

GB MT500 Radio
Interactive Sound Board Conversion Kit
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TOOLS NEEDED

- Soldering iron (multi temp best)
- Wire snippers
- Precision screwdrivers
- Hot glue or super glue

NOTE: This kit requires some minor soldering work in order to completely install the sound board into an MT-500 radio. Please contact a professional if you are unable to or are not comfortable completing the work.

FUNCTIONAL OVERVIEW

This sound board converts your mt500 radio into an interactive sound playback device! Once powered up, the board plays out several different sounds via a pushbutton.

The sound package comes with:

- programmed and assembled sound board
- small speaker (wired up)
- master power wires
- pushbutton wires

POWER SUPPLY

The sound board runs on a 9V battery using the included battery holder.

OPERATION

The sound board has 6 sounds that can be played out individually. They are numbered as follows:

- 1) Ballroom
- 2) Funky
- 3) That's great
- 4) Come in
- 5) Slimed
- 6) Ahhhhhh

The 2 trigger wires act as the keying mechanism. You can connect these 2 wires to a SPST pushbutton or use the internal MT500 key switch (shown later) for the pushbutton.

To play a desired sound, press and release the pushbutton (or raw trigger wires) the desired number of times corresponding to the sound number above (do not allow more than 1 second to pass in between presses). After 1 second of no button presses, the board will play out the sound corresponding to the number of button presses you just input. For example, to play out sound 4, press and release the

trigger wire pushbutton 4 times in a row. After the 4th push, the board will wait one second and then start playing out the 4th sound.

NOTE: For a radio conversion the trigger wires will be connected to the keying switch inside the Mt-500. This will act as the pushbutton to key in the desired sound.

INSTALLATION INTO MT-500

To install the board into an Mt-500, first you will have to gut the radio of all its electronics. Unscrew the back and take off the battery cover. Also unscrew the antenna and other screws holding the front and back pieces. Gut the entire radio and snip all wires going to the top switches. Also unscrew the speaker and remove it as well. There is also a metal box next to the keying switch inside the mt500 metal frame. Unscrew this box also and remove it.

The sound board will fit in the upper area of the mt-500 front plate. Put the speaker down in first then the board. You can secure the speaker with a couple dabs of hot glue. You can do the same for the sound board once you are ready to reassemble everything.



