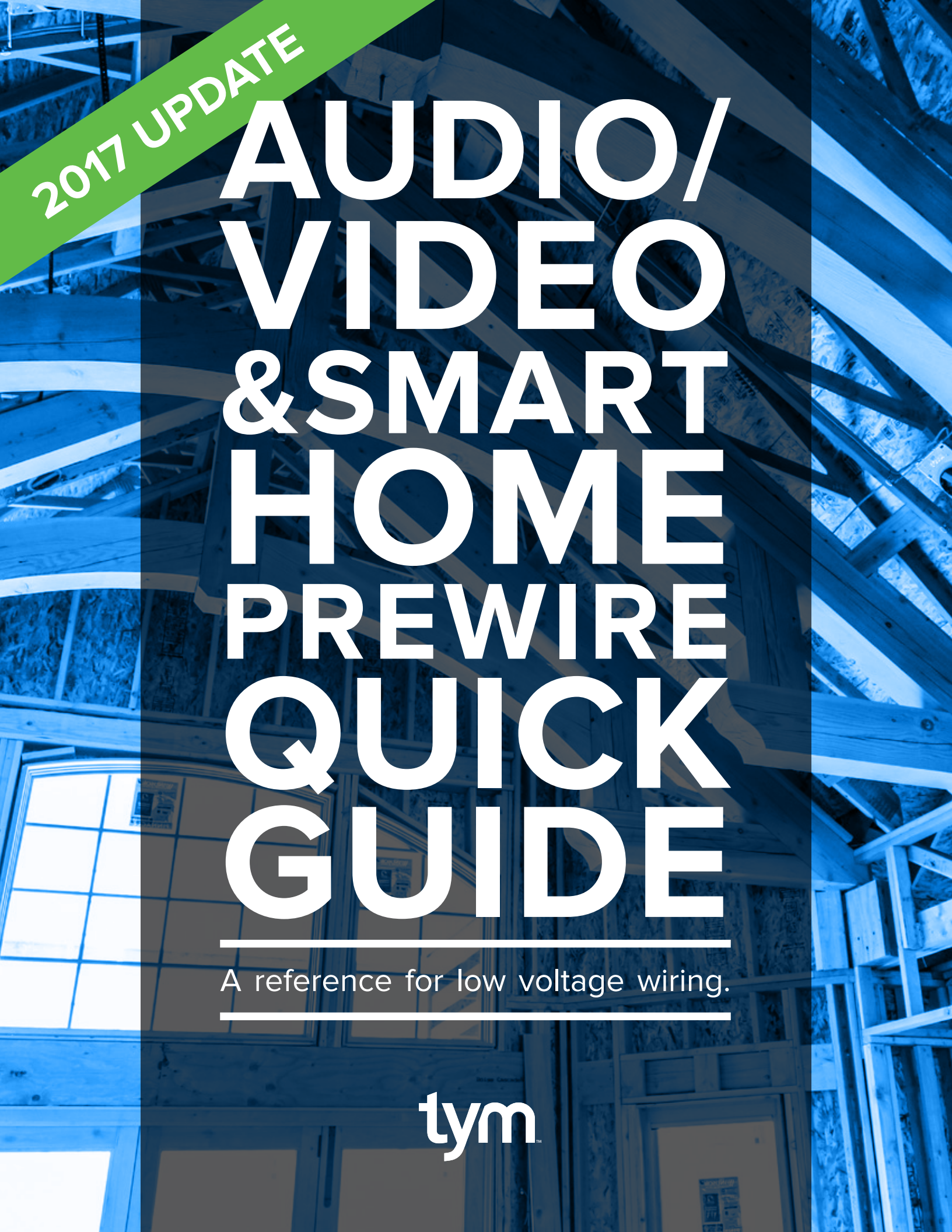
2017 UPDATE
AUDIO/
VIDEO
&SMART
HOME
PREWIRE
QUICK
GUIDE
A reference for low voltage wiring.
tym

INTRODUCTION

Thanks for downloading our Prewire Quick Guide. We created it to be a helpful resource for our friends and Clients who want to try their hand at prewiring their own homes. Be sure to check out our **Prewire Ebook**, and **Prewire Design Services** as well.

We started getting request to help design prewires, and walk Clients through their own prewires a couple years ago. It's evolved a bit since. We now design prewires, provide checklists, ship bulk wire and supplies to your house, and whatever else you might need to prewire your own home. We've even started building out media racks, pre-programming them and shipping them to Clients along with speakers and other supplies for finish. So you do as much as you want to do, and then when you're ready for some extra help, you let us know and we'll help wherever we can.

