



## ANTENNA SOFTWARE UPDATE PROCEDURE



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11200 Hampshire Avenue South, Bloomington, MN 55438  
PH 952.922.6889 || FAX 952.922.8424 || [kingconnect.com](http://kingconnect.com)

In late 2015, DISH® began an effort to convert most of its satellite TV signals from QPSK encoding to a new 8PSK format. The new signals allow more content to be streamed through the same bandwidth and provide greater utilization of satellites. However, these signals cannot be decoded by many mobile satellite antennas or the older DISH Network satellite receivers including models 301, 2800, 3700, 3900, 4900, 1000/1500, 3000/3500, 4000/4500, 5000/5500, 501, 508, and 510 receivers.

Since 1998, KING has manufactured a variety of mobile satellite antennas that rely on the QPSK signal in order to identify satellites, so their operation will be affected by these changes from DISH. Other models manufactured by KING either do not rely on this type of information to lock on and identify the satellites, or they were designed with a special tuner that has the ability to identify the newer 8PSK signals from DISH, and therefore are not affected by these changes. We expect that DISH will continue to transmit QPSK encoded signals from at least a single transponder on each DISH satellite for some time, so most KING satellite antennas that rely on that signal can be programmed to look for the remaining QPSK signals by simply modifying the software.

The changes will impact antenna use with all service providers, not just DISH users. KING strongly recommends that DIRECTV® and Bell TV™ users also update their antenna software.

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DISH is a registered trademark of DISH Network L.L.C.  
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22337 Rev A, Antenna Software Update Procedure

## Section 2 **AFFECTED MODELS**

The following KING satellite antenna models will require software reprogramming via the KING #1844 keypad diagnostic tool (or) an update to an 8PSK compatible DVB board if within the serial number range noted.<sup>1</sup>

### **LEGACY (DISCONTINUED) ANTENNA MODELS**

#### **KING-DOME**

9704/9704-LP ..... s/n #611325 or lower  
9754/9754-LP ..... s/n #702321 or lower  
KD2200..... s/n #B06292 or lower  
KD3200..... s/n #C05888 or lower

**NOTE:** The following units cannot be reprogrammed with the keypad without first installing a software update. Contact KING for additional details.

9704.....609381 thru 610083  
9754.....701872 thru 702011

#### **VUQUBE**

VQ2000 ..... s/n #106-4989 or lower  
VQ3000 ..... s/n #107-1526 or lower  
V20 ..... s/n #104-1186 or lower  
V30 ..... s/n #105-1418 or lower

To reprogram one of the antenna models mentioned above, **follow the instructions on pages 4-5** to modify the transponder lookup table in your antenna's software.

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The following KING model antennas will require a software update via a USB thumb drive. A USB thumb drive with the updated software can be purchased from KING for \$20 or software can be downloaded from our website at [www.kingconnect.com](http://www.kingconnect.com) onto your own USB device.<sup>2</sup>

### **LEGACY (DISCONTINUED) ANTENNA MODELS**

VQ2100 ..... all serial numbers  
KD1500..... all serial numbers

### **CURRENT ANTENNA MODELS**

VQ4100 ..... serial numbers with 5th character of A or B<sup>1</sup>

**EXAMPLE: 084MB-00003**

└─ 5th character is B - needs update

To perform the software update for one of these antennas, **follow the instructions on pages 6-8.**

<sup>1</sup>Serial number can be found on the serial number tag on the outside of antenna unit.

<sup>2</sup>USB drive must have FAT32 File Format and be no larger than 16GB.

## Section 3 SOFTWARE REPROGRAMMING WITH KEYPAD

You must have the KING Diagnostic Keypad #1844 to reprogram the antenna unit. The keypad tool can be purchased from KING or an authorized KING distributor.

You do not have to remove the dome cover for this procedure.



Keypad #1844

1. Unplug the existing wall mount controller or hand held controller and plug in the keypad.

Wall Mount Controller



Hand Held Controller



Controller appearance may vary.

2. Turn on the keypad.



3. Determine current 2 digit provider code and record this number for step 5. Press \*24# (keypad displays current 2 digit provider code)

**WRITE THIS NUMBER DOWN!**

4. Using the keypad, follow the steps on the next page to change the transponder lookup table for the 110, 119 and 129 satellites.

