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## **Rack Build Guide**

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This document will guide the installer through building an equipment rack

### **Preparation:**

1. Remove all Doors and set them to the side.
2. Mark back rails with blue tape between space 4 and 5 at the bottom
3. Remove back rails and cut between space 4 and 5 with a jig saw cutter
4. Re-install back rails spacing the now top section at 6 inches from the back inside of the rack and the now bottom section all the way touching the back of the rack, towards you when you are facing the rack.
5. Ensure the front rails of the rack are pushed all the way forward
6. Lay the rack down on its back, to make it easier to load the equipment in.
7. Remove all shelves and blanks that come with the rack and set them to the side.

### **Loading the Equipment:**

1. Look at the Rack Diagram so you can get an understanding of where the equipment gets installed.
2. Starting at the bottom of the rack, unbox the piece of equipment that goes in first.
3. Install Rack Ears on the Device.
4. Remove the factory installed Feet (this will make the unit fit into the Rack Unit Space, this also enables the unit to be easily slid out when we go to service.
5. Place the device onto rack rails where it is drawn to be installed.
6. Install Rack Screws to secure in place (Make sure to use the same type of rack screw for entire rack) If using a drill to start the screws either set the torque or start with the drill but use a screwdriver to finish tightening. You don't want to over tighten rack screws or they will easily strip out.
7. Continue loading the equipment and rack shelves per the Rack Diagram
8. Once Complete, stand the rack upright. This may take two people as the rack will probably be heavy.
9. With the rack upright, you can now start installing lacing bars at the back of the rack.
10. Lacing Bars will give the rack wiring person something to cleanly secure the wiring too, either with zip ties or velcro. (Lacing Bars can go above and below each piece of equipment.
11. If a long plug strip was sold, install in the back of the rack on the back right side (if looking from the back)

### **Wiring the Rack:**

1. Study the Wiring Diagram.
2. Verify you have all of the cables that are sold on the contract and understand their intent.
3. If you have any questions, verify with Sales Engineer
4. Start making the internal rack connections. General Rule of Thumb - All internal wiring comes from the lacing bar above the device and all external wiring comes from the lacing bar below (This is a general rule of thumb, exceptions are always acceptable if it makes the rack wiring look nicer)
5. All Low Voltage wiring should be routed on the left side of the rack (if looking from the back) All high voltage wiring should be routed on the right side of the rack (if looking from the back).
6. Run all wiring behind the side doors. No wiring should be down the back.
7. Where possible, use velcro - zip ties are ok, if you understand how much pressure the zip ties can affect the wire you are lacing up. If using zip ties, always trip the ends off with a zip tie side cut, leaving no sharp edges.
8. Wire the external wire harness that will connect to the house Home Runs.

#### Wiring Considerations

- Use Red Ethernet cables for all network connections
- Use Blue Ethernet cables for all Video Feeds (VOIP and HdBaseT)
- Use Black 14/4 or 16/4 for all External Wiring and follow [Neutrik Diagram](#)