



Wiring Harness Diagram Rev7 - 2024

- New for May of 2024
- Wiring colors have been changed to better reflect industry-standard colors
- This supercedes the Rev6a diagram from 2023 which is now considered legacy
- April-May of 2024 color codes may have been a hybrid of Rev6a and Rev7 while we made our transition
- If you are having difficulty mapping (programming) the buttons, try the new grounding scheme reflected in the Rev7 diagram
 - Customers have stated this has helped with their mapping

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Quick-links to instructions & diagrams

- [Kenwood Instructions](#) (note that not all compatible radios may be listed)
 - [Wiring diagram without amplifier, with SWI CP2](#)
 - [Wiring diagram with amplifier, with CP2, using High-level inputs](#)
 - [Wiring diagram with amplifier, with CP2, using Low-level inputs](#)
 - [Mapping handlebar buttons for the CP2](#)
- [JVC Instructions](#) (note that not all compatible radios may be listed)
 - [Wiring diagram without amplifier, with SWI CP2](#)
 - [Wiring diagram with amplifier, with CP2, using High-level inputs](#)
 - [Wiring diagram with amplifier, with CP2, using Low-level inputs](#)
 - [Mapping handlebar buttons for the CP2](#)
- [Pioneer Instructions](#) (note that not all compatible radios may be listed)
 - [Wiring diagram without amplifier, with SWI CP2](#)
 - [Wiring diagram with amplifier, with CP2, using High-level inputs](#)
 - [Wiring diagram with amplifier, with CP2, using Low-level inputs](#)
 - [Mapping handlebar buttons for the CP2](#)
- [Sony Instructions](#) (note that not all compatible radios may be listed)
 - [Wiring diagram without amplifier, with SWI CP2](#)
 - [Wiring diagram with amplifier, with CP2, using High-level inputs](#)
 - [Wiring diagram with amplifier, with CP2, using Low-level inputs](#)
 - [Mapping handlebar buttons for the CP2](#)
- [Clarion Instructions](#) (note that not all compatible radios may be listed)
 - [Wiring diagram without amplifier, with SWI CP2](#)
 - [Wiring diagram with amplifier, with CP2, using High-level inputs](#)
 - [Wiring diagram with amplifier, with CP2, using Low-level inputs](#)
 - [Mapping handlebar buttons for the CP2](#)

What is high-level vs. low-level amplifier input?

High-level inputs have already passed through the amplifier on the head unit and are sometimes called “dirty”. Low-level inputs bypass the amplifier for a cleaner signal to the amplifier.

Some Amplifiers only allow ONE option, so check your amplifier’s manual to determine which method is used.

Unless you are building a competition-level system, the high-level inputs are fine.

What is the SWI CP2?

The PAC SWI-CP2 [Steering Wheel Interface](#) allows you to retain your handlebar controls.

The CP2 is not pre-programmed for the Kawasaki. The handlebar control buttons must be programmed manually.

Each brand of radio has a different mapping sequence and DIP switch settings



Installation wiring diagram and CP2 mapping instructions

KENWOOD

Thank you for purchasing your PAC SWI-CP2 steering wheel module from Engineered Adapters and for supporting small business! The CP2 is the latest steering wheel interface from Pacific Audio Corp that will allow you to map your Voyager or Vaquero handlebar controls to work with your aftermarket radio

Our Wiring Harness Plug offers a hassle-free installation without cutting any factory wiring

These diagrams assume you have purchased both our Wiring Harness Plug and the SWI CP2 steering wheel control module

The resistors must be installed for the steering wheel controls to function properly. The location is critical, the orientation is not

If you are installing your amplifier, you will need to determine if you want to use high-level inputs or low-level inputs. High-level inputs have already passed through the amplifier on the head unit and are sometimes called “dirty”. Low-level inputs bypass the amplifier for a cleaner signal to the amplifier. Some Amplifiers only allow ONE option, so check your amplifier’s manual to determine which method is used. Unless you are building a competition-level system, the high-level inputs are fine.

Notes and Recommendations for mapping:

- The resistors must be installed for the steering wheel controls to function properly. The location is critical, the orientation is not.
- We highly recommend reading through the mapping instructions several times
- We highly recommend writing out the specific mapping sequence you will use for your stereo.
 - You do not need to use them all, but you do need to program them in the sequence listed
- We recommend installing the CP2 in an area that can easily be accessed should any functions need to be remapped
- **We recommend mapping just the first two actions so you can verify everything is functioning and you are doing the sequence correctly**
 - Regardless of the manufacturer, the first two actions on the mapping are Volume Up / Volume Down
- You can program up to 9 functions on the Voyager or Vaquero which includes using the lower “CB controls”
 - Each Row has a left, right and center-push function
- The CP2 LED will blink each time a button is pressed to acknowledge the action
- The CP2 LED will flash 3x green if the mapping was successful
- A red/yellow flash when complete indicates an error
- This sequence can be run any number of times and can be restarted at any point. Just wait the 7 seconds for it to complete and start again.

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KMM-325BT, KMM-BT232U, KMM-BT732U
KMR-D382BT, KMR-M322BT, KMR-D332BT

KENWOOD

With PAC | Without Amplifier

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Wiring Harness Diagram
EngineeredAdapters.com

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Blue/Yellow

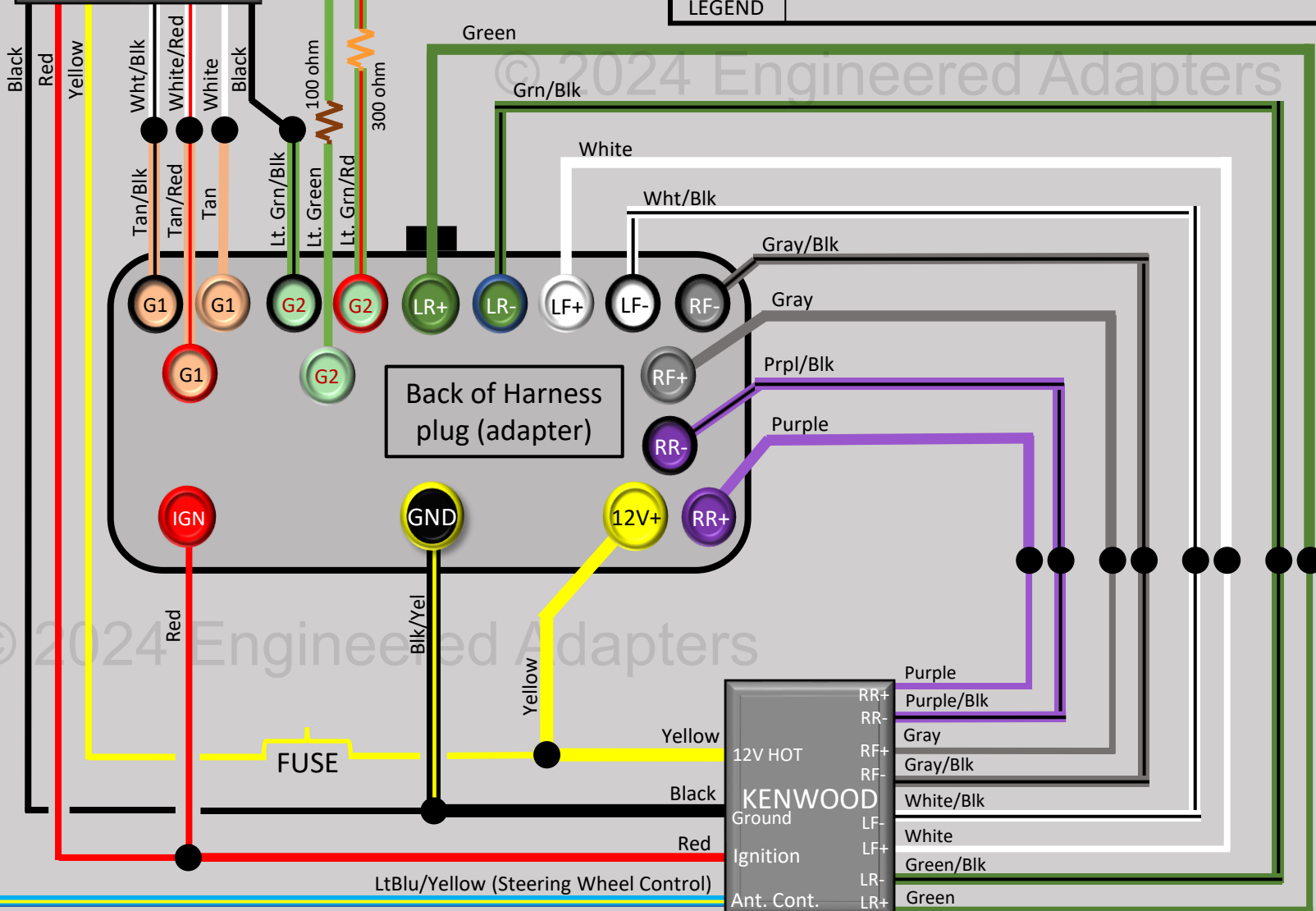
5-PIN
PAC SWI-CP2
USE ONLY
WIRES SHOWN
11-PIN

Resistor orientation is not critical

Handlebar buttons
must be mapped

LEGEND

- Ground
- Resistor
- Inner = Main Color
Outer = Tracer Color
- 100 ohm = Brown Stripe
- 300 ohm = Orange Stripe
- Wire Connection



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KMM-325BT, KMM-BT232U, KMM-BT732U
KMR-D382BT, KMR-M322BT, KMR-D332BT

