



Cisco 9865H Signal Decoder Troubleshooting Guide

The model 9865H signal decoder manufactured by Cisco® and used by American Forces Network authorized audience members to decrypt the AFN signal must be set up properly to acquire a quality signal.

We strongly suggest you download and read the 9865 Installation and Operation Guide, available on our website, to become familiar with the operation of the device. Not all 9865 decoder features are available via the AFN programming streams.

You can also download the AFN Signal Acquisition Guide, which helps you to determine satellite dish size, alignment, and programming availability on the various AFN programming streams.

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Decoder Registration

Decoder registration

All AFN-capable decoders must be registered at <https://afnconnect.myafn.dodmedia.osd.mil/> prior to use. Only authorized audience members identified in the AFN decoder terms of use found at www.myafn.net/terms are allowed to own or operate an AFN-capable signal decoder. Violations of the terms of use may result in a permanent AFN decoder registration ban.

You will need the TID and UA numbers off of the back of your 9865H decoder before you access the decoder registration portal. These numbers can be found on the back of your decoder as identified in red on the image below.



If your internet browser returns a certificate error when accessing the website, please choose to 'continue to the website' to complete the decoder registration.

All DoD-affiliated individuals must supply their APO/FPO zip code during registration. All State Department-affiliated individuals must supply the mission's DPO+4.

You are required to supply a valid email address during the registration process and we recommend you use your official .mil or .gov email address. If you use a commercial email service you will need to supply additional credentials to verify eligibility. AFN will send you a link in a confirmation email and you must click on that link to complete the registration process.

Decoder registrations are good for one year and you must access the registration portal annually to update your information and request reauthorization of the unit. All registrations are verified against the Defense Enrollment Eligibility Reporting System (DEERS) database and your registration may be delayed if your DEERS information is incorrect. Visit <https://www.dmdc.osd.mil/milconnect/> to verify your DEERS information is correct.

In some instances you will need to supply copies of your U.S. Government-issued ID card or other official documentation in order to confirm eligibility requirements and complete your registration.

Contact the AFN Broadcast Center Helpdesk if you need assistance with the registration process.

Email: sathelpdma@mail.mil

DSN Phone: 312-348-1339, Commercial Phone: 951-413-2339

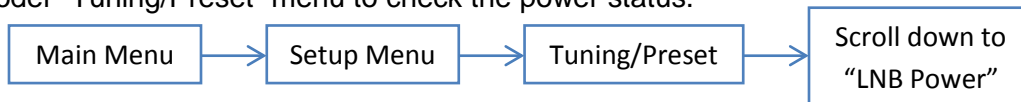
Note: Occasionally a registered decoder will refuse to recognize its authorization key, which is part of the satellite signal for all registered decoders. If you know your decoder is authorized but the key is not recognized, complete the full-factory reset procedures in this manual.

No Signal Troubleshooting

No Signal

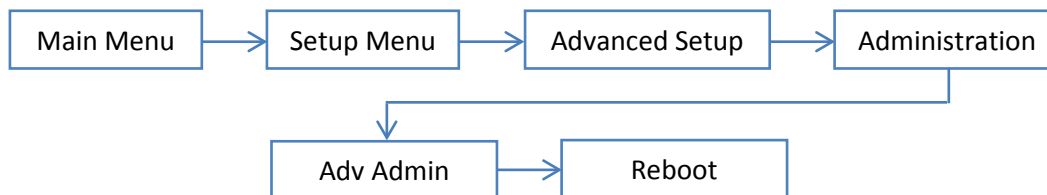
Complete the following steps if your signal level is zero.

1. Verify the decoder is powering the satellite dish Low Noise Blocker¹ (LNB) by going to the decoder “Tuning/Preset” menu to check the power status.



If the LNB is powered then you are most likely dealing with a coaxial cable connection issue between the satellite dish and the decoder. Follow the coaxial cable troubleshooting tips in this manual.

2. If your signal level remains 48 or higher and your signal quality is zero, check the decoder settings for location. The settings are listed in this manual.
3. If your settings are correct you will most likely need to troubleshoot your satellite dish. Download the Signal Acquisition Guide for help in this area.
4. In some instances your decoder, like other modern electronic devices, needs to be reset or rebooted in order to correct a problem. Remove power from the decoder and wait 5 minutes² before reconnecting. If this doesn't correct the problem you should reboot the decoder through the menu.



5. After you start a reboot through the menu you must wait a few minutes while the decoder completes the process. When the reboot is finished the decoder should return to the last channel you were viewing.
6. If the above actions do not work then you should complete a full factory reset. Instructions for this procedure are in this manual.

¹ The Low Noise Blocker is essentially an amplifier found on the feedhorn of a satellite dish. There are two types of LNBs; circular and linear polarization. Linear polarized LNB's will use specific terms to describe their polarization. They are either "FSS" or "FTA." Universal LNB's are always linear.

² Manufacturer technical support recommends you wait five minutes in order to fully clear the cache after removing power.

Intermittent Signal Troubleshooting

Intermittent Signal

If your signal level is going up or down by more than three points you are most likely dealing with a wire connection issue between your satellite dish and the decoder. If this is the case follow the coaxial cable troubleshooting steps found in this manual.

If your signal level is 48 or higher and your signal quality is going up or down by more than three points you most likely need to replace your LNB. If your signal level is 48 or higher and your signal quality is zero you most likely need to troubleshoot your dish. In either case, download the Signal Acquisition Guide for help in this area.

Navigate through the menu settings below to identify the signal level and signal quality information.



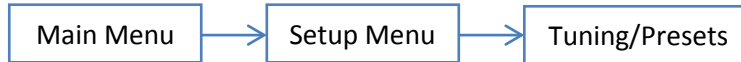
If this solution doesn't work you may have a poorly aligned satellite dish that is locked onto the fringe of the coverage area. Download the Signal Acquisition Guide for information on how to determine satellite dish size and aiming information.

