



AVALON

x



SOUND SYSTEM REVIEW

presented by



TABLE OF CONTENTS

SOUND SYSTEM REVIEW

- Video “How To” Tutorials *Slide 3*
- Things you should know *Slide 7*
 - Bluetooth Set up Process
 - Dealer Warranty Support
 - Proper Antenna Installation
 - Audio Signals
- List of Garmin Avalon Products *Slide 13*
- Product Sell Sheets – Stereos & Amplifiers *Slide 15*
- MY24 Sound System Schematics *Slide 21*
- Appendix *Slide 50*
 - MY23 Sound System Schematics
 - MY23 Amplifier Tuning



FUSION TECH TIPS
HOW TO USE APPLE AIRPLAY
WITH THE APOLLO SERIES

Video Tutorial – 2:15



[youtube.com/watch?v=4UVclzzoDs4](https://www.youtube.com/watch?v=4UVclzzoDs4)



FUSION TECH TIPS
SETTING UP DSP PROFILES
WITH THE FUSION LINK APP

Video Tutorial – 3:54



youtube.com/watch?v=dYJL37srxFI



FUSION TECH TIPS
PAIRING YOUR ARX REMOTE
WITH YOUR FUSION STEREO

Video Tutorial – 1:17



youtube.com/watch?v=YeIDSLKLC9Q



FUSION TECH TIPS
USING PARTYBUS
WITH THE FUSION-LINK APP

Video Tutorial – 1:37



youtube.com/watch?v=yva4uGrH_ZU

The new Fusion-Link App introduces advanced wireless remote control for any supported Apollo Marine Entertainment system via Bluetooth or Wi-Fi with a compatible Apple or Android device. Fusion Entertainment's new and improved Fusion-Link App, now has Party Bus control, Digital Signal Processing (DSP) setup and Over-the-air software update capability for Fusion's revolutionary Apollo Series. To use these amazing features please download the App, is available for free from the Apple App Store® and Google Play™.



Turn On your Stereo and wait until the unit reboot normal



Tap on BT

*Note that the maximum number of paired Bluetooth devices is 8

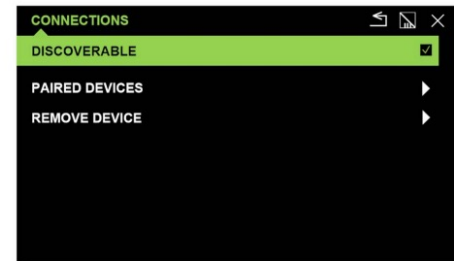
In the main source screen Tap on Bluetooth Icon



Tap On Connections



Tap on Menu, then on Bluetooth Sub-Menu



Tap on Discoverable and follow the pairing process on your smart device Bluetooth settings



For dealers: fusiondealersupport@garmin.com
For end users: techsupport.na@fusionentertainment.com



800-353-1355

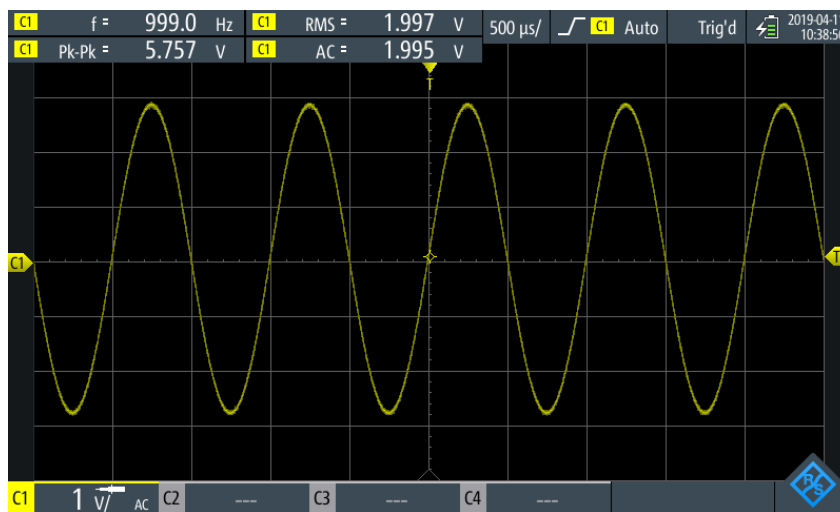
- Dealers should provide as much info in the email as possible.
- Note if it was an OEM install and who the manufacturer is.
- The issue and troubleshooting steps that have taken place.
- Current software if possible.
- All contact info for the dealer (Phone # and address).
- Serial Number of the device.

To ensure maximum signal strength, install AM/FM antenna so that it is extended and spread out.



UNCLIPPED

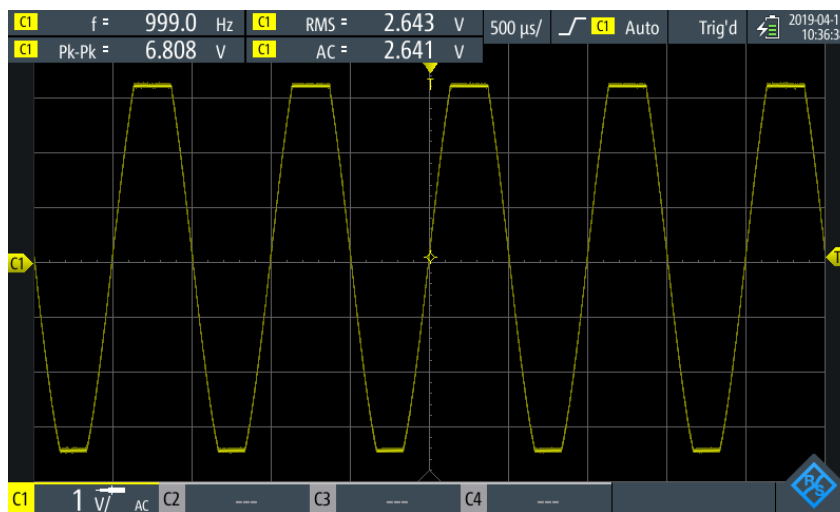
AUDIO SIGNAL



Un-Clipping audio signal is a waveform with out distortion, when an amplifier is driven and deliver this clean signal the amplifier works at its maximum capacity with out any risk to damage Speakers, Subwoofers & Tweeters.

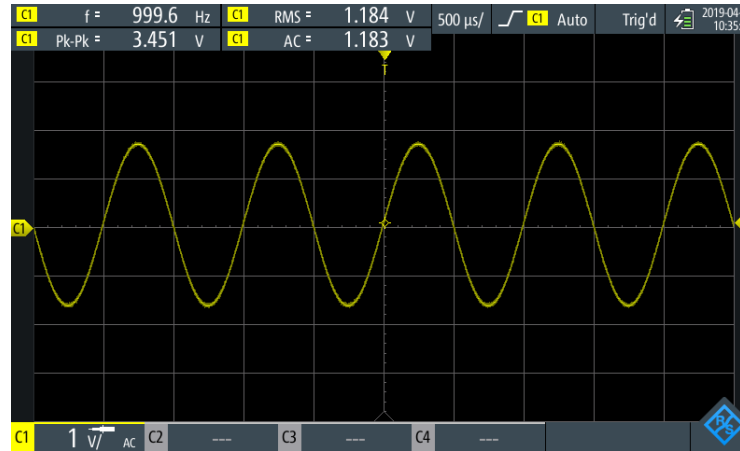
CLIPPED

AUDIO SIGNAL

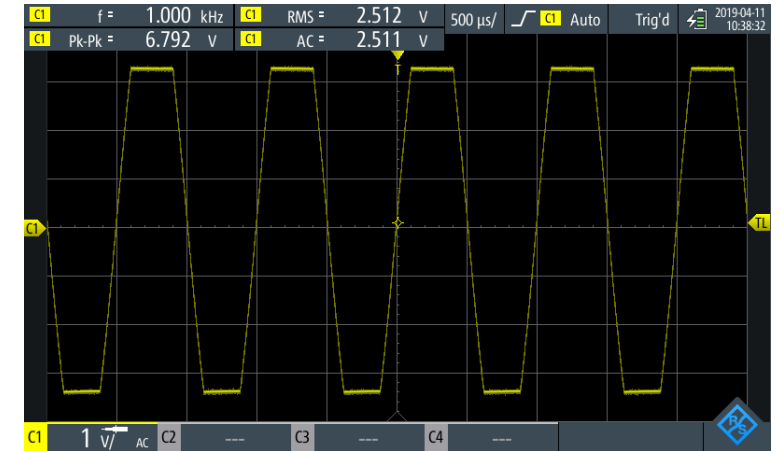


Clipping signal is a waveform distortion and occurs when an amplifier is overdriven or attempts to deliver more power than its maximum capabilities, this problem can increase the current draw from the batteries up to 24 or 30 % and damage the speaker, subwoofers & tweeters.

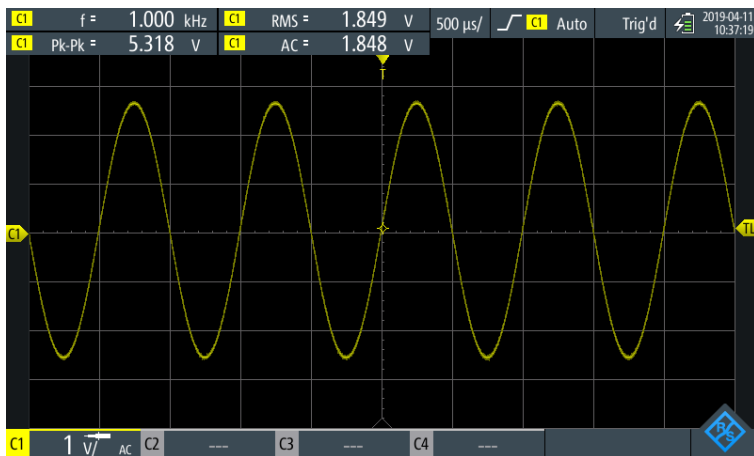
UNCLIPPED VS. CLIPPED



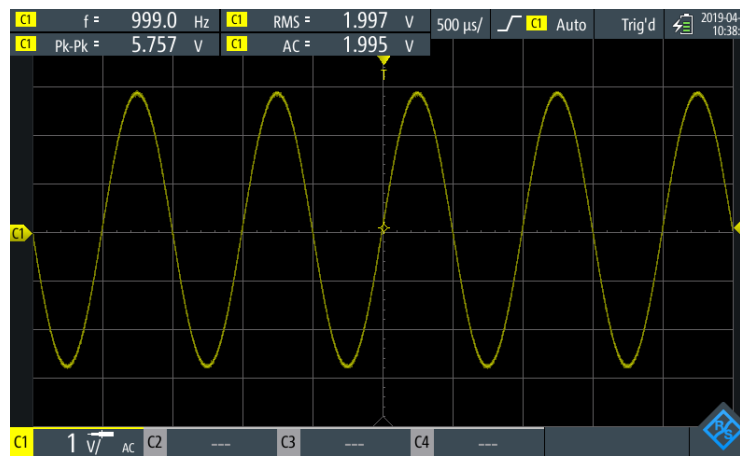
Unclipped Audio Signal 1 Khz / Flat Tone Settings
Zone Volume Max / iPhone EQ OFF.



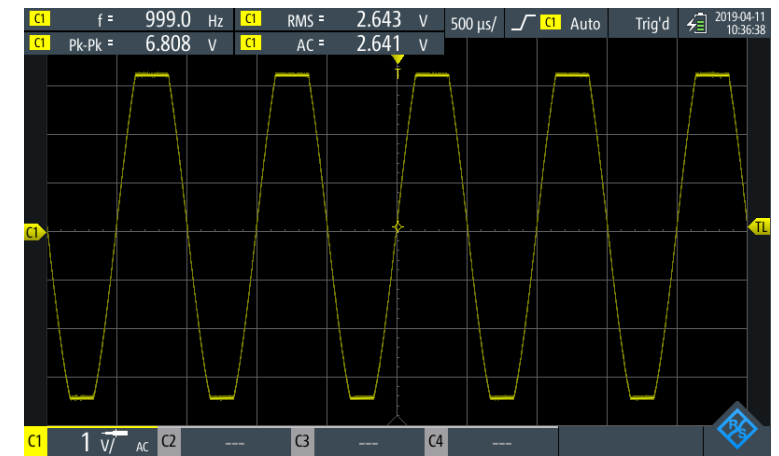
Clipped Audio Signal 1 Khz / Tone Settings Adjusted
Zone Volume Limit Max / iPhone EQ OFF.



Unclipped Audio Signal 1 Khz / Tone Settings Adjusted
Zone Volume Limit Adjusted / iPhone EQ ON.



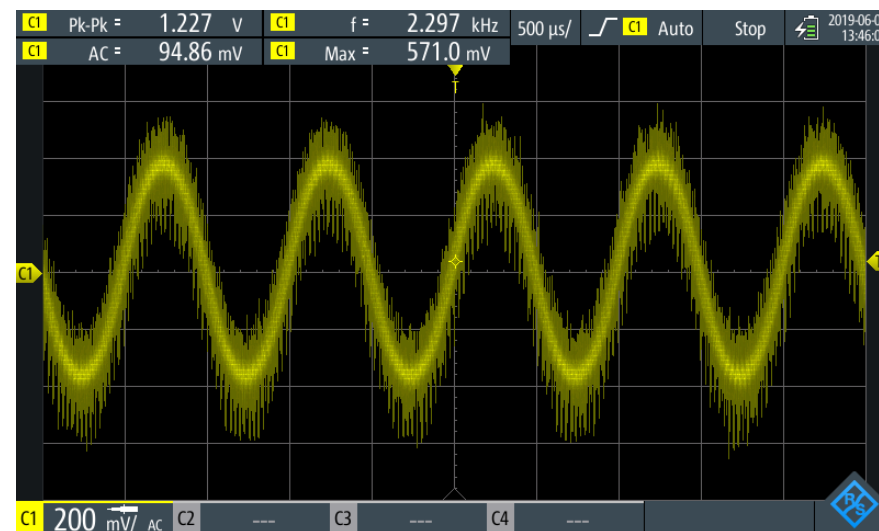
Unclipped Audio Signal 1 Khz / Tone Settings Adjusted
Zone Volume Limit Adjusted / iPhone EQ OFF.



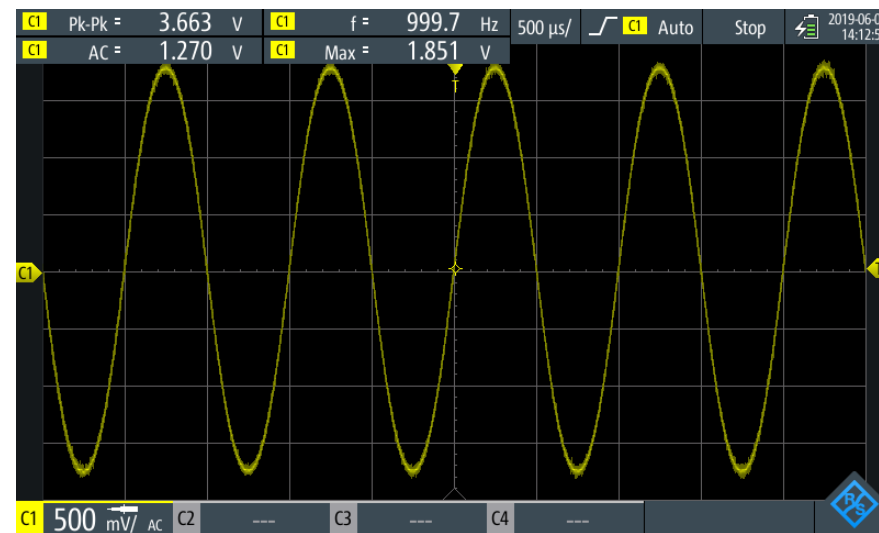
Clipped Audio Signal 1 Khz / Tone Settings Adjusted
Zone Volume Max / iPhone EQ OFF.

Fusion Model No.	GPN
MS-RCA3	010-12613-00
MS-RCA6	010-12614-00
MS-RCA12	010-12615-00
MS-RCA25	010-12616-00
MS-FRCA6	010-12618-00
MS-FRCA12	010-12619-00
MS-FRCA25	010-12620-00
MS-RCAYM	010-12621-00
MS-RCAYF	010-12622-00

1 Khz frequency signal thru standard RCAS Cables showing Interference on a bench test.



1 Khz frequency signal thru fusion premium RCAS cables showing clean signal on a bench test





AVALON

STEREOS

MS-RA60 Fusion Marine Stereo, OEM

GARMIN PN: 010-02405-10

AVALON PN: 128907A

MS-RA670 Fusion Marine Stereo, OEM

GARMIN PN: 010-02138-01

AVALON PN: 128917

MS-RA770 Fusion Marine Stereo, OEM

GARMIN PN: 010-01905-10

AVALON PN: 128925

MS-RA210 Fusion Marine Stereo, NMEA 2000, OEM

GARMIN PN: 010-02250-10

AVALON PN: 128915

AMPS

MS-AP61800 Fusion 6 Ch Marine Amplifier, Apollo NF

GARMIN PN: 010-02284-65

AVALON PN: 128963

MS-AP82400 Fusion 8 Ch Marine Amplifier, Apollo NF

GRAMIN PN: 010-02284-85

AVALON PN: 128962

MS-AP12000 Fusion 1 Ch Marine Amplifier, Apollo NF

GARMIN PN: 010-02284-15

AVALON: 128964

AP-DA214 Fusion 2 Ch Marine Zone Amplifier, Retail

GARMIN PN: 010-02569-00

AVALON PN: 128965

SPEAKERS

XS-FL651OEMAMP 6.5" Spk,w/o grille,w/ LED, OEM, Amp 2+6P

GARMIN PN: 010-02196-92

AVALON PN: 128918RGB

SG-FL653SPGCRGBW 6.5" Sprts Grey Spk, LED, AMP 6+2P, Fusion

GARMIN PN: 010-02771-11

AVALON PN: 128926A

SG-FL773SPGCRGBW 7.7" Sprts Grey Spk, LED, AMP 6+2P,Fusion

GARMIN PN: 010-02772-11

AVALON PN: 129480A

SG-FT882SPC 8.8" Sports Grey Chrome Tower Spk, LED, Fusion

GARMIN PN: 010-02437-00

AVALON PN: 129481

EL-FL652OEMAMP 6.5" Spk,w/o grille,w/ LED, OEM, Amp 2+6P

GARMIN PN: 010-02080-92

AVALON PN: 128908ARGB

EL-X651SPG Acc. EL-X651SPG, Fusion, 6.5" Sports Grille Grey

GARMIN PN: 010-12789-10

AVALON PN: 128909

SUBS

XS-SL10OEMAMP 10" Sub, w/o grille,w/ LED, OEM, Amp 2+6P

GARIM PN: 010-02198-92

AVALON PN: 128921

SG-SL103SPG 10" Sprts Grey Sub, LED, AMP 6+2P,Fusion

GARMIN PN: 010-02774-11

AVALON PN: 128930A



MS-RA60 Fusion Marine Stereo, OEM

GARMIN PN: 010-02405-10

AVALON PN: 128907A

MS-RA60
MARINE STEREO
WITH WIRELESS CONNECTIVITY

FUSION
A Garmin Brand

RA60
MARINE STEREO

1 YEAR
WARRANTY



SOURCES



BLUETOOTH®



1x AUX



AM/FM RADIO



DAB+ (*)

PRODUCT OVERVIEW

The new MS-RA60 is the most economical marine stereo from Fusion yet, featuring modern aesthetics, Multi-Zone™ technology in two zones and advanced connectivity options in a compact form factor. Engineered for quality audio entertainment in the harsh marine environment, a perimeter bonded, anti-fogging LCD is integrated into the IPX6 and IPX7 water-resistant black front face – making the MS-RA60 an attractive addition to your helm.

A replacement for the entry-level RA55 marine stereo, you can easily retrofit the RA60 without needing to change the existing cutout, which simplifies installation.

CLASS-D AMPLIFIER DESIGN

The built-in Class-D amplifier provides increased power while drawing less current than a standard Class-AB amplifier. The amplifier design delivers increased efficiency and power output, letting you enjoy your music at high volumes for longer.

IPX6 AND IPX7 WEATHER RESISTANCE RATING

The front panel of the MS-RA60 meets international IPX6 and IPX7 Water Ingress Protection standards, providing assurance that your stereo will perform and last in the harsh marine/outdoor environment when installed correctly.

WIRELESS SOFTWARE UPDATES

Over-the-air software updates are now available from your compatible smart device via BLUETOOTH® connectivity with the free Fusion-Link™ app, making it simple to keep the MS-RA60 up to date with the latest features.

FUSION-LINK CONTROL VIA BLUETOOTH AND ANT® TECHNOLOGIES

Fusion-Link makes control of your on-water entertainment easier than ever. Quickly find your favorite song, tune into the sports, or turn up the volume, all from your Fusion-Link compatible smartphone, device or Garmin smartwatch.

(* DAB+ radio available in Europe and Australia only; does not support traffic and weather.

PRODUCT IMAGES



GARMIN



MS-RA60 Fusion Marine Stereo, OEM

GARMIN PN: 010-02405-10

AVALON PN: 128907A

MS-RA60
MARINE STEREO
WITH WIRELESS CONNECTIVITY

FUSION
A Garmin Brand

KEY FEATURES

The **MS-RA60**, with its innovative technology and design, offers a quality audio entertainment experience, featuring:



The monochrome LCD is perimeter bonded to improve durability and protection against condensation and fogging and is optimized for daylight viewing.

KEY FEATURE



Download the free Fusion-Link™ remote control app for BLUETOOTH® connectivity from the App Store® or Google Play, and enjoy the freedom of wireless control from your compatible device. Download the free Fusion-Link™ Lite app from the Connect IQ™ app to enable wireless control via ANT® technology from your compatible Garmin smartwatch.



Up to two independent audio zones are available for a customized listening experience across your boat, each with advanced localized audio options, including volume limits, zone naming, tone control, balance and more. Note: Subwoofer and full range line outs require additional amplification.



The front panel of the MS-RA60 meets international IPX6 and IPX7 Water Ingress Protection standards, providing assurance that your product will perform and last in the harsh marine/outdoor environment when installed correctly (please refer to the installation instructions for more details).



The built-in Class-D amplifier provides increased power while drawing less current than a standard Class-AB amplifier. The amplifier design delivers increased efficiency and power output, letting you enjoy your music at higher volumes for longer.

NEW FEATURE



Over-the-air software updates are now available from your compatible smart device via BLUETOOTH with the free Fusion-Link app, making it simple to keep the MS-RA60 up to date.

NEW FEATURE



The built-in DAB tuner supports the latest DAB and DAB+ broadcasts, allowing you to enjoy high-quality digital radio streaming wherever DAB and DAB+ is supported.



180-watt peak power



4 ohm stereo stable



The MS-RA60 is designed to fit in the MS-RA55 mounting profile, eliminating the need to alter your existing cutout, reducing complexity when upgrading your stereo system.

PRODUCT CODES

FUSION CODE	GARMIN PN	EAN-13 BARCODE	MRP (USD)	MRP (CAD)
MS-RA60	010-02405-00	0753759250300	\$199.99	\$259.99



MS-RA670 Fusion Marine Stereo, OEM

GARMIN PN: 010-02138-01

AVALON PN: 128917

MS-RA670

APOLLO MARINE ENTERTAINMENT SYSTEM
WITH DIGITAL SIGNAL PROCESSING (DSP)



APOLLO 670



SOURCES



BLUETOOTH



OPTICAL
AUDIO IN



USB



MTP



1x AUX



UPnP*



AM/FM RADIO



DAB+
READY**



SiriusXM
READY**

PRODUCT OVERVIEW

The Revolution Continues with the extension of the award-winning Apollo Series with the NEW RA670 marine stereo. The Apollo 670 inherits key audio innovations and technological brilliance from the award-winning Apollo RA770, reembodyed in a more compact form factor. Experience the powerful features including optical audio for connection and audio playback from modern TVs, Wi-Fi audio streaming* and over-the-air software updates* via the Fusion-Link™ app. With the power of advanced DSP technology, the RA670 delivers you a technically superior listening experience - without the need for you to have a technical understanding. Enjoy the freedom of musical choice with Fusion's PartyBus™, the audio distribution network of the future.

HIGH QUALITY AUDIO THROUGH DSP

The power of Fusion's Digital Signal Processing (DSP) enables the optimization of Fusion speakers in each audio zone on your vessel. Our system approach ensures every step of the audio chain is optimized through calculations by our engineers to deliver a technically superior listening experience – without the need for you to have a technical understanding. From the kick drum to your eardrum Fusion DSP reproduces your music the way the musicians intended.

TRUE-MARINE™ PHILOSOPHY

Fusion's True-Marine design philosophy stems from our experience confronting the harsh marine environment. By designing and engineering from the ground up specifically for real world boating applications, our customers are assured that the equipment they fit into their vessel will deliver quality entertainment season after season - the Apollo 670 comes with a 3 year warranty.

FUSION-PARTYBUS™ VIA ETHERNET*

The power of PartyBus enables other PartyBus products on the network to connect to the RA670 (via Ethernet) in Party Mode and play the same perfectly synced audio source through the entire vessel. Opt into Personal Mode on any PartyBus enabled product and listen to available audio sources from your stereo in the area of your choice without disrupting Party Mode in the other areas of the vessel.

FUSION-LINK CONTROL

Fusion-Link makes control of your on-water entertainment easier than ever. Quickly find your favorite song, tune in to the sports or turn up the volume all from your partnered Multi-Function Display (MFD), compatible smartphone or Garmin watch.

(**) When connected to a wireless router or integrated into a Wi-Fi enabled Apollo Series stereo network.

(**) A SiriusXM Connect vehicle tuner and subscription required to access SiriusXM satellite radio (available in USA only). DAB+ radio requires the addition of an MS-DAB100A module (available in Europe and Australia only, does not support traffic and weather).

PRODUCT IMAGES





MS-RA670 Fusion Marine Stereo, OEM
 GARMIN PN: 010-02138-01
 AVALON PN: 128917

MS-RA670

APOLLO MARINE ENTERTAINMENT SYSTEM
 WITH DIGITAL SIGNAL PROCESSING (DSP)



KEY FEATURES

The **Apollo RA670**, with its innovative technology and design, offers a new world-class audio entertainment experience, featuring:

- KEY FEATURE**

DSP The Apollo RA670 harnesses the power of Fusion DSP, letting you optimize each audio zone on your vessel with your Fusion speakers, for premium listening in any environment.
- KEY FEATURE**

PARTYBUS The power of PartyBus™ enables other PartyBus products on the network to connect to the RA670 (via Ethernet) in Party Mode and play the same perfectly synced audio source through the entire vessel. (*)
- KEY FEATURE**

Wi-Fi When integrated into a network, enjoy the clarity and quality of Wi-Fi audio streaming, along with over-the-air software updates allowing you to keep your system up to date with the latest features with convenience. (*)
- KEY FEATURE**

True-Marine Fusion's True-Marine design philosophy stems from our experience confronting the harsh marine environment. By designing and engineering from the ground up specifically for real world boating applications, our customers are assured that the equipment they fit into their vessel will deliver quality entertainment season after season.
- KEY FEATURE**

Fusion-Link™ Fusion-Link™ is the industry standard protocol for on-water audio integration and control. Fusion-Link enables you to control the entertainment right from your partnered marine Multi-Function Displays, compatible devices and Garmin watches.
- 3 ZONES** Up to three independent audio zones are available for a customized listening experience across your vessel, each with advanced localized audio options, including volume limits, zone naming, tone control, balance, disabling zones and more. Note that Subwoofer and full range line outs require additional amplification.
- 2.7"** The color LCD is optically bonded to improve durability and protection against condensation and fogging, and is optimized for daylight viewing.
- IPX7** Enjoy confidence that your Apollo RA670 will last season after season in the harsh marine and outdoor environment. Meeting both IPX6 and IPX7 international standards for water resistance from the front panel when installed correctly, the RA670 is built to last on board.
- Class-D** Class-D amplifier delivers a higher efficiency and greater output, meaning you can listen to your music louder for longer without worrying about battery drain.
- 280W PEAK** 280 W peak power output
- 2 Ohm** 2 Ohm stereo stable for wiring up to 2 speakers per channel
- Compact** The compact design of the Apollo 670 increases installation options and versatility making it easier to get a premium marine stereo onboard.

(*) When connected to a wireless router or integrated into a Wi-Fi enabled Apollo Series stereo network.

REAR VIEW

USB PORT

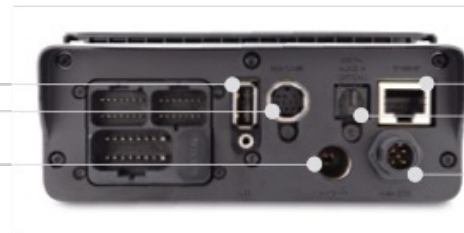
SiriusXM

ANTENNA /
DAB100A

ETHERNET PORT

OPTICAL AUDIO IN

NMEA 2000





MS-RA770 Fusion Marine Stereo, OEM
 GARMIN PN: 010-01905-10
 AVALON PN: 128925

APOLLO MARINE ENTERTAINMENT SYSTEM WITH BUILT-IN WI-FI STREAMING **FUSION®**

CODE:
MS-RA770

AUDIO SOURCES
 AM / FM / Bluetooth® / Apple AirPlay® / PartyBus / digital optical input / USB audio / AUX x 2 / UPnP / MTP / SiriusXM-Ready™ (for USA only, requires optional SiriusXM Connect vehicle tuner) / DAB+ ready (available in Europe and Australia only, does not support traffic and weather)



KEY FEATURES 

HIGH QUALITY AUDIO THROUGH DSP

The power of Fusion's Digital Signal Processing (DSP) enables the optimization of Fusion speakers in each audio zone on your vessel. Our system approach ensures every step of the audio chain is optimized through calculations by our engineers to deliver a technically superior listening experience – without the need for you to have a technical understanding. From the kick drum to your eardrum Fusion DSP reproduces your music the way the musicians intended.



WORLD'S FIRST MARINE WI-FI STEREO

Wi-Fi audio streaming delivers higher quality audio through Wi-Fi's exceptionally faster data transfer rate in comparison with Bluetooth. PartyBus over Wi-Fi allows for quick and simple network setup.



FUSION-PARTYBUS™

The power of PartyBus kicks in when you add more PartyBus enabled stereos to your entertainment system. Each additional PartyBus enabled stereo gives you the option to join Party Mode and play the same perfectly synced audio source through the entire vessel. Switch into Personal Mode and listen to available audio sources from your stereo in the area of your choice without disrupting Party Mode in the other areas of the vessel.

TOUCHSCREEN DISPLAY

Control your entertainment with the touch of a finger on the optically bonded touchscreen display. Simply tap the screen to pause and play, or swipe through your playlist to your favorite song – the future has arrived.



OVER-THE-AIR SOFTWARE UPDATES

Over-the-air software updates are now available from your smartphone or compatible device via the free Fusion-Link™ app, making the Apollo Series intelligently simple and always up to date.



FUSION-LINK™ CONTROL

The Fusion-Link remote control app gives you the flexibility to control your onboard entertainment from anywhere on the boat, with multiple connectivity options available:

- NMEA 2000 network via a partnered Multi-Function Display.
- Ethernet via a partnered Multi-Function Display.
- Wi-Fi via a wireless Ethernet router or wireless network.
- NRX Series remote via a stand-alone Fusion Remote Control Network.
- Bluetooth Wireless Technology via a compatible Apple or Android device.
- ANT via a compatible Garmin watch with the Fusion-Link Lite app.

APPLE AIRPLAY®

Enjoy seamless high quality audio streaming via Apple AirPlay over Wi-Fi from a compatible Apple device to the Apollo RA770. Control of your favorite music app is only a tap away with your iPhone, on either the control center, lock screen or in-app controls.
 Note: AirPlay is not supported over PartyBus.

TRUE-MARINE™ PHILOSOPHY

Fusion's True-Marine design philosophy stems from our experience confronting the harsh marine environment. By designing and engineering from the ground up specifically for real world boating applications, our customers are assured that the equipment they fit into their vessel will deliver quality entertainment season after season.



FUSION® APOLLO™ MARINE AMPLIFIERS

PRODUCT UPDATE



MS-AP61800 Fusion 6 Ch Marine Amplifier, Apollo NF

GARMIN PN: 010-02284-65

AVALON PN: 128963

MS-AP82400 Fusion 8 Ch Marine Amplifier, Apollo NF

GRAMIN PN: 010-02284-85

AVALON PN: 128962

MS-AP12000 Fusion 1 Ch Marine Amplifier, Apollo NF

GARMIN PN: 010-02284-15

AVALON: 128964

AP-DA214 Fusion 2 Ch Marine Zone Amplifier, Retail

GARMIN PN: 010-02569-00

AVALON PN: 128965

Monoblock Amplifier



AVAILABLE	INCLUDES	COUNTRY OF ORIGIN		
August	Apollo monoblock amplifier, mounting bracket, power connector, speaker connector, four 8-gauge flathead self-tapping screws, four 8-gauge panhead self-tapping screws, four screw covers, mounting template, installation instructions and ISPI	Made in Taiwan. Connectors made in China.		
DESCRIPTION	SKU	UPC	MRP (USD)	MRP (CAD)
Apollo Monoblock Amplifier	010-02284-15	753759329600	\$649.99	\$879.99

4 Channel Amplifier



AVAILABLE	INCLUDES	COUNTRY OF ORIGIN		
August	Apollo 4 channel amplifier, mounting bracket, power connector, two speaker connectors with high-power mode adapters, four 8-gauge flathead self-tapping screws, four 8-gauge panhead self-tapping screws, four screw covers, mounting template, installation instructions and ISPI	Made in Taiwan. Connectors made in China.		
DESCRIPTION	SKU	UPC	MRP (USD)	MRP (CAD)
Apollo 4 Channel Marine Amplifier	010-02284-45	753759329617	\$649.99	\$879.99

6 Channel Amplifier



AVAILABLE	INCLUDES	COUNTRY OF ORIGIN		
August	Apollo 6 channel amplifier, mounting bracket, power connector, three speaker connectors with high-power mode adapters, four 8-gauge flathead self-tapping screws, four 8-gauge panhead self-tapping screws, four screw covers, mounting template, installation instructions and ISPI	Made in Taiwan. Connectors made in China.		
DESCRIPTION	SKU	UPC	MRP (USD)	MRP (CAD)
Apollo 6 Channel Marine Amplifier	010-02284-65	753759329624	\$799.99	\$1,079.99

8 Channel Amplifier



AVAILABLE	INCLUDES	COUNTRY OF ORIGIN		
August	Apollo 8 channel amplifier, mounting bracket, power connector, four speaker connectors with high-power mode adapters, four 8-gauge flathead self-tapping screws, four 8-gauge panhead self-tapping screws, four screw covers, mounting template, installation instructions and ISPI	Made in Taiwan. Connectors made in China.		
DESCRIPTION	SKU	UPC	MRP (USD)	MRP (CAD)
Apollo 8 Channel Marine Amplifier	010-02284-85	753759329631	\$949.99	\$1,279.99

PACKAGING SPECIFICATIONS:

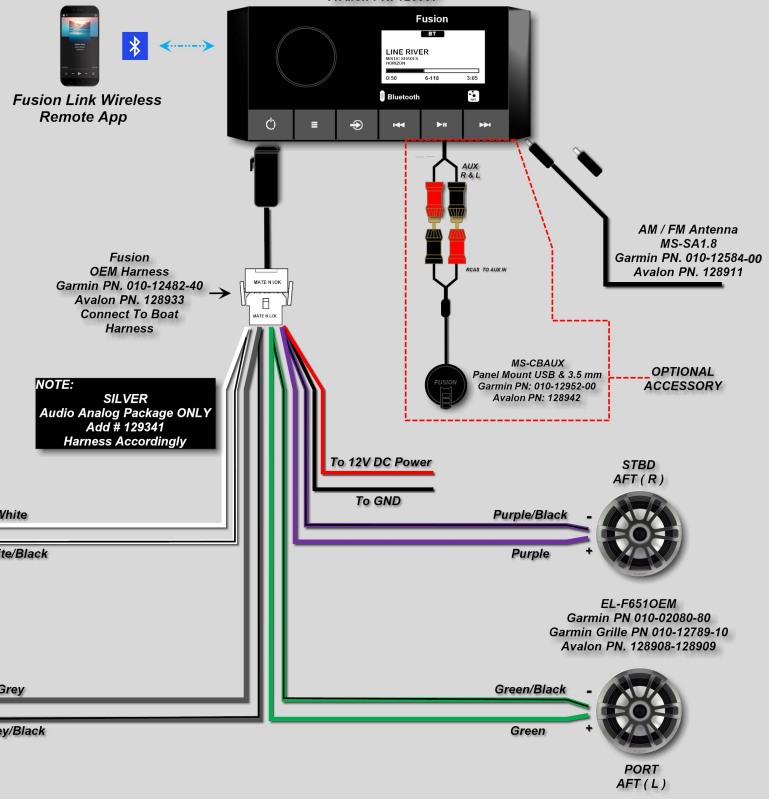
	MONOBLOCK AMPLIFIER	4 CHANNEL AMPLIFIER	6 CHANNEL AMPLIFIER	8 CHANNEL AMPLIFIER
Gift box dimensions (W x H x D):	11.85" x 9.45" x 5.04" (301 x 240 x 128 mm)	11.85" x 9.45" x 5.04" (301 x 240 x 128 mm)	14.33" x 9.45" x 5.04" (364 x 240 x 128 mm)	16.77" x 9.45" x 5.04" (426 x 240 x 128 mm)
Gift box weight:	6.6 lbs (3.0 kg)	6.6 lbs (3.0 kg)	8.4 lbs (3.8 kg)	9.7 lbs (4.4 kg)
Master carton dimensions (W x H x D):	21.22" x 12.68" x 10.43" (539 x 322 x 265 mm)	21.22" x 12.68" x 10.43" (539 x 322 x 265 mm)	14.96" x 10.87" x 10.43" (380 x 276 x 265 mm)	17.40" x 10.87" x 10.43" (442 x 276 x 265 mm)
Master carton weight:	30 lbs (13.6 kg)	30 lbs (13.6 kg)	21 lbs (9.5 kg)	23 lbs (10.4 kg)
Master carton quantity:	4	4	2	2



BRONZE MY24

REVISIONS		
REV.	DESCRIPTION	DATE
	INITIAL DESIGN	4/24/2023

MS-RA60
Garmin PN. 010-02405-10
Avalon PN. 128907



NOTE:
SILVER
Audio Analog Package ONLY
Add # 129341
Harness Accordingly



Apple App Store
Fusion Link QR



Google App Store
Fusion Link QR

Audio System Part Numbers

GARMIN P/N	FUSION MODEL NO.	AVALON P/N	QTY	DESCRIPTION
010-02405-10	MS-RA60OEM	128907	1 EA	MS-RA60- Multi-Zone Technology, Anti-Fogging LCD, IPX6 and IP7 Water Resistance Black Front Face.
010-12482-21	OEM HEAD UNIT HARNESS	128910	1 EA	Loom, A Port-TE 12P, PWR/SPKR, FusConn, Fusion Suits MS-RA60
010-02080-80	EL-F651OEM	128908	2 PAIRS	Fusion, 6.5" Spk, w/o Grille, OEM, Bulk, NO Grilles
010-12789-10	EL-X651SPG	128909	2 PAIRS	Fusion, 6.5", Sports Grille Grey
010-12584-00	MS-SA1.8	128911	1 EA	Fusion, 1.8 Meter Stealth Antenna
010-12952-00	MS-CBAUX	128942	1 EA	3.5MM AUX JACK (OPTIONAL ACCESSORY)

MS-RA60 Tone Settings

Tone Settings BOW (Zone 1)	Tone Settings AFT (Zone 2)
Base... 9	Base... 9
Middle... 4	Middle... 4
Treble... 5	Treble... 5
Sub Level... 0	Sub Level... 0
Low Pass... 55 Hz	Low Pass... 55 Hz

16 AWG SPEAKER CABLES
POWER CABLES

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

CONFIDENTIAL
This drawing is confidential and may contain information which is proprietary to SM Osgood Company and their manufacturing partners. This material may not be reproduced or used in whole or in parts as the basis for manufacturing or sale of products with out written permission.

