

WARRANTY

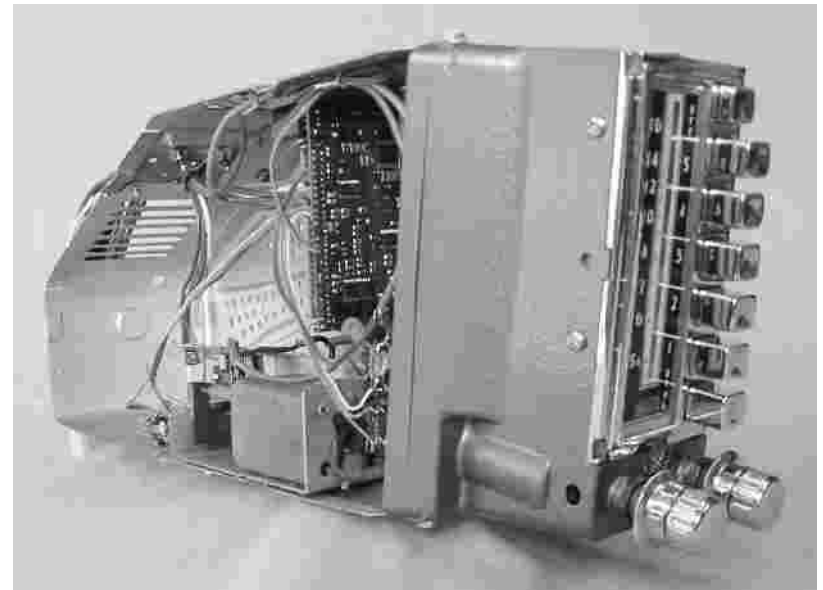
S & M Electro - Tech, Inc. will warranty this unit for (1) one year from the original installation date in your car. We will repair your unit at no charge for parts and labor during the warranty period. Please contact us before sending your unit in for service. Be sure to include a copy of your original bill of sale. Units that require service after the expiration of the warranty period will be repaired on an estimated cost basis.

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AM/FM Stereo Radio Conversion Ver. 8.2



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Troubleshooting Tips

All conversion radios are tested and leave here fully functional. If you have trouble, please check the following:

No power/radio will not turn on: Be sure you have a good ground to the radio case and that the factory fuse in the fuse panel is good. Also make sure the fuse makes good connection in the fuse clips. A test light connected between the orange wire in the radio harness and the radio case should light when the radio is turned on.

Power but No Sound: Does the LED light? If so, does it change to orange when you tune the radio? If not, check your antenna lead and connections. The radio mutes between stations and with no radio signal, will be totally silent. You should have less than 5 ohms resistance between the small pin on the Motorola plug and the mast of the antenna.

The LED lights and changes to orange, but you get no sound from the radio. The conversion amplifiers have short circuit protection and will shut down all channels if you have any of the speaker leads shorted together or touching ground. Be sure your speakers do not have one terminal connected to the frame of the speaker. (Many Delco factory speakers are grounded in this fashion). If your wiring and speakers check OK, and you have a radio configured for 4 channel but only have 2 speakers connected, be sure the fade function is not set all the way to the unconnected rear speakers.

If you still have problems, please call us before you remove the radio from your car as we may be able to help resolve the issue without removing and returning the radio.

Thank You for choosing S&M Electro-Tech for you classic car radio AM/FM Stereo conversion. We hope you enjoy the conversion of your radio. Please read the following instructions completely. If you do not understand something contained in the instructions, please contact us. We will be happy to help in any way possible. Always work safely and double check your work .

INSTALLATION

Please read the following installation instructions carefully.

WARNING: Always disconnect the ground (chassis) side of the battery when working on the electrical system of your car.

IMPORTANT: Your radio now contains new solid state electronics. Because we convert so many different makes, models and years of radios in both 6 volt and 12 volt, ve and negative ground configurations, we have provided a configuration check list with this booklet that is specific to your radio conversion and car application. Please refer to the check list in conjunction with the following instructions. Failure to follow the correct wiring can damage the modern electronics.

New Connector: All conversion radios have a new 12 pin “Molex” style connector installed with anywhere from 3 wires up to 12 wires depending on configuration.