Full Factory Reset Troubleshooting

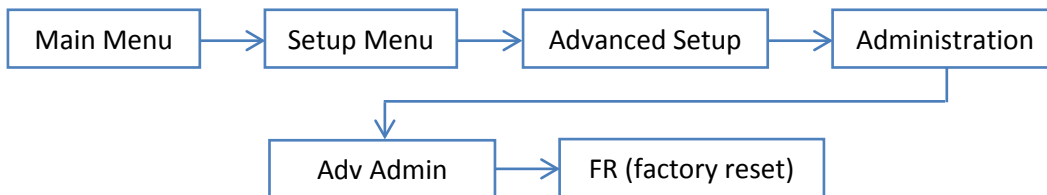
Full Factory Reset

A full factory reset of your decoder should only be accomplished after all of the other troubleshooting tips in the 'no signal' section have been tried.

The full factory reset will completely wipe all settings from the decoder memory. The settings for each region are found later in this manual. You can also go to the tuning/presets menu and write down the current settings. You will need to scroll down on the tuning/presets menu and write down all 11 settings.



You can start a full factory reset by navigating through the menu settings as indicated below.



If prompted to download a software version select the highest or most current version available.

A factory reset takes approximately two minutes to complete. Most decoders will go into 'standby' and the display will only show a flashing light during the process. When the process is complete some decoders will prompt you to reboot the unit. If the decoder goes into 'standby' mode you can use the 'display' button on the remote control to bring it out of this mode.

You will need to return to the 'tuning/presets' menu and enter the information you wrote down prior to starting the full factory reset.

APP Troubleshooting

Application Troubleshooting

It is normal for a 9865 decoder to display “APP” when first powered up. This is not an error code but rather the application number of the downloadable firmware the decoder is using when in operation.

A decoder continually displaying “APP” indicates the unit is not booting up. If this occurs you should turn off the unit and remove the power cord from the wall outlet. Let the decoder rest for at least 5 minutes³ before reconnecting the power and turning it on.

If the “APP” continues to display complete the above steps again. Some decoder owners have reported they have had to perform the above steps five or six times before the unit would successfully boot up.

If the problem persists your decoder has most likely failed and must be replaced. If the unit is under warranty you should follow the manufacturer’s return procedures.

Note: If you replace your decoder please email the UA and TID number off of the back of the malfunctioning/defective unit to sathelpdma@mail.mil so we can remove it from the decoder database.

³ Manufacturer technical support recommends you wait five minutes in order to fully clear the cache after removing power.

Coaxial Cable Troubleshooting

Coaxial Cable Troubleshooting

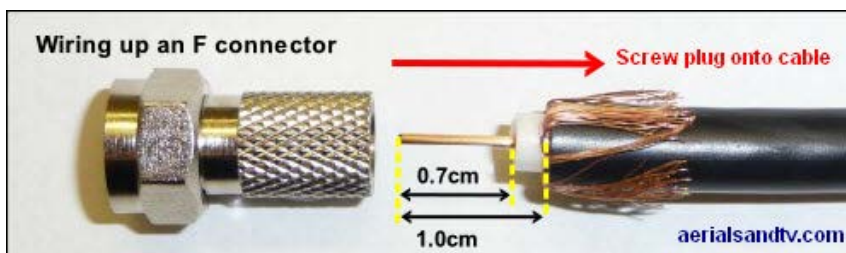
Coaxial cable has four main parts.

1. The outer insulation, which is typically black or white plastic
2. The shielding, which is typically foil or braided wires
3. The inner insulation, which is typically white plastic
4. The center wire, which is typically copper

AFN recommends using RG6 coaxial cable for all applications.

American-style connectors use the center wire as part of the connector. European connectors typically have the center wire attached to the center pin of the connection.

1. Ensure the connector is securely attached to the cable. If it is loose or comes off easily it should be repaired or replaced.
2. Ensure the center copper wire is in good condition and not bent. Copper corrodes and turns green when exposed to air and water and you may need to clean the copper or cut the cable back approximately an inch to expose fresh, uncorroded wire.
3. If the connector on the LNB is corroded, the LNB will need to be replaced.
4. All coaxial cables should be round to ensure the high-frequency signal passes from each component. If the cable is flattened, crushed or kinked, it should be replaced. Special 'flat' cables can be purchased and used if you must pass the cable through a window or door.
5. If you're using a cable splitter, flat cable or other equipment between the dish and the decoder, bypass those features when troubleshooting to eliminate those elements as a possible signal failure cause.
6. In rare cases a zero signal level occurs when your decoder is no longer powering the dish.
7. If you feel your settings are correct try using the decoder on a system known to be functioning correctly. If your decoder works on the other system then you know it to be functioning properly and you should investigate the satellite dish alignment, feedhorn and LNB as the cause of the signal problem.



Audio & Video Troubleshooting

Audio but no Video or Video but no Audio

If you have either Audio or Video, your decoder is receiving both and the issue is typically due to poor cable connections between your decoder and television. In some instances this condition is due to the decoder being locked up and it is not sending the audio, video or both signals to your television.

HDMI Troubleshooting

If you are using an HDMI cable to connect your decoder and television, remove and cable and plug it in again to ensure the connections are solidly in place. If that doesn't work, try a different HDMI cable.

If the problem persists, complete a full factory reset by following the full factory reset troubleshooting steps found in this manual.



A/V Cable Troubleshooting



If you are using Audio/Video cables that have three individual plugs, red, yellow and white, remove the cable and plug it in again to ensure the connections are solidly in place. The yellow plug is for video, the red and white plugs are for the right and left channel audio. If reseating the cable doesn't work, try a different cable.

