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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 proper wire tag (wire use, location and wire #) (i.e. WAP-101-1)
- All RG-6 coax ran to 4x4 plywood sheet hole where Comcast can install their splitter
- All Cat6, Audio, Control Wiring should be ran to DEB48 Panel.
 - Wiring should be ran to the bottom of the DEB48 and create 1 loop (approximately 5')
- All wiring to be ran according to wire checklist unless substitution/alteration is approved by the project lead.

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 the top of box.
- In Rooms where the typical location for watching will be on the couch, 48" - 60" depending on the 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

(x1) RG-6 - WHITE - Cable Coax - used for Cable TV/Over The Air Antenna/Satellite

(x1) CAT6 - GRAY - Network Connection.

Future Proof TV Outlet

(x1) RG-6 - WHITE - used for Cable TV/Over The Air Antenna/Satellite

(x1) CAT6 - GRAY - Network Connection.

(x1) CAT6A SHIELDED - BLUE - used for video distribution

(x1) CAT6 YELLOW - Usually used for Control

(x1) Cleerline MMF BLUE 2 Strand Fiber - Future Proof the TV location for higher speed data, for HDMI Extension, for Digital Audio

DAVP

(x1) RG-6 - WHITE - used for Cable TV/Over The Air Antenna/Satellite

(x1) CAT6 - GRAY - Network Connection.

(x1) CAT6 YELLOW - Usually used for Control

(x1) Cleerline MMF BLUE 2 Strand Fiber - Future Proof the TV location for higher speed data, for HDMI Extension, for Digital Audio

Projector Pre Wire

(x1) HDMI Cable - Final Length TBD

(x1) CAT6 YELLOW - Usually used for Control

(x1) CAT6 SHIELDED - WHITE - used for video distribution

(x1) CAT6 - GRAY - Network Connection.

(x1) 2" Carlon Orange Flexible Conduit - For additional future proofing

SECTION NOTE:

CAT6 GRAY 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.

WHA

(x1) 16/4 Home Run - To the Closest Speaker

(x1) 16/2 Link from Home Run Speaker Location to other speaker

Surround Sound Pre-Wire - Passive Subwoofer

(x7) 14/2 BLACK - ran to each Speaker Location and Home Ran

(x1) 14/4 BLACK - ran to each Subwoofer

(x7) 14/2 BLACK - Subwoofer jumper (if second subwoofer is installed)

Surround Sound Pre-Wire - Powered Subwoofer

(x7) 14/2 BLACK - ran to each Speaker Location and Home Ran

(x1) RG-6 BC - BLACK - to Subwoofer Location

Data

(x1) CAT6 - GRAY - Network Connection - Hook to the High Speed Network Infrastructure

Dual Data

(x2) CAT6 - GRAY - Network Connection - Hook to the High Speed Network Infrastructure

Phone

(x1) CAT6 - ORANGE - Home Run to Structured Wiring Panel

WAP

(x1) CAT6 - BLUE - Network Connection to connect the WAP back to the Network Switch.

TOUCH PANEL

(x1) CAT6 - WHITE - Network Connection to connect the TP back to the Network Switch.

IP Camera Pre-Wire

(x1) CAT6 - PURPLE - Network Connection to connect the Camera back to the Network Switch.

Doorbell / Doorstation

(x1) CAT6 - PURPLE - Network Connection to connect the Camera back to the Network Switch.

(x1) 18/4 - BROWN - used to power the doorbell or for a contact output.

D-Mark Cable/Data Feed

(x1) RG-6 - BLACK - Used to Bring Cable TV or Satellite into the House.

(x1) CAT6 - ORANGE - Running out of house near Cable Feed.

(x1) Cleerline SMF YELLOW - 2 Strand Fiber Running out of house with Phone Feed

Section Note:

Run out the side of house where the Electrical Feed Comes in. The Cable Company utilizes the Electrical Grounding Rod to ground their feed. Place in Weatherproof Box to protect the line and to make side of house look good if wires are not used.

Flatpanel PreWire

(x1) RG-6 - WHITE - Cable Coax - used for Cable TV/Over The Air Antenna/Satellite

(x1) HDMI Cable - Final Length TBD

(x1) CAT6 YELLOW - Usually used for Control

(x1) Carlon Flex Pipe – so we can fish wires from the TV location to local cabinet.

Security Wiring

Section Note:

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/Wireless Receivers -

(x1) 22/4 GREEN (Home Run)

***Detail:** 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 -

(x1) 22/4 WHITE

***Detail:** 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 -

(x1) 22/4 WHITE

***Detail:** 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.*

Glass Breaks -

(x1) 22/4 ORANGE

***Detail:** 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) -

(x1) 22/4 YELLOW

***Detail:** 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 drywaller so we can pull it out and use the good wire.*

Environmental -

(x1) 22/4 GRAY - Used for H2O sensors, temperature sensor, etc

Smoke Detectors -

(x1) 18/6 RED SOLID (LOOP)

Detail: Run Red 18/6 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. Install a blue box for the detector.

Heat Detectors -

(x1) 18/4 RED SOLID

Detail: Run Red 18/4 Fire Wire. Home run the wire for the detector. Install a blue box for the detector.

Gas Detectors

(x1) 22/4 BROWN

Detail: Place Box 12" from ceiling to top of box. Use Blue Box

Siren -

(x1) 22/4 BROWN

Detail: 2-gang Orange Box

Cell Radio -

(x1) CAT6 RED

(x1) 16/4 WHITE

Overhead Doors -

(x1) CAT6 YELLOW - Run to Top of Overhead Door - either side.

(x1) 22/4 WHITE - Run to Overhead Contact locations.