SM Osgood Company
3410 Hardscrabble Road N.
Minnetrista, MN 55364

DRWN No.	DRWN	DATE	BRONZE MY24	REV.
1	DP	4/24/2023		

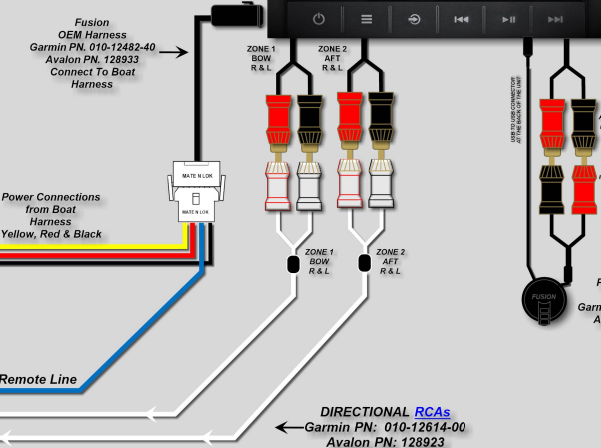


GP1 MY24

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	5/9/2023

MS-AP61800
Garmin PN: 010-02284-65
Avalon PN: 128963

MS-RA670
Garmin PN: 010-02138-01
Avalon PN: 128917



129285A
APOLLO SOUND HRNS 3 MY24
NOT FOR VRL OF ANY MODEL
NOT FOR CTP ELW, ENTFS OR VRB

ARX70B
Optional ANT Wireless Stereo Remote
Garmin PN: 010-02167-00

Apple App Store
Fusion Link QR

Google App Store
Fusion Link QR

MS-SA1.8
AM / FM Antenna
Garmin PN: 010-12584-00
Avalon PN: 128911

MS-CBUSB3.5
Panel Mount USB & 3.5 mm
Garmin PN: 010-12381-00
Avalon PN: 128940

Fusion OEM Harness
Garmin PN: 010-12482-40
Avalon PN: 128933
Connect To Boat Harness

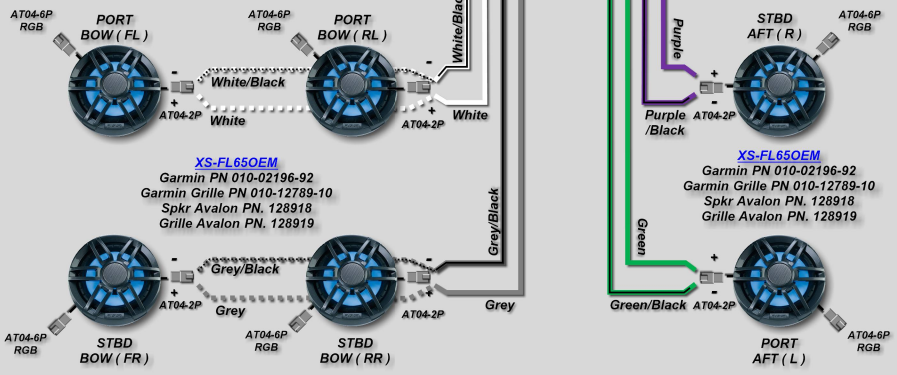
Power Connections from Boat Harness
Yellow, Red & Black

Head Unit Remote Line

DIRECTIONAL RCAs
Garmin PN: 010-12614-00
Avalon PN: 128923

To 285 Circuit Breaker 80 Amp 8 AWG

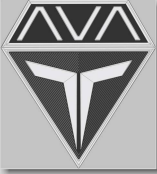
To BBS Ground BusBar 8 AWG



- PARALLEL SPEAKER CABLES
- 16 AWG SPEAKER CABLES
- HEAD UNIT REMOTE POWER
- AMP POWER CABLES

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

CONFIDENTIAL			
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SM Osgood Company 3410 Hardscrabble Road N. Minnetrista, MN 55364			
DRWN No. 1	DRWN DP	DATE 5/9/2023	GP1 MY24 All CAT/CAS Floor Plans Except VRL . Standard for VRB All CTP/CSP Floor Plans Except ELW, VRB, ENTFS & CRUFS
			REV. A



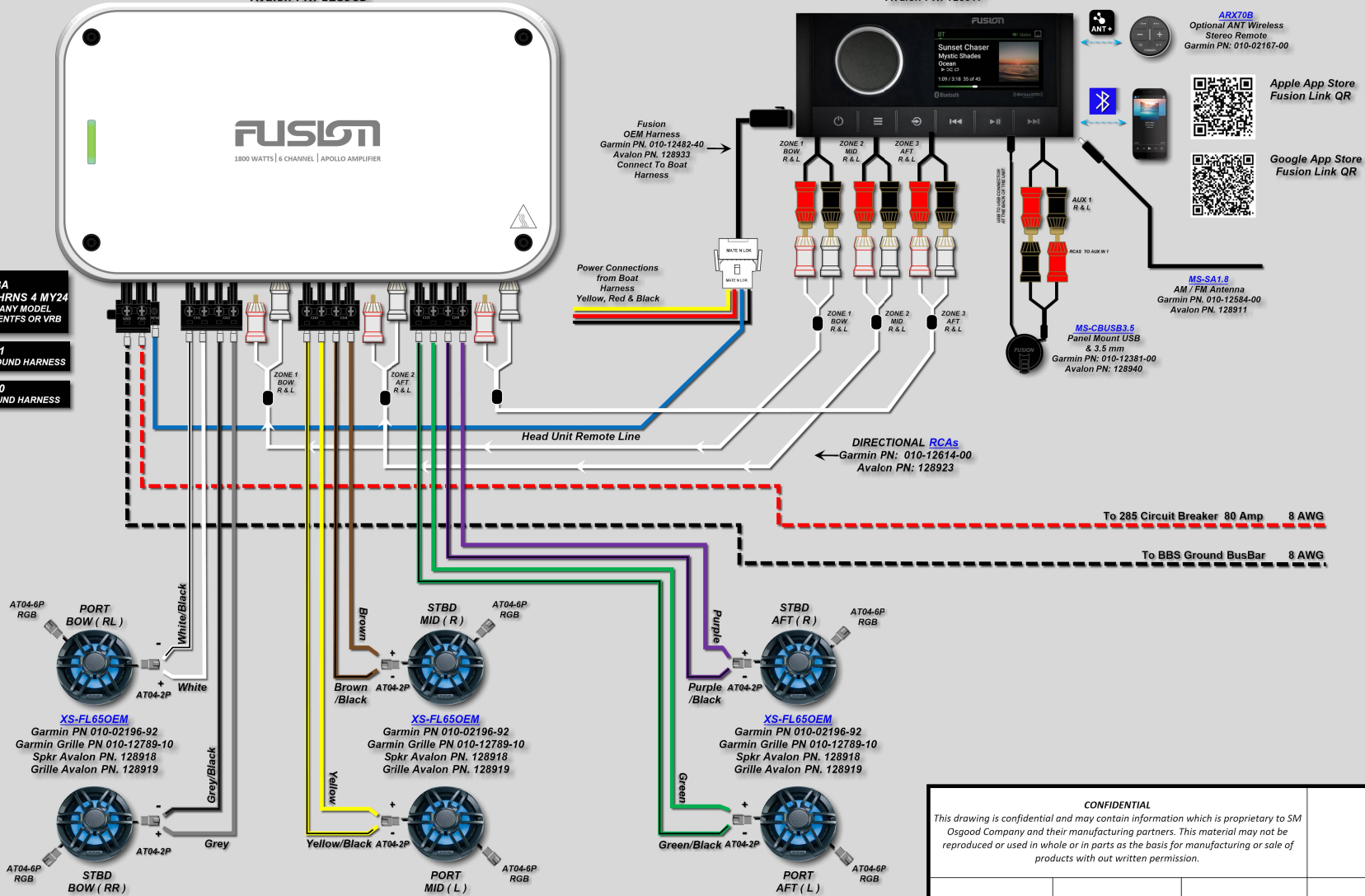
GP2 MY24

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	5/9/2023

MS-AP61800
Garmin PN: 010-02284-65
Avalon PN: 128963

MS-RA670
Garmin PN: 010-02138-01
Avalon PN: 128917

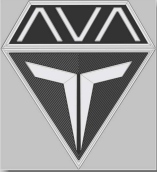
- 129368A**
APOLLO SOUND HRNS 4 MY24
NOT FOR VRL OF ANY MODEL
NOT FOR CTP ELW, ENTFS OR VRB
- 129281**
VRL & PLANT VRB SOUND HARNESS
- 129340**
ELW VRBW MID SOUND HARNESS



- PARALLEL SPEAKER CABLES
- 16 AWG SPEAKER CABLES
- HEAD UNIT REMOTE POWER
- - - - AMP POWER CABLES

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

CONFIDENTIAL			<p>SM Osgood Company 3410 Hardscrabble Road N. Minnetrsta, MN 55364</p>	
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DRWN No. 2	DRWN DP	DATE 5/9/2023	<p>GP2 MY24 All CAT/CAS Floor Plans Except VRL, Standard for VRB All CTP/CSP Floor Plans Except ELW, VRB, ENTFS & CRUPS</p>	REV. A



GP3 MY24

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	12/6/2023

MS-AP61800

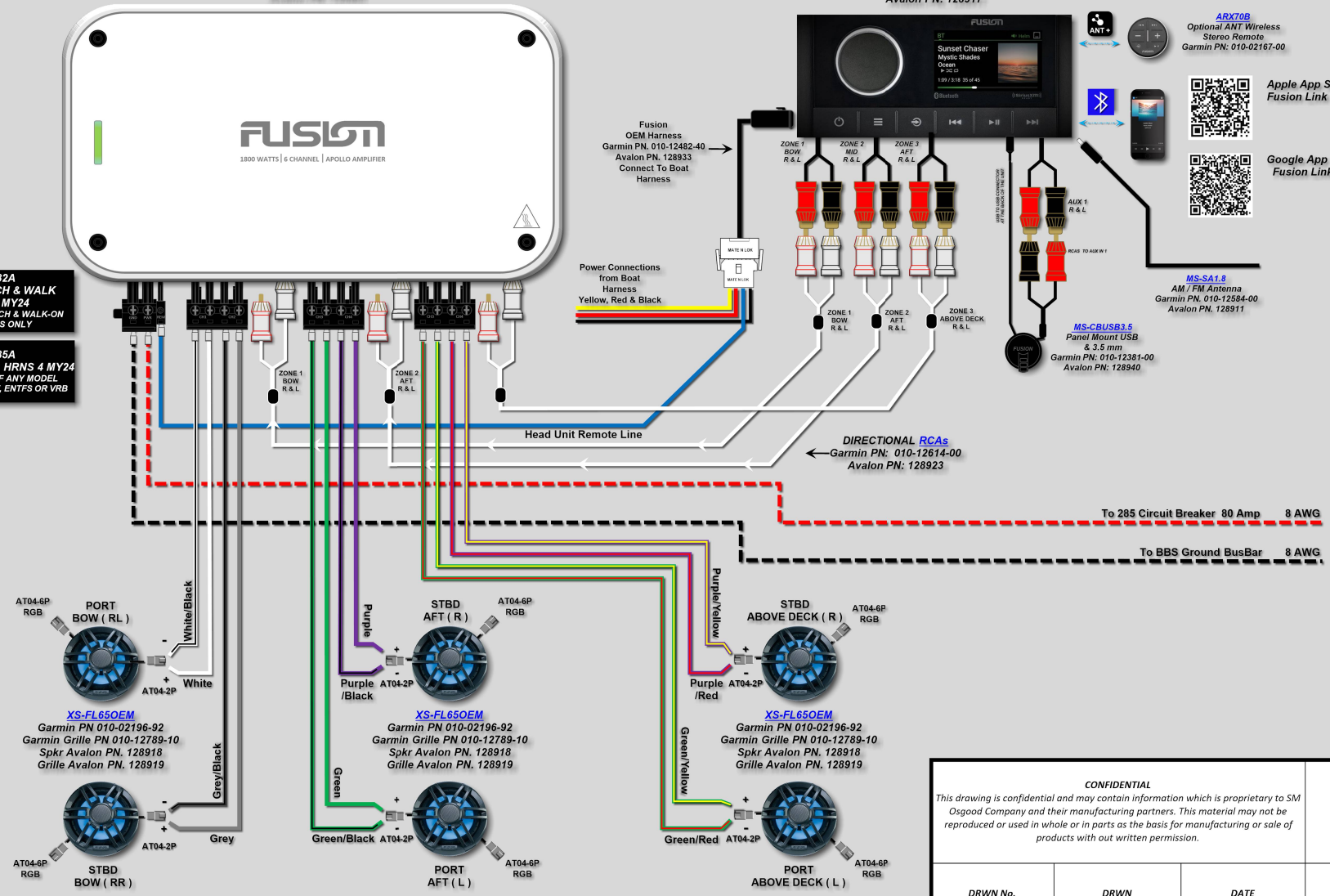
Garmin PN: 010-02284-65
Avalon PN: 128963

MS-RA670

Garmin PN: 010-02138-01
Avalon PN: 128917

129382A
APOLLO ARCH & WALK
HRNS 4 MY24
INTEGRATED ARCH & WALK-ON
SPEAKERS ONLY

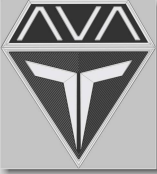
129285A
APOLLO SOUND HRNS 4 MY24
NOT FOR VRL OF ANY MODEL
NOT FOR CTP ELW, ENTFS OR VRB



- - - - - PARALLEL SPEAKER CABLES
- — — — — 16 AWG SPEAKER CABLES
- — — — — HEAD UNIT REMOTE POWER
- - - - - AMP POWER CABLES

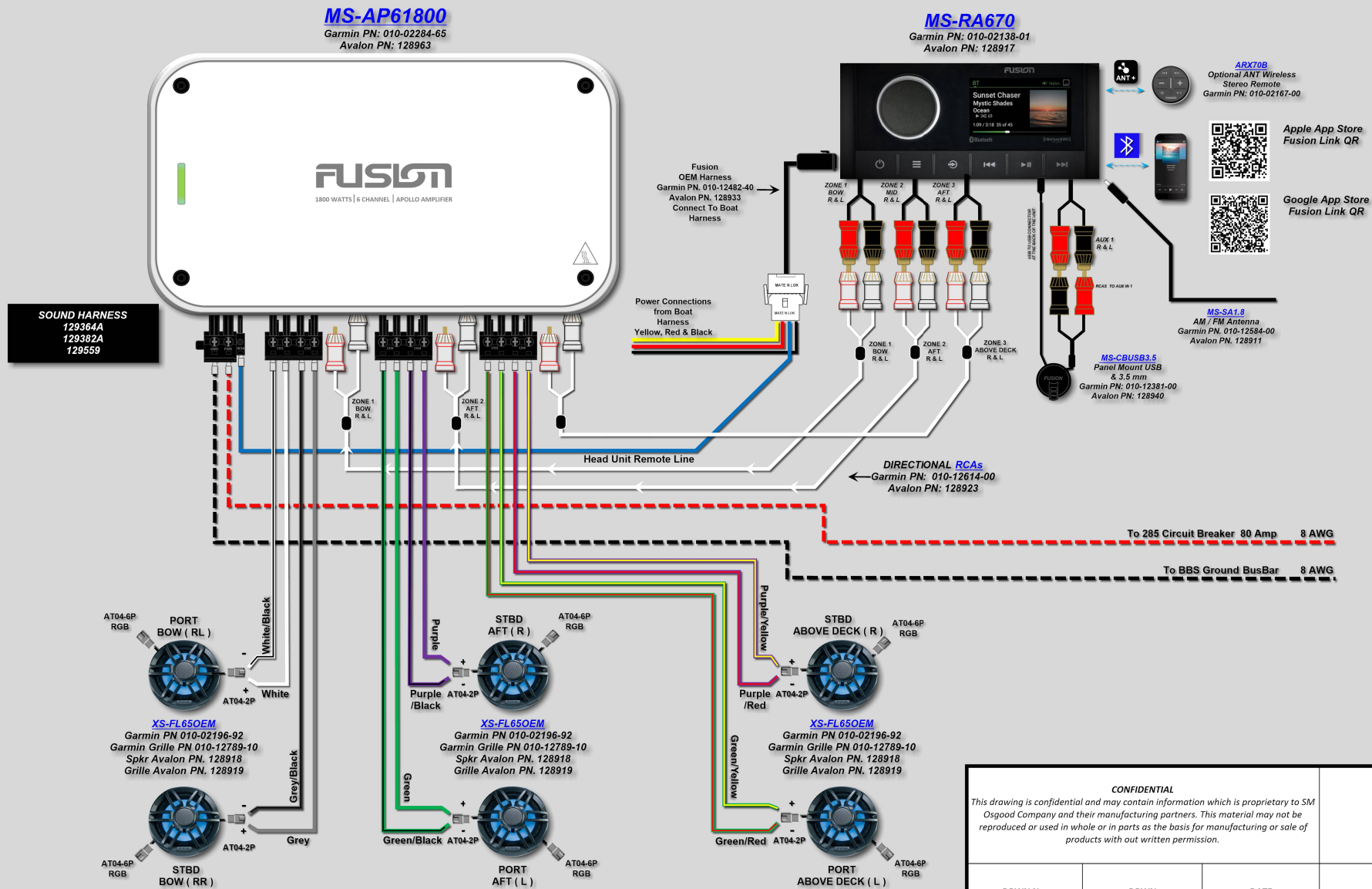
CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

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DRWN No. 3	DRWN DP	DATE 12/6/2023	GP3 MY24 All CAT Floor Plans: QL-RL-ENT-EL-VRL-ENTFS	REV. A



GP4MY24

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	12/6/2023



SOUND HARNESS
 129364A
 129382A
 129559

MS-AP61800
 Garmin PN: 010-02284-65
 Avalon PN: 128963

MS-RA670
 Garmin PN: 010-02138-01
 Avalon PN: 128917

ARX708
 Optional ANT Wireless Stereo Remote
 Garmin PN: 010-02167-00

Apple App Store
 Fusion Link QR

Google App Store
 Fusion Link QR

MS-SAT 3
 AM / FM Antenna
 Garmin PN: 010-12584-00
 Avalon PN: 128911

MS-CBUSB3.5
 Panel Mount USB & 3.5 mm
 Garmin PN: 010-12381-00
 Avalon PN: 128940

Fusion OEM Harness
 Garmin PN: 010-12482-40
 Avalon PN: 128933
 Connect To Boat Harness

Power Connections from Boat Harness
 Yellow, Red & Black

DIRECTIONAL RCAs
 Garmin PN: 010-12614-00
 Avalon PN: 128923

To 285 Circuit Breaker 80 Amp 8 AWG

To BBS Ground BusBar 8 AWG

AT04-6P RGB
PORT BOW (RL)
 XS-FL65OEM
 Garmin PN 010-02196-92
 Garmin Grille PN 010-12789-10
 Spkr Avalon PN. 128918
 Grille Avalon PN. 128919

AT04-6P RGB
STBD AFT (R)
 XS-FL65OEM
 Garmin PN 010-02196-92
 Garmin Grille PN 010-12789-10
 Spkr Avalon PN. 128918
 Grille Avalon PN. 128919

AT04-6P RGB
STBD ABOVE DECK (R)
 XS-FL65OEM
 Garmin PN 010-02196-92
 Garmin Grille PN 010-12789-10
 Spkr Avalon PN. 128918
 Grille Avalon PN. 128919

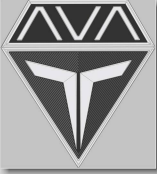
AT04-6P RGB
STBD BOW (RR)

AT04-6P RGB
PORT AFT (L)

AT04-6P RGB
PORT ABOVE DECK (L)

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

CONFIDENTIAL This drawing is confidential and may contain information which is proprietary to SM Osgood Company and their manufacturing partners. This material may not be reproduced or used in whole or in parts as a basis for manufacturing or sale of products with out written permission.			SM Osgood Company 3410 Hardscrabble Road N. Minnetrista, MN 55364	
DRWN No. 3	DRWN DP	DATE 12/6/2023	GOLD 3 MY24 All CAT Floor Plans: QL-RL-ENT-EL-VRL-ENTFS	REV. A



HPS1 MY24

MS-AP61800
 Garmin PN: 010-02284-65
 Avalon PN: 128963

MS-RA670
 Garmin PN: 010-02138-01
 Avalon PN: 128917

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	5/9/2023



- 129285A**
 APOLLO SOUND HRNS 3 MY24
 NOT FOR VRL OF ANY MODEL
 NOT FOR CTP ELW, ENTFS OR VRB
- 129342**
 SHORT SUBWOOFER HARNESS
- 129343**
 LONG SOBWOOFER HARNESS



Fusion OEM Harness
 Garmin PN: 010-12482-40
 Avalon PN: 128933
 Connect To Boat Harness

Power Connections from Boat Harness
 Yellow, Red & Black

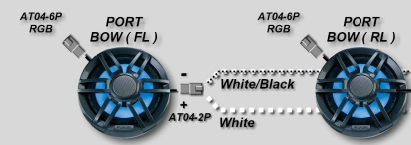
Place the High Power Adapter on Zone 3 when use a bridge mode connection for Subwoofer

Head Unit Remote Line

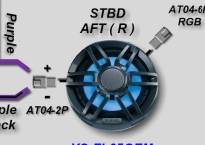
DIRECTIONAL RCAs
 ← Garmin PN: 010-12614-00
 Avalon PN: 128923

To 285 Circuit Breaker 80 Amp 8 AWG

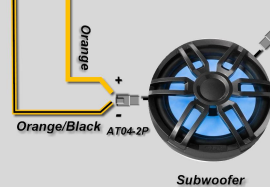
To BBS Ground BusBar 8 AWG



XS-FL65OEM
 Garmin PN: 010-02196-92
 Garmin Grille PN: 010-12789-10
 Spkr Avalon PN: 128918
 Grille Avalon PN: 128919

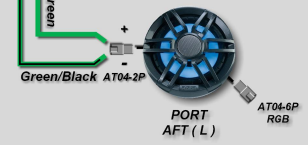
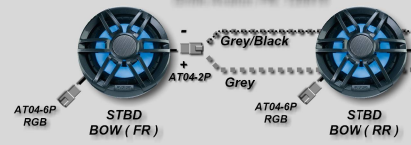


XS-FL65OEM
 Garmin PN: 010-02196-92
 Garmin Grille PN: 010-12789-10
 Spkr Avalon PN: 128918
 Grille Avalon PN: 128919



XS-SL10OEM
 Garmin PN: 010-02198-92
 Avalon PN: 128921

CHROME GRILLE
 Garmin PN: 010-12880-40
 Avalon PN: 128922



- 16 AWG SPEAKER CABLES
- PARALLEL SPEAKER CABLES
- 14 AWG SUBWOOFER CABLES
- HEAD UNIT REMOTE POWER
- AMP POWER CABLES

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

CONFIDENTIAL This drawing is confidential and may contain information which is proprietary to SM Osgood Company and their manufacturing partners. This material may not be reproduced or used in whole or in parts as the basis for manufacturing or sale of products with out written permission.			SM Osgood Company 3410 Hardscrabble Road N. Minnetrista, MN 55364	
DRWN No. 1	DRWN DP	DATE 5/9/2023	HPS1 1 MY24 ALL MODELS & FLOORPLANS EXCEPT VRL ALL CTP/CSP FLOORPLANS EXCEPT ELW, QLW, VRB, ENTFS, CRUFS	
			REV. A	

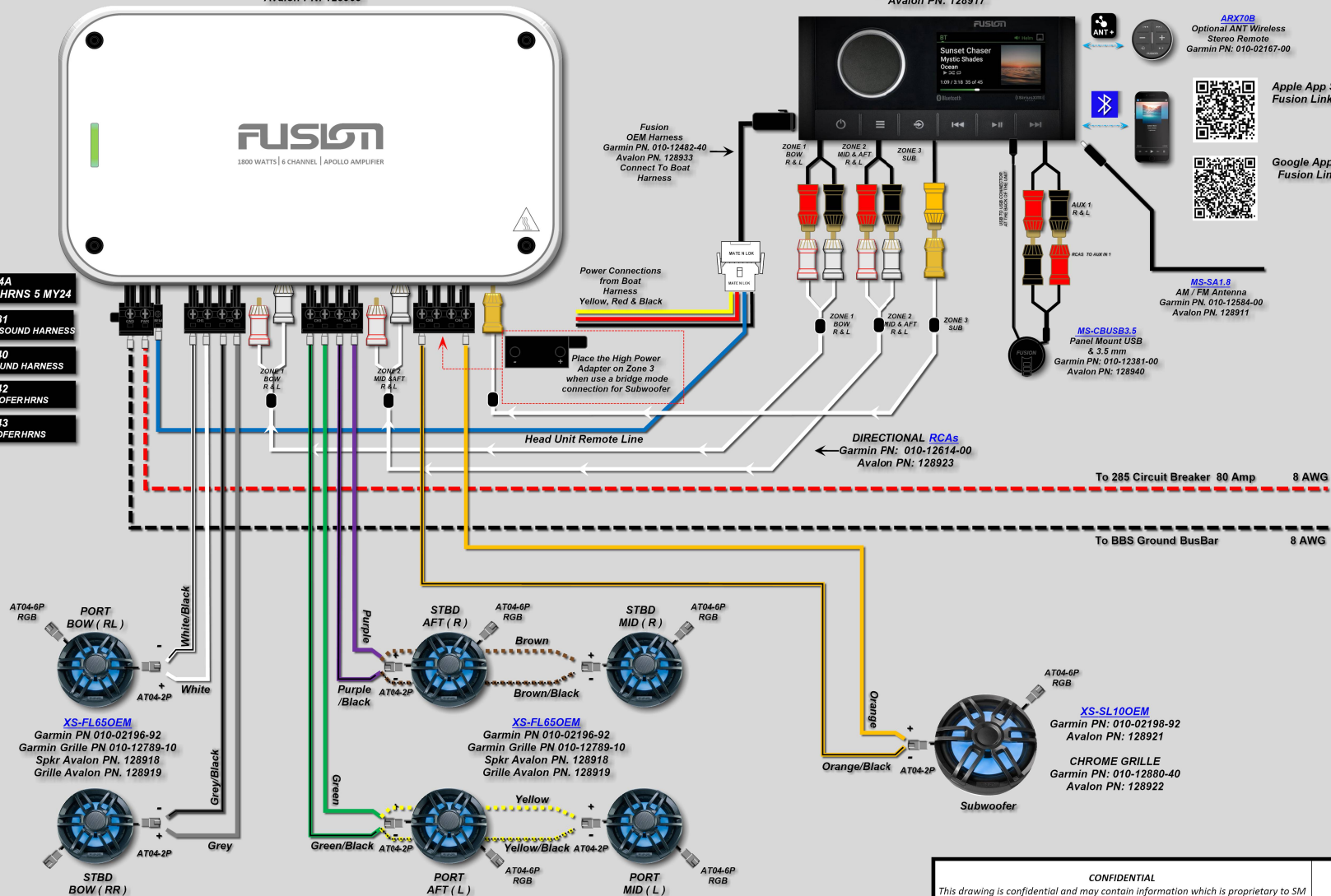


MS-AP61800
Garmin PN: 010-02284-65
Avalon PN: 128963

HPS2 MY24

MS-RA670
Garmin PN: 010-02138-01
Avalon PN: 128917

- 129364A
APOLLO SOUND HRNS 5 MY24
- 129281
VRL & PLAT VRB MID SOUND HARNESS
- 129340
ELW VRBW MID SOUND HARNESS
- 129342
SHORT SUBWOOFER HRNS
- 129343
LONG SUBWOOFER HRNS

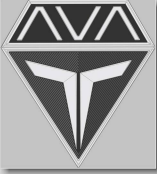


REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	5/9/2023

- 16 AWG SPEAKER CABLES
- PARALLEL SPEAKER CABLES
- 14 AWG SUBWOOFER CABLES
- HEAD UNIT REMOTE POWER
- AMP POWER CABLES

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

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<p>DRWN No. 2</p>	<p>DRWN DP</p>	<p>DATE 5/9/2023</p>	<p>HPS1 MY24 ALL MODELS & FLOORPLANS EXCEPT VRL ALL CTP/CSP FLOORPLANS EXCEPT ELW, QLW, VRB, ENTFS, CRUFS</p>	<p>REV. A</p>



MS-AP61800
 Garmin PN: 010-02284-65
 Avalon PN: 128963

HPS3 MY24

MS-RA670
 Garmin PN: 010-02138-01
 Avalon PN: 128917

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	5/9/2023



- 129382A
APOLLO ARCH & WALK-ONHRNS MY24
INTEGRATED ARCH & WALK-ON
SPEAKERS ONLY
- 129431A
APOLLO SOUNDHRNS 6 MY24
- 129342
SHORT SUBWOOFER HARNESS
- 129343
LONG SOBWOOFER HARNESS

Fusion
 OEM Harness
 Garmin PN: 010-12482-40
 Avalon PN: 128933
 Connect To Boat
 Harness

Power Connections
 from Boat
 Harness
 Yellow, Red & Black

Place the High Power
 Adapter on Zone 3
 when use a bridge mode
 connection for Subwoofer

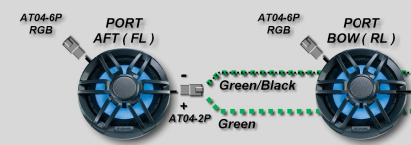
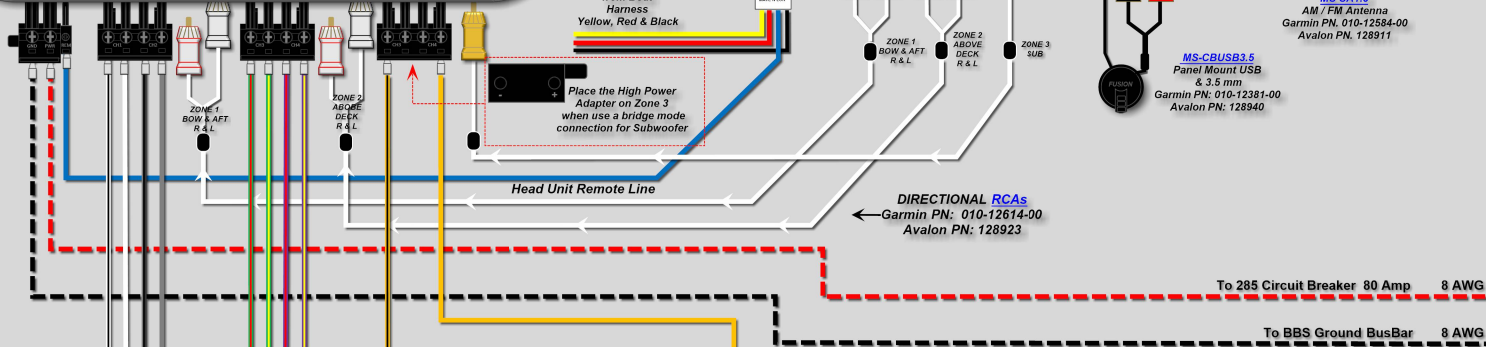
ARX70B
 Optional ANT Wireless
 Stereo Remote
 Garmin PN: 010-02167-00

Apple App Store
 Fusion Link QR

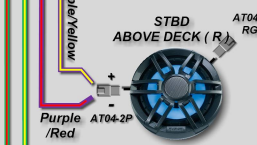
Google App Store
 Fusion Link QR

MS-SA1.8
 AM / FM Antenna
 Garmin PN: 010-12584-00
 Avalon PN: 128911

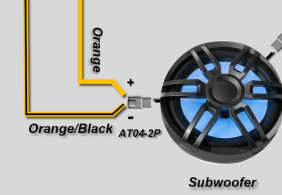
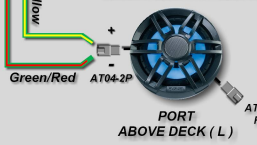
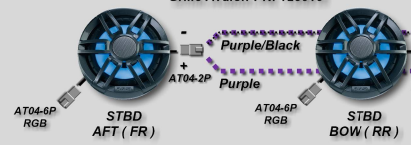
MS-CBUSB3.5
 Panel Mount USB
 & 3.5 mm
 Garmin PN: 010-12381-00
 Avalon PN: 128940



XS-FL65OEM
 Garmin PN 010-02196-92
 Garmin Grille PN 010-12789-10
 Spkr Avalon PN: 128918
 Grille Avalon PN: 128919



XS-FL65OEM
 Garmin PN 010-02196-92
 Garmin Grille PN 010-12789-10
 Spkr Avalon PN: 128918
 Grille Avalon PN: 128919

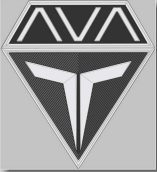


XS-SL10OEM
 Garmin PN: 010-02198-92
 Avalon PN: 128921
CHROME GRILLE
 Garmin PN: 010-12880-40
 Avalon PN: 128922

- 16 AWG SPEAKER CABLES
- PARALLEL SPEAKER CABLES
- 14 AWG SUBWOOFER CABLES
- HEAD UNIT REMOTE POWER
- AMP POWER CABLES

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

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DRWN No. 3	DRWN DP	DATE 5/9/2023	<p>HPS3 MY24 FOR CTP/CSP ENTFS & CRUFS ONLY</p>	
			REV. A	



HPS4 MY24

MS-AP6180U
Garmin PN: 010-02284-65
Avalon PN: 128963

MS-RA670
Garmin PN: 010-02138-01
Avalon PN: 128917

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	5/9/2023



- 129435A
APOLLO SOUND HRNS 4 MY24
- 129281
VRL & PLAT VRB MID SOUND HARNESS
- 129340
ELW VRBW MID SOUND HARNESS
- 129342
SHORT SUBWOOFER HRNS
- 129343
LONG SUBWOOFER HRNS

Fusion OEM Harness
Garmin PN: 010-12432-40
Avalon PN: 128933
Connect To Boat Harness

Power Connections from Boat Harness
Yellow, Red & Black

Place the High Power Adapter on Zone 3 when use a bridge mode connection for Subwoofer

Head Unit Remote Line

DIRECTIONAL RCAs
Garmin PN: 010-12614-00
Avalon PN: 128923

ARX709
Optional ANT Wireless Stereo Remote
Garmin PN: 010-02167-00

Apple App Store
Fusion Link QR

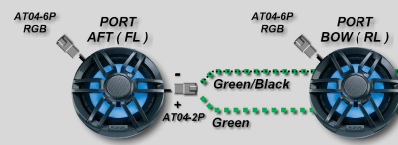
Google App Store
Fusion Link QR

MS-SA13
AM / FM Antenna
Garmin PN: 010-12584-00
Avalon PN: 128911

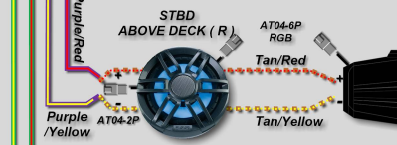
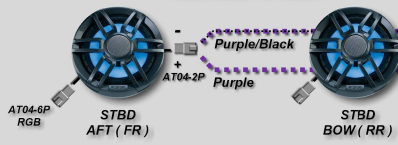
MS-CBUSB3.5
Panel Mount USB & 3.5 mm
Garmin PN: 010-12381-00
Avalon PN: 128940

To 285 Circuit Breaker 80 Amp 8 AWG

To BBS Ground BusBar 8 AWG



XS-FL65OEM
Garmin PN 010-02196-92
Garmin Grille PN 010-12789-10
Sprkr Avalon PN. 128918
Grille Avalon PN. 128919



XS-FL65OEM
Garmin PN 010-02196-92
Garmin Grille PN 010-12789-10
Sprkr Avalon PN. 128918
Grille Avalon PN. 128919



XS-SL10OEM
Garmin PN: 010-02198-92
Avalon PN: 128921

CHROME GRILLE
Garmin PN: 010-12880-40
Avalon PN: 128922

- 16 AWG SPEAKER CABLES
- PARALLEL SPEAKER CABLES
- 14 AWG SUBWOOFER CABLES
- HEAD UNIT REMOTE POWER
- AMP POWER CABLES

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

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DRWN No. 4	DRWN DP	DATE 6/28/2023	<p>HPS7 MY24 FOR HP SOUND BOATS WITH 4 DECK LEVEL SPEAKERS, INTEGRATED ARCH & 2 XS CAN SPEAKERS</p>	REV. A



HPS 5 MY 24

MS-AP6180U
Garmin PN: 010-02284-65
Avalon PN: 128963

MS-RA670
Garmin PN: 010-02138-01
Avalon PN: 128917

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	5/9/2023



- 129435A
APOLLO SOUND HRNS 4 MY24
- 129281
VRL & PLAT VRB MID SOUND HARNESS
- 129340
ELW VRBW MID SOUND HARNESS
- 129342
SHORT SUBWOOFERHRNS
- 129343
LONG SUBWOOFERHRNS

ARX709
Optional ANT Wireless Stereo Remote
Garmin PN: 010-02167-00

Apple App Store
Fusion Link QR

Google App Store
Fusion Link QR

MS-SA13
AM / FM Antenna
Garmin PN: 010-12584-00
Avalon PN: 128911

MS-CBUSB3.5
Panel Mount USB & 3.5 mm
Garmin PN: 010-12381-00
Avalon PN: 128940

Fusion OEM Harness
Garmin PN: 010-12432-40
Avalon PN: 128933
Connect To Boat Harness

Power Connections from Boat Harness
Yellow, Red & Black

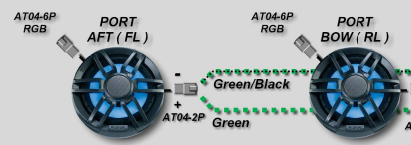
Place the High Power Adapter on Zone 3 when use a bridge mode connection for Subwoofer

Head Unit Remote Line

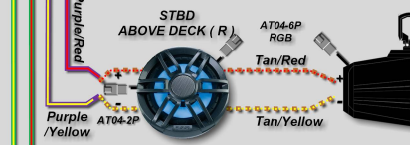
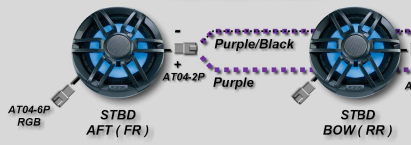
DIRECTIONAL RCAs
Garmin PN: 010-12614-00
Avalon PN: 128923

To 285 Circuit Breaker 80 Amp 8 AWG

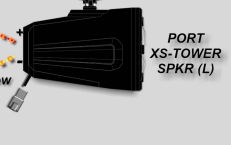
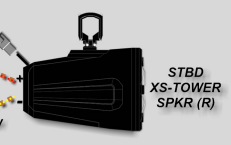
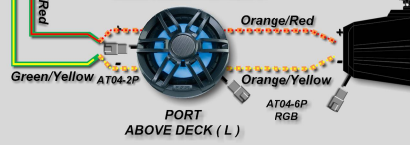
To BBS Ground BusBar 8 AWG



XS-FL65OEM
Garmin PN 010-02196-92
Garmin Grille PN 010-12789-10
Spkr Avalon PN. 128918
Grille Avalon PN. 128919



XS-FL65OEM
Garmin PN 010-02196-92
Garmin Grille PN 010-12789-10
Spkr Avalon PN. 128918
Grille Avalon PN. 128919



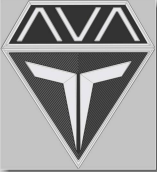
XS-SL10OEM
Garmin PN: 010-02198-92
Avalon PN: 128921