If the problem persists complete a full factory reset by following the full factory reset troubleshooting steps found in this manual.

Black Screen Troubleshooting

Black Screen

A decoder can lock up and require a reset for a variety of reasons or, in more rare cases, the decoder itself can fail. When either of these conditions exists you will typically only see a black screen on your television.

If your decoder and television are plugged in and powered on, you have checked all of the cable connections between the decoder and television, and you have selected the correct channel on your television to view the decoder output signal, you should complete the steps below.

1. Press the 'menu' button on the front of the decoder.
2. If the decoder menu displays on the television then attempt a full factory reset. Directions to complete this troubleshooting procedure are in this manual.
3. If the decoder menu doesn't display on the television screen, complete the following steps;
 - a. Double check to make sure the television and decoder are plugged in and powered on.
 - b. Make sure you have selected the correct source/input on your television to view the output of the decoder.
 - c. Try resetting the cables between the TV and decoder by unplugging them and reseating them to ensure a complete connection.
 - d. If you are using HDMI cables to connect the units, try using A/V cables instead. If you are using A/V cables, try using an HDMI cable. If you switch cables you will have to change the source/input selection on your television to view the alternate source.
 - e. If the problem persists, try using your decoder on a friend's working system or borrow a friend's decoder to see if it will work on your set up.
 - f. In some instances it can take between one and 24 hours for all of the decoder random access memory to fully discharge according to the manufacturer. If you've tried the above steps without success disconnect power for an extended period of time before attempting to acquire a signal again.
 - g. If all of these steps are completed and your decoder still doesn't work, your decoder has most likely failed. If the unit is under warranty you should follow the manufacturer's return procedures.

Note: If you replace your decoder please email the UA and TID number off of the back of the malfunctioning/defective unit to sathelpdma@mail.mil so we can remove it from the decoder database.

AFN 9865H settings for Intelsat 10-02

The C-band AFN signal on the Intelsat 10-02 satellite carries the AFN Direct to Home signal and covers Eastern South America, Europe, Africa and the Middle East. Access the 'tuning/preset' menu and enter the settings below only if you get your AFN signal from the Intelsat 10-02 satellite.



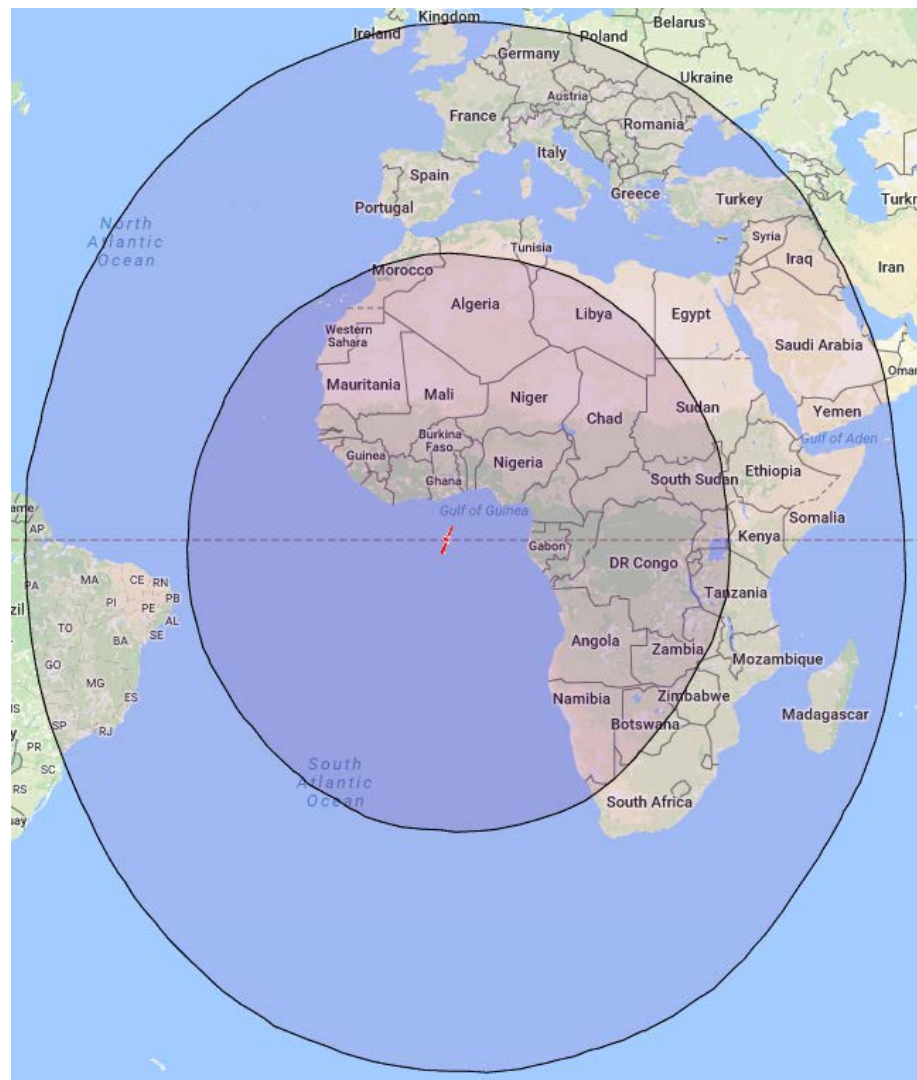
9865H Decoder Settings

Modulation Type: DVB-S	LO Select: Auto	LNB Power: 18-H
Downlink: 4.175	LO Freq 1: 5.15	DiSEqC: Disable
Symbol Rate: 28	LO Freq 2 ² : 0	DiSEqC Switch: Off
Net ID ¹ : 3	Crossover: 0	

You will need a right-hand circular feedhorn, 20° Kelvin Low Noise Blocker on your satellite dish to acquire this signal.
¹ Enter as 00003 ² Change this setting as needed to match the LO Freq2 on the satellite dish Low Noise Blocker

Highlight 'save' once all settings are verified and press the 'ok' button before exiting the menu.

