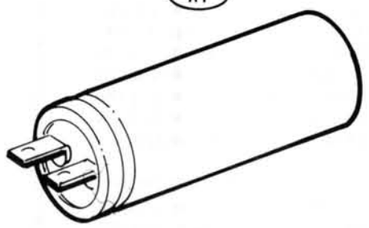
ILLUSTRATION BOOKLET

Part of 595-4322

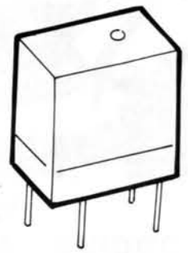
POWER UNIT PARTS PICTORIAL

A1

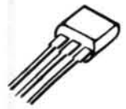


A2

A3

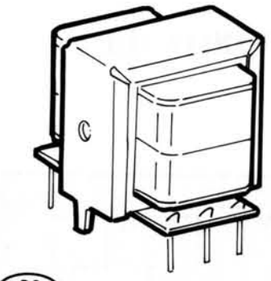


A4

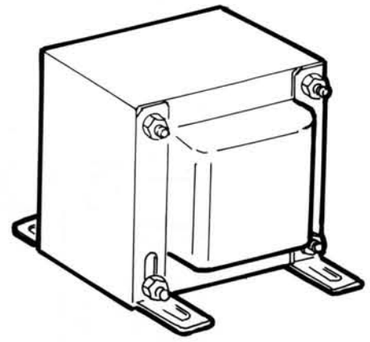


A5

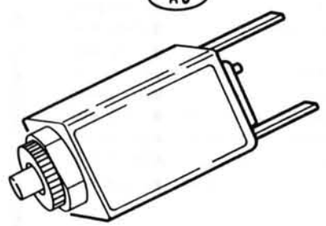
A6



A7

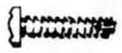


A8



B1

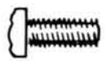
B2



B3

B4

B5

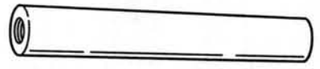


B6

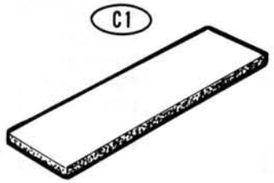
B7

B8

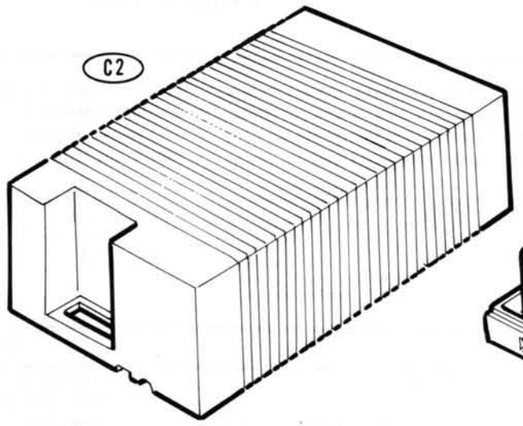
B9



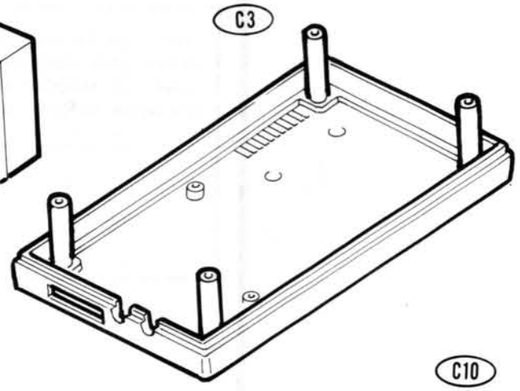
C1



C2



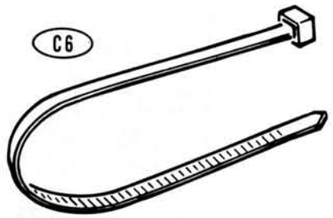
C3



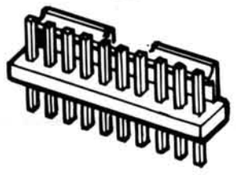
C4

C5

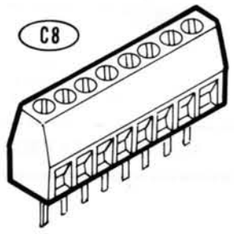
C6



C7



C8



C9

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD REPLACE FUSE ONLY WITH SAME TYPE AND RATING 390-1255

C10

CAUTION

To prevent electrical shock hazard, disconnect line cord before opening.

