PCR PID is provided set to the Video PID or if a radio service set to the Audio PID

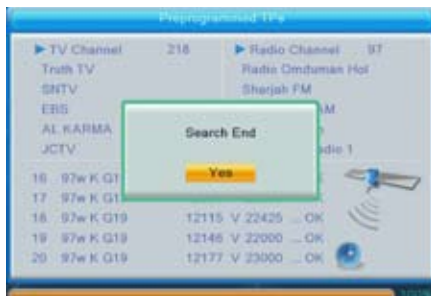
Press UP or DOWN NAV key to highlight OK or Cancel. If you wish to scan the TP for manually entered PIDs, select OK and press OK key. To exit without searching, select Cancel and Press OK key



Scan Results

When the scan is complete the Transponders scanned, and logged TV and Radio channels will be displayed with a prompt “ Search End” or “No Program Found”

Press OK key to exit the Search screen



3.1 Language

3.2 TV System

3.3 Display Setting

3.4 Local Time Setting

3.5 Timer Setting

3.6 Parental Lock

3.7 OSD Setting

3.8 Favorite

3.9 Other



3. System Setup

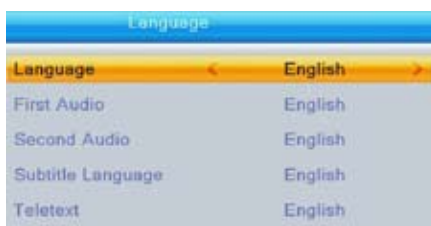


3.1 Language Selection

Language: Menus, On Screen Displays – Press LEFT or RIGHT NAV key to select English, Spanish or Russian

First Audio: Primary Audio default language automatically selected if broadcaster provides multiple languages - Press LEFT or RIGHT NAV key to select English, French, German, Italian, Spanish, Portuguese, Russian, Turkish, Polish, Greek, Czech, Swedish, Finnish,

Second Audio: Secondary audio default language automatically selected if broadcaster provides multiple languages (see language selection above)

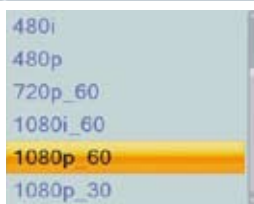


Subtitle Language: Default Subtitle text language automatically selected if broadcaster provides Subtitle Service and in multiple languages (see language selection above). Typically not used in North America.

Teletext: Default Teletext text language automatically selected if broadcaster provides teletext service and in multiple languages (see language selection above). Typically not used in North America.

3.2 TV System

Video Resolution: Setting the Output Resolution for HDMI Video. Press LEFT or RIGHT NAV key or press List/OK key to display scroll list. Select 480i, 480p, 720p_60, 1080i_60, 1080p_30, 1080p_60, By Source (program will set resolution), By Native TV (The connected TV must be capable of full HDMI compliance to set the microHD output to the maximum supported resolution)



Aspect Mode: Setting the Output Aspect Ratio for Composite and HDMI Video. Press LEFT or RIGHT NAV key or press List/OK key to display scroll list.

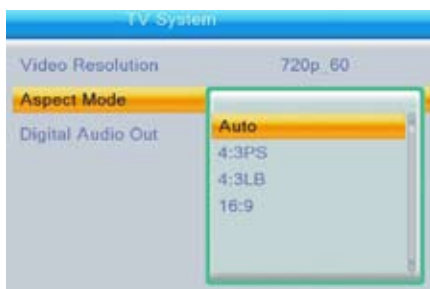


Auto: No aspect conversion by the microHD

4:3PS: (Picture Source) Good for 4:3 displays, but stretched wide on widescreen TVs

4:3LB: (Letter Box) Good for 4:3 displays, but stretched wide on widescreen TVs

16:9: Source programming originating in 4:3 will be letter boxed on a 16:9 display



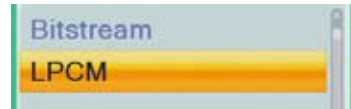
Digital Audio Out: Setting the HDMI digital audio output mode. Press LEFT or RIGHT NAV key or press List/OK key to display scroll list.



