ECHOSTAR TECHNOLOGIES

EchoStar Technologies Corporation
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PRODUCT LAUNCH BULLETIN: ViP722 DVR

Introduction

ViP722 DVR is a dual-tuner, two-TV DISH Network satellite receiver compatible with the MPEG-4 and MPEG-2 compression standards. ViP722 DVR supports high-definition (HD) and standard-definition (SD) outputs for TV1, standard-definition outputs for TV2, provides DVR functionality for both TV1 and TV2, and includes one digital over-the-air tuner. Refer to *Quick Facts: ViP722 DVR* for additional information.

Considerations

The ViP722 DVR has these features in common with the ViP622 DVR:

- TV1 video is provided by two HD video outputs (HDMI digital audio/video and Component (YPbPr)) and two SD video outputs (S-Video and composite (RCA-type)). TV1 audio is provided by either left/right (RCA-type) or a digital optical audio output.

- An over-the-air tuner is included for TV1 which receives only digital over-the-air channels, not analog over-the-air channels. To watch analog over-the-air channels, the TV's tuner must be used.

- The Home Distribution output supports a modulated channel carrying TV1 programming in addition to the modulated channel that carries TV2 programming. When the system is locked, the password must be entered to enable the TV1 Out channel. Refer to *Connecting to the Remote TVs (TV1 or TV2)* in Chapter 12 of the User's Guide or *Quick Facts: TV1/TV2 Agile Output* for additional information.

- Dish**COMM** Technology is supported on the ViP722 DVR, allowing phone and other data to be sent between compatible receivers and devices over the home power lines. Refer to *Quick Facts: DishCOMM Technology* for additional information.

- A UHF Pro remote can be used for the TV1 location. Refer to *Upgrading TV1 IR to UHF Pro* in the *Installation Reference Handbook 2007*.

- Two USB 2.0 ports are included: one on the front panel and one on the back panel. These ports can be used for multimedia features similar to those of ViP622 DVR, including transferring photo files to the receiver.

- One Ethernet port is included on the back panel.

The ViP722 DVR has the following additional features:

- Increased recording capacity provides SD recording up to 350 hours, HD recording up to 55 hours, or a combination of the two.

- Supports high-definition video on demand.

- Connect an external hard disk drive for expanded storage capacity. Refer to *Quick Facts: DVR External Hard Disk Drive Storage* for more information (feature added to ViP622 DVR in software version L441).

- A broadband Internet connection can be used for updating Pay-Per-View purchase records and fulfilling the phone connection requirement. Refer to *Quick Facts: Connecting the Receiver to the Home Network* and *Home Network Installation Instructions* for additional information (feature added to ViP622 DVR in software version L441).

Initial Installation Tips

- Software for the ViP722 DVR is *not* available from the 110° satellite location. To download software for the ViP722 DVR, you must have signal from one of these satellite locations: 61.5°, 119°, 121°, or 148°.

- Use Remote Control 1 (IR) indicated with the green 1 key to perform the initial receiver installation. Similar to the ViP622 DVR, Remote Control 2 (UHF Pro) is preset at the factory to a random remote address between 1 and 16, and is set up to operate the receiver in a later step of the installation. See *Installation Instructions* on page 2.

- Remote Control 2, indicated with the blue key, has a small A/B switch under the battery cover that changes the remote to a different UHF frequency. The default setting for this switch is the "A" position. Only change this setting to avoid UHF interference from other devices. Changing the frequency between A or B requires re-synchronizing the receiver to the remote control by pressing RECORD on the System Information screen.

- Default output resolution for the HD outputs is 480p. During installation, change the resolution to 720p or 1080i as appropriate for the connected HDTV.

- The default mode of the ViP722 DVR is Dual Mode, supporting independent viewing on two TVs.

- Do not connect a phone line to the Ethernet port. All phones in the household will stop working if a phone line is accidentally plugged into this port.

Installation Instructions for ViP722 DVR

Follow the steps below to install a ViP722 DVR. Detailed instructions for some steps below are found in the receiver User's Guide. All current LNBF and switch configurations are supported by the ViP722 DVR with factory software. A DISH Pro Plus Separator can be used if the receiver is directly connected to a DISH Pro Plus LNBF or switch.

Note: Do not use Remote Control 2 to operate the ViP722 DVR until after the software download. Install batteries in Remote Control 1 now.

1. **Mount Dish**: Assemble and mount the satellite dish(es) using the dish antenna's installation instructions.

2. **Peak Dish Using Peaking Meter**: Peak each dish for maximum signal strength.

3. **Run and Connect Cable(s)**: Connect cable(s) from the dish to either the receiver or the switch, and then from the switch to the receiver. Connect cable(s) to the TV2 location(s).

    a. Connect all LNBFs and switches together using the instructions for these devices, and connect both of the ViP722 DVR's SATELLITE IN ports to the same switch, LNBF, or DISH Pro Plus Separator. Attach the two blue Satellite In stickers from the receiver User's Guide to the two Satellite In cables near the receiver.

    b. Connect a cable from the receiver's HOME DISTRIBUTION output to the existing wall cable outlet. Attach the yellow Home Distribution sticker to this cable near the receiver.

    c. If installing an over-the-air (OTA) antenna, connect the OTA antenna cable to the ViP722 DVR's OVER THE AIR ANTENNA IN port. Attach the black Over-the-Air Antenna In sticker from the receiver User's Guide to the OTA antenna cable near the receiver.