**Make sure to complete steps 5 and 6 on next page after changing transponders!**



## SATELLITE 110

### Set satellite ID code for satellite 110:

\*96# - \*66# - \*88# - use up/down arrows to display 10 on keypad - \*25# - \*99#

### Modify transponder lookup table for satellite 110:

\*96# - \*66# - \*88# - use up/down arrows to display 21 on keypad - \*20# - \*12# - \*99#

\*96# - \*66# - \*88# - use up/down arrows to display 21 on keypad - \*20# - \*13# - \*99#

\*96# - \*66# - \*88# - use up/down arrows to display 16 on keypad - \*20# - \*14# - \*99#

\*96# - \*66# - \*88# - use up/down arrows to display 16 on keypad - \*20# - \*15# - \*99#

## SATELLITE 119

### Set satellite ID code for satellite 119:

\*96# - \*66# - \*88# - use up/down arrows to display 19 on keypad - \*25# - \*99#

### Modify transponder lookup table for satellite 119:

\*96# - \*66# - \*88# - use up/down arrows to display 15 on keypad - \*20# - \*12# - \*99#

\*96# - \*66# - \*88# - use up/down arrows to display 19 on keypad - \*20# - \*13# - \*99#

\*96# - \*66# - \*88# - use up/down arrows to display 14 on keypad - \*20# - \*14# - \*99#

\*96# - \*66# - \*88# - use up/down arrows to display 14 on keypad - \*20# - \*15# - \*99#

## SATELLITE 129

### Set satellite ID code for satellite 129:

\*96# - \*66# - \*88# - use up/down arrows to display 29 on keypad - \*25# - \*99#

### Modify transponder lookup table for satellite 129:

\*96# - \*66# - \*88# - use up/down arrows to display 21 on keypad - \*20# - \*12# - \*99#

\*96# - \*66# - \*88# - use up/down arrows to display 21 on keypad - \*20# - \*13# - \*99#

5. To complete the update, reprogram provider code to original number:  
\*96# - \*66# - \*88# - use up/down arrows to display original 2 digit provider code on keypad from Step 3 (previous page) - \*25# - \*99#
6. Turn off keypad. Unplug keypad and plug wall mount controller or hand held controller back in.

## Section 4 SOFTWARE UPDATE VIA USB DRIVE

**IMPORTANT!** Read static electricity warnings on page 8 before beginning.

### TO TURN POWER ON AND OFF TO UNIT:

#### UNITS WITH CONTROLLER:

TURN ON: Momentarily press POWER.  
(LEDs flash and COAX CONNECTION stays on.)

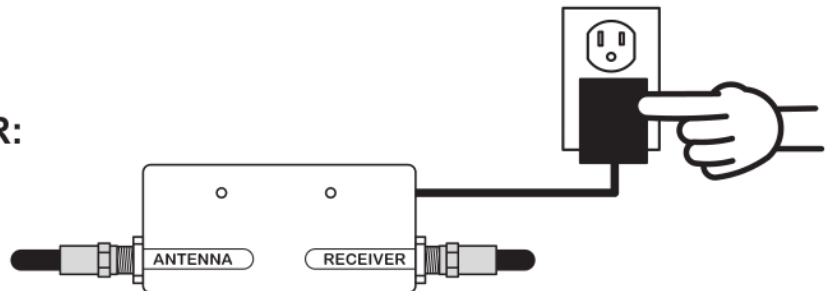
TURN OFF: Momentarily press POWER.  
(All LEDs turn off.)



#### UNITS WITH POWER INJECTOR:

TURN ON: Plug in power injector.

TURN OFF: Unplug power injector.