Bitstream: No AC3 decoding. Raw AC3 to HDMI output

LPCM: Decodes both PCM and AC3 for output to HDMI output

The RCA audio outputs always are fed decoded AC3 and PCM.



3.3 Display Setting: Adjustments for Composite and HDMI Video Outputs. Press LEFT or RIGHT NAV key or press List/OK key to display scroll list. Select new level and it is immediately applied.

Brightness, Contrast, Saturation, Hue and Sharpness



3.4 Local Time Setting: Select Auto or Manual Time Setting Mode

GMT Usage: Time is set by the current selected channel. Press LEFT or RIGHT NAV key to select ON or OFF. GMT reference is not suggested as many broadcasters do not correctly set the time. This will cause Timer Events to cancel or missed recordings.



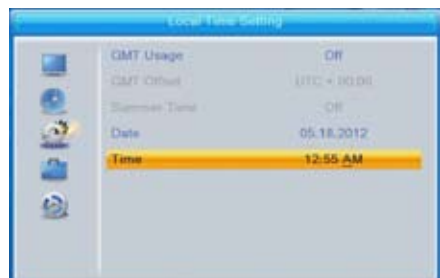
GMT Offset: Setting with GMT Usage ON. Press LEFT or RIGHT NAV key or press List/OK key to display scroll list. Select the time zone offset from GMT/UTC. Example cities for the selected time zone are displayed.



Daylight Saving: Setting with GMT Usage ON. Adds one hour when ON. Press LEFT or RIGHT NAV key to select ON or OFF

Date: Setting with GMT Usage OFF. Use numeric keys to enter month, day, year

Time: Setting with GMT Usage OFF. Use numeric Buttons to enter time in 12 hour mode. Change AM/PM with any numeric key.



3.5 Timer Setting with Remote Control Short Cut Key:

Thirty timers wake-up the microHD, return to standby mode, change channels, start and stop DVR recordings.

Press UP or DOWN NAV key to highlight available timer.

Press OK key to display Timer Setting menu with current time and date displayed in upper right corner.

Press UP or DOWN NAV key to highlight Timer Mode

Press LEFT or RIGHT NAV key to select frequency of the timer event. Once, Daily, Weekly, Monthly

Press UP or DOWN NAV key to highlight Timer Service

Press LEFT or RIGHT NAV key to select Channel Change or Record

Press UP or DOWN NAV key to highlight Channel

Press LEFT or RIGHT NAV key or press List/OK key to display scroll list. Select the Channel Name for the event

Press UP or DOWN NAV key to highlight Date

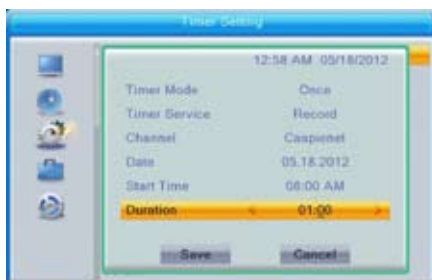
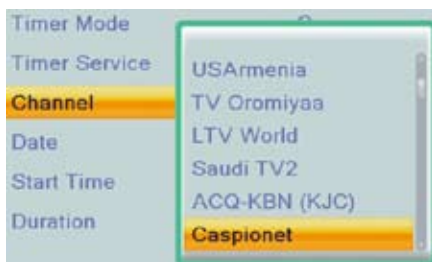
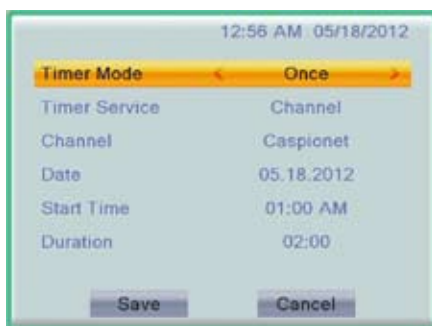
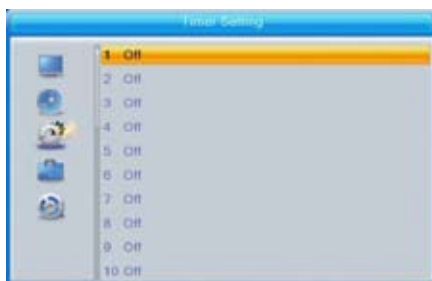
Use the numeric keys to enter month, day, year

