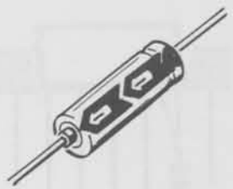
Part of 595-3486

ILLUSTRATION BOOKLET

PARTS PICTORIAL

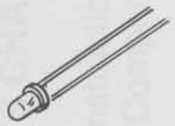
A1

A2



A3

B1

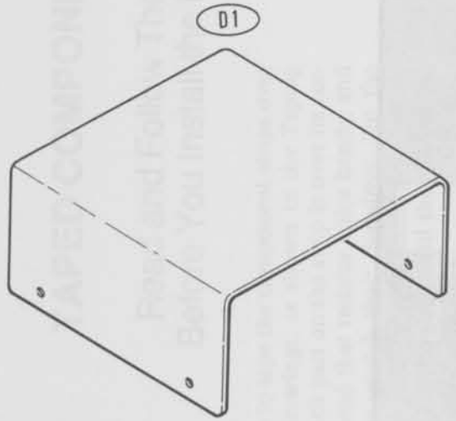


C1

C2

ALWAYS IDENTIFY AN I.C BY THE PART NUMBER OR THE TYPE NUMBER NOTE: THE STYLE MAY BE SLIGHTLY DIFFERENT THAN SHOWN.

D1



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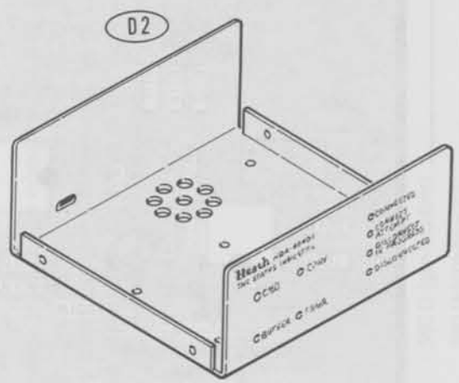

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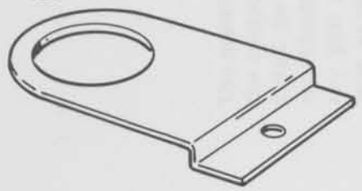


E1

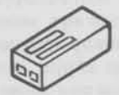
E2

E3

E4

F1

F2



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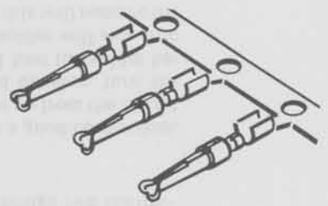

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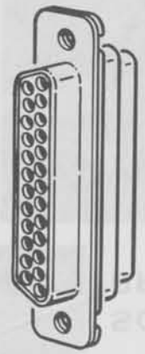

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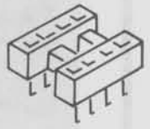

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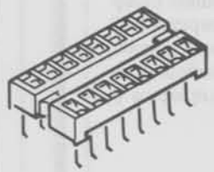
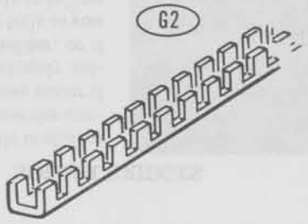
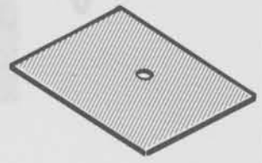


G1

G2

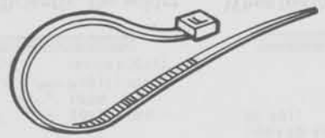


G3



H1

H2



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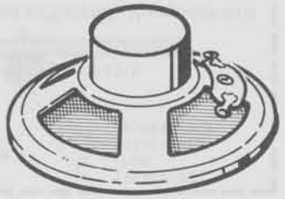
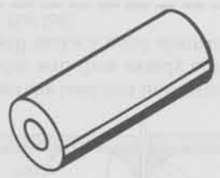
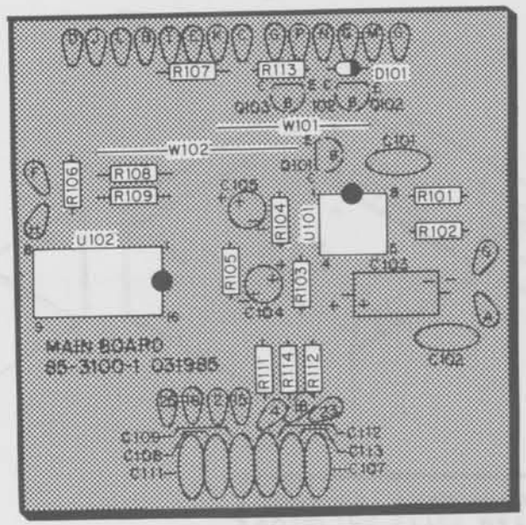


H4

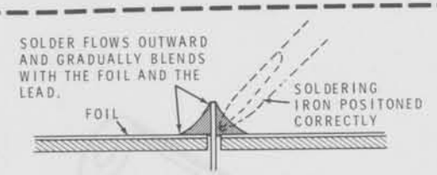


Model HDA-4040-1



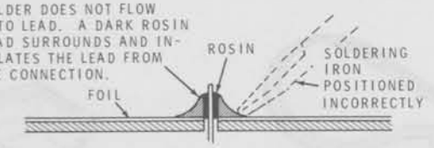
PICTORIAL 1-1

A GOOD SOLDER CONNECTION

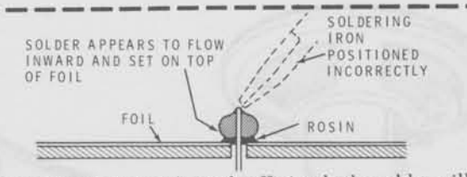


When you heat the lead and the circuit board foil at the same time, the solder will flow evenly onto the lead and the foil. The solder will make a good electrical connection between the lead and the foil.