If you have questions about your prewire project, be sure to contact us. We'd love to help.

Matt Montgomery
Co-founder and Lead Designer at Tym

A NOTE ON WIRELESS - We're often asked if it's still worth it to prewire your home with all the advances in wireless technology. Yes! PREWIRE, PREWIRE, PREWIRE™!

Wireless has come a long way, and we use it in almost every Smart Home and Audio/Video System we install, but we still want the wire to do the heavy lifting. It's like Trucks and Cars. Trucks, or in the case of your home the wire, does the heavy lifting. So it carries the 4K video Content, hardwires the network into your TV's, carries High Res Audio to your speakers, etc. The Cars, or the wireless in the case of your home, do the light work. Lighting Control, Climate Control, Door Locks etc. We want a combination of both in your home, but we want the wire for sure.

So the items in this Quick Guide, and in our Ebook, are the items we recommend prewiring. Best of luck!

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CONTENTS

AUDIO

SPEAKERS: Run (1)16/4 speaker wire from the Media Rack to the first speaker in the room. Create a jumper cable between the first speaker and the second speaker in the room, using (1)16/2 speaker wire.

DUAL VOICE COIL SPEAKERS: Run (1)16/4 from the Media Rack to the room's speaker. A dual voice coil speaker, is designed for smaller rooms like a bathroom. It gives you a stereo sound from a single speaker.

NOTE: 14, and 12 Gauge wire can also be used for speakers

IN-LINE VOLUME CONTROLS: Run (1)16/4 speaker wire from the Media Rack to the Room's Volume Control location. Run (1)16/4 from the Volume Control to the first speaker in the room, and your (1)16/2 for your jumper from the first to second speaker.

DIGITAL VOLUME CONTROLS: Run (1) Cat5e, or (1)Cat6 from the Media Rack to the Digital Volume Control location.
**Digital Volume Controls are usually specific to manufacturer. It's best to decide on a system before you prewire.*

LANDSCAPE SPEAKERS: Run (1)16/4 speaker wire from the Media Rack to the exterior of the home. (1)16/4 wire powers one zone of landscape speakers -- 4-8 speakers and a subwoofer.

SPEAKERS
16/4 & 16/2

DUAL VOICE COIL SPEAKERS
16/4

IN-LINE VOLUME CONTROLS
16/4

DIGITAL VOLUME CONTROLS
Cat5e or Cat6

LANDSCAPE SPEAKERS
16/4

NOTE ON SPEAKER BRACKETS: Speaker brackets allow you to line up speakers with can lights, and leave a template for the sheetrock company to cut out for you. They're specific to speaker brands, so you have to decide on speakers in advance. You can also use 'Hanger Strap' found in the plumbing section at Home Depot, and then cut out speakers yourself at finish.

VIDEO

4K ULTRA HD TV's: Run (2)Shielded Cat6 (for Video Distribution), (1)Cat6 (for Network & Control), and (1)RG6/ Coaxial Cable from the Media Rack, to each TV in the home. You can run less cables, and even use Cat5e, but this is the recommendation for 4K Video Distribution and TV Control.

HIDDEN BLU-RAY PLAYER: Clients with Video Distribution frequently hide Blu-ray players in key locations around the house like the Master Closet, so that they don't have to run to the Rack to load in a Blu-ray. Remember to get an outlet from your electrician. Run (2)Shielded Cat 6 cables (for Video Distribution) from the Media Rack to the Blu-ray player.

PROJECTOR: When possible run 1.5" Flexible Conduit from the Media Rack to the Projector location. HDMI goes bad over time, and changes in technology require more advanced HDMI. So you want the option to replace the HDMI. If the space doesn't allow Conduit, pull (4)Shielded Cat6 Cables.

SATELLITE PREWIRE: Run (4) Coaxial Cables from the Media Panel to the soffit nearest the Satellite Location. For snowy climates, run (1)18/2 for a heater to melt the snow from the Satellite. **We recommend contacting your local Satellite Provider for their recommendations on wire requirements.*

DEMARCATION: Run (2)Cat6, (2)RG6/Coaxial Cables, and (1)18/2 from the Media Panel, to the Demarcation spot on the exterior of the home. This is typically next to the Electrical Meter. If you are in a market that offers fiber, you should contact our provider for their requirements.