Model HD-1780

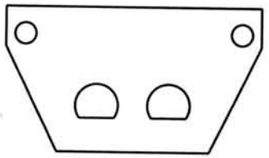
120/240 V 50/60 Hz 250 W max.

Wired for ____ Volts

EIA-416

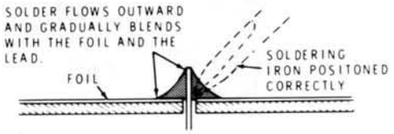
C11

C12



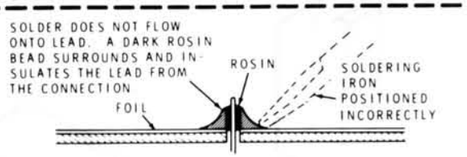
D1

A GOOD SOLDER CONNECTION

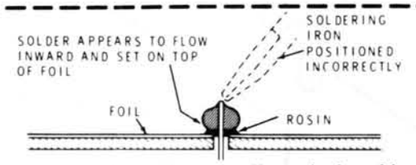


When you heat the lead and the circuit board foil at the same time, the solder will flow evenly onto the lead and the foil. The solder will make a good electrical connection between the lead and the foil.

POOR SOLDER CONNECTIONS



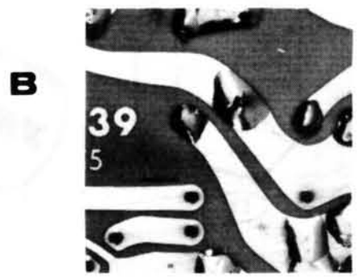
When the lead is not heated sufficiently, the solder will not flow onto the lead as shown above. To correct, reheat the connection and, if necessary, apply a small amount of additional solder to obtain a good connection.



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.

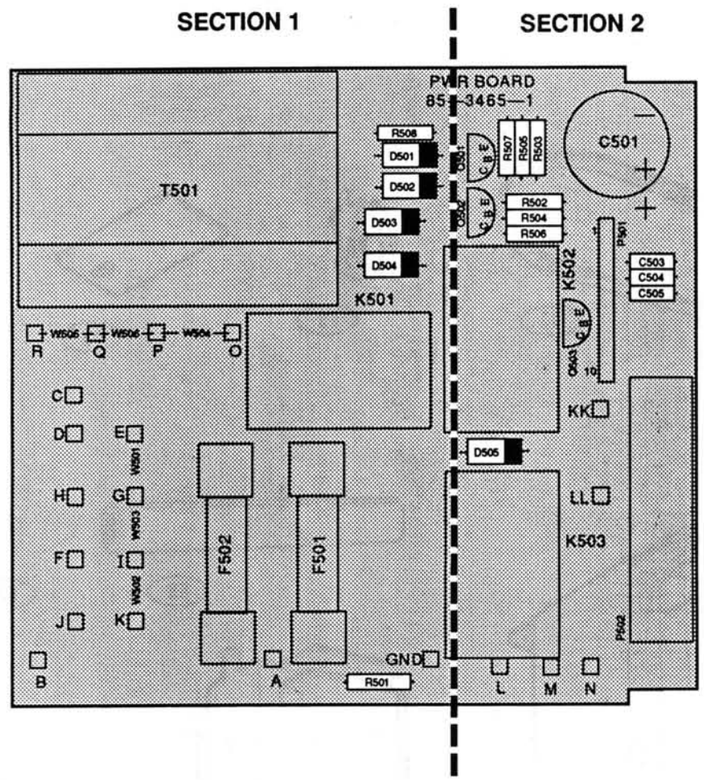
SOLDER BRIDGES

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.

