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Installation Guide for GeoSat GS120 DiSEqC Motorized Satellite Dish Mover



Items needed for installation:

1. DiSEqC / USALS Compatible GEOSATpro GS120 Motor
2. Fortec Lifetime Ultra MPEG2 DVB Satellite Receiver with USALS
3. Assembled 75cm – 1.2 Meter Dish
4. LNBF (Ku-Band)
5. Coax Jumper
6. Portable TV or Monitor

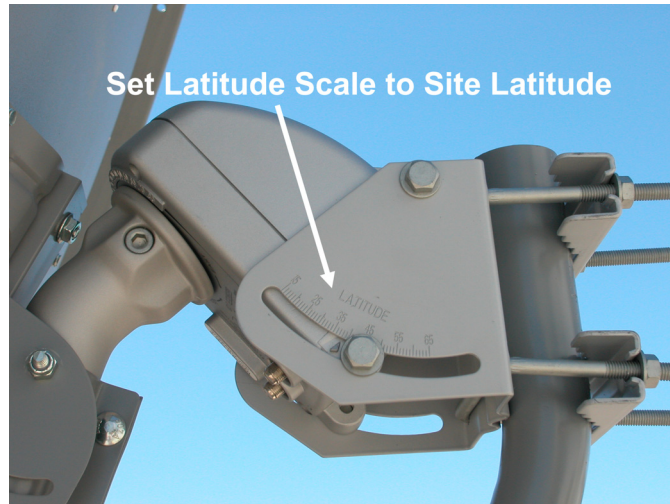
Satellite aiming Calculator is available: <http://vbs.arachnoid.com/satfinder/index.html>

Available channels and broadcaster information can be found at www.lyngsat.com

GEOSATpro GS120 Motor Installation



1. Mount the assembled dish on the motor post. Place the dish mast top bolt through the motor post alignment hole and securely tighten the dish mounting bolts.
2. Find the longitude and latitude for the installation location. If your system was supplied with SatFinder aiming coordinates, your location coordinates are printed at the top of the sheet or use a GPS unit to locate the install position. Longitude references the East / West location and Latitude the North / South.



Motor Mount Latitude Scale = Install Location Latitude

3. Assemble the motor and mount on a perfectly plumb, level and stable post. If the post is not exactly level the dish will not track the satellite arc. While the motor is still in the 0 position rotate the motor on the mounting post towards magnetically corrected South. Find true south by adding or subtracting the magnetic declination for your area to the compass reading. Example: Sacramento, CA, magnetic declination is 15.6 subtracted from 180 degrees equals 164.4. This is not a critical step, but it will be easier to locate the first satellite if the motor is roughly aimed.

4. Set the motor mount latitude scale to the latitude of the installation location. Securely tighten the two latitude adjustment bolts as this setting should not need to be readjusted.



Dish Elevation Angle

5. Set the Dish Elevation Angle on the dish elevation bracket using the Dish Angle Table on page 6 of the GeoSat GS120 Motor Manual. Loosely secure the two dish elevation bolts, as the elevation may need to be adjusted for the dish to properly track the satellite arc.



LNBF Set to 12 O'clock Position

6. Set lnb rotation to 12 o'clock position. The motor will rotate the lnb and dish as it moves through satellite positions.



Carefully Route and Secure Coax Cables

7. Connect a coax cable from the lnb to the motor port labeled “To LNB”.
8. Clear all obstructions to permit dish movement. Always keep the area clear when programming and moving the motorized dish.
9. **Warning: The dish may suddenly move when connected to the receiver!**
Unplug the receiver from the electrical outlet. Connect a short temporary coax cable between the motor “To Receiver” and the receiver “LNB IN” ports. Route and secure all coax cables in a manner to avoid interference and / or damage during motor movement.
10. Stand clear of the motorized dish and plug the receiver into an electrical outlet.
11. Verify the green LED power indicator status light is lit on the motor. Please consult with the motor operation manual for description of modes of the status indicator light.
12. Press and hold the manual movement button on the motor until the motor reaches an obstacle or the West mechanical limit of the motor. Press the button twice within one second and hold to drive the motor to an obstruction or limit to the East. If the dish cannot be installed in a location free of obstacles the operation manual will provide directions on adjusting the mechanical limits for motor travel. Failure to prevent contact with objects can result in damage to the dish and motor.

Fortec Lifetime Ultra Installation

- A. Press MENU, RIGHT arrow to INSTALLATION and select ANTENNA SETUP and press OK.
- B. Select SATELLITE - IA5KU and press OK.
- C. Choose LNB type Standard or Universal 1 by pressing LEFT or RIGHT arrow.

- D. Select Positioner Setting and press LEFT arrow to select USALS, press OK.
- E. Select My Longitude and use the remote numeric keys to enter the longitude of the install location then use the Right / Left Arrow to select if the location is entered as East or West (North American coordinates are entered as West).
- F. Select My Latitude and use the remote numeric keys to enter the latitude of the install location then use the Right / Left Arrow to select if the location is entered as North or South (North American coordinates are entered as North).
- G. Select MOVE and press OK. The dish will rotate to the selected satellite position based on the inputted values.
- H. After the motor has moved, select STORE and press OK to save the values. Press the EXIT key 2 times then OK to save. Press OK.
- I. Highlight TP and RIGHT or LEFT arrow to Active TP (example 12177 V 23.000)
- J. Slightly loosen the motor mast and rotate the motor East or West on the post in minute movements while observing the signal quality meter. If a quality reading cannot be obtained or if the quality is low, raise or lower the dish elevation by a degree and repeat the slow azimuth rotation.
- K. Press EXIT 2 times.
- L. Highlight POWER SCAN, press OK.
- M. Verify SATELLITE - IA5 and highlight SCAN-FTA, press OK.
- N. 8-10 minutes later all satellite channels found will be automatically added to the receiver and the unit will restart and display the added channels.

To program additional satellites enter the ANTENNA SETUP menu and select a second satellite from the antenna setup list (AMC4). Set the LNB type to Standard or Universal type. Set TP to an active frequency (11822 H 5700) and activate USALS for the POSITIONER SETTING to drive the motor automatically to satellite position (AMC4). Once the dish has automatically moved into position you may need to slightly adjust the azimuth (rotation) orientation or dish elevation to peak the quality of the signal. Press EXIT then OK to save the changes then press EXIT again. Select POWER SCAN then select the name of the satellite (AMC4) by pressing the LEFT or RIGHT arrow. Highlight SCAN- FTA the press OK. The receiver will automatically scan the satellite for new transponder frequencies, then save the found channel(s). Now when you change channels the motor will automatically move the dish to the correct satellite and the selected channel will appear.

To program additional satellites select a satellite from the Satellite Name list (preferably on the opposite end of the arc), set the LNB type and select an active transponder frequency then activate USALS. Once the dish has moved into position verify that the signal quality is peaked. It may be necessary to slightly adjust the azimuth (rotation) orientation or dish elevation to peak the quality of the signal. Power Scan the satellite for available channels. Repeat for each available satellite. Move the dish back a channel from the first satellite and verify good signal quality. If the reading has degraded you may need to fine-tune the azimuth and dish elevation settings to reflect high quality readings between the multiple satellite locations. If the post is level and plumb, the motor latitude adjustment should not need to be adjusted.