CHROME GRILLE
Garmin PN: 010-12880-40
Avalon PN: 128922

- 16 AWG SPEAKER CABLES
- PARALLEL SPEAKER CABLES
- 14 AWG SUBWOOFER CABLES
- HEAD UNIT REMOTE POWER
- AMP POWER CABLES

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

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DRWN No. 5	DRWN DP	DATE 6/28/2023	<p>HPS5 MY24 FOR HP SOUND BOATS WITH 4 DECK LEVEL SPEAKERS, INTEGRATED ARCH & 2 XS-CAN SPEAKERS</p>	
			REV. A	



HPS6 MY24

MS-AP6180U
 Garmin PN: 010-02284-65
 Avalon PN: 128963

MS-RA670
 Garmin PN: 010-02138-01
 Avalon PN: 128917

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	12/5/2023



- 129435A
APOLLO SOUND HRNS 4 MY24
- 129281
VRL & PLAT VRB MID SOUND HARNESS
- 129340
ELW VRBW MID SOUND HARNESS
- 129342
SHORT SUBWOOFER HRNS
- 129343
LONG SUBWOOFER HRNS

Fusion OEM Harness
 Garmin PN: 010-12432-40
 Avalon PN: 128933
 Connect To Boat Harness

Power Connections from Boat Harness
 Yellow, Red & Black

Place the High Power Adapter on Zone 3 when use a bridge mode connection for Subwoofer

Head Unit Remote Line

DIRECTIONAL RCAs
 Garmin PN: 010-12614-00
 Avalon PN: 128923

ARX709
 Optional ANT Wireless Stereo Remote
 Garmin PN: 010-02167-00

Apple App Store
 Fusion Link QR

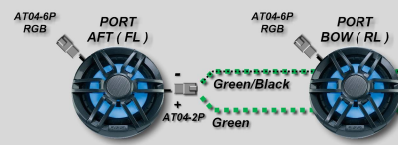
Google App Store
 Fusion Link QR

MS-SA13
 AM / FM Antenna
 Garmin PN: 010-12584-00
 Avalon PN: 128911

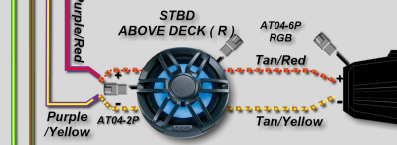
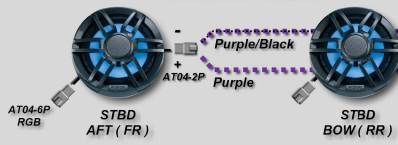
MS-CBUSB3.5
 Panel Mount USB & 3.5 mm
 Garmin PN: 010-12381-00
 Avalon PN: 128940

To 285 Circuit Breaker 80 Amp 8 AWG

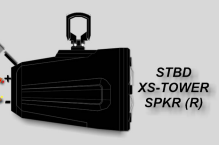
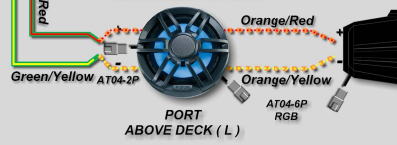
To BBS Ground BusBar 8 AWG



XS-FL65OEM
 Garmin PN 010-02196-92
 Garmin Grille PN 010-12789-10
 Spkr Avalon PN. 128918
 Grille Avalon PN. 128919



XS-FL65OEM
 Garmin PN 010-02196-92
 Garmin Grille PN 010-12789-10
 Spkr Avalon PN. 128918
 Grille Avalon PN. 128919



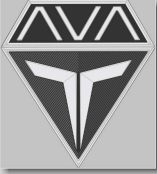
XS-SL10OEM
 Garmin PN: 010-02198-92
 Avalon PN: 128921

CHROME GRILLE
 Garmin PN: 010-12880-40
 Avalon PN: 128922

- 16 AWG SPEAKER CABLES
- PARALLEL SPEAKER CABLES
- 14 AWG SUBWOOFER CABLES
- HEAD UNIT REMOTE POWER
- AMP POWER CABLES

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

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DRWN No. 6	DRWN DP	DATE 12/5/2023	<p>HPS6 MY24 FOR HP SOUND BOATS WITH 4 DECK LEVEL SPEAKERS, INTEGRATED ARCH & 2 XS CAN SPEAKERS</p>	
			REV. A	



HPS7 MY24

MS-AP6180U
Garmin PN: 010-02284-65
Avalon PN: 128963

MS-RA670
Garmin PN: 010-02138-01
Avalon PN: 128917

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	12/5/2023



- 129435A
APOLLO SOUND HRNS 4 MY24
- 129281
VRL & PLAT VRB MID SOUND HARNESS
- 129340
ELW VRBW MID SOUND HARNESS
- 129342
SHORT SUBWOOFER HRNS
- 129343
LONG SUBWOOFER HRNS

Fusion OEM Harness
Garmin PN: 010-12432-40
Avalon PN: 128933
Connect To Boat Harness

Power Connections from Boat Harness
Yellow, Red & Black

Place the High Power Adapter on Zone 3 when use a bridge mode connection for Subwoofer

Head Unit Remote Line

DIRECTIONAL RCAs
Garmin PN: 010-12614-00
Avalon PN: 128923

ARX709
Optional ANT Wireless Stereo Remote
Garmin PN: 010-02167-00

Apple App Store
Fusion Link QR

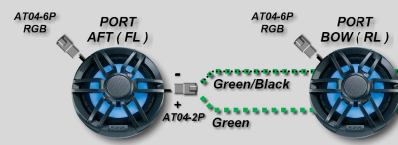
Google App Store
Fusion Link QR

MS-SA13
AM / FM Antenna
Garmin PN: 010-12584-00
Avalon PN: 128911

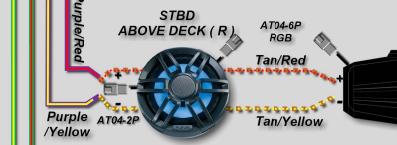
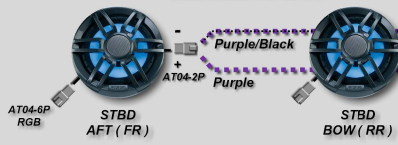
MS-CBUSB3.5
Panel Mount USB & 3.5 mm
Garmin PN: 010-12381-00
Avalon PN: 128940

To 285 Circuit Breaker 80 Amp 8 AWG

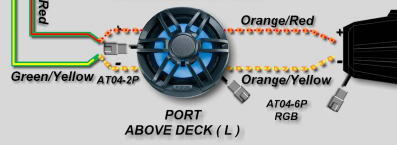
To BBS Ground BusBar 8 AWG



XS-FL65OEM
Garmin PN 010-02196-92
Garmin Grille PN 010-12789-10
Spkr Avalon PN. 128918
Grille Avalon PN. 128919



XS-FL65OEM
Garmin PN 010-02196-92
Garmin Grille PN 010-12789-10
Spkr Avalon PN. 128918
Grille Avalon PN. 128919



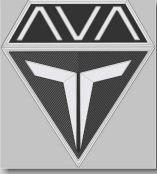
XS-SL10OEM
Garmin PN: 010-02198-92
Avalon PN: 128921

CHROME GRILLE
Garmin PN: 010-12880-40
Avalon PN: 128922

- 16 AWG SPEAKER CABLES
- PARALLEL SPEAKER CABLES
- 14 AWG SUBWOOFER CABLES
- HEAD UNIT REMOTE POWER
- AMP POWER CABLES

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

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DRWN No. 7	DRWN DP	DATE 12/5/2023	<p>HPS7 MY24 FOR HP SOUND BOATS WITH 4 DECK LEVEL SPEAKERS, INTEGRATED ARCH & 2 XS-CAN SPEAKERS</p>	REV. A

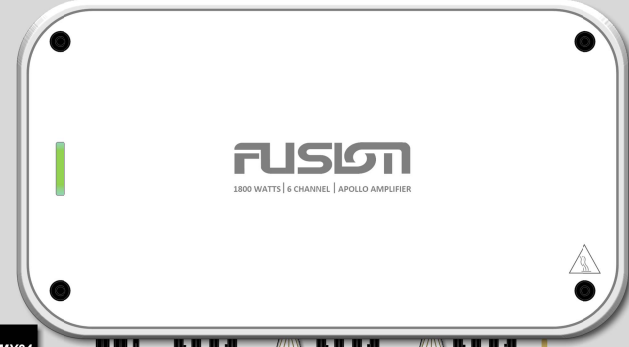


HPS8 MY24

MS-AP61800
Garmin PN: 010-02284-65
Avalon PN: 128963

MS-RA670
Garmin PN: 010-02138-01
Avalon PN: 128917

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	12/5/2023



- 129435A
APOLLO SOUND HRNS 4 MY24
- 129281
VRL & PLAT VRB MID SOUND HARNESS
- 129340
ELW VRBW MID SOUND HARNESS
- 129342
SHORT SUBWOOFER HRNS
- 129343
LONG SUBWOOFER HRNS

Fusion OEM Harness
Garmin PN: 010-12432-40
Avalon PN: 128933
Connect To Boat Harness

Power Connections from Boat Harness
Yellow, Red & Black

Place the High Power Adapter on Zone 3 when use a bridge mode connection for Subwoofer

Head Unit Remote Line

DIRECTIONAL RCAs
Garmin PN: 010-12614-00
Avalon PN: 128923

ARX709
Optional ANT Wireless Stereo Remote
Garmin PN: 010-02167-00

Apple App Store
Fusion Link QR

Google App Store
Fusion Link QR

MS-SA1.3
AM / FM Antenna
Garmin PN: 010-12584-00
Avalon PN: 128911

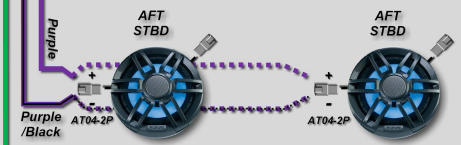
MS-CBUSB3.5
Panel Mount USB & 3.5 mm
Garmin PN: 010-12891-00
Avalon PN: 128940

To 285 Circuit Breaker 80 Amp 8 AWG

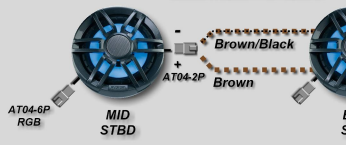
To BBS Ground BusBar 8 AWG



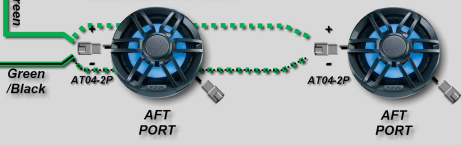
XS-FL65OEM
Garmin PN 010-02196-92
Garmin Grille PN 010-12789-10
Sprkr Avalon PN. 128918
Grille Avalon PN. 128919



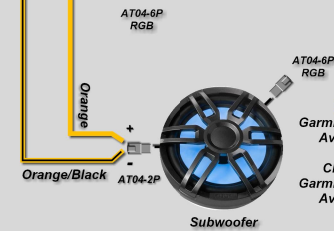
XS-FL65OEM
Garmin PN 010-02196-92
Garmin Grille PN 010-12789-10
Sprkr Avalon PN. 128918
Grille Avalon PN. 128919



XS-FL65OEM
Garmin PN 010-02196-92
Garmin Grille PN 010-12789-10
Sprkr Avalon PN. 128918
Grille Avalon PN. 128919



XS-FL65OEM
Garmin PN 010-02196-92
Garmin Grille PN 010-12789-10
Sprkr Avalon PN. 128918
Grille Avalon PN. 128919



XS-SL10OEM
Garmin PN: 010-02198-92
Avalon PN: 128921

CHROME GRILLE
Garmin PN: 010-12880-40
Avalon PN: 128922

- 16 AWG SPEAKER CABLES
- PARALLEL SPEAKER CABLES
- 14 AWG SUBWOOFER CABLES
- HEAD UNIT REMOTE POWER
- AMP POWER CABLES

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

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SM Osgood Company
3410 Hardscrabble Road N.
Minnetrista, MN 55364

DRWN No. 8	DRWN DP	DATE 12/5/2023	HPS8 MY24 LTD:QLW	REV. A
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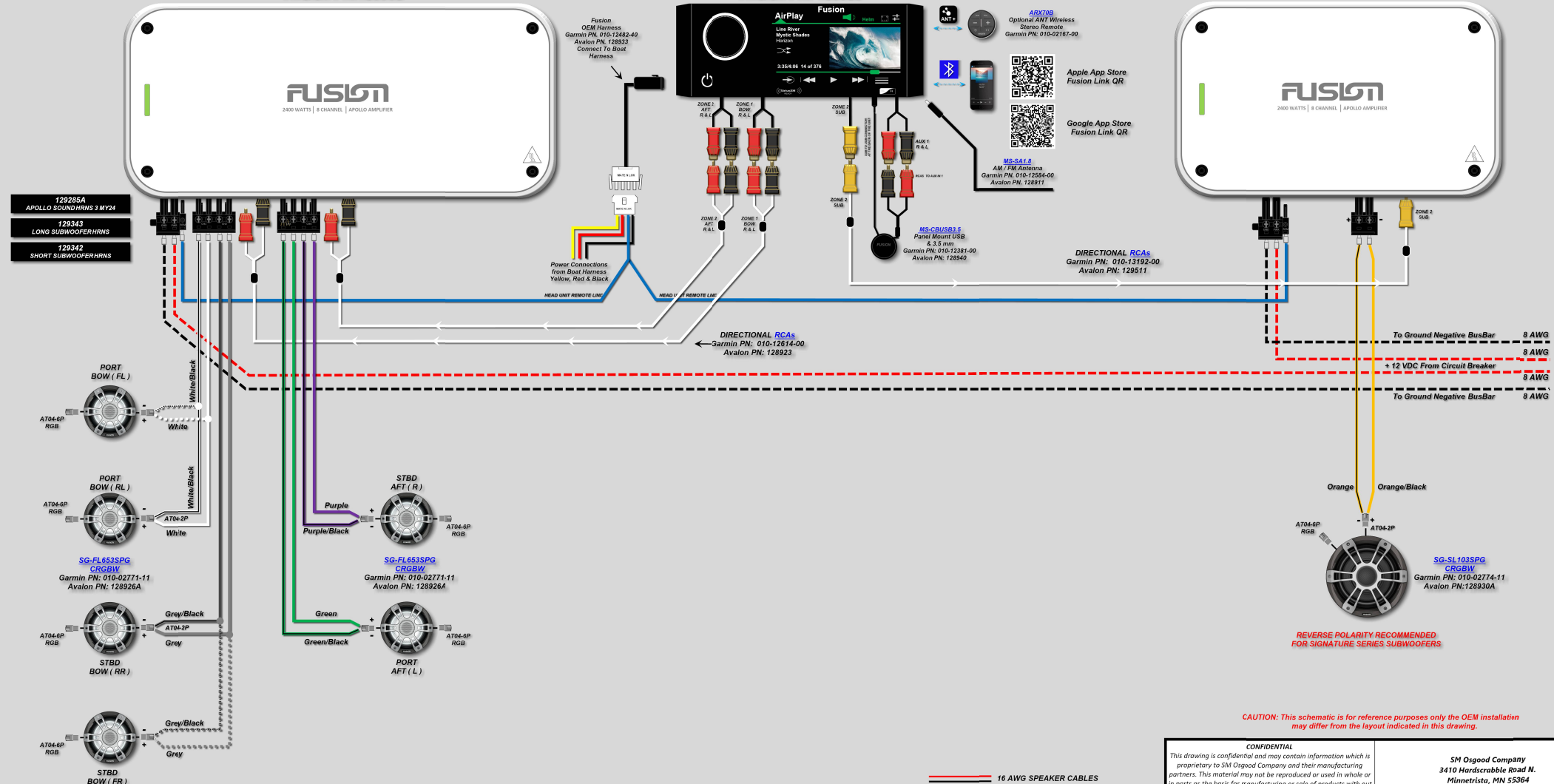
PS1 MY24

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	12/6/2023

MS-AP82400
Garmin PN: 010-02284-85
Avalon PN: 128962

MS-RA770
Garmin PN: 010-01905-10
Avalon PN: 128925

MS-AP12000
Garmin PN: 010-02284-15
Avalon PN: 128964



CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

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SM Osgood Company 3410 Hardscrabble Road N. Minnetrista, MN 55364		PS1 MY24 ALL MODELS & FLOORPLANS EXCEPT VRL ALL CTP/CSP FLOORPLANS EXCEPT ELW, VRB, ENTFS, CRUFS	
DRWN No. 1	DRWN DP	DATE 12/6/2023	REV. A



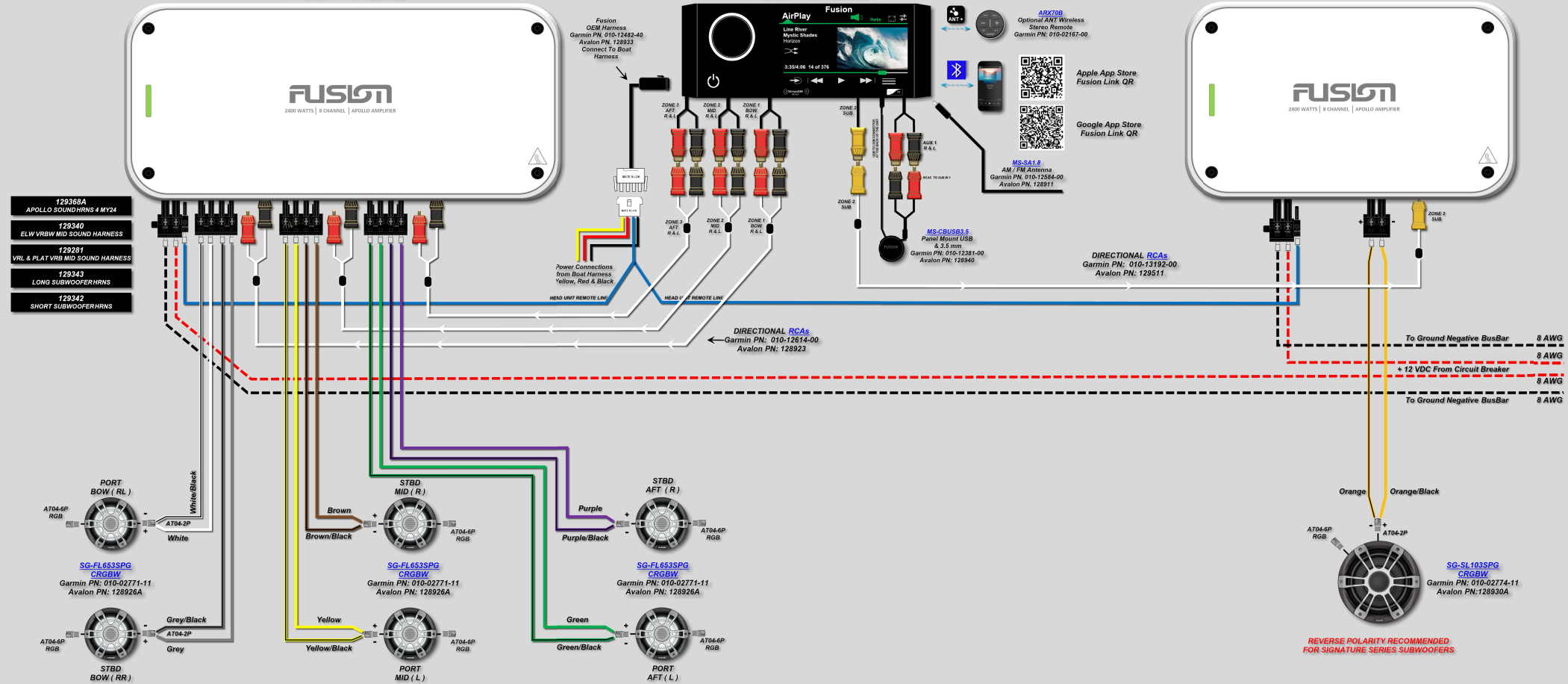
PS2 MY24

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	12/6/2023

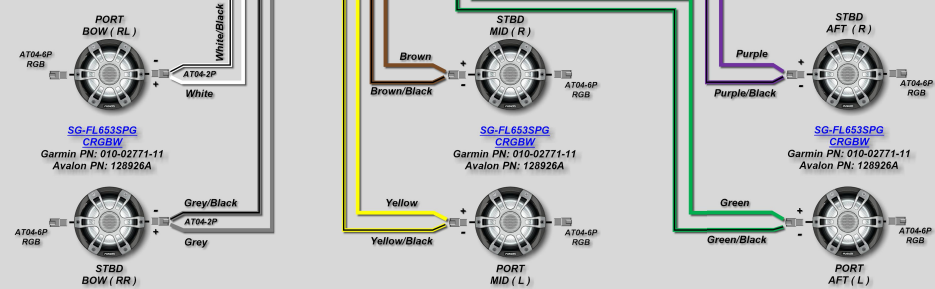
MS-AP82400
 Garmin PN: 010-02284-85
 Avalon PN: 128962

MS-RA770
 Garmin PN: 010-01905-10
 Avalon PN: 128925

MS-AP12000
 Garmin PN: 010-02284-15
 Avalon PN: 128964



- 129368A
APOLLO SOUND/HRNS 4 MY24
- 129340
ELW VRBW MID SOUND HARNESS
- 129281
VRL & PLAT VRB MID SOUND HARNESS
- 129343
LONG SUBWOOFERHRNS
- 129342
SHORT SUBWOOFERHRNS



- 16 AWG SPEAKER CABLES
- PARALLEL SPEAKER CABLES
- 12 AWG SUBWOOFER CABLES
- HEAD UNIT REMOTE POWER
- AMP POWER CABLES

<p>CONFIDENTIAL</p> <p>This drawing is confidential and may contain information which is proprietary to SM Osgood Company and their manufacturing partners. This material may not be reproduced or used in whole or in parts as the basis for manufacturing or sale of products with out written permission.</p>			<p>SM Osgood Company 3410 Hardscrabble Road N. Minnetrista, MN 55364</p>	
<p>DRWN No. 2</p>	<p>DRWN DP</p>	<p>DATE 12/6/2023</p>	<p>PS2 MY24 EXC LTD WITH EX ONLY ALL VRL, CTP/CSP ELW & VRB EXCEPT ENTFS & CRUFS.</p>	<p>REV. A</p>



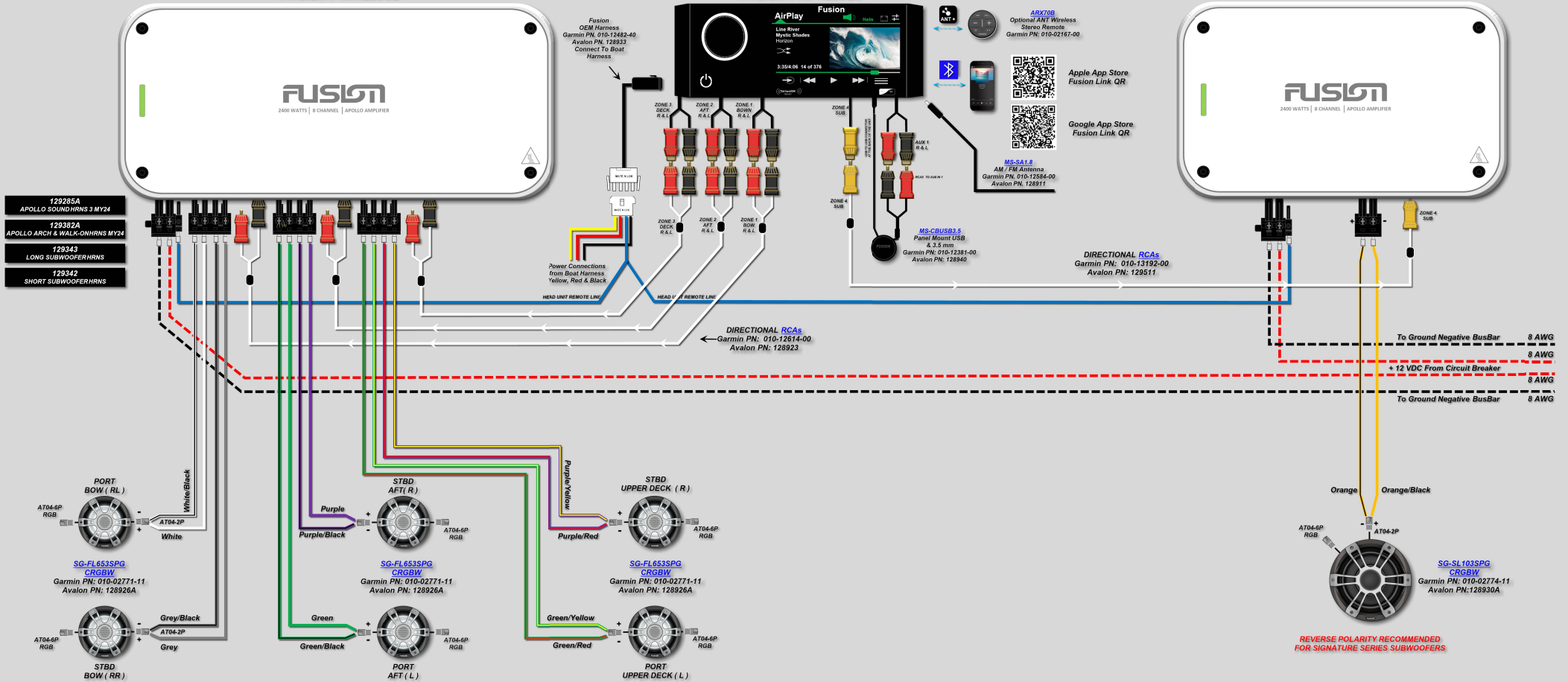
PS3 MY24

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	5/9/2023

MS-AP82400
 Garmin PN: 010-02284-85
 Avalon PN: 128962

MS-RA770
 Garmin PN: 010-01905-10
 Avalon PN: 128925

MS-AP12000
 Garmin PN: 010-02284-15
 Avalon PN: 128964



- 129285A APOLLO SOUNDHRNS 3 MY24
- 129382A APOLLO ARCH & WALK-ONHRNS MY24
- 129343 LONG SUBWOOFERHRNS
- 129342 SHORT SUBWOOFERHRNS

PORT BOW (RL)
 AT04-6P RGB
 SG-FL653SPG CRGBW
 Garmin PN: 010-02771-11
 Avalon PN: 128926A

STBD BOW (RR)
 AT04-6P RGB
 SG-FL653SPG CRGBW
 Garmin PN: 010-02771-11
 Avalon PN: 128926A

STBD AFT (R)
 AT04-6P RGB
 SG-FL653SPG CRGBW
 Garmin PN: 010-02771-11
 Avalon PN: 128926A

PORT AFT (L)
 AT04-6P RGB
 SG-FL653SPG CRGBW
 Garmin PN: 010-02771-11
 Avalon PN: 128926A

STBD UPPER DECK (R)
 AT04-6P RGB
 SG-FL653SPG CRGBW
 Garmin PN: 010-02771-11
 Avalon PN: 128926A

PORT UPPER DECK (L)
 AT04-6P RGB
 SG-FL653SPG CRGBW
 Garmin PN: 010-02771-11
 Avalon PN: 128926A

STBD LOWER DECK (R)
 AT04-6P RGB
 SG-SL103SPG CRGBW
 Garmin PN: 010-02774-11
 Avalon PN: 128930A

PORT LOWER DECK (L)
 AT04-6P RGB
 SG-SL103SPG CRGBW
 Garmin PN: 010-02774-11
 Avalon PN: 128930A

REVERSE POLARITY RECOMMENDED FOR SIGNATURE SERIES SUBWOOFERS

- 16 AWG SPEAKER CABLES
- PARALLEL SPEAKER CABLES
- 12 AWG SUBWOOFER CABLES
- HEAD UNIT REMOTE POWER
- AMP POWER CABLES

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

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<p>DRWN No. 3</p>	<p>DRWN DP</p>	<p>DATE 6/28/2023</p>	<p>PS3 MY24 FOR ALL MODELS WITH ENTFS & CRUFS FLOOR PLAN</p>	<p>REV. A</p>



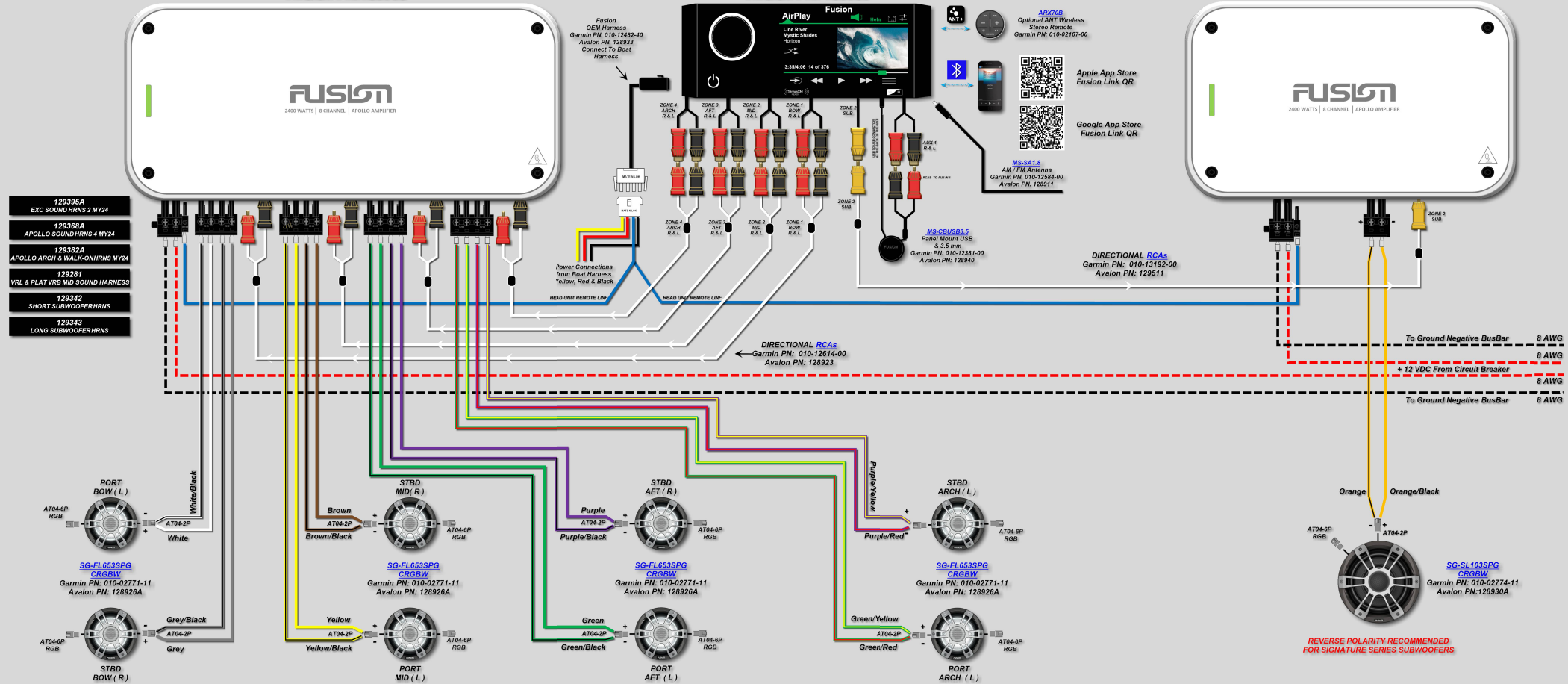
PS4 MY24

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	9/8/2023

MS-AP82400
 Garmin PN: 010-02284-85
 Avalon PN: 128962

MS-RA770
 Garmin PN: 010-01905-10
 Avalon PN: 128925

MS-AP12000
 Garmin PN: 010-02284-15
 Avalon PN: 128964



- 129395A
EXC SOUND HRNS 2 MY24
- 129368A
APOLLO SOUND HRNS 4 MY24
- 129392A
APOLLO ARCH & WALK-ON HRNS MY24
- 129281
VRL & PLAT VRB MID SOUND HARNESS
- 129342
SHORT SUBWOOFER HRNS
- 129343
LONG SUBWOOFER HRNS

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

- 16 AWG SPEAKER CABLES
- PARALLEL SPEAKER CABLES
- 12 AWG SUBWOOFER CABLES
- HEAD UNIT REMOTE POWER
- AMP POWER CABLES

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DRWN No. 4	DRWN DP	DATE 6/28/2023	PS4 MY24 FOR EXC/GRT WITH CX TOWER ONLY. FLASH XL DSP FOR XL PACKAGES FOR CTP/CSP ELW & VRB WITH 2 INTEGRATED ARCH SPRKS EXCEPT ENTFS & CRUFS.
			REV. A



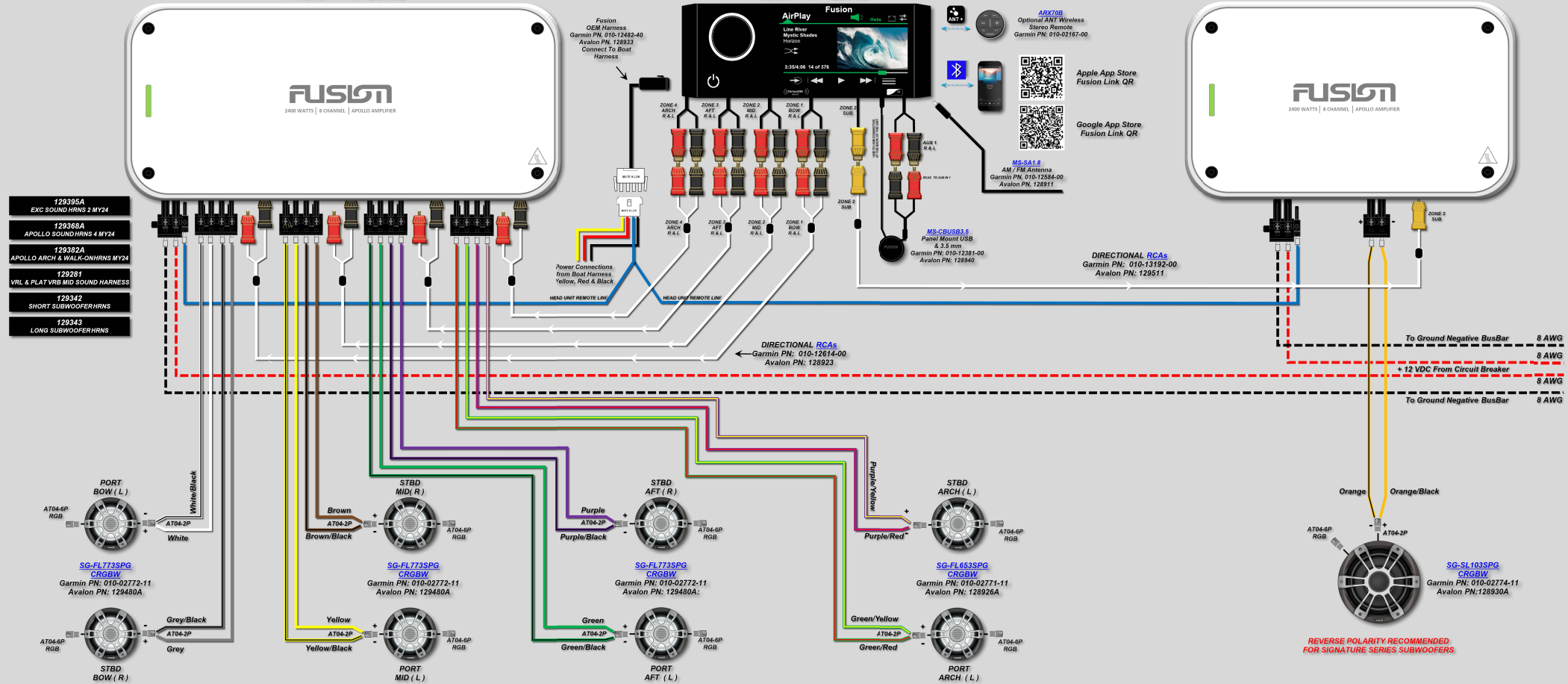
PS4XL MY24

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	9/8/2023

MS-AP82400
 Garmin PN: 010-02284-85
 Avalon PN: 128962

MS-RA770
 Garmin PN: 010-01905-10
 Avalon PN: 128925

MS-AP12000
 Garmin PN: 010-02284-15
 Avalon PN: 128964



CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

- 16 AWG SPEAKER CABLES
- PARALLEL SPEAKER CABLES
- 12 AWG SUBWOOFER CABLES
- HEAD UNIT REMOTE POWER
- AMP POWER CABLES

CONFIDENTIAL			SM Osgood Company 3410 Hardacre Road N. Minnetrista, MN 55364	
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DRWN No. 5	DRWN DP	DATE 6/28/2023	PS4XL MY24 FOR EXC/GRT WITH CX TOWER ONLY. FLASH XL DSP FOR XL PACKAGES FOR CTP/CSP ELW & VRB WITH 2 INTEGRATED ARCH SPRKS EXCEPT ENTFS & CRUFS.	REV. A



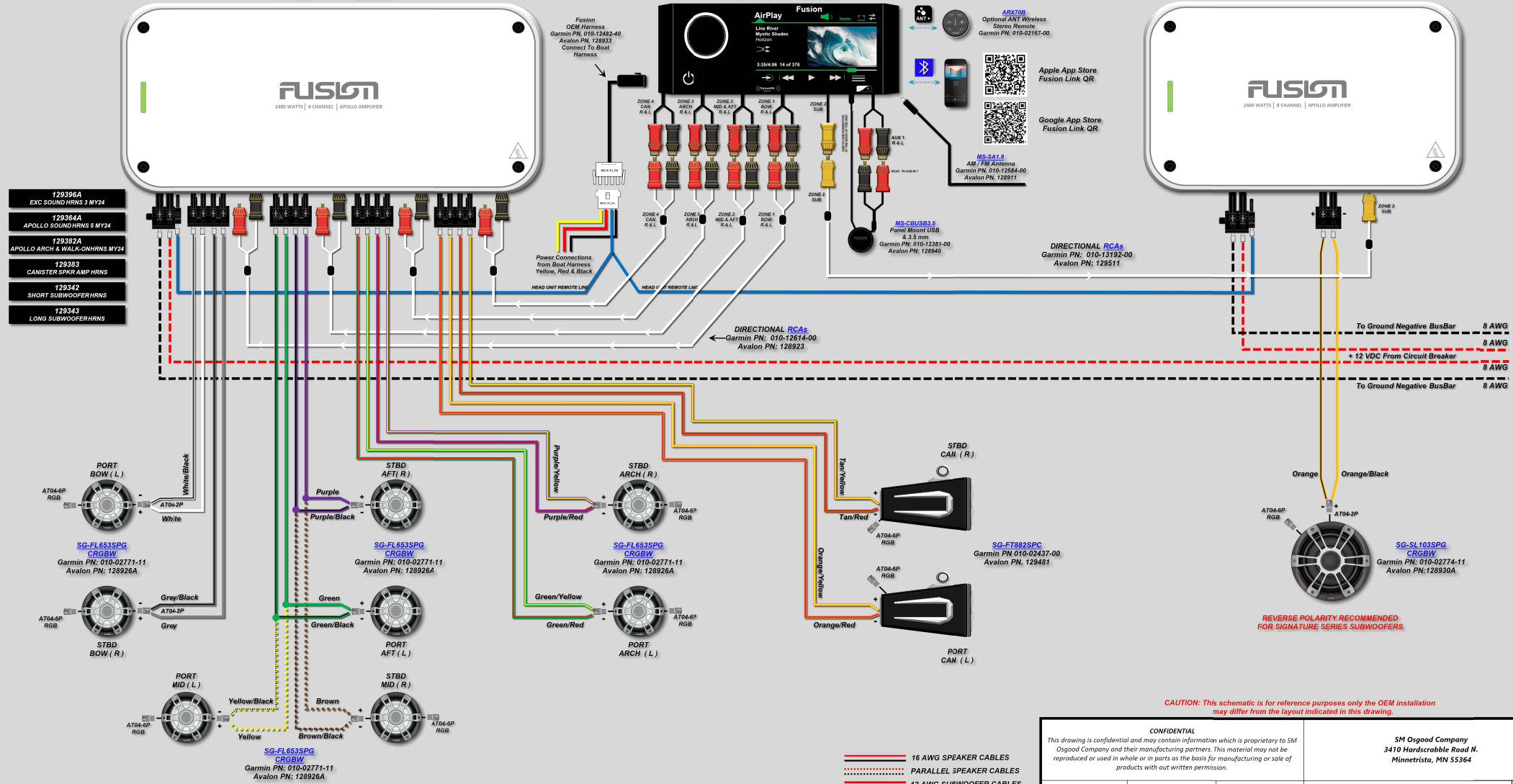
P S 5 M Y 2 4

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	9/8/2023

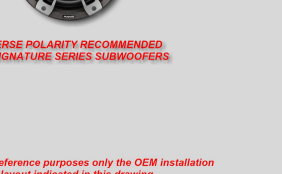
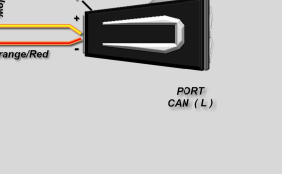
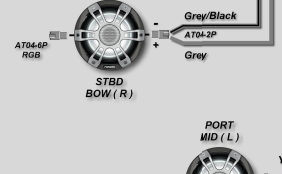
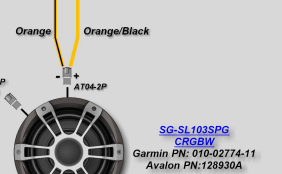
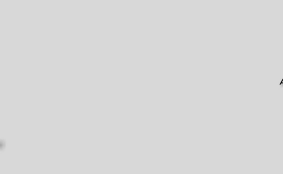
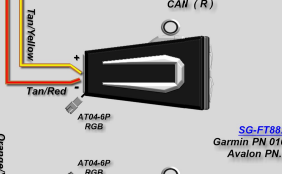
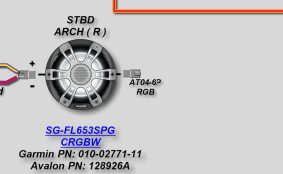
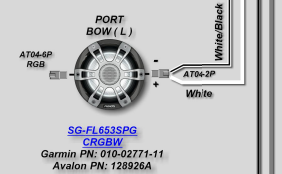
MS-AP82400
Garmin PN: 010-02284-85
Avalon PN: 128962

