Hopper Receiver Installation

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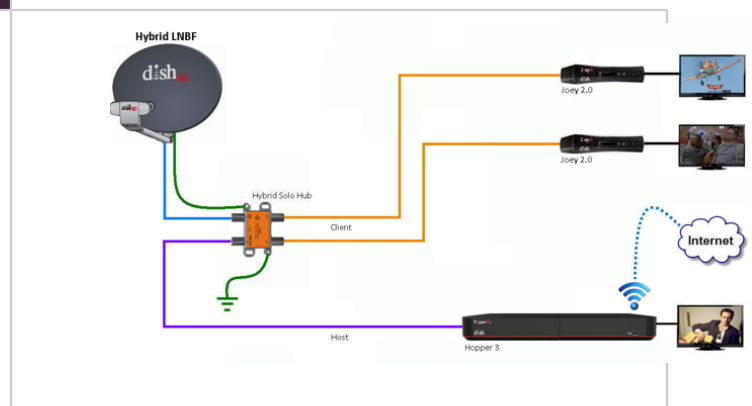
HOPPER 3

- For information regarding the Hybrid LNBF, refer to LNBFs.
- Use only the equipment that is listed on the work order for a Hopper 3 installation
  - Hopper 3 can only be installed with DISH pro Hybrid (DPH) equipment
  - Hopper 3 must be connected to port 1 on the DPH LNBF
  - Hopper 3 requires 3GHz cable to be used for the Host line
  - Joey 2.0, 4K Joey, and Wireless Joeys can be used with Hopper 3. Joey 1.0 is not compatible with Hopper 3.
- Single Messenger cable coming from the DPH LNBF must be connected to Port 1 in a Hopper 3 installation
  - The DPH Duo Hub will not be used in Hopper 3 installations
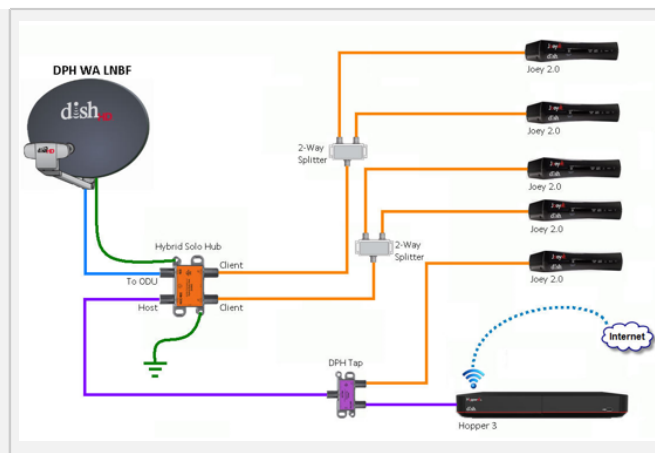
Hopper 3 Installation Scenarios

Hopper and 2 Joeys

Hopper and 5 Joeys

Two-way splitters off of the client lines and a DPH tap are used to open up additional installation possibilities and maximize the standard configuration to five Joeys and one Hopper 3 for a total of six TVs

Hopper 3 Installation FAQs

Can a Super Joey be included in a Hopper 3 installation?

No. The Super Joey is not compatible in a Hopper 3 installation

What components are required in a Hopper 3 installation?

DPH components are required.

How many Hopper 3s are allowed in an installation?

Just one Hopper 3 is allowed per installation.

How many Joeys can a Hopper 3 support?

The standard configuration allows for a maximum of five Joeys.

Does an installation of a Hopper 3 take the same amount of time as a Hopper 2?

There are fewer connection points in a Hopper 3 installation, so it is a more efficient, streamlined process.

