



This radio is designed to preserve the original fit, functions and appearance, while providing the best of the latest digital technology in one small case! The modern features that were not available when your vehicle was new are cleverly disguised so that they are functional and easily accessible but not visible. The face, knobs and pushbuttons are designed and manufactured to look and feel just like the original. The AM dial scale looks like the original. The FM dial scale is hidden on the background. There is a small **LED** indicator near the top of the dial background. In AM, the indicator will be red. It will be dim red when off station and bright red when tuned into a station. In FM, the indicator will be dim green when off station, bright green when tuned to a mono station and orange when locked on 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 the features of this radio. Although this radio is considerably smaller than the original, it will fit in the dash without any alterations. Do not use the original, grounded speakers. They will not handle the power or the frequency range of this radio.

## INSTALLATION INSTRUCTIONS

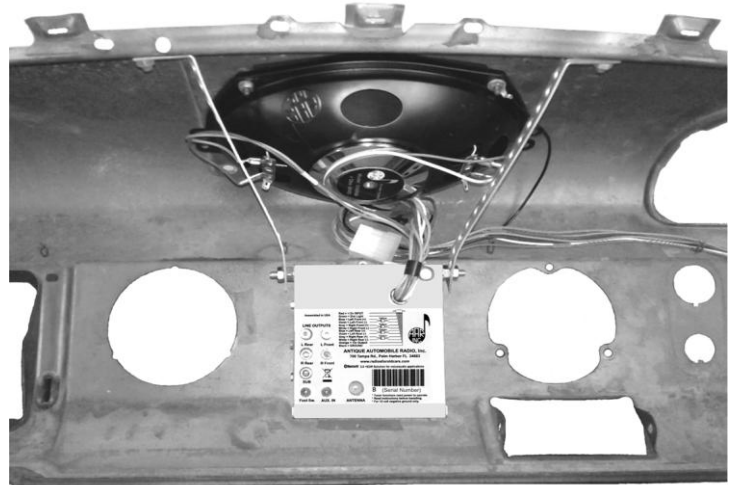
**Before you begin installation:** Be Safe! Disconnect one battery terminal and leave it disconnected until installation is complete. Locate the antenna jack, the auxiliary input, line outputs and other options you may need before you mount the radio. If you want to “bench test” the radio, use a fully 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 damage from wiring errors and power faults in the vehicles electrical system. Never use a fuse rated for more than 10 Amps!

**To remove the original radio:** Remove the antenna and speaker plugs. Remove the in-line fuse. Using a 7/16” wrench remove the hex nuts on both sides of the radio holding the mounting arms in place. Do not detach the arms. Remove the (2) Phillips Head screws from the Dash Trim ring. While holding the radio, slide the mounting arms off of the studs and lower the radio out of the dash. Remove the 11/32” hex nut that holds the Dash Trim ring in place and remove the Dash Trim ring. Remove the mounting arms from the top of the dash with a 7/16” wrench. Remove the speaker. It is held in place by (4) 11/32” hex nuts.

**To install the new radio:** Take precautions and be careful when handling the dial face. The dial glass can easily scratch and crack if too much pressure is applied. Do not attempt to remove the volume or tuning knob as damage may occur.

**Speakers:** See our line of Dual Voice Coil speakers designed specifically for this radio. Use only 4-ohm speakers. A quality full-range speaker with 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 -. 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! Run a 1/4” drill bit through the 4 mounting holes in the new speaker to help with alignment. The illustration shows our 6x9” Dual Voice Coil speaker with the Left Front and Right Front speaker leads attached to the harness from our radio.

Install the new Dash Trim ring in dash. Bolt the new mounting arms to the top of the dash as shown in the illustration. New 7/16” nuts are provided. Remove the outer 7/16” mounting nuts from the sides of the new radio. Put the slotted hole in the mounting arms over the mounting studs on the radio. Put the 7/16” mounting nuts back on the radio mounting studs, but do not tighten them. Carefully slide the radio into



the Dash Trim ring and into the radio. Be careful not to cross-thread them. They should go in easily if everything is properly aligned. Do not tighten them. You should be able to wiggle the radio to make sure it is properly seated in the trim ring. Snug up on each of the trim ring screws until the trim ring is flush with the dash and the radio dial face is centered in the chrome. Now tighten the 7/16” mounting nuts while holding the radio in place. Tighten the Phillips Head screws, but don't over-tighten them.