MS-RA770
Garmin PN: 010-01905-10
Avalon PN: 128925

MS-AP12000
Garmin PN: 010-02284-15
Avalon PN: 128964



- 129396A
EXC SOUND HRNS 3 MY24
- 129364A
APOLLO SOUND HRNS 5 MY24
- 129392A
APOLLO ARCH & WALK-ON HRNS MY24
- 129383
CANISTER SPKR AMP HRNS
- 129342
SHORT SUBWOOFER HRNS
- 129343
LONG SUBWOOFER HRNS



- 16 AWG SPEAKER CABLES
- PARALLEL SPEAKER CABLES
- 12 AWG SUBWOOFER CABLES
- HEAD UNIT REMOTE POWER
- AMP POWER CABLES

REVERSE POLARITY RECOMMENDED FOR SIGNATURE SERIES SUBWOOFERS

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

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DRWN No. 6	DRWN DP	DATE 6/28/2023	<p>PSS MY24 FOR EXC/GRT WITH CX TOWER AND CANS. FLASH XL DSP FOR XL BOATS.</p>	REV. A



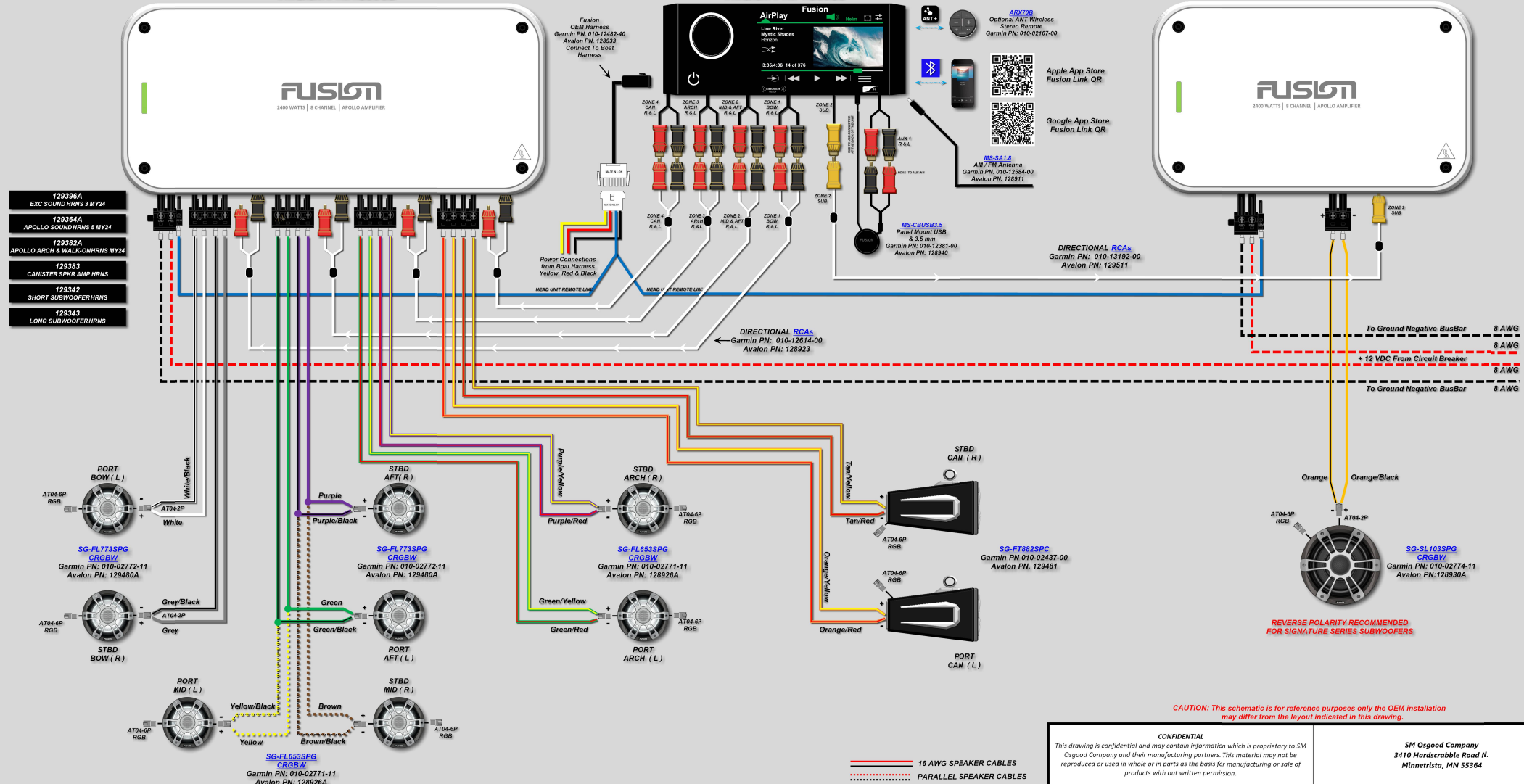
PS5XL MY24

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	9/8/2023

MS-AP82400
 Garmin PN: 010-02284-85
 Avalon PN: 128962

MS-RA770
 Garmin PN: 010-01905-10
 Avalon PN: 128925

MS-AP12000
 Garmin PN: 010-02284-15
 Avalon PN: 128964



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 Minnetrista, MN 55364

DRWN No. 7	DRWN DP	DATE 6/28/2023	PSSXL MY24 FOR EXC/GRT WITH CX TOWER AND CANS. FLASH XL DSP FOR XL BOATS.	REV. A
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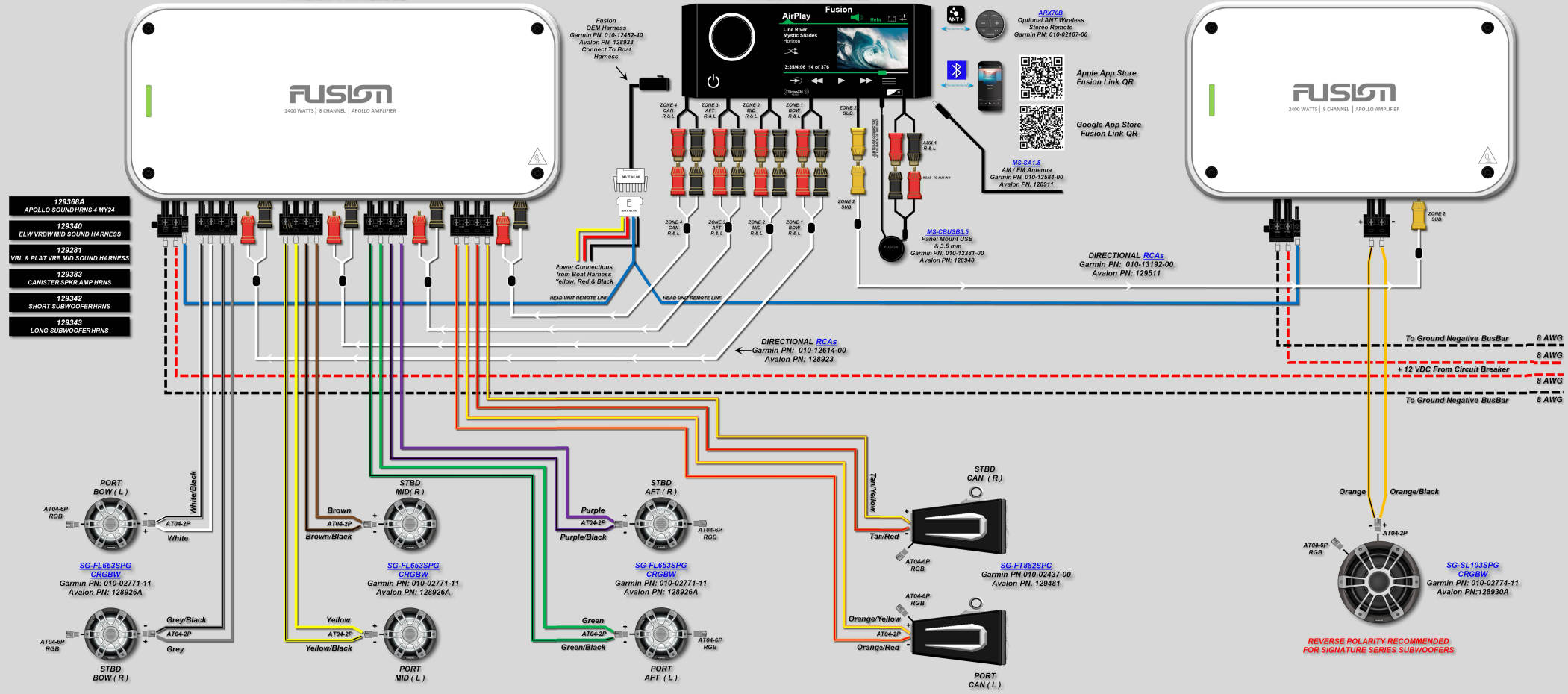
PS6 MY24

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	5/9/2023

MS-AP82400
 Garmin PN: 010-02284-85
 Avalon PN: 128962

MS-RA770
 Garmin PN: 010-01905-10
 Avalon PN: 128925

MS-AP12000
 Garmin PN: 010-02284-15
 Avalon PN: 128964



- 129368A APOLLO SOUND HRNS 4 MY24
- 129340 ELW VRBW MID SOUND HARNESS
- 129281 VRL & PLAT VRB MID SOUND HARNESS
- 129383 CANISTER SPKR AMP HRNS
- 129342 SHORT SUBWOOFER HRNS
- 129343 LONG SUBWOOFER HRNS

- 16 AWG SPEAKER CABLES
- PARALLEL SPEAKER CABLES
- 12 AWG SUBWOOFER CABLES
- HEAD UNIT REMOTE POWER
- AMP POWER CABLES

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

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DRWN No. 8	DRWN DP	DATE 5/9/2023	PS6 MY24 FOR EXC LTD & OTHER WINDSHIELD BOATS: 6 DECK LEVEL SPEAKERS & 2 CANS. FLASH XL DSP FOR XL BOATS. DECK SPEAKER CONFIG: BOW, MID, AFT ONLY - SEE PSOUND9 FOR ALTERNATE CONFIG
			REV. A



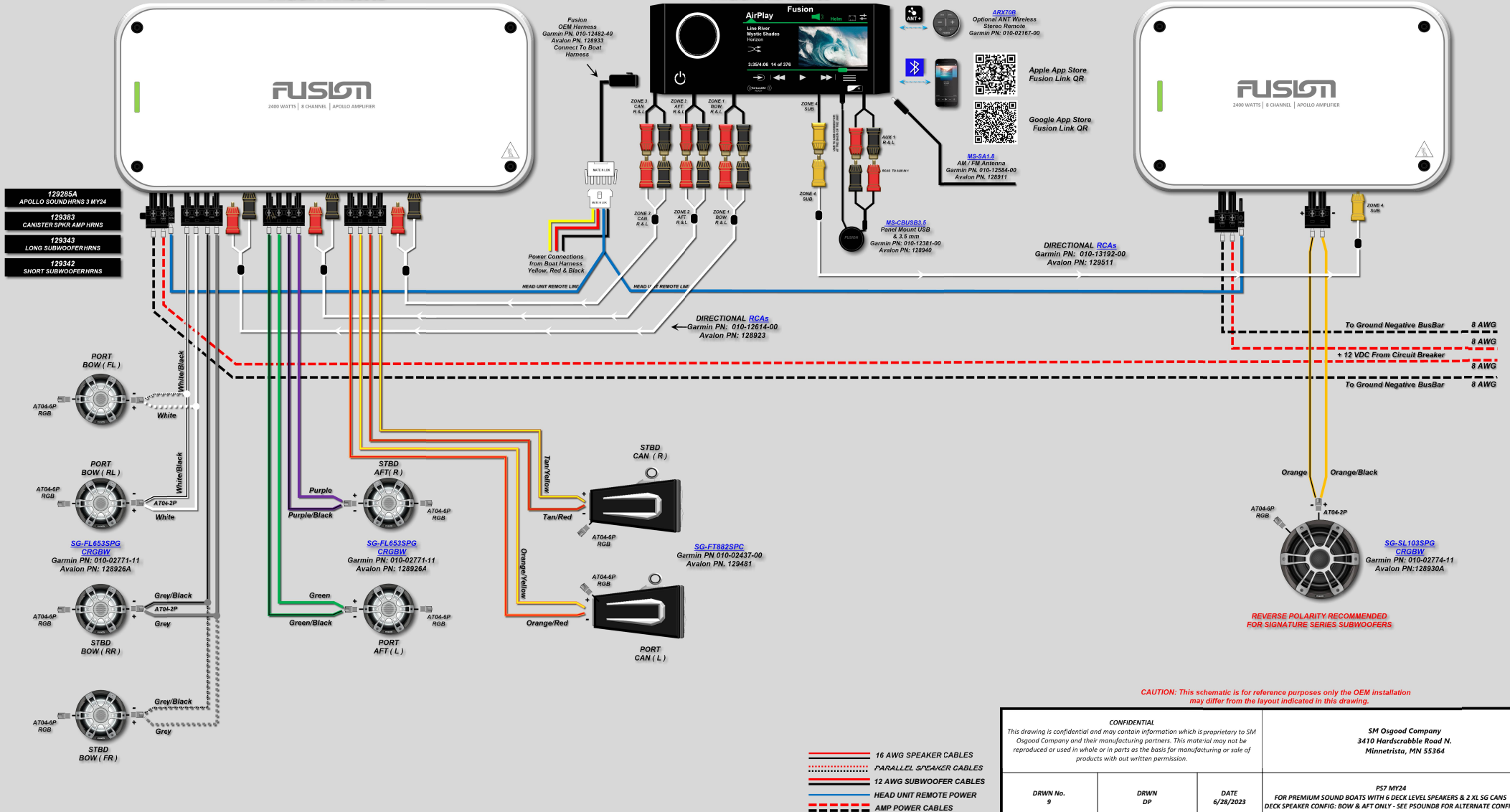
PS7 MY24

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	9/8/2023

MS-AP82400
Garmin PN: 010-02284-85
Avalon PN: 128962

MS-RA770
Garmin PN: 010-01905-10
Avalon PN: 128925

MS-AP12000
Garmin PN: 010-02284-15
Avalon PN: 128964



- 129285A APOLLO SOUND HRNS 3 MY24
- 129383 CANISTER SPKR AMP HRNS
- 129343 LONG SUBWOOFER HRNS
- 129342 SHORT SUBWOOFER HRNS

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DRWN No. 9	DRWN DP	DATE 6/28/2023	PS7 MY24 FOR PREMIUM SOUND BOATS WITH 6 DECK LEVEL SPEAKERS & 2 XL SG CANS DECK SPEAKER CONFIG: BOW & AFT ONLY - SEE PSOUNDS FOR ALTERNATE CONFIG.	REV. A



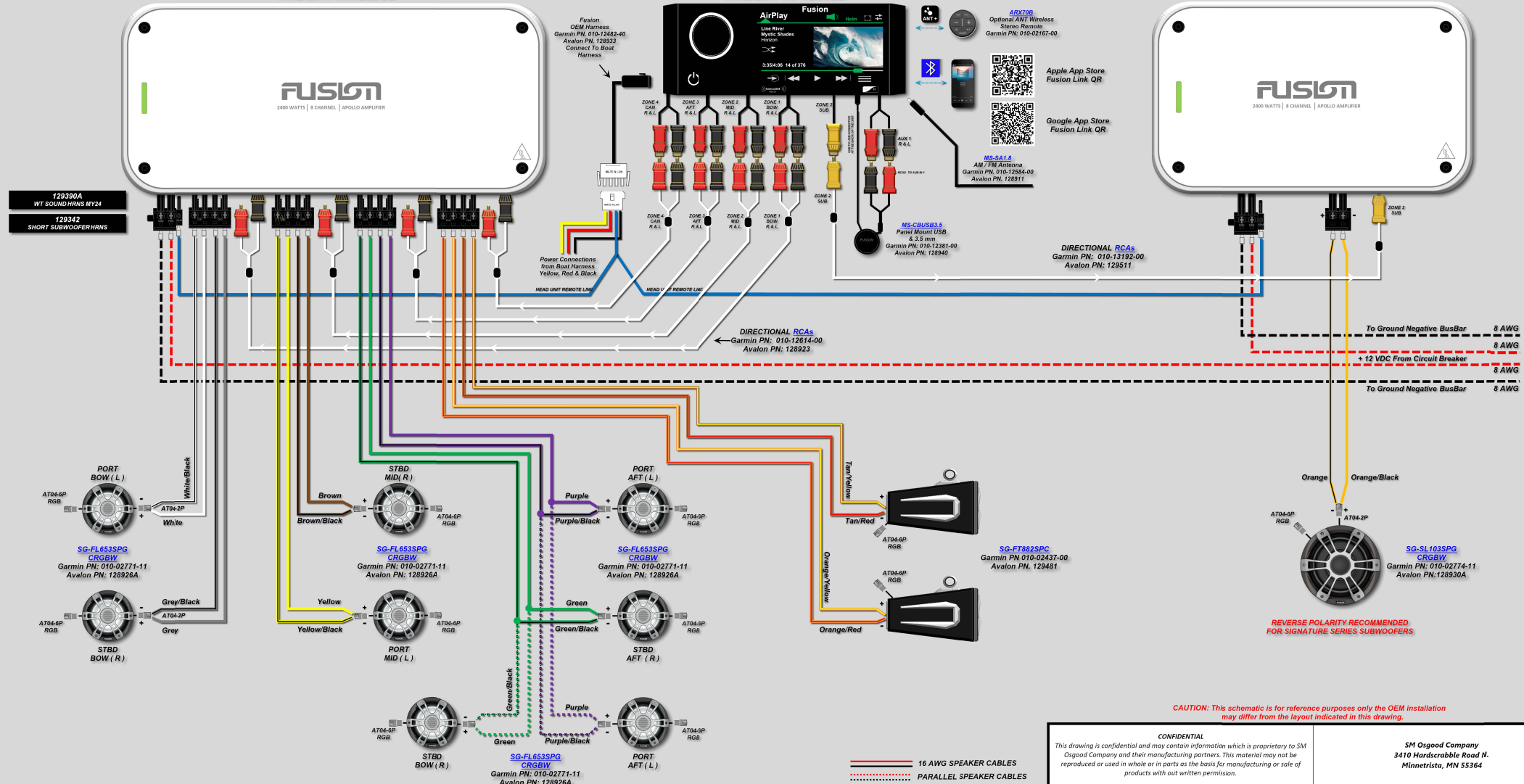
PS8 MY24

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	5/9/2023

MS-AP82400
 Garmin PN: 010-02284-85
 Avalon PN: 128962

MS-RA770
 Garmin PN: 010-01905-10
 Avalon PN: 128925

MS-AP12000
 Garmin PN: 010-02284-15
 Avalon PN: 128964



129390A
 WT SOUND HRNS MY24

129342
 SHORT SUBWOOFERHRNS

ARX708
 Optional ANT Wireless Stereo Remote
 Garmin PN: 010-02167-00

Apple App Store
 Fusion Link QR

Google App Store
 Fusion Link QR

MS-SA14
 AM F75E Antenna
 Garmin PN: 010-12584-00
 Avalon PN: 128911

MS-CRUS83
 Panel Mount USB & 3.5 mm
 Garmin PN: 010-12381-00
 Avalon PN: 128940

DIRECTIONAL RCAs
 Garmin PN: 010-13192-00
 Avalon PN: 129511

DIRECTIONAL RCAs
 Garmin PN: 010-12814-00
 Avalon PN: 128923

To Ground Negative BusBar 8 AWG

+12 VDC From Circuit Breaker 8 AWG

To Ground Negative BusBar 8 AWG

PORT BOW (L)
 AT04-6P RGB

SG-FL653SPG CRGBW
 Garmin PN: 010-02771-11
 Avalon PN: 128926A

STBD MID (R)
 AT04-6P RGB

SG-FL653SPG CRGBW
 Garmin PN: 010-02771-11
 Avalon PN: 128926A

PORT AFT (L)
 AT04-6P RGB

SG-FL653SPG CRGBW
 Garmin PN: 010-02771-11
 Avalon PN: 128926A

STBD AFT (R)
 AT04-6P RGB

SG-FT882SPC
 Garmin PN 010-02437-00
 Avalon PN: 129481

STBD BOW (R)
 AT04-6P RGB

SG-SL103SPG CRGBW
 Garmin PN: 010-02774-11
 Avalon PN: 128930A

PORT MID (L)
 AT04-6P RGB

SG-FL653SPG CRGBW
 Garmin PN: 010-02771-11
 Avalon PN: 128926A

STBD AFT (L)
 AT04-6P RGB

SG-FL653SPG CRGBW
 Garmin PN: 010-02771-11
 Avalon PN: 128926A

PORT BOW (R)
 AT04-6P RGB

SG-FL653SPG CRGBW
 Garmin PN: 010-02771-11
 Avalon PN: 128926A

STBD BOW (R)
 AT04-6P RGB

SG-FT882SPC
 Garmin PN 010-02437-00
 Avalon PN: 129481

PORT AFT (L)
 AT04-6P RGB

SG-FL653SPG CRGBW
 Garmin PN: 010-02771-11
 Avalon PN: 128926A

REVERSE POLARITY RECOMMENDED FOR SIGNATURE SERIES SUBWOOFERS

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

- 16 AWG SPEAKER CABLES
- PARALLEL SPEAKER CABLES
- 12 AWG SUBWOOFER CABLES
- HEAD UNIT REMOTE POWER
- AMP POWER CABLES

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DRWN No. 10	DRWN DP	DATE 5/9/2023	SM Osgood Company 3410 Hardscrabble Road II. Minnetrista, MN 55364
PS8 MY24 SOUND PACKAGE FOR WAKETOON - ONLY NEEDS 129390 AND 129391			REV. A



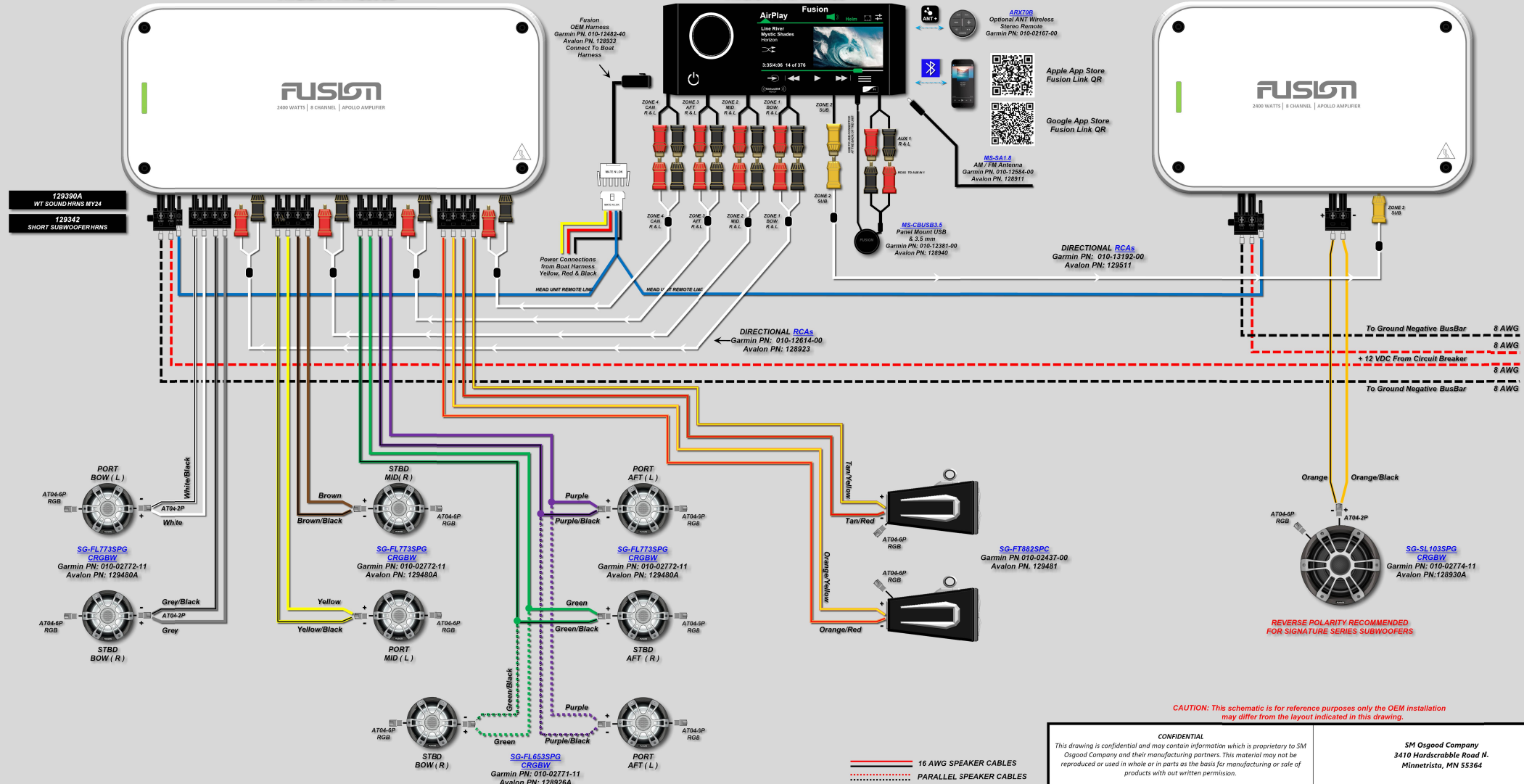
P S 8 X L M Y 2 4

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	5/9/2023

MS-AP82400
 Garmin PN: 010-02284-85
 Avalon PN: 128962

MS-RA770
 Garmin PN: 010-01905-10
 Avalon PN: 128925

MS-AP12000
 Garmin PN: 010-02284-15
 Avalon PN: 128964



129390A
WT SOUND HRNS MY24

129342
SHORT SUBWOOFERHRNS

PORT BOW (L)
A704-6P RGB

SG-FL773SPG CRGBW
Garmin PN: 010-02772-11
Avalon PN: 129480A

STBD BOW (R)
A704-6P RGB

STBD MID (R)
A704-6P RGB

SG-FL773SPG CRGBW
Garmin PN: 010-02772-11
Avalon PN: 129480A

PORT MID (L)
A704-6P RGB

PORT AFT (L)
A704-6P RGB

SG-FL773SPG CRGBW
Garmin PN: 010-02772-11
Avalon PN: 129480A

STBD AFT (R)
A704-6P RGB

SG-FT882SPC
Garmin PN 010-02437-00
Avalon PN, 129481

SG-SL103SPG CRGBW
Garmin PN: 010-02774-11
Avalon PN: 128930A

- 16 AWG SPEAKER CABLES
- PARALLEL SPEAKER CABLES
- 12 AWG SUBWOOFER CABLES
- HEAD UNIT REMOTE POWER
- AMP POWER CABLES

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

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This drawing is confidential and may contain information which is proprietary to SM Osgood Company and their manufacturing partners. This material may not be reproduced or used in whole or in parts as the basis for manufacturing or sale of products with our written permission.			PSSXL MY24 SOUND PACKAGE FOR WAKETOON - ONLY NEEDS 129390 AND 129391	
DRWN No. 11	DRWN DP	DATE 5/9/2023	REV. A	



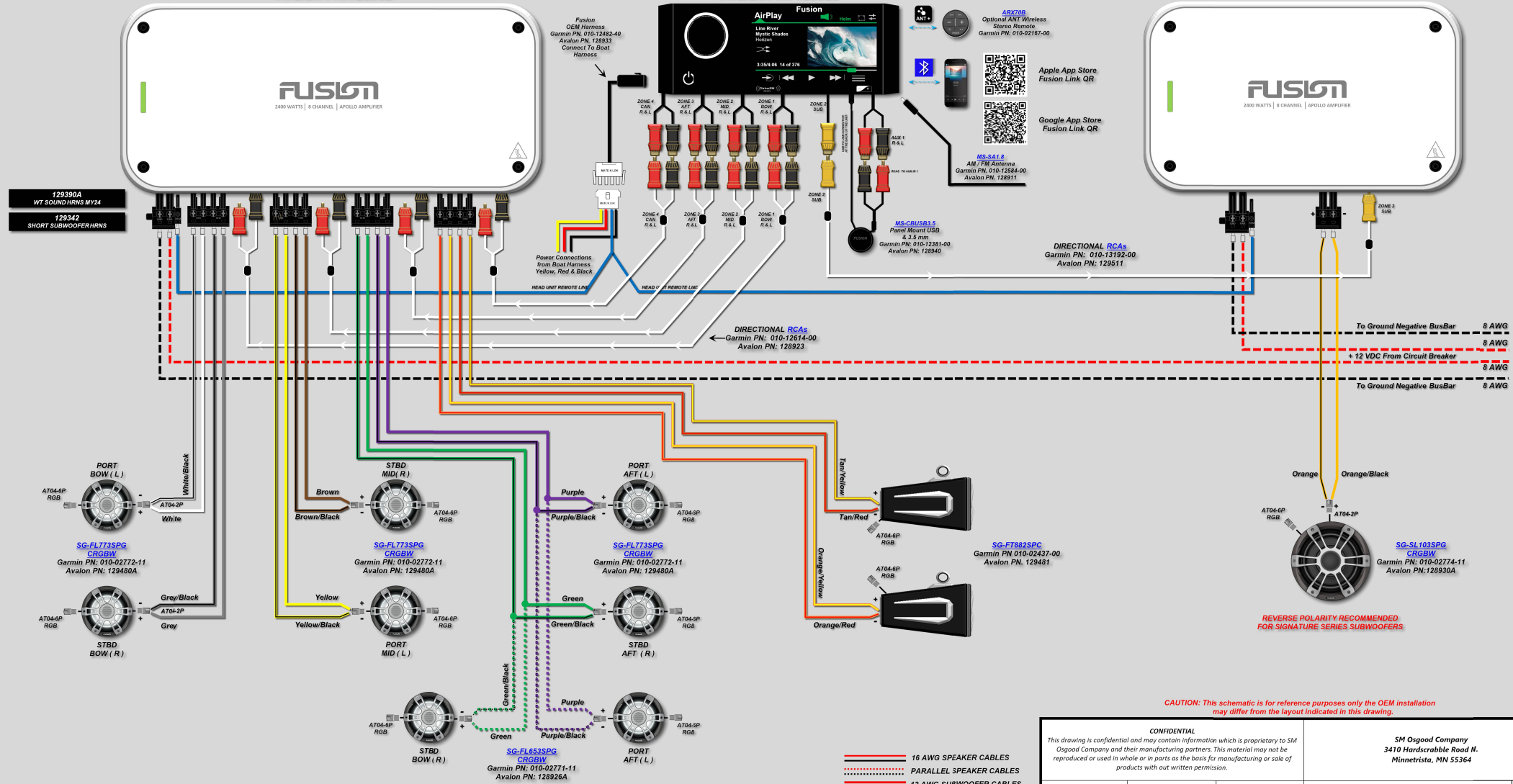
PS9 MY24

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	12/5/2023

MS-AP82400
 Garmin PN: 010-02284-85
 Avalon PN: 128962

MS-RA770
 Garmin PN: 010-01905-10
 Avalon PN: 128925

MS-AP12000
 Garmin PN: 010-02284-15
 Avalon PN: 128964



129390A
WT SOUND HRNS MY24

129342
SHORT SUBWOOFER HRNS

PORT BOW (L)
 AT04-6P RGB
 SG-FL773SPG CRGBW
 Garmin PN: 010-02772-11
 Avalon PN: 129480A

STBD MID (R)
 AT04-6P RGB
 SG-FL773SPG CRGBW
 Garmin PN: 010-02772-11
 Avalon PN: 129480A

PORT AFT (L)
 AT04-6P RGB
 SG-FL773SPG CRGBW
 Garmin PN: 010-02772-11
 Avalon PN: 129480A

STBD AFT (R)
 AT04-6P RGB
 SG-FT882SPC
 Garmin PN 010-02437-00
 Avalon PN. 129481

STBD BOW (R)
 AT04-6P RGB
 SG-SL103SPG CRGBW
 Garmin PN: 010-02774-11
 Avalon PN: 128930A

STBD BOW (R)
 AT04-6P RGB
 SG-FL773SPG CRGBW
 Garmin PN: 010-02772-11
 Avalon PN: 129480A

PORT MID (L)
 AT04-6P RGB
 SG-FL773SPG CRGBW
 Garmin PN: 010-02772-11
 Avalon PN: 129480A

STBD AFT (R)
 AT04-6P RGB
 SG-FL773SPG CRGBW
 Garmin PN: 010-02772-11
 Avalon PN: 129480A

STBD BOW (R)
 AT04-6P RGB
 SG-FL653SPG CRGBW
 Garmin PN: 010-02771-11
 Avalon PN: 128926A

- 16 AWG SPEAKER CABLES
- PARALLEL SPEAKER CABLES
- 12 AWG SUBWOOFER CABLES
- HEAD UNIT REMOTE POWER
- AMP POWER CABLES

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

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 3410 Hardscrabble Road II.
 Minnetrista, MN 55364

DRWN No. 12	DRWN DP	DATE 12/5/2023	PS9 MY24 LSZ - CAT - LTD:QLW Only	REV. A
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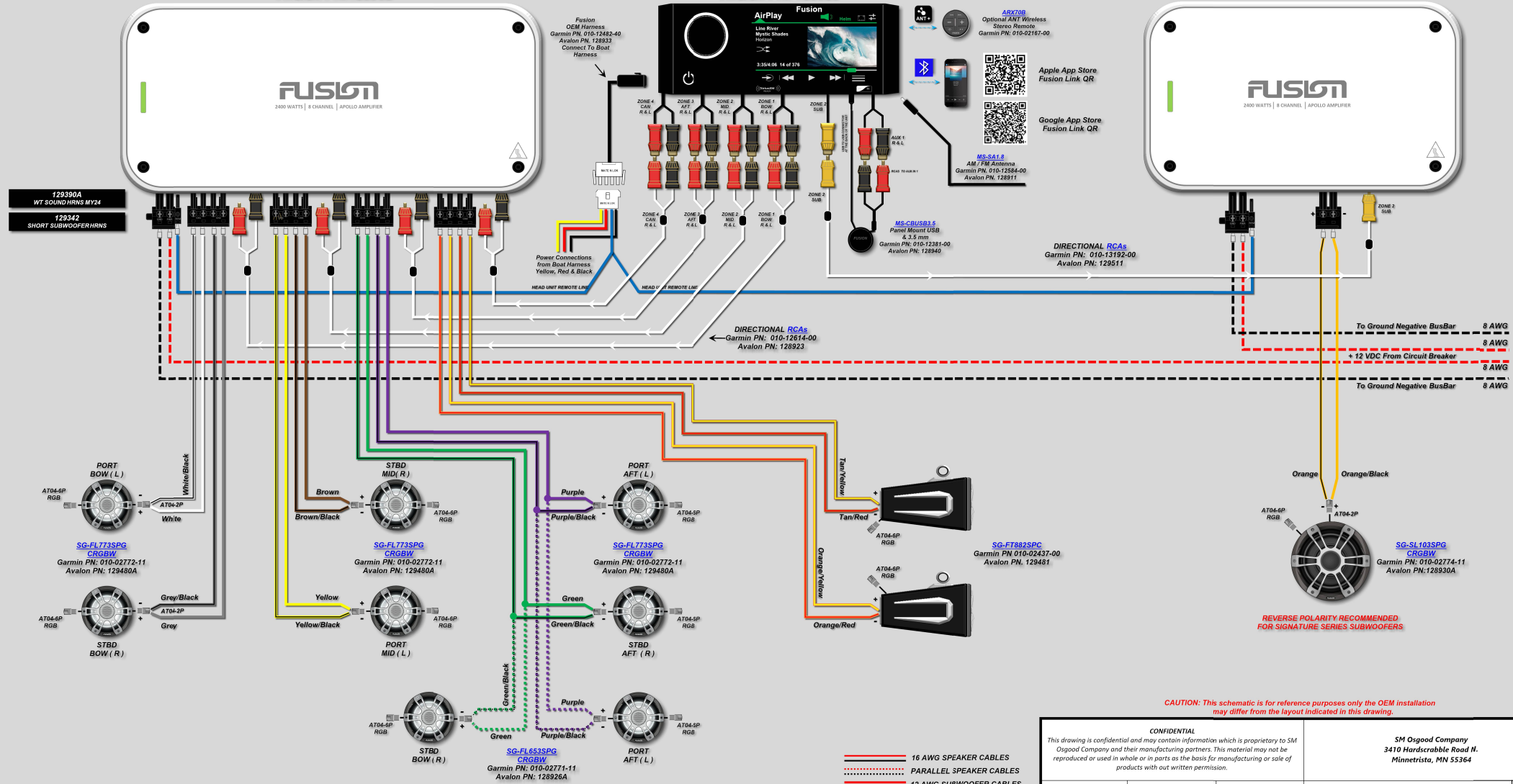
PS10MY24