Power connection: If you have a **RED** wire in the new connector, this is the main power feed to the radio. If your radio came to us with the original factory style power wiring or connector, we would have retained this connection for radio power. The radio case is always ground, and there will be no ground wire on the radio or in the new connector. Ground is established when the radio is bolted into the car dash and hanger. **Note:** Do Not over-fuse – 10 amp maximum.

Dial Light Wiring: Many radios have their internal dial light wired directly to the radio power switch and no separate dial light wiring exists. If you have a **GREEN** wire in the new connector, this wire should be connected to your dash light dimmer circuit. If your radio came to us with the original factory style dial light wiring or connector, we have retained this connection or wiring. Connect as original.

Example: All Corvette radios from 1958 through 1974 use a factory 3 prong plug that has power, dial light and ground. This factory connector is retained on the conversion radios and plugs back in to the factory dash harness as original.

Antenna/+12 volt/Aux Amp Trigger: All conversions will have an **ORANGE** wire in the new connector. This wire is seldom used but is available for a number of uses. On 12 volt radios, radio power appears on this wire when the radio is turned on. It can be used to trigger an automatic antenna that will extend when the radio is turned on and retract when the radio is turned off. It can also be used to turn on a separate subwoofer amplifier when the radio is turned on.

Note: On 6 volt radios, either positive or negative ground models, this wire will have +12 volts with respect to ground. It can be used to power low current 12 volt devices like a cell phone charger, portable CD, MP3 or an i-Pod adapter, etc., on 6 volt cars.

Secondary Aux input Selector: If you requested a second set of Aux input jacks, you may have a **YELLOW** wire in the connector wired to a small toggle switch. This switch allows for selection of either Aux 1 or Aux 2 input jacks on the back of the radio. Mount the switch in a convenient location at the bottom of the dash.

Station Preset Buttons: Your station preset buttons will still function as designed. The conversion does not change how the mechanical presets work from original. On radios made from the mid 1950's up until the advent of electronic tuning in the late 70's, you set the presets by tuning the radio to the desired station with the manual tune, then pull the desired push button out by wiggling the button side to side while pulling out. Then push the button all the way in.

Delco Wonder Bar radios made before 1957 used 5 small sliders under a door at the bottom of the dial window. Each slider corresponds to one of the push buttons. Tune in a station using the manual tune or Wonder Bar, then slide the nearest slider to the same position as the main dial pointer. When a preset is selected, the main dial pointer will scan until it finds the slider that corresponds to the pressed button and it finds a station. If the slider is off station, the pointer will not stop, but just keep looking. Hit the wonder bar to stop the scan and readjust the slider – it may have to be a bit ahead of the pointer. Early to mid 1950's Ford radios with round push buttons, are set by unscrewing the push button CCW a couple turns, press the button all the way in, slowly release the button, then tighten the knob back down by turning it CW.

Radios made before the 1950's used many different schemes to set the presets. Too many variations exist to list here. If you do not know how to set the presets on your radio, please contact us.

Aux Input Option: If your radio has the Aux input option for portable music players, just plug your player into the jacks with the supplied cable. Turn the volume on the portable player up to almost maximum. When the radio sees the signal from the player, it will switch to the aux mode. Use the radio volume control to adjust the playback level. Lack of signal for 15 seconds and the radio will switch back to the radio mode.

AM/FM Switching: Most original AM radios will use the power switch to select between AM band and FM band. If your radio was an AM only radio to begin with, when you first turn the radio on, it will start up on the FM band. To switch to the AM band, once the radio is on in FM, turn the radio off and right back on. The radio will switch to the AM band. To switch back to FM, turn the radio off, wait a couple seconds, then turn the radio back on and it will come back on in the FM band. If your radio was a factory AM/FM radio to begin with, the radio will use its original AM/FM band switch, usually a slide bar or rotary control. Wonder Bar, Town & Country, or other signal seeking radios will use the sensitivity switch as the AM/FM switch. (See your configuration insert). If your radio had a one or two position tone switch, we have configured the old tone switch to be the AM/FM switch and alternate between AM and FM bands each time it is pressed.

LED Indicator: On most conversion radios that have space on the dial backer plate, we install a small 3 color LED. This LED will light GREEN on the FM band off station, ORANGE when tuned to a FM Stereo station and RED when on the AM band. Radios that have rolling dial scales, like most Delco AM/FM factory radios, or space issues like Blaupunkts will have the LED hidden and not mounted in the dial. We try and mount them where they can be seen if needed for troubleshooting when the radio is installed in the car, but that is not always possible. On Many 60's vintage Delco AM/FM radios like the mid-year Corvettes, the LED will be mounted in the old antenna trimmer location. The LED can be seen by removing the tuning and dummy knob from the radio. It can be in seen in a small hole above the tuning shaft.