KENWOOD

With PAC | With Amplifier | High-level Input

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Wiring Harness Diagram
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Blue/Yellow

5-PIN
PAC SWI-CP2
USE ONLY
WIRES SHOWN
11-PIN

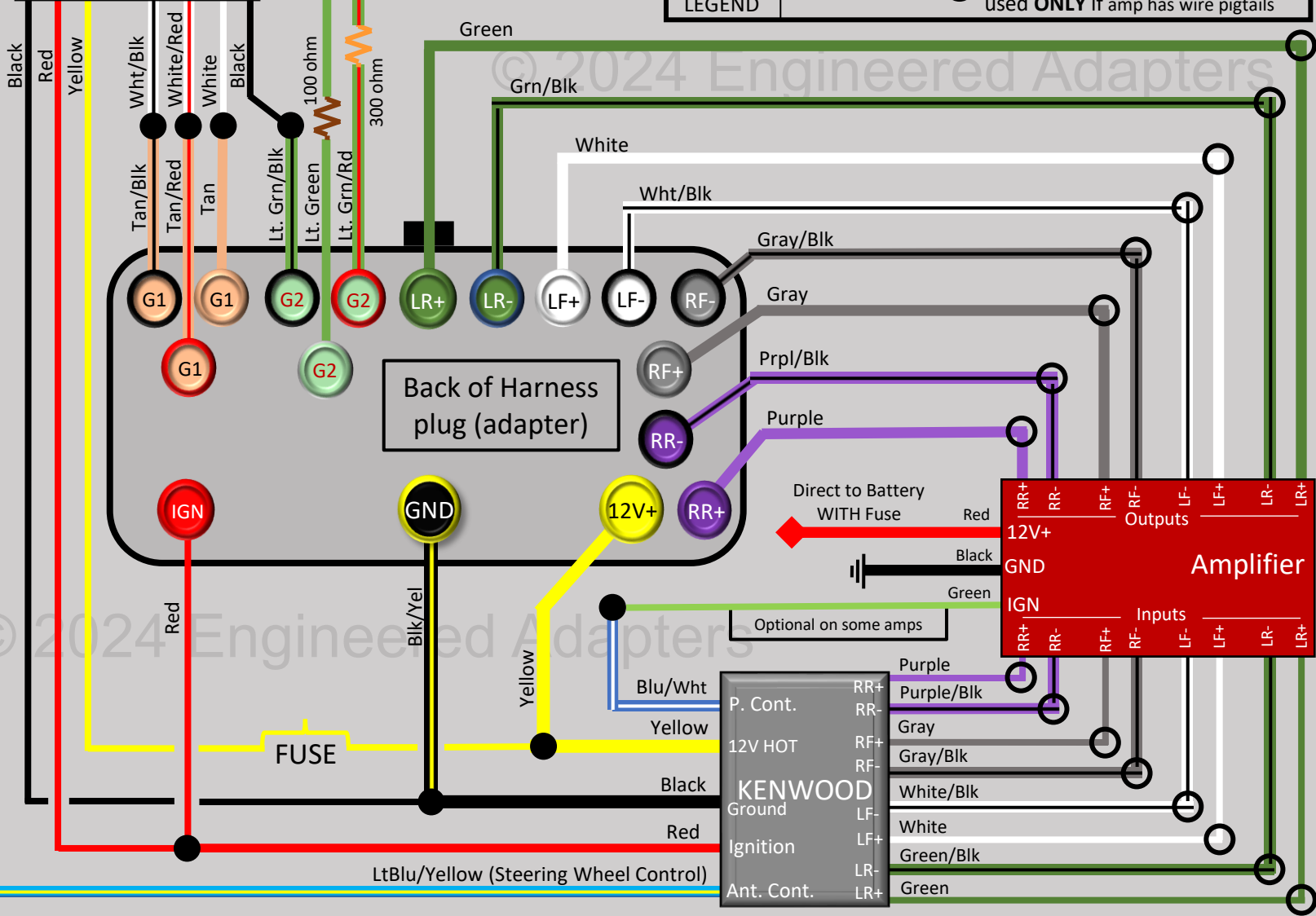
Resistor orientation is not critical

Handlebar buttons
must be mapped

LEGEND

- Ground
- Resistor
- Inner = Main Color
Outer = Tracer Color
- Wire Connection
- Possible Wire Connection
used **ONLY** if amp has wire pigtails

100 ohm = Brown Stripe
300 ohm = Orange Stripe



Back of Harness
plug (adapter)

RR+
RR-
RF+
RF-
LF+
LF-
LR+
LR-
Ant. Cont.

KENWOOD

P. Cont.
12V HOT
Ground
Ignition

RR+ RR- RF+ RF- LF- LF+ LR- LR+
12V+
GND
IGN
RR+ RR- RF+ RF- LF- LF+ LR- LR+
Inputs
Outputs

Amplifier

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KMM-325BT, KMM-BT232U, KMM-BT732U

KMR-D382BT, KMR-M322BT, KMR-D332BT

KENWOOD

With PAC | With Amplifier | Low-level Input

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Wiring Harness Diagram

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Blue/Yellow

5-PIN
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USE ONLY
WIRES SHOWN
11-PIN

Resistor orientation is not critical

Handlebar buttons must be mapped

Ground

Resistor

Inner = Main Color
Outer = Tracer Color

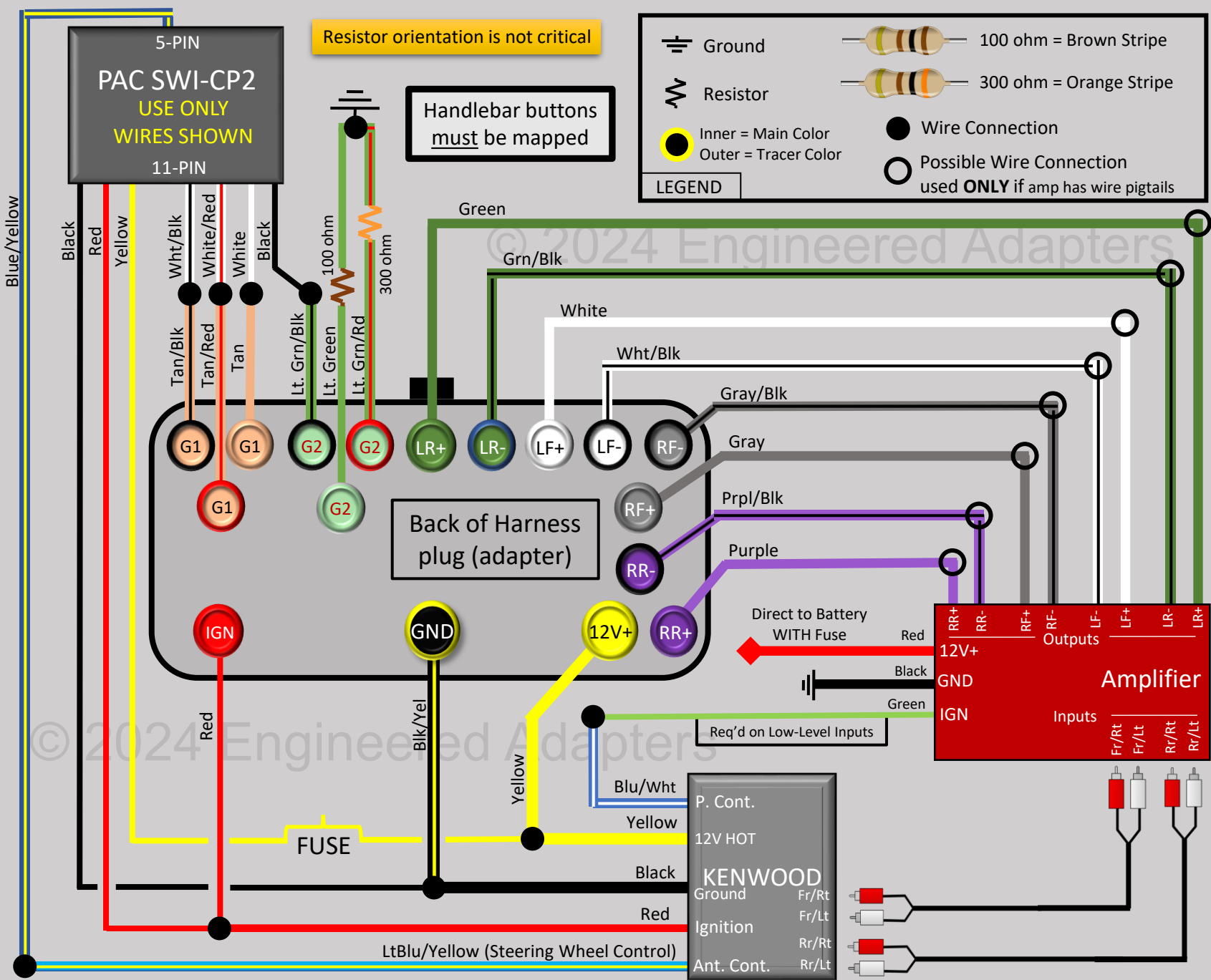
LEGEND

100 ohm = Brown Stripe

300 ohm = Orange Stripe

Wire Connection

Possible Wire Connection
used **ONLY** if amp has wire pigtails



Back of Harness
plug (adapter)

Direct to Battery
WITH Fuse

Req'd on Low-Level Inputs

P. Cont. Blu/Wht
 12V HOT Yellow
 Ground Black
 Ignition Red
 Ant. Cont. LtBlu/Yellow (Steering Wheel Control)

12V+
 GND
 IGN
 RR+ RR- RF+ RF- LF- LF+ LR- LR+
 Outputs
 Fr/Rt Fr/Lt Rr/Rt Rr/Lt
 Inputs
Amplifier