POOR SOLDER CONNECTIONS



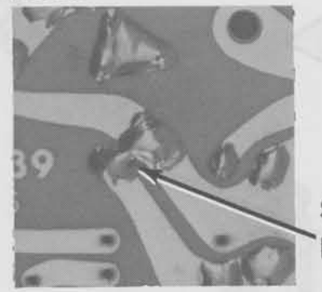
When the lead is not heated sufficiently, the solder will not flow onto the lead as shown above. To correct, reheat the connection and, if necessary, apply a small amount of additional solder to obtain a good connection.



When the foil is not heated sufficiently the solder will blob on the circuit board as shown above. To correct, reheat the connection and, if necessary, apply a small amount of additional solder to obtain a good connection.

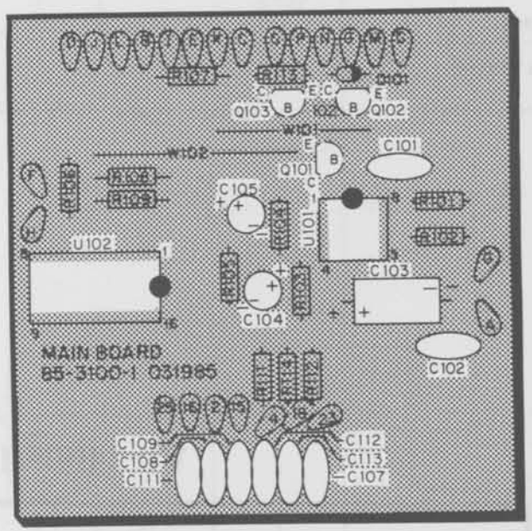
SOLDER BRIDGES

A solder bridge between two adjacent foils is shown in photograph **A**. Photograph **B** shows how the connection should appear. A solder bridge may occur if you accidentally touch an adjacent previously soldered connection, if you use too much solder, or if you "drag" the soldering iron across other foils as you remove it from the connection. A good rule to follow is: always take a good look at the foil area around each lead before you solder it. Then, when you solder the connection, make sure the solder remains in this area and does not bridge to another foil. This is especially important when the foils are small and close together. NOTE: It is alright for solder to bridge two connections on the same foil.



Use only enough solder to make a good connection, and lift the soldering iron straight up from the circuit board. If a solder bridge should develop, turn the circuit board foil-side-down and heat the solder between connections. The excess solder will run onto the tip of the soldering iron, and this will remove the solder bridge. NOTE: The foil side of most circuit boards has a coating on it called "solder resist." This is a protective insulation to help prevent solder bridges.

Figure 1



PICTORIAL 1-2

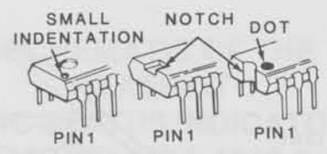
IC INSTALLATION

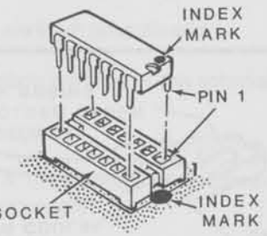
CAUTION: Integrated circuits (ICs) are complex electrical devices that perform many complicated operations in a circuit. These devices can be damaged during installation. Read all of the following information before you install the ICs.

IMPORTANT: An IC packaged in conductive foam can be damaged by static electricity once you remove the IC. Once removed, do not lay the IC down or let go of it until you install it in its socket. When you bend the leads of the IC, hold it in one hand and place the other hand on the work surface before you touch the IC to that surface. This will equalize the static electricity between the work surface and the IC.

The pins of the ICs may be bent out at an angle as shown in A; if this is the case, they will not line up with the holes in the IC socket. Before you install an IC, lay it down on its side as shown in B and very carefully roll it toward the pins to bend the lower pins into line. Then turn the IC over and bend the pins on the other side in the same manner.

Before you install an IC, you must first identify the pin 1 end. Make sure this end of the IC is positioned over the index mark on the circuit board, as shown. Also make sure that all of the pins are started into the socket. NOTE: An IC pin can become bent under the IC and it will appear as though it is correctly installed in the socket.





If it ever becomes necessary to remove an IC from its socket, insert the end of a screwdriver blade under the IC and gently move it up and down until the pins are free of the socket holes. Then carefully remove the IC.

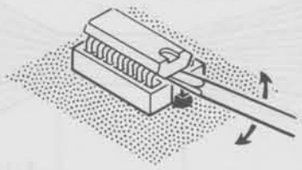
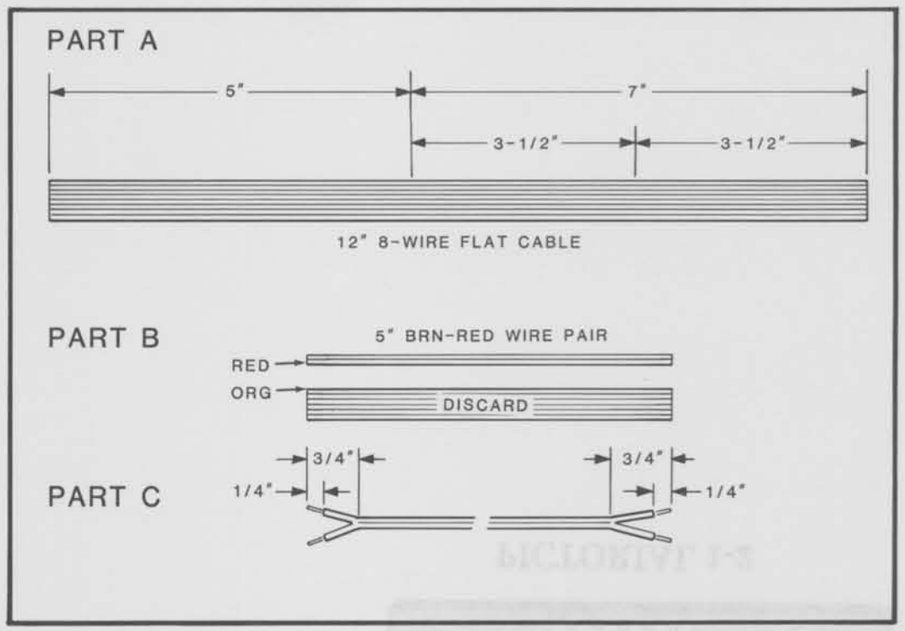
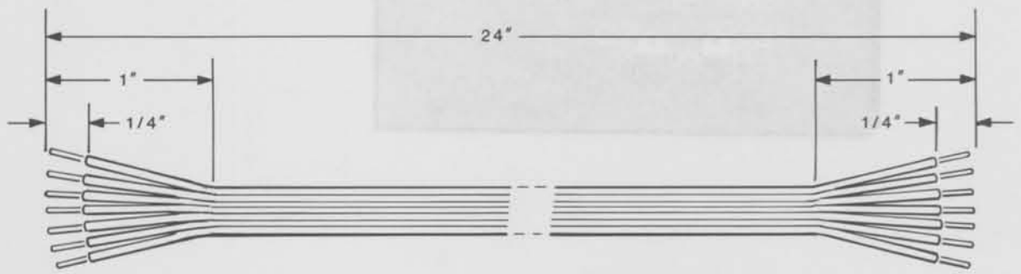


