

# Mr. Heaterbox & Interior Restoration Services

## AM/FM Radio Conversion User Guide

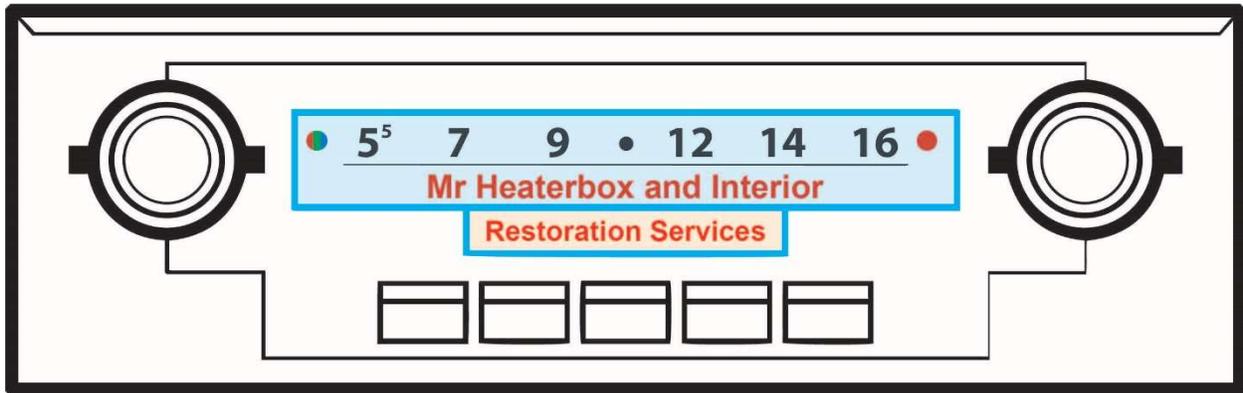


**Websites:** <https://mrheaterbox.com/>  
<https://classicradiorestitution.com/>

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# Welcome to Your Newly Converted AM/FM Radio



## Basic Radio Control Actions

- |  |                           |  |                        |
|--|---------------------------|--|------------------------|
|   | Virtual Fader             |   | Virtual Balance        |
|  | Loudness Toggle<br>On/Off |  | AVC Toggle**<br>On/Off |

## Auto Scan Action (standard tuner)

- |   |            |   |           |  |             |
|---|------------|---|-----------|--|-------------|
|  | Start Scan |  | Stop Scan |  | Cancel Scan |
|---|------------|---|-----------|--|-------------|

When in radio mode, double twist the tuning knob to start a scan. (The dial pointer will not move while scanning) To stop on a station, turn the tuning knob. The station will be temporarily stored. To find the actual station on the dial, turn the tuning knob within 5 seconds of stopping the scan. When turning the dial in the correct direction, the radio will mute until the station is found.

*Note: To perform an Action, smoothly twist the control forwards and back in a continuous motion as shown by the arrows, repeating for the number of arrows shown.*

## Welcome:

Thank you for allowing us to convert your AM radio to this state-of-the-art AM/FM receiver with many advanced functions. Great care has been taken during the conversion process to install all components, wiring and hardware in a manner that will produce a product that will give amazing radio reception and years of service.

As an extra feature all radios converted by Mr Heaterbox and Interior Restoration services have had the volume control switch fully disassembled, cleaned and rebuilt.

Should your radio be a Mopar thumbwheel radio then we have also repaired or performed a preventative maintenance on the main tuning gear which is often problematic in this style of radio.

We pay attention to the little details so that you can have a trouble-free ownership experience.

The actual radio module has excellent reception. In some cases, this radio module used in your conversion will pull in more FM stations than brand new model car radios. One thing that is important to understand is that an antenna is not just an antenna. Typically, an AM antenna and an AM/FM antenna are different items from an electrical standpoint. If you are returning this radio to a car that was originally an AM radio only car and you find that you are having reception issues, then it is almost certain that your original radio antenna on the car is not compatible with the AM/FM requirements of your newly converted radio. If this is the case, please contact your preferred restoration parts supplier and purchase a reproduction AM/FM antenna to install. Even if your radio is working fine, you might be surprised at how big a difference a specifically made AM/FM antenna will make.

