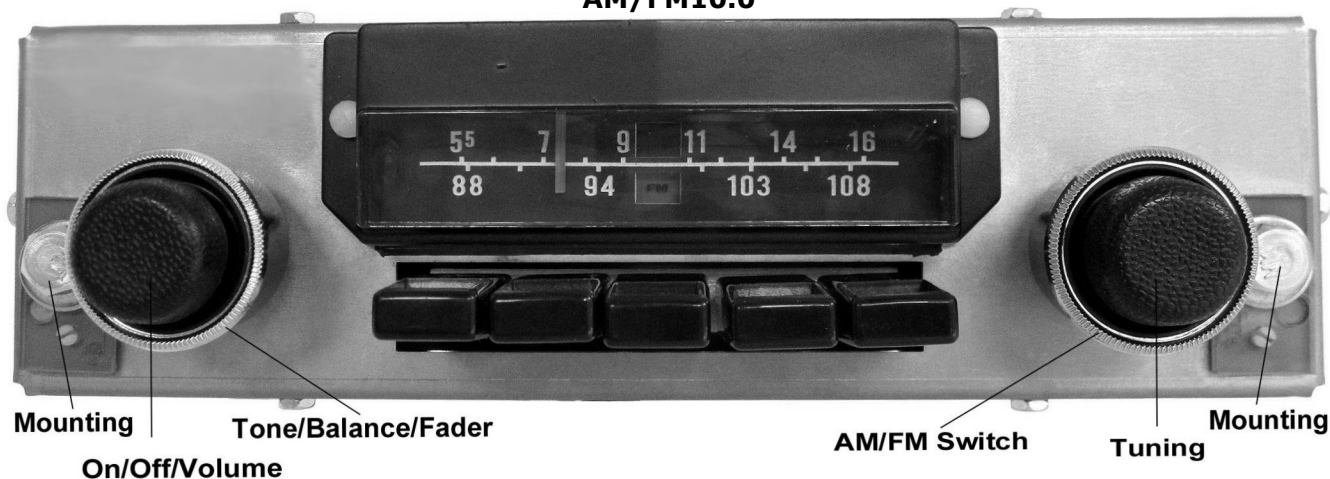


Release Date
April 2018

1970 MOPAR® 'B' Body AM/FM/BLUETOOTH®

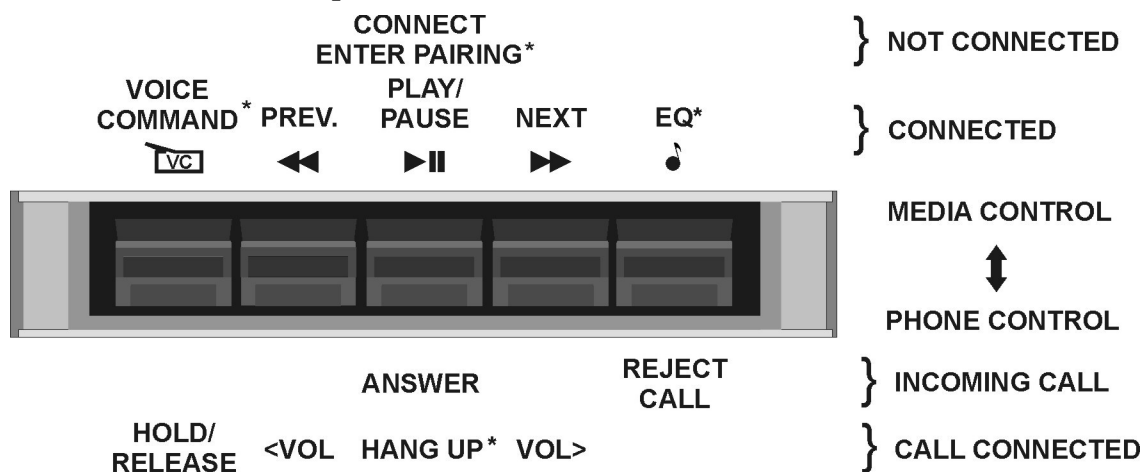
RADIO INSTALLATION AND OPERATING INSTRUCTIONS AM/FM10.0



Dodge
Charger
Coronet
Super Bee

Plymouth
Belvedere
GTX
Roadrunner
Satellite

Model #823101BT Rallye Model # 823101-RBT



* = Press and Hold

ANTIQUE AUTOMOBILE RADIO, INC.