TVs (2)Shielded Cat6, (1)Cat6, (1)RG6
HIDDEN BLU-RAY PLAYER (2)Shielded Cat6
PROJECTOR Conduit for HDMI or (4)Cat6
SATELLITE PREWIRE (4)RG6 Coaxial & (1)18/2
DEMARCATION (2)Cat6, (2)RG6 & (1)18/2

SURROUND SOUND

PRIMARY SURROUND SOUND: For the main Theater area in your home, we recommend pulling (1) 14/2 wire to each speaker location. Speakers can be in-wall, in-ceiling, or floor standing. Pull the wire from the media rack to the speaker location.

SECONDARY SURROUND SOUND: For rooms like your Master, Great room, or Back Deck, we recommend running (1) 16/2 for each speaker. Pull the wire from the media rack to the speaker location.

FLOOR STANDING SUBWOOFER: Run (1)RG6/Coaxial cable from the Media Rack to the location of the Floor standing subwoofer. Keep the wire close to the electrical outlet, so that the subwoofer covers the outlet at finish.

IN-WALL SUBWOOFER: Run (1)14/2 from the media rack to the in-wall Subwoofer location. Make sure it's a study bay that's 16" on center or larger, and that no electrical wires are running through the section of the wall where the sub will rest.

IN-CEILING SUBWOOFERS: Run (1)14/2 for the subwoofer, but you need to select the in-ceiling subwoofer before prewiring. Each manufacturer does it differently and has different requirements for placement. *Some Manufacturers require (2) In-ceiling subwoofers, so be sure to check before prewiring.

PRIMARY SURROUND SOUND 14/2
SECONDARY SURROUND SOUND 16/2
FLOOR STANDING SUBWOOFER RG6 Coaxial
IN-WALL SUBWOOFER 14/2 or 16/2
IN-CEILING SUBWOOFER 14/2

SECURITY

SECURITY KEYPADS: Run (1)22/4 from the Media Panel to the Security Keypad Location. We recommend placing the keypad at a height of 5', and stacked above the light switch for the room. We usually place them in the Mudroom, and in the Master Bedroom.

MOTION SENSORS: Run (1)22/4 from the Media Panel to the location of the Motion Sensor. We place our motions in the corner of rooms, and at a height of 7'.

GLASS BREAK SENSORS: Run (1)22/4 from the Media panel to the location of the glass break sensor. Place Glass break sensors in the ceiling, 10-15' from windows. Windows need to be in line of site.

DOOR SENSORS: Run (1)22/2 from the Media Panel to the Door. Pull the 22/2 wire through the frame of the door, on the non-hinged side, using a 3/8" hole.

WINDOW SENSORS: Run (1)22/2 from the Media Panel to the window. You'll use surface mount window sensors. So run the wire just to the edge of the window frame. You'll have a small amount of wire exposed at finish, and after the sensor is installed.

VIDEO DOORBELL: Run (1)Cat6 or Cat5e & (1)22/4 from the Media rack to the doorbell location. Have the electricians wire up their part of the doorbell as normal.

SURVEILLANCE CAMERAS: Run (1)Cat6 or Cat5e from the Media Rack to the Camera location.
*For specialty sensors like flood sensors, humidity sensors, temp sensors, etc, run (1)22/4 wire.

SECURITY KEYPADS
22/4

MOTION SENSORS
22/4

GLASS BREAK SENSORS
22/4

DOOR SENSORS
22/2

WINDOW SENSORS
22/2

VIDEO DOORBELL
Cat6 & 22/4

SURVEILLANCE CAMERAS
Cat6

ACCESSORIES & INTEGRATION

AUTOMATED BLINDS: Run (1) 18/2 from the Media Panel to the Blind location. Some blinds do require high voltage, so it's good to decide on blinds you're going to use before prewiring.

FIREPLACE SWITCH: Run (1) 22/4 from the Media Rack to the Fireplace switch. Leave the wire coiled up inside of the electrical box with the wire coming from the fireplace.

POOL & SPA CONTROL: Run (1) Cat6 or (1) Cat5e from the Media Rack to the pool control location.

IPAD MOUNTS & TOUCHSCREENS: Run (1) 18/2, and (1) Cat6 from the Media Panel to the iPad Mount/Tablet location. We usually place the mount/tablet at 5' and over the light switch for the room.

LUTRON LIGHTING: If you're planning to use Lutron Lighting, you'll want to run (1) Cat6 to each 'Lutron Repeater.' Run the wire from the Media Rack to the repeater location. Typically you want Repeaters no more than 30' apart, and hidden in closets or cabinets out of site.