4. **Connect ViP722 DVR to HDTV (TV1)**: Connect the receiver to the nearby HDTV using the TV1 audio/video connections. Power on the HDTV, turn on the satellite receiver, and confirm you can see a picture from the receiver.

    a. If you cannot see a picture, ensure the HDTV is on the correct input and capable of displaying 480p, which is the default resolution of the ViP722 DVR through the HD outputs. See the user's guide that came with the HDTV for instructions.

    b. If you still cannot see a picture, temporarily connect the composite (RCA-type) TV1 outputs to the nearby HDTV, and change the HDTV to the appropriate input to see a picture.

5. **Make Additional Connections**: Attach the remote control antenna and an active phone line to the ViP722 DVR. If a broadband home network is available, the receiver can be connected to the network using Ethernet or a HomePlug-to-Ethernet Adapter. Refer to *Quick Facts: Connecting the Receiver to the Home Network* and *Home Network Installation Instructions* for detailed steps.

    Note: If it is not possible to connect an active phone line or Internet connection to the ViP722 DVR, when activating the receiver after the software download, have the "Programming Access Fee" added to the customer's account. A Dish**COMM** Network allows compatible receivers to share one receiver's phone connection. To create a Dish**COMM** Network, refer to *Create a DishCOMM Network* on page 4.

6. **Check Switch**: Run a Check Switch test. From the Point Dish screen, select **Check Switch**, then **Test** (if the receiver is not already on the Point Dish screen, access by pressing MENU on the remote control, selecting **Installation** (1), then **Point Dish** (1)). Make sure that the results show the correct LNBF(s), switch, and satellite locations for the installation, and that the results match for Satellite Tuner 1 and 2.

7. **Software Download**: Take a software download by selecting **Done** from the Point Dish screen and selecting **Yes** on the next screen. The software download takes approximately 30 minutes to complete.

8. **Address ViP722 DVR to Remote Control 2**: After the software download is complete, the receiver displays a pop-up message asking you to press RECORD on Remote Control 2. Install batteries in Remote Control 2 and press RECORD, which places the receiver and Remote Control 2 on the same remote address.

9. **Check Switch**: Run a second Check Switch test. Make sure that the results show the correct LNBF(s), switch, and satellite locations, and that the results match for Satellite Tuner 1 and 2.
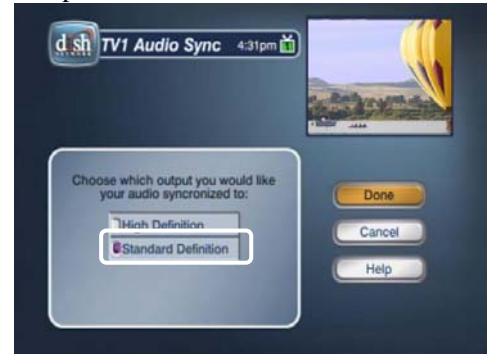
10. **Customize ViP722 DVR's HDTV Picture Settings**: Refer to *Connecting to the Nearby TV (TV1)* in Chapter 12 of the User's Guide. Go to the HDTV Setup menu by pressing MENU on the remote, selecting **System Setup** (6), then **HDTV Setup** (8).

   a. Select an HD resolution (720p or 1080i) supported by the HDTV under TV Type.

   b. Select the correct Aspect Ratio for the HDTV, then select **Done**. See the user's guide that came with the HDTV if you do not know what resolution or aspect ratio setting to use.

   Note: If you had to temporarily connect composite cables to get a picture on the HDTV, change the HDTV back to the correct input and resolution for the receiver's HD output.

11. **TV1 Audio Sync**: The default setting is for TV1 audio outputs to be synchronized with the HD video outputs. If using the SD video outputs (S-Video, RCA or coaxial) for viewing of TV1 programming, set the receiver to synchronize the TV1 audio to the SD video outputs.

   a. Go to the TV1 Audio Sync menu by pressing MENU on the remote, selecting **System Setup** (6), **Installation** (1), then **TV1 Audio Sync** (7).

   b. Select **Standard Definition**, then select **Done**.

12. **Set Up Over-the-Air (OTA) Antenna**: Refer to *Connecting Over-the-Air Antenna* in Chapter 12 of the User's Guide. When the receiver is in Dual Mode, digital OTA broadcasts can only be viewed at the TV1 location. If you plan to connect an OTA antenna for reception of digital OTA channels:

   a. Peak the OTA antenna using a signal meter appropriate for digital OTA broadcasts. Refer to www.antennaweb.org for assistance in choosing an antenna, digital stations in the area, and compass orientation. Stations outputting at a high power level may require that an attenuator be installed between the OTA antenna and the receiver's OVER THE AIR ANTENNA IN port.

   b. Go to the Local Channels menu by pressing MENU on the DISH Network remote, selecting **System Setup** (6), then **Local Channels** (9). You can select **Scan Locals** to let the receiver find digital over-the-air channels or **Add Locals** to add them manually.

   c. When you are finished adding digital over-the-air channels, select **Done**.

