Sega Moto Champ
Owner's Manual - Solid State Sound (S^3) Replacement Unit

Model # S^3-02

INTRODUCTION:

- Thank you for purchasing this Solid State Sound unit (or "S^3" for short). It is designed as a "drop-in" replacement for the original 8-track tape deck and requires only minimal modifications to the original wiring in the game's cabinet.

- The S^3-02 contains digital copies of the original motorcycle engine sounds which are heard while a race is in progress, and also the trumpet fanfare tune which is heard if the player's bike finishes in first place.
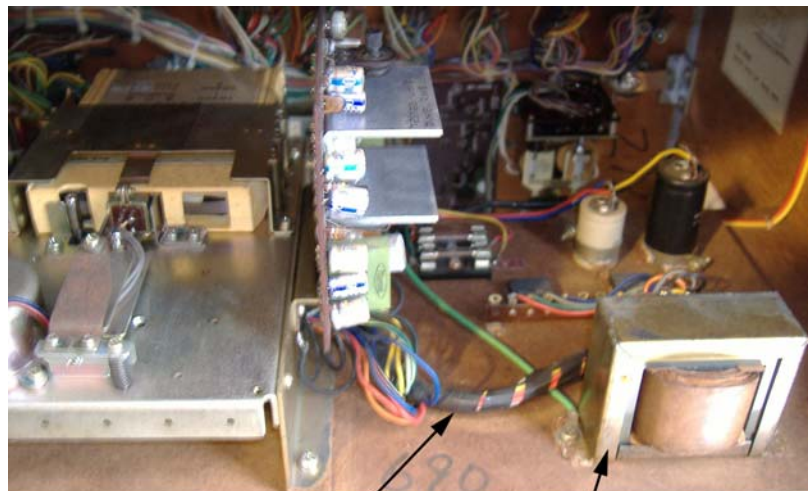
INSTALLATION:

- The original tape deck assembly will be removed and the S^3-02 will be mounted in its place. Careful inspection of the tape deck assembly reveals that many wires are bundled together in a wire loom which is present on the tape deck assembly itself (see picture below). However, only eleven wires actually leave the deck assembly and go off to the rest of the cabinet. These eleven wires must be cut, so that the tape deck can be removed and the S^3-02 unit installed. These cut wires will be re-attached to the S^3-02. Of these eleven wires, there are two wires that will not be re-connected to the S^3-02 because they are no longer needed. One of these unused wires is colored gray with a blue stripe. The other unused wire is solid gray.

- Refer to the picture of the original 8-track tape deck (shown here) and proceed as follows:
    a. Turn off the main power switch on the game.

    b. Locate the red and black wires that connect to the 100V and 0V input taps of the power transformer on the tape deck assembly. Cut these two wires at the transformer terminals and remove them from the tape deck wire loom. Remove enough of these wires from the wire loom so they are clear of the deck assembly itself. Wires must be cut at the transformer so there is adequate wire length to connect to the S^3-02 unit. **IMPORTANT:** Keep these two wires separate from the other wires that will be cut. These are the 100 VAC power wires and must be connected to the A.C. Power Transformer of the S^3-02.

Wire Loom ——   └ Power Transformer

Tape Deck Assembly

    Connecting either of these two wires to any other terminal on the S^3-02 unit will cause permanent damage to the solid state electronics of the S^3-02.

    c. Unplug the speaker from the tape deck (an RCA jack with a solid orange and a solid black wire). Cut off the RCA jack as it will no longer be used.

    d. Cut and remove the remaining seven wires that leave the tape deck assembly. Refer to step "i" below for the wire colors to cut. It is important that all wires be cut as far into the deck assembly wire loom as possible, so that adequate wire length is left, to connect to the S^3-02 unit.

    e. Wrap or insulate the exposed ends of the two unused gray wires with electrical tape or shrink tubing. Secure these wires, out of the way, into the cabinet wiring harness (loom).

f. At this point, the single wiring loom that goes to the original 8-track tape deck, should be free and disconnected from the tape deck assembly. Remove the tape deck assembly from the cabinet. Strip the ends of the cut wires in preparation to connect them to the S^3-02 unit.

g. Place the S^3-02 unit into the cabinet and secure it with wood screws (not supplied).

h. Refer to the S^3-02 unit shown here. Attach the AC power wires (the solid black and solid red wires from step "b" above) to the A.C. Power Transformer on the S^3-02. The wires can be soldered directly to the transformer, or a standard 2-prong AC outlet can be purchased and installed if desired.

A.C. Power

Terminal No.   3 4 5 6 7 8
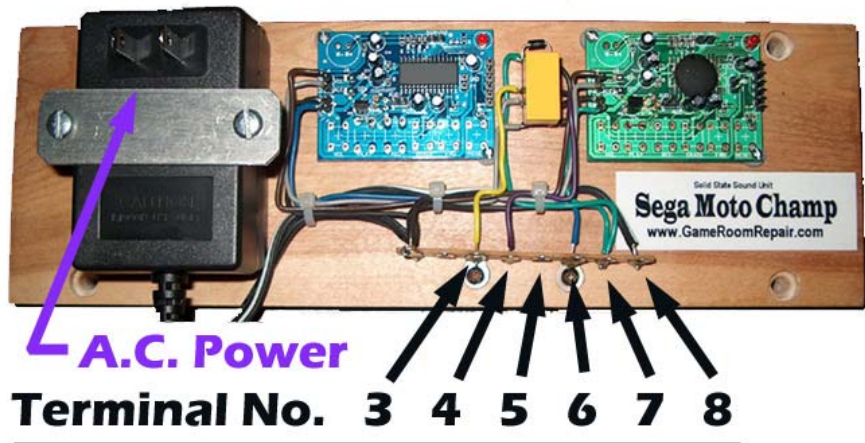
i. Attach the following wires to the corresponding numbered terminals on the S^3-02:
    o Green wire with black stripe   - S^3-02 Terminal 3.
    o Solid black wire (from speaker, not AC Power) - S^3-02 Terminal 4.
    o Two solid orange wires, connect them both to - S^3-02 Terminal 5.
    o Light blue wire with yellow stripe   - S^3-02 Terminal 6.
    o Green wire with yellow stripe   - S^3-02 Terminal 7.
    o Dark blue wire with yellow stripe   - S^3-02 Terminal 8.

j. Installation is complete and the S^3-02 unit is ready to use. If the Moto Champ game is functioning properly, motorcycle and fanfare sounds will be heard at their appropriate times during game play.

DIAGNOSTICS:
To verify that the S^3-02 unit is functioning properly, it must be removed from the game and tested "stand alone."

Additional test items needed are:
- A standard 120VAC, 60Hz. power source.
- A four or eight ohm test speaker and two connecting wires (used to connect the speaker to the S^3-02 unit).
- A temporary jumper wire that will be used to enable or "activate" the playing of motorcycle and fanfare sounds.

To test the S^3-02 unit, proceed as follows:
- Connect a 120VAC power source to the A.C. Power transformer of the S^3-02.
- Connect the test speaker to S^3-02 terminals 3 and 4.
- Connect the temporary "activate" jumper wire between S^3-02 terminals 6 and 8. This will cause the motorcycle engine sounds to be played through the test speaker.
- Remove the temporary "activate" jumper wire from S^3-02 terminals 6 and 8. Then connect the temporary "activate" jumper wire between S^3-02 terminals 7 and 8. This will cause the trumpet fanfare tune to be played through the test speaker.
- Test complete.