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CP2 Button Mapping Instructions: KENWOOD

Step 1:

Install Radio and/or Amp per Wiring Diagram



OR



OR



Step 2:

Set CP2 DIP Switches



Step 3:

Map Handlebar Controls



KENWOOD
Volume Up
Volume Down
Attenuation
Source
Play
Track Up
Track Down
Disc/Radio Up
Disc/Radio Down
Answer
Voice
On Hook
Off Hook
Mute
Preset Up

1. Turn the key to the ignition position. The LED will illuminate red
2. Press and hold the programming button on the side of the CP2 until the LED illuminates GREEN. Release the programming button.
3. Press the button that is to be learned on the handlebar controls. LED will turn RED when pressed, then back to GREEN
4. If you need to program more buttons; repeat step 3 for each additional audio function on the steering wheel.
5. If you come across a function in the chart that your steering wheel does not have, or you do not want to program, press and release the program button on the side of the interface to skip that function. The LED will turn OFF then back ON when the skip has been done successfully.
6. When finished, wait 7 seconds. The LED will flash green 3x indicating the end of programming
7. Test the function of the buttons

Notes (See “Notes and Recommendations for mapping” on sheet 1 for more)

- The LED will flash 3x green if the mapping was successful
- A red/yellow flash when complete indicates an error. Start again.
- This sequence can be run any number of times and can be restarted at any point. Just wait the 7 seconds for it to complete before restarting.

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Installation wiring diagram and CP2 mapping instructions

JVC

Thank you for purchasing your PAC SWI-CP2 steering wheel module from Engineered Adapters and for supporting small business! The CP2 is the latest steering wheel interface from Pacific Audio Corp that will allow you to map your Voyager or Vaquero handlebar controls to work with your aftermarket radio

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Blue/Yellow

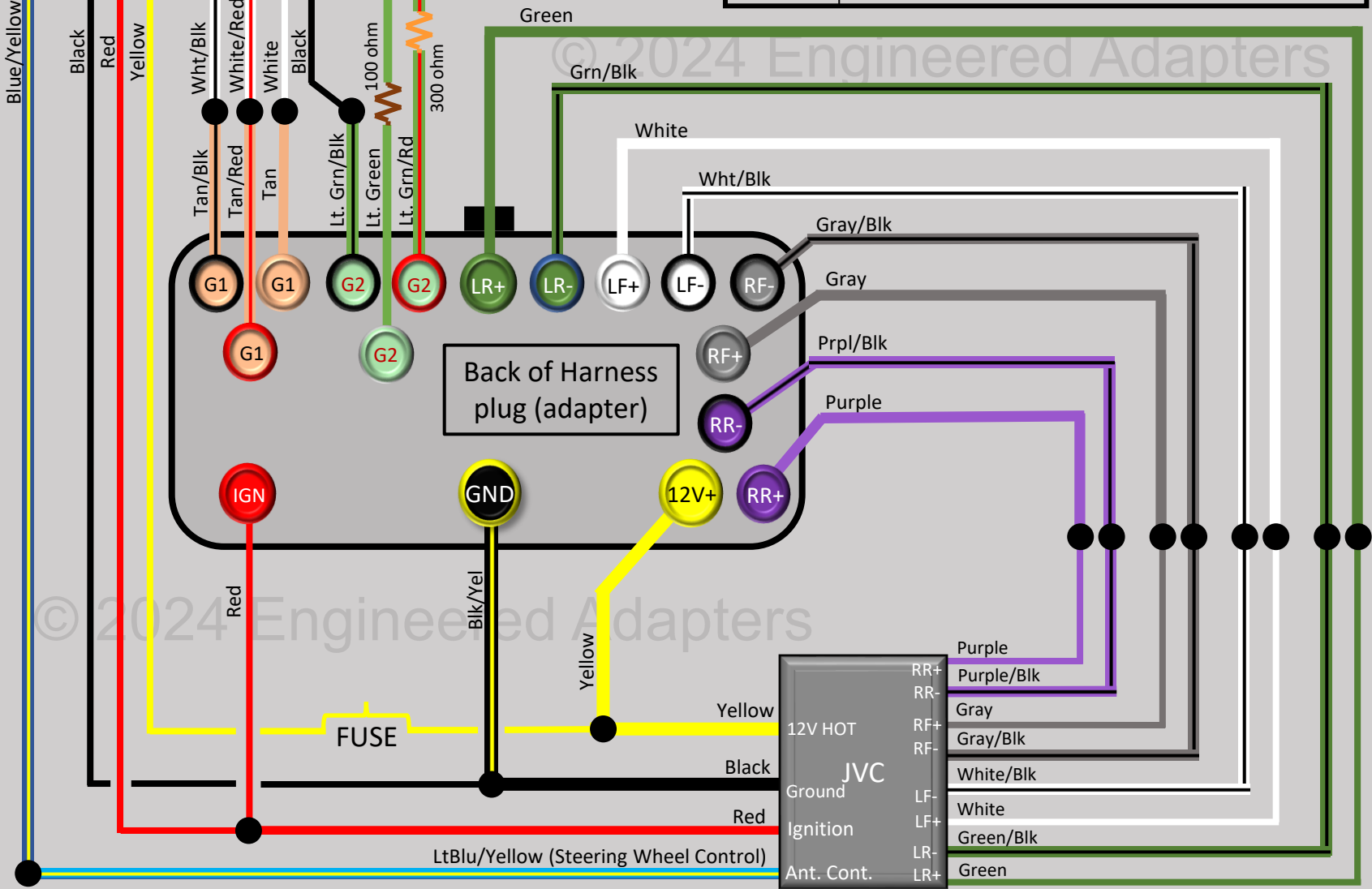
5-PIN
PAC SWI-CP2
 USE ONLY
 WIRES SHOWN
 11-PIN