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	12/5/2023

MS-AP82400
 Garmin PN: 010-02284-85
 Avalon PN: 128962

MS-RA770
 Garmin PN: 010-01905-10
 Avalon PN: 128925

MS-AP12000
 Garmin PN: 010-02284-15
 Avalon PN: 128964



129390A
 WT SOUND HRNS MY24

129342
 SHORT SUBWOOFER HRNS

PORT BOW (L)
 AT04-6P RGB
 White/Black
 White

SG-FL773SPG
 CRGBW
 Garmin PN: 010-02772-11
 Avalon PN: 129480A

STBD BOW (R)
 AT04-6P RGB
 Grey/Black
 Grey

STBD MID (R)
 AT04-6P RGB
 Brown/Black

SG-FL773SPG
 CRGBW
 Garmin PN: 010-02772-11
 Avalon PN: 129480A

PORT MID (L)
 AT04-6P RGB
 Yellow

PORT AFT (L)
 AT04-6P RGB
 Purple

SG-FL773SPG
 CRGBW
 Garmin PN: 010-02772-11
 Avalon PN: 129480A

STBD AFT (R)
 AT04-6P RGB
 Green/Black

STBD BOW (R)
 AT04-6P RGB
 Green/Black

SG-FL653SPG
 CRGBW
 Garmin PN: 010-02771-11
 Avalon PN: 128926A

PORT AFT (L)
 AT04-6P RGB
 Purple/Black

- 16 AWG SPEAKER CABLES
- PARALLEL SPEAKER CABLES
- 12 AWG SUBWOOFER CABLES
- HEAD UNIT REMOTE POWER
- AMP POWER CABLES

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 3410 Hardscrabble Road II,
 Minnetrista, MN 55364

DRWN No. 13	DRWN DP	DATE 12/5/2023	PS10 MY24 LSZ - CAT - LTD:QLW Only	REV. A
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CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

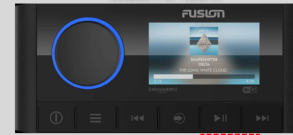
REVERSE POLARITY RECOMMENDED FOR SIGNATURE SERIES SUBWOOFERS



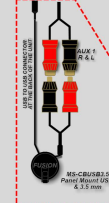
SILVER MY24

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	5/9/2023

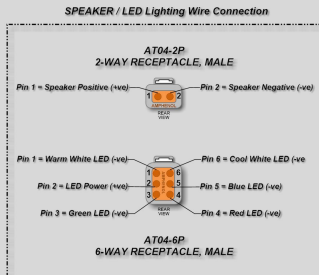
MS-RA210
Garmin PN. 010-02250-10
Avalon PN. 128915



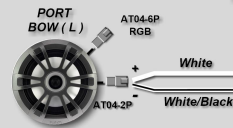
AM / FM Antenna
MS-SA1.8
Garmin PN. 010-12584-00
Avalon PN. 128911



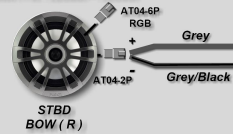
MS-CBUS83.5
Panel Mount USB
& 3.5 mm
Garmin PN. 010-12381-00
Avalon PN. 128940



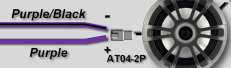
NOTE:
SILVER
Audio Analog Package ONLY
Add # 129341
Harness Accordingly



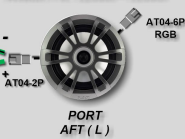
EL-FL652OEM
Garmin PN 010-02080-92
Garmin Grille PN 010-12789-10
Avalon PN. 128908 - 128909



To 12V DC Power
To GND
To 12V DC SWITCH Power



EL-FL652OEM
Garmin PN 010-02080-92
Garmin Grille PN 010-12789-10
Avalon PN. 128908 - 128909



Audio System Part Numbers

GARMIN P/N	FUSION MODEL NO.	AVALON P/N	QTY	DESCRIPTION
010-02250-10	MS-RA210OEM	128915	1 EA	MS-RA210- Multi-Zone Technology, Anti-Fogging LCD, IPX6 and IP7 Water Resistance Black Front Face.
010-12482-40	OEM HEAD UNIT HARNESS	128933	1 EA	Loom, A Port-TE 12P, PWR/SPKR, FusConn, Fusion Suits MS-RA210/RA670/RA770/WB670.
010-02080-92	EL-FL652OEM	128908	2 PAIRS	Amphenol 2 Pin + 6 Pin Conn, Fusion, 6.5" Spk, w/o Grille, RGB OEM, Bulk, NO Grilles
010-12789-10	EL-X6S1SPG	128909	2 PAIRS	Fusion, 6.5", Sports Grille Grey
010-12584-00	MS-SA1.8	128911	1 EA	Fusion, 1.8 Meter Stealth Antenna
010-12381-00	MS-CBUS83.5	128940	1 EA	Panel Mount USB & 3.5 mm Aux In Connector (OPTIONAL ACCESSORY)

MS-RA210 DSP Profile Settings

Tone Settings BOW (Zone 1)	Tone Settings AFT (Zone 2)
Bass: 3	Bass: 3
Middle: 4	Middle: 4
Treble: 5	Treble: 5
Sub Level: 0	Sub Level: 0
Low Pass: 55 Hz	Low Pass: 55 Hz
DSP Settings BOW	DSP Settings AFT
Amplified Speakers:	Amplified Speakers:
Speakers Connected: CHECK	Speakers Connected: CHECK
Model: EL-FL651XXX	Model: EL-FL651XXX
Paralle: UNCHECK	Paralle: UNCHECK
Environment: HELM	Environment: HELM
Line Out Speaker:	Line Out Speaker:
Line Out Connected: UNCHECK	Line Out Connected: CHECK
Speaker:	Speaker:
Amplifier:	Amplifier:
Environment:	Environment:
Subwoofer:	Subwoofer:
Subwoofer Connected: CHECK	Subwoofer Connected: UNCHECK
Model:	Model:
Environment:	Environment:
Amplifier:	Amplifier:
Phase:	Phase:

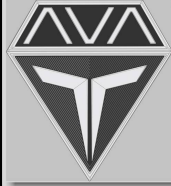
16 AWG SPEAKER CABLES
POWER CABLES

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

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3410 Hardscrabble Road N.
Minnnetrista, MN 55364

DRWN No. 1	DRWN DP	DATE 5/9/2023	SILVER MY24	REV. A
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SP1 MY24

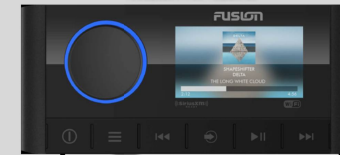
REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	5/9/2023

AP-DA214
 Garmin PN. 010-02569-01
 Avalon PN. 128965



129485 - APOLLO SOUND HRNS 1 MY24
 ANALOG DASH: LSZ/LTZ, VEN/SPT &
 VLS/VTX ONLY - 4 BOW, 2 AFT
NO FISHING MODELS

MS-RA210
 Garmin PN. 010-02255-10
 Avalon PN. 128915



Fusion Link Wireless Remote App

Apple App Store Fusion Link QR

Google App Store Fusion Link QR

ZONE 1 (L&R)

ZONE 1 (L&R) BOW

AUX R & L

Fusion OEM Harness
 Garmin PN. 010-12482-40
 Avalon PN. 128933
 Connect To Boat Harness

MS-SA1.8
 AM / FM Antenna
 Garmin PN. 010-12584-00
 Avalon PN. 128911

MS-CBAUX
 Panel Mount USB & 3.5 mm
 Garmin PN: 010-12852-00
 Avalon PN: 128942

OPTIONAL ACCESSORY

ZONE 1 BOW (L&R) RCAS
 Garmin PN. 010-12888-00
 Avalon PN. 128913

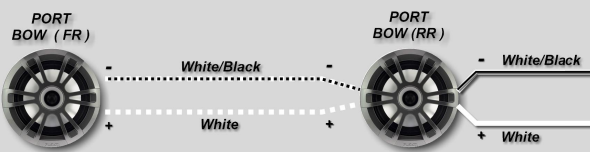
Head Unit Remote Line

Head Unit 12V DC Power

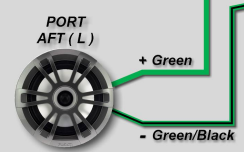
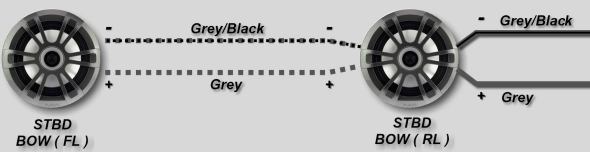
Head Unit Ground

Amplifier 12V DC Power

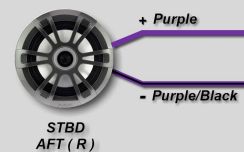
Amplifier Ground



EL-F651OEM
 Garmin PN 010-02080-80
 Garmin Grille PN 010-12789-10
 Avalon PN. 128908 - 128909



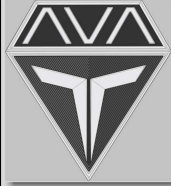
EL-F651OEM
 Garmin PN 010-02080-80
 Garmin Grille PN 010-12789-10
 Avalon PN. 128908 - 128909



- PARALLEL SPEAKER CABLES
- 16 AWG SPEAKER CABLES
- HEAD UNIT POWER CABLES
- HEAD UNIT REMOTE POWER
- - - - POWER CABLES

CAUTION: This schematic is for reference purposes only the EM installation may differ from the layout indicated in this drawing.

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DRWN No. 2	DRWN DP	DATE 5/9/2023	SP1 MY24 4 SPKRS BOW - 2 AFT
			REV. A



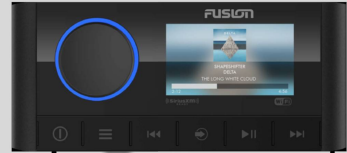
SP2 MY24

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	5/9/2023

AP-DA214
Garmin PN. 010-02569-01
Avalon PN.128965



MS-RA210
Garmin PN. 010-02255-10
Avalon PN. 128915



Fusion Link Wireless Remote App



Apple App Store Fusion Link QR



Google App Store Fusion Link QR

129486 - APOLLO SOUND HRNS 2 MY24 ANALOG DASH VEN & LSZ ONLY - 2 BOW 4 AFT

ZONE 2 (L&R)
ZONE 2 AFT (L&R)
AUX R & L

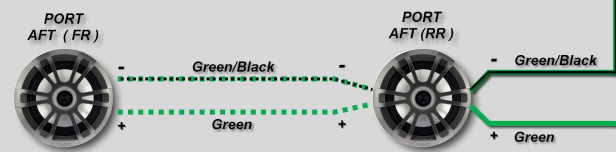
Fusion OEM Harness
Garmin PN. 010-12482-40
Avalon PN. 128933
Connect To Boat Harness

MS-SA1.8
AM / FM Antenna
Garmin PN. 010-12584-00
Avalon PN. 128911

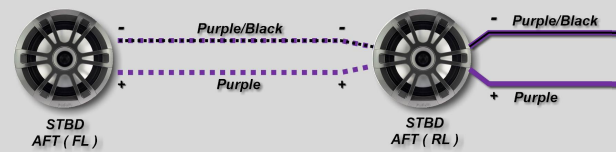
ZONE 2 AFT (L&R) RCAS
Garmin PN. 010-12888-00
Avalon PN. 128913

MS-CBAUX
Panel Mount USB & 3.5 mm
Garmin PN: 010-12852-00
Avalon PN: 128942

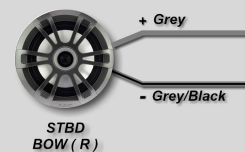
OPTIONAL ACCESSORY



EL-F651OEM
Garmin PN 010-02080-80
Garmin Grille PN 010-12789-10
Avalon PN. 128908 - 128909



EL-F651OEM
Garmin PN 010-02080-80
Garmin Grille PN 010-12789-10
Avalon PN. 128908 - 128909



- - - - - PARALLEL SPEAKER CABLES
- ===== 16 AWG SPEAKER CABLES
- ===== HEAD UNIT POWER CABLES
- ===== HEAD UNIT REMOTE POWER
- POWER CABLES

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

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DRWN No. 3	DRWN DP	DATE 5/9/2023	SP2 MY24 4 SPKR5 AFT - 2 BOW	REV. A

AVALON

x

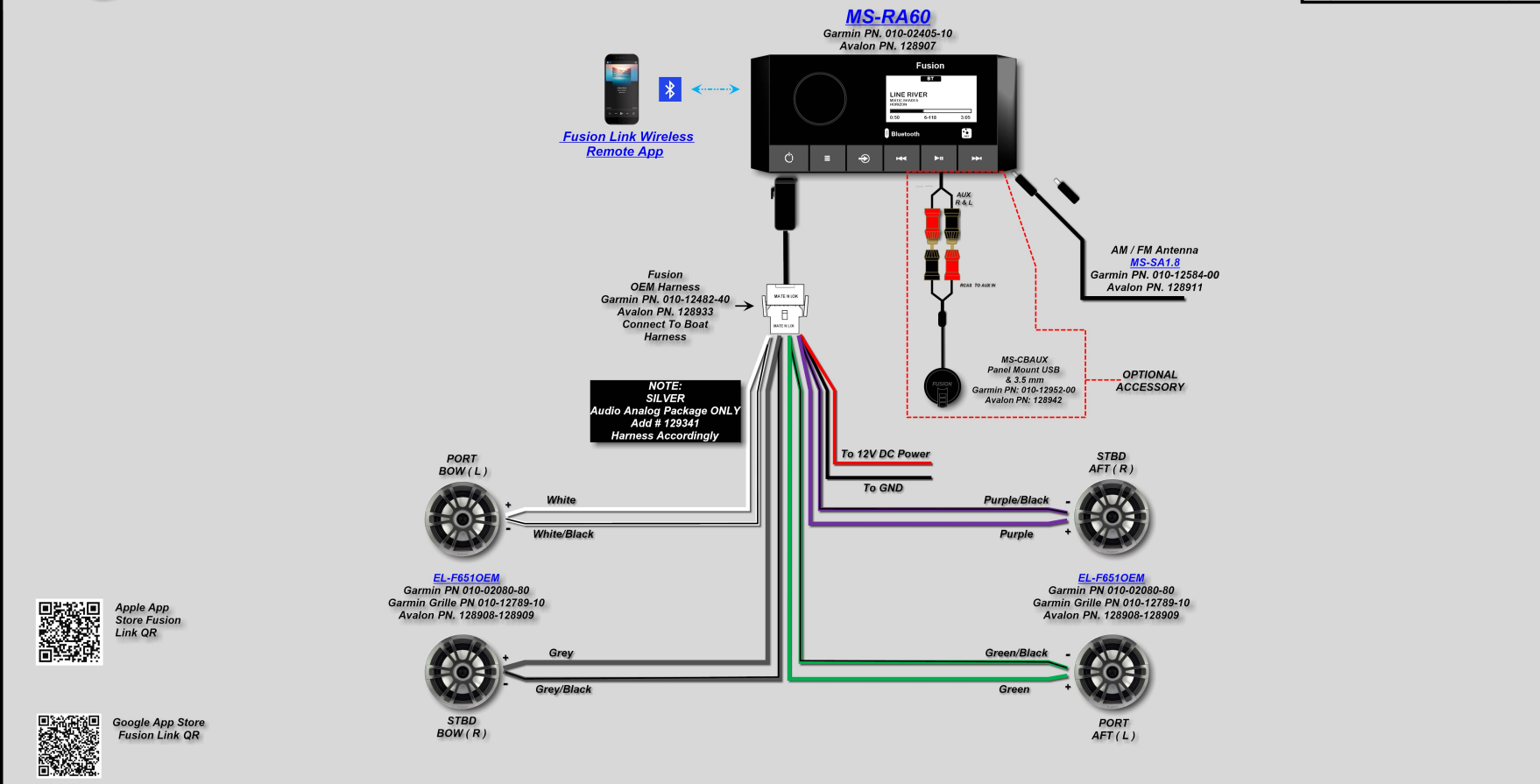


APPENDIX

MY23 SOUND SYSTEMS

BRONZE OPTIONAL MY23

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22



Apple App Store Fusion Link QR



Google App Store Fusion Link QR

Audio System Part Numbers

GARMIN P/N	FUSION MODEL NO.	AVALON P/N	QTY	DESCRIPTION
010-02405-10	MS-RA60OEM	128907	1 EA	MS-RA60- Multi-Zone Technology, Anti-Fogging LCD, IPX6 and IP7 Water Resistance Black Front Face.
010-12482-21	OEM HEAD UNIT HARNESS	128910	1 EA	Loom, A Port-TE 12P, PWR/SPKR, FusConn, Fusion Suits MS-RA60
010-02080-80	EL-F651OEM	128908	2 PAIRS	Fusion, 6.5" Spk, w/o Grille, OEM, Bulk, NO Grilles
010-12789-10	EL-X651SPG	128909	2 PAIRS	Fusion, 6.5", Sports Grille Grey
010-12584-00	MS-SA1.8	128911	1 EA	Fusion, 1.8 Meter Stealth Antenna
010-12952-00	MS-CBAUX	128942	1 EA	3.5MM AUX JACK (OPTIONAL ACCESSORY)

MS-RA60 DSP Profile Settings

Tone Settings BOW (Zone 1)	Tone Settings AFT (Zone 2)
Bass: 3	Bass: 3
Middle: 4	Middle: 4
Treble: 5	Treble: 5
Sub Level: 0	Sub Level: 0
Low Pass: 50 Hz	Low Pass: 50 Hz
DSP Settings BOW	DSP Settings AFT
Amplified Speakers: Speakers Connected: CHECK	Amplified Speakers: Speakers Connected: CHECK
Model: EL-F651XXX	Model: EL-F651XXX
Parallel: UNCHECK	Parallel: UNCHECK
Environment: HELM	Environment: HELM
Line Out Speaker: Line Out Connected: UNCHECK	Line Out Speaker: Line Out Connected: CHECK
Speaker: Speaker:	Speaker: Speaker:
Amplifier: Amplifier:	Amplifier: Amplifier:
Environment: Environment:	Environment: Environment:
Subwoofer: Subwoofer Connected: CHECK	Subwoofer: Subwoofer Connected: UNCHECK
Model: Model:	Model: Model:
Environment: Environment:	Environment: Environment:
Amplifier: Amplifier:	Amplifier: Amplifier:
Phase: Phase:	Phase: Phase:



CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

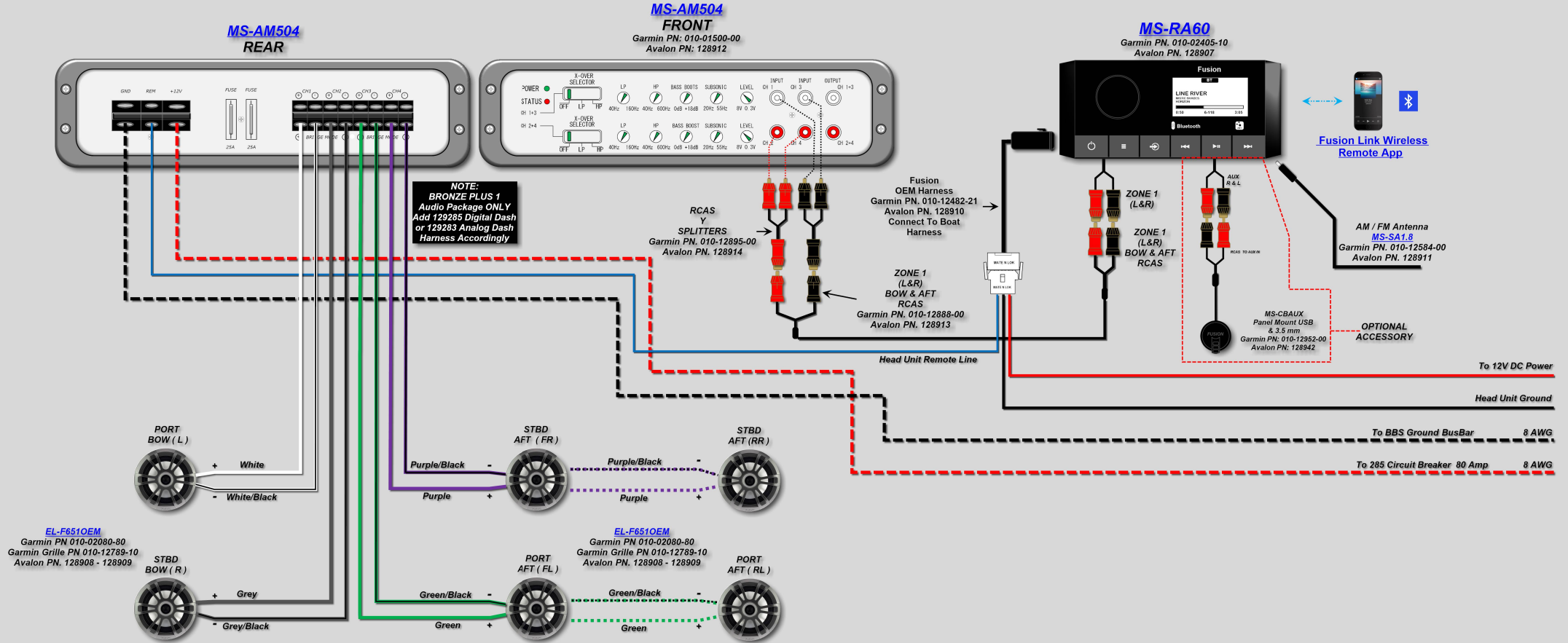
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SM Osgood Company
3410 Hardscrabble Road N.
Minnetrista, MN 55364

DRWN No.	DRWN	DATE	PACKAGE	REV.
1	DP	10/6/2022	BRONZE (OPTIONAL PACKAGE)	A

BRONZE PLUS 1

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22



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DRWN No.	DRWN	DATE	BRONZE PLUS 1	REV.
2	DP	10/6/2022		A



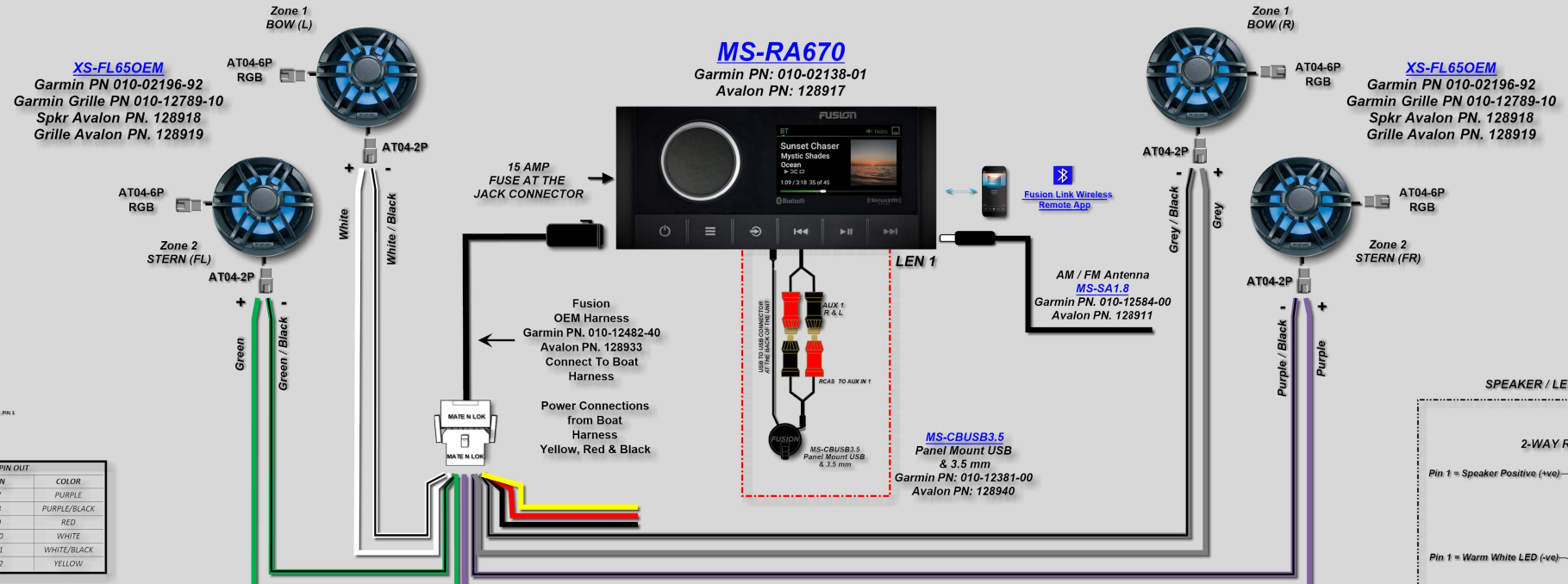
Apple App Store Fusion Link QR



Google App Store Fusion Link QR

- PARALLEL SPEAKER CABLES
- 16 AWG SPEAKER CABLES
- HEAD UNIT POWER CABLES
- HEAD UNIT REMOTE POWER
- POWER CABLES

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22



MATE N LOK TE 1-480708-0 PIN OUT

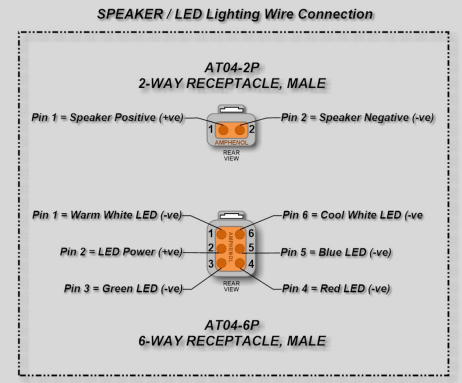
PIN	COLOR	PIN	COLOR
1	BLACK	7	PURPLE
2	BLUE	8	PURPLE/BLACK
3	GREEN	9	RED
4	GREEN/BLACK	10	WHITE
5	GREY	11	WHITE/BLACK
6	GREY/BLACK	12	YELLOW

- 16 AWG Speakers Cables
- 16 AWG Speakers Parallel Cables
- Power Cables

NOTE:
GOLD
Audio Package ONLY
Add 129341
Harness Accordingly

MS-RA670
DSP Profile Settings

<p>Tone Settings BOW (Zone 1)</p> <p>Bass.....4 Middle.....5 Treble.....8 Sub Level...0 Low Pass...55 Hz</p> <p>DSP Settings BOW</p> <p>Amplified Speakers: Speakers Connected:CHECK Model:XS-FL65XXX Parallel:UNCHECK Environment:HELM</p> <p>Line Out Speaker: Line Out Connected:UNCHECK Speaker: Amplifier: Environment:</p> <p>Subwoofer: Subwoofer Connected:CHECK Model: Environment: Amplifier: Phase:</p>	<p>Tone Settings AFT (Zone 2)</p> <p>Bass.....4 Middle.....5 Treble.....5 Sub Level...0 Low Pass...55 Hz</p> <p>DSP Settings AFT</p> <p>Amplified Speakers: Speakers Connected:CHECK Model:XS-FL65XXX Parallel:UNCHECK Environment:HELM</p> <p>Line Out Speaker: Line Out Connected:CHECK Speaker: Amplifier: Environment:</p> <p>Subwoofer: Subwoofer Connected:UNCHECK Model: Environment: Amplifier: Phase:</p>
---	---



CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

Audio System Part Numbers

VENDOR #	FUSION MODEL NO.	AVALON P/N	QTY	DESCRIPTION
010-02138-01	MS-RA670OEM	128917	1 EA	No Wiring Harness, Apollo Series, Stereo with DSP
010-12482-40	OEM HEAD UNIT HARNESS	128933	1 EA	Loom, A Port-TE 12P, PWR/SPKR, FusConn, Fusion Suits MS-RA770/MS-RA670/MS-RA210
010-02196-92	XS-FL65OEM	128918	2 PAIRS	AMPHENOL 2P + 6Pin, Fusion, XS Series 6.5" Spk, RGB, OEM without Grille, 200W Peak, 50W RMS
010-12878-40	XS-X65SPC	128919	2 PAIRS	Fusion, 6.5", Sports Grille Chrome
010-12584-00	MS-SA1.8	128911	1 EA	1.8 Meter Stealth Antenna
010-12381-00	MS-CBUS3.5	128940	1 EA	Panel Mount USB/3.5mm Headphone jack connection with Waterproof cap

CONFIDENTIAL

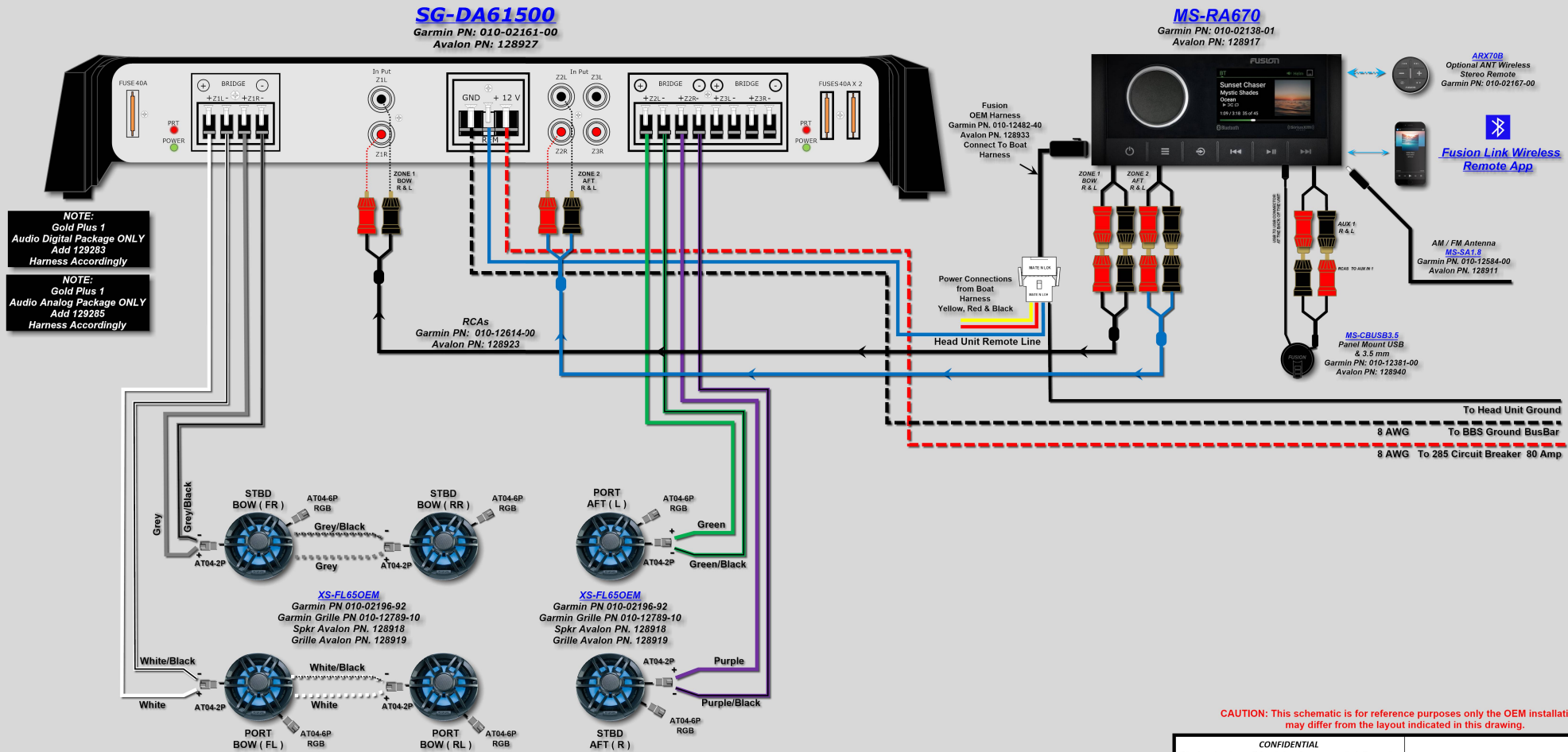
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SM Osgood Company
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Minnetrista, MN 55364

DRWN No. 1	DRWN DP	DATE 10/6/2022	GOLD (OPTIONAL PACKAGE)	REV. A
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GOLD PLUS 1 MY23

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22



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DRWN No. 2	DRWN DP	DATE 10/6/2022	GOLD Plus 1 MY23	REV. A



Apple App Store Fusion Link QR



Google App Store Fusion Link QR

- PARALLEL SPEAKER CABLES
- ===== 16 AWG SPEAKER CABLES
- ===== 12 AWG SUBWOOFER CABLES
- ===== HEAD UNIT REMOTE POWER
- POWER CABLES

GOLD PLUS 2 MY23

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22

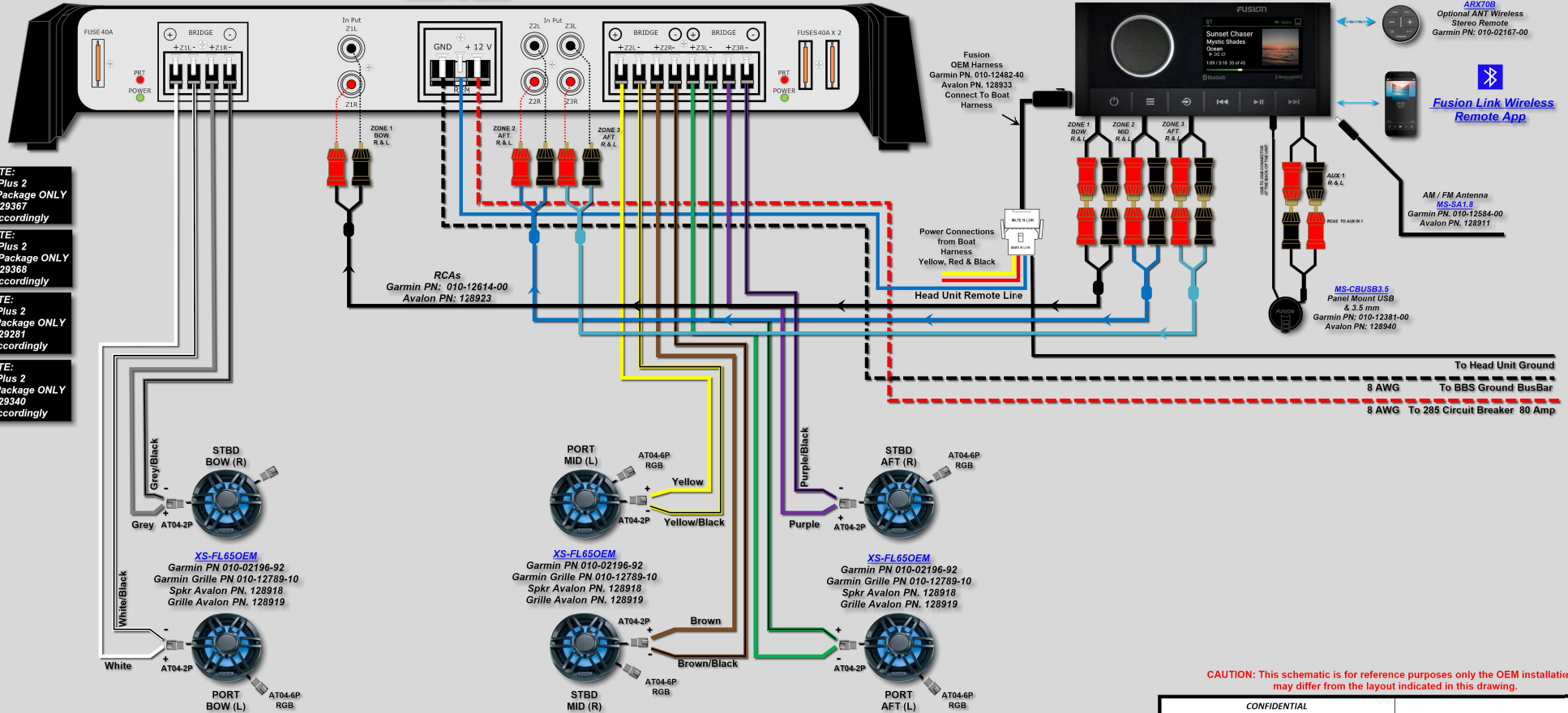
SG-DA61500

Garmin PN: 010-02161-00
Avalon PN: 128927

MS-RA670

Garmin PN: 010-02138-01
Avalon PN: 128917

- NOTE:**
Gold Plus 2
Audio Digital Package ONLY
Add 129367
Harness Accordingly
- NOTE:**
Gold Plus 2
Audio Analog Package ONLY
Add 129368
Harness Accordingly
- NOTE:**
Gold Plus 2
Audio Digital Package ONLY
Add 129281
Harness Accordingly
- NOTE:**
Gold Plus 2
Audio Digital Package ONLY
Add 129340
Harness Accordingly



CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

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DRWN No. 3	DRWN DP	DATE 10/6/2022	GOLD Plus 2 MY23	REV. A



Apple App Store Fusion Link QR



Google App Store Fusion Link QR

- PARALLEL SPEAKER CABLES
- 16 AWG SPEAKER CABLES
- 12 AWG SUBWOOFER CABLES
- HEAD UNIT REMOTE POWER
- POWER CABLES

GOLD PLUS 3 MY23

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	9/16/22

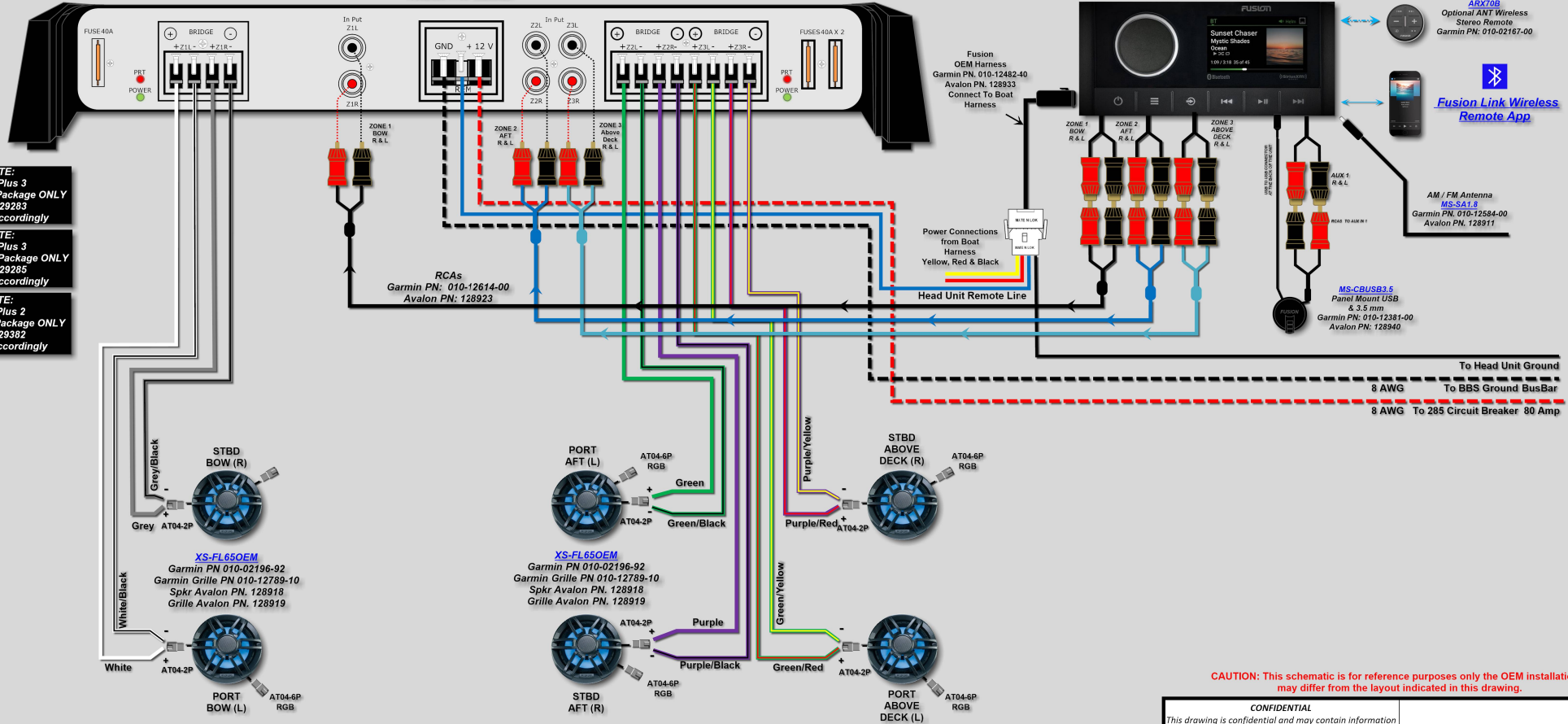
SG-DA61500

Garmin PN: 010-02161-00
Avalon PN: 128927

MS-RA670

Garmin PN: 010-02138-01
Avalon PN: 128917

- NOTE:**
Gold Plus 3
Audio Digital Package ONLY
Add 129283
Harness Accordingly
- NOTE:**
Gold Plus 3
Audio Analog Package ONLY
Add 129285
Harness Accordingly
- NOTE:**
Gold Plus 2
Audio Digital Package ONLY
Add 129382
Harness Accordingly