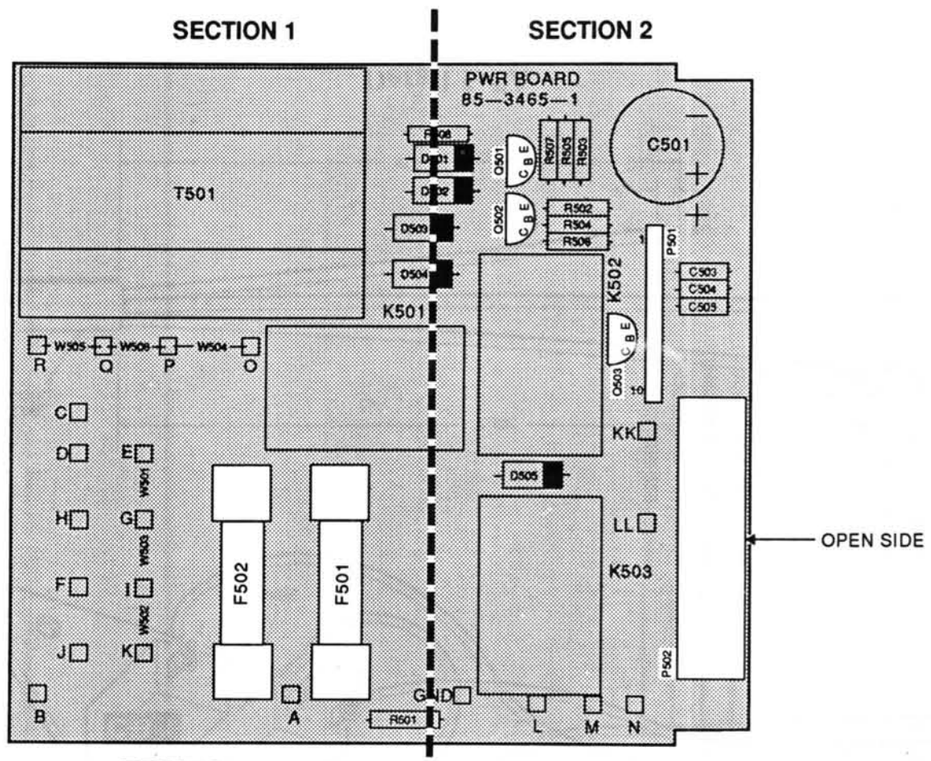


Use only enough solder to make a good connection, and lift the soldering iron straight up from the circuit board. If a solder bridge should develop, turn the circuit board foil-side-down and heat the solder between connections. The excess solder will run onto the tip of the soldering iron, and this will 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.