*(As a side note if you have an old parts book for your classic car often you will find a totally different part number for an AM/FM antenna compared to that of an AM only antenna).*

Before your radio has left our shop, it has undergone a full quality control inspection and EVERY function right down to the dial lamp has been checked and tested for proper operation. Additionally, it has been run for 12-24 continuous hours at a high output level to ensure that everything is working well and stable.

The first page of this manual shows you visually some of the impressive new features that your radio now has in terms of operation.

Unless you have requested otherwise, all of our radio conversions come with an RGB coloured MODE LED on the left and a red STEREO RECEPTION LED on the right.

Depending on your radio configuration the possible Mode Colours are as follows:

AM = **Red** FM = **Yellow**, Bluetooth = **Blue**, USB = **Magenta**, Aux I/P = **Green**

All radios (unless requested otherwise) come with a 3.5mm – 1/8" stereo mini-jack Aux Input which is compatible with all phones and most other audio devices and players. To select this AUX I/P to play so that you can hear the music from the device plugged into it, simply tune your dial tuner all the way down to the lowest (leftmost) end of the radio dial. Soon as you do this the Mode LED will turn **GREEN** and your music will play. Its always a good idea to program the left most pushbutton on your radio to this point so that you can use it to instantly select and activate the AUX I/P. To deselect the AUX I/P simply tune off the end and up the radio dial.

If the Radio is playing an FM station (Mode LED is **YELLOW**) and you wish to go to the AM Dial, simply turn the power switch off and back on quickly and the power cycle will enable the AM band and the Mode LED will display RED. To go back to FM, once gain do the power cycle. Its pretty easy and quick to get used to!

On a basic conversion the **MAGENTA** and **BLUE** Modes will not be used since these features USB memory stick music playlists and Bluetooth operations are not installed.

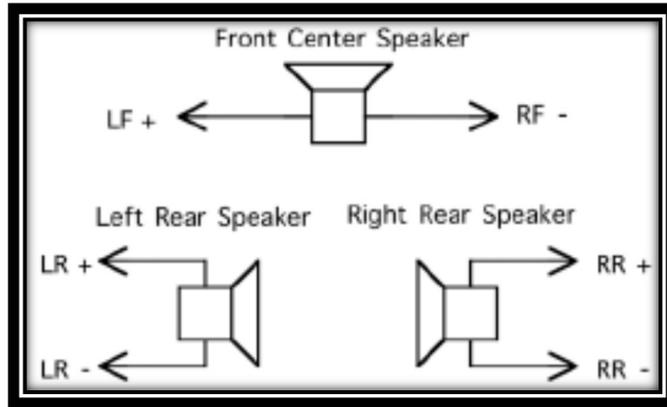
## Speaker Selection & Configuration:

This radio conversion (unless otherwise requested) supports up to 4 speakers simultaneously driven. The computer in the radio module AUTOMATICALLY senses speaker connections at power on and configures the radio to use them. If there is a shorted speaker connection, no damage will happen (the radio will simply shut down that channel) and the VOICE HD feature will audibly tell you which speaker is the problem.

This radio conversion supports ONE, TWO THREE and FOUR speaker configurations.

The two and four speaker configurations are pretty standard i.e. a pair of speakers for the front and a pair of speakers for the rear.

Here is how to wire a one speaker and three speaker configurations. Note the polarities and which channels used:



Your new radio works best with up to FOUR 4 ohm impedance loudspeakers but (up to four) 8 ohm speakers work fine too. 2 ohm speakers are supported but be aware that you can only use a maximum of TWO of these speakers. The impedance of a loudspeaker is generally written on the box (if purchased new) or the metal frame that holds the speaker cone (if using an existing speaker). Remember the better your speaker the better your radio will sounds, so now is a good time to upgrade those speakers if you have time and budget!