Press UP or DOWN NAV key to highlight Start Time

Use the numeric keys to enter the time. Use any numeric key to select AM or PM

Press UP or DOWN NAV key to highlight Duration

Use the numeric keys to enter the length of the timer or recording (maximum timer duration is 99 hours and 59 minutes)



Press UP or DOWN NAV key to highlight Save or Cancel. If you wish to schedule the timer, select OK and press OK key. To exit without saving the timer setting, select Cancel and Press OK key



Notice: If the microHD is in standby mode when timer is scheduled, the receiver will automatically Power ON one minute before the Start Time. The receiver will automatically return to the previous channel or operation mode after the timer ends

Two timers can be set to simultaneously record two different channels on the same satellite and transponder. Start and stop times must be spaced one minute apart to avoid conflict. A third channel or previously recorded program may be watched at the same time.

If the system is motorized, allow extra lead on the start time to allow the motor to position the dish

3.6 Parental Lock: Prevents the unauthorized access to menus or limit channel viewing. The default Lock Code is 0,0,0,0

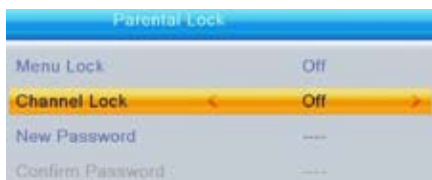
Press UP or DOWN NAV key to highlight Menu Lock.

Press LEFT or RIGHT NAV key to select Off or On. Turning Menu Lock On will require a password to enter any menu. Default is Off



Press UP or DOWN NAV key to highlight Channel Lock.

Press LEFT or RIGHT NAV key to select On or Off. Turning Channel Lock Off will disable the requirement to enter a password for accessing locked channels. Default is On



Press UP or DOWN NAV key to highlight New Password

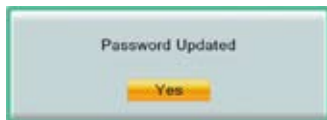
Use the numeric keys to enter a new four digit code. Please be sure to document this code and store in a secure location. Passwords cannot be retrieved and there is no master code to unlock a personal password.



Press UP or DOWN NAV key to highlight Confirm Password

Use the numeric keys to re-enter the four digit code.

A prompt will confirm the updated Password. Press OK key to exit



3.7 OSD Setting: Settings for Subtitle, Teletext and OSD (On Screen Display)

Subtitle Display: Press LEFT or RIGHT NAV key to select On or Off. Typically not used in North America.

OSD Timeout: Press LEFT or RIGHT NAV key or press List/OK key to display scroll list. Select the duration of the On Screen Display (1 – 10 seconds)

OSD Transparency: Press LEFT or RIGHT NAV key or press List/OK key to display scroll list. Select the transparency of the On Screen Display (Off – 40%)

Teletext: Press LEFT or RIGHT NAV key to select On or Off. Typically not used in North America.



3.8 Favorite Lists: Rename the Favorites Lists

Press UP or DOWN NAV key to highlight the Favorites List to rename

Press OK key to Display Text entry menu

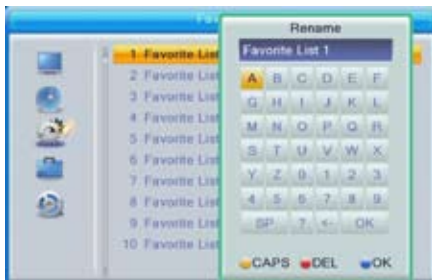
Press the YELLOW color key for capitalization On or Off

Press the RED color key to delete

Use the LEFT/RIGHT/UP/DOWN NAVs to select a letter, number or symbol.

