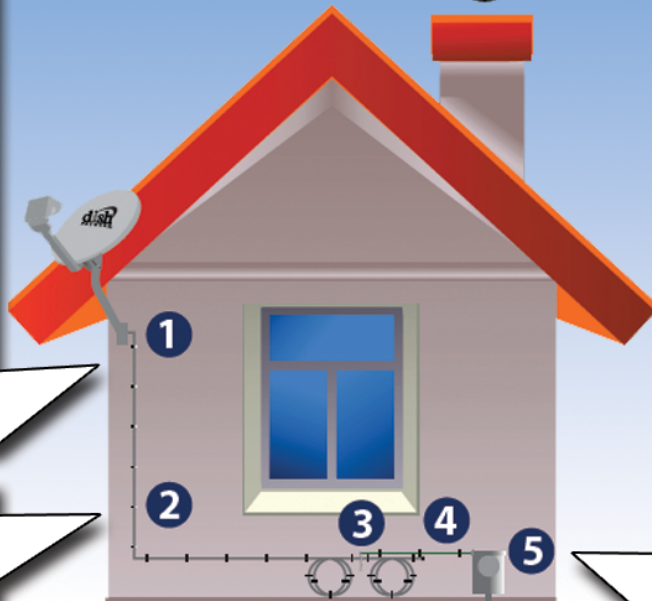
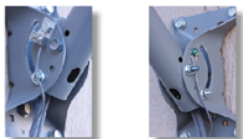


# Grounding



## 1 Dish Bonding

- Messenger wire must be attached to foot plate with either a dual terminal ground lug or green self-tapping ground screw
- If dual ground lug is used, scrape the paint on the foot plate to ensure metal to metal contact and connect the messenger wire to an open port
- If self-tapping green ground screw is used, it must be tightly secured to the foot plate
- If using a wing dish:
  - Must use a dual ground lug on the first dish
  - Attach a green ground wire from the wing dish's dual ground lug or green ground screw to the first dish's dual ground lug



## 2 Dish to Ground Block Wiring

- Messenger wire must be a continuous run from the foot plate to ground block or switch
- Wire CANNOT be spliced
  - Maximum total cable run of 200 ft. between LNBF and receiver must be taken into consideration

## 3 Ground Block Bonding

- The ground block must be placed on the exterior of the home and within 20 ft. of the ground source



Single Ground Block

- One ground block can be used to connect up to two receivers
- Receivers can be any combination of single or dual tuners



Multiple Ground Blocks

- If multiple ground blocks are needed:
  - The ground blocks must be bonded together with a small piece of ground wire
  - Each ground block must be secured with its own two screws

- The following can be used as a ground block, if they have the UL stamp:

- DP 34 switch
- DPP 33 switch
- DPP 44 switch
- Single node
- Dual node

## 4 Ground Block to Ground Source Wiring

- Run 10 gauge green copper ground wire from the ground block to the ground source
- Ground wire must be as straight as possible
- Ground wire CANNOT exceed a maximum of 20 ft. from the ground block to the ground source

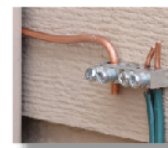
## 5 Ground Source Bonding

There are six possible sources to bond a DISH installation to ground. They are listed in order of **easiest to install/locate**.

### 1. Intersystem Bonding Terminal

The intersystem bonding terminal is a terminal that is provided as a grounding site by the electrician that wires the house.

- Commonly found near the exterior meter box and cable/phone distribution located on the side or rear of the home
- Ground wire can be directly connected to one of the open terminals



No component is needed

### 2. Meter Box, Service Equipment/Power Service/AC Disconnect Enclosure

The meter box, service equipment, power service and AC disconnect enclosures include any metal enclosure, as long as it is connected visually with rigid conduit to the grounding electrode conductor.

- Commonly found on the exterior side or rear of the home
- Component cannot impede the opening/closing of the enclosure



Corner Clamp



Side Clamp



Strap (limited use)

### 3. Rigid Electrical Conduit

The rigid electrical conduit is a metal enclosure housing electrical wiring.

- Commonly found in various locations on the exterior of the home and near the meter box
- Conduit Must be continuous to meter box



Steel Pipe Strap

### 4. Grounding Electrode Conductor

The grounding electrode conductor is a #6 copper or aluminum wire running from the grounding electrode to the meter box.

- Commonly found near the exterior meter box on the side or rear of the home

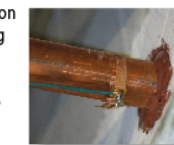


Split Bolt

### 5. Interior Grounded Cold Water Pipe

The interior copper cold water pipe is part of the home's water distribution system.

- Commonly found near the home's utilities which could be in the basement or utility closet
- Ground location must be on the interior of the building within 5 ft. of the water pipes entrance
- External water spigots are not an acceptable ground source



Copper Pipe Strap

### 6. Building Grounding Electrode or Conductor

The building ground electrode system includes the ground rod and structural frame of the home.

- Usually difficult to locate and rarely exposed



Ground Rod Clamp

- **The ground rod -**
  - Minimum of 1/2 inch diameter and buried 8 ft. into the earth
  - Commonly found near the exterior meter box and grounding electrode conductor



I-Beam Clamp

- **The structural mainframe of a building -**
  - Metallic I-beams
  - Commonly found in the basement, crawl space or under a mobile home