## Wiring Connector:

Your radio comes with a 12 pin Molex style (brand) connector for speakers and power connections. You will have one connector wired directly to your radio and the other one intended to be integrated into your car's under-dash wiring connected to it. Wire assignments are as follows. Please note that a radio specific wiring diagram has been attached to the top case of your radio. If there are any discrepancies between the information below and that which is printed on the radio case label, the radio case label takes precedence.

### Wiring Harness Connections:

Red*	Ignition/ Battery
Blue	Not used
Orange	Dial Lamp
Black	Ground
Green	Left Rear +
Green/Black	Left Rear -
Violet	Right Rear +
Violet/Black	Right Rear -
White	Left Front +
White/Black	Left Front -
Grey	Right Front +
Grey/Black	Right Front -

\* For circuit protection there is a 10 Amp 12V blade type ATO automotive fuse installed in the rubber holder in the **RED** main power wire

We suggest using soldered connections with heat shrinkable insulation tubing/sleeving installed over top. Crimp connectors will work but are often a source of problem in the long term. The extra few minutes it takes to make good solder connections can save hassle and irritation in years down the road.

## APPENDIX –A –

### Radio Functions Explained in More Detail:

#### Virtual Balance:

Virtual balance/fader controls will be enabled when physical controls are not present. By quickly twisting the tone control back and forth twice to the LEFT the tone control temporarily becomes the balance control. This will be confirmed by the FMR-radio by speaking “balance adjust” signifying a virtual balance setting is in progress. The user can then turn the tone control to adjust the balance. As long as the tone control is moving, the FMR-radio will continue to adjust the balance. Once the desired balance setting is obtained, the FMR-radio waits a few seconds and then confirms the setting by playing a confirmation beep tone. The tone control then reverts back to its normal operation.

#### Virtual Fader:

The virtual fader control is entered by quickly twisting the tone control back and forth twice to the RIGHT, the tone control temporarily becomes the fader control. This will be confirmed by the FMR-radio by speaking “fader adjust” signifying a virtual fader setting is in progress. The user can then turn the tone control to adjust the fader. As long as the tone control is moving, the FMR-radio will continue to adjust the fader. Once the desired fader setting is obtained, the FMR-radio waits a few seconds and then confirms the setting by playing a confirmation beep tone. The tone control then reverts back to its normal operation.

#### Loudness Mode:

Loudness Contouring can be enabled and disabled in a similar manner. Quickly twist the tone control back and forth three times to the LEFT to toggle the Loudness ON and OFF. *Voice Assist HD* will announce the change

#### Automatic Volume Control:

The optional Automatic Volume Control that is sensitive to engine rpm can be enabled and disabled similarly. This feature will automatically increase radio volume slightly as

engine RPM increases. Quickly twist the volume control back and forth three times to the LEFT to toggle Automatic Volume Control on and off. *Voice Assist HD* will announce the change. Note: the engine must be running for this change to take effect.

## Digital Scan for Channels:

On manually tuned radios, to start a scan, double twist the tuning control to the RIGHT. (the front panel status LED will slowly pulsate) The radio will seek to the next station, pause for 8 seconds, and then seek to the next station continuously. (the dial pointer will not move during this scan). To stop on a station, simply turn the tuning control to the RIGHT. The front panel LED will then pulsate faster. If you do nothing in the next 5 seconds, the radio will hold the station until you press one of the tuner presets, turn the tuning control, or turn the radio off. If you want to find the actual position of the station on the dial, turn the tuning control to the right within the 5 second period. You can then start to tune toward where the station is on the dial, if you are going in the wrong direction the station will just continue playing. If you are going in the correct direction, the radio will mute and then unmute once the station position is found. The scan can be canceled by pressing one of the tuner preset buttons on the radio or turning the tuning control to the LEFT.

