

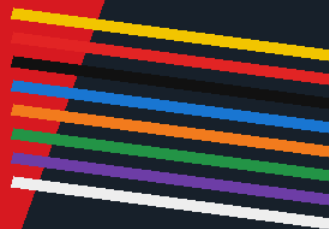
QUALITY MOBILE VIDEO · COMPLETE INSTALLATION GUIDE

CAR STEREO WIRING GUIDE

Harnesses · Power · Speakers · RCA Signals
Interfaces · Steering-Wheel Controls · Cameras · USB

A practical guide for modern vehicles

QualityMobileVideo.com



Complete Car Stereo Wiring Guide

A complete printable companion to the Quality Mobile Video blog article.

Part 1: Getting Started

Use a vehicle-specific harness or interface, preserve the factory connector, and match every circuit by function rather than color alone.

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Harness to Receiver Connection

Keep the factory plug intact and match every wire by function.



Use a vehicle-specific harness or interface. Match every connection by function—not merely by color.

Part 2: Power Wires Explained

Verify constant power, accessory power, ground, amplifier turn-on, antenna, illumination, dimmer, reverse, parking-brake and vehicle-speed functions before connecting the receiver.

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Testing Power Wires

Use a digital multimeter and verify the circuit before connecting the radio.

METER



12.48



YELLOW

Constant 12V

12V in every key position



RED

Accessory 12V

0V OFF • 12V ACC/ON



BLACK

Ground

Low resistance to chassis



BLUE/WHITE

Amp remote

12V whenever radio is on

Part 3: Front and Rear Speaker and RCA Signals

Standard speaker pairs are white, gray, green and purple. Premium-audio integration interfaces may use Front Left, Front Right, Rear Left and Rear Right RCA signals.

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Speaker and RCA Signal Wiring

Standard speaker pairs plus four-channel RCA connections used by some premium-audio interfaces



FRONT LEFT



White (+)
White/Black (-)

FRONT RIGHT



Gray (+)
Gray/Black (-)

REAR LEFT



Green (+)
Green/Black (-)

REAR RIGHT



Purple (+)
Purple/Black (-)

PREMIUM-AUDIO RCA SIGNALS

 FL Front Left

 FR Front Right

 RL Rear Left

 RR Rear Right

Used by some amplified-system harnesses and interfaces.

Part 4: Steering-Wheel Controls

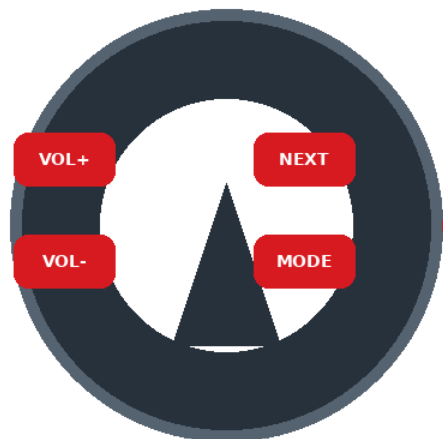
The Metra AXSWC-2 can automatically detect many vehicles and receivers, preset controls, retain memory, provide LED feedback, support manual programming, remapping and dual assignment.

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Retaining Steering-Wheel Controls

A steering-wheel-control interface translates factory button commands for a compatible aftermarket receiver.

SWC



AXSWC-2

- Auto-detects many vehicles
- Auto-detects the connected radio
- Supports manual programming
- Dual-assign and remap controls
- Non-volatile memory retains settings
- LED feedback aids setup

Use Metra's vehicle-specific instructions and verify the radio's steering-wheel-control input.

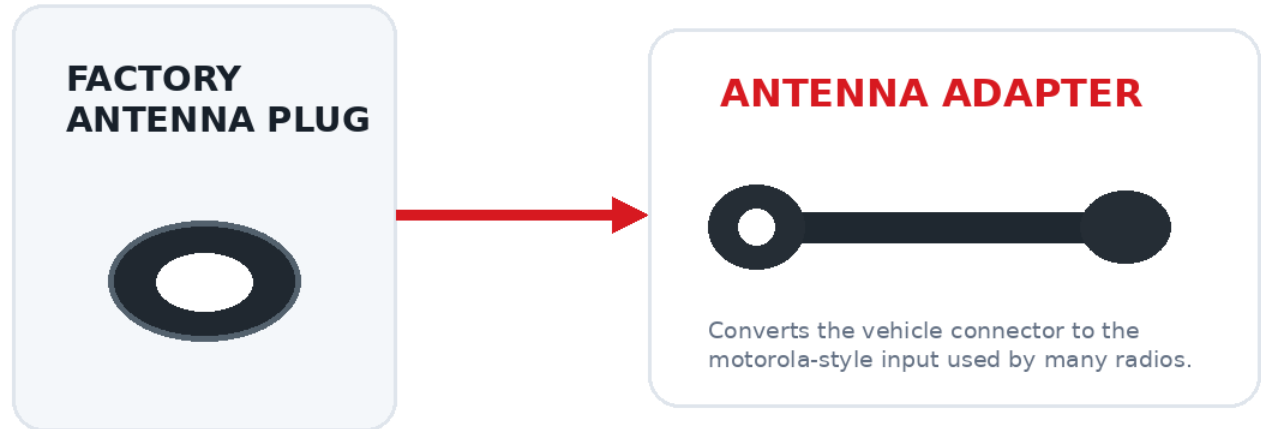
Part 5A: Antenna Adapters

Use a vehicle-specific adapter and connect any required amplified-antenna power lead.

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Antenna Adapters

The factory antenna connector often needs an adapter to fit the aftermarket receiver.



Part 5B: Backup-Camera Retention

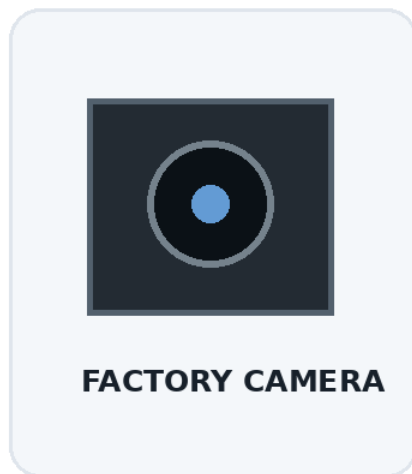
Verify camera voltage, connector compatibility, video conversion and the reverse trigger.

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Backup-Camera Retention Harnesses

Keep a compatible factory camera when replacing the original radio.

CAMERA



CAMERA RETENTION HARNESS

- 1 Retains the original camera connector
- 2 May convert factory camera voltage
- 3 Provides composite video RCA output
- 4 Supplies or passes the reverse trigger

Compatibility and camera voltage are vehicle-specific.

Part 5C: USB Retention

A compatible adapter may retain charging, data, audio or selected factory USB functions.

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USB Retention Harnesses

Reuse a compatible factory USB port with the replacement receiver.

USB

FACTORY USB PORT



USB RETENTION HARNESS



- Retains the original dash or console USB location
- Adapts the factory connector to the new receiver
- May support charging, audio, data, or only selected functions
- Confirm receiver and vehicle compatibility before installation

Part 6: Ground Resistance Testing

Disconnect power, measure the meter leads, then measure the radio ground to verified clean chassis metal. Subtract lead resistance; near zero is preferred.

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Testing Ground Resistance

Measure resistance only with power disconnected; account for the meter-lead resistance.

OHMS



0.2 Ω

1 Disconnect battery power.

2 Set meter to resistance (Ω).

3 Short probes together and note lead resistance.

4 Measure from radio ground to clean chassis metal.

High resistance indicates a weak, painted, corroded, or loose ground path

Part 6: Troubleshooting Reference

Radio does not turn on

Verify yellow constant power, red accessory power, black ground, fuses, interface connections and programming.

Radio loses memory

Verify yellow remains at approximately 12 volts with the key removed.

Radio powers up but has no sound

Check factory-amplifier turn-on, interface requirements, speaker wiring, mute/fader settings and RCA routing.

Amplifier shuts off on Bluetooth or USB

Use blue/white amplifier remote rather than solid-blue power antenna.

Weak bass or hollow sound

Check speaker polarity and verify no speaker negative is grounded.

Alternator whine

Repair grounding or signal-routing faults rather than masking them with a ground-loop isolator.

Camera does not switch

Check accessory camera power, reverse trigger, video connection and receiver settings.

Steering-wheel controls do not work

Check compatibility, vehicle wiring, radio input and programming.

Part 7: Frequently Asked Questions

Do I need an interface for every vehicle?

No. Some vehicles only require a basic harness, while others require a data interface to create accessory power or retain factory features. Check MetraOnline.com and enter your specific year, make, model and factory audio system.

Can I use a test light?

A conventional test light completes a circuit and can load sensitive electronics. Testing the wrong wire may damage a module and could affect an airbag circuit.

Can I use a test probe?

Yes, if it is an electronic high-impedance automotive test probe intended for modern vehicle electronics.

How should I power an aftermarket backup camera?

Use a fused accessory circuit at the receiver and send the positive reverse-lamp signal to the receiver reverse input for automatic switching.

Can Quality Mobile Video pre-wire a harness or interface?

Yes, when the compatible harness or interface and replacement receiver are purchased together. Call for compatibility and ordering information.

Final Installation Checklist

- Confirm the vehicle and factory audio system.
- Obtain the correct kit, harness, interface and adapters.
- Disconnect the negative battery terminal.
- Match every connection by function.
- Secure and insulate every connection.
- Test all four speakers and RCA channels.
- Test amplifier, steering-wheel controls, camera, USB and antenna.
- Reconnect the negative battery terminal after inspection.
- Test every feature again before reinstalling the dash.

Car Stereo Installation Essentials

Wire Harnesses	https://www.qualitymobilevideo.com/catalogsearch/result/?q=wire+harness
Car Stereo Interfaces	https://www.qualitymobilevideo.com/catalogsearch/result/?q=car+stereo+interface
Steering-Wheel Controls	https://www.qualitymobilevideo.com/catalogsearch/result/?q=steering+wheel+control
Speaker Wire Harnesses	https://www.qualitymobilevideo.com/catalogsearch/result/?q=speaker+wire+harness
Antenna Adapters	https://www.qualitymobilevideo.com/catalogsearch/result/?q=antenna+adapter
Camera Retention Harnesses	https://www.qualitymobilevideo.com/catalogsearch/result/?q=camera+retention+harness
USB Retention Harnesses	https://www.qualitymobilevideo.com/catalogsearch/result/?q=usb+retention+harness
Crimp Connectors	https://www.qualitymobilevideo.com/catalogsearch/result/?q=crimp+connectors
Crimp Tools	https://www.qualitymobilevideo.com/catalogsearch/result/?q=crimp+tool
Electrical Tape	https://www.qualitymobilevideo.com/catalogsearch/result/?q=electrical+tape
Heat-Shrink Tubing	https://www.qualitymobilevideo.com/catalogsearch/result/?q=heat+shrink
Solder	https://www.qualitymobilevideo.com/catalogsearch/result/?q=solder
Wire and Zip Ties	https://www.qualitymobilevideo.com/catalogsearch/result/?q=zip+ties
Trim-Removal Tools	https://www.qualitymobilevideo.com/catalogsearch/result/?q=trim+tool
Digital Multimeters	https://www.qualitymobilevideo.com/catalogsearch/result/?q=multimeter