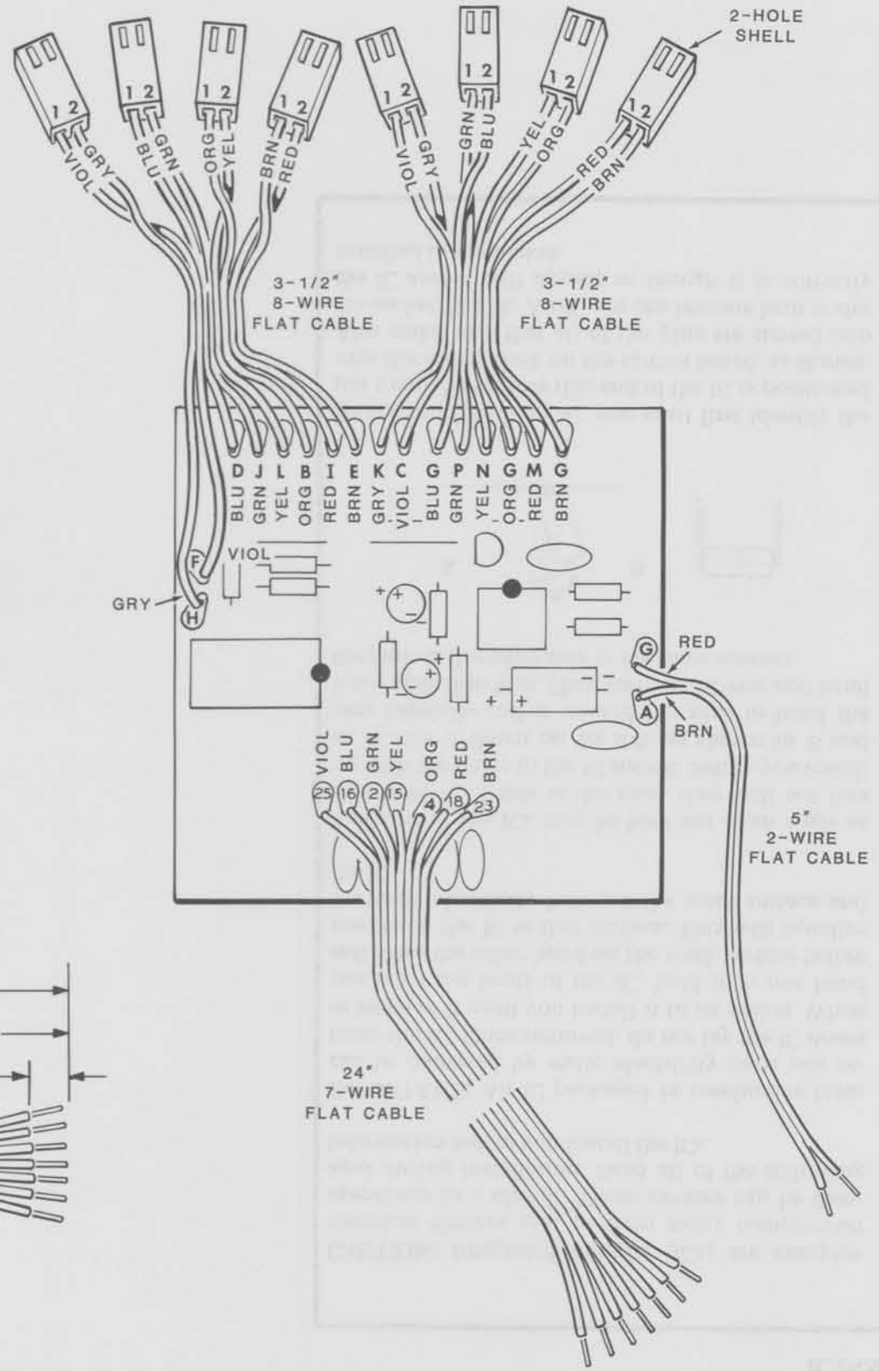
Figure 2



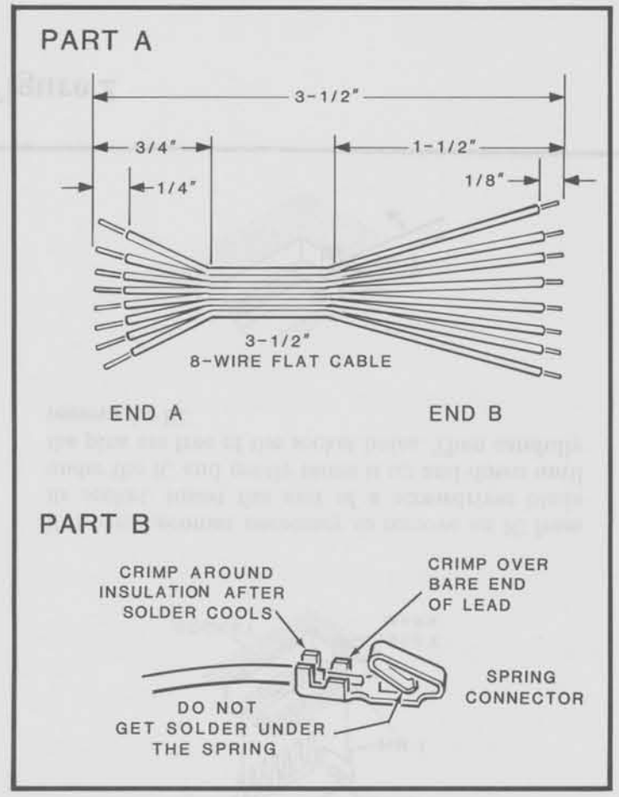
Detail 1-3A



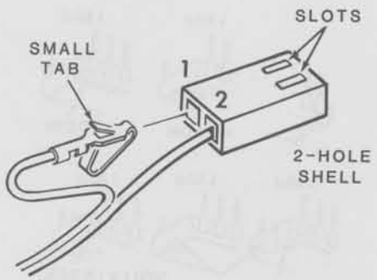
Detail 1-3D



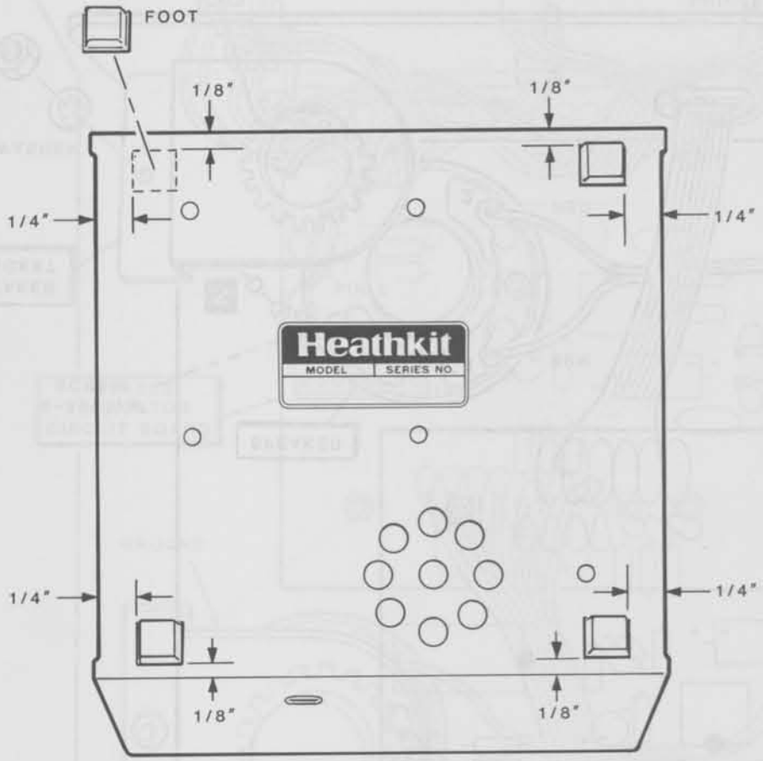
PICTORIAL 1-3



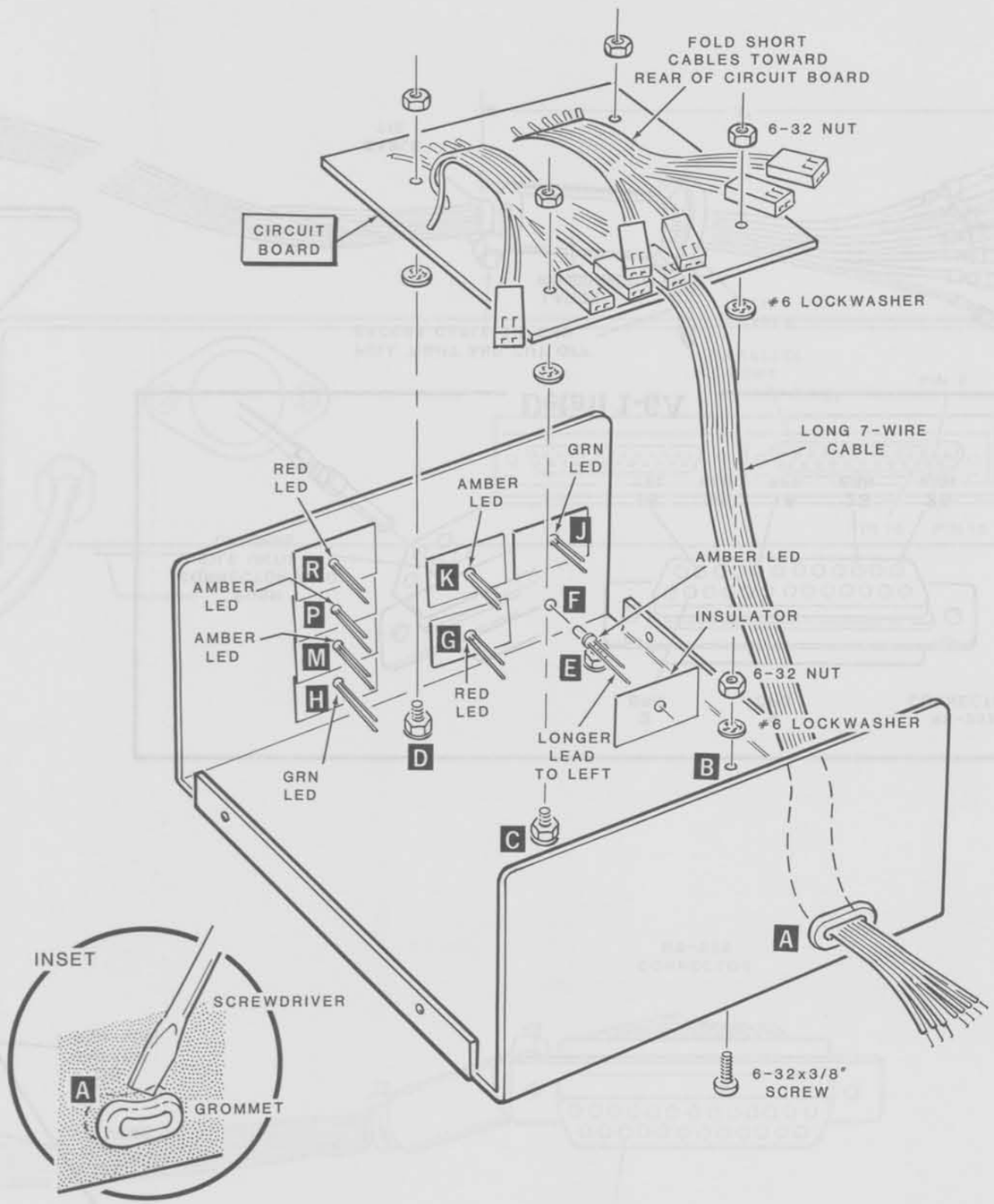
Detail 1-3B



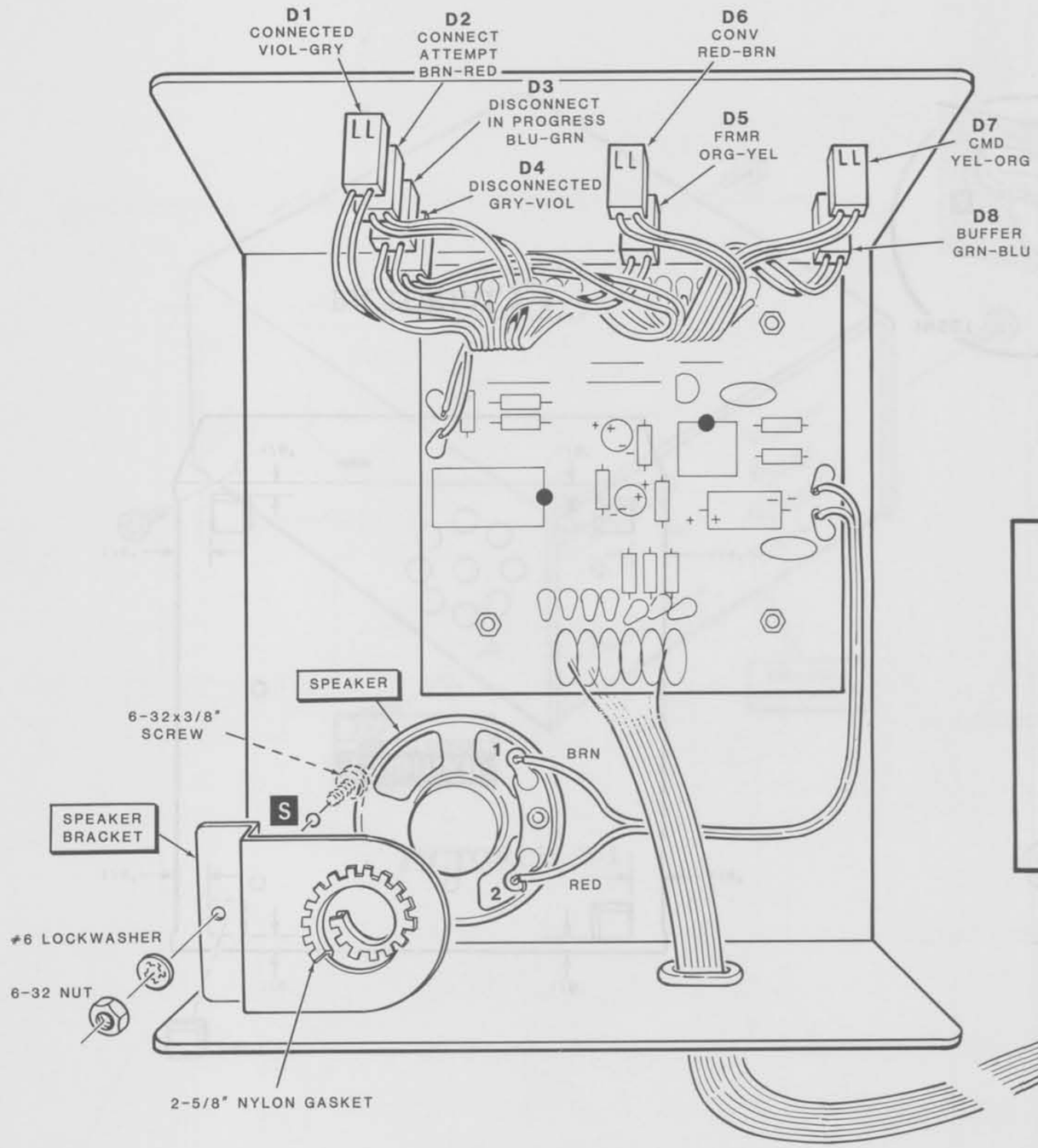
Detail 1-3C



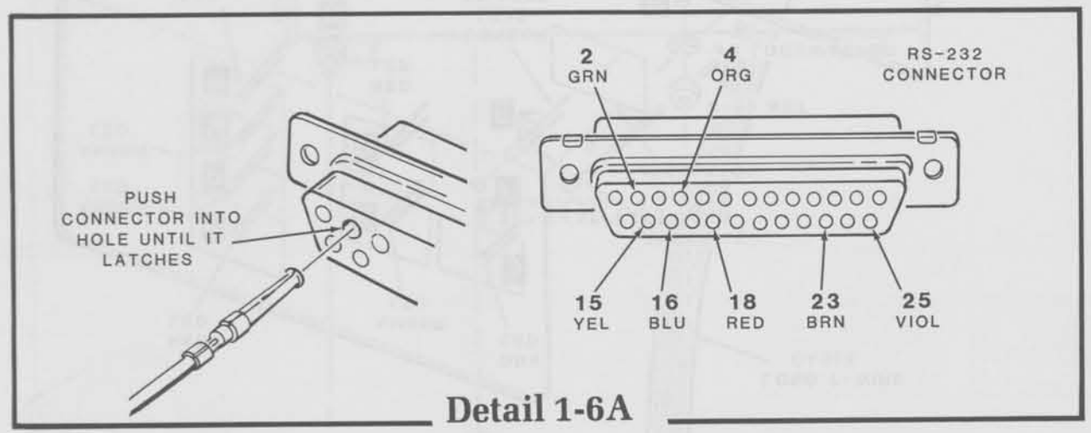
PICTORIAL 1-4



