



# Technical Bulletin

Date: March 21, 2016

## Subject: DISH Network Satellites Upgraded to 8PSK Modulation

### Products Affected

TracVision® C3, 4, 6, G4, G6, G8, M1DX, M3DX, M5, M7, and M9

### Problem Description

DISH Network® has converted their satellite transmission signals from QPSK modulation to a more efficient 8PSK format. This newer format improves the customer experience by providing more high-definition programming and additional content. The new format is **not** compatible with many older DISH Network receivers, and impacts the ability of some older KVH antenna systems to identify and track DISH Network satellites.

**IMPORTANT! KVH's latest generation of TracVision products (HD11, TV1, TV3, TV5, TV6, and TV8) are fully compatible with 8PSK format. For your convenience, the instructions for updating a TV-Series satellite library are provided at the end of this bulletin. For all other systems, refer to its User's Guide for instructions on updating the satellite library.**

### Problem Solution – TracVision M5, M7, and M9 Systems Equipped with an RF7 Board

In M5, M7, and M9 systems with an RF7 board installed, verify that the following tracking parameters are configured in the system.

Parameter	Satellite 110°W		Satellite 119°W		Satellite 129°W	
Polarization	LHCP	RHCP	LHCP	RHCP	LHCP	RHCP
Frequency	12414 MHz	12516 MHz	12326 MHz	12486 MHz	12501 MHz	12516 MHz
Symbol Rate	21500	21500	21500	21500	21500	21500
FEC Code	2/3	2/3	2/3	2/3	2/3	2/3
Network ID	0x1006	0x1006	0x1004	0x1004	0x1008	0x1008
Decoding Type	Turbo 8PSK	Turbo 8PSK	Turbo 8PSK	Turbo 8PSK	Turbo 8PSK	Turbo 8PSK

Update the tracking parameters as described on the next page.



## Updating Tracking Parameters

To update the tracking parameters, connect a laptop to the antenna's Maintenance port and use the @SATCONFIG commands as shown below (refer to the antenna's manual for details). These commands assume the antenna is configured for either DISH 1000/129 mode (A=119W, B=110W, and C=129W) or DISH 500 mode (A=119W and B=110W). If your antenna is configured for a different mode, substitute the appropriate satellite locations for your configuration.

### M5/M7 with RF7 Board

```
HALT
@DEBUGON
@SATCONFIG,A,53,12326,21500,23,0x1004,L,U,4
@SATCONFIG,A,53,12486,21500,23,0x1004,R,U,4
@SATCONFIG,B,52,12414,21500,23,0x1006,L,U,4
@SATCONFIG,B,52,12516,21500,23,0x1006,R,U,4
@SATCONFIG,C,54,12501,21500,23,0x1008,L,U,4
@SATCONFIG,C,54,12516,21500,23,0x1008,R,U,4
@SAVE,A
@SAVE,B
@SAVE,C
ZAP
```

### M9 with RF7 Board

```
HALT
@DEBUGON
@SATCONFIG,A,23,12326,21500,23,0x1004,L,U,4
@SATCONFIG,A,23,12486,21500,23,0x1004,R,U,4
@SATCONFIG,B,22,12414,21500,23,0x1006,L,U,4
@SATCONFIG,B,22,12516,21500,23,0x1006,R,U,4
@SATCONFIG,C,24,12501,21500,23,0x1008,L,U,4
@SATCONFIG,C,24,12516,21500,23,0x1008,R,U,4
@SAVE,A
@SAVE,B
@SAVE,C
ZAP
```

### HD11

Access the HD11 web interface and update the satellite parameters as shown in the table on the previous page.

***For systems not equipped with an RF7 board, and for all TracVision M1, M2, M3, C3, 4, 6, G4, G6 and G8 systems, contact KVH Technical Support.***

If you have any questions, please contact KVH Technical Support at +1 401 847-3327 or via email at [support@kvh.com](mailto:support@kvh.com).

## Updating the Satellite Library in a TV-Series System

Service providers occasionally change the tracking parameters of their satellites, necessitating an update to the data in the TracVision satellite library. You can update the system's satellite library to the latest version at any time by downloading the file from KVH's Update server and uploading it to the TV-Hub. When you update the library, the new version simply overwrites the previously installed version.

**IMPORTANT! With the exception of user-defined satellites, updating the satellite library overwrites any changes you have made to the satellite's tracking parameters. All parameters for preset satellites revert to their factory default settings.**

Use one of the following methods to update the satellite library:

### Using an Onboard Network with Internet Access

1. Connect your computer to the same network as the TV-Hub.
2. At the Updates page of the web interface, select the satellite library. Then select **Download Update**. This will download the latest version of the library file onto your computer.
3. Select **Install Update**. Then navigate to and select the library file (it has a .xml extension) saved on your computer. It will only take a few seconds for the update to complete.

### Using a SmartPhone or Tablet

If you have an Apple® iOS or Google™ Android™ smartphone or tablet, and your device has an Internet connection, you can use the TracVision TV/RV App to download the latest library file and upload it to the system. You can download the App for free from the Apple iTunes® App Store™ or Google Play Store.

### Using a Computer with Internet Access

If your computer has an Internet connection, you can use that connection to download the library file. Follow these steps:

1. Download the latest version of the library file onto your computer from the KVH website (go to [www.kvh.com/Support/Product-Support-Library/Software-Updates](http://www.kvh.com/Support/Product-Support-Library/Software-Updates)).
2. Once you have downloaded the file onto your computer, use the same computer to access the TV-Hub's web interface.
3. At the Updates page of the web interface, select the satellite library then select **Install Update**. Navigate to and select the library file (it has a .xml extension) saved on your computer. It will only take a few seconds for the update to complete.