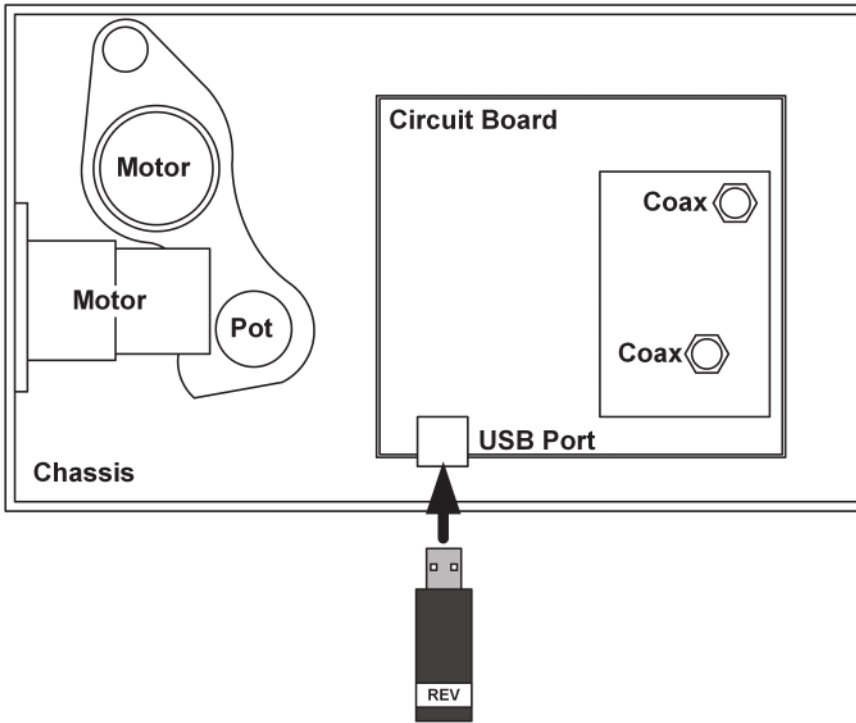


1. Turn power off to antenna unit.
2. Remove dome cover (see page 8 - read static electricity warnings).
3. Plug in USB drive (see page 7).
4. Turn power on to antenna.

Wait 5 minutes for software to download. Circuit board LEDs will flash, and COAX CONNECTION and ERROR LEDs will blink on the controller (if applicable).

5. Unplug controller or power injector from AC power outlet.
6. Remove USB drive.
7. Reinstall dome cover (see page 8).
8. Plug controller or power injector into AC power outlet.