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DRWN No. 3	DRWN DP	DATE 9/16/2022	GOLD Plus 3 MY23	REV. A

- PARALLEL SPEAKER CABLES
- ===== 16 AWG SPEAKER CABLES
- ===== 12 AWG SUBWOOFER CABLES
- ===== HEAD UNIT REMOTE POWER
- POWER CABLES



Apple App Store Fusion Link QR



Google App Store Fusion Link QR

HP SOUND 1 MY23

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22

SG-DA61500

Garmin PN: 010-02161-00
Avalon PN: 128927

MS-RA670

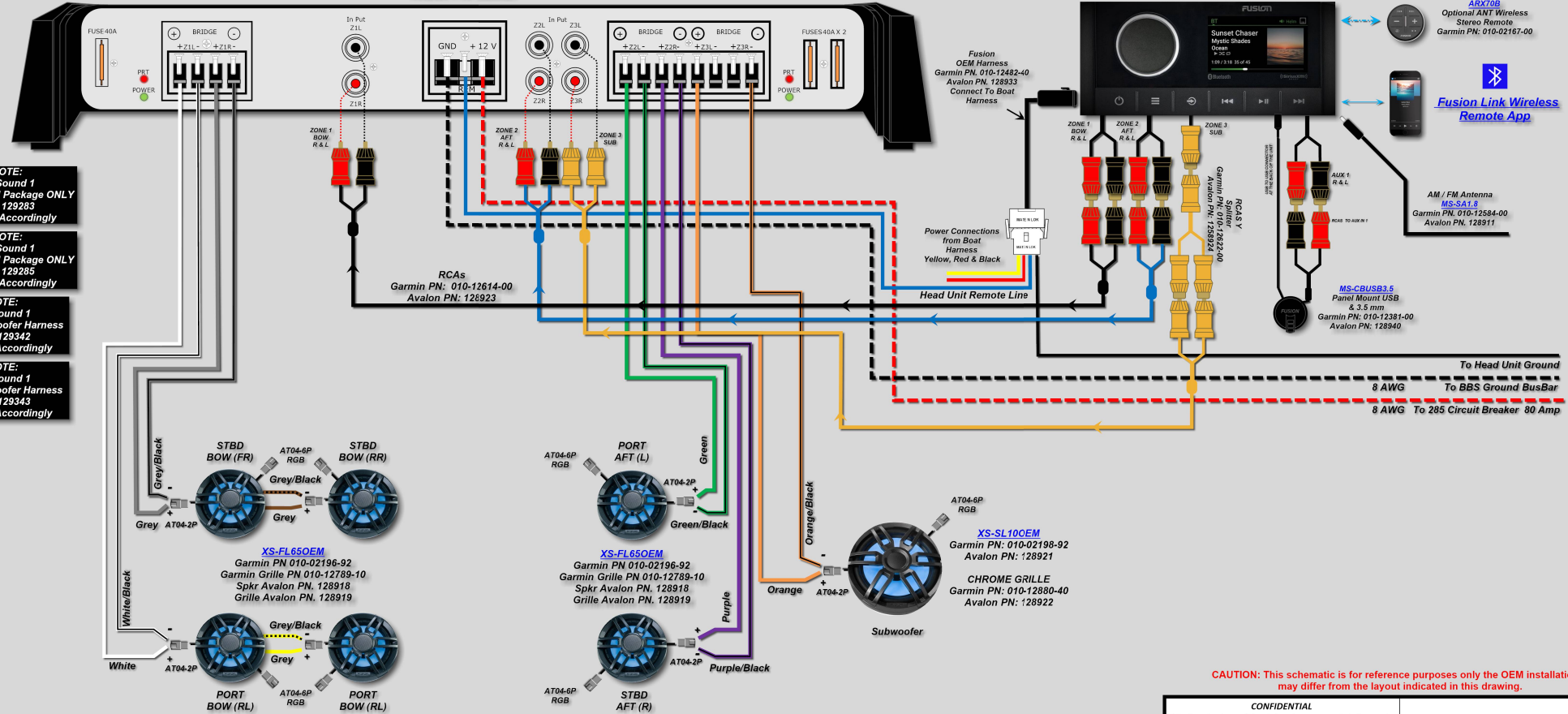
Garmin PN: 010-02138-01
Avalon PN: 128917

NOTE:
HP Sound 1
Audio Digital Package ONLY
Add 129283
Harness Accordingly

NOTE:
HP Sound 1
Audio Digital Package ONLY
Add 129285
Harness Accordingly

NOTE:
HP Sound 1
Short Subwoofer Harness
Add 129342
Harness Accordingly

NOTE:
HP Sound 1
Long Subwoofer Harness
Add 129343
Harness Accordingly



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DRWN No. 1	DRWN DP	DATE 10/6/2022	HP SOUND 1 MY23	REV. A



Apple App Store Fusion Link QR



Google App Store Fusion Link QR

- PARALLEL SPEAKER CABLES
- 16 AWG SPEAKER CABLES
- 12 AWG SUBWOOFER CABLES
- - - - - HEAD UNIT REMOTE POWER
- POWER CABLES

HP SOUND 2 MY23

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22

SG-DA61500

Garmin PN: 010-02161-00
Avalon PN: 128927

MS-RA670

Garmin PN: 010-02138-01
Avalon PN: 128917

NOTE:
HP Sound 2
Audio Digital Package ONLY
Add 129281
Harness Accordingly

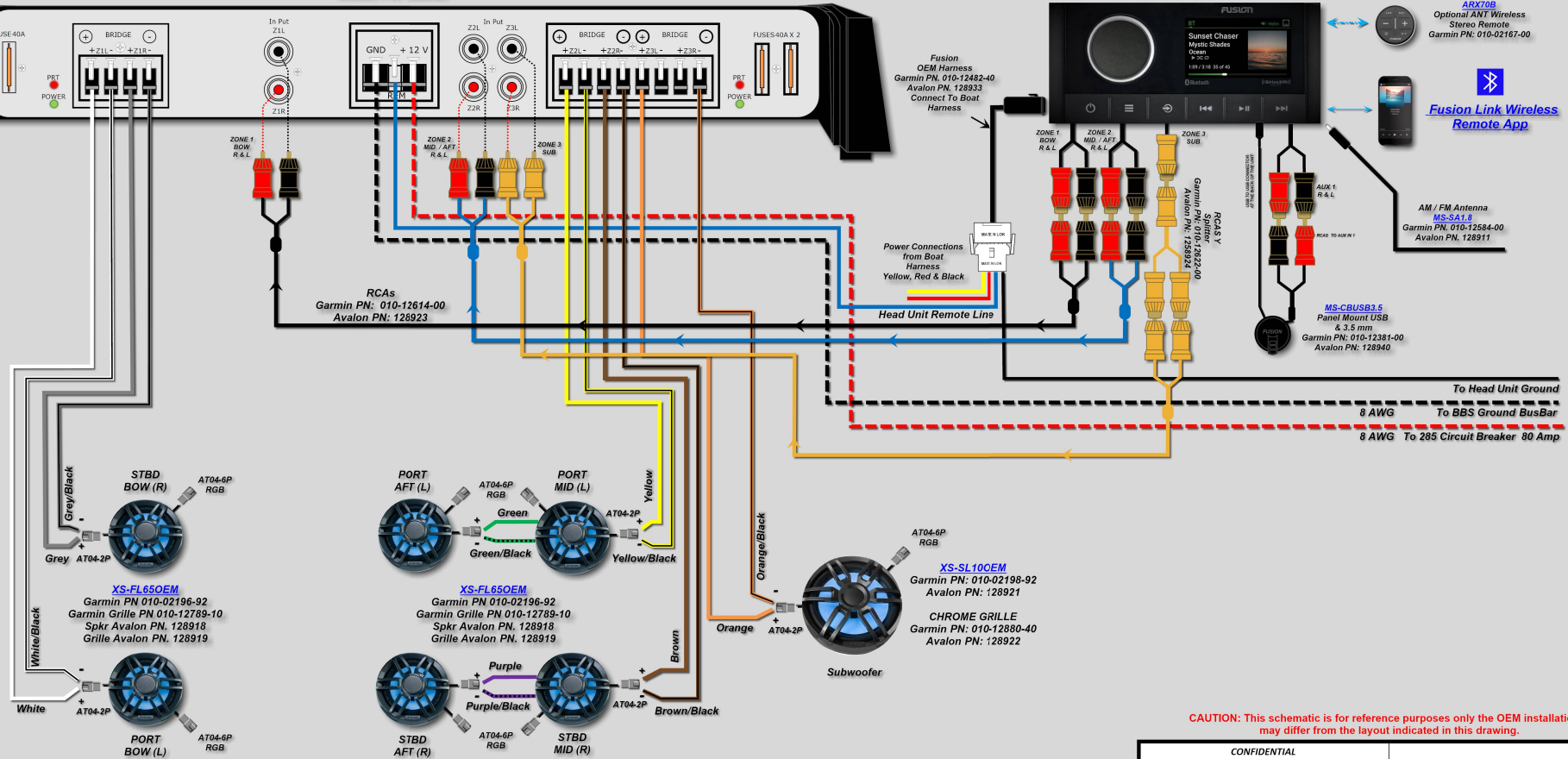
NOTE:
HP Sound 2
Audio Digital Package ONLY
Add 129340
Harness Accordingly

NOTE:
HP Sound 2
Audio Analog Package ONLY
Add 129364
Harness Accordingly

NOTE:
HP Sound 2
Audio Digital Package ONLY
Add 129284
Harness Accordingly

NOTE:
HP Sound 2
Short Subwoofer Harness
Add 129342
Harness Accordingly

NOTE:
HP Sound 2
Long Subwoofer Harness
Add 129343
Harness Accordingly



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DRWN No. 2	DRWN DP	DATE 10/6/2022	HP SOUND 2 MY23	REV. A



Apple App Store Fusion Link QR



Google App Store Fusion Link QR

- PARALLEL SPEAKER CABLES
- ===== 16 AWG SPEAKER CABLES
- ===== 12 AWG SUBWOOFER CABLES
- HEAD UNIT REMOTE POWER
- POWER CABLES

HP SOUND 3 MY23

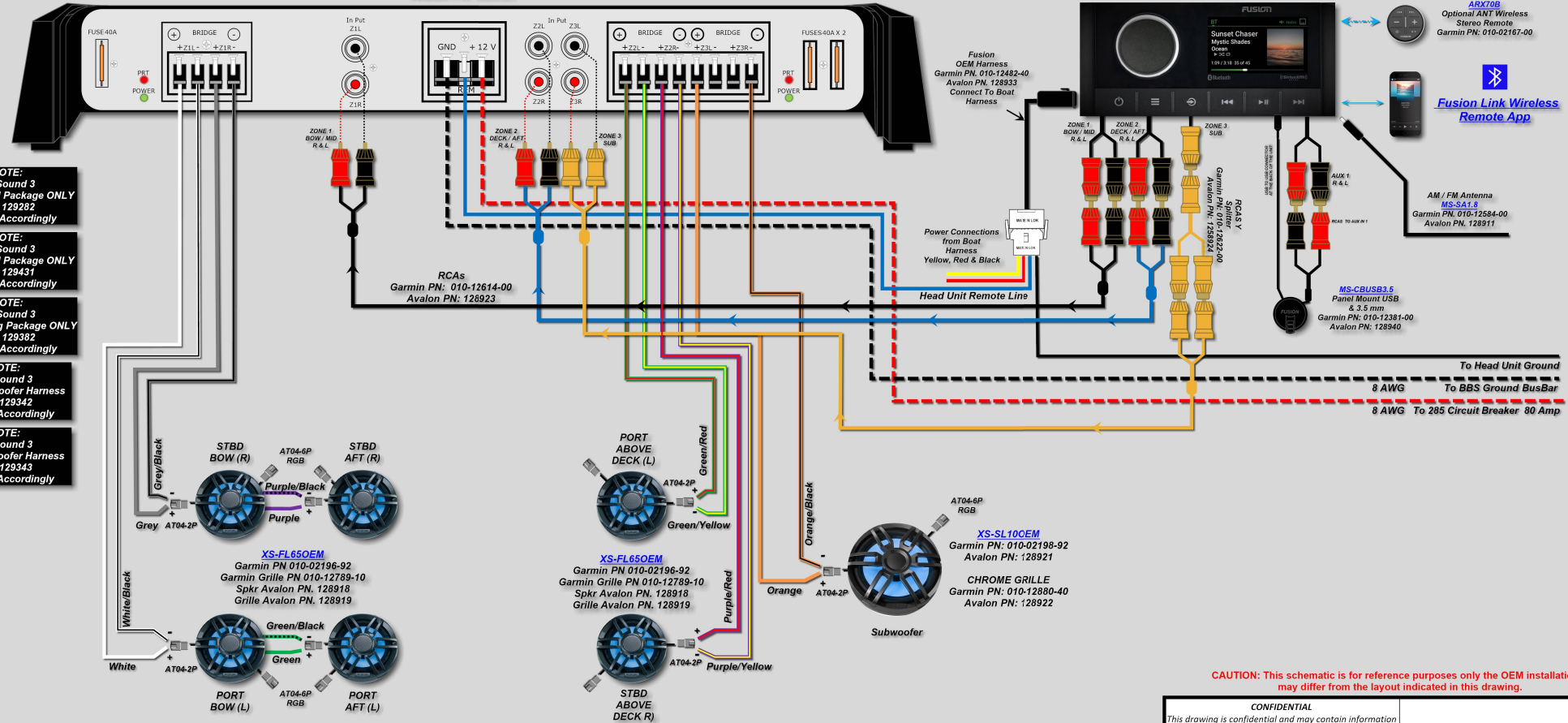
REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22

SG-DA61500

Garmin PN: 010-02161-00
Avalon PN: 128927

MS-RA670

Garmin PN: 010-02138-01
Avalon PN: 128917



- NOTE:**
HP Sound 3
Audio Digital Package ONLY
Add 129282
Harness Accordingly
- NOTE:**
HP Sound 3
Audio Digital Package ONLY
Add 129431
Harness Accordingly
- NOTE:**
HP Sound 3
Audio Analog Package ONLY
Add 129382
Harness Accordingly
- NOTE:**
HP Sound 3
Short Subwoofer Harness
Add 129342
Harness Accordingly
- NOTE:**
HP Sound 3
Long Subwoofer Harness
Add 129343
Harness Accordingly

- ARX708**
Optional ANT Wireless
Stereo Remote
Garmin PN: 010-02167-00
- Fusion Link Wireless
Remote App**
- AM / FM Antenna
MS-SA1.3**
Garmin PN: 010-12584-00
Avalon PN: 128911



Apple App Store
Fusion Link QR



Google App Store
Fusion Link QR

- PARALLEL SPEAKER CABLES
- ===== 16 AWG SPEAKER CABLES
- ===== 12 AWG SUBWOOFER CABLES
- ===== HEAD UNIT REMOTE POWER
- POWER CABLES

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DRWN No. 3	DRWN DP	DATE 10/6/2022	HP SOUND 3 MY23	REV. A

HP SOUND 5 MY23

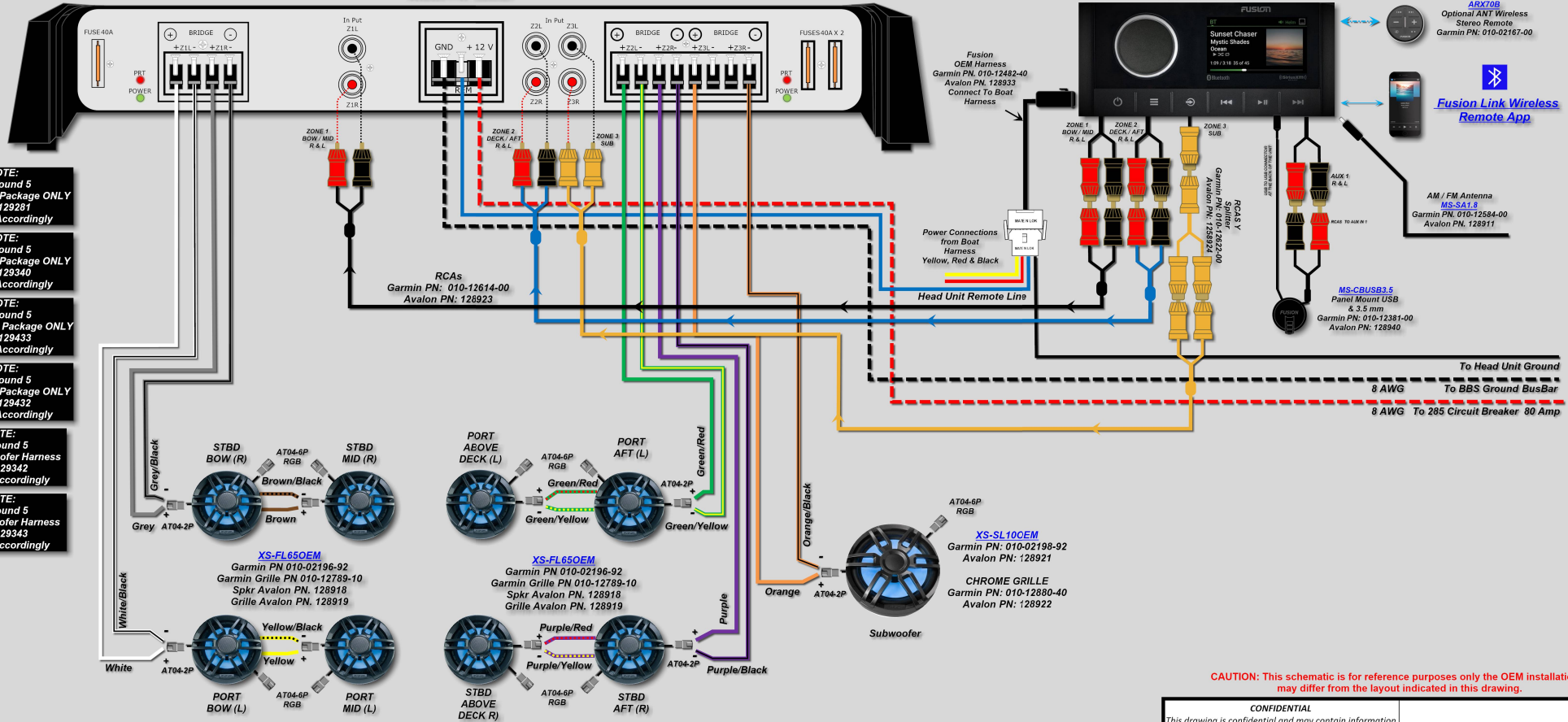
REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22

SG-DA61500

Garmin PN: 010-02161-00
Avalon PN: 128927

MS-RA670

Garmin PN: 010-02138-01
Avalon PN: 128917



NOTE:
HP Sound 5
Audio Digital Package ONLY
Add 129281
Harness Accordingly

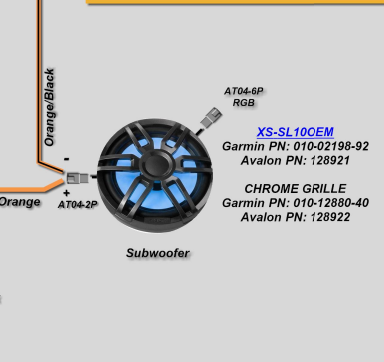
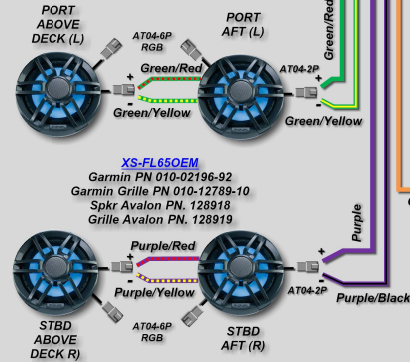
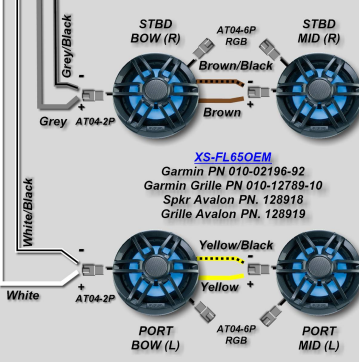
NOTE:
HP Sound 5
Audio Digital Package ONLY
Add 129340
Harness Accordingly

NOTE:
HP Sound 5
Audio Analog Package ONLY
Add 129433
Harness Accordingly

NOTE:
HP Sound 5
Audio Digital Package ONLY
Add 129432
Harness Accordingly

NOTE:
HP Sound 5
Short Subwoofer Harness
Add 129342
Harness Accordingly

NOTE:
HP Sound 5
Long Subwoofer Harness
Add 129343
Harness Accordingly



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DRWN No. 5	DRWN DP	DATE 10/6/2022	HP SOUND 5 MY23	REV. A



- PARALLEL SPEAKER CABLES
- _____ 16 AWG SPEAKER CABLES
- _____ 12 AWG SUBWOOFER CABLES
- - - - - HEAD UNIT REMOTE POWER
- - - - - POWER CABLES

HP SOUND 6 MY23

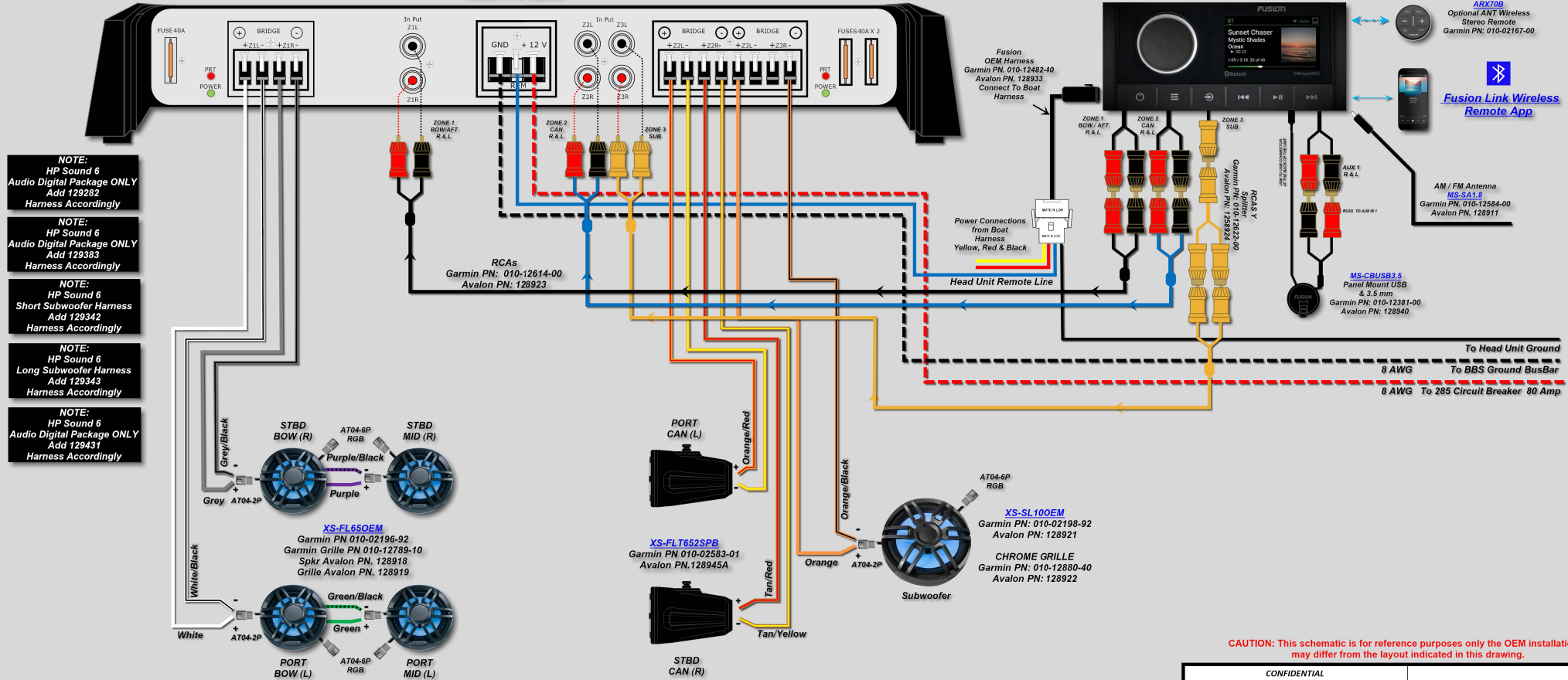
REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22

SG-DA61500

Garmin PN: 010-02161-00
Avalon PN: 128927

MS-RA670

Garmin PN: 010-02138-01
Avalon PN: 128917



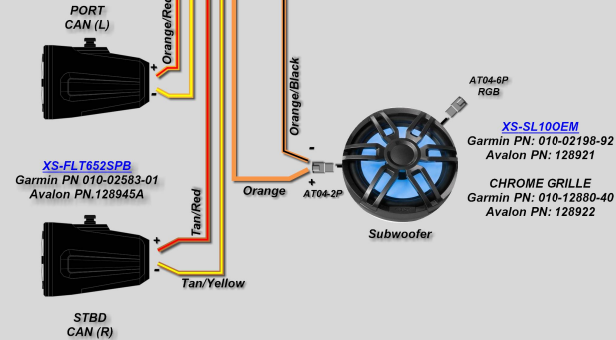
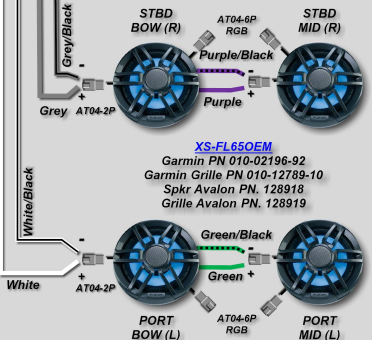
NOTE:
HP Sound 6
Audio Digital Package ONLY
Add 128922
Harness Accordingly

NOTE:
HP Sound 6
Audio Digital Package ONLY
Add 128933
Harness Accordingly

NOTE:
HP Sound 6
Short Subwoofer Harness
Add 129342
Harness Accordingly

NOTE:
HP Sound 6
Long Subwoofer Harness
Add 129343
Harness Accordingly

NOTE:
HP Sound 6
Audio Digital Package ONLY
Add 129431
Harness Accordingly



CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

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DRWN No. 6	DRWN DP	DATE 10/6/2022	HP SOUND 6 MY23	REV. A



- PARALLEL SPEAKER CABLES
- ===== 16 AWG SPEAKER CABLES
- ===== 12 AWG SUBWOOFER CABLES
- ===== HEAD UNIT REMOTE POWER
- POWER CABLES

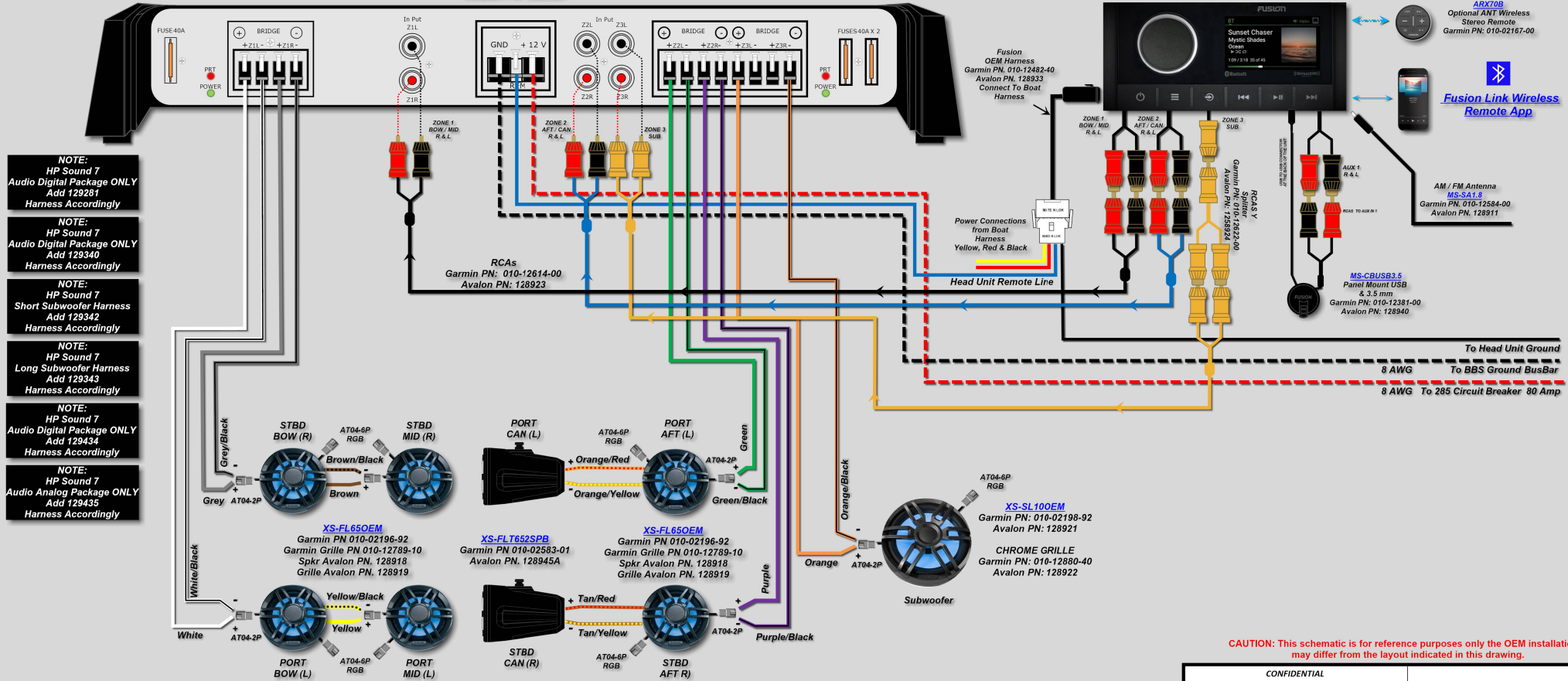
REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22

SG-DA61500

Garmin PN: 010-02161-00
Avalon PN: 128927

MS-RA670

Garmin PN: 010-02138-01
Avalon PN: 128917



NOTE:
HP Sound 7
Audio Digital Package ONLY
Add 128281
Harness Accordingly

NOTE:
HP Sound 7
Audio Digital Package ONLY
Add 128340
Harness Accordingly

NOTE:
HP Sound 7
Short Subwoofer Harness
Add 128342
Harness Accordingly

NOTE:
HP Sound 7
Long Subwoofer Harness
Add 128343
Harness Accordingly

NOTE:
HP Sound 7
Audio Digital Package ONLY
Add 128434
Harness Accordingly

NOTE:
HP Sound 7
Audio Analog Package ONLY
Add 128435
Harness Accordingly



Apple App Store Fusion Link QR



Google App Store Fusion Link QR

- PARALLEL SPEAKER CABLES
- ===== 16 AWG SPEAKER CABLES
- ===== 12 AWG SUBWOOFER CABLES
- ===== HEAD UNIT REMOTE POWER
- ===== POWER CABLES

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DRWN No. 7	DRWN DP	DATE 10/6/2022	HP SOUND 7 MY23	REV. A

HP SOUND 8 MY23

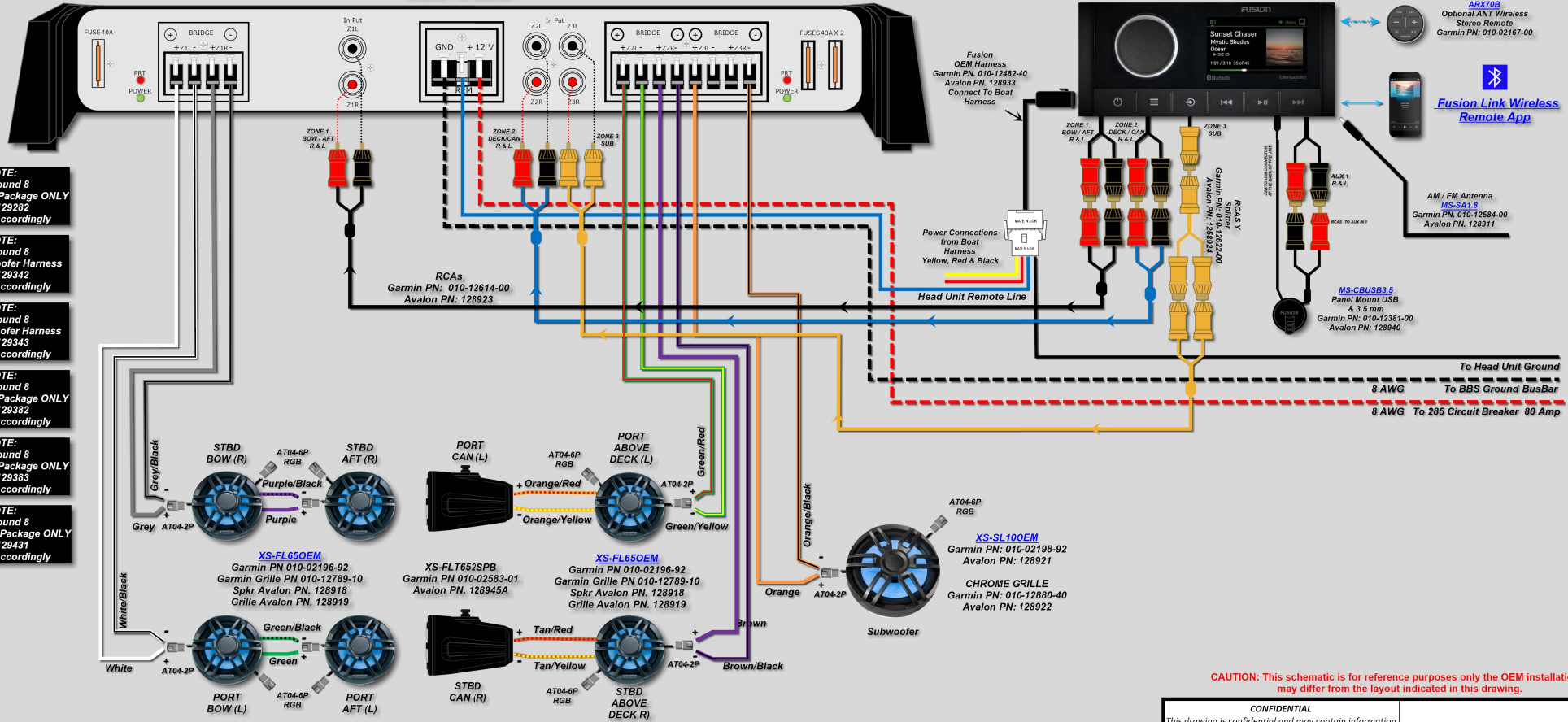
REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22

SG-DA61500

Garmin PN: 010-02161-00
Avalon PN: 128927

MS-RA670

Garmin PN: 010-02138-01
Avalon PN: 128917



NOTE:
HP Sound 8
Short Subwoofer Harness
Add 129342
Harness Accordingly

NOTE:
HP Sound 8
Long Subwoofer Harness
Add 129343
Harness Accordingly

NOTE:
HP Sound 8
Audio Digital Package ONLY
Add 129382
Harness Accordingly

NOTE:
HP Sound 8
Audio Digital Package ONLY
Add 129383
Harness Accordingly

NOTE:
HP Sound 8
Audio Analog Package ONLY
Add 129431
Harness Accordingly



Apple App Store Fusion Link QR



Google App Store Fusion Link QR

- PARALLEL SPEAKER CABLES
- ===== 16 AWG SPEAKER CABLES
- ===== 12 AWG SUBWOOFER CABLES
- ===== HEAD UNIT REMOTE POWER
- POWER CABLES

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

CONFIDENTIAL			SM Osgood Company 3410 Hardscrabble Road N. Minnetrista, MN 55364	
DRWN No. 8	DRWN DP	DATE 10/6/2022	HP SOUND 8 MY23	REV. A

HP SOUND 9 MY23

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22

SG-DA61500

Garmin PN: 010-02161-00
Avalon PN: 128927

MS-RA670

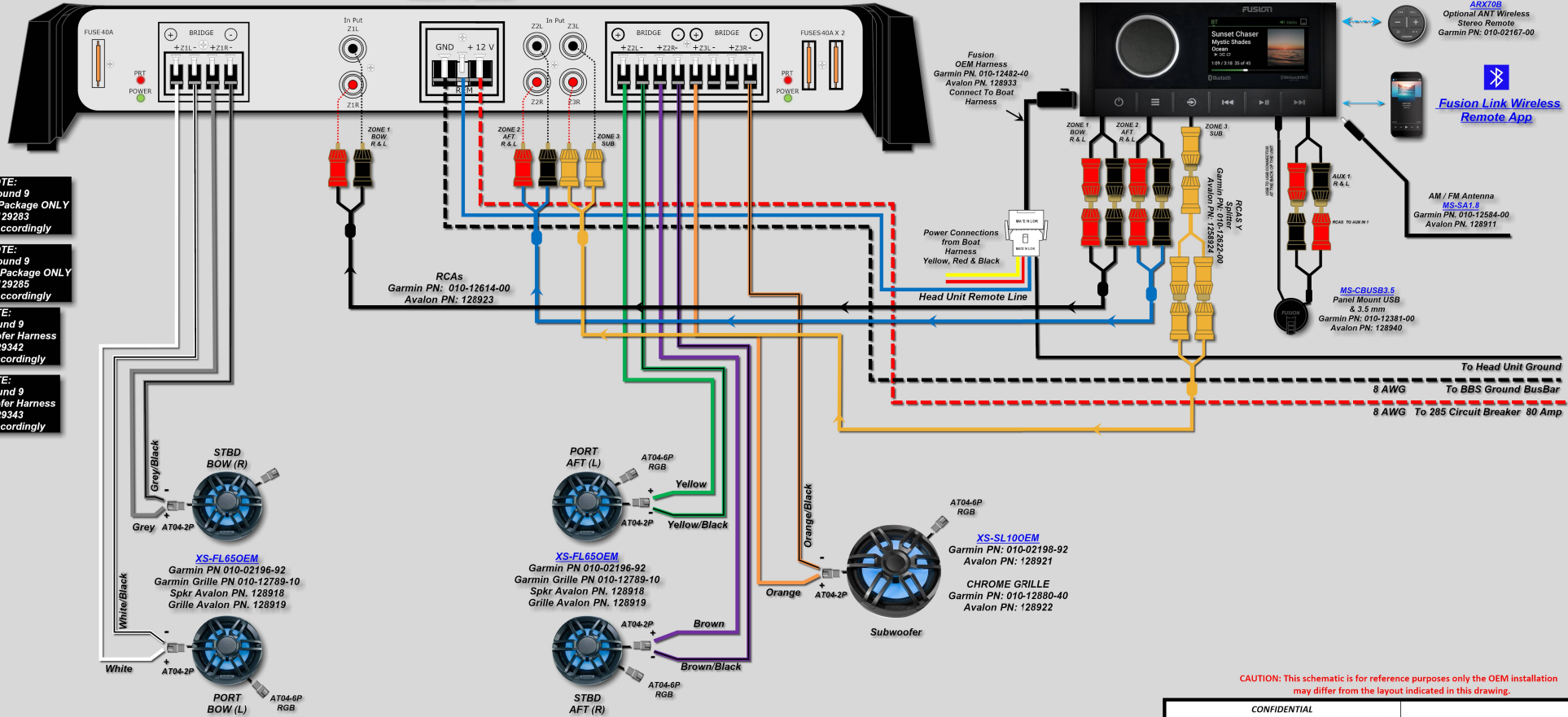
Garmin PN: 010-02138-01
Avalon PN: 128917

NOTE:
HP Sound 9
Audio Digital Package ONLY
Add 129283
Harness Accordingly

NOTE:
HP Sound 9
Audio Analog Package ONLY
Add 129285
Harness Accordingly

NOTE:
HP Sound 9
Short Subwoofer Harness
Add 129342
Harness Accordingly

NOTE:
HP Sound 9
Long Subwoofer Harness
Add 129343
Harness Accordingly



Apple App Store Fusion Link QR



Google App Store Fusion Link QR

- PARALLEL SPEAKER CABLES
- ===== 16 AWG SPEAKER CABLES
- ===== 12 AWG SUBWOOFER CABLES
- ===== HEAD UNIT REMOTE POWER
- POWER CABLES

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

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DRWN No. 9	DRWN DP	DATE 10/6/2022	HP SOUND 9 MY23	REV. A

PS SOUND 1 MY23

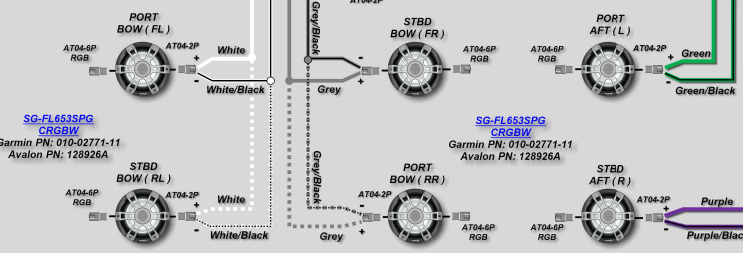
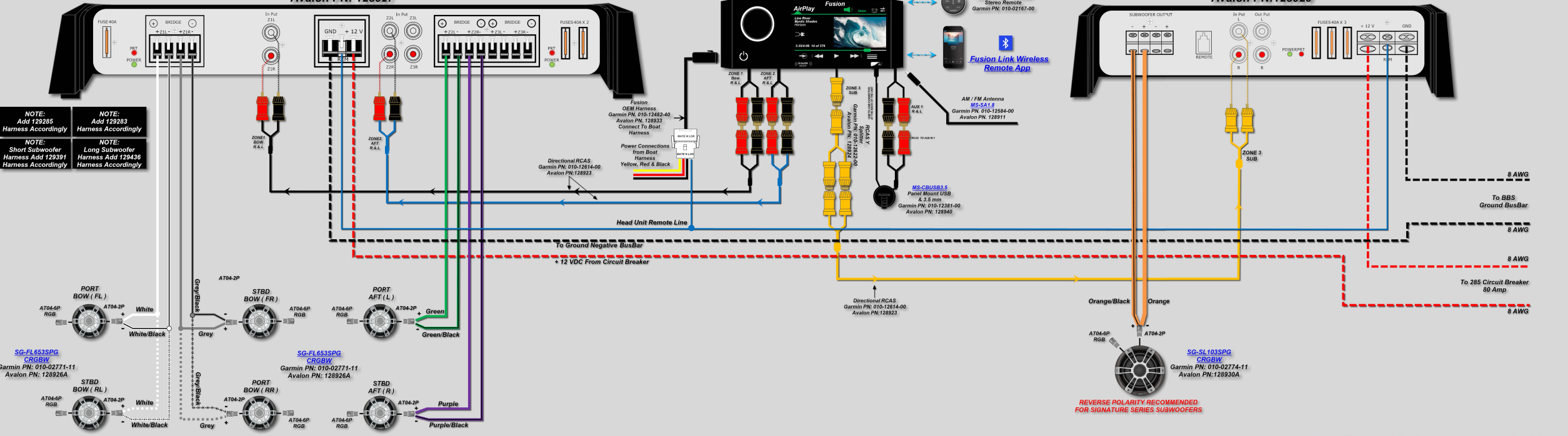
REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22

SG-DA61500
Garmin PN: 010-02161-00
Avalon PN: 128927

MS-RA770
Garmin PN: 010-01905-10
Avalon PN: 128925

SG-DA12250
Garmin PN: 010-01970-00
Avalon PN: 128929

- NOTE:** Add 129285 Harness Accordingly
- NOTE:** Add 129283 Harness Accordingly
- NOTE:** Short Subwoofer Harness Add 129391 Harness Accordingly
- NOTE:** Long Subwoofer Harness Add 129436 Harness Accordingly



- 16 AWG PARALLEL SPEAKER CABLES**
- 16 AWG SPEAKER CABLES**
- 12 AWG SUBWOOFER CABLES**
- AMPLIFIER POWER CABLES**

CAUTION: This schematic is for reference purposes only the OEM installation maybe differ from the layout in this drawing.