## Speaker Selection/Configuration:

The radio through the use of a digitally controlled power amplifier, detects at turn-on which speaker outputs are connected. No settings during configuration are required, and the user can change the attached speakers at anytime and the radio will make the appropriate adjustments to mono/stereo operation and whether a Operation and whether a balance and/or fader control is required.

- The radio supports up to four 4 ohm speakers or two 2 ohm speakers. DO NOT connect four 2 ohm speakers!
- For a single speaker installation, the speaker can be connected to any one of the 4 speaker outputs. The radio will automatically enter the mono mode and no balance or fader control will be enabled.
- If a speaker is detected on at least one of the left channel outputs and one of the right channel outputs, stereo mode will be enabled.
- If a speaker is detected on both the left and right front pair or left and right rear pair the balance control, physical or virtual, will be enabled.
- If a speaker is detected on either front channel and either rear channel the fader control, physical or virtual, will be enabled.
- If three or four speakers are detected, both the balance and fader controls will be enabled.

With the flexibility of this system, original balance and or fader controls can be made to operate as desired just by connecting speakers to the appropriate outputs. The radio's internal software configuration program takes care of the rest!

## Overheat Situation:

During normal operation, if the radio detects that it is becoming too hot, the Voice Assist HD will announce it. No damage will occur to the radio and operation will be unaffected unless this condition continues to get worse at which time the radio will start to limit the output power to the speakers. It will continue to lower the output power until the temperature is brought back under control.

## Basic Radio Specifications

- Designed to meet automotive OEM and SAE specifications
- Protected against reverse battery, double battery jump start, load dump and mutual coupling transients
- 40°C to +65°C operating range
- Fully protected speaker outputs:
- Speakers protected against line shorts, shorts to ground and shorts to battery
- Digitally controlled power amplifier automatically senses which speakers are attached and takes appropriate action. (i.e. disables/enables balance/fader controls)
- 4 X 45W maximum output into 4 ohms @ 14.4V (EIAJ)
- 2 X 75W maximum output into 2 ohms @ 14.4V (EIAJ)
- High Efficiency Class SB power amplifier
- Noise blankers to suppress ignition/generator/alternator noise
- Automatic bandwidth control for optimum performance in all situations
- Wiring harness uses high temperature automotive grade GXL wire
- Powerful on-board microprocessor handles all control functions
- User settings are saved in onboard non-volatile memory so no continuous battery lead required
- Full World Wide Analog Radio support (Americas, Europe/Asia, Japan)
- Standard Voice Assist HD, Radio speaks all operations in clear English, no obtuse beep tones
- Automatic Volume Control option raises and lowers radio volume with engine speed
- Dedicated Auxiliary input for use with MP3 players, satellite radio, etc.

## **Troubleshooting / Questions:**

If you have any questions about your radio from either an installation or operation standpoint please do not hesitate to contact us. We are here to support you and ensure that your new radio conversion meets or exceeds your expectations. Contact us if needed as follows:

### **Mr.Heaterbox and Interior Restoration Services**

613-532-2587

[MrHeaterbox@kos.net](mailto:MrHeaterbox@kos.net)

# More Than Just Radio

Check out our Mopar Interior Restoration Parts on <https://premiumdashdecals.com>

## Premium Dash Decals

We offer re-facing kits for ALL classic Mopar and AMC gauges, designed with both concourse accuracy and long-term durability in mind.

They're made with quality 3M™ Controltac™ vinyl (the same stuff you would find on the side of a bus) with Conform™ technology to provide an easy, bubble-free and repositionable installation, even on curved surfaces.

Our decals are coated with our proprietary UV-resistant matte finish and pre-cut to ensure that they go on without a fuss and look factory perfect (or better).