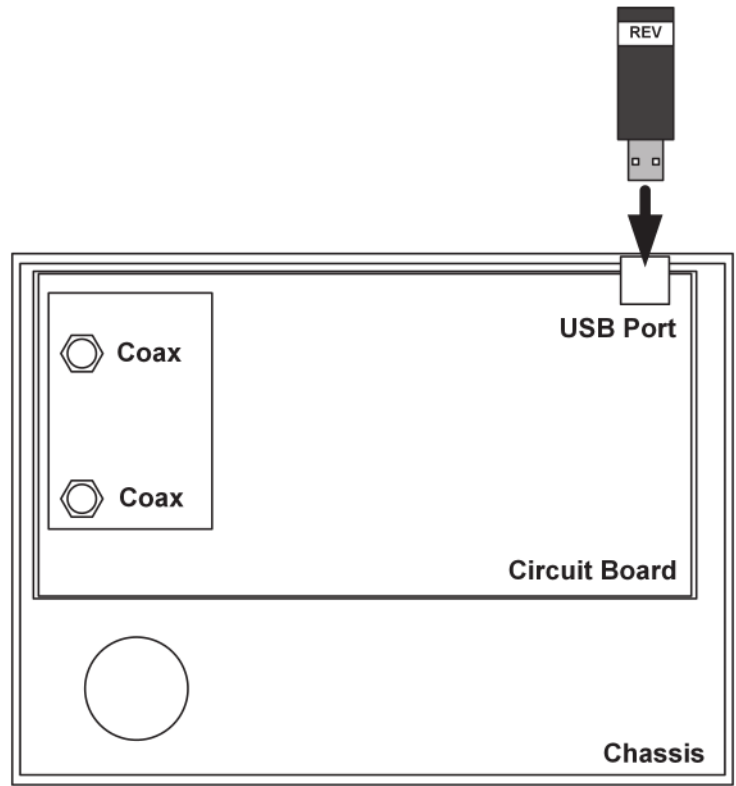
TOP VIEW OF CHASSIS WITH CIRCUIT BOARD



VQ2100



KD1500



BACK VIEW OF CHASSIS WITH CIRCUIT BOARD

## VQ2100

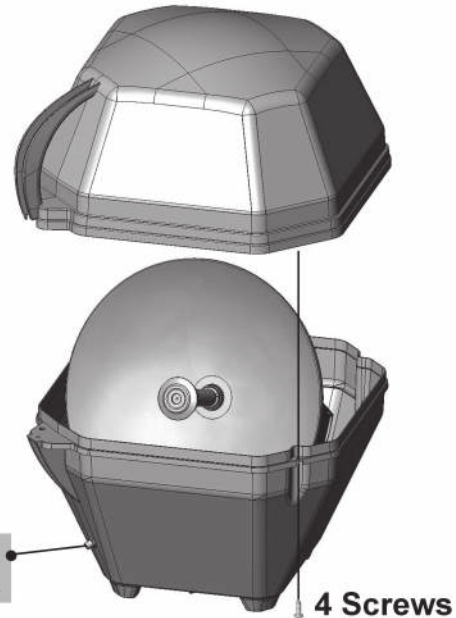


### WARNING! STATIC ELECTRICITY!

Static electricity will damage the internal circuitry of the antenna unit. Discharge static electricity by touching the METAL part of the external MAIN coax connection on the base of the antenna unit before touching any internal components.

Repeat this procedure if you leave and come back to the antenna unit.

Touch metal part of external MAIN connection to discharge static electricity!



4 Screws

## KD1500



### WARNING! STATIC ELECTRICITY!

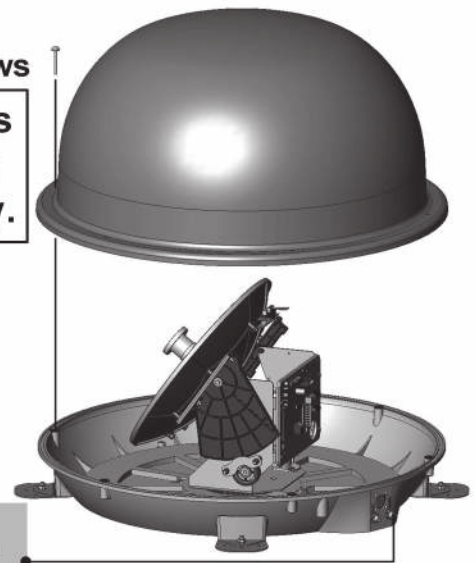
Static electricity will damage the internal circuitry of the antenna unit. Discharge static electricity by touching the METAL part of the external MAIN coax connection on the base of the antenna unit before touching any internal components.

Repeat this procedure if you leave and come back to the antenna unit.

Touch metal part of external MAIN connection to discharge static electricity!

6 Screws

Tighten screws until washers deform slightly.



## VQ4100



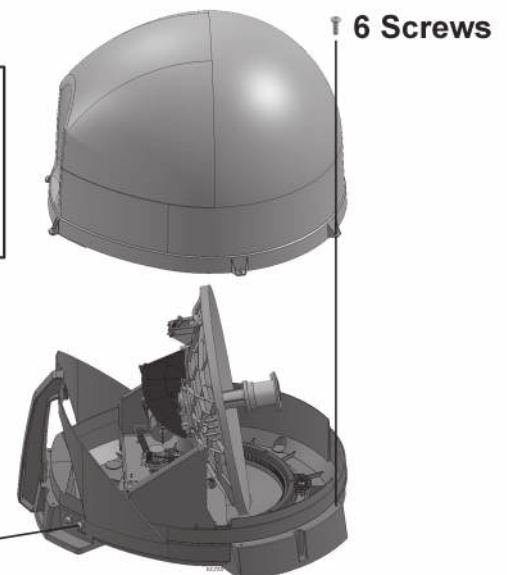
### WARNING! STATIC ELECTRICITY!

Static electricity will damage the internal circuitry of the antenna unit. Discharge static electricity by touching the METAL part of the external MAIN coax connection on the base of the antenna unit before touching any internal components.

Repeat this procedure if you leave and come back to the antenna unit.

Touch metal part of external MAIN connection to discharge static electricity!

Do not overtighten screws into plastic.



6 Screws