

SCELBI COMPUTER CONSULTING INC.

ASSEMBLY INSTRUCTIONS - SCELBI CARD #: 2102

AUDIO TAPE OUTPUT CARD

DESCRIPTION

The SCELBI #2102 audio output card is one part of a two card set that allows the user to utilize a low cost Audio tape cassette recorder as a peripheral device for storing programs or data for the SCELBI-8H mini-computer. The data or programs can then be reloaded back into the memory of a SCELBI-8H whenever desired. The system is about five times faster than a typical teletype paper tape System. It thus greatly increases the efficiency with which programs can be loaded into the computer, or saved for future use. The low cost of the unit makes it an extremely attractive addition to any SCELBI-8H mini-computer system.

KIT ASSEMBLY

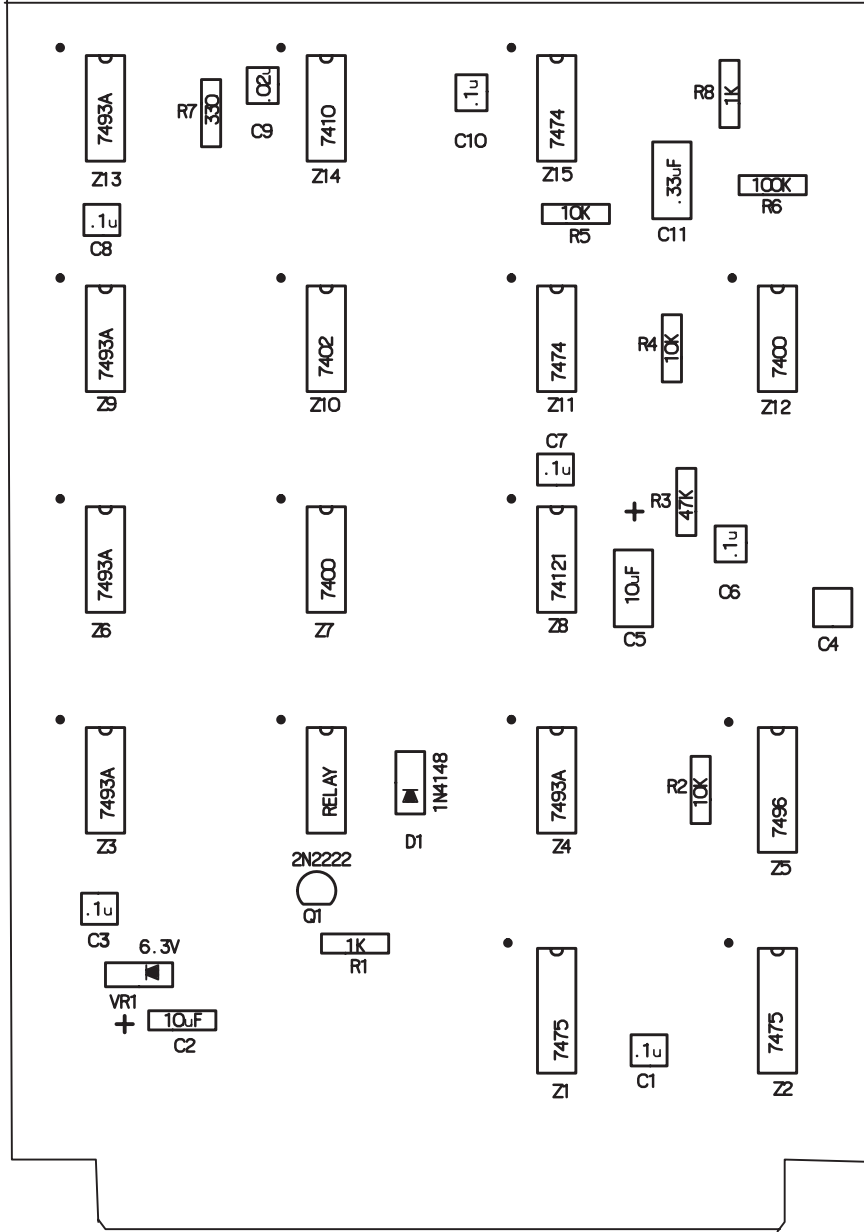
You should refer to the assembly drawing shown on the next page during the assembly process. The drawing is to scale and shows the exact location of each part on the P.C. card.