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HOPPER 2 AND HOPPER

- Hopper host receivers connect to Joey client receivers through Nodes via coaxial cables. Hopper host receivers can share any content with any Hopper or Joey receivers installed in the system.
- Up to three Joey client receivers supported
- One Super Joey client receiver supported
- Only connects via a TO HOST port (host line)

Hopper 2 and Hopper Installation Scenarios

For detailed installation diagrams, visit Hopper Receiver Installation Diagrams
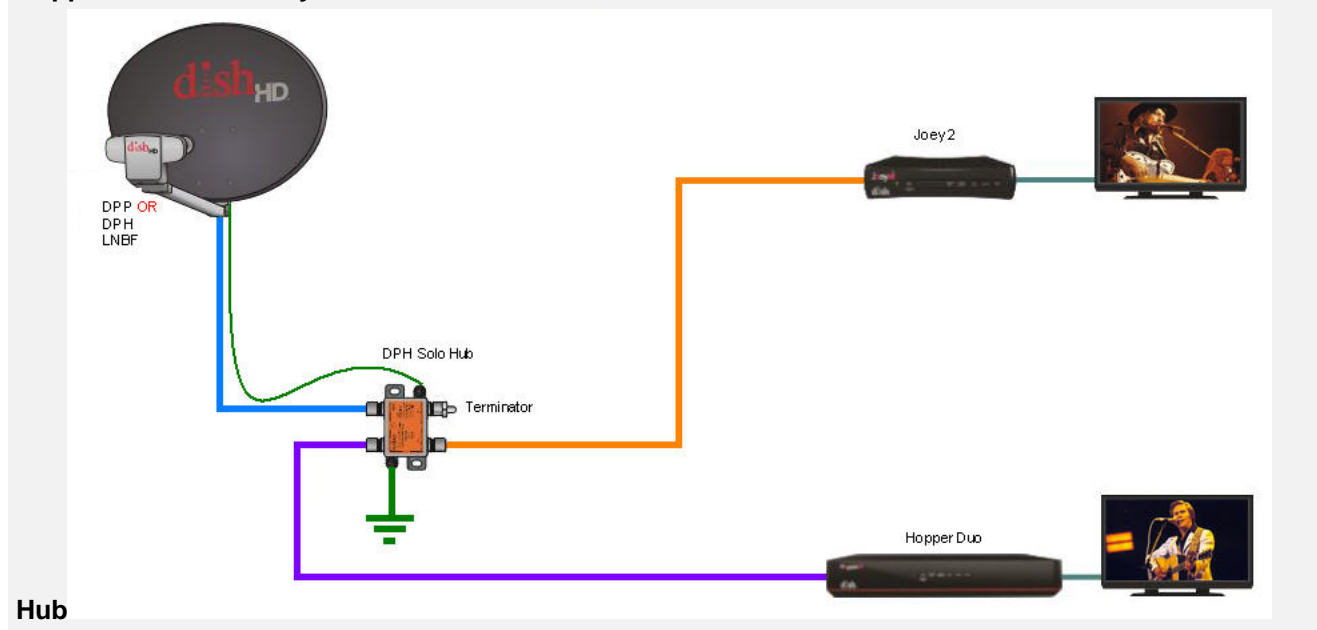
HOPPER DUO