WIRING THE SOUND BOARD TO THE RADIO

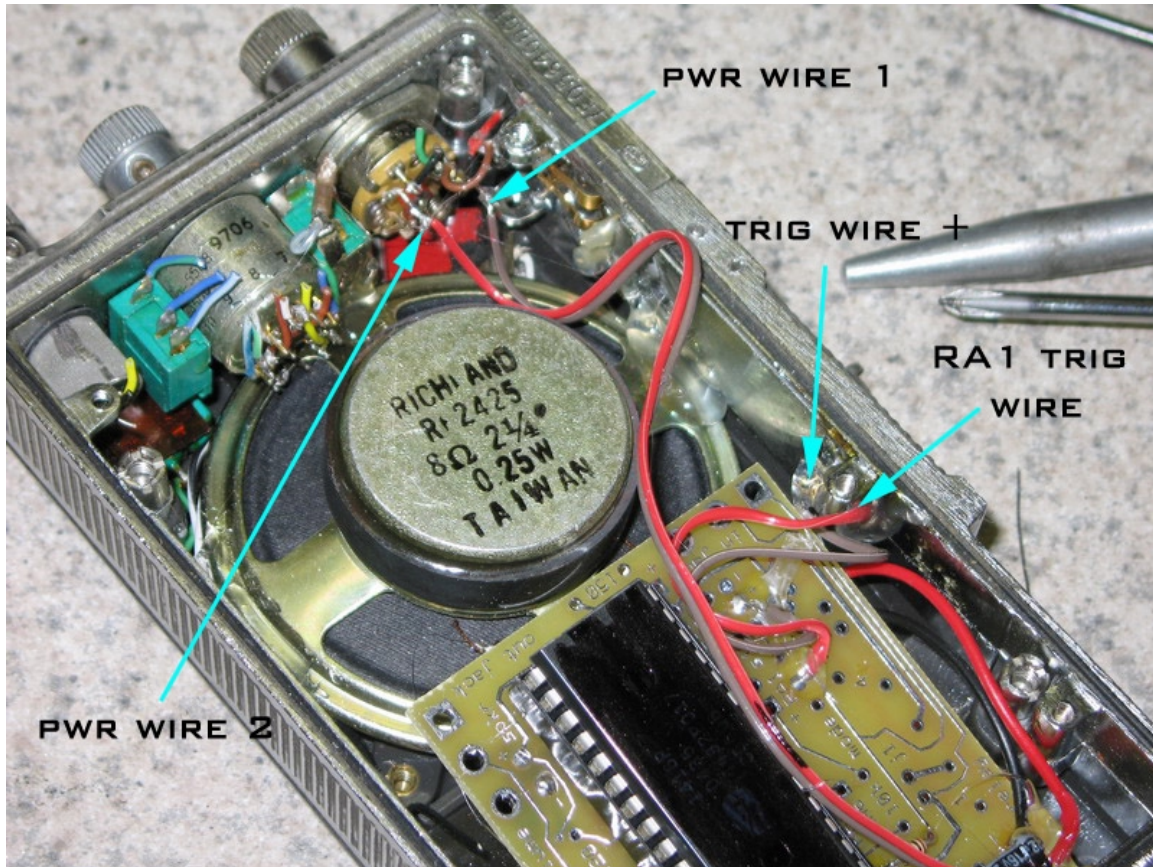
Next the wires from the sound board have to be attached to the radio so it uses the existing switches.

First up are the power (on/off) wires:

The 2 power wires are located next to the 3 pin IC with the metal tab on the sound board. These 2 wires can easily be soldered to the click on/off rotary switch on the top of the radio. During your gutting

procedure, you will have snipped a red wire and a red/white wire that were soldering to legs on this rotary switch. These are the 2 wires you attach the power wires to.

Here is a pic of the power wires soldered to the corresponding rotary switch leads:



Next up are the pushbutton trigger wires:

The trigger wire connections are also shown above. These 2 wires need to hook up to a SPST pushbutton switch, and here we are going to use the existing grey keying button located on the right side of the radio.

The wire coming off the sound board labeled “RA1” needs to be soldered to the metal frame on the inside of the radio. **NOTE: You will need a very hot soldering iron to heat up the metal radio frame enough for the solder to stick.** I suggest going to 800-900 deg to get the solder to stick to the metal frame. If you are unable to do this, you can also use super glue to attach the wire to the metal frame (just make sure it makes good contact!)