Intelsat 10-02
Location: 1° West
Transponder: Global
Band: C-band



Note: The gradients inside the satellite footprint indicate signal strength in the various areas, which correlates to the size of satellite dish you will need. Signal strength is stronger in the darker areas and weaker toward the fringes.

AFN 9865H settings for Eutelsat 9B

The AFN Ku-band signal on the Eutelsat 9B satellite carries the AFN Direct to Home service and covers a wide area of Europe, Western Asia and Northern Africa. Access the 'tuning/preset' menu and enter the settings below only if you get your AFN signal from the Eutelsat 9B satellite.



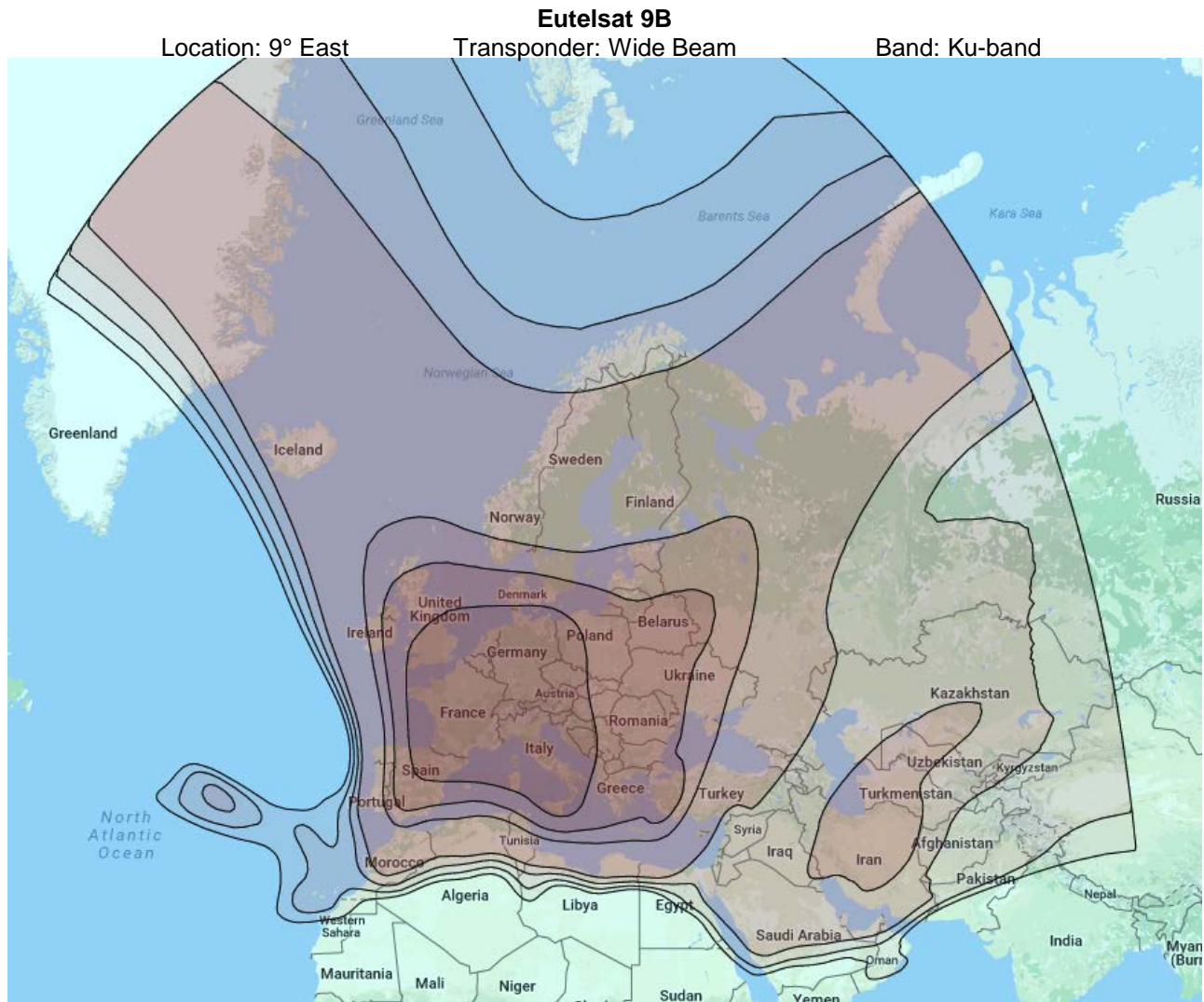
9865H Decoder Settings

Modulation Type: DVB-S	LO Select: Auto	LNB Power: 13-V
Downlink: 11.8042	LO Freq 1: 9.75	DiSEqC: Disable
Symbol Rate: 27.5	LO Freq 2 ² : 10.6	DiSEqC Switch: Off
Net ID ¹ : 158	Crossover: 11.7	

You will need a linear HDTV DVB-S2 compliant LNB with a range of 950-2150 Mhz, LQ Freq of 9.75 & 10.6, 13-18 volt 22 khz LNB for a .80 to 1.8 meter satellite dish to acquire the signal.

¹ Enter as 00158 ² Change this setting as needed to match the LO Freq2 on the satellite dish Low Noise Blocker

Highlight 'save' once all settings are verified and press the 'ok' button before exiting the menu.