Press OK key to save the character

When completed, press the BLUE color key to save and exit



3.9 Other: Setting additional Functions

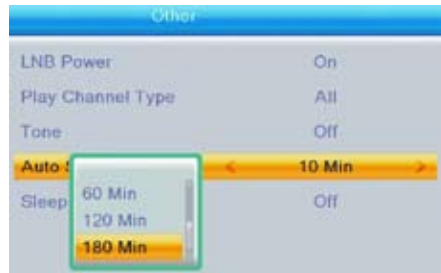
LNB Power: Press LEFT or RIGHT NAV key to select if the LNB power is On or Off. Typically this will be On, but might be set to Off if the receiver is slaved.

Play Channel Type: Press LEFT or RIGHT NAV key to select if the microHD displays All Channels, Free Channels only or Scrambled Channels only

Tone: Press LEFT or RIGHT NAV key to select if the Signal Meter Audio Tone is On or Off in the menus

Auto Standby: Press LEFT or RIGHT NAV key to select if the receiver will go into standby after inactivity (Off, 10, 30, 60, 120, 180 minutes)

Sleep Timer: Press LEFT or RIGHT NAV key to select how long the receiver will stay on before going into standby (Off, 10, 30, 60, 90, 120 minutes)



4. Tools

4.1 Information

4.2 Factory Reset

4.3 S/W Update via Satellite – Manual

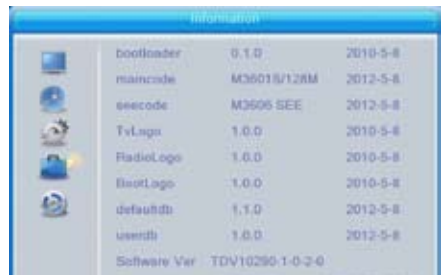
4.3 Automatic S/W Update via Satellite

4.4 Update by USB

4.5 Save to USB

4.6 Disconnect External USB Device

4.1 Information: Screen displays the versions and load dates of system files, databases and background images.



4.2 Factory Reset: Press OK key to perform a Factory Reset. Warning this will reset all settings to default. All user settings will be lost. Be sure to save firmware, backgrounds and user data to an external USB if you wish to save the receiver settings, user added satellites, transponders, channel and favorites lists.



Press UP or DOWN NAV key to highlight Yes or No. If you wish to delete all user data and return the receiver to default settings, select OK and press OK key. To exit without performing a Factory Reset, select No and Press OK key



4.3 S/W Update Via Satellite – Manual

GEOSATpro updates are currently provided on KU-band from 97W currently named Galaxy 19. These OTA-SSU updates are available 24/7 on Frequency 11842, Polarity Horizontal, Symbol Rate 22000, PID 330.

To manually update the receiver firmware via satellite, the system must be receiving a good Signal Quality reading above 40% on this transponder. Press Start and follow the on screen prompts. Please visit www.GEOSATpro/satupdate for the availability of the satellite update feature on other satellite platforms.



4.4 Automatic S/W Update via Satellite: (Feature is in beta testing as of 7/1/2012. Visit www.GEOSATpro.com/satupdate for official launch date) – The system must have a fixed, motorized or multi-satellite system with 97W KU-band, Galaxy 19 satellite activated and configured. When this feature is enabled, the micro HD will automatically select the G19 satellite from the activated list and control the switches or motor to receive the update.

4.5 Update by USB: Update Firmware, Background Images, Default and User Database profiles including satellites, transponders, channels and favorites lists..

Caution: Before Updating, first backup and Save to USB (see 4.6), the User Data Base .udf file or Default Data Base .ddf to restore customs settings such as: menu settings, background images and default or user database profiles.