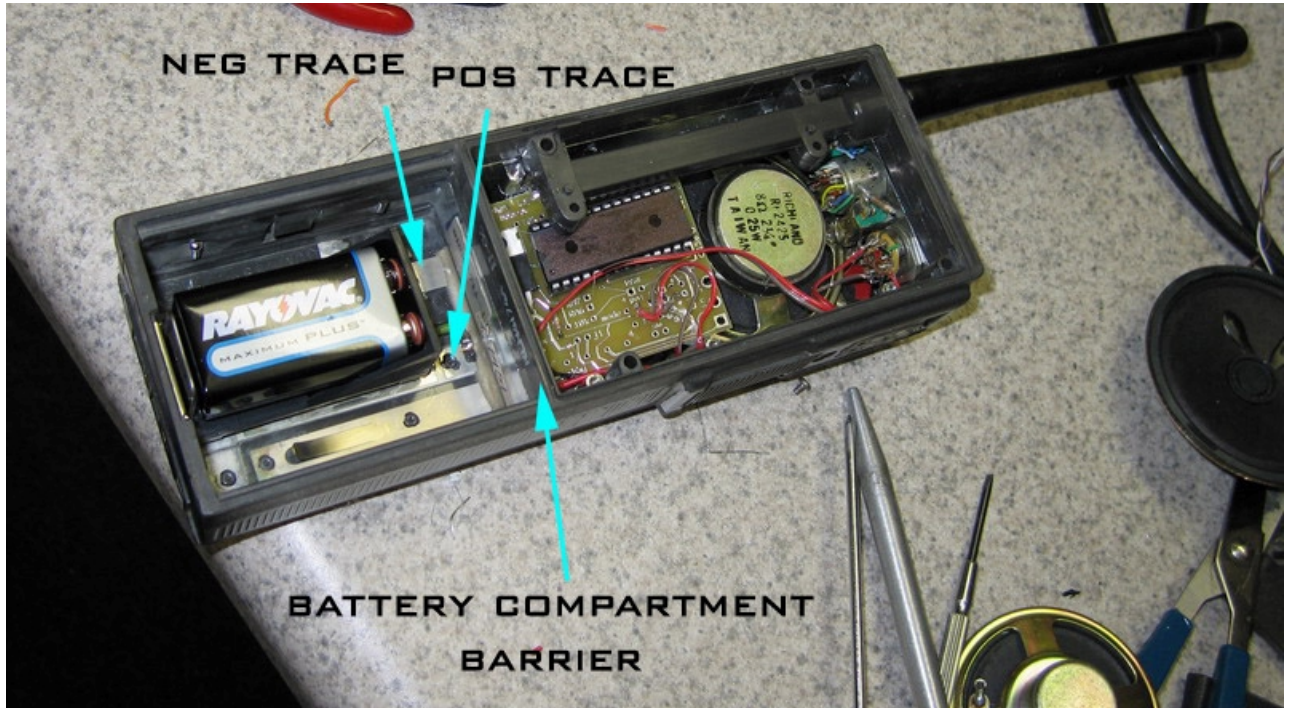
The other trigger wire labeled + needs to be soldered to the nipple connector on the inside of the radio that is attached to the outside key switch. Once you remove the small metal casing from the inside of the radio this small nipple connector will be exposed. It has a brass end on it that you want to solder the trigger wire to. You can use hot glue to secure the wires in place once you are done.

Once you have done this, the outside radio keyswitch will now be used to key in the sound snippet you want to playback. The top on/off rotary knob will turn the sound board on and off, just like on the original radio!

Optional 9V battery wiring:

The 9V battery connector resides in the original battery compartment. If you have a multimeter, you can ohm out the battery traces and actually solder the battery connector to the + and – traces inside the battery compartment, then solder the + and – wires from the sound board to the traces on the other side of the battery compartment barrier. Doing this frees you from having to run wires from the battery compartment to the main compartment while dealing with this plastic barrier. If you don't feel comfortable doing this then just cut a small notch in the plastic barrier for the wires to go through.

The next pic demonstrates this optional wiring of the battery holder:



The above pic shows the battery holder with its leads bent out and soldered to the radio's internal battery traces. Underneath the sound board the positive and negative battery wires are soldered to the corresponding traces on the other side of the battery compartment barrier. This is optional but provides a nice clean wiring solution without having the drill or dremel out the battery compartment barrier. Plus you can use a different battery holder if you need to later on (or even use the original radio battery!).

REASSEMBLY

Before reassembly, make sure the unit is operating. Install a battery and check the functionality before doing final gluing. Make sure the key switch works and the on/off rotary does too. Once that is confirmed you can put the radio back together.

Now you can reassemble the radio!! Put on the plastic middle piece, install the antenna, and replace the back piece. Screw down the back plate and you are done!!

NOTICE: There is no warranty on kits!! It is your responsibility to install the board. Kits cannot be returned! Be careful if you plan to use a battery source that is capable of delivering a lot of current. Contact a professional if you need assistance. Hyperdyne Labs assumes no responsibility for the misuse of this kit.