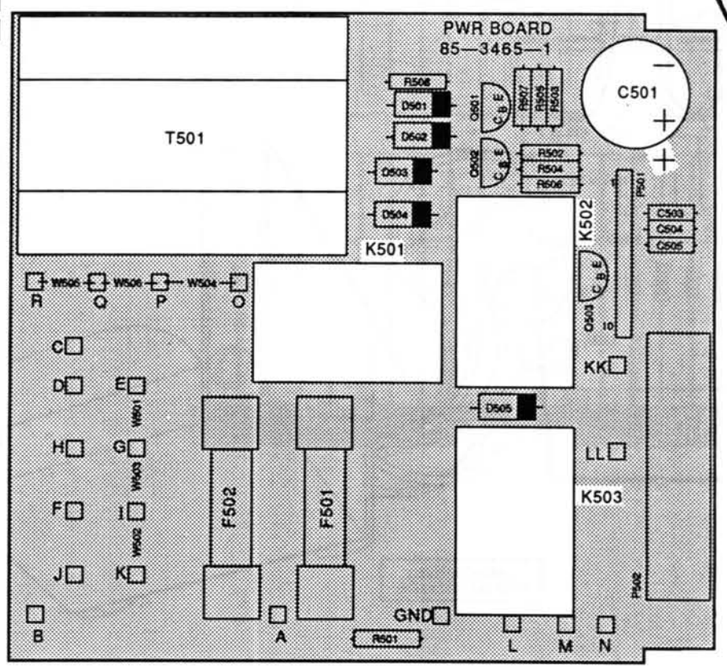
Detail 1-1A



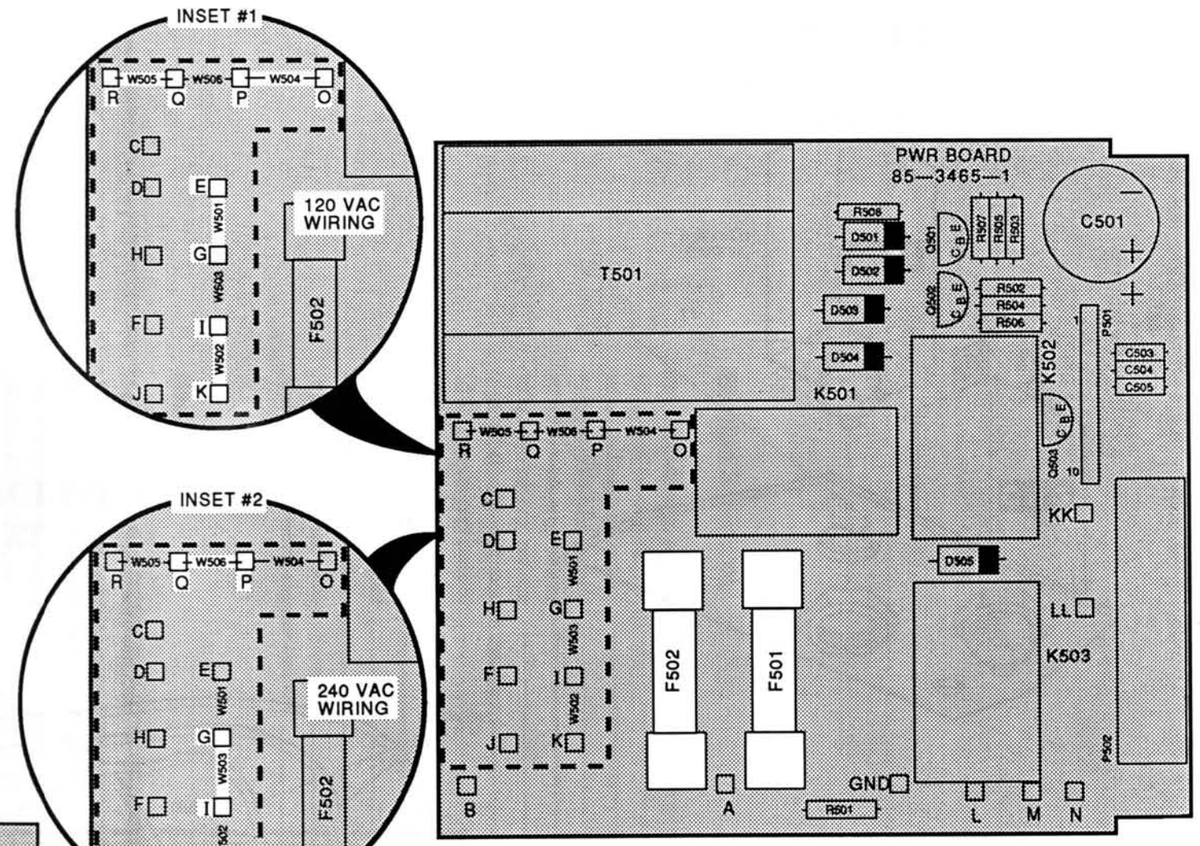
PICTORIAL 1-1



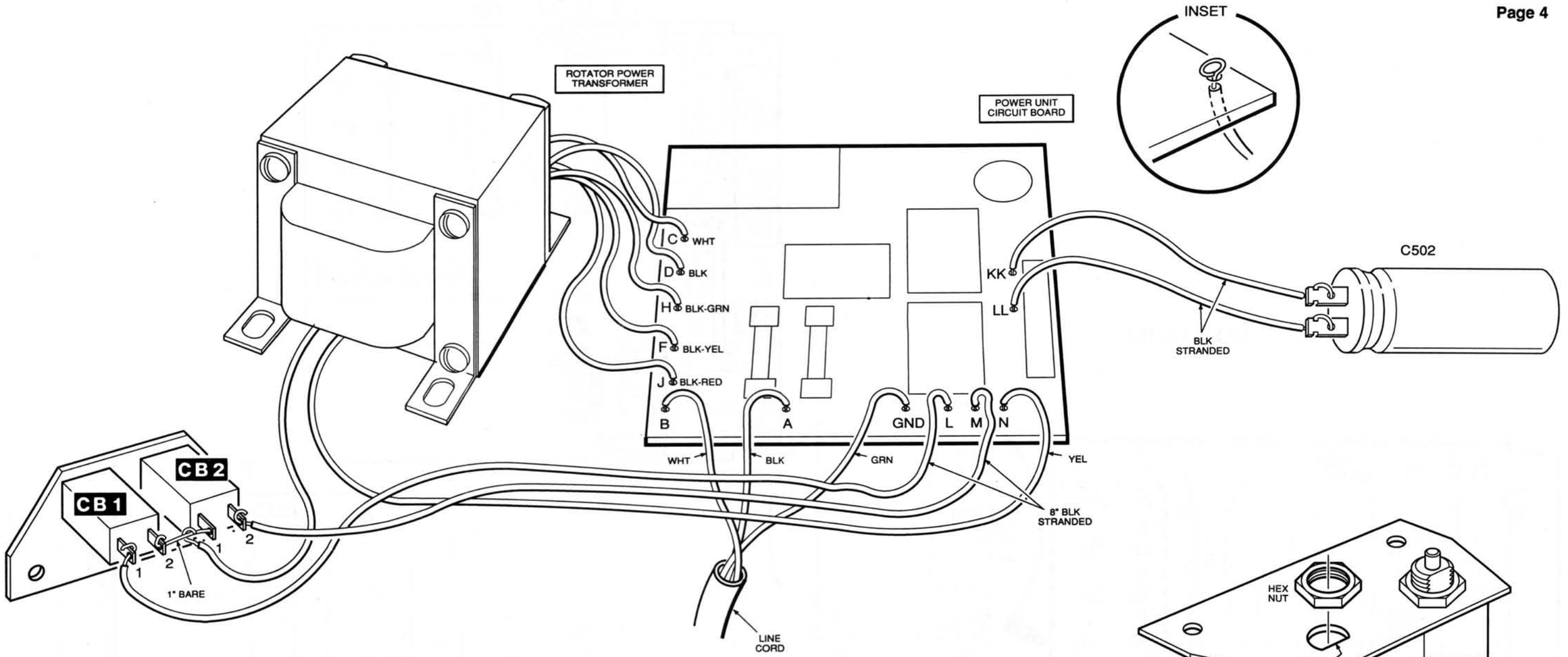