Press UP or DOWN NAV key to highlight Upgrade Mode

Press LEFT or RIGHT NAV key to select:

Allcode: Updates firmware, clears defaults and user settings

TvLogo: Menu background image

RadioLogo: Radio image

BootLogo: Start-up image

Defaultddb: Default menu settings, background images, satellites, transponders, channels and favorites lists

Userddb: Custom user settings for menu settings, background images, satellites, transponders, channels and favorites lists

Press UP or DOWN NAV key to highlight Upgrade File

Press LEFT or RIGHT NAV key to select the file saved on the USB drive for upgrade

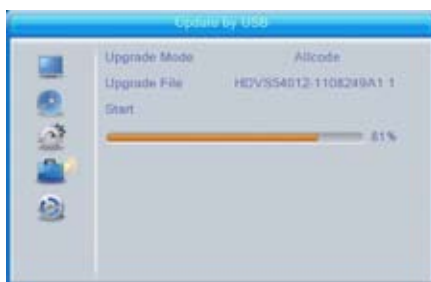
Press UP or DOWN NAV key to highlight Start

Press OK key to upgrade the microHD with the selected file

Warning: Do not interrupt the update or disconnect the power. This could corrupt the update and disable the receiver!

Once update is complete, press the EXIT key

The receiver must be power cycled for update changes to take effect. Firmware updates should be followed with a Factory Reset to clear all previous settings and install fresh data.



4.6 Save to USB: Save current Firmware, Background Images, Default and User Data Profiles

Press UP or DOWN NAV key to highlight Save Mode

Press LEFT or RIGHT NAV key to select:

Allcode: Saves all Firmware, Background Images, Default and User Data Profiles

TvLogo: Menu background image

RadioLogo: Radio image

BootLogo: Start-up image

Defaultdb: Default menu settings, background images, satellites, transponders, channels and favorites lists (Save current User Data Base as Default Data Base in the Channel Manager Menu 1.4 before saving)

Userdb: Custom user settings for menu settings, background images, satellites, transponders, channels and favorites lists

Press UP or DOWN NAV key to highlight Start

Press OK key to save the selected file.

Once the Save to USB process is complete, press EXIT key



4.7 Disconnect USB Device:

Safely remove the external USB device from the microHD

Press OK key to disconnect the USB drive

A prompt will request confirmation to disconnect.



Press LEFT or RIGHT NAV key to highlight Yes or No. If you wish to disconnect the USB, select Yes and press OK key. To exit without disconnecting the USB, select No and Press OK key

Press LEFT or RIGHT NAV key or List/OK key to display a list. Select the USB drive to disconnect (the default is USB Disk A)

Press UP or DOWN NAV key to highlight OK or Cancel. . If you wish to disconnect the selected USB, select OK and press OK key. To exit without disconnecting the USB, select Cancel and Press OK key



5. Media Manager

5.1 Media Player

5.2 DVR USB Memory Information

5.3 DVR Set-up



5.1 Media Player with Remote Control Short Cut Key:

Connect a USB drive to the microHD and the receiver becomes a Media Player. Playback DVR Radio and TV recordings, music, movies and display photos. Please reference the microHD specifications for the list of supported file types.

Press the SAT key to select the Media Player mode from the four media playback types: Music, Image, Video or DVR playback modes



Music Mode: Listen to one audio file at a time or create a playback list.

Repeat: Play once, Loop Song, Loop Folder

FAV All: Select favorite audio files to play in a Play List



Play List: Manage and play the audio files selected as favorite: OK key = Play files in Play List, RED key = Move, GREEN key = Delete, YELLOW key = Delete All



Edit: Edit the audio files: Red key = Rename, Green key = Copy, Yellow key = Delete, Blue key = Create New Folder



Sort: Sort audio files by: Name, Time, Size or Favorite



How to Listen to an Audio File:

Press DOWN NAV key to select the connected USB drive

Press OK key to show available music files

Press UP or DOWN NAV key to highlight a photo (Preview displays file information)

Press Play key to listen to audio file

Pause, step frame, multi-speed reverse/forward, play and stop keys are available for control



Image Mode: Display one photo at a time or create a playback list.

