

Installation Rules

Only 2 components can be between any 2 Hopper Joey System receivers

- Nodes and 75 Ohm Terminators do not count for this restriction
- Minimize number of devices for the installation

Nodes must be connected to a DPP LNBF or DPP switch

Do not install any non-Hopper Joey System components after the Node

Maximum 200-foot cable length from LNBF to farthest Hopper

Maximum 200-foot cable length between any Hopper and Joey

Host lines must use RG-6 coaxial cable

Client lines can use either RG-59 or RG-6 coaxial cable

Taps can only be installed on host lines

When using 2 Taps, the entire Hopper Joey System must use RG-6 coaxial cable

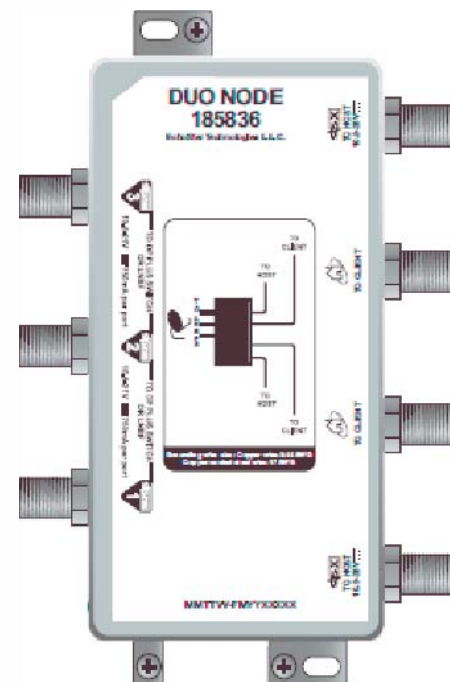
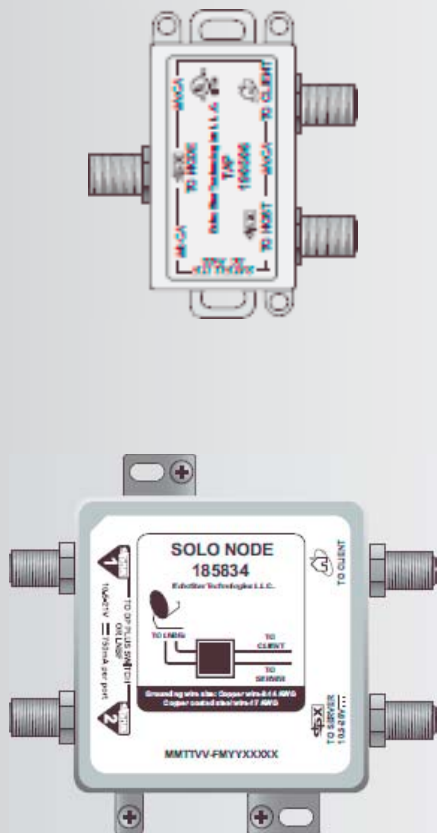
All unused ports must be capped with 75 Ohm Terminators

When using a power inserter, it must be installed before the Node

- Connect ports 2 - 4 on the switch to the Node and port 1 to the power inserter

Install the Hopper at the primary TV location; it supports PiP

Always install, download, and activate the Hopper before plugging in any Joey receivers



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.

- Host receiver (main receiver)
- 3 tuners
- 2 Terabyte hard drive (Up to 250 hours of HD program recording)
- Up to three Joey client receivers supported
- Supports PrimeTime Anytime (PTAT)
- Only connects via a TO HOST port (host line)
- HDMI, RCA, and digital audio outputs are supported
- Ethernet port for broadband connectivity is supported
- Uses the 40.0 UHF 2G remote
 - o Colored shortcut buttons for easy menu access
 - o Increased distance and faster communication
- Picture-in-Picture and Blockbuster @Home supported
- USB port can be used for Wi-Fi adapter, external hard drive, or Sling adapter

Joey

Joey client receivers connect to Hopper client receivers through Nodes via coaxial cables. Joey client receivers can request any content from any Hopper installed in the system.

- Client receiver
- Requires a Hopper to work
- Must be paired with a Hopper
- Only connects via a TO CLIENT port (client line)
- Compact size is ideal for placement out of view
- Same user interface as a Hopper
- HDMI, RCA, and digital audio outputs are supported
- Internal remote antenna
- BLOCKBUSTER @HOME supported
- Uses the 40.0 UHF 2G remote
 - o Colored shortcut buttons for easy menu access
 - o Increased distance and faster communication
- Ethernet and USB ports are for future functionality

Solo Node

A Solo Node is the nearest component to the DPP LNBF or DPP switch in the Whole-Home HD DVR system. Nodes manage the transfer of programming between a Hopper and a Joey.