- Hopper host receiver connects to Joey client receiver through Nodes via coaxial cables. Hopper host receiver can share any content with any Joey receiver installed in the system.
- Only one Joey client receiver allowed (Joey 1.0, 2.0, 3.0, Wireless, or 4K)
- Super Joey client receiver is NOT supported
- Only connects via a TO HOST port (host line)
- May be connected to a DPP or DPH LNBF or switch
- Maximum of 200' of coax between:
  - Hopper Duo and the farthest LNBF
  - Hopper Duo and Joey
- A DPH Solo Hub may ONLY be connected to a DPP LNBF/Switch
- A DPH Tap may be used on the Host line to connect a Joey or HIC
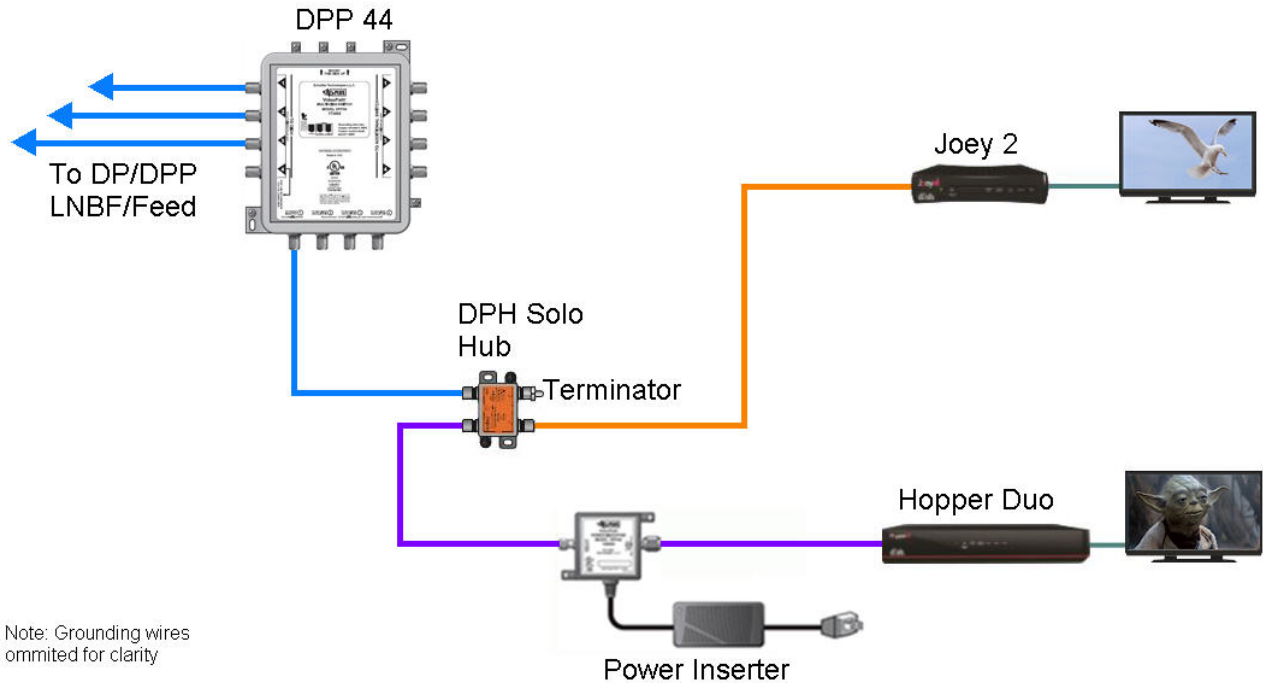- Terminate any unused client ports

Hopper Duo Installation Scenarios

For detailed installation diagrams, visit Hopper Receiver Installation Diagrams

Hopper Duo and 1 Joey with DPH Solo

Hub

Hopper Duo and 1 Joey with DPP 44

Hopper Duo Installation FAQs

Will Hopper Duo be preloaded?
At launch a group of Hopper Duo will not be preloaded and will take a software download in the initial install wizard. The software version on these receiver is called "Factory Software" and the second digit is always a zero.
Long term Hopper Duo will have software preloaded to increase install speed. Preloaded receiver can be identified by the software version printed on the outside sticker.

Can a DPH 42 be used with a Hopper Duo?
Yes, a Hopper Duo can be connected to a DPH 42 in an MDU installation or if the antenna configuration necessitates the use of a DPH 42. A DPH Solo Hub is used to provide a Joey connection point.

Can a DPP switch such as a DPP 44 or DPP 33 be used to connect a Hopper Duo?
Yes, any DPP LNBF or switch will support Hopper Duo. A DPH Solo Hub is used to provide a Joey connection point.

Why does the Hopper Duo label say "Reman"?
The Hopper Duo is an all new receiver but the hard-drive is refurbished. Because of this the label states that it is a "Reman" model. The refurbished hard drive has been tested to provide an optimal customer experience.

JOEY 2.0

Compatibility

Joey 2.0s will be installed the same way and appear identical as Joey 1.0s. However, it is crucial to know which Joey is compatible with which receiver.