700 TAMPA RD. Palm Harbor, FL 34683 USA (727) 785-8733

For HELP, Questions or Comments **email:**

support@radiosforoldcars.com

CONGRATULATIONS! You have one of the most unique and sophisticated radios ever built! It is designed to preserve the original fit, functions and appearance of your radio while providing the best of the latest digital technology. The more modern features that were not available when your vehicle was new are cleverly disguised so that they are functional and easily accessible, but are not visible. The face, knobs and pushbuttons are designed to look and feel just like the original. There is a small indicator in the center of the band flags on the dial. In the AM mode it will be red; in the FM mode it will be green and will turn orange when the radio detects a stereo station. In the Bluetooth® mode this indicator has multiple uses. Please take a few minutes to read this manual and familiarize yourself with all of the features of this radio. The radio is designed to work well with the original antenna. **Do not use the original speakers.** They will not handle the power or the frequency range of this radio.

Before you begin installation: Be Safe! Disconnect one battery terminal and leave it disconnected until installation is complete. Make sure you are familiar with the options and features programmed into this radio. Locate the antenna jack, the auxiliary input, line outputs and other options you may need before you mount the radio. If you want to “bench test” the radio use a fully charged battery. **DO NOT** operate this radio directly from a battery charger. Serious damage may result! This radio has several protection circuits to help prevent serious damage from wiring errors and power faults in the vehicle electrical system. Never use a fuse rated for more than 10 Amps!

Speakers: See our new line of Dual Voice Coil speakers designed specifically for this radio. Use only 4 ohm speakers. A quality full range speaker with 30 or 40 watt RMS ratings should be sufficient. The higher the SPL rating of the speaker, the better it sounds. Look for an SPL of 88 or better. A good full range speaker should have a frequency range from less than 40 Hz to at least 18 kHz. Pay attention to polarity! Speaker terminals will be marked with a + and -, or a red dot on the + terminal. If all speakers are connected to the proper polarity, they will operate in harmony. If they are not properly phased, you will not hear the full fidelity of the radio. This is especially important when using dual voice coil speakers. Note: - does not mean ground! This is a high power radio in which both speaker lines are driven with high currents! **Never** allow any speaker lead to become grounded when the radio is on!

Operating Your Radio (See the front page for control locations)

Band selection: The backing behind the tuning knob is the band selector. Turn it counter-clockwise to switch to AM. A white AM flag will show in the middle of the AM dial. Turn it clockwise to switch to FM. A red FM flag will show in the middle of the FM dial.

Tuning: The outer knob on the right is for tuning. Turning the tuning knob moves the dial pointer up or down the dial scale. The radio is digitally tuned for stability, but has the look and feel of an analog radio.

Note: The dial pointer will only move when the radio is powered on.

Setting pushbuttons: Your radio has 5 presets for FM and 5 presets for AM. A major difference between the original radio and this one is the way the pushbuttons are set. **Never** attempt to pull out on the buttons! When you push a button, the radio will start playing the selected station, and the dial pointer will move to the selected location. To set a button to a different station: (1) Tune in the desired station. (2) Press and hold the button you want to set. The tuner will move to the previous setting. (3) After about 2 seconds, the radio will begin playing the newly selected station. The dial pointer may cycle to locate the correct position. This is normal. The dial pointer will stop at the new station. (4) Release the button. Be aware it takes a couple of seconds to write the new pushbutton data to permanent memory. You can continue to set other buttons or tune other stations, but if the radio is turned off before the write cycle is completed, the new stations may not be saved. In the Bluetooth® mode the pushbuttons have several different functions and will not change the dial pointer position.

Tone: The tone control (behind the volume control) provides full bass and treble near the center position. Turning the control clockwise reduces treble, and counter-clockwise reduces bass. When streaming music in Bluetooth mode an equalizer is also available.

Balance: (2, 3, or 4 speaker settings only). The original radio did not provide for a balance control, so we use the tone control to program this function. To adjust the balance: (1) Select the AM band and tune in a station near the top of the dial. (2) Let it play for a few seconds, then tune the radio all the way to the top of the dial. After about 5 seconds, the station you were listening to will begin playing at this location. (3) Turn the tone control to shift the audio between the **right** and **left** speakers. In a stereo system, the audio information sent to the right channel is often different than the left channel. When you set the balance to the extreme left or right, the radio will automatically switch out of the stereo mode and all of the information for both channels will be present in the speaker that is selected (Mono mode). (4) When you tune away from the top of the dial, the radio will resume normal operation and the tone control will no longer affect the balance function. The balance setting is permanently stored (until you change it).