Note: The gradients inside the satellite footprint indicate signal strength in the various areas, which correlates to the size of satellite dish you will need. Signal strength is stronger in the darker areas and weaker toward the fringes.

AFN 9865H settings for Koreasat 5

The Ku-band AFN signal on the Koreasat 5 satellite carries the AFN Direct to Home signal and mainly covers Japan, South Korea, and the Philippines. Access the 'tuning/preset' menu and enter the settings below only if you get your AFN signal from the Koreasat 5 satellite.



Highlight 'save' once all settings are verified and press the 'ok' button before exiting the menu.

9865H Decoder Settings

Modulation Type: DVB-S

Downlink: 12.59

Symbol Rate: 28

Net ID¹: 18

LO Select: Auto

LO Freq 1: 9.75

LO Freq 2²: 10.6

Crossover: 11.7

LNB Power: 13-V

DiSEqC: Disable

DiSEqC Switch: Off

You will need a linear HDTV DVB-S2 compliant LNBF with a range of 950-2150 Mhz, LQ Freq of 9.75 & 10.6, 13-18 volt 22 khz LNB for a .80 to 1.8 meter satellite dish to acquire the signal.

¹ Enter as 00018

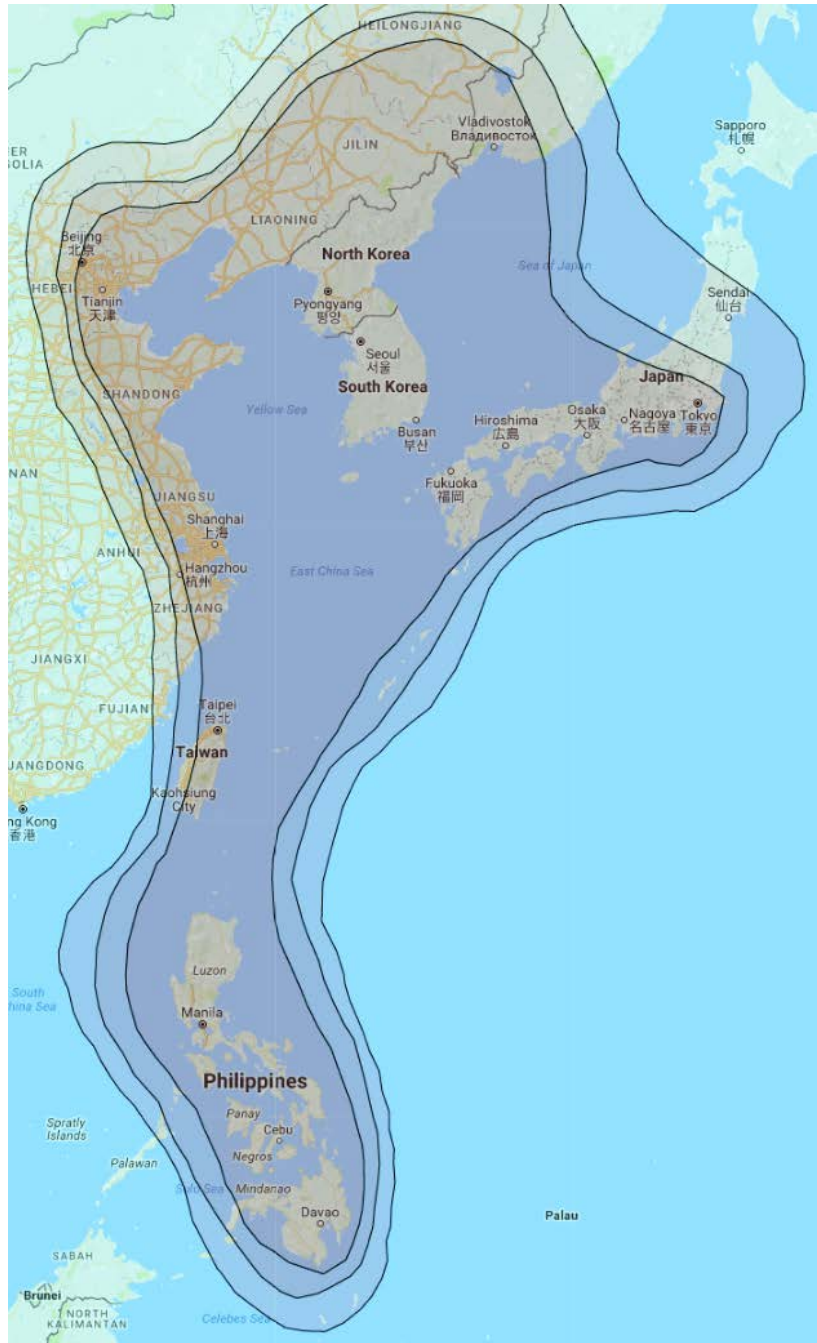
² Change this setting as needed to match the LO Freq2 on the satellite dish Low Noise Blocker

Korasat 5

Location: 113° East

Transponder: NE Asia Beam

Band: Ku-band



Note: The gradients inside the satellite footprint indicate signal strength in the various areas, which correlates to the size of satellite dish you will need. Signal strength is stronger in the darker areas and weaker toward the fringes.

AFN 9865H settings for Intelsat 18 DTH

The C-band AFN signal on the Intelsat 18 satellite carries the AFN Direct to Home signal and covers the Northern and Western Pacific Ocean and East Asia. Access the 'tuning/preset' menu and enter the settings below only if you get your AFN signal from the Intelsat 18 satellite Direct to Home signal.