Joey 2.0 is not compatible with all Hoppers as they are not in the same receiver family as Joey 1.0. As always, it is best to complete the installation based on what is listed on the work order. Compatibility is as follows:

	Joey 2.0	Joey 1.0
Hopper 3	Required	N/A
Hopper 2	Available*	Required
Hopper	N/A	Required

*Requires Work Order Modification

Hopper 3
- Must be installed with Joey 2.0. Joey 1.0 is not compatible

Hopper 2
- Joey 1.0 is preferred and will appear on all Hopper 2 work orders
- Joey 2.0 is compatible, but will require a WO Modification in order to activate on a Hopper 2 account

Hopper
- Joey 2.0 is not compatible with Hopper 2K

Differentiating the Two

If a Joey that is not authorized on the account is attempted to be activated, the following error will display in Oracle Field Service Cloud (OFSC): "Equipment activation failed. Please check equipment info and re-attempt via mobility device. Unexpected model type and/or quantity. Please review Equipment Required and try again." If this error is received, ensure you are activating the proper Joey or contact DASH to ensure the work order was properly modified.
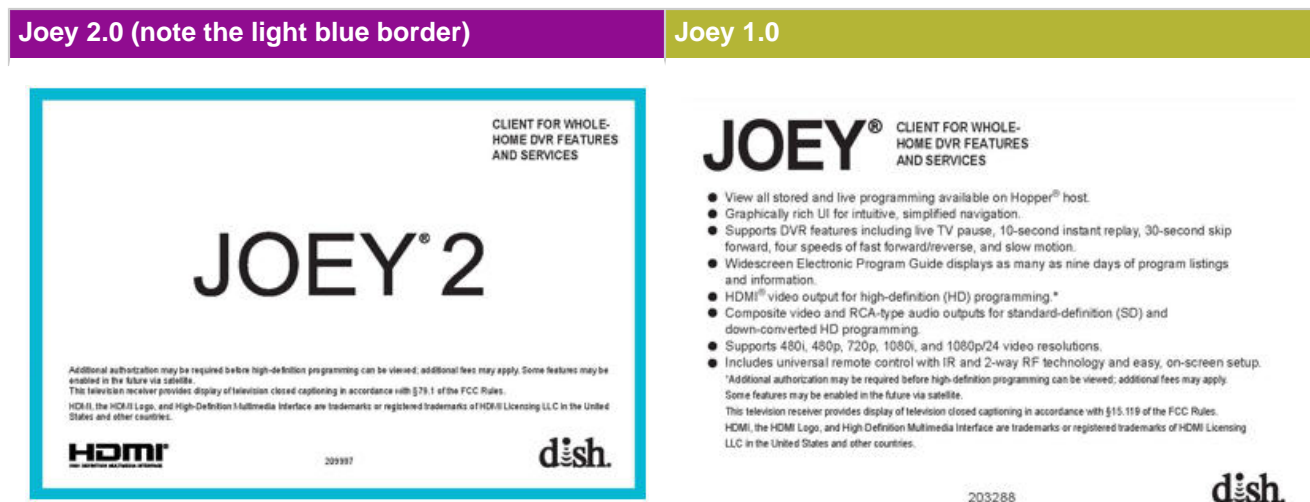
Since the two Joeys appear identical to one another, it is important to look at the Contents and Features label and the part number to determine which generation Joey you are installing.

The part numbers for the Joeys are:
- Joey 2.0 New: 207186 (with the 52.0)
- Joey 2.0 Remanufactured: DN007600 (with the 52.0)
- Joey 1.0 New: 187894
- Joey 1.0 Remanufactured: DN007689 and DN003316

The contents and Features labels for the Joeys are:

Joey 2.0 (note the light blue border)	Joey 1.0

Joey 2.0 Installation Diagrams

For detailed installation diagrams, visit Receiver Installation Diagrams - Joey. (Note: Joey = Joey 2.0 or Joey 1.0 in that document)

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WIRELESS JOEY

Wireless Joey Installation Instructions

Determine Device Placement
- Wireless Joey Access Point (WAP) ideally placed at the Hopper location
- May be installed at a location closer to Wireless Joeys using Hopper Internet Connector (HIC)
- Both WAP and Wireless Joey must be positioned vertically for optimal signal transmission
- For larger homes (+4,000 square feet), it may be necessary to use Level Quality Indicator (LQI) Testing to determine ideal placement of Wireless Joey and WAP