Fader: The fader is also set by using the tone control except that the adjustment is made at the top end of the FM dial. To adjust the fader, tune to an FM station near the top of the dial. After you’ve listened for a few seconds, tune all the way to the top of the dial. After about 5 seconds, the last station you were listening to will start playing again. Turn the tone control to shift the audio between the **front** and **rear** speaker pairs. When you tune away from the top of the dial, the radio will resume normal operation, and the tone control will no longer affect the fader function. The fader setting is permanently stored (until you change it).

Bluetooth®: See the illustration on the cover for all of the alternate button functions. To connect your phone, it must first be “paired” to this radio. Make sure Bluetooth is enabled on your phone. Search for available devices. Turn your radio on. “AARInc.BTVx.x” should be visible for a few minutes after the radio is turned on. Select it to pair. You can pair up to 4 devices with this radio. The radio will attempt to connect with the last paired device every time the radio is turned on. To activate Bluetooth®, tune to the low end of the **AM** dial (we suggest you set the leftmost pushbutton to this position). If your phone is paired, it will connect automatically. The AM indicator in the dial will turn bright blue. To exit Bluetooth® mode manually tune the radio away from the low end of the dial. When listening to the radio (AM or FM band) an incoming call will switch the radio into Bluetooth® mode to allow you to answer by briefly pressing the center button. To reject the call press the rightmost button. To end the call, press and hold the center button. If the radio was not in Bluetooth® mode when the call began, the radio will return to the station you were listening to when the call is ended. If another call comes in during an active call, you may put the current caller on hold and answer the 2nd one, or reject it. During an active call you can raise or lower the caller's volume by pressing the <VOL or VOL> buttons. When the call is ended, the volume will return to the normal setting. For detailed Bluetooth® instructions go to www.radiosforoldcars.com/bluetooth.

Your radio has a 12 pin connector for the speakers, power, and options. See illustration below for more details. There is one **red** (fused) wire. This is the main power input. It should be connected to the 12 volt Accessory circuit. There is a **green** wire that is used for the dial light. It should be wired to the dash light circuit ahead of the dimmer rheostat so that the radio lights come on when the other gauge lights are turned on. The wiring for the front speakers includes a **blue (+)** and **violet (-)** pair for the left front speaker, and a **gray (+)** and **white (-)** pair for the right front speaker. Each **front** pair will have a **yellow** band around it. The rear speaker wiring also has a **blue (+)** and **violet (-)** pair for the left rear speaker and a **gray (+)** and **white (-)** pair for the right rear speaker. Each **rear** pair will have a **green** band around it. Your system may not use all of the speaker connections. Be careful to tape up any unused wires where they cannot touch anything. The **orange** wire is a switched 12 volt output used to provide power for options like remote turn-on for power amplifiers, power antennas, etc. Do not use it to power loads greater than 4 amps. The **black** wire is the system ground. This wire should be connected to a solid chassis ground. The Bluetooth® microphone is built in. No external wiring is required.



The **ANTENNA** jack is located beneath the wiring harness exit. It will accept your original antenna plug.

The **AUX. INPUT** jack in the upper right is a standard 3.5 mm stereo jack. It is provided to allow accessories like MP3 players to be active when not using Bluetooth®. To switch to the auxiliary input mode, tune the radio to the extreme low end of the dial in either band. (Hint: Set a pushbutton at this point to allow rapid switching). The radio will resume playing when you tune towards the middle of the dial. The volume, tone, and balance controls will be functional in the AUX mode, but the alternate fader control will not be accessible. The AUX Input is shared with Bluetooth® connected devices. Bluetooth® always has priority and will override any Aux input. If an accessory is powered by the **orange** wire the accessory will turn off when the radio is turned off. You should adjust the accessory audio level to match the level of the radio. Check the option instruction manual for how to set the audio level.

When you receive your radio it is setup for North American channel spacing. You can change the frequency by holding down the middle pushbutton while the power is off and while continuing to hold down the middle pushbutton turn the radio on. You will notice a green light in the center of the dial. The radio will scan through the local stations and determine which frequency to use for AM and FM. These changes will be permanently stored until they are changed again by repeating the steps above. The AM broadcast band in the Americas is 530 to 1710 kHz in 10 kHz steps, and for all of Europe, the UK and Japan it is 531 to 1629 kHz in 9 kHz steps. The FM broadcast band in the Americas is 87.5 to 107.9 MHz in 200 kHz steps, and for Western Europe and the UK it is 87.5 to 108.0 MHz in 100 kHz steps. Japan and Eastern Europe FM frequencies are not compatible with this receiver.