   Note: The ViP722 DVR supports display of only digital over-the-air channels in the EPG. Analog over-the-air channels can be viewed using the TV's tuner. For TVs connected using the HOME DISTRIBUTION output (TV1/TV2 Agile Output), the over-the-air antenna needs to be connected to the TV distribution equipment. The FCC requires that you install appropriate equipment between the over-the-air antenna and the satellite receiver to prevent you from accidentally retransmitting DISH Network programming. The Super Home Node is the only EchoStar-approved device supporting this type of installation. See the *FCC Compliance* section in the Appendix of the User's Guide for additional information.

13. **Customize Display of HD Channels in Program Guide**: To choose how HD satellite channels display in the Program Guide, select **Chan Display** (in the Local Channels menu accessed by pressing MENU, selecting **System Setup** (6), then **Local Channels** (9)).

   ▪ Choose an option for Local Sat Channels to change how satellite-delivered locals are displayed:

     — **HD Priority**—HD channels display at the local station's channel number; if HD version is not available, the SD version is displayed.

     — **SD Only**—only SD versions of channels display at the local station's channel number.

     — **HD and SD (default)**—both HD and SD local channels appear below channel 100 at the local station's channel number.

- – **Disable**—HD and SD local channels are only listed in the four-digit channel range.
  - ▪ Choose an option for Dish**HD** Channels to change how other HD satellite channels display:
    - – **Enable**—HD satellite channels are displayed next to the SD channel number in the Program Guide.
    - – **Disable**—HD satellite channels are displayed only in the four-digit channel range (primarily above 9400) in the Program Guide.

14. **Set Up ViP722 DVR for TV2(s):**
   a. Connect the remote TV(s) to an existing wall cable outlet and power on the TV(s).
   b. Find three side-by-side channels on the remote TV(s) that show no video (they show snow, static, etc., instead). These three channels must be in the 21-69 range if your TV(s) will be set in Air Mode or in the 73-125 range if using Cable Mode.
   c. Tune the remote TV(s) to the middle channel of the side-by-side channels you found and note the mode (air or cable) the TV is in.
   d. Back at the HDTV, go to the Modulator Setup menu by pressing MENU on Remote Control 1, selecting **System Setup** (6), **Installation** (1), then **Modulator Setup** (5). Set the TV2 Out mode and channel to the same channel as you set on the remote TV(s), then select **Done**.
   e. Verify that you have a good picture on the remote TV(s). If not, you may need to change the cable connections on the splitter that sends the TV signal throughout the house. Make sure that the HOME DISTRIBUTION port is connected to the input of the splitter, and that the remote TV(s) is connected to an output of the splitter. Attach the TV2 sticker on or close to the remote TV(s), and write on the sticker the channel the TV needs to be on to view satellite programming.
   f. In the *How to Watch TV on TV2* section of the included TV2 Quick Reference Guide, write down the TV2 Out channel, and if applicable, the VCR channel and whether the VCR needs to be on or off.

      Note: To display TV1 programming on the HOME DISTRIBUTION output, follow the steps above and enable TV1 Out using the Modulator Setup screen, setting TV1 Out to the same mode (air or cable) and at least two channels away from TV2 Out. If TV1 has locks set, you will need to enter the password to enable TV1 Out. Set the remote TV(s) to the same mode (air or cable) and channel as the TV1 Out setting in the Modulator Setup screen. Refer to *Connecting to the Remote TVs (TV1 or TV2)* in Chapter 12 of the User's Guide for additional information.

15. **Program TV Mode and Limited Mode as Needed**: Program each remote control to operate the TV. If you want to program the TV in Limited Mode to send only power and volume commands, use the steps listed in *Turning Limited Mode On and Off* in Chapter 10 of the User's Guide.

16. **Recover Button**: Program the RECOVER button for Remote Control 2 to the same channel as the remote TV, using the steps listed in *Programming the Recover Button for Remote Control 2* in Chapter 10 of the User's Guide. Confirm the RECOVER button works for each remote control and TV.

17. **Create a DishCOMM Network**: Go to the Dish**COMM** Setup screen by pressing MENU, selecting **System Setup** (6), **Installation** (1), then **DishCOMM Setup** (8). Refer to *Quick Facts: DishCOMM Technology* for additional information.
   a. Select **Add** to go to the Add Device screen. Enter the Receiver ID or ID numbers from all devices that will be added to the Dish**COMM** Network.
   b. Select **Done** to save the changes, or select **Test** to test the Dish**COMM** Network.

      Note: If a Dish**COMM** Network already exists, enter this receiver's ID using the Dish**COMM** Setup screen of a receiver already on the Dish**COMM** Network.