The majority of our faces are available in black and white, in both standard and metric variations to suit your particular project.

All artwork is hand-drawn in house using original survivor gauges for reference, ensuring absolute accuracy; you can hardly tell they're decals! We can also do custom gauges and variations by request!



## Premium Circuit Boards

If you've had your cluster out before, you know the phenolic paper circuit boards that were used by the factory. While they were good for their time, these haven't aged well and can lead to issues with your dash.

Our line of replacement PCBs have been thoughtfully designed and are a high-quality drop-in replacement for those original boards.

Using modern-day materials and manufacturing techniques, all of our boards feature a glass epoxy substrate with hand-soldered, corrosion-resistant pins and traces. This ensures reliable, long-lasting connections and the brightest dash lights possible!

We also have a full line of tach boards for both standard and MSD ignitions. Every component is hand-soldered and tested on an actual Mopar ignition and tachometer before shipping.



## Premium Restoration Parts

Sometimes when you're restoring a vehicle, you just need that one last little piece to make it all come together. That's where our restoration parts come in!

We design and manufacture an ever expanding line of products and solutions to assist you in the restoration of your interior components.

For example, we make heater control wafers from sturdy fiber-reinforced plastic, designed to replace worn OEM wafers inside vacuum control blocks.

Terminal insulators, light shrouds, neoprene gasket kits, electronic voltage limiters (12v to 5v) and so much more! We have what you need to get every detail just right!

Take advantage of our extensive experience with Mopar and AMC vehicles to solve your interior restoration problems!



## WE NEVER LEAVE A CLASSIC BEHIND!

ALL Mopar and AMC Models, including A/B/C/E Body, AMC, Trucks, Vans and Motorhomes!



DO-IT-YOURSELF? WE'LL SUPPLY THE PRODUCTS AND SUPPORT YOU THROUGH THE ENTIRE PROCESS!



PremiumDashDecals.com



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Info@PremiumDashDecals.com

# More Than Just Radio

We also offer Restoration Services for your classic Mopar!

<https://mrheaterbox.com>



## Mr. Heaterbox and Interior Restoration Services

For more than 15 years we've been your source for full-service, better-than-factory components and restoration services for your classic Mopar or AMC!

We eat, sleep, breath and of course drive Chrysler, Dodge, Plymouth and AMC vehicles!

Thousands of old Mopars are still on the road thanks to our restoration products and services. Put your trust in our deep knowledge and experience to keep your car running and looking the best it can!

Thank you for considering us as a part of your next restoration, and for supporting North American workmanship!

*Long live the classics!*



“We don't use cheap reproduction parts in any of our restorations! Everything is factory original and fully re-manufactured in our shop. If we can't find it, we'll make it!”

Brian Ball — Mr. Heaterbox

## We offer more than just Heaterboxes!

At our shop, we have a full-sized automotive paint booth, multiple blasting cabinets, laser cutting equipment and specially designed tools for repairing, rebuilding and testing Mopar components. Lens polishing, switch rebuilding and even more; we handle it all, from door-to-door!



## Our Restoration Process

- ➔ **Inspection and Documentation**  
Once we receive your original components, they are thoroughly inspected and photographed, so that we have a record of their condition and the work that needs to be done.
- ➔ **Discussion and Restoration**  
Before any work begins, we will contact you to discuss our recommendations and your requirements, as well as to provide a price estimate.
- ➔ **Quality Assurance, Shipping & Support**  
After completing your restoration, we subject all components to our strict Quality Audit before shipping. Our After Sales Support ensure you get your parts installed and working well for years of enjoyment!

**Whip Your Car Into Shape With Us!**

**MOPAR INTERIOR PARTS**



<https://premiumdashdecals.com>

**MOPAR INTERIOR SERVICES**



<https://mrheaterbox.com>

**RADIOS CONVERSIONS FOR ALL CLASSICS**



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*Thank you for supporting North American workmanship!*