1. 1. Press and hold SAT until all lights illuminate
   2. Release SAT
   3. Press and hold INPUT for four seconds
   4. Release INPUT, remote will beep and light up (2+ lights illuminated indicates adequate signal. If less than two light illuminate, relocate WJAP and Wireless Joey closer together, a HIC may be necessary.)
   5. Press SELECT to exit LQI mode

Before Connecting the Wireless Access Point or Wireless Joey

- Power on and complete Hopper wizard all the way to the authorization step
- Software for Wireless Joey and Access Point is stored on the Hopper

Wireless Access Point Setup

1. Connect Wireless Joey Access Point to Hopper or HIC with Ethernet
2. Green light blinks, software will begin downloading
3. Wireless Joey Access Point reboots when download is complete
4. From the Hopper Menu, access Settings > Network Setup > Wireless Joey Access Point and confirm WAP is detected and software version appears

Wireless Joey Setup

1. Connect Wireless Joey to TV with HDMI and power on
2. Complete Install Wizard on Wireless Joey
3. Verify Wireless Joey signal is consistently at 45 or above

Install Wizard Steps

1. Press SELECT on front panel to link to WAP
2. Press WPS button on WAP
3. Wireless Joey links to WAP
4. Software automatically downloads
5. Name location
6. Set Video Resolution
7. Link to desired Hopper

Rules

- Three Wireless Joeys and one Wireless Access Point allowed per account
- Wireless Joey signal must be consistently at 45 or above for reliable operation

Troubleshooting

Low Signal	Loss of Function
- Reposition WAP and Wireless Joey away from other electronic devices - Reposition WAP and Wireless Joey closer together - Use longer Ethernet cable to position WAP closer to the Wireless Joey - Place WAP closer to the Wireless Joey(s) by using an HIC	Unplug WAP and Wireless Joey then power on to re-establish connections

Wireless Joey Installation Scenarios

For detailed installation diagrams, visit Receiver Installation Diagrams - Joey.

Wireless Joey Installation FAQs

Which receiver models are compatible with the Wireless Joey?
Hopper 3, Hopper 2, Hopper, Super Joey, and Joey.

How many Wireless Joeys can a Subscriber have on their account?
Four Wireless Joeys can be activated on a single account.

How many Wireless Joeys are supported by the Wireless Joey Access Point?
Three Wireless Joeys may be linked to a single Wireless Joey Access Point.

What is the maximum distance that a Wireless Joey can be placed from the Wireless Joey Access Point?
A home up to 4000 square feet constructed with conventional wood frame and drywall should have no problem operating the Wireless Joey.

Does the Subscriber need Wi-Fi to use the Wireless Joey?
No, the Wireless Joey Access Point creates a dedicated 802.11ac network for the exclusive use of the Wireless Joey(s).

Is an internet connection required to use the Wireless Joey?
An internet connection is not required to operate a Wireless Joey however it's always desirable to connect the Hopper system to the internet to take full advantage of all features.

Does the Wireless Joey receive signal using Bluetooth?
Bluetooth is not used for video/audio transmission. The wireless Joey uses a private 802.11ac network created by the Wireless Joey Access Point to transmit HD video/audio. The network that the Wireless Joey uses is separate from the Subscriber's home network used to access the internet on devices such as computers and tablets.

What signal level is required on the Wireless Joey for reliable operation?
Signal on the Wireless Joey must be consistently at 45 or above for continuous, reliable operation

What action should be taken if signal is not consistently at 45 on the Wireless Joey?
The Wireless Joey and Wireless Joey Access Point should be repositioned away from other devices and moved closer together. A longer Ethernet cable or a Hopper Internet Connector may be necessary to relocate the Wireless Joey Access Point.

How many tuners does the Wireless Joey have?
None, The Wireless Joey utilizes tuners from the Hopper or Super Joey the same way that a standard Joey does.

Why is there an Access Point/Client switch on the back of the Wireless Joey Access Point?