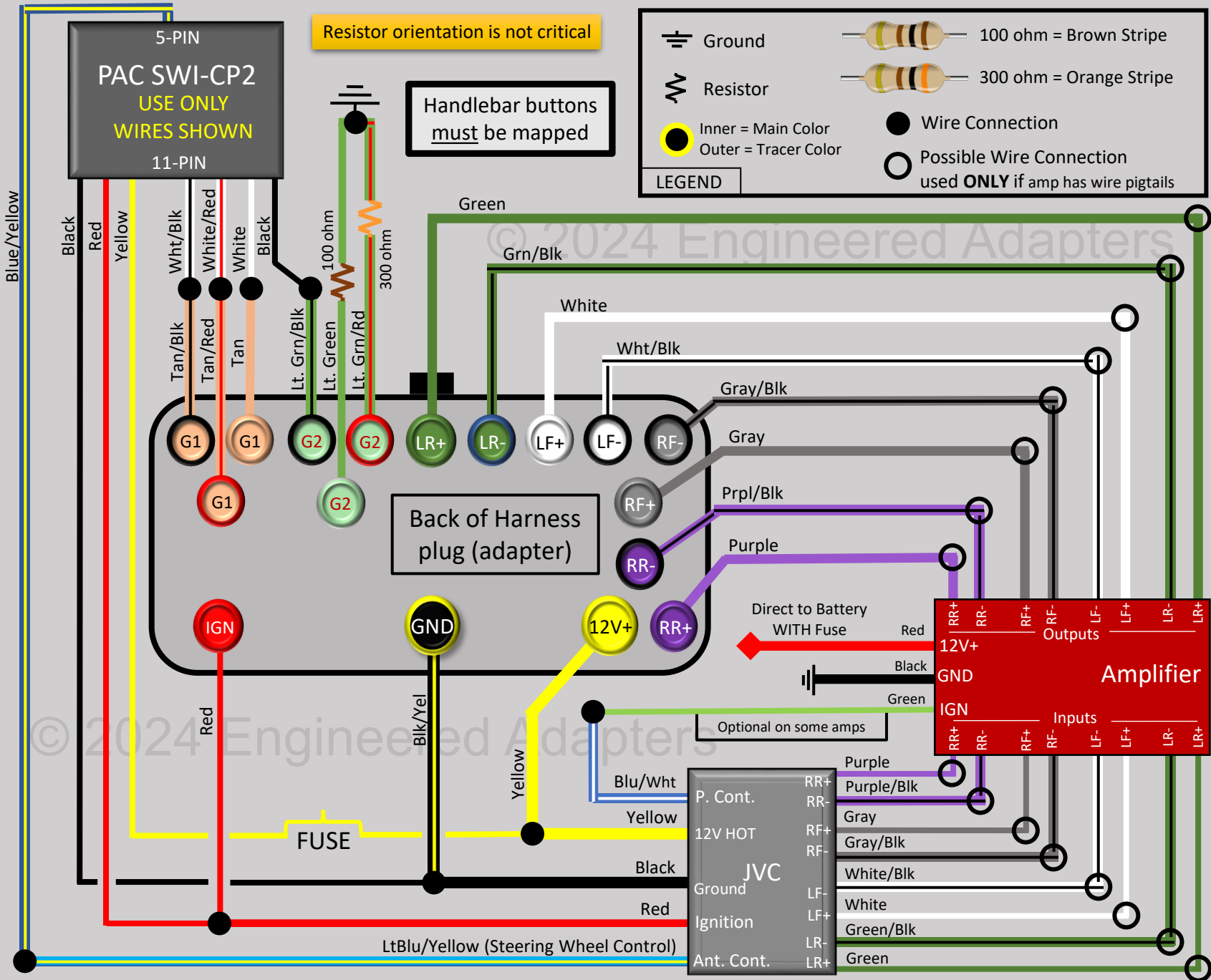
Resistor orientation is not critical

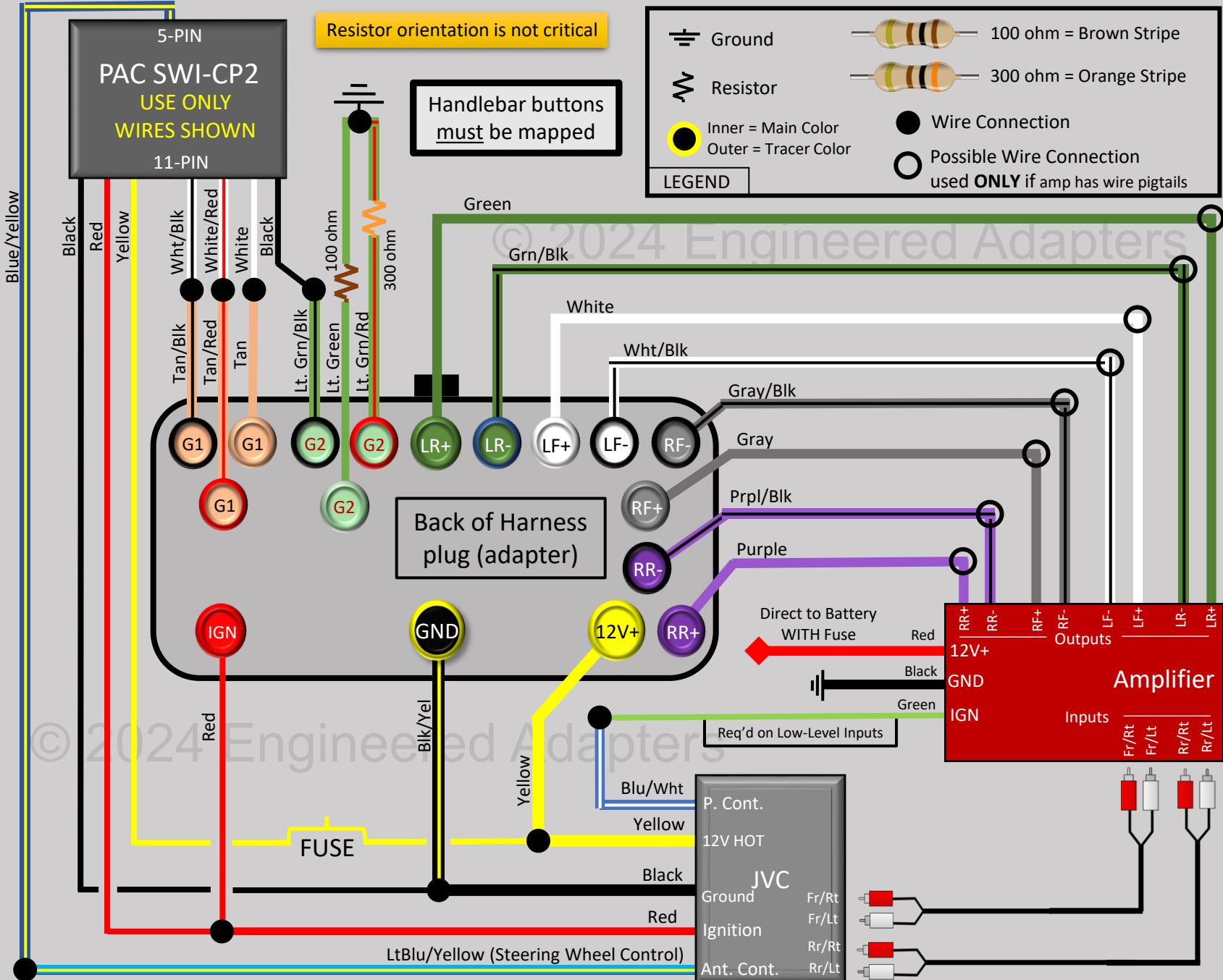
Handlebar buttons
must be mapped

LEGEND

- Ground
- Resistor
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- 300 ohm = Orange Stripe
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Outer = Tracer Color
- Wire Connection





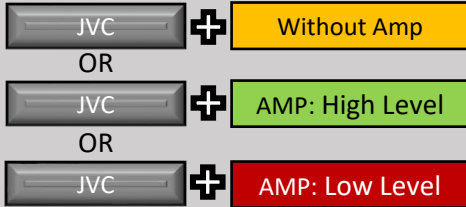




CP2 Button Mapping Instructions: JVC

Step 1:

Install Radio and/or Amp per Wiring Diagram



Step 2:

Set CP2 DIP Switches



Step 3:

Map Handlebar Controls



JVC
Volume Up
Volume Down
Mute
Source
Track Up
Track Down
Band / Disc Up
Preset / Disc Down
Select
Attenuation
Phone Receive
Voice
Power

1. Turn the key to the ignition position. The LED will illuminate red
2. Press and hold the programming button on the side of the CP2 until the LED illuminates GREEN. Release the programming button.
3. Press the button that is to be learned on the handlebar controls. LED will turn RED when pressed, then back to GREEN
4. If you need to program more buttons; repeat step 3 for each additional audio function on the steering wheel.
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Black 1/8" Plug

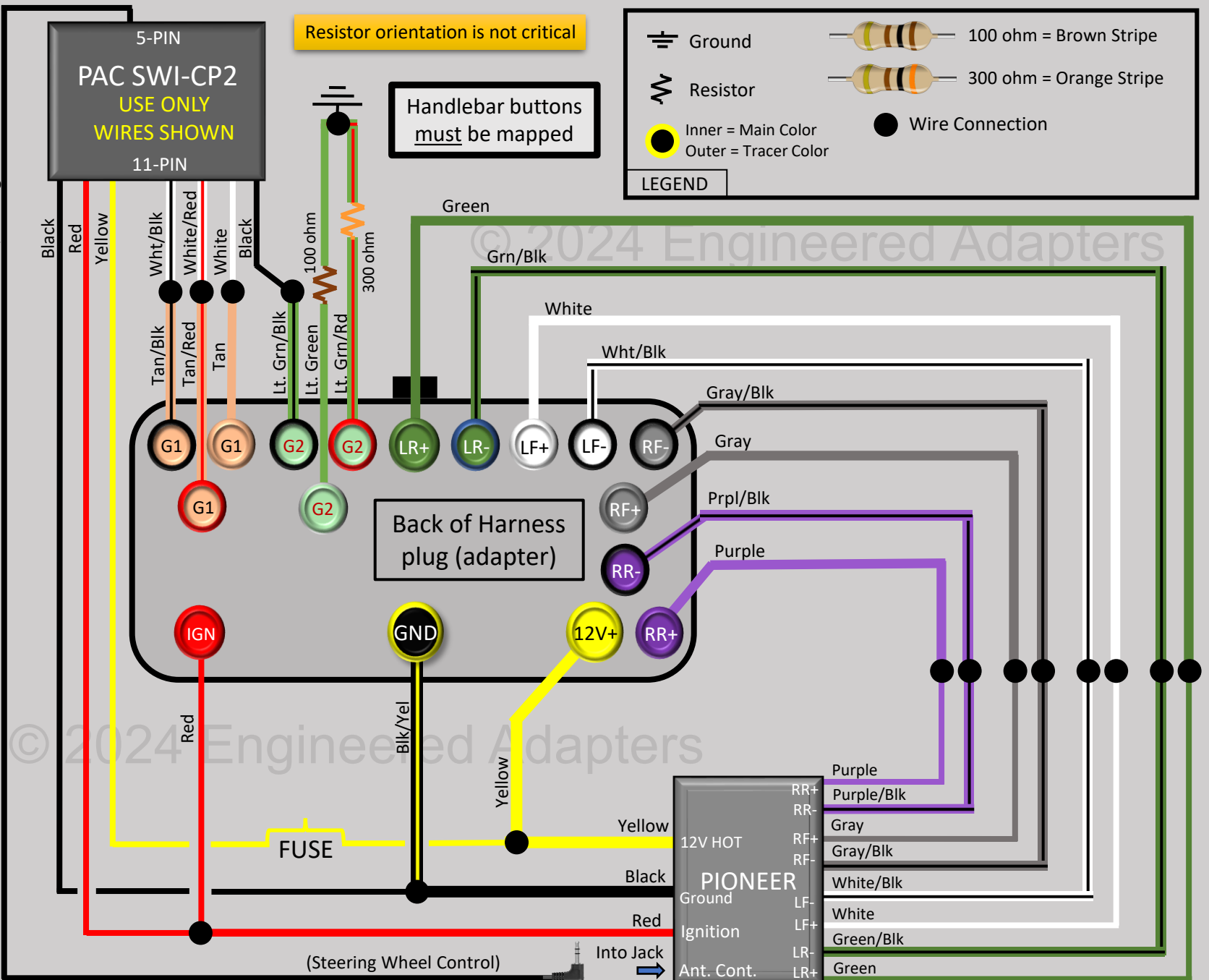
5-PIN
PAC SWI-CP2
 USE ONLY
 WIRES SHOWN
 11-PIN

Resistor orientation is not critical

Handlebar buttons must be mapped

LEGEND

- Ground
- Resistor
- Inner = Main Color
Outer = Tracer Color
- 100 ohm = Brown Stripe
- 300 ohm = Orange Stripe
- Wire Connection



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Black 1/8" Plug

5-PIN
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 USE ONLY
 WIRES SHOWN
 11-PIN

