# Technical Bulletin

Date:          March 21, 2016

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

### Products Affected

TracVision® L3, S3, R1DX, R4, R5, R4SL, R5SL, and R6DX

### 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 (RV1 and A9) are fully compatible with 8PSK format. The instructions for updating the RV1 and A9 satellite library are provided at the end of this bulletin.**

### Problem Solution

The products affected will only be able to track DISH Network's 119°W satellite. Verify that the following tracking parameters are configured in the system.

| Parameter | Satellite 119°W | |
|---|---|---|
| Polarization | LHCP | RHCP |
| Frequency | 12530 MHz | 12632 MHz |
| Symbol Rate | 20000 | 20000 |
| FEC Code | 6/7 | 6/7 |
| Network ID | 0x0003 | 0x0003 |
| Decoding Type | DSS | DSS |

Update the tracking parameters as described on the next page.

If you have any questions about this problem or its solution, please contact KVH Technical Support at **+1 401 847-3327** or via e-mail at **support@kvh.com.**

## 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).

### L3, S3, R4, R5, R4SL, R5SL

```
HALT
DEBUGON
SATINSTALL,ECHO_119,NONE
@DEBUGON
@SATCONFIG,A,53,12530,20000,67,0x0003,L,U,2
@SATCONFIG,A,53,12632,20000,67,0x0003,R,U,2
@SAVE,A
ZAP
```

### R1DX and R6DX

```
HALT
@DEBUGON
@SATCONFIG,119W,12632,20000,67,0x0003,R,U,2
ZAP
```

## Updating the Satellite Library in an RV1 and A9 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).

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.