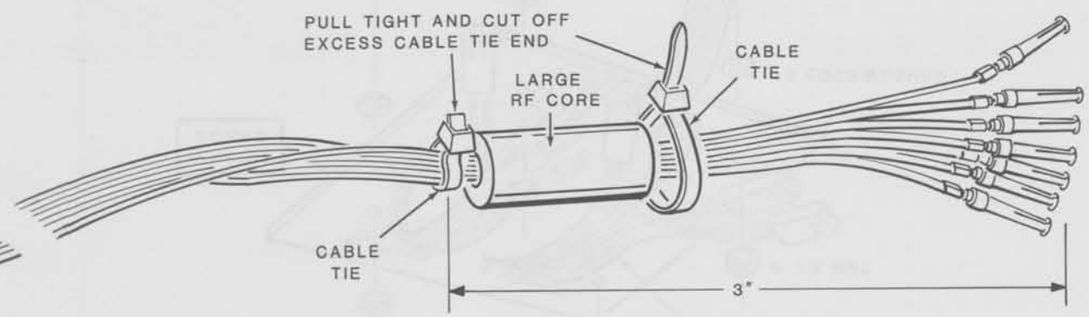
PICTORIAL 1-5

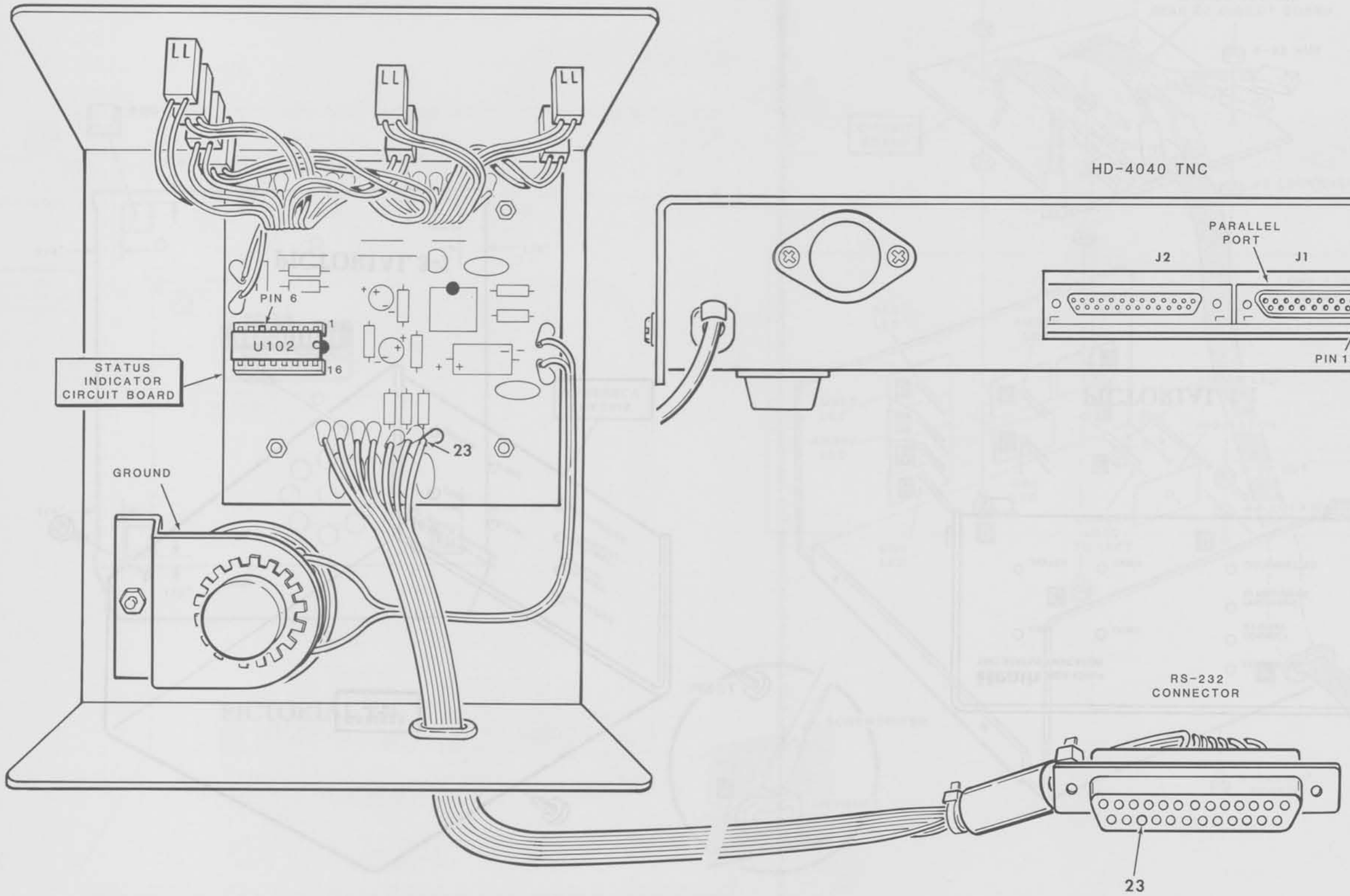


PICTORIAL 1-6

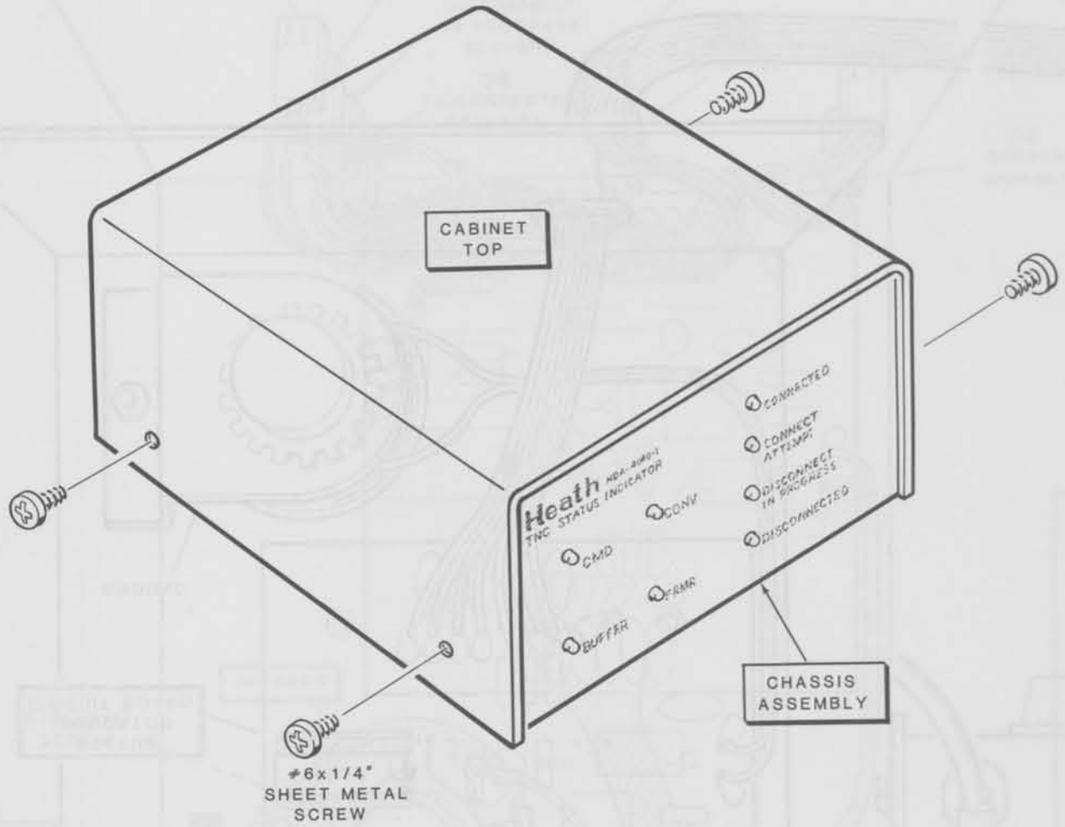


Detail 1-6A

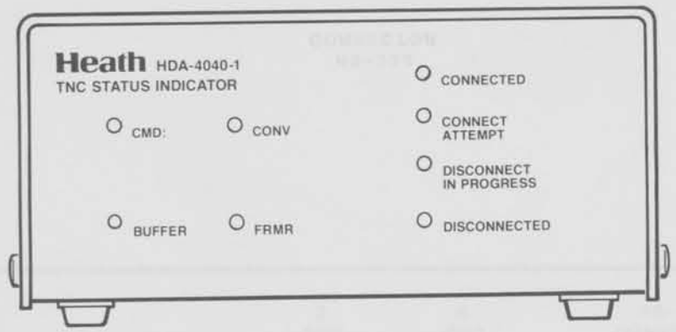




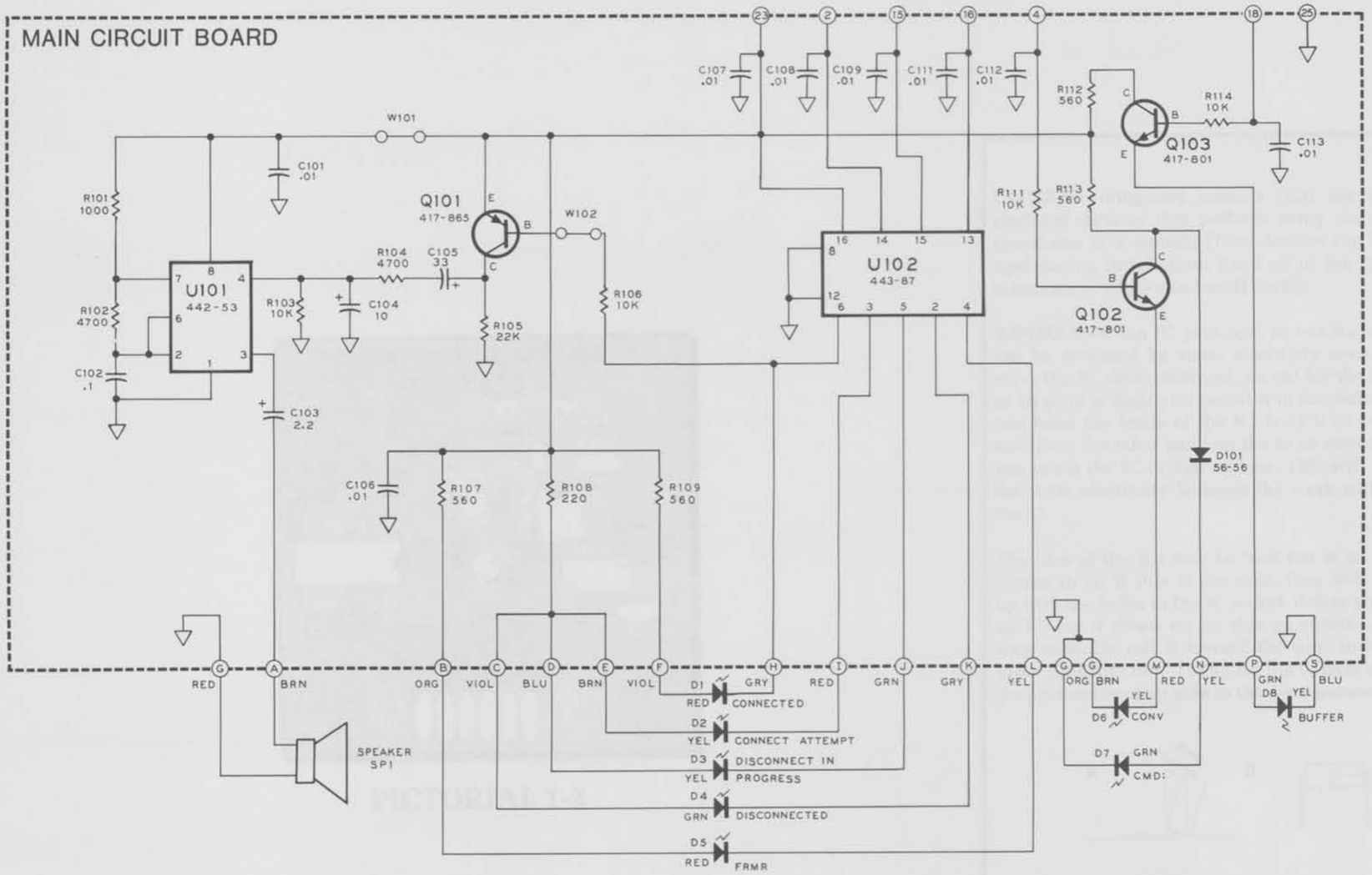
PICTORIAL 2-1



PICTORIAL 3-1



PICTORIAL 4-1



SCHEMATIC OF THE HEATHKIT® TNC STATUS INDICATOR MODEL HDA-4040-1

NOTES:

1. All resistors are rated at 1/4-watt, and have a 5% tolerance unless otherwise noted (K = 1000).
2. Capacitor values are in μF (microfarads).
3. The following symbols are used on this schematic diagram:

   ▽ Circuit board ground.

   (A) (Lettered) A circuit board wire connection to a chassis-mounted component.

   (18) (Numbered) A circuit board wire connecton to a like number on TNC parallel port P1.

   ⬭ A DC voltage reading taken with a high input impedance digital voltmeter from the point indicated to chassis ground. Voltages may vary ± 10%.

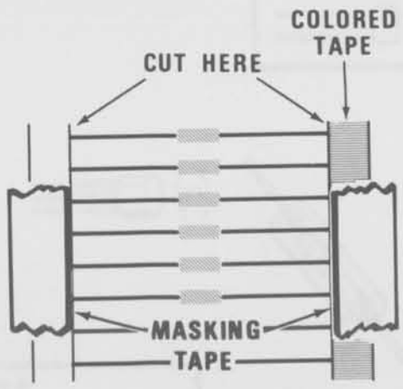
4. Refer to the "Circuit Board X-Ray View" on Manual Page 23 for the physical locations of parts.

TAPED COMPONENTS CHART

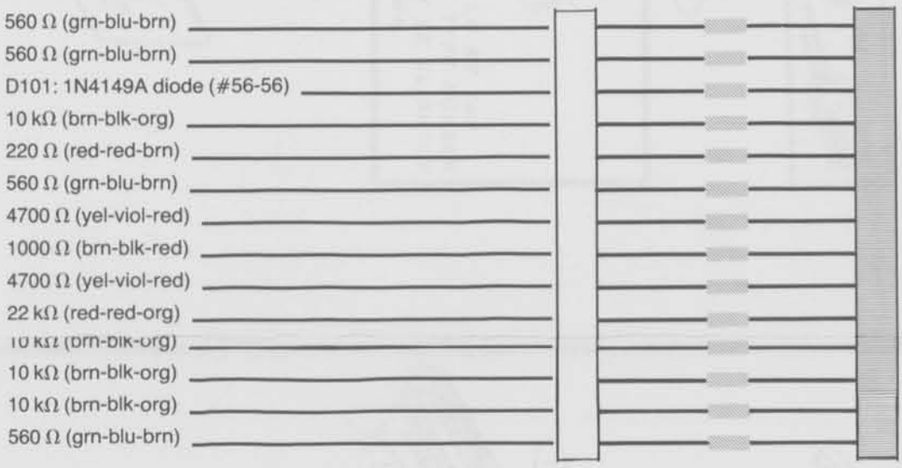
Read and Follow These Instructions Before You Install the First Component.

Use masking tape to tape the component strips over the component drawings, as shown in the Taping Detail. Be sure each part on the strip is over its correct illustration; and that resistor color bands, and any part numbers, match their drawings. Cut the tape, as necessary, to align each section. Do not remove any parts from the strip until they are called for in the assembly instructions.

NOTE: Never attempt to pull the components free from the tape; gum residue from the the tape could cause an intermittent solder connection. Use diagonal cutters to remove each part as it is called for in the assembly instructions. Cut the leads at the inside edge of the tape as shown.



Taping Detail



CUT HERE