# Cylon Sound Board w/ IR Module
# Hyperdyne Labs, © 2004
## http://www.hyperdynelabs.com

The sound package comes with:

- programmed and assembled sound board
- small speaker (wired up)
- master power switch (wired up)
- jack for external amplified speaker w/ volume control

You may also need:

- 1/8" mono cable
- plastic project box or heat shrink wrap

You can also use the following compatible equipment with your voice amp:

- Amplified speaker (Radio Shack #277-1008C)

- PA amp

**POWER SUPPLY**

The sound board runs on batteries. You can use a 9V battery, a 6AA battery pack, or any other DC source in the range of 8-18V. The 6AA battery pack will last much longer than a single 9V. If you do use a 9V, consider a lithium or rechargeable nickel-metal hydride battery for extended battery life.

**OVERVIEW**

The cylon board has a built-on sound and motion detector to give you realistic synchronized sounds and light. The onboard motion detector triggers the board whenever motion is detected. This will start the wig-wag eye sweep along with randomized cylon sayings.

IR sensor:

The IR sensor derives power from the sound board. When the board is powered up, it will take the IR sensor **30 seconds** before it responds to any motion. This is its warm up period. After that, it will activate the board if any motion is detected in its field of view (up to 10ft). Once the sound board plays out a sequence of sounds with the eye sweep lights, the IR sensor will go dormant for 7 seconds. After this time, if motion is once again detected, the sound board will play out another sequence. This wait time functionality will keep your helmet from continuously playing out sounds if someone is moving around him or if he is in a crowded area.

Also, be sure to mount the IR detector so it has a line of site out of the helmet (through a hole, opening, etc). This will give you maximum motion detection distance. If the motion module is blocked and cannot "see" out of the helmet, this will limit its detection range.

The unit has an on/off switch run off some wire, so you can mount this to an easy to reach place.

Sound operation:

The sound board includes 6 cylon phrases and the eye warble effect. Every time motion is detected, a random phrase is played out followed by a random playing of the eye warble sound (sometimes the eye warble sound is not played out).

Powering a separate eye circuit:

The onboard relay will power a separate eye sweep light board if you have one. There are 2 wires coming off the board for + and – voltage. **Be sure to observe the polarity! The red wire is the positive wire and the darker wire is the negative wire. Connect these wires to your eye circuit power wires.**

The switched output from the sound board is +4.5V. Whenever the cylon sound board detects motion, this relay will turn on to automatically synchronize your eye lights and the cylon sounds! After the cylon is done speaking, the sound board will shut off this relay and powerdown your eye circuit.

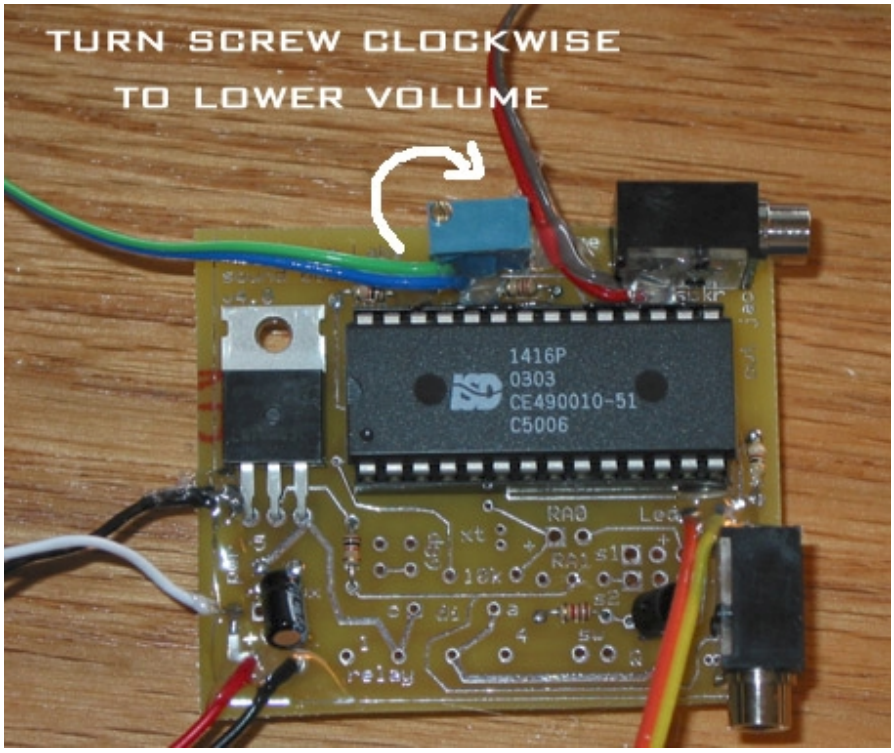
**USING AN EXTERNAL SPEAKER FOR MORE SOUND**

If you want to get **louder** sound, you can hook up any size 8-ohm speaker that you require. You can also connect up the speaker output to a line-level amplifier/speaker combo (computer sound card, portable PA system, amplified speaker, etc) to get much louder sound.

If you need more volume than the attached speaker can provide, then you use the external speaker jack in conjunction with an amplified speaker (listed on page 1) or other external amplifier/speaker setup.

Simply insert a 1/8" mono cable into the jack and run it to your amplified speaker. Turn the blue pot screw to control the volume going into the amplifier.

**NOTE: If you are using the external speaker jack, you must disconnect the existing speaker from the board!** If you don't then the resulting amplified sound will not be good.




The pot screw **turns 25 times** to go through its entire volume range. So if the volume is too loud going into your external amplifier, you need to reduce the volume from the sound board.

Turn the screw in 4 turn increments (clockwise) until your speaker sounds less distorted. If the volume is too low, turn the screw in 4 turn increments (counterclockwise) to raise the volume.

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