SERIAL INTEGRATION: When in doubt, run (1) Cat6 from the Media Rack to the device in question. Higher end HVAC systems for example can't be controlled via a Nest or Ecobee, but can be integrated via a 'serial connection.' You create the Serial connection with (1) Cat6 wire. For outdoor landscape lighting, gate controls, etc. Run a Cat5e to the location and you might just get lucky.

NETWORK HOTSPOTS: We run (1) Cat6 from the media rack to each Hotspot location. Most hotspots get their power from the Cat6, so they won't require an outlet.

MEDIA RACK: Have the electricians leave you a dedicated 20Amp outlet for the Media Rack.

LOW VOLTAGE CAN OR MEDIA PANEL: Have the electricians leave you an outlet inside the Can, and just outside the can.

JUMPER WIRES: Run jumper wires from the Media Rack to the Media Panel. We usually run (4) Cat6, and (4)RG6/Coaxial cables.

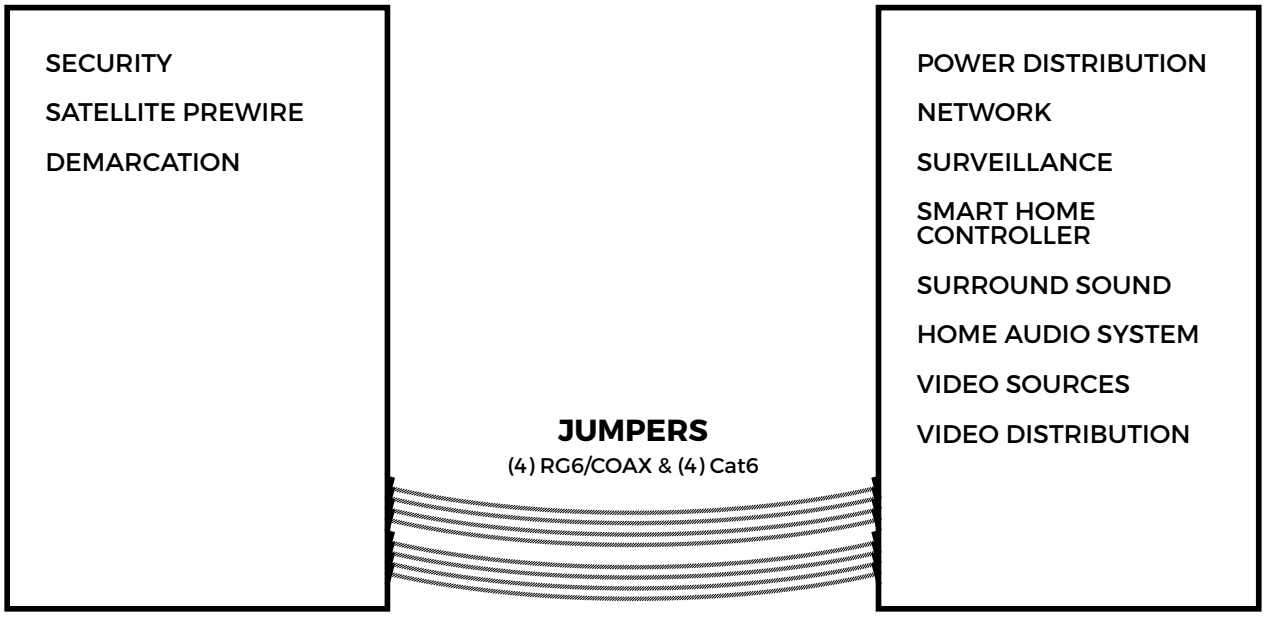
BLINDS 18/2
FIREPLACE SWITCH 22/4
POOL & SPA Cat6 or Cat5e
IPAD MOUNTS/TOUCHSCREEN 18/2 & Cat5e
LUTRON LIGHTING Cat5e
SERIAL INTEGRATION Cat5e
NETWORK HOTSPOTS Cat6 or Cat5e
MEDIA RACK 20 Amp outlet
JUMPER WIRES Cat6 & RG6 Coaxial

LOW VOLTAGE PANEL

LOCATION:
Typically located in the mechanical room.

MEDIA RACK

LOCATION:
Typically located in a dedicated AV closet or the mechanical room. Ventilation recommended.



POWER REQUIREMENTS:
Low voltage panel requires (1) outlet within and (1) outlet below.

POWER REQUIREMENTS:
Media Rack requires a minimum of (1) 20AMP dedicated outlet.

NOT TO SCALE

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NEW EBOOK

Award-winning home technology designer Matt Montgomery details step-by-step instructions — on over 70 pages — how to prewire you home for audio/video and smart home automation.

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