The switch must be set to Access Point for normal operation. The Client setting was designed to be used when two Wireless Joey Access Points are used together to extend the MoCA network, currently this configuration is not supported but may be in the future.

How does the Wireless Joey download software?

The Wireless Joey and Wireless Joey Access Point download software from the Hopper. For this   reason the Hopper must be at the last step in the install wizard before setting up the Wireless Joey Access Point or the Wireless Joey.

How long does it take to install a Wireless Joey?

It takes about 16 minutes to install a Wireless Joey. The Wireless Joey Access Point takes about 4 minutes to set up and download software. The Wireless Joey takes about 12 minutes from power on to watching live video.

Can existing Hopper Subscribers get a Wireless Joey?

Yes, an existing Subscriber can order a Wireless Joey at dish.com or through the call center and have it shipped to them with the Wireless Joey Access Point for self installation.

What are the Subscriber charges for a Wireless Joey?

There is a one-time fee of $50 to purchase the Wireless Joey Access Point and the Wireless Joey monthly fee is $7, the same as a standard Joey.

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SUPER JOEY

Installing a Super Joey

Follow these steps to install the Super Joey. The Hopper and standard Joeys should still be installed in accordance with the IJA.

1. Run RG-6 cable from LNBF to "To LNBF" port on integrator
2. Connect integrator's "To Advanced Client Port" to Super Joey's Coax port via RG-6 cable rated to 2150 MHz
3. Connect "To HVN" port on integrator to client port on either splitter or solo node
4. Bond integrator to solo node with 10 gauge ground wire
5. Verify Hopper is connected to the Internet and bridging is turned on to share the benefits of connectivity with every receiver in the system
6. During Customer Education, point out the two extra tuners provided by the Super Joey on the TV Activity Screen

Downloading Software and Completing Install Wizard

- Power on and complete Hopper wizard all the way to the authorization step (don't authorize yet)
- Power on Super Joey and start wizard
- Power on all remaining Joeys and start wizard
- Verify that the Super Joey has reached the authorization step (last step) in the wizard
- Authorize Hopper, Super Joey, and all Joeys through Smart Mobility Device or CSC Agent

Super Joey Requirements

- Super Joey only works with a single Hopper system
- Super Joey only works with a solo node; do not install with a duo node
- A Super Joey can be used on a system of 2-5 TVs
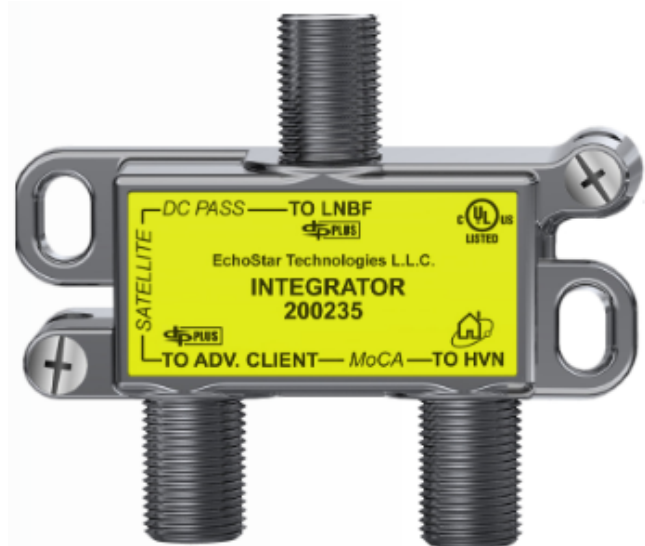 - 5 TV Installation: 1 Hopper, 3 Joeys, 1 Super Joey

Cabling and Device Requirements

- Super Joey must be connected to integrator with RG-6 cable rated to 2150 MHz
- Maximum of 2 inline devices (taps, splitters, HIC) between any two Hopper/Joey/Super Joey receivers
  - Integrator and node do not count towards 2-device limit
- Use a splitter with the fewest ports needed; try not to leave unused ports on a splitter