Setup: Slideshow (OFF – 9 second delay), Slide Show Repeat – On or Off

FAV All: Select favorite photos to display in a Play List

Play List: Slide show only displays images selected as favorite: OK key = Play files in Play List, RED = Move, GREEN = Delete, YELLOW = Delete All

Edit: Edit the photo files: Red key = Rename, Green key = Copy, Yellow key = Delete, Blue key = Create New Folder

How to view photos:

Press DOWN NAV key to select the connected USB drive

Press OK key to show available photo files

Press UP or DOWN NAV key to highlight a photo (image displays in Preview with file information)

Press OK key to display full screen

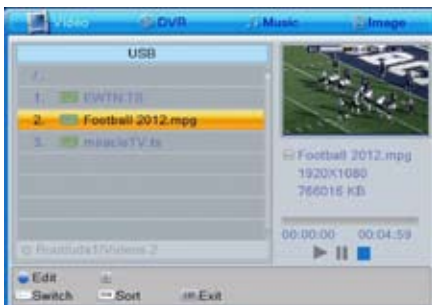
Press EXIT key to return to Media Player Menu



Video Mode: Watch videos and movies

Edit: Edit the video files: Red key = Rename, Green key = Copy, Yellow key = Delete, Blue key = Create New Folder

Sort: Sort audio files by: Name, Time, Size



How to Watch a Video File:

Press DOWN NAV key to select the connected USB drive

Press OK key to show available video files

Press UP or DOWN NAV key to highlight a video (Preview displays file information)

Press PLAY key to play the video file in the Preview display

Press OK key to Play in full screen mode

Pause, step frame, multi-speed reverse/forward, play and stop keys are available for control.



DVR Mode: Playback DVR Recordings with Short Cut Remote Key –

The microHD is capable of simultaneous recording of two programs that are on the same transponder while watching a third channel from the same transponder or viewing a DVR recording.

Rename: Rename a recording

Lock: Prevent recording from being viewed, edited or erased without parental password

Delete: Delete recordings



How to Watch a DVR Recording:

Press DOWN NAV key to highlight a DVR recording (Preview displays still image with file information)

Press PLAY key to play the DVR recording in the Preview display

Press OK key to Play in full screen mode

Pause, step frame, multi-speed reverse/forward, play and stop keys are available for control.



5.2 DVR USB Memory Information

Provides file information for the connected USB drive.



5.3 DVR Set-up: Feature Setting for DVR Operation

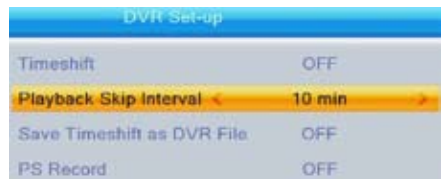
Press UP or DOWN NAV key to highlight Time Shift

Press LEFT or RIGHT NAV key to select On or Off. On temporary records the current tuned channel. Timeshift allows the review of current channel programming that has been automatically recorded since the last channel change (maximum record time is two hours). If the channel is changed, the Timeshift file is automatically deleted and the new channel's programming is recorded. Note: The Channel Banner information is not available when Timeshift is On. Timeshift must be On to use the Timeshift to DVR recording feature.



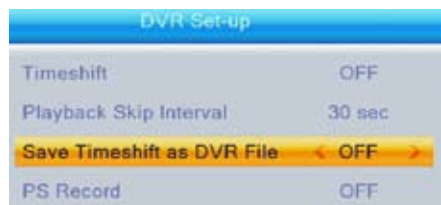
Press UP or DOWN NAV key to highlight Playback Skip Interval

Press LEFT or RIGHT NAV key to select: 30 seconds, 1, 5, 10, 30 minute jumps in playback mode when PAGE UP/PAGE DOWN keys (25/26) are pressed



Press UP or DOWN NAV key to highlight Save TimeShift as DVR File

Press LEFT or RIGHT NAV key to select On or OFF. This feature converts the current Timeshift file into a DVR recording. Note: Timeshift must be ON to use this feature.