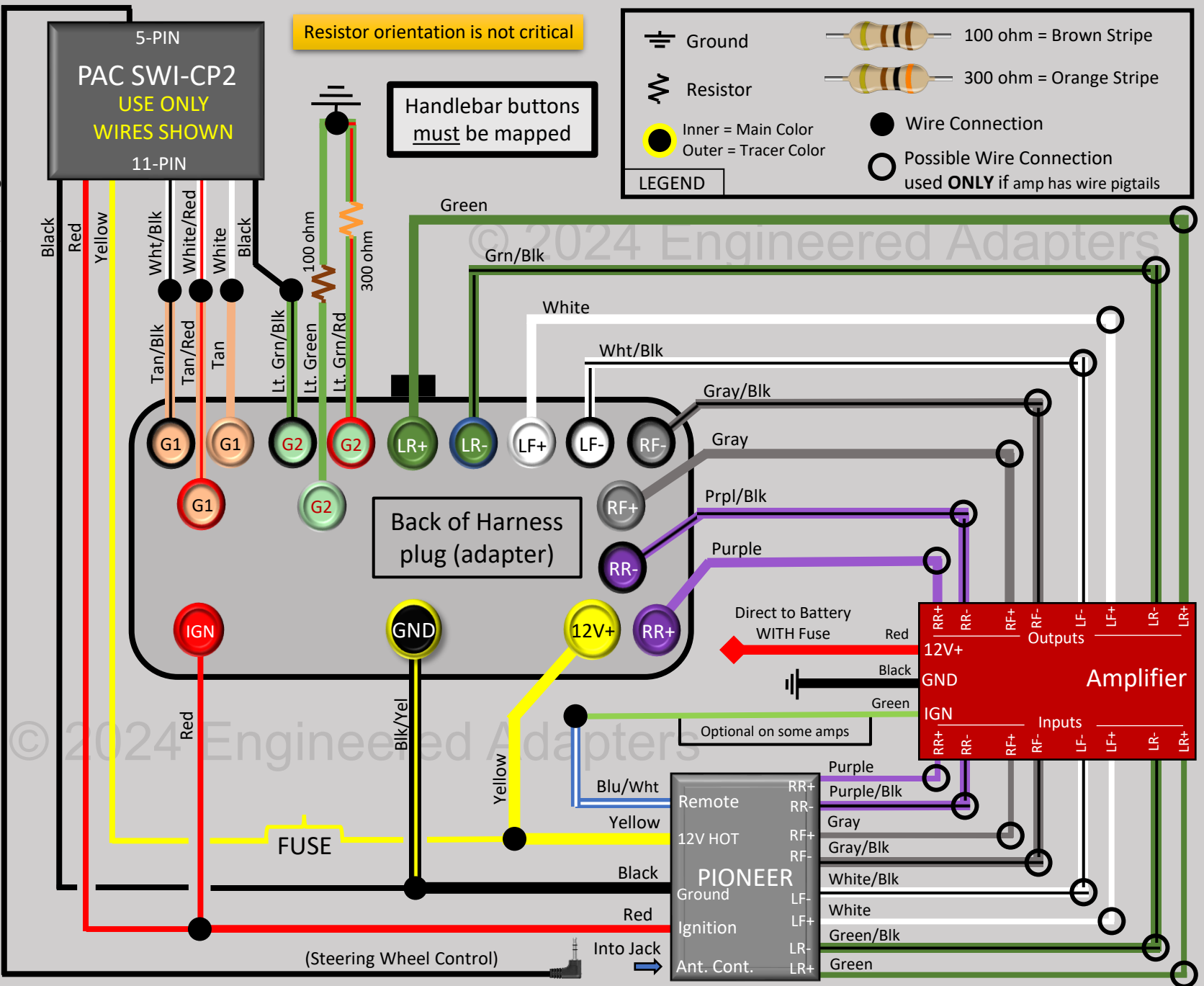
Resistor orientation is not critical

Handlebar buttons must be mapped

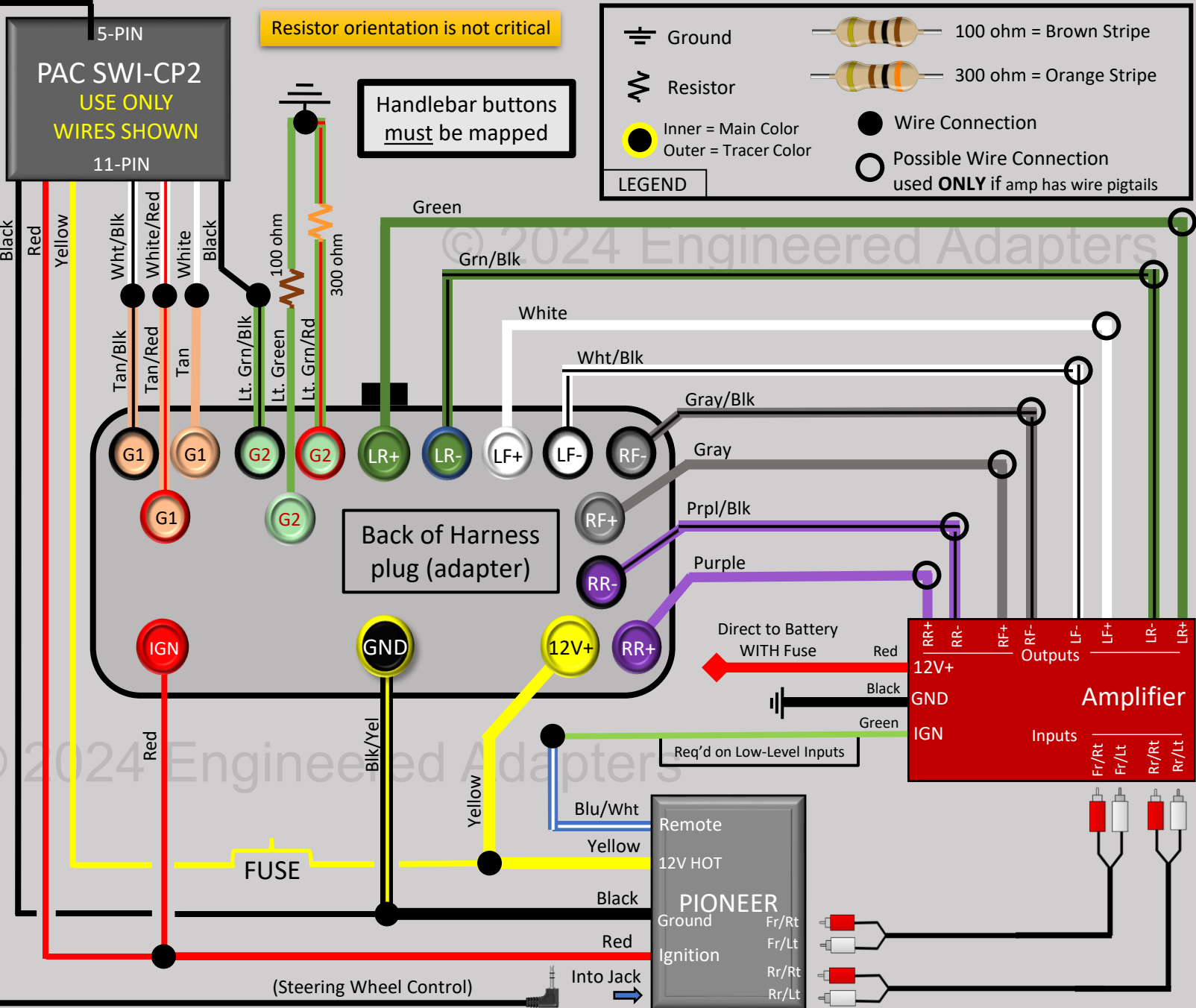
LEGEND

- Ground
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- Wire Connection
- Possible Wire Connection used **ONLY** if amp has wire pigtails

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Black 1/8" Plug

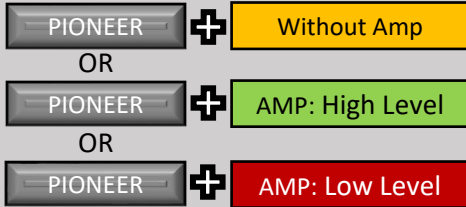




CP2 Button Mapping Instructions: PIONEER

Step 1:

Install Radio and/or Amp per Wiring Diagram



Step 2:

Set CP2 DIP Switches



Step 3:

Map Handlebar Controls



SONY
Volume Up
Volume Down
Mute
Preset Up
Preset Down
Source
Track Up
Track Down
Band
Phone Menu
Voice
Answer
End
Voice

1. Turn the key to the ignition position. The LED will illuminate red
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Notes (See “Notes and Recommendations for mapping” on sheet 1 for more)

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Installation wiring diagram and CP2 mapping instructions