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DRWN No. 1	DRWN DP	DATE 10/6/2022	PS SOUND 1	REV. A

SG-FL653SPG



PS SOUND 3 MY23

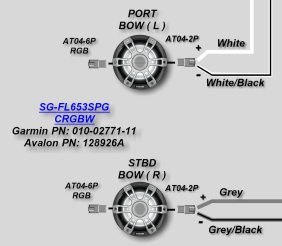
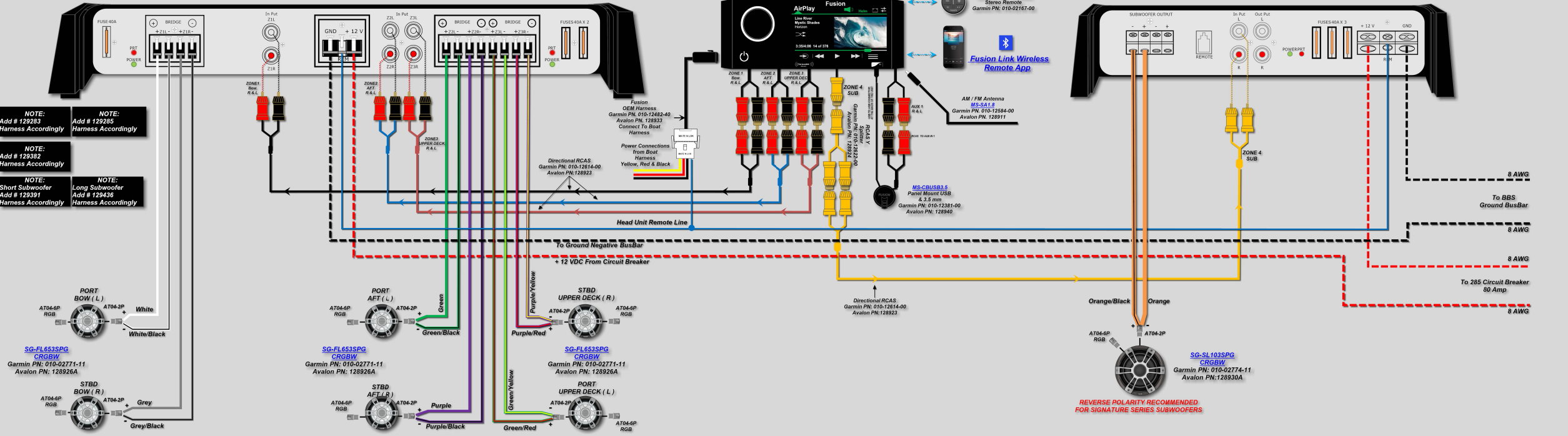
REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22

SG-DA61500
Garmin PN: 010-02161-00
Avalon PN: 128927

MS-RA770
Garmin PN: 010-01905-10
Avalon PN: 128925

SG-DA12250
Garmin PN: 010-01970-00
Avalon PN: 128929

- NOTE:**
Add # 129283
Harness Accordingly
- NOTE:**
Add # 129285
Harness Accordingly
- NOTE:**
Add # 129382
Harness Accordingly
- NOTE:**
Short Subwoofer
Add # 129391
Harness Accordingly
- NOTE:**
Long Subwoofer
Add # 129436
Harness Accordingly



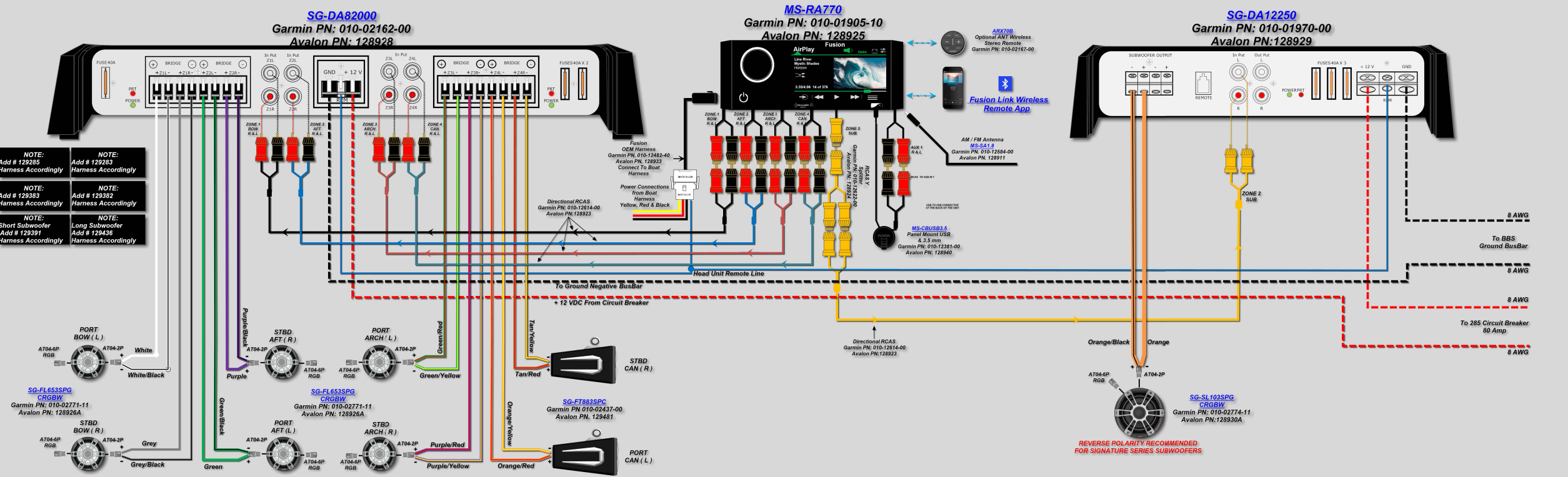
- 16 AWG SPEAKER CABLES
- 12 AWG SUBWOOFER CABLES
- AMPLIFIER POWER CABLES

CAUTION: This schematic is for reference purposes only; the OEM installation may differ from the layout in this drawing.

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DRWN No. 3	DRWN DP	DATE 10/6/2022	PS SOUND 3	REV. A

PS SOUND 5 MY23

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22



- NOTE:** Add # 129285 Harness Accordingly
- NOTE:** Add # 129383 Harness Accordingly
- NOTE:** Short Subwoofer Add # 129391 Harness Accordingly
- NOTE:** Add # 129283 Harness Accordingly
- NOTE:** Add # 129382 Harness Accordingly
- NOTE:** Long Subwoofer Add # 129438 Harness Accordingly



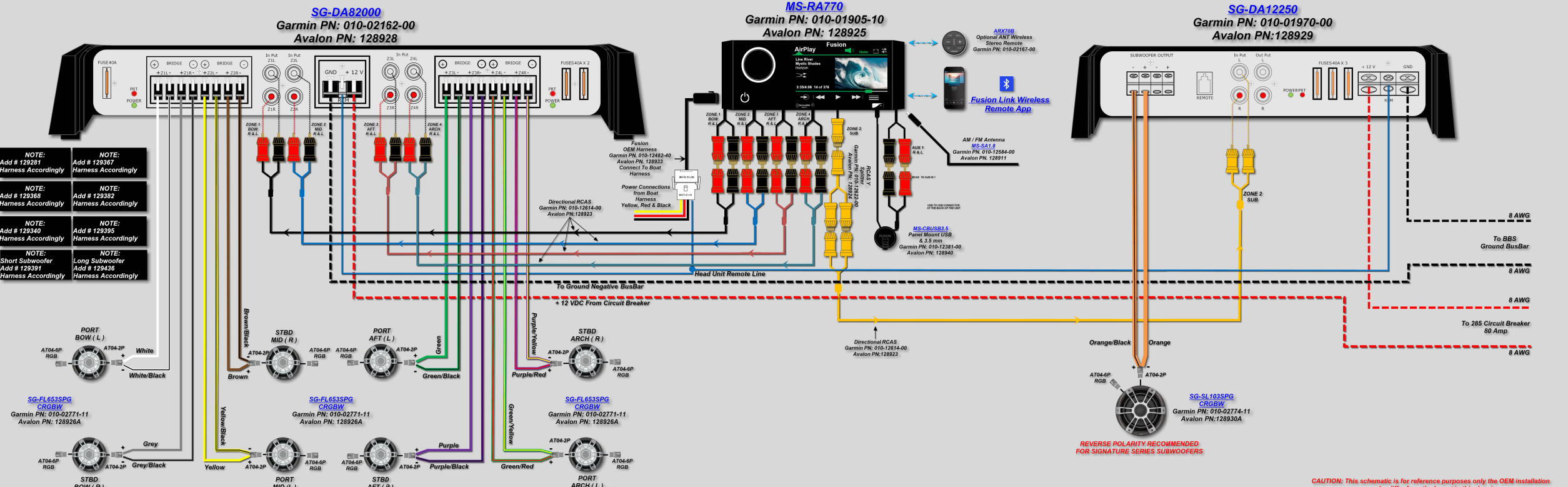
- 16 AWG PARALLEL SPEAKER CABLES**
- 16 AWG SPEAKER CABLES**
- 12 AWG SUBWOOFER CABLES**
- AMPLIFIER POWER CABLES**

CAUTION: This schematic is for reference purposes only; the OEM installation may differ from the layout in this drawing.

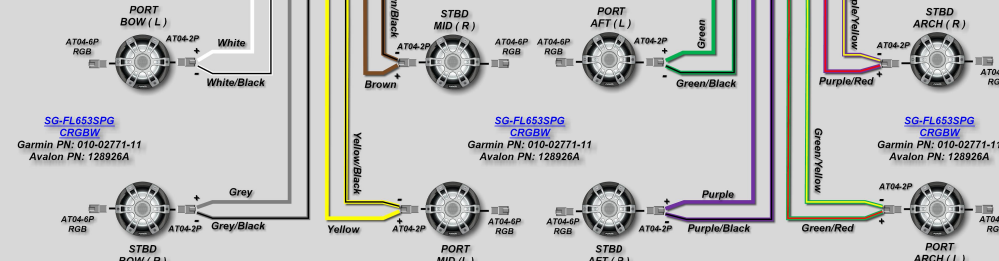
CONFIDENTIAL This drawing is confidential and may contain information which is proprietary to SM Osgood Company and their manufacturing partners. This material may not be reproduced or used in whole or in parts as the basis for manufacturing or sale of products without written permission.			SM Osgood Company 3410 Hardscrabble Road N. Minnetrista, MN 55364	
DRWN No. 5	DRWN DP	DATE 10/6/2022	PS SOUND 5	REV. A

PS SOUND 6 MY23

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22



- NOTE:**
Add # 129381
Harness Accordingly
- NOTE:**
Add # 129387
Harness Accordingly
- NOTE:**
Add # 129388
Harness Accordingly
- NOTE:**
Add # 129382
Harness Accordingly
- NOTE:**
Add # 129340
Harness Accordingly
- NOTE:**
Add # 129395
Harness Accordingly
- NOTE:**
Short Subwoofer
Add # 129391
Harness Accordingly
- NOTE:**
Long Subwoofer
Add # 129436
Harness Accordingly



- 16 AWG PARALLEL SPEAKER CABLES
- 16 AWG SPEAKER CABLES
- 12 AWG SUBWOOFER CABLES
- AMPLIFIER POWER CABLES

CAUTION: This schematic is for reference purposes only the OEM installation maybe differ from the layout in this drawing.



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DRWN No. 6	DRWN DP	DATE 10/6/2022	PS SOUND 6	REV. A

SM Osgood Company
3410 Hardscrabble Road N.
Minnetrsta, MN 55364

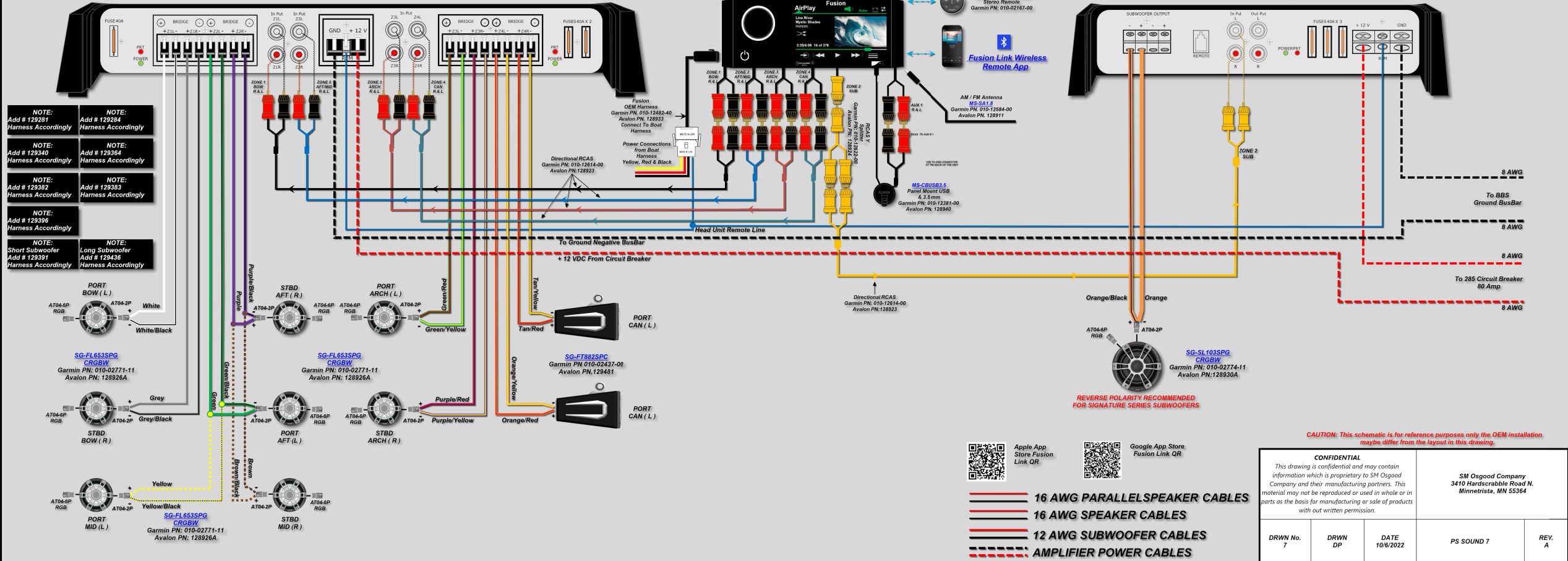
PS SOUND 7 MY23

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22

SG-DA82000
Garmin PN: 010-02162-00
Avalon PN: 128928

MS-RA770
Garmin PN: 010-01905-10
Avalon PN: 128925

SG-DA12250
Garmin PN: 010-01970-00
Avalon PN: 128929



- NOTE:** Add # 129281 Harness Accordingly
- NOTE:** Add # 129364 Harness Accordingly
- NOTE:** Add # 129340 Harness Accordingly
- NOTE:** Add # 129382 Harness Accordingly
- NOTE:** Add # 129396 Harness Accordingly
- NOTE:** Short Subwoofer Add # 129391 Harness Accordingly
- NOTE:** Long Subwoofer Add # 129436 Harness Accordingly



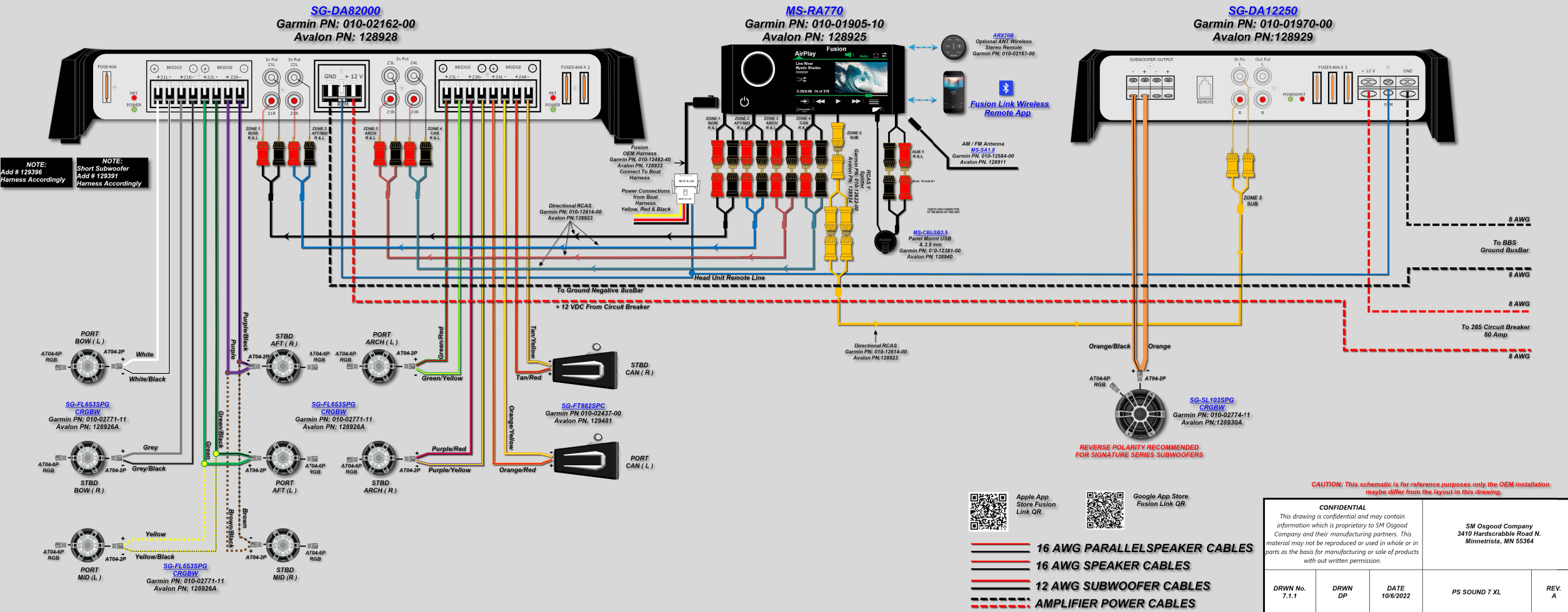
- 16 AWG PARALLEL SPEAKER CABLES**
- 16 AWG SPEAKER CABLES**
- 12 AWG SUBWOOFER CABLES**
- AMPLIFIER POWER CABLES**

CAUTION: This schematic is for reference purposes only, the OEM installation maybe differ from the layout in this drawing.

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DRWN No. 7	DRWN DP	DATE 10/6/2022	PS SOUND 7	REV. A
			SM Osgood Company 3410 Hardscrabble Road N. Minnetrasta, MN 55364	

PS SOUND 7 XL MY23

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22



PS SOUND 8 MY23

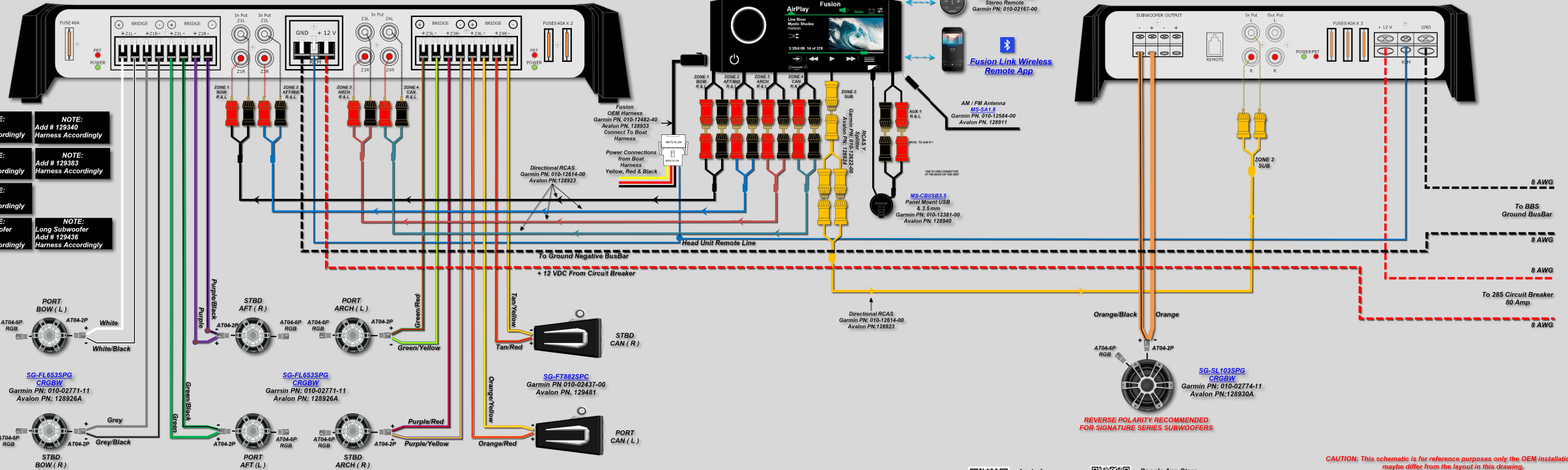
REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22

SG-DA82000
Garmin PN: 010-02162-00
Avalon PN: 128928

MS-RA770
Garmin PN: 010-01905-10
Avalon PN: 128925

SG-DA12250
Garmin PN: 010-01970-00
Avalon PN: 128929

- NOTE:**
Add # 129321
Harness Accordingly
- NOTE:**
Add # 129340
Harness Accordingly
- NOTE:**
Add # 129367
Harness Accordingly
- NOTE:**
Add # 129383
Harness Accordingly
- NOTE:**
Add # 129368
Harness Accordingly
- NOTE:**
Short Subwoofer
Add # 129391
Harness Accordingly
- NOTE:**
Long Subwoofer
Add # 129436
Harness Accordingly

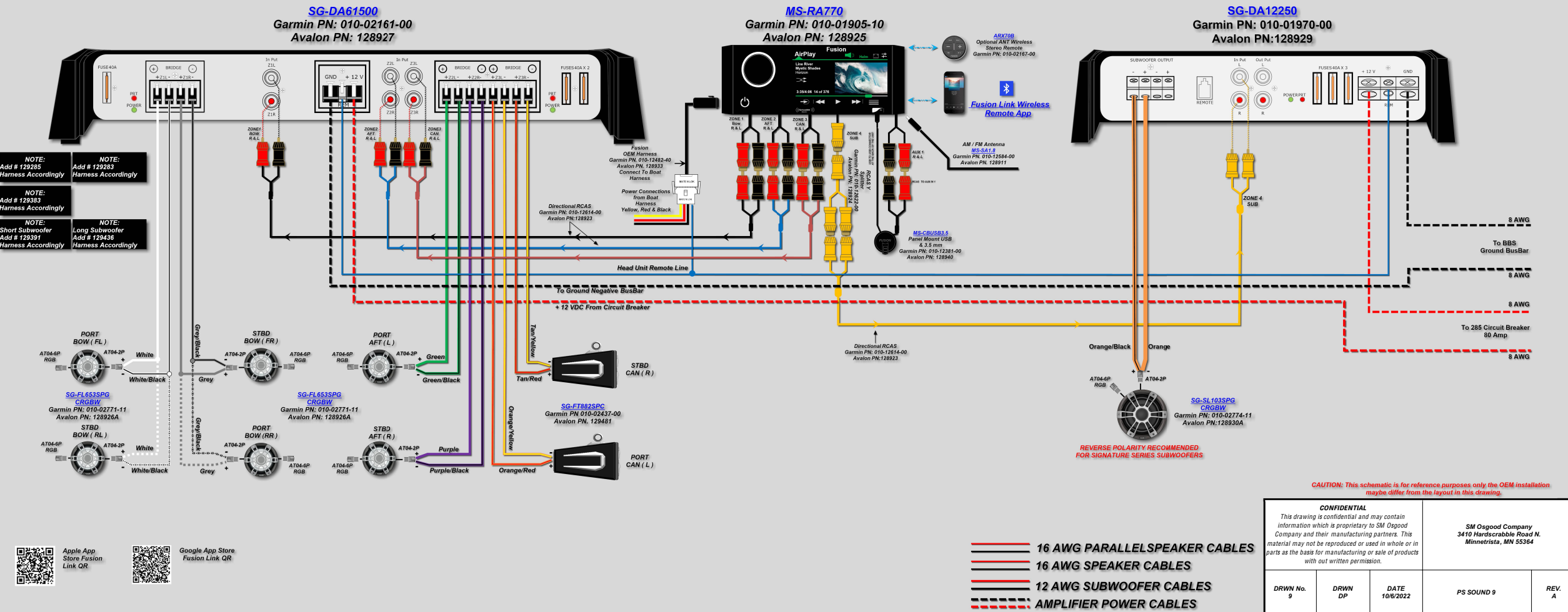


- 16 AWG PARALLELSPEAKER CABLES
- 16 AWG SPEAKER CABLES
- 12 AWG SUBWOOFER CABLES
- AMPLIFIER POWER CABLES

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DRWN No. 8	DRWN DP	DATE 10/6/2022	PS SOUND 8	REV. A
SM Osgood Company 3410 Handscorable Road N. Minnristra, MN 55364				

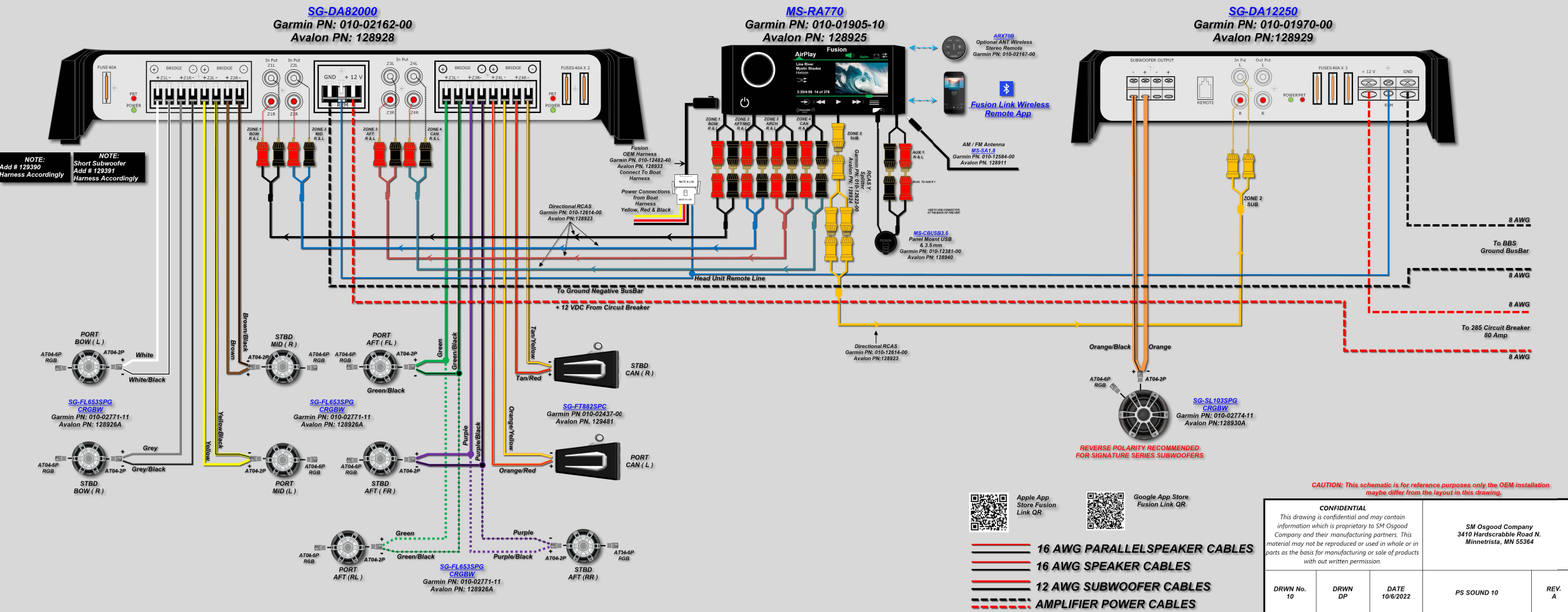
PS SOUND 9 MY23

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22



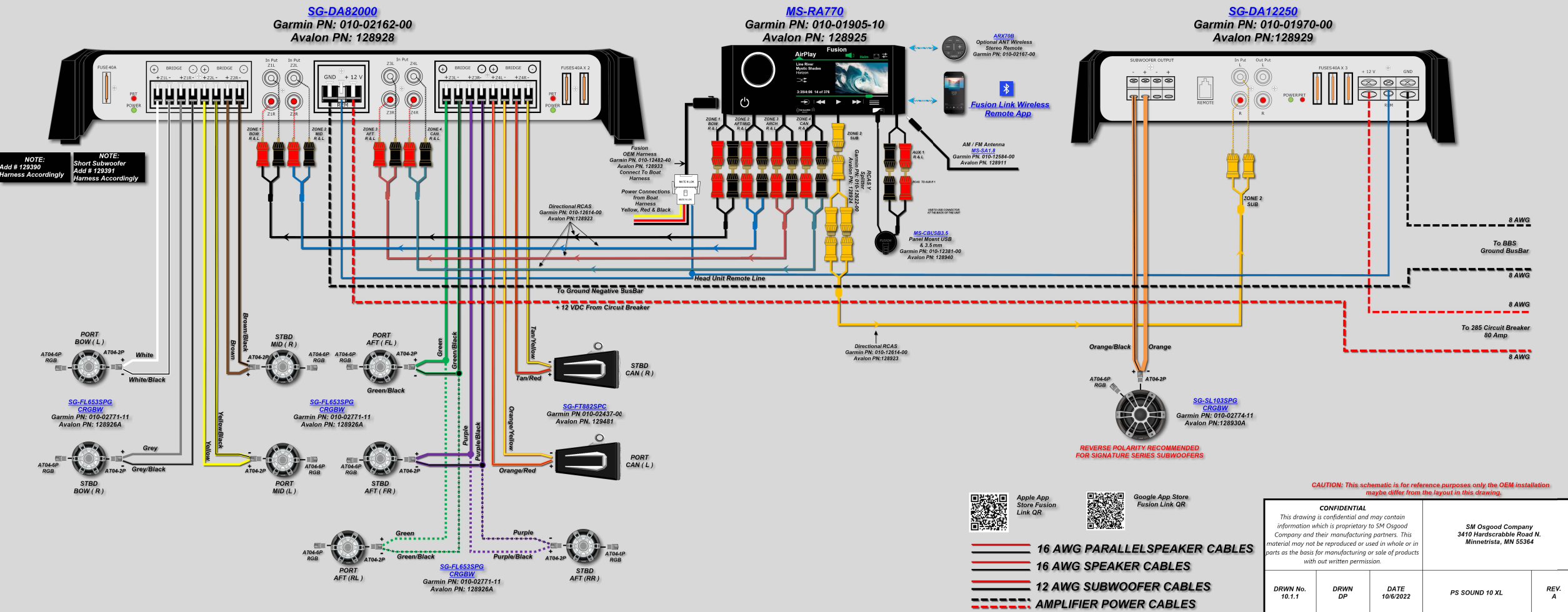
PS SOUND 10 MY23

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22



PS SOUND 10 XL MY23

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22



NOTE:
Add # 129390
Harness Accordingly

NOTE:
Short Subwoofer
Add # 129391
Harness Accordingly



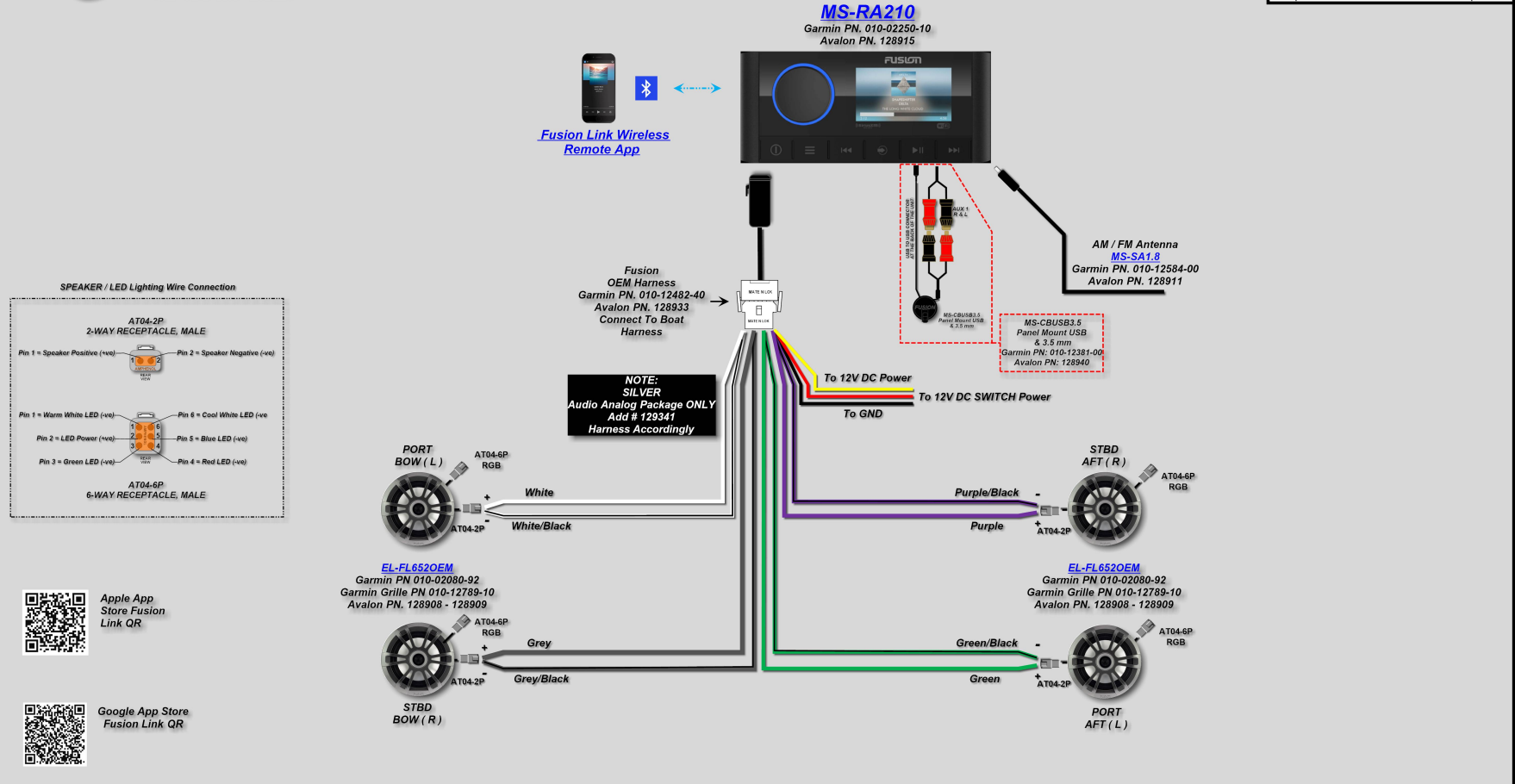
- 16 AWG PARALLEL SPEAKER CABLES
- 16 AWG SPEAKER CABLES
- 12 AWG SUBWOOFER CABLES
- AMPLIFIER POWER CABLES

CAUTION: This schematic is for reference purposes only; the OEM installation may differ from the layout in this drawing.