INSTALLATION OF INTEGRATED CIRCUITS

- () Install two type 7475 integrated circuits in the locations labeled on the assembly drawing as: Z1 & Z2. When they have been installed, turn the card over and solder the pins on the I.C. to their foil pad.
- () Install five type 7493A integrated circuits at the locations specified for Z3, Z4, Z6, Z9 and Z13. Then solder the pins of the integrated circuits to the card foil.
- () Install and solder one type 7496 integrated circuit at the location shown for Z5.
- () Install and solder one type 7400 integrated circuits at the locations shown for Z7 and Z12.
- () Install and solder one type 74121 integrated circuit at the location shown for Z8.
- () Install and solder one type 7402 integrated circuit at the location shown for Z10.
- () Install and solder two type 7474 integrated circuits at the locations shown for Z11 and Z15.
- () Install and solder one type 7410 integrated circuit at the location shown for Z14.

INSTALLATION OF RELAY SOCKET

- () Install and solder one 14 pin DIP socket at the location shown for RELAY.



INSTALLATION OF RESISTORS

- () Install two 1K ohm (BRN-BLK-RED) 1/4 watt resistors at the locations shown on the assembly drawing for R1 and R8.
- () Install three 10K ohm (BRN-BLK-ORN) 1/4 watt resistors at the locations shown on the assembly drawing for R2, R4 and R5.
- () Install one 47K ohm (- - orange) 1/4 watt resistor at the location shown on the assembly drawing for R3.
- () Install one 100K ohm (brown- black- yellow) 1/4 watt resistor at the location shown on the assembly drawing for R6.
- () Install one 330 ohm (orange-orange-brown) 1/4 watt resistor at the location shown on the assembly drawing for R7.

INSTALLATION OF DIODES

- () Install one 6.3 volt zener diode at the location shown for VR1. Be sure and observe correct polarity as indicated on the drawing.
- () Install one 1N4148 diode at the location shown for D1. Be sure and observe correct polarity as indicated on the drawing.

INSTALLATION OF TRANSISTOR

- () Install one 2N2222 transistor at the location shown for Q1. Be sure and observe correct orientation.

INSTALLATION OF CAPACITORS

- () Install two 10 MFD electrolytic capacitors in the positions labeled on the assembly drawing for C2 and C5. Be certain that the positive (+) end of the capacitor is oriented in the same direction as that shown on the drawing and indicated on the P.C. card.
- () Install six .1 UFD disk capacitors in the positions labeled on the assembly drawing as: C1, C3, C6, C7, C8 and C10.
- () Install one .02 UFD disk capacitor at the location identified on the assembly drawing for C9.
- () Install one .33uF film capacitor at the location identified on the assembly drawing for C11.

INSTALLATION OF RELAY

- () Install one relay component at the location shown for RELAY. Be sure and observe correct orientation.

INSTALLATION OF FUSE CLIPS

- () Install the two P.C. Mounting fuse clips in the positions shown to hold fuse F1. Insert the two tabs on the base of each clip into the holes provided for each clip, bend the tabs slight against the foil on the other side of the board to hold them in place and then solder each tab to the foil. Ensure that the clips line up so that a fuse will seat properly when installed.
- () Install a .75 ampere type 8AG fuse in the fuse clips for F1.

INITIAL INSPECTION AND TESTING

() At this time carefully inspect both sides of the board to ascertain that there are not any solder shorts between P.C. foil lands. Be especially observant on the component side of the card around the I.C. pins. Remove any solder shorts that are found.

() Use an ohm meter to make the following measurements:

Meter between pins A1 and A3 of the card connector - and then reverse the meter leads to obtain a second reading. The reading in both directions should be greater than five (5) ohms. (One reading will typically be several times higher than the other.) If the readings are less than five ohms look for solder shorts between the +5 volt supply lines and the common return lines on the card.

FINAL TESTING

Final testing of the card must be done when the card is connected to a SCEL-BI minicomputer system.