Each time the radio is powered on it will perform speaker diagnostics to determine the number of speakers that are connected. In a 3 or 4 speaker set up the balance and fader controls work as described. In the 2 speaker position the 2 front or 2 rear speakers will work with the balance control but there is no fader. In the 1 speaker position neither the balance or fader controls have any effect. In this setting the receiver and the aux inputs operate in mono mode so that the information from both the right and left channels will be heard in the single speaker. The stereo indicator will not function.

Below the auxiliary jack are 5 color-coded RCA jacks. These are line outputs for an external power amplifier. The Left (white) and Right (red) jacks are stereo line outs, and the black one is for a sub-woofer amp input. To add an amplifier to your setup: With the radio turned off hold down the center pushbutton. Turn the radio on and release the pushbutton. You will notice a green light in the middle of the dial, after 7 seconds it will turn red. Once it begins to blink red if you would like to add an amplifier press the second pushbutton. The light will flash green to show an amp has been added. To deselect an amplifier from the setup press the 4th pushbutton and the light will flash red. Once you have made your selection press the first pushbutton to return to the radio. You must make a selection within a few seconds or these setting will not be saved.

Note: If you program the radio to have an amplifier the fade and balance controls will be active.

Specifications

11-16 Volts DC Negative ground only
Output: 180 W. RMS (45 W x 4 speakers @ 4Ω 14.4 V, 1 kHz)
10 Presets (5 AM, 5 FM) Digitally tuned w/analog display
Dimensions: 8.75" W x 2.55" H x 3" D (behind dash)

3.5mm stereo input jack, Standard (Motorola) antenna jack
Left, right and sub-woofer outputs use standard RCA jacks
Bluetooth® 3.0+EDR, Built in microphone for HFP, HSP, A2DP
Memory retention (presets and user settings) more than 40 years

Visit www.radiosforoldcars.com/bluetooth for more information on how to use all of the Bluetooth® options in this radio or click on the QR code. The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Antique Automobile Radio, Inc. is under license. Other trademarks and trade names are those of their respective owners.



DIAGNOSTICS

No Sound: Check for a good fuse with proper rating. When the radio is turned on, the orange wire should have 12 volts present. Every speaker lead should measure about 6 volts to ground with the radio on and volume low. During start up diagnostics if the radio detects a shorted speaker wire the radio will shut off that speaker lead until the issue is resolved. Radio will mute when no station is received. Make sure antenna is plugged into the proper jack. If an accessory is not connected there will be no audio in auxiliary mode.

Weak or No Reception: Check continuity between the center pin of the antenna plug and the antenna mast. It should read 0 ohms (like a short). Next, check continuity between the center pin of the antenna plug and the car body. It should not read (like an open circuit). If you're in a metal building, reception may be limited. Try it outside.

Ignition Noise: Usually caused by an ungrounded antenna shield. The base of the antenna must make good contact with the car body. This problem often shows up after a good paint job! Make sure the engine grounding straps are in place, clean and tightly bonded to the frame.

Distortion: Check to see if your speakers can handle at least 45 watts RMS. Small speakers that can only reproduce high frequency will distort on bass notes. Make sure speakers are properly installed. Make sure that no speaker is grounded. Every speaker lead should measure about 6 volts to ground with the radio on and volume low. Resistance in the DC power input wiring can cause the amplifiers to "starve". If distortion seems to increase with volume, measure the voltage on the orange wire. If the voltage drops when the volume is raised, it is an indication of resistance between the battery and the radio – usually at the fuse block, but sometimes in the ignition switch. If the backstrap is not bolted to a clean metal ground, try running a heavy ground wire from the ground lug on the radio directly to the firewall.

Radio shuts off after a few minutes: The radio has thermal protection built in to prevent damage from excessive heat. Possible causes are shorted or grounded speaker wires. See if any unused wires can touch anything. Make sure the heater or defroster duct isn't blowing directly on the radio.

Dial pointer issues: If the dial pointer gets stuck at one end or if it is misaligned, hold down one of the preset buttons for 5-10 seconds to realign or free dial pointer. If the dial pointer is stuck at one end of the dial, turn the tuning knob. The dial pointer should try to move while you're turning the knob. Continue to turn the tuning knob until the pointer resets itself.

BE SAFE: Make sure you are familiar with the way this radio works before you go out on the road. Driving demands your full attention. Texting while driving is dangerous and it is illegal in many states. Remember: not all drivers have hands free phones, so the guy next to you may be driving while distracted.

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