PICTORIAL 1-2



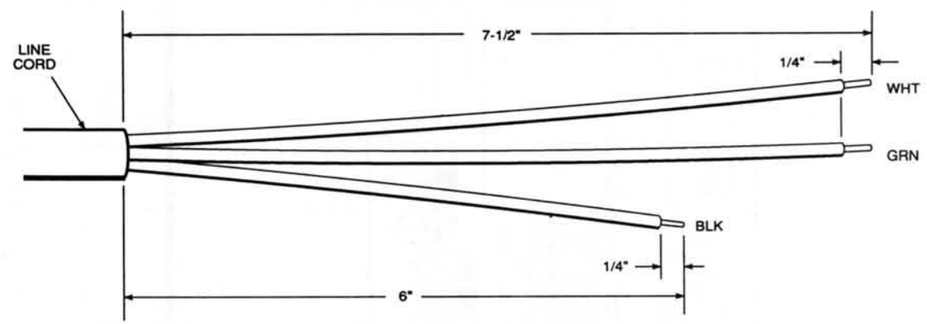
PICTORIAL 1-3



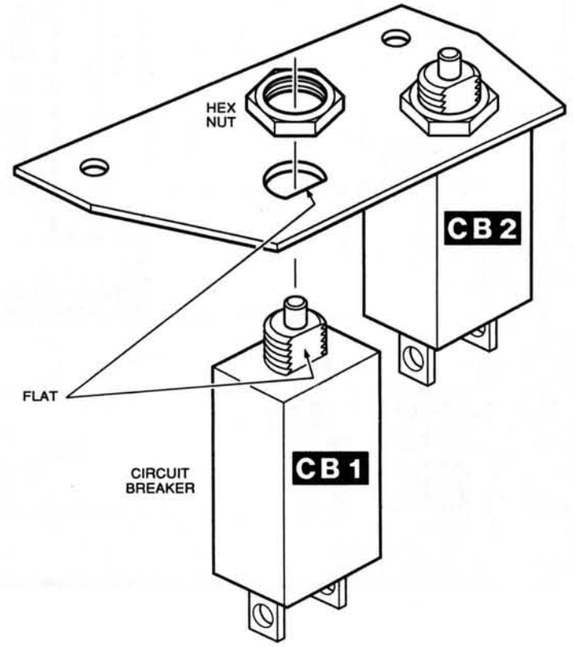
PICTORIAL 1-4