Press UP or DOWN NAV key to highlight PS Record

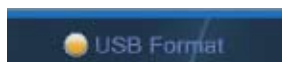
Press LEFT or RIGHT NAV key to select: On or OFF. We recommend leaving PS (Program Stream) Off as the DVR often cannot record HD programs with PS Record On.



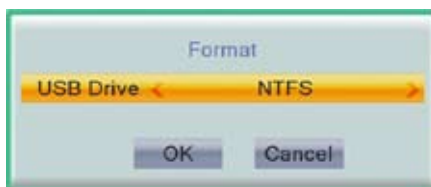
USB Drive Formatting

Warning! Formatting the USB drive will erase all recordings and files on the drive. You will not be able to undo this process. If you wish to archive the recordings or files before formatting, connect the USB drive to a computer and copy the files to another drive.

Press the YELLOW color key to format the connected USB drive.



Press LEFT or RIGHT NAV to select NTFS or FAT. NTFS format type provides the most flexibility and compatibility with the microHD. We recommend formatting to the NTFS format.



Press UP or DOWN NAV to highlight OK or Cancel. . If you wish to format the selected USB drive, select OK and press OK key. To exit without formatting, select Cancel and Press OK key.

The formatting may take a while and depends on the size of the drive.



FAQ – Frequently Asked Questions

Satellite receiver displays “Warning - Do NOT power off Software Download” for more than 1/2 hour. The satellite signal may have been interrupted during the automatic updating process. Reset Master Power switch on rear of the receiver. Place receiver on channel 1 and press the Signal button on the remote. If the Signal Quality is below 50% the receiver will not update and require dish adjustment.

Remote doesn’t work but receiver front panel buttons may turn on/off and change channels. Check batteries. Press any remote key and observe if the remote control POWER button. If the POWER button lights, the batteries should be strong enough to operate. Is the remote aimed at the receiver? The remote will not work through walls, cabinet doors, etc. Reset Master Power by momentarily unplugging the receiver.

No lights on receiver. Check power plug make sure that it is plugged into a working electrical outlet. Always plug the receiver into a surge protector power strip to help prevent damage by power line surges and lightning strikes. Reset Master Power.

Receiver displays 45% or better Signal Level, but no Signal Quality on all channels. The receiver is connected to a LNBF, but the dish might be pointed at the wrong satellite or there may be an obstruction in the line of sight between the dish and satellite. Mounting mast may be loose or moved.

Meters display 0% signal level and no quality. Coax not connected from LNBF on dish to SAT INPUT on receiver. Dish not properly aimed. Bad coax, connectors or LNBF failure.

Picture breaks up into big blocks and the audio is garbled. The antenna might be slightly out of alignment.. Satellite view partially obstructed. Damaged coax or connections.

Satellite receiver has a Green LED on front panel, but TV displays No Video. Select the corresponding HDMI or AV connection input on the TV.

No audio on any satellite channels. Set satellite receiver audio level to 75% then use the TV volume control to adjust volume.

Picture breaks up during rain and snow. Heavy rain or clouds may affect the strength of the satellite signal. A properly installed dish will rarely lose signal during extreme weather. Snow or ice build up can interfere with the satellite signal. Mount the dish where snow can be gently brushed off. Dish covers and heaters are available for locations with regular ice and snow accumulations.

Satellite receiver displays “No Signal” only during very hot or cold weather. An aging or defective LNBF can drift off frequency and cause the loss of reception during the heat of the day or coolness of the night. Replace the LNBF.

Satellite receiver displays “No Signal” or the picture breaks up during high winds. Strong winds can move the dish out of alignment and cause the signal to be reduced or lost. Make sure the mast support legs have been installed and the mast is secure and not moving. Once the mast is stable, follow the aiming instructions to re aim the dish and tighten all hardware to prevent any movement.