- Requires two DPP satellite inputs
- One Hopper supported
 - o One TO HOST port
- One TO CLIENT port supported
- Can be used to ground the DISH system

Duo Node

A Duo Node is the nearest component to the DPP LNBF or DPP switch in the Whole-Home HD DVR system. Nodes manage the transfer of programming between a Hopper and a Joey.

- Requires three DPP satellite inputs
- Up to two Hopper host receivers supported
 - o Two TO HOST ports
- Two TO CLIENT ports supported
- Can be used to ground the DISH system

Tap

Taps are used to create a host line and client line from a single host line off of a Node. Think of it as creating a line for a Hopper and Joey from a single host line.

- Limited to one Tap per installation
- One TO NODE port supported
- One TO HOST port supported
- One TO CLIENT port supported

Splitters

Standard 2-way or 3-way splitters can only be used on a client line to support multiple Joey client receivers off of a single client line.

Example: Using a 2-way splitter from the TO CLIENT port on a Tap to support two Joey client receivers.

- Only use splitters on client lines
- 2-way or 3-way splitters are supported

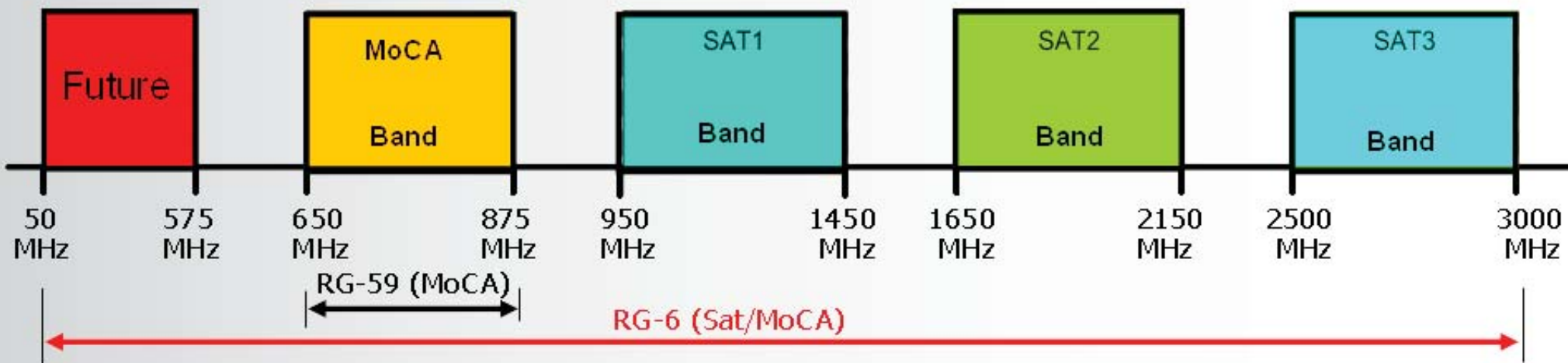
75 Ohm Terminator

Use 75 ohm terminators on any unused ports in a Hopper Joey System installation to prevent RF leakage or outside RF interference.

Hopper Internet Connector (HIC)

The HIC makes the Internet connection between the customer's router and the entire Hopper Joey System.

- Only use a HIC on client lines
- One Ethernet port supported
 - o Used to connect to the customer's router
- One Home Video Network port supported
 - o Carries the Internet connection to the entire Hopper Joey System



*DISH Methods**Details*

1

Direct Ethernet Connection to Hopper

- Direct Ethernet cable connection from router/switch to Hopper is always the preferred connection if the router is nearby
 - Hopper manages the features that are IP-dependent (IPVOD, On-Demand, etc.)
- Preferred method of connectivity if customer wants to use TV Everywhere
- If Hopper is IP-connected, it shares connection with all linked Joeys so they can enjoy IP features as well

2

Hopper Internet Connector (HIC) (Use Existing Cable)

- New connectivity device that uses coaxial wiring feeding Hoppers and Joeys to connect them to the Internet
- Used with existing pre-wired cable or when using the PASS-THRU to a Joey

3

USB Wi-Fi Adapter on Hopper

- Wi-Fi Adapter offers convenient, fast installation to connect Hopper
- Hopper shares connections with all linked Joeys so they can enjoy IP features as well
- If customer isn't likely to use TV Everywhere, achieves minimum connectivity needs (Order PPV with remote)
- Primarily an offer to existing DISH customers, but used on new installations

4

Hopper Internet Connector (HIC) (Running New Cable)

- New connectivity device that uses coaxial wiring feeding Hoppers and Joeys to connect them to the Internet
- Used when running to cable to the HIC/Router location