SONY

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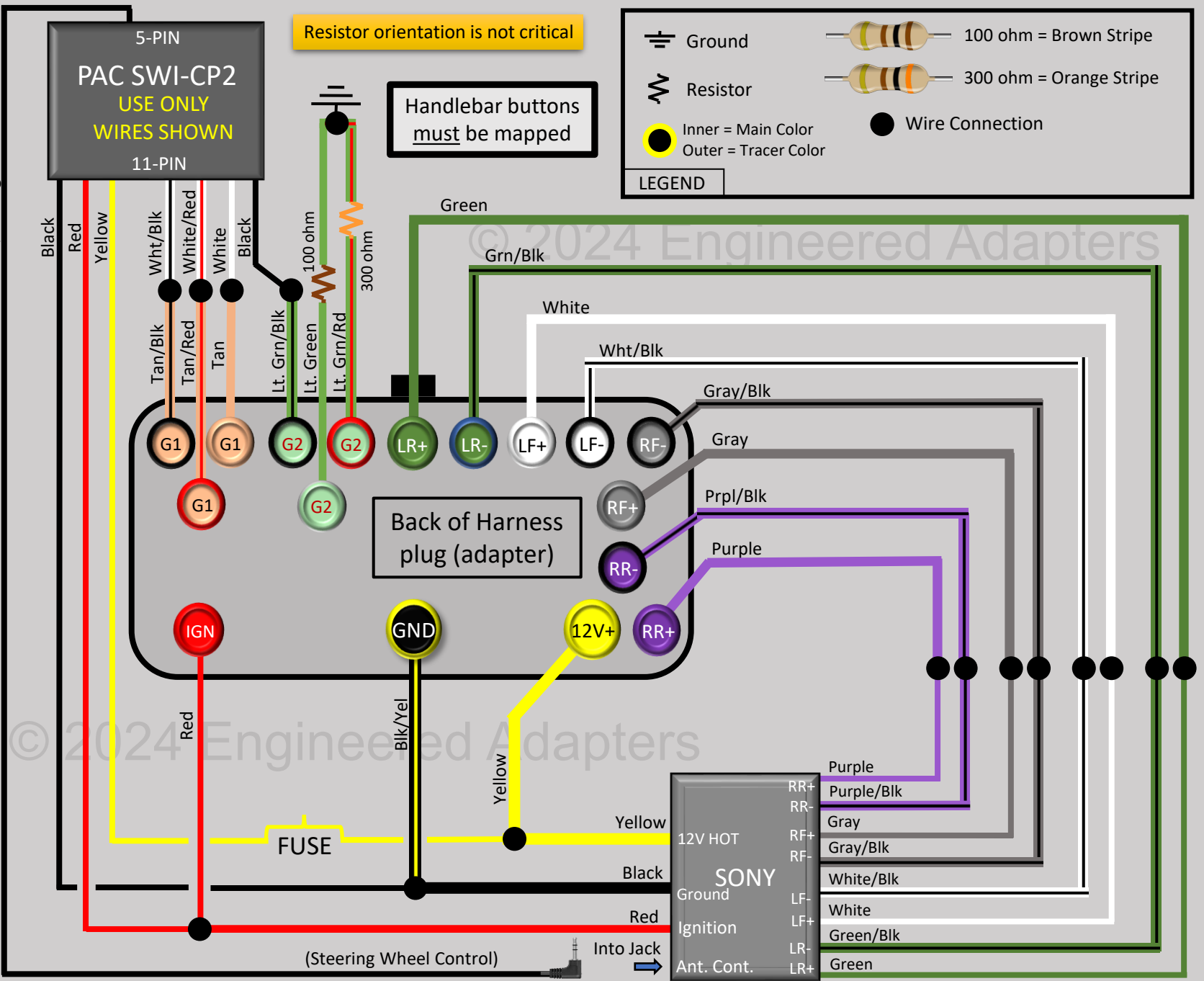
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USE ONLY
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11-PIN

Resistor orientation is not critical

Handlebar buttons
must be mapped

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- Wire Connection



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5-PIN
PAC SWI-CP2
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11-PIN

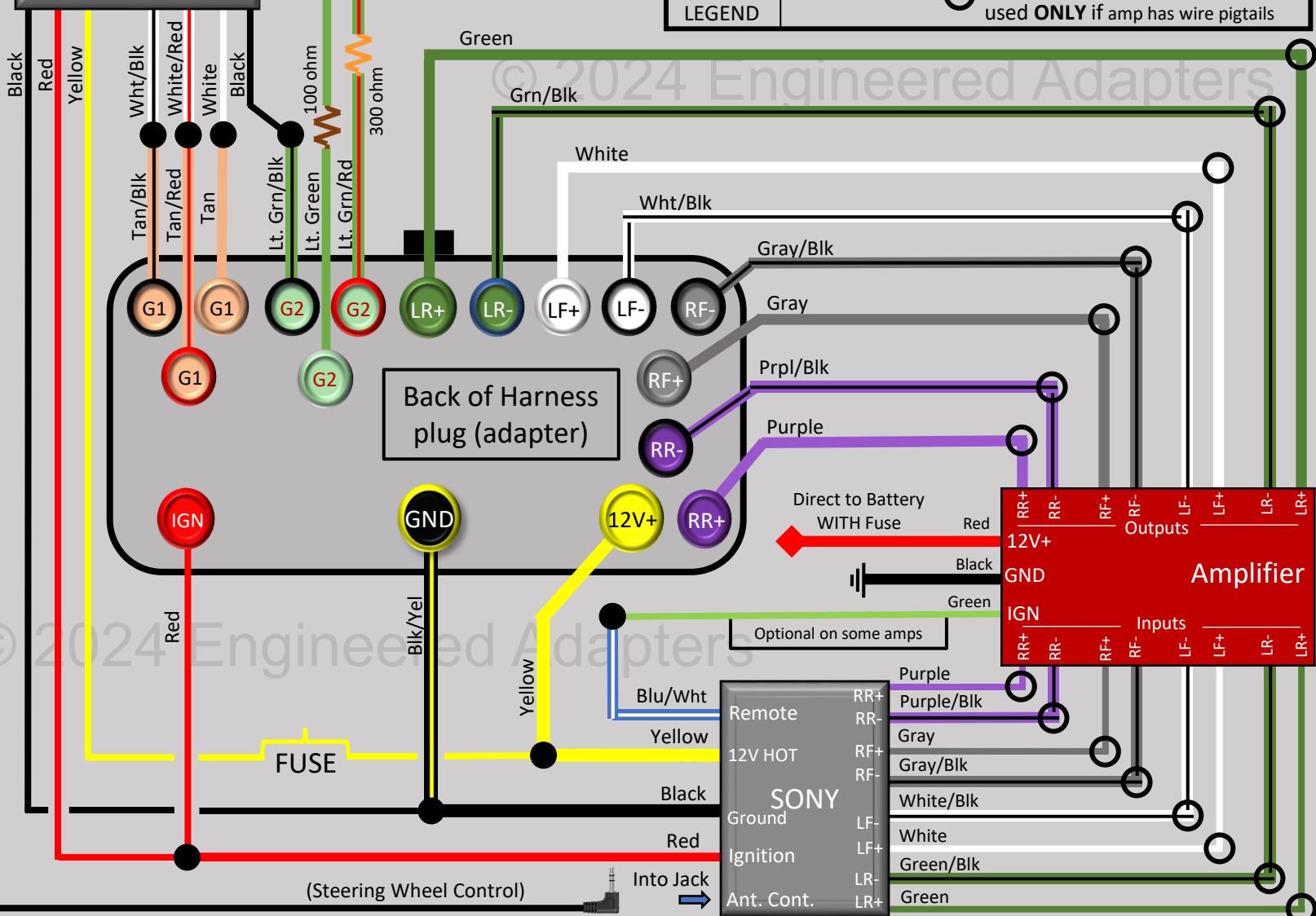
Resistor orientation is not critical

Handlebar buttons must be mapped

LEGEND

- Ground
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- Wire Connection
- Possible Wire Connection used **ONLY** if amp has wire pigtails

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300 ohm = Orange Stripe



(Steering Wheel Control)

Into Jack

SONY

- Remote
- 12V HOT
- Ground
- Ignition
- Ant. Cont.