Picture is skipping and/or audio jumps during DVR functions. A USB device

may not have enough transfer speed to handle the DVR function. Make sure that the USB device is 2.0 type. Try another USB drive with better processing speed. Thumb drives often cannot process the data and the picture pixilates or freezes.

Message window displays “USB Speed to low” when trying to record. The connected USB device may have limited throughput speed or be formatted incorrectly. Format drive to either NTFS or FAT and retry recording. Consult with the drive manufacturer.

Message window displays “USB space to low” when trying to record. The connected USB device is full or the USB drive is entering a power-saving sleep mode. This model may not be compatible with the DVR. Consult with the drive manufacturer.

USB drive mounts and dismounts repeatedly. The connected drive may require more power than the USB port is capable of providing. Connect to optional USB power or contact the drive manufacturer regarding the exceeded current draw.

USB drive cannot be formatted with the receiver. A drive may not be compatible with DVR systems. When choosing a drive, avoid drives with auto back-up or power saving sleep features which cannot be disabled. Drives that are not able to be formatted with the receiver often may be formatted with a computer then reformatted with the microHD.

Customers with a single satellite fixed dish may purchase an optional telephone technical support contract for an annual fee of \$19.95. Motorized or multi-satellite systems support is available for \$29.95 per event with event expiration 30 days from the service initiation.

Accessories

Your GEOSATpro reseller carries a large selection of satellite accessories and replacement items. Please consider these accessories for your installation.



GEOSATpro microHD
Add a 2nd Room



SL1PLL LNBF
Lifetime Warranty



Under Eave Mount
Tile or no Holes Roof Mount



HDMI Cable
HD Digital Video/Audio



Non-Penetrating Roof Mount
No Holes or Temporary

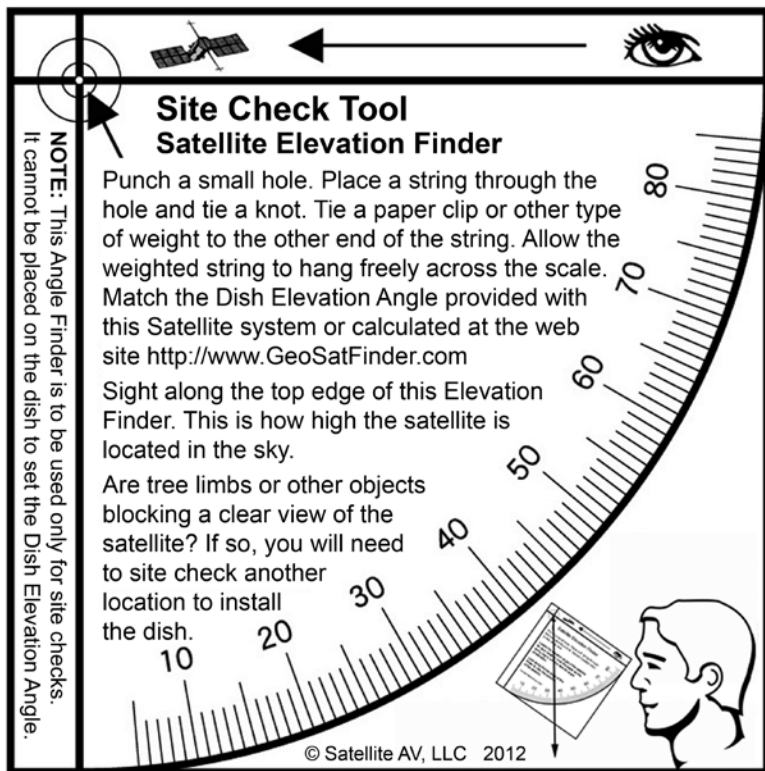


Dish 1.2 Meter
Reliable Fringe Area Reception



Cut Here

FOLD
HERE



FOLD
HERE