Your radio has a 12-wire harness for power, lights, speakers, 12v output and ground. See illustration on the back of the radio for more details. The red (fused) wire is the power input. It should be connected to the switched, 12-volt accessory circuit. The radio does not require constant power. The settings are stored internally when power is disconnected. The green wire is for the dial lights. It should be wired to the dash light circuit, so that the radio lights come on when the other gauge lights are turned on. The wiring for the front speakers is indicated by a yellow band. They include a blue(+) and violet(-) set for the left front speaker, and a gray(+) and white(-) set for the right front speaker. The rear speaker wiring is indicated by a green band. They also have a blue(+) and violet(-) set for the left rear speaker and a gray(+) and white(-) set for the right rear speaker. Your system may not use all the speaker connections. Be careful to cap off any unused wires so they cannot touch anything. The orange wire is a switched 12-volt output used to provide power for options like the remote turn-on for an external amplifier, power antenna, etc. If an accessory is powered by the orange wire, the accessory will shut off when power is switched off to the radio. 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 will accept your original antenna plug. The **FOOT SW.** jack is for our foot control accessory that gives your radio a seek switch option mounted to the floor. There are 5 color-coded **RCA jacks**. The Left (white) and Right (red) jacks are front and rear stereo line outputs for an external power amplifier. The single black jack is for an external powered subwoofer. The subwoofer jack sends both the left and right low frequencies to the external device. The speaker wires from the radio harness are still active when the RCA outputs are in use. Giving you the potential for more than 4 speakers. The fader and balance controls will work with all speaker outputs when an amplifier is added to your setup (see additional settings).

## Operating Your Radio

(See the cover page for control locations)

**Power & Volume:** The outer knob turns the radio on and off, as well as changes the volume for the radio.

**Band selection:** Your radio will start with the last radio station you were listening to when the radio was turned off. To change bands, turn the radio off, then on immediately. If the radio has been off for more than a few seconds, when powered on, it will play the last band selected.

**Tuning:** The black knob behind the volume knob is for tuning. Turning the tuning knob moves the dial pointer up or down the dial scale.

Note: the dial pointer and pushbuttons will only function when the radio has power and is turned on.

**Tone:** The horizontal tone control (chrome control below the volume/tuning controls) provides full bass and treble near the center position. Turning the control to the left reduces treble, and to the right reduces bass.

**Balance:** The original radio did not provide for a balance control. We use the **tone** control to set balance. To adjust the balance: (1) Select the AM band (red LED) and tune in to 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. The Status Indicator will blink. After about 5 seconds you will hear the station 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 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 will be permanently stored (until you change it). Balance only works if the radio has at least 2 speakers connected.

**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 a FM station (green or orange LED). After you've listened for a few seconds, tune all the way to the top of the dial. The Status Indicator will blink. After about 5 seconds you will hear the station begin playing at this location. 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 will be permanently stored. Fader only works with 3 or 4 speakers.

**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 for about 5 seconds. The tuner will move to the previous setting and after about 2 seconds, the radio will begin playing at 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. (3) Release the button. Be aware it takes a couple of seconds to store the new pushbutton data to memory so do not turn off the radio immediately after saving a new station. You can continue to set other buttons or tune in to other stations, but if the radio is turned off immediately, the new stations may not be saved. Please wait 5 seconds before powering off the unit after making a change.

Note: The pushbuttons will not function without power.

**Bluetooth®:** To connect your phone, it must first be "paired" to this radio. Make sure Bluetooth is turned on, on your phone. Tune to the bottom of the dial in either band (below the 88 in FM or the 55 in AM). The stereo indicator in the dial will not be illuminated. Press and hold the middle pushbutton for about 5 seconds. You will see the stereo indicator blink blue, indicating a pairing signal has been sent. Search for available devices on your phone. "AARInc.BTvx.x" should be visible for a few minutes. Select it to pair to radio.

Once your phone is paired, it will connect automatically when the radio is turned on.