- RR+
- RR-
- RF+
- RF-
- LF-
- LF+
- LR-
- LR+

Amplifier

- 12V+
- GND
- IGN

- RR+
- RR-
- RF+
- RF-
- LF-
- LF+
- LR-
- LR+

Outputs

Inputs

Black 1/8" Plug

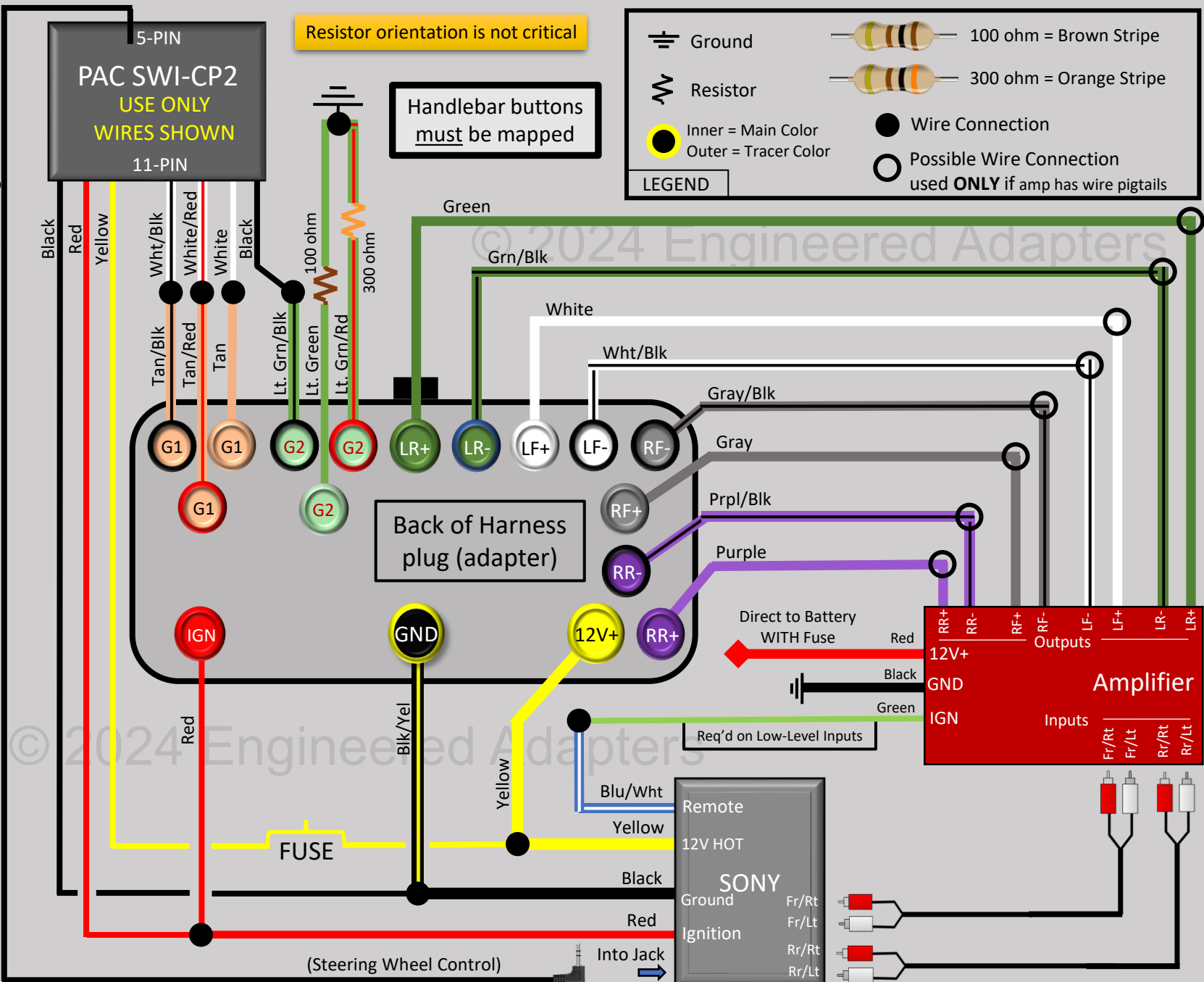
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(Steering Wheel Control)

Into Jack

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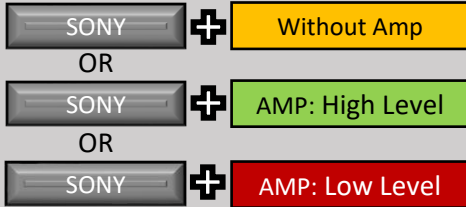
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CP2 Button Mapping Instructions: SONY

Step 1:

Install Radio and/or Amp per Wiring Diagram



Step 2:

Set CP2 DIP Switches



Step 3:

Map Handlebar Controls



SONY
Volume Up
Volume Down
Mute
Preset Up
Preset Down
Source
Track Up
Track Down
Band
Source / Reject
Voice
Answer / End
Voice

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CLARION

Thank you for purchasing your PAC SWI-CP2 steering wheel module from Engineered Adapters and for supporting small business! The CP2 is the latest steering wheel interface from Pacific Audio Corp that will allow you to map your Voyager or Vaquero handlebar controls to work with your aftermarket radio

Our Wiring Harness Plug offers a hassle-free installation without cutting any factory wiring

These diagrams assume you have purchased both our Wiring Harness Plug and the SWI CP2 steering wheel control module

The resistors must be installed for the steering wheel controls to function properly. The location is critical, the orientation is not

If you are installing your amplifier, you will need to determine if you want to use high-level inputs or low-level inputs. High-level inputs have already passed through the amplifier on the head unit and are sometimes called “dirty”. Low-level inputs bypass the amplifier for a cleaner signal to the amplifier. Some Amplifiers only allow ONE option, so check your amplifier’s manual to determine which method is used. Unless you are building a competition-level system, the high-level inputs are fine.

Notes and Recommendations for mapping:

- The resistors must be installed for the steering wheel controls to function properly. The location is critical, the orientation is not.
- We highly recommend reading through the mapping instructions several times
- We highly recommend writing out the specific mapping sequence you will use for your stereo.
 - You do not need to use them all, but you do need to program them in the sequence listed
- We recommend installing the CP2 in an area that can easily be accessed should any functions need to be remapped
- **We recommend mapping just the first two actions so you can verify everything is functioning and you are doing the sequence correctly**
 - Regardless of the manufacturer, the first two actions on the mapping are Volume Up / Volume Down
- You can program up to 9 functions on the Voyager or Vaquero which includes using the lower “CB controls”
 - Each Row has a left, right and center-push function
- The CP2 LED will blink each time a button is pressed to acknowledge the action
- The CP2 LED will flash 3x green if the mapping was successful
- A red/yellow flash when complete indicates an error
- This sequence can be run any number of times and can be restarted at any point. Just wait the 7 seconds for it to complete and start again.

<https://pac-audio.com/swi-guide-center/controlpro-guide/>

*** Engineered Adapters makes no warranty, expressed or implied, about this product or its use ***

Black 1/8" Plug

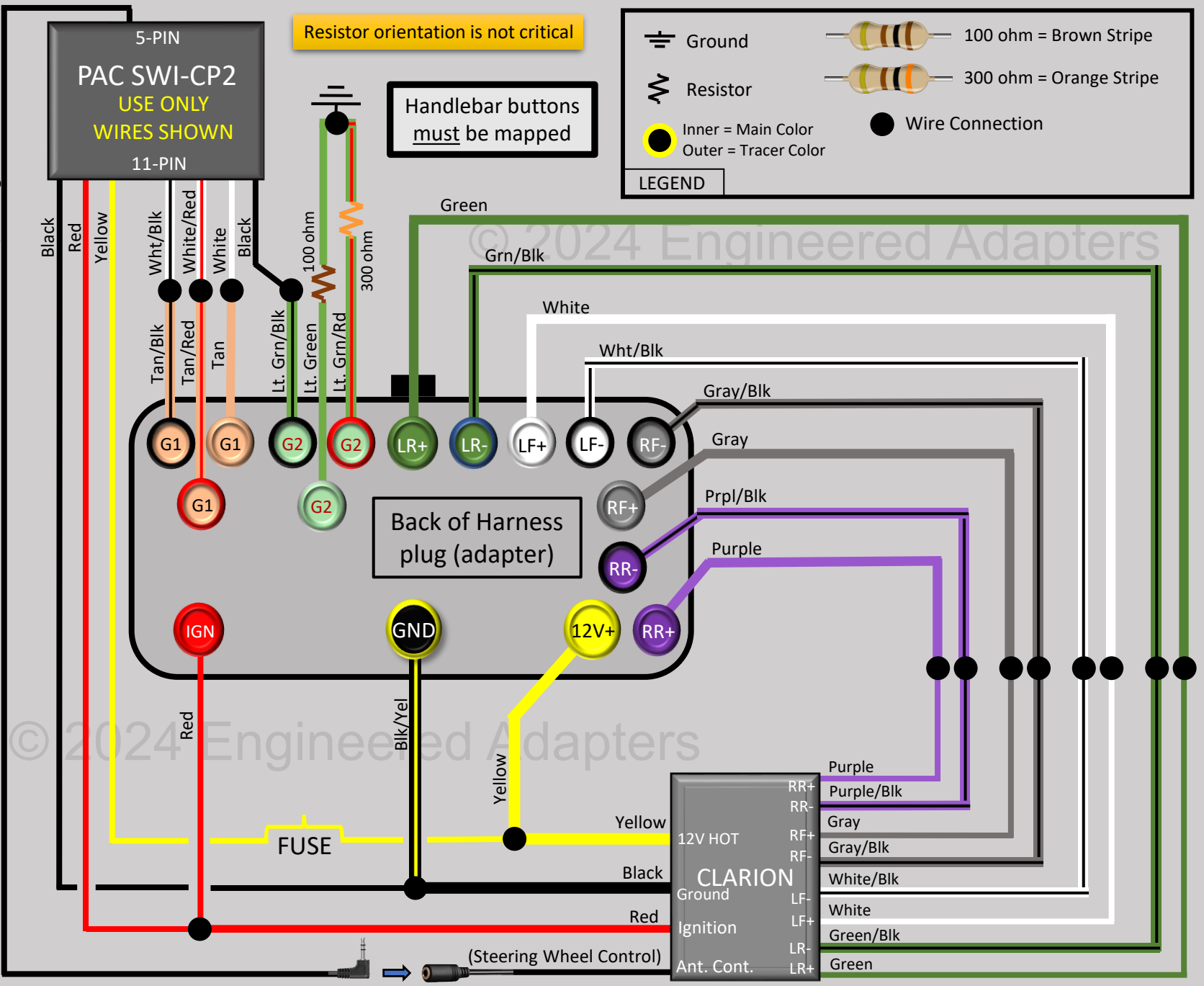
5-PIN
PAC SWI-CP2
 USE ONLY
WIRES SHOWN
 11-PIN

Resistor orientation is not critical

Handlebar buttons must be mapped

LEGEND

- Ground
- Resistor
- 100 ohm = Brown Stripe
- 300 ohm = Orange Stripe
- Inner = Main Color
Outer = Tracer Color
- Wire Connection



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Back of Harness plug (adapter)

RR+ Purple
 RR- Purple/Blk
 RF+ Gray
 RF- Gray/Blk
 LF+ White/Blk
 LF- White
 LR+ Green/Blk
 LR- Green

CLARION
 12V HOT
 Ground
 Ignition
 Ant. Cont.

