# JIM KANESS SYSTEMS ENGINEERING

4267 Varsity St., Ventura, CA 93003

## SYLVANIA SCR1206B-PL CLOCK RADIO ADDING A HEADPHONE JACK 22 April 2016

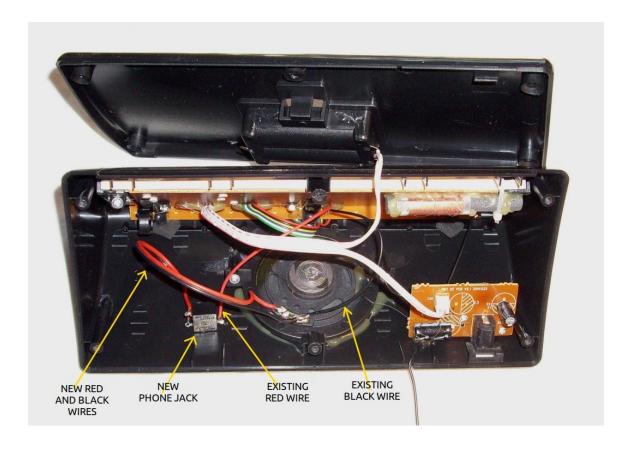
NOTE: The radio and its single speaker are only monaural, not stereo. You can add either a mono phone jack, or a stereo phone jack with both left and right channels connected together for monaural sound in both channels.

PREPARATION: You will need the following items to add to the radio:

- 1. One 3.5 mm Mono or Stereo Headphone Jack.
- 2. About 6-inches of black stranded wire (18 to 24 gauge)
- 3. About 6 inches of red stranded wire (18 to 24 gauge)

TOOLS: You will need the following tools to add a headphone jack:

- 1. Wire cutter and wire stripper (or a sharp knife)
- 2. Small soldering iron, about 50 75 watts
- 3. Few inches of thin rosin core solder
- 4. Phillips screwdriver, #2 bit size (most common size)
- 5. Variable speed drill motor
- 6. Sharp ¼-inch drill bit for the hole to mount the 6-mm bushing on the 3.5 mm headphone jack



### JIM KANESS SYSTEMS ENGINEERING

4267 Varsity St., Ventura, CA 93003

## SYLVANIA SCR1206B-PL CLOCK RADIO ADDING A HEADPHONE JACK Page 2 of 3

### STARTING THE JOB:

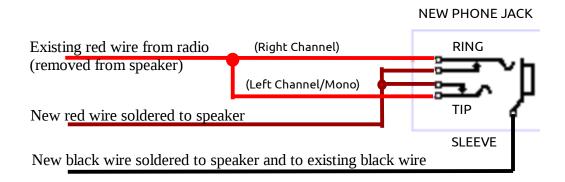
- 1. Unplug the 5-volt power adapter from the radio.
- 2. Remove the two AA batteries from their holder on the bottom of the radio. (NOTE: The radio will forget the time, alarm settings, and radio station presets when you do this.)
- 3. Remove the six Phillips screws from the bottom of the radio.
- 4. Gently separate the bottom plate from the rest of the radio.

### DRILLING THE HOLE FOR THE HEADPHONE JACK:

- 1. The rear wall of the radio where the speaker is mounted offers plenty of room between the speaker and the left end wall to mount the headphone jack. Pick a place where you want to install the headphone jack. Mine is about 2-inches from the left wall and about 1-inch from the bottom opening (see photo).
- 2. Using a <u>sharp</u> ¼-inch drill bit, and using a variable-speed drill motor, use low speed to slowly drill the ¼-inch hole in the plastic rear wall. Drilling plastic can be tricky. Using high speed can melt the plastic and make a messy hole.

#### PRE-WIRING THE HEADPHONE JACK:

- 1. With the headphone jack held in a vise, solder one new black wire to the sleeve terminal: the terminal that connects with the threaded 6-mm mounting.
- 2. Solder one new red wire to the "normally-closed" tip terminal that will feed audio to the speaker when the headphone is NOT plugged in (see the headphone jack instruction sheet for this or the diagram below). If you are using a stereo jack, connect this wire to BOTH the left and right channel terminals (both tip and ring)



## JIM KANESS SYSTEMS ENGINEERING

4267 Varsity St., Ventura, CA 93003

## SYLVANIA SCR1206B-PL CLOCK RADIO ADDING A HEADPHONE JACK Page 3 of 3

### INSTALLING AND CONNECTING THE HEADPHONE JACK:

- 1. Carefully unsolder the existing red wire that connects to one of the speaker terminals.
- 2. Solder the free end of that existing red wire to the audio input terminal on the jack (see the headphone jack instruction sheet for this or the diagram above). If you are using a stereo jack, connect this wire to BOTH the left and right channel terminals (tip and ring).
- 3. Solder the free end of the NEW red wire to the speaker terminal the existing red wire used to be connected to (see #1 above).
- 4. Solder the free end of the NEW black wire to the speaker terminal that already has a black wire connected to it. Be sure that BOTH black wires are now connected to this same speaker terminal.
- 5. Install the headphone jack in the hole you drilled and gently tighten its mounting nut so the jack does not rotate in its hole.

### VERIFYING SUCCESSFUL INSTALLATION:

- 1. Before reinstalling the bottom cover, and with NOTHING plugged into the new phone jack, turn on the radio and verify that sound comes from the speaker.
- 2. Plug in your headphones to the new jack and verify that sound now comes from the headphones and that no sound comes from the speaker.
- 3. Success!
- 4. Replace the bottom cover and reinstall the 6 Phillips screws.
- 5. Reinstall the two AA batteries in their holder.
- 6. Reset the time, alarms, and radio station presets.