Installing the Integrator

- Integrator must be used to connect Super Joey to a DPP LNBF or switch and a port on the MoCA Home Video Network
- Integrator is approved as a grounding device to bond to the solo node
- If integrator is installed on the interior of the home and cannot be bonded to the node, ground-block must be installed on the cable feeding from the DPP LNBF/Switch to the integrator
  - If ground-block is used, it must be bonded to the solo node with 10-gauge ground wire

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MoCA Troubleshooting

- Verify all devices and components have been connected in accordance with the cabling and device requirements
- Run a limit scan with a jumper to bypass the node to check signal strength
- Check MoCA signal from the Hopper Menu Settings > Network Setup > Whole Home
  - Identify receivers with weak MoCA signals from this menu
- Inspect cables and connectors along the cable run to the receivers with weak MoCA
  - Verify cable rating is appropriate for the receiver (i.e. RG-6 2150 MHz for Super Joey)
  - Replace damaged or corroded cables and connectors
  - Verify the connectors are properly prepped and torqued to 30 in. lbs

Super Joey Installation Diagrams

For detailed installation diagrams, visit Receiver Installation Diagrams - Joey.

Super Joey Installation FAQs

Which receiver models are compatible with the Super Joey?

Hopper, Hopper 2, and Joey

Will a Super Joey work with a duo node?

No. A solo node is required to use a Super Joey. Duo nodes can only be installed with two Hopper systems.

How does the Super Joey connect to broadband Internet?

Like the Joey, the Super Joey is connected to broadband through the Hopper. The Hopper must be connected to broadband using either direct Ethernet, Wi-Fi, or HIC.

Can existing Hopper Subscribers get a Super Joey?

Yes, an existing Subscriber with a single Hopper can add a Super Joey. However, the limit is one Hopper, three Joeys, and one Super Joey for a total of five TVs.

How many TVs will the Super Joey service?

Although the Super Joey has two tuners, it is designed to connect to one HDTV with an HDMI cable. However, the two tuners may be utilized by any user in the Hopper-Joey system.

Can the Integrator also be used as a grounding device?

Yes. Since the Super Joey requires a separate RG-6 cable from the LNBF to the Integrator, the Integrator is approved for use as a grounding device.

Can you run a check-switch test on the Super Joey?

No. As with the standard Joey, check-switch is not an active feature on the Super Joey. Access the whole-home screen to verify good MoCA communication with the other devices on the whole-home network.

Can you connect a satellite signal meter such as the Super Buddy to the coaxial cable at the Super Joey location to check signal strength?

Yes. To verify satellite signal strength, a meter may be connected at the Super Joey location to run a limit scan; the Integrator, however, does not need to be bypassed.

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4K JOEY

Important Information

- 4K Joeys must be wired to the 4K TV directly
    - When used with a Hopper 2, this may require swapping the Hopper location with a Joey location to accomodate 4K viewing
    - If swapping Hopper 2 location, technicians must verify that the new Host line is rated to 3 GHz
- When installing a 4K Joey with a Hopper 3, 4K Joeys will be used primarily as the second 4K TV with a Hopper 3 system. (Hopper 3 has 4K capability and can broadcast 4K content.)
- 4K Joeys are not compatible with the Hopper 2000
- 4K Joeys require the new UI to be present on the Hopper 2 in order to properly download the 4K Joey software
    - In most instances, the Hopper 2 will already have the new UI prior to your arrival at the appointment
    - In the event that a Hopper 2 has not updated to the new UI (or in the event of a same-day work order), complete the following steps to force the new UI to the Hopper:
    1. From live TV, press the Menu button
    2. From the Menu screen, select Settings
    3. From the Settings screen, select Diagnostics
    4. From the Diagnostics screen, select Updates
    5. While on the Updates screen, press the remote buttons in the following sequence to start the UI download process: Play > Play > Recall. This process will only work on a Hopper 2 with current software.
- Ensure that you are doing complete Subscriber education for the new UI with the 4K Joey
- Make sure to use the 4K HDMI input on the TV
    - Refer to TV manual for details
- Installation rules are the same as existing Hopper system installs, including the same cable length limitations and number of devices allowed in signal path
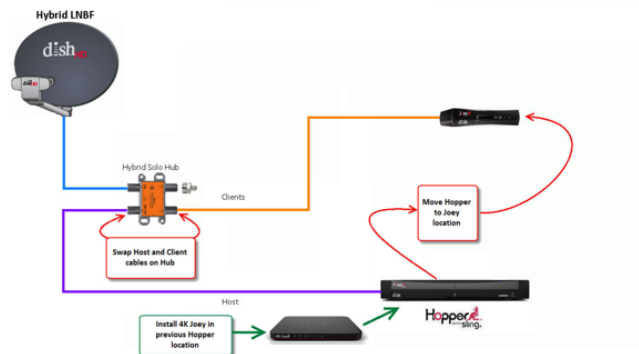- Remember to set the 4K Joey resolution to the 4K setting in the Install Wizard