To enter Bluetooth® mode after initial connection, tune to the bottom of the dial in either band (below the 88 in FM or the 55 in AM). The stereo indicator in the dial will turn bright blue. To exit Bluetooth® mode, manually tune away from the low end of the dial. When listening to the radio (AM or FM) 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. See the illustration on the cover for all the alternate call functions. 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 ends. While streaming music, the buttons function as well. You can play/pause and skip songs using the pushbuttons. See the illustration on the cover for all the alternate music functions. For detailed Bluetooth® instructions go to [www.antiqautomobileradio.com/bluetooth-pairing-instructions/](http://www.antiqautomobileradio.com/bluetooth-pairing-instructions/).

**Auxiliary:** The aux. input jack left of the foot sw. is a standard 3.5 mm stereo jack. It is provided to allow accessories like CD players to be active when not using Bluetooth®. To switch to the auxiliary mode, tune the radio to the bottom of the dial in either band (below 88 in FM or below 55 in AM). The center LED will go out indicating you have reached the end of the dial and are now in aux. mode. The volume, tone, and balance controls will be functional, but the alternate fader will not be accessible. The aux. input is shared with Bluetooth® and Bluetooth® will override any aux. device. If you have a device paired to the radio, you will need to shut off Bluetooth® on that device. You should always adjust the volume level on the external device to match the volume level of the radio.

**Additional Settings:** When you receive your radio, it is set to North American channel spacing and is set to not use an external amplifier. You can change these settings by holding down the middle pushbutton while the power is switched off to the radio. While holding down the middle pushbutton turn the radio on. If an antenna is present, you will notice a green and red 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. The dial pointer will be scanning up and down the dial. Once the dial pointer stops at the far right and the LED is blinking red you can press the 2nd pushbutton to add an external amplifier to your setup (balance and fader will work for the RCA output jacks on the back of the radio) or press the 4th pushbutton if you will not be using an external amplifier (this allows fade and balance to follow only the speakers connected from the harness). Once you have made your selection press the 1st leftmost pushbutton and you will return to normal radio functions. These changes will be permanently stored until they are changed again by repeating the steps above. If no antenna is present, the radio will not be able to determine which channel spacing to use and the LED will be orange to let you know no antenna was detected. You can still select or deselect an external amplifier (as described above) and save that setting by pressing the first leftmost pushbutton to return to normal radio operations.

## DIAGNOSTICS

**Radio not functioning:** Check for 12 volts going into the red (input) wire and about the same voltage coming out of the orange (output) wire. If no power is present, check the in-line fuses (10 amp on red wire & 3 amp on orange wire). Check for a good ground connection. The radio has a protection circuit built in that will not allow the radio to turn on if the radio detects an issue like a grounded or pinched wire. The radio will not turn on and it will be in a protective state until the issue has been resolved. The radio must have 12 volts on the red wire for the dial pointer to move with the tuning knob or pushbuttons.

**No Sound:** The radio will be muted in between stations. Make sure the antenna is plugged into the proper jack and the center LED shows that you are on station (see page 1 for LED descriptions). If an antenna is not connected there will be no sound coming from the speakers on AM or FM. You can check your speakers by using Bluetooth® or auxiliary mode if no antenna is present. Make sure your speakers are connected correctly (+ and -) and each speaker lead measures about 6 volts when measured with a volt meter to ground.

**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. If using a hidden antenna, make sure the signal will not be blocked by metal in the dash. Hidden antennas tend to have limited reception compared to a standard mast antenna. If using a windshield antenna, make sure it is still operational. You can always test reception with a new, standard mast antenna rested on the seat of the vehicle to verify if the antenna is causing any reception issues.

**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 the speakers are properly installed. 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 below 12 volts 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. If the radio works on accessory/battery power but not with ignition power, there may be a grounding issue allowing interference to the radio signal. Check grounds on the ignition system, antenna and radio.

**Dial pointer issues:** If the dial pointer is misaligned, hold down one of the preset buttons for 5-10 seconds to realign the 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.

## Specifications

11.5-16 Volts DC Negative ground only  
(PGPI-HC Power Inverters are available for 6-volt positive ground vehicles)  
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: 6" W x 4.75" H x 2.5" D (behind dash)

3.5mm stereo input jack, Standard (Motorola) antenna jack  
Foot Sw. jack for our optional foot control switch (FC-1)  
Left, right and sub-woofer outputs use standard RCA jacks  
Bluetooth® 5.0+EDR, Built in microphone for HFP, HSP, A2DP  
Memory retention (presets and user settings) more than 40 years  
Easily configured for U.S., European or Australian Frequencies

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