FUSE

(Steering Wheel Control)

Black 1/8" Plug

5-PIN
PAC SWI-CP2
 USE ONLY
WIRES SHOWN
 11-PIN

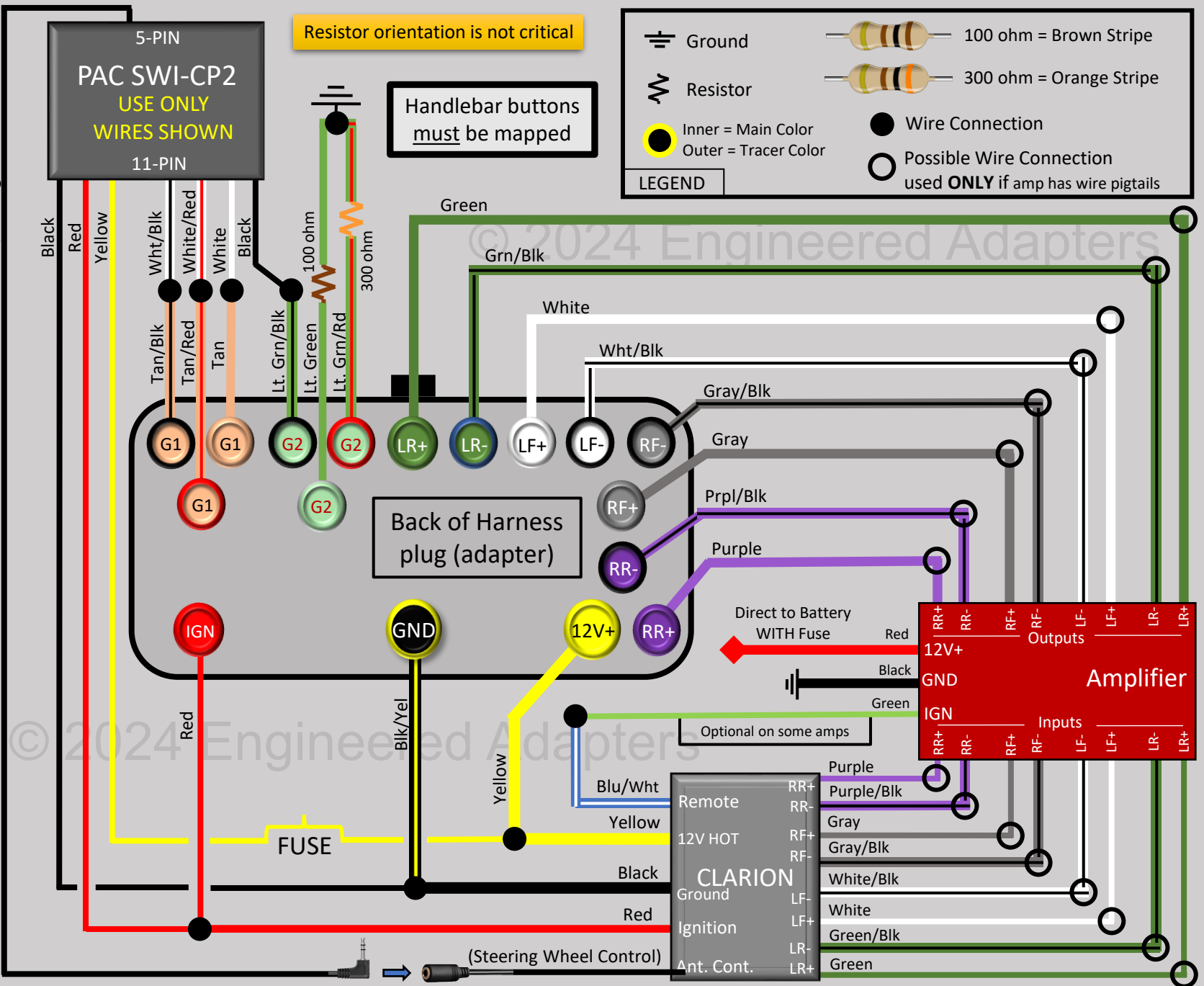
Resistor orientation is not critical

Handlebar buttons
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LEGEND

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- Resistor
- Inner = Main Color
Outer = Tracer Color
- Wire Connection
- Possible Wire Connection used **ONLY** if amp has wire pigtails

100 ohm = Brown Stripe
 300 ohm = Orange Stripe



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Black 1/8" Plug

5-PIN
PAC SWI-CP2
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WIRES SHOWN
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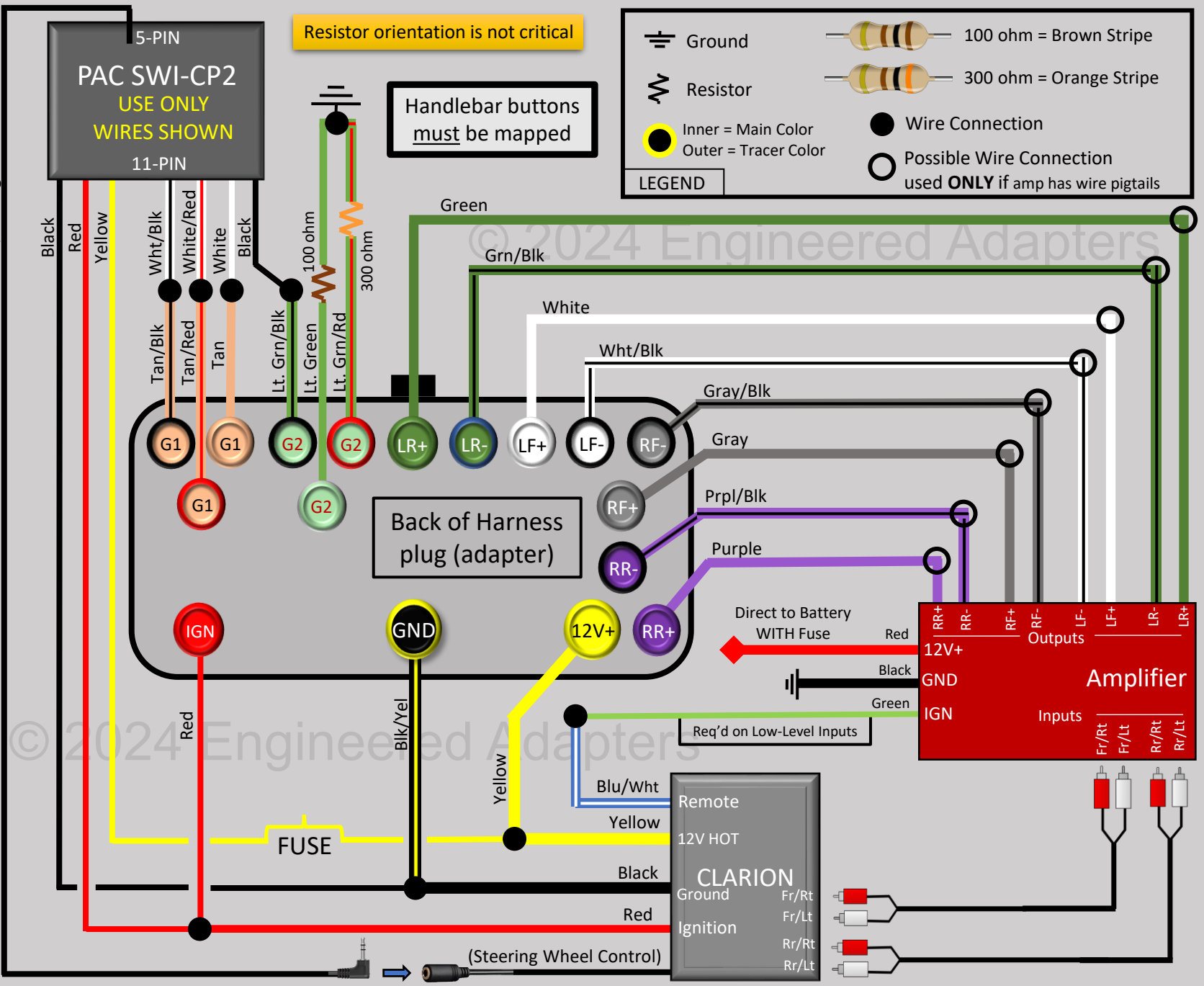
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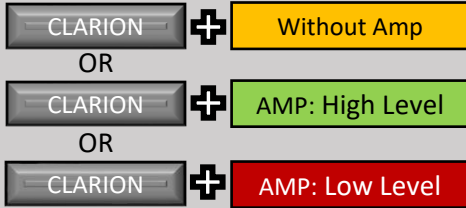
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CP2 Button Mapping Instructions: CLARION

Step 1:

Install Radio and/or Amp per Wiring Diagram



Step 2:

Set CP2 DIP Switches



Step 3:

Map Handlebar Controls



CLARION
Volume Up
Volume Down
Mute
Source
Search Up
Search Down
Band
Send / End
Send
End
Voice

1. Turn the key to the ignition position. The LED will illuminate red
2. Press and hold the programming button on the side of the CP2 until the LED illuminates GREEN. Release the programming button.
3. Press the button that is to be learned on the handlebar controls. LED will turn RED when pressed, then back to GREEN
4. If you need to program more buttons; repeat step 3 for each additional audio function on the steering wheel.
5. If you come across a function in the chart that your steering wheel does not have, or you do not want to program, press and release the program button on the side of the interface to skip that function. The LED will turn OFF then back ON when the skip has been done successfully.
6. When finished, wait 7 seconds. The LED will flash green 3x indicating the end of programming
7. Test the function of the buttons

Notes (See “Notes and Recommendations for mapping” on sheet 1 for more)

- The LED will flash 3x green if the mapping was successful
- A red/yellow flash when complete indicates an error. Start again.
- This sequence can be run any number of times and can be restarted at any point. Just wait the 7 seconds for it to complete before restarting.