9865H Decoder Settings

Modulation Type: DVB-S	LO Select: Auto	LNB Power: 18-H
Downlink: 3.75325	LO Freq 1: 5.15	DiSEqC: Disable
Symbol Rate: 28	LO Freq 2 ² : 0.0 or N/A	DiSEqC Switch: Off
Net ID ¹ : 19	Crossover: 0.0 or N/A	

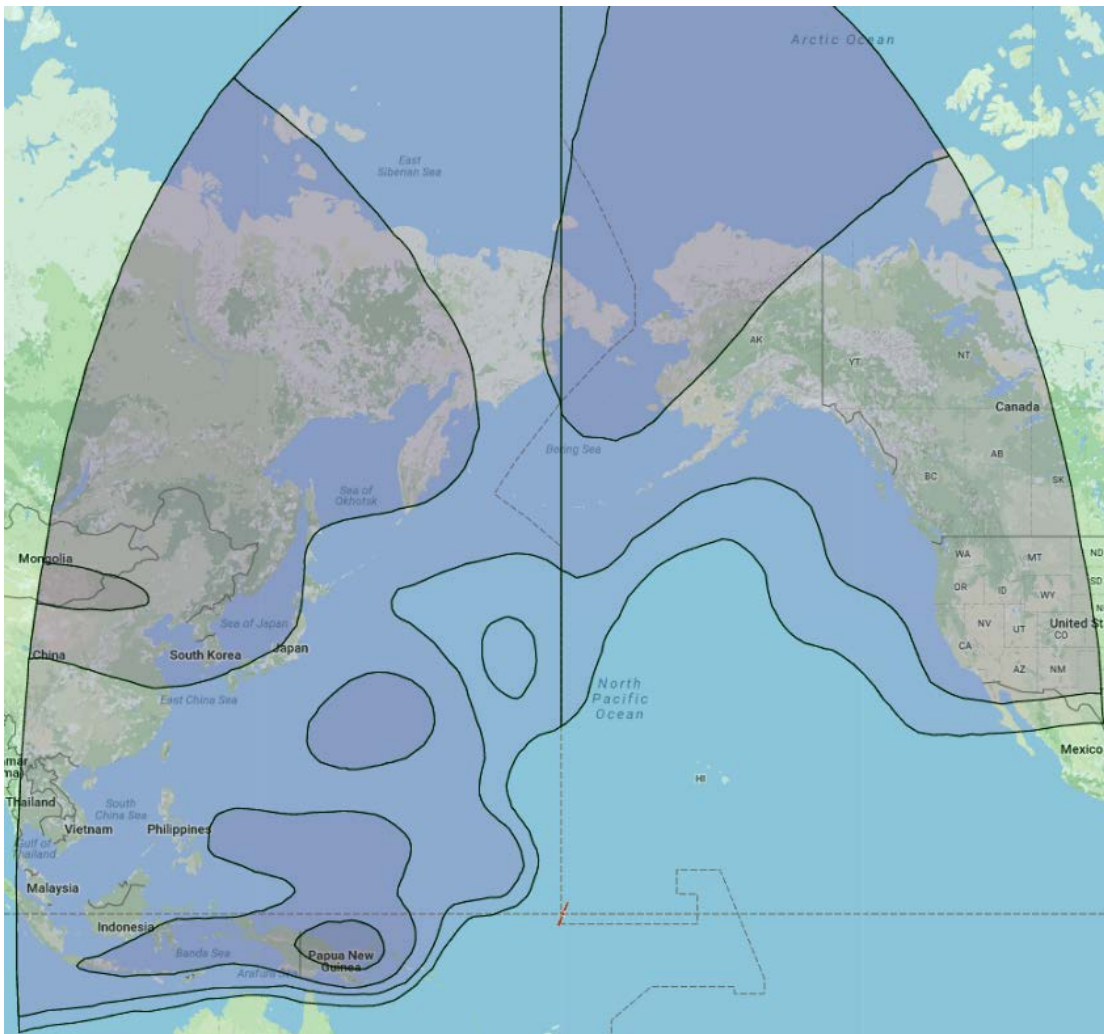
You will need a right-hand circular feedhorn, 20° Kelvin Low Noise Blocker on your satellite dish to acquire this signal.

¹ Enter as 00019 ² Change this setting as needed to match the LO Freq2 on the satellite dish Low Noise Blocker

Highlight 'save' once all settings are verified and press the 'ok' button before exiting the menu.

Intelsat 18

Location: 180° Transponder: North Hemi (NHCL) Band: C-band

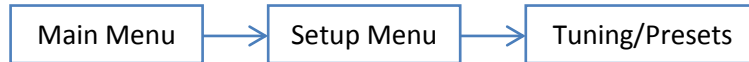


Note: The gradients inside the satellite footprint indicate signal strength in the various areas, which correlates to the size of satellite dish you will need. Signal strength is stronger in the darker areas and weaker toward the fringes.

AFN 9865H settings for Galaxy 16

The C-band AFN signal on the Galaxy 16 satellite carries the AFN Direct to Home signal and covers North and Central America and the Caribbean. Access the 'tuning/preset' menu and enter the settings below only if you get your AFN signal from the Galaxy 16 satellite.

Note: AFN service is not available in the United States, its territories or possessions and AFRTS will not approve activation of AFN-capable signal decoders in these areas.