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DRWN No. 10.1.1	DRWN DP	DATE 10/6/2022	PS SOUND 10 XL	REV. A
SM Osgood Company 3410 Handscrabble Road N. Minnetrsta, MN 55364				

SILVER MY23

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22



Audio System Part Numbers

GARMIN P/N	FUSION MODEL NO.	AVALON P/N	QTY	DESCRIPTION
010-02250-10	MS-RA210OEM	128915	1 EA	MS-RA210- Multi-Zone Technology, Anti-Fogging LCD, IPX6 and IP7 Water Resistance Black Front Face.
010-12482-40	OEM HEAD UNIT HARNESS	128933	1 EA	Loom, A Port-TE 12P, PWR/SPKR, FusConn, Fusion Suits MS-RA210/RA670/RA770/NB670.
010-02080-92	EL-FL652OEM	128908	2 PAIRS	Amphenol 2 Pin + 6 Pin Conn, Fusion, 6.5" Spk, w/o Grille, RGB OEM, Bulk, NO Grilles
010-12789-10	EL-X651SPG	128909	2 PAIRS	Fusion, 6.5", Sports Grille Grey
010-12584-00	MS-SA1.8	128911	1 EA	Fusion, 1.8 Meter Stealth Antenna
010-12381-00	MS-CBUS83.5	128940	1 EA	Panel Mount USB & 3.5 mm Aux In Connector (OPTIONAL ACCESSORY)

MS-RA210 DSP Profile Settings

Tone Settings BOW (Zone 1)	Tone Settings AFT (Zone 2)
Base: 3	Base: 3
Middle: 4	Middle: 4
Treble: 5	Treble: 5
Sub Level: 0	Sub Level: 0
Low Pass: 55 Hz	Low Pass: 55 Hz
DSP Settings BOW	DSP Settings AFT
Amplified Speakers:	Amplified Speakers:
Speakers Connected: CHECK	Speakers Connected: CHECK
Model: EL-FL651XXX	Model: EL-FL651XXX
Parallel: UNCHECK	Parallel: UNCHECK
Environment: HELM	Environment: HELM
Line Out Speaker:	Line Out Speaker:
Line Out Connected: UNCHECK	Line Out Connected: CHECK
Speaker: Amplifier	Speaker: Amplifier
Environment: Phase	Environment: Phase
Subwoofer:	Subwoofer:
Subwoofer Connected: CHECK	Subwoofer Connected: UNCHECK
Model: Environment: Amplifier: Phase:	Model: Environment: Amplifier: Phase:

CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

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SM Osgood Company
3410 Hardscrabble Road N.
Minnetrista, MN 55364

DRWN No.	DRWN	DATE	SILVER MY23	REV.
1	DP	10/6/2022		A

SILVER PLUS 1 MY23

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22

MS-AM504

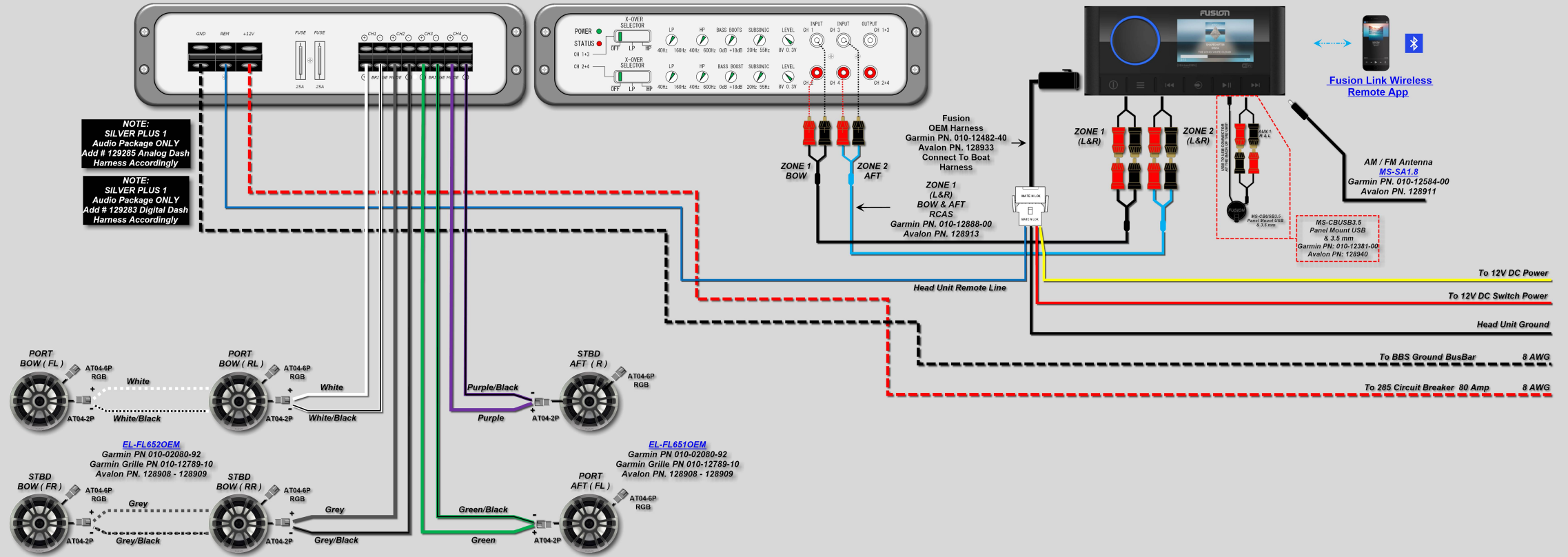
REAR
Garmin PN: 010-01500-00
Avalon PN: 128912

MS-AM504

FRONT
Garmin PN: 010-01500-00
Avalon PN: 128912

MS-RA210

Garmin PN: 010-02255-10
Avalon PN: 128915



CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

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DRWN No. 2	DRWN DP	DATE 10/6/2022	SILVER PLUS 1	REV. A



- PARALLEL SPEAKER CABLES
- 16 AWG SPEAKER CABLES
- HEAD UNIT POWER CABLES
- HEAD UNIT REMOTE POWER
- POWER CABLES

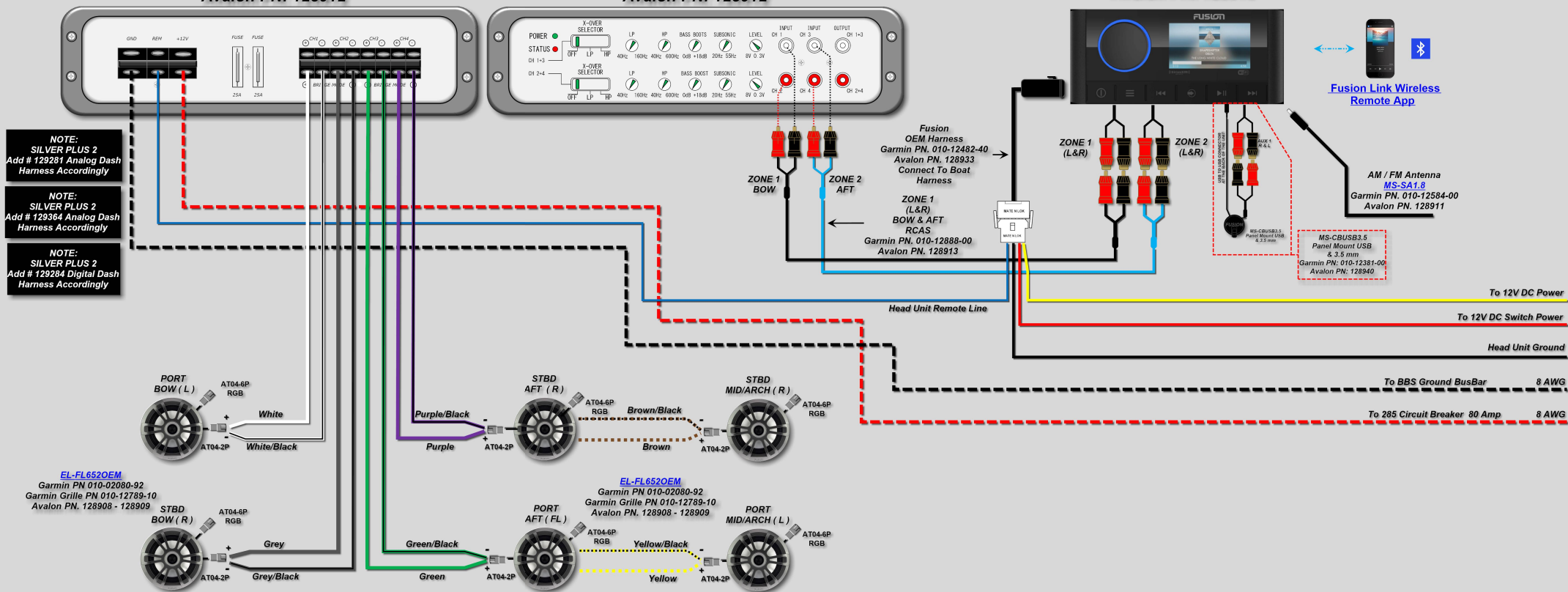
SILVER PLUS 2 MY23

REVISIONS		
REV.	DESCRIPTION	DATE
A	INITIAL DESIGN	10/6/22

MS-AM504
REAR
Garmin PN: 010-01500-00
Avalon PN: 128912

MS-AM504
FRONT
Garmin PN: 010-01500-00
Avalon PN: 128912

MS-RA210
Garmin PN: 010-02255-10
Avalon PN: 128915



CAUTION: This schematic is for reference purposes only the OEM installation may differ from the layout indicated in this drawing.

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DRWN No. 3	DRWN DP	DATE 10/6/2022	SILVER PLUS 2	REV. A



- - - - - PARALLEL SPEAKER CABLES
- ===== 16 AWG SPEAKER CABLES
- ===== HEAD UNIT POWER CABLES
- ===== HEAD UNIT REMOTE POWER
- - - - - POWER CABLES

Class-D Amplifier Technology, 2250 Watts Peak Power, Marine-Ready Design with Conformal Coated PCBs

SG-DA12250

Manual Tuning Process



Signature Series Monoblock Amplifier Specs.

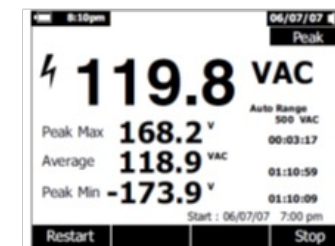
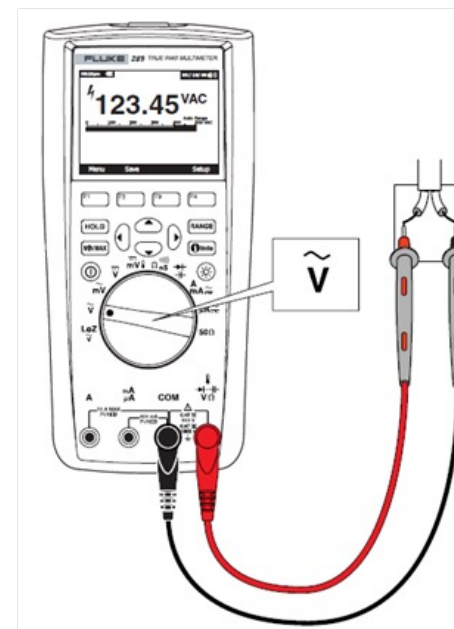
500 Watts RMS x 4 @ 14.4V - 4 X 1 % THD.

850 Watts RMS x 4 @ 14.4V - 2 . 1 % THD.

1100 Watts RMS x 2 @ 14.4V - 1 T 1 % THD.

SG-DA12250 Amplifier SUBWOOFER Settings.

- Connect a Digital Meter with VAC Setting & Leads to a Subwoofer amplifier out puts.
- Connect a media source to the head unit (iPod, iPhone or Android) device whit a 85 Hz Track.
- Select the X-Over Switches from Zone 1 & 2 to HP Position.
- Adjust LOW PASS.Gain Control to two thirds of gain around (160 Hz).
- Adjust SUB SONIC Gain Controls to a third of gain around (30 Hz).
- Adjust BASS BOOST Gain Controls to Half of Gain (6 db).
- Start to play the 85 Hz tone track on the media device.
- Adjust the LEVEL Gain Controls to the VAC Reference in the Subwoofer chart.AC Voltage reference. Usually a third of gain.



WARNING: The Amplifier AC Voltage reference in this slide Is the maximum ac voltage for the amplifier to play with out distortion audio, please see the chart AC Voltage to adjust the voltage according the subwoofer connected to the amp.

**Class-D Amplifier Technology, 2250 Watts Peak Power,
Marine-Ready Design with Conformal Coated PCBs**

SG-DA12250

DSP Tuning Process



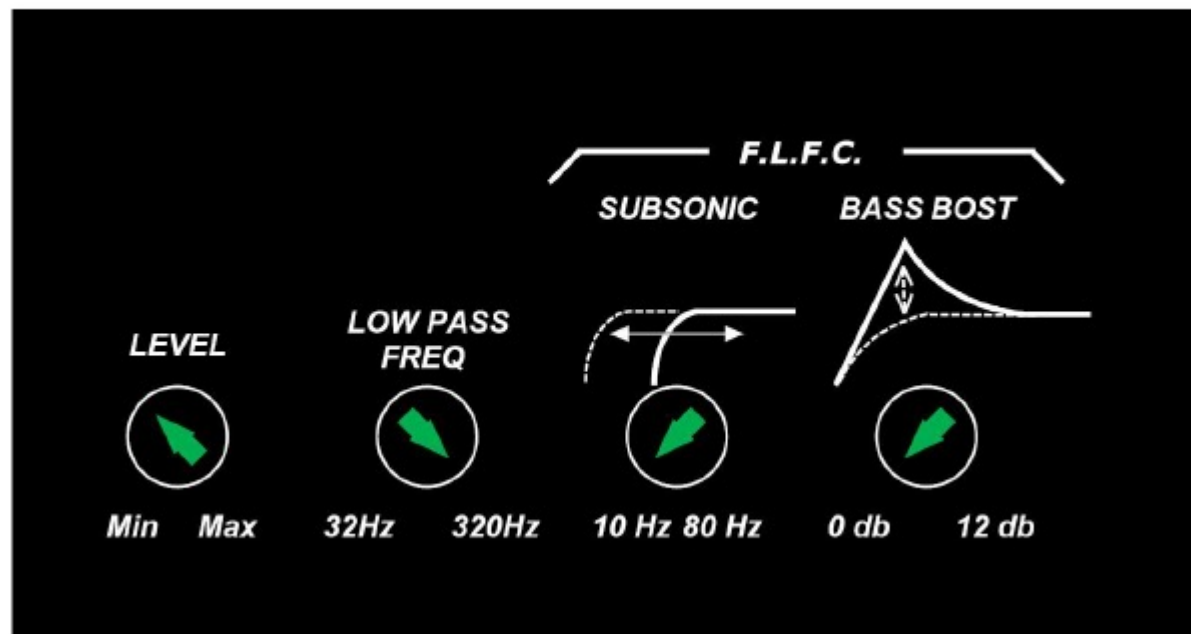
Signature Series Monoblock Amplifier Specs.

500 Watts RMS x 4 @ 14.4V - 4 X 1 % THD.

850 Watts RMS x 4 @ 14.4V - 2 . 1 % THD.

1100 Watts RMS x 2 @ 14.4V - 1 T 1 % THD.

SG-DA12250 DSP Amplifier Settings





SG-DA41400

Class-D Amplifier Technology, 1400 Watts Peak Power, Marine-Ready Design with Conformal Coated PCBs

Manual Tuning Process



Signature Series 4 Channel Amplifier Specs.

150 Watts RMS x 4 @ 14.4V - 4 X 1 % THD.

220 Watts RMS x 4 @ 14.4V - 2 | 1 % THD.

440 Watts RMS x 2 @ 14.4V - 4 Bridged
1 % THD.

WARNING: The Amplifier AC Voltage reference in this slide is the maximum ac voltage for the amplifier to play with out distorted audio, please see the chart AC Voltage to adjust the voltage according the speakers connected to the amp

SG-DA41400 Amplifier SPKRS Settings.

- Connect a Digital Meter with VAC Setting & Leads to a Zone 1 channel amplifier out put.
- Connect a media source to the head unit (iPod, iPhone or Android) device whit a 1 KHz Track.
- Select the X-Over Switches from Zone 1 & 2 to HP Position.
- Adjust the Zone 1 & 2 FREQ.Gain Controls to a third of gain around (65 Hz ~ 70 Hz).
- Start to play the 1 KHz tone track on the media device.
- Adjust the LEVEL Gain Controls to the VAC Reference in the Speaker chart.AC Voltage reference. Usually a third of gain.
- Repeat the same process to the rest of the amplifier speaker outputs.

Bridge SPKR Ch Settings (Subs Only)

- Select X-Over Switch Subwoofer to Sub Mode.
- Connect a Digital Meter with VAC Setting & Leads to Zone 1 bridge out put.
- Adjust FREQ.Gain Control to two thirds of gain around (160Hz).
- Adjust the Bass Boost Gain Control to half of gain 6 db.
- Adjust the LEVEL Gain Control to the VAC Reference in the the Subwoofer.chart voltage reference. Usually a third of gain.
- Repeat the same process to the Zone 2 Bridge out put..

Tone Frequency	Bridge Channels	AC Volts
85 Hz	@ 4 8	41.95

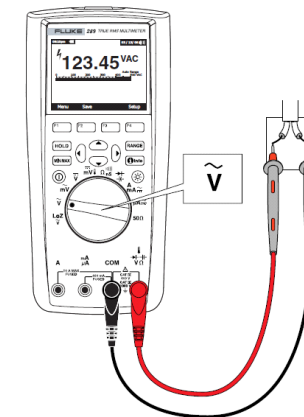


Illustration for reference only
not actual VAC for SPKR, Sub or Amp.

SG-DA41400

DSP Tuning Process



Signature Series 4 Channel Amplifier Specs.

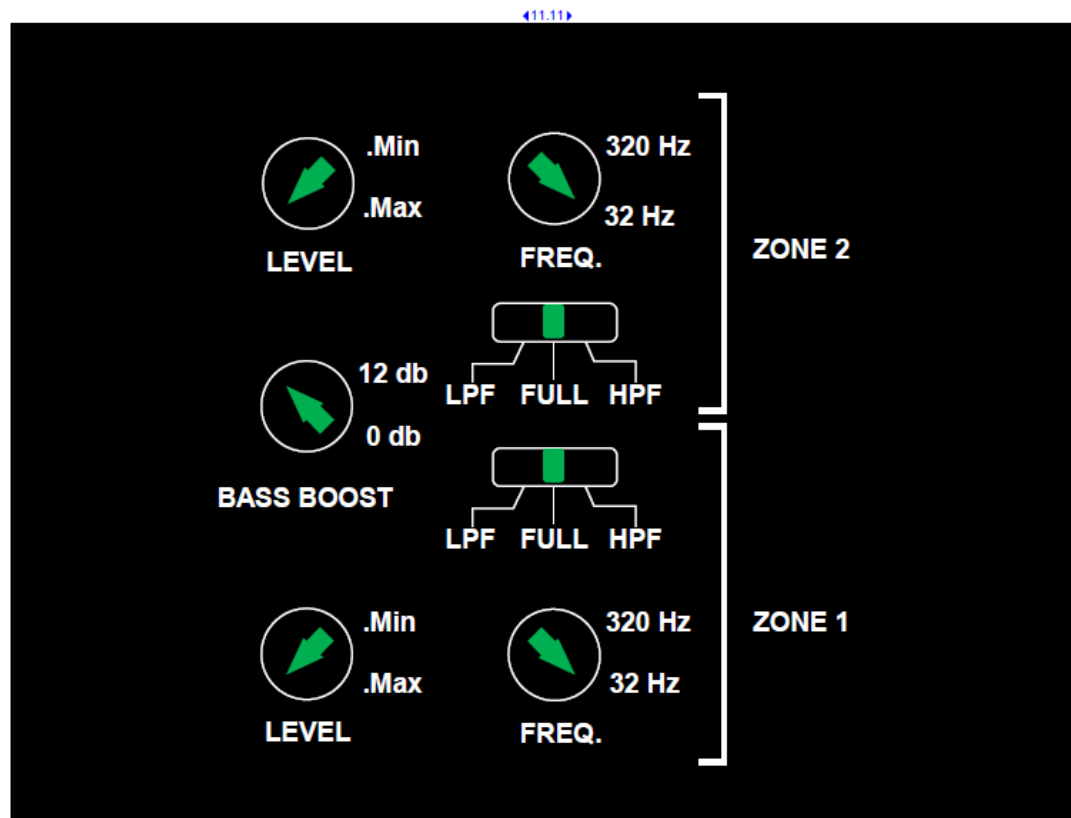
150 Watts RMS x 4 @ 14.4V - 4 X 1 % THD.

220 Watts RMS x 4 @ 14.4V - 2 1 1 % THD.

440 Watts RMS x 2 @ 14.4V - 4 Bridged
1 % THD.

Class-D Amplifier Technology, 1400 Watts Peak Power,
Marine-Ready Design with Conformal Coated PCBs

SG-DA41400 DSP Amplifier Settings



Class-D Amplifier Technology, 1600 Watts Peak Power, Marine-Ready Design with Conformal Coated PCBs

SG-DA51600

Manual Tuning Process



Signature Series 5 Channel Amplifier Specs.

80 Watts RMS x 4 + 250 Watts RMS x 1 @ 14.4V - 4 Ohms 1% THD.

130 Watts RMS x 4 + 330 Watts RMS x 1 @ 14.4V - 2 Ohms 1% THD.

250 Watts RMS x 2 @ 14.4V - 4 Ohms Bridged 1 % THD + 250 Watts RMS X 1 @ 4 Ohms 1 % THD.

SG-DA51600 Amplifier Settings.

- Connect a Digital Meter with VAC Setting & Leads to a Zone 1 channel amplifier out put.
- Connect a media source to the head unit (iPod, iPhone or Android) device with a 1 KHz and 85 Hz tone tracks.
- Select the X-Over Switches from Zone 1 & 2 to HP.
- Adjust the Zone 1 & 2 FREQ.Gain Controls to a third of gain around (65 Hz ~ 70 Hz).
- Start to play the 1 KHz tone track on the media device.
- Adjust the LEVEL Gain Controls to the VAC Reference in the chart, Usually a third of gain.
- Repeat the same process on the rest of the amplifier speaker outputs.

- Select X-Over Switch Subwoofer to Sub Mode.
- Connect a Digital Meter with VAC Setting & Leads to Sub amplifier out put.
- Adjust Low Pass FREQ.Gain Control to two thirds of gain around (160Hz).
- Adjust the Bass Boost Gain Control to half of gain 6 db.
- Adjust Sub Sonic FREQ.Gain Control to a third of gain around (30 Hz).
- Adjust the LEVEL Gain Control to the VAC Reference in the chart for the Subwoofer. Usually a third of gain.

Amplifier SPKR Ch Voltage Adjustment

Frequency	Zone 1 & 2	AC Volts
1 KHz	L&R @ 4	17.88
1 KHz	L&R @ 2 1	16.12
1 KHz	Bridge @ 4 A	31.62

Amplifier Sub Ch Voltage Adjustment

Frequency	Subwoofer	AC Volts
85 Hz	@ 4 ≅	31.62
85 Hz	@ 2 ≅	25.69

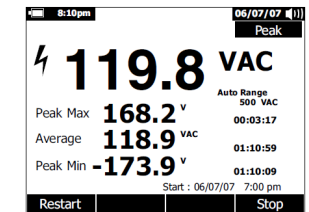
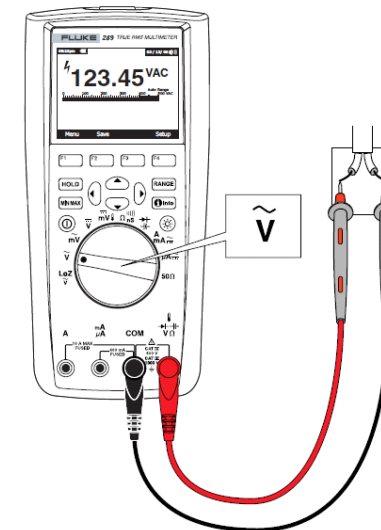


Illustration for reference only not actual VAC for SPKR, Sub or Amp.

WARNING: The Amplifier AC Voltage reference in this slide is the maximum ac voltage for the amplifier to play with out distorted audio, please see the chart AC Voltage to adjust the



SG-DA51600

DSP Tuning Process



Signature Series 5 Channel Amplifier Specs.

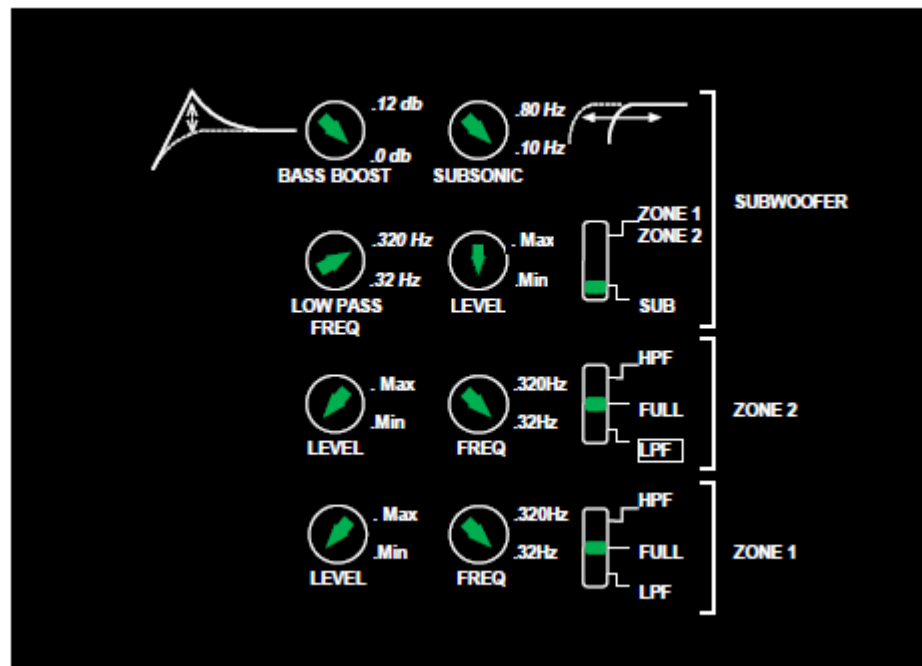
80 Watts RMS x 4 + 250 Watts RMS x 1 @ 14.4V - 4 Ohms 1% THD.

130 Watts RMS x 4 + 330 Watts RMS x 1 @ 14.4V - 2 Ohms 1% THD.

250 Watts RMS x 2 @ 14.4V - 4 Ohms Bridged 1% THD + 250 Watts RMS X 1 @ 4 Ohms 1% THD.

Class-D Amplifier Technology, 1600 Watts Peak Power, Marine-Ready Design with Conformal Coated PCBs

SG-DA51600 DSP Amplifier Settings



SG-DA61500

Manual Tuning Process



Signature Series 6 Channel Amplifier Specs.

100 Watts RMS x 4 @ 14.4V - 4 1 % THD.

140 Watts RMS x 4 @ 14.4V - 2 1 % THD.

280 Watts RMS x 3 @ 14.4V - 4 T Bridged
1 % THD.

WARNING: The Amplifier AC Voltage reference in this slide is the maximum ac voltage for the amplifier to play with out distorted audio, please see the chart AC Voltage to adjust the voltage according the speakers connected to the amp

Class-D Amplifier Technology, 1500 Watts Peak Power, Marine-Ready Design with Conformal Coated PCBs

SG-DA61500 Amplifier SPKRS Settings.

- Connect a Digital Meter with VAC Setting & Leads to a Zone 1 channel amplifier out put.
- Connect a media source to the head unit (iPod, iPhone or Android) device whit a 1 Khz Track.
- Select the X-Over Switches from Zone 1 & 2 to HP Position.
- Adjust the Zone 1 & 2 FREQ.Gain Controls to a third of gain around (65 Hz ~ 70 Hz).
- Start to play the 1 Khz tone track on the media device.
- Adjust the LEVEL Gain Controls to the VAC Reference in the Speaker chart.AC Voltage reference. Usually a third of gain.
- Repeat the same process to the rest of the amplifier speaker outputs.

- Select X-Over Switch Subwoofer to Sub Mode.
- Connect a Digital Meter with VAC Setting & Leads to Zone 1 bridge out put.
- Adjust FREQ.Gain Control to two thirds of gain around (160Hz).
- Adjust the Bass Boost Gain Control to half of gain 6 db.
- Adjust the LEVEL Gain Control to the VAC Reference in the Subwoofer chart. Usually a third of gain.
- Repeat the same process to the Zone 2 & 3 Bridge out puts..

Max Amplifier SPKR Ch Voltage Adjustment

Tone Frequency	Zone 1 & 2	AC Volts
1 Khz	L&R @ 4 1	24.49
1 Khz	L&R @ 2 Λ	20.97

Max Amplifier Bridge Ch Voltage Adjustment

Tone Frequency	Bridge Channels	AC Volts
85 Hz	@ 4 8	41.95

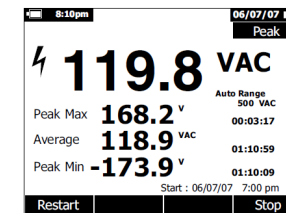
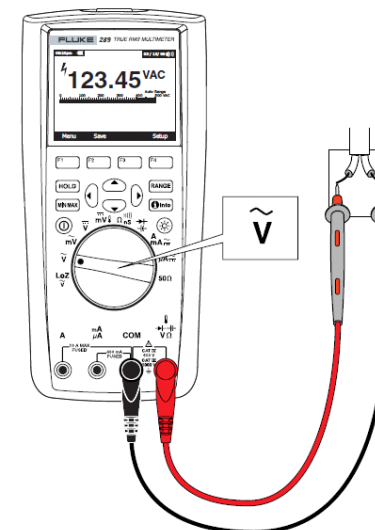


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SG-DA61500

DSP Tuning Process



Signature Series 6 Channel Amplifier Specs.

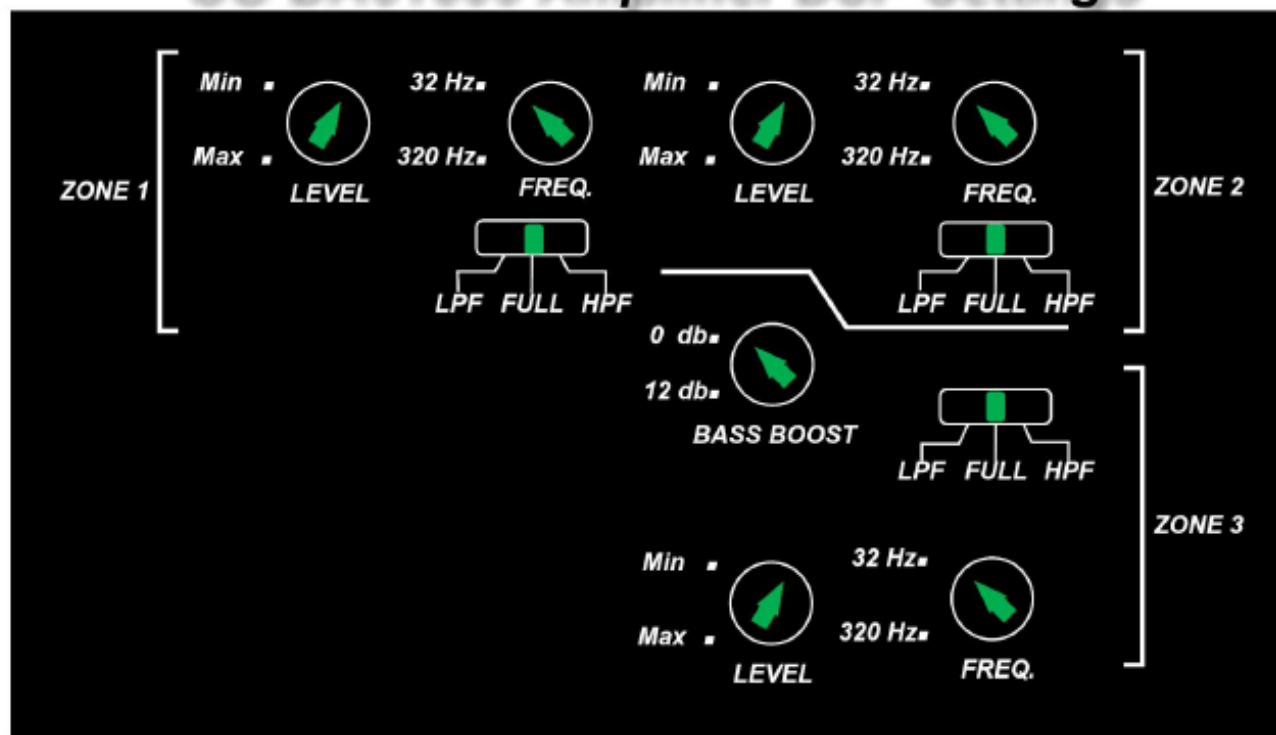
100 Watts RMS x 4 @ 14.4V - 4 1 % THD.

140 Watts RMS x 4 @ 14.4V - 2 1 % THD.

280 Watts RMS x 3 @ 14.4V - 4 T Bridged
1 % THD.

Class-D Amplifier Technology, 1500 Watts Peak Power,
Marine-Ready Design with Conformal Coated PCBs

SG-DA61500 Amplifier DSP Settings



Class-D Amplifier Technology, 1500 Watts Peak Power, Marine-Ready Design with Conformal Coated PCBs

SG-DA82000

Manual Tuning Process



Signature Series 8 Channel Amplifier Specs.

100 Watts RMS x 4 @ 14.4V - 4 P 1 % THD.

140 Watts RMS x 4 @ 14.4V - 2 P 1 % THD.

280 Watts RMS x 4 @ 14.4V - 4 Bridged
1 % THD.

SG-DA8200 Amplifier SPKRS Settings.

- Connect a Digital Meter with VAC Setting & Leads to a Zone 1 channel amplifier out put.
- Connect a media source to the head unit (iPod, iPhone or Android) device with a 1 KHz Track.
- Select the X-Over Switches from Zone 1 & 2 to HP Position.
- Adjust the Zone 1 & 2 FREQ.Gain Controls to a third of gain around (65 Hz ~ 70 Hz).
- Start to play the 1 KHz tone track on the media device.
- Adjust the LEVEL Gain Controls to the VAC Reference in the Speaker chart AC Voltage reference. Usually a third of gain.
- Repeat the same process to the rest of the amplifier speaker outputs.

Max Amplifier SPKR Ch Voltage Adjustment

Tone Frequency	Zone 1 & 2	AC Volts
1 KHz	L&R @ 4 1	24.49
1 KHz	L&R @ 2 Λ	20.97

Max Amplifier Bridge Ch Voltage Adjustment

Tone Frequency	Bridge Channels	AC Volts
85 Hz	@ 4 8	41.95

Bridge SPKR Ch Settings Subs Only.

- Select X-Over Switch Subwoofer to Sub Mode.
- Connect a Digital Meter with VAC Setting & Leads to Zone 1 bridge out put.
- Adjust FREQ.Gain Control to two thirds of gain around (160Hz).
- Adjust the Bass Boost Gain Control to half of gain 6 db.
- Adjust the LEVEL Gain Control to the VAC Reference in the Subwoofer chart voltage reference. Usually a third of gain.
- Repeat the same process to the Zone 2, 3 & 4 Bridge out puts..

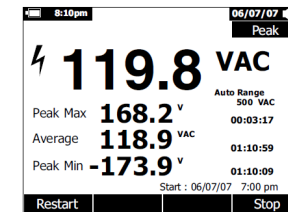
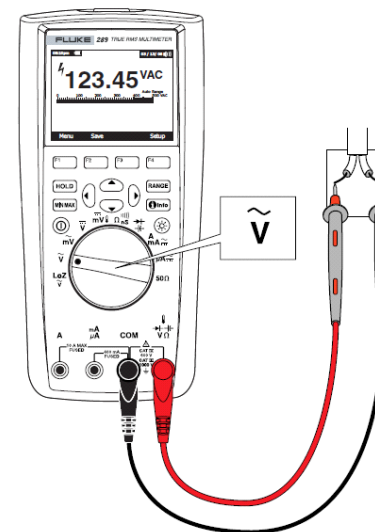


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SG-DA82000

DSP Tuning Process



Class-D Amplifier Technology, 1500 Watts Peak Power,
Marine-Ready Design with Conformal Coated PCBs

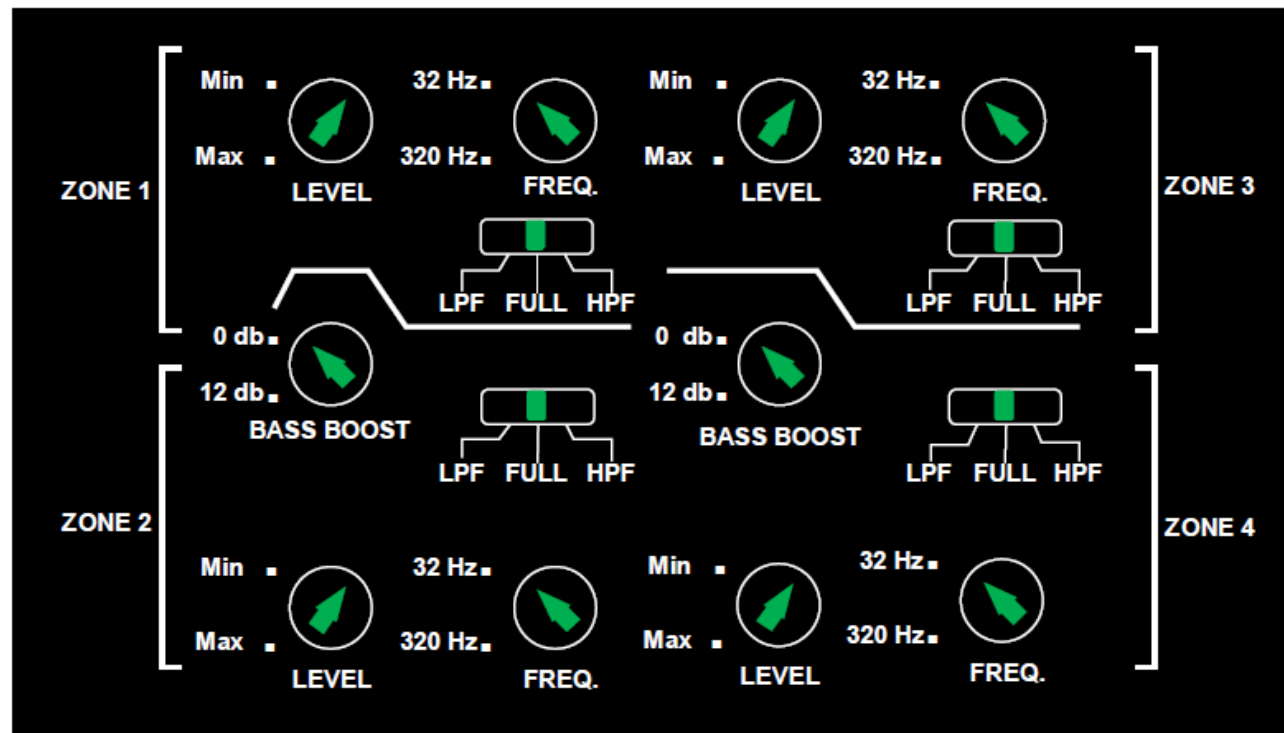
SG-DA82000 Amplifier DSP Settings

Signature Series 8 Channel Amplifier Specs.

100 Watts RMS x 4 @ 14.4V - 4 P 1 % THD.

140 Watts RMS x 4 @ 14.4V - 2 P 1 % THD.

280 Watts RMS x 4 @ 14.4V - 4 Bridged
1 % THD.



AVALON

x



THANK YOU