4K Joey Installation Scenarios

Here are three installation scenarios you may encounter. Where there is a swap, the orange line indicates cable rated to 3GHz:
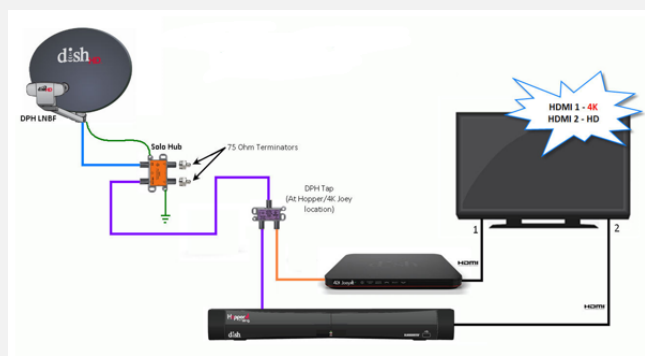
Hopper Receiver Installation
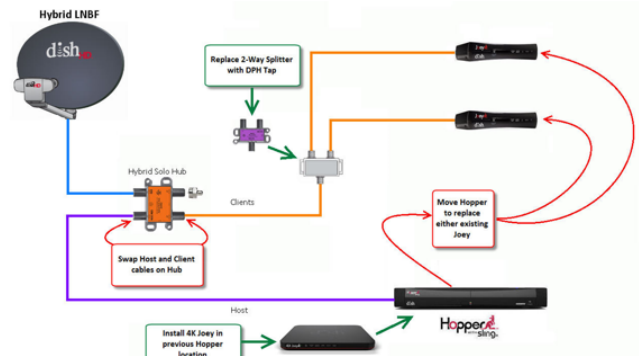
Scenario 1:

Hopper 2
1 Joey
4K Joey Upgrade
1 4K TV

Scenario 2:

Hopper 2
4K Joey co-located at the Hopper location

Scenario 3:

Hopper 2
2 Joeys
Joeys split line
4K Joey Upgrade

JOEY 1.0

Joey 1.0 Installation Diagrams

For detailed installation diagrams, visit Receiver Installation Diagrams - Joey. (Note: Joey = Joey 2.0 or Joey 1.0 in that document)

Before beginning the below steps, ensure the Hopper has progressed all the way to the last step (authorization) in the wizard. For maximum efficiency, please follow the steps as shown below:

Joey: Download Initiation

Note: Steps may vary depending on the version of the install wizard

1. Attach the coaxial cable
2. Plug the Joey in to power
3. Pair the remote by pressing the SAT button on the Joey remote
4. Name the location by selecting the location name
5. Select Next to initiate download and move on to next Joey if multiple Joeys are being installed

Joey: Setup Completion

1. Set and save the video resolution by selecting the appropriate setting, then selecting Next
2. Link receivers by selecting the appropriate Hopper 2 from the Whole-Home screen
3. Select Watch Live TV
4. Program the remote to the TV
5. Verify MoCA Signal in System Status Box C (bars should be green)
    1. Menu > Settings > Diagnostics > System Status
6. Verify that the subscribed channels display (local, Package, Premiums)

Repeat the above steps for each additional Joey.

After Joey: Setup Completion

Access the TV Activity Screen (red color button) at the Hopper 2 and verify the EPG download is complete by ensuring Guide Update is no longer displaying in the status boxes.

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