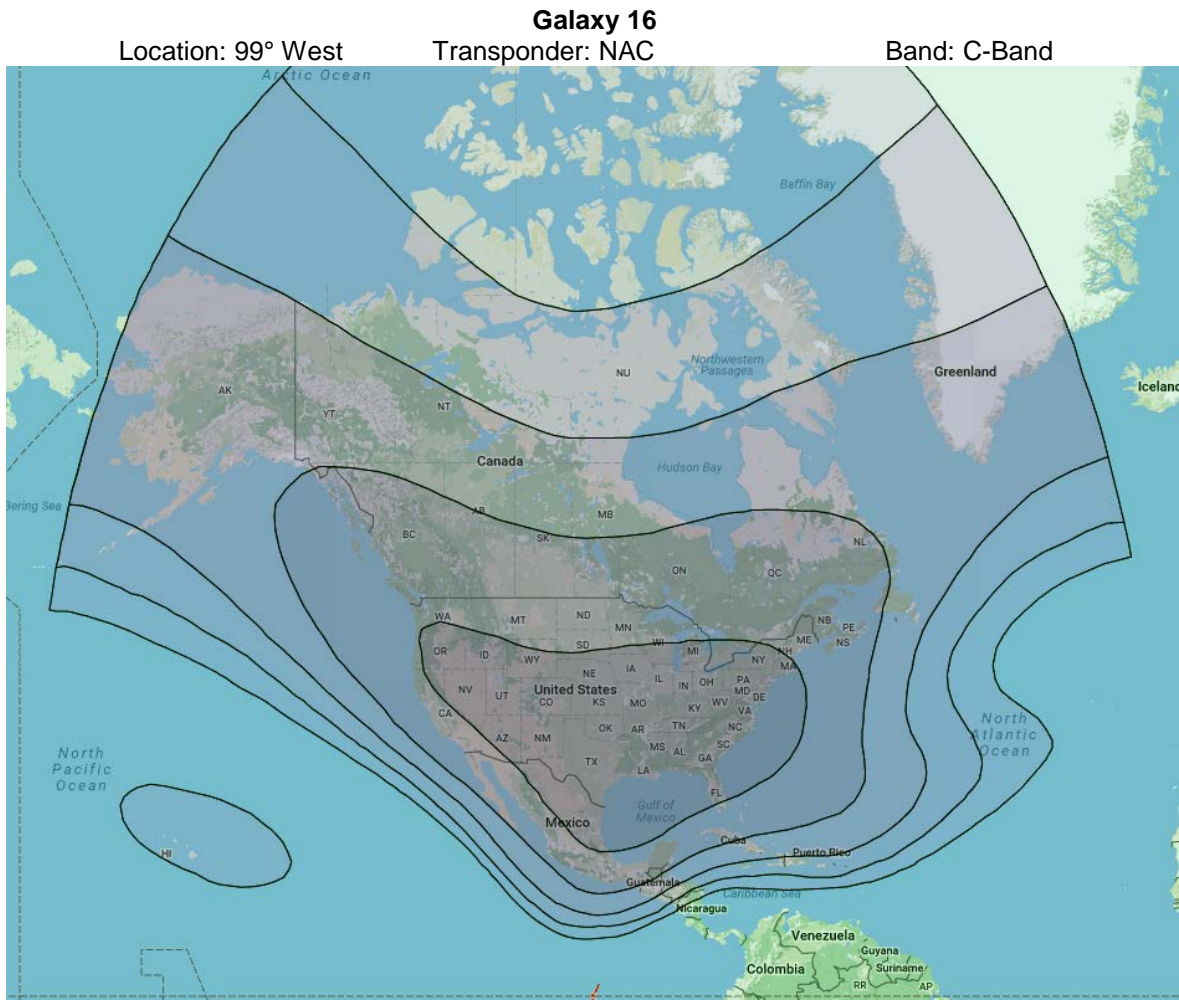
9865H Decoder Settings

Modulation Type: DVB-S	LO Select: Auto	LNB Power: 18-H
Downlink: 3.9000	LO Freq 1: 5.15	DiSEqC: Disable
Symbol Rate: 28	LO Freq 2 ² : 0.0	DiSEqC Switch: Off
Net ID ¹ : 11	Crossover: 0.0	

You will need a right-hand circular feedhorn, 20° Kelvin Low Noise Blocker on your satellite dish to acquire this signal.

¹ Enter as 00011 ² Change this setting as needed to match the LO Freq2 on the satellite dish Low Noise Blocker

Highlight 'save' once all settings are verified and press the 'ok' button before exiting the menu.



Note: The gradients inside the satellite footprint indicate signal strength in the various areas, which correlates to the size of satellite dish you will need. Signal strength is stronger in the darker areas and weaker toward the fringes.

AFN 9865H settings for Intelsat 35e DTS

The C-band Direct to Sailor AFN signal on Intelsat 35e covers the Atlantic Ocean Region. Access the 'tuning/preset' menu and enter the settings below only if you get your AFN signal from this satellite.



Highlight 'save' once all settings are verified and press the 'ok' button before exiting the menu.

9865H Decoder Settings

- Modulation Type: DVB-S
- Downlink: 4.126
- Symbol Rate: 3.68
- Net ID¹: 16
- LO Select: Auto
- LO Freq 1: 5.15
- LO Freq 2²: 0.0 or N/A
- Crossover: 0.0 or N/A
- LNB Power: 18-H
- DiSEqC: Disable
- DiSEqC Switch: Off

You will need a left-hand circular feedhorn 20° Kelvin Low Noise Blocker on your satellite dish to acquire this signal.

¹ Enter as 00016

² Change this setting as needed to match the LO Freq2 on the satellite dish Low Noise Blocker

Intelsat 35e

- Location: 34° West
- Transponder: Global
- Band: C-band



Note: The unique signal compression used on the DTS service enables most users to acquire a quality signal with a 1.5 meter dish regardless of their location within the footprint.

AFN 9865H settings for Intelsat 906 DTS

The C-band Direct to Sailor AFN signal on Intelsat 906 covers the Indian Ocean Region. Access the 'tuning/preset' menu and enter the settings below only if you get your AFN signal from this satellite.



Highlight 'save' once all settings are verified and press the 'ok' button before exiting the menu.

9865H Decoder Settings

- Modulation Type: DVB-S
- Downlink: 4.0935
- Symbol Rate: 3.68
- Net ID¹: 7
- LO Select: Auto
- LO Freq 1: 5.15
- LO Freq 2²: 0.0 or N/A
- Crossover: 0.0 or N/A
- LNB Power: 18-H
- DiSEqC: Disable
- DiSEqC Switch: Off

You will need a left-hand circular feedhorn 20° Kelvin Low Noise Blocker on your satellite dish to acquire this signal.

¹ Enter as 00007

² Change this setting as needed to match the LO Freq2 on the LNB

Intelsat 906

- Location: 64° East
- Transponder: Global
- Band: C-band



Note: The unique signal compression used on the DTS service enables most users to acquire a quality signal with a 1.5 meter dish regardless of their location within the footprint.

AFN 9865H settings for Intelsat 18 DTS

The C-band Direct to Sailor AFN signal on Intelsat 18 covers the Pacific Ocean Region. Access the 'tuning/preset' menu and enter the settings below only if you get your AFN signal from this satellite.



Highlight 'save' once all settings are verified and press the 'ok' button before exiting the menu.

9865H Decoder Settings

Modulation Type: DVB-S
Downlink: 4.173
Symbol Rate: 3.68
Net ID¹: 5
LO Select: Auto
LO Freq 1: 5.15
LO Freq 2²: 0.0
Crossover: 0.0
LNB Power: 18-H
DiSEqC: Disable
DiSEqC Switch: Off

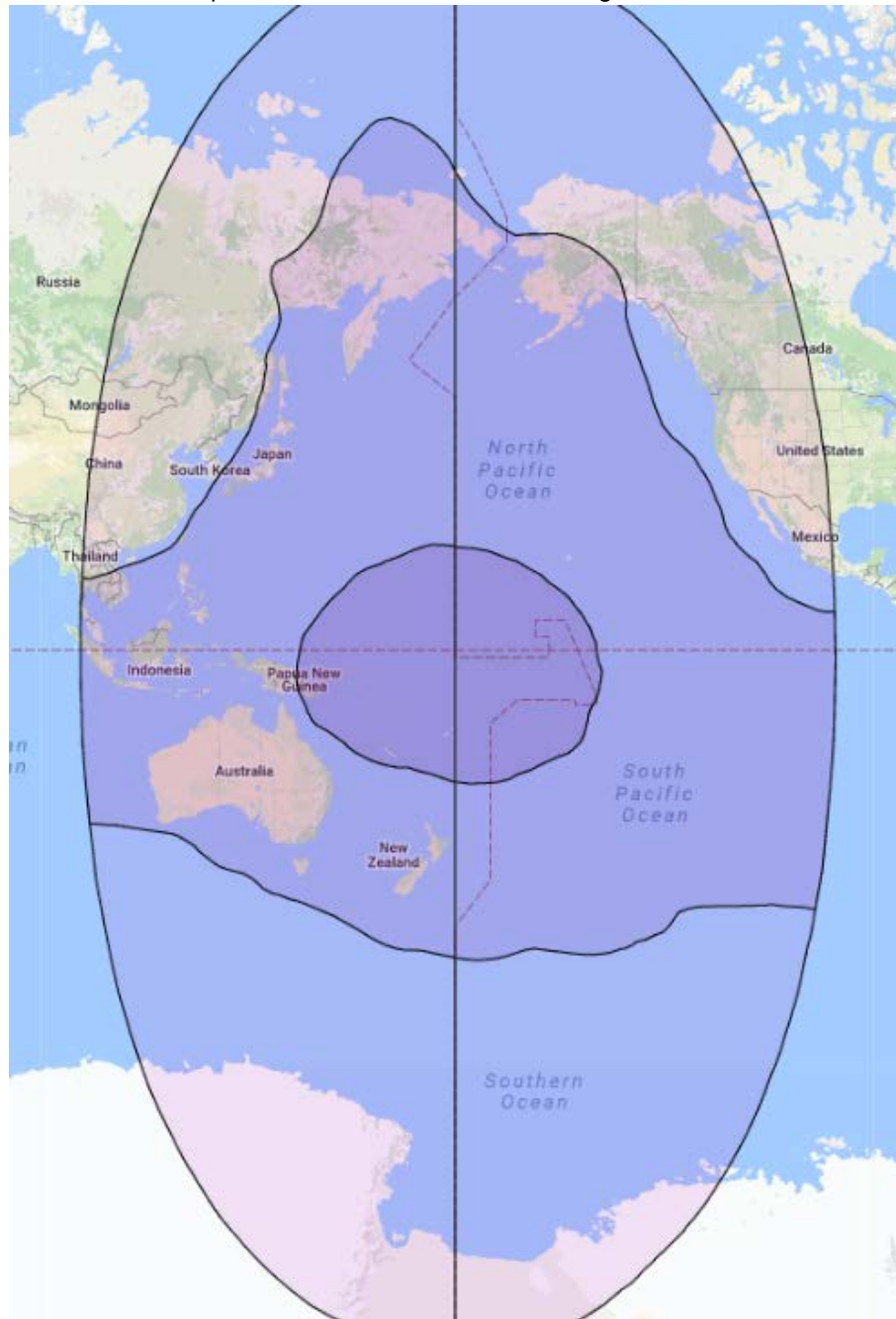
You will need a left-hand circular feedhorn 20° Kelvin Low Noise Blocker on your satellite dish to acquire this signal.

¹ Enter as 00005

² Change this setting as needed to match the LO Freq2 on the satellite dish Low Noise Blocker

Intelsat 18

Location: 180°
Transponder: Global
Band: C-band



Note: The gradients inside the satellite footprint indicate signal strength in the various areas. The unique signal compression used on the DTS service enables most users to acquire a quality signal with a 1.5 meter dish regardless of their location within the footprint.