Speaker Wiring

The remaining wires in the connector consist of white/grey and violet/blue pairs for speaker connections. Unless requested otherwise, 12 volt radios are configured for 4 channel/4 speaker operation. Conversion radios configured for 6 volt operation are restricted to 2 channel/2 speaker operation due to limitations of the 6 volt to 12 volt power converter. Front and rear speaker wiring are the same colors but are differentiated by yellow and green tape bands on the speaker pairs. Speaker wiring is as follows:

Front Channel Speakers (connect these first for 2 chan use):

Blue – Left Front (+) speaker (Yellow Band)

Violet – Left Front (-) speaker (Yellow Band)

Gray – Right Front (+) speaker (Yellow Band)

White – Right Front (-) speaker (Yellow Band)

Rear Channel Speakers:

Blue – Left Rear (+) speaker (Green Band)

Violet – Left Rear (-) speaker (Green Band)

Gray – Right Rear (+) speaker (Green Band)

White – Right Rear (-) speaker (Green Band)

If your radio has a built in single speaker, the internal is wired to the left front channel and only the right front channel wiring will be in the new connector. This wiring is normally connected to the rear deck speaker for a 2 channel system.

If your radio has a dual speaker installed in the radio box, only the rear left and right speaker wiring will be in the connector.

Warning: Do not ground or short any of the speaker wires. The amplifier will shut down and no sound will be heard from any speaker. Use only 4 to 8 ohm speakers with 88db or higher sensitivity rating.

Antenna Wiring

Your conversion radio is designed to use the original factory fender mounted mast antenna. It will plug into the radio in the same location as original using a “Motorola” pin plug. If your original factory antenna was mounted on the rear of the car, please contact us. The connecting cable that runs from the antenna to the radio may need to be modified to function properly with the antenna and conversion radio. The factories never offered rear mount antennas with FM radios.

Note: Radio signals will **NOT** pass through sheet metal. Hidden antennas under the dash, antennas with open lead-in wires, or antennas mounting inside door pillar posts, etc., will not function. The conversion radios mute the audio signal if no radio signal is received and will be totally quiet without a good signal. For good AM reception the antenna must have a good ground connection at the base of the antenna and the antenna must be extended to full length for reception of weak signals. FM reception is best when the antenna length is about 31”.

Radio Operation

Your converted radio will operate pretty much as original. **On/Off, volume, manual tuning**, and presets will all function as designed. In most cases, the tone control will also function as designed.

Tone Control: If your original tone control was an actual rotary control, it has been configured as a tone control. It may also function as a left/right balance control and a front/rear fade control. (See your configuration insert).

If your tone control was a multiple position switch like the 1949-1951 Ford and Mercury radios, it will still function as tone but not as a left/right balance control or front rear fade control. We have added a new control on the bottom or side of the radio or on a pigtail lead that can be mounted at the bottom of the dash that will now function as a full time balance control and alternate fade control.

If your original tone control was a push button with one or two positions, it may be configured as an AM/FM Selector switch and a new Tone/Balance/Fade control has been added to the bottom or side of the radio or on a pigtail to be mounted at the bottom of the dash.

Alternate Tone/Balance/Fade: To adjust the left/right balance on a radio configured with a shared tone control, tune the radio to a known FM station near the lower end of the dial. Then tune the radio as far to the left as the dial pointer will go, below the 55 on the dial scale. The LED in the dial will blink and after 4 to 5 seconds, the station you were tuned to before you tuned to the bottom of the dial will come back on. The tone control will now function as a left/right balance control. Adjust the balance for equal left/right sound level. When done, tune the radio back into the normal tuning range between the 55 and the 16 on the dial. Your new balance setting will be saved in memory (even if the battery is disconnected from the car) and the tone control will again become a tone control. Alternate front/rear fade is the same process except you tune off the far right side of the dial (above the 16). This will change the tone control to a front/rear fade control. Again, adjust for proper front/rear sound level, then tune back into the normal tuning range between the 55 and 16 on the dial.