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Structured Wiring Guidelines

Notes

All wiring at Wall plate locations should be ran 18" out of box to give room to trim out wires and to have extra.

All Home Runs should be labeled with location and wire use (i.e. Great Room DAVP)

All RG-6 Ran to Structured Wiring Panel

All Cat6, Audio, Control Wiring should be ran to Equipment Rack Location.

Wallbox Height

-If the outlet is marked low on the wall, match the electrician's wall box height. It is important to measure the closest box and match it (not just one - who knows if the electrician measured the same each time)

-In Bedrooms - Typical Wall Mounted TV Outlets are placed at 72" to top of box.

-In Rooms where typical location for watching will be on couch, 48" - 60" depending on room.

-Above Fireplace - Typically 24" above Top of Mantel.

-If box is on an interior wall - use backless boxes.

-If box is on an exterior wall - use backed boxes.

TV/Combo

White RG-6 - Cable Coax - used for Cable TV/Over The Air Antenna/Satellite

Grey Cat6 - Network Connection. Can be used to connect to the back of a TV. Some ISP use the ethernet connection to distribute video to their boxes - ATT. We can also utilize the Cat6 for a HDMI Extender with Control.

Future Proof TV Outlet

RG-6 - Cable Coax - used for Cable TV/Over The Air Antenna/Satellite

Grey Cat6 - Network Connection. Can be used to connect to the back of a TV. Some ISP use the ethernet connection to distribute video to their boxes - ATT. We can also utilize the Cat6 for a HDMI Extender with Control.

Yellow Cat5 - Usually used for Control

Fiber - Dual Strand Fiber - Future Proof the TV location for higher speed data, for HDMI Extension, for Digital Audio

DAVP

RG-6 - Cable Coax - used for Cable TV/Over The Air Antenna/Satellite
Grey Cat6 - Network Connection. Can be used to connect to the back of a TV. Some ISP use the ethernet connection to distribute video to their boxes - ATT.
Blue Cat6 - HDMI Extender.
Yellow Cat5 - Usually used for Control
Dual Fiber - Used for Video

Data

Grey Cat 6 - Network Connection - Hook to the High Speed Network Infrastructure

Phone

White Cat 5 - Home Run to Structured Wiring Panel

WHA

16/4 Home Run - To the Closest Speaker

16/2 Link from Home Run Speaker Location to other speaker

WAP

Blue Cat 6 - Network Connection to connect the WAP back to the Network Switch.

IP Camera Pre-Wire

Purple Cat 6 - Network Connection to connect the Camera back to the Network Switch.

Projector Pre Wire

A designated length of HDMI

Cat6 - Yellow for Control

Cat6 - Shielded White for HDMI Extender

Cat6 - Grey for Ethernet Connection

2" Carlon Orange Flexible Conduit to future proof

Surround Sound Pre-Wire

14/2 ran to each Speaker Location and Home Ran

Bare Copper RG-6 to Subwoofer Location

Cable Feed

RG-6 - Cable Coax - Used to Bring Cable TV or Satellite into the House. Run out the side of house where the Electrical Feed Comes in. The Cable Company utilizes the Electrical Grounding Rod to ground their feed.

Phone Feed

Orange Cat6 Running out of house near Cable Feed.

Data Feed

Dual Stranded Fiber Running out of house with Phone Feed - Place in Weatherproof Box to protect the line and to make side of house look good if wires are not used.

Flatpanel PreWire

HDMI-Run 1 local HDMI – Video Connection

RG-6 – Cable Coax – Used to have extend local cable box to behind the TV if necessary or to return Digital audio back down to the cabinet.

Yellow Cat5 - Usually used for Control

Carlson Flex Pipe – so we can fish wires from the TV location to local cabinet.

Security Wiring

Notes: All Security Wiring should be ran to Structured Wiring Panel. Leave at least 18" of wire at device location for trim out. Leave at least 3' extra wire at panel location for trim out. Label Each Wire with Device Location and Type (i.e. Master Bed Glass Break) at Panel Location.

Keypads - 22/4 Home Run - Top of Box at 60". If you we cannot center with a box, zig zag wiring above light switches so keypad can be mounted centered. Keypads are installed 60" Above Finished Floor to the top of the keypad.

Door Contacts - 22/4 Home Run. The wiring should be drilled out of Jamb side of door with 3/4" hole. When you leave pre-wire, the wire should be stubbed out so it is ready for the door to be installed.

Window Contacts - Drill either side of 2x4 holding the side of the window - 6" above bottom of window seal. We typically use surface mount contacts to avoid voiding the window warranty.

Overhead Doors - Run 22/4 to Top of Overhead Door - either side. Run Cat5 to Overhead Button locations.

Glass Breaks - 22/4 Home Run to Glass Break Location. GB's must be centered in window. If you have cut a 2x4 to get it centered, do it. If there is a floor joist in the way, use a nail and we will install a surface mount glass break. Use Blue Box

Motion Detectors (PIR) - 22/4 Home Run. Nail Motion Detector Wiring out of Corner and wrap nail with wire, make sure there is enough slack inside wall in case the wire is damaged by the dry waller so we can pull it out and use the good wire.

Water Detectors - 22/4 Home Run

Smoke Detectors - Run Red 18/4 Fire Wire. Home Run the first Smoke Detector in line and then go from smoke to smoke until you come to the last one. Once at last one, home run the end of line too. Must Place Smokes at Highest Point in each room at least 3' away from any HVAC Vent, 10' from Bathroom entrances.

Heat Detectors - Run 18/4 Fire Wire - Home Run. Use Blue Box

Smoke Detectors - Run 18/4 Fire Wire – Loop to next Smoke. Home Run First smoke to panel. Use Blue Box

Carbon Monoxide - 22/4 Home Run - Place Box 12" from ceiling to top of box. Use Blue Box

Siren - 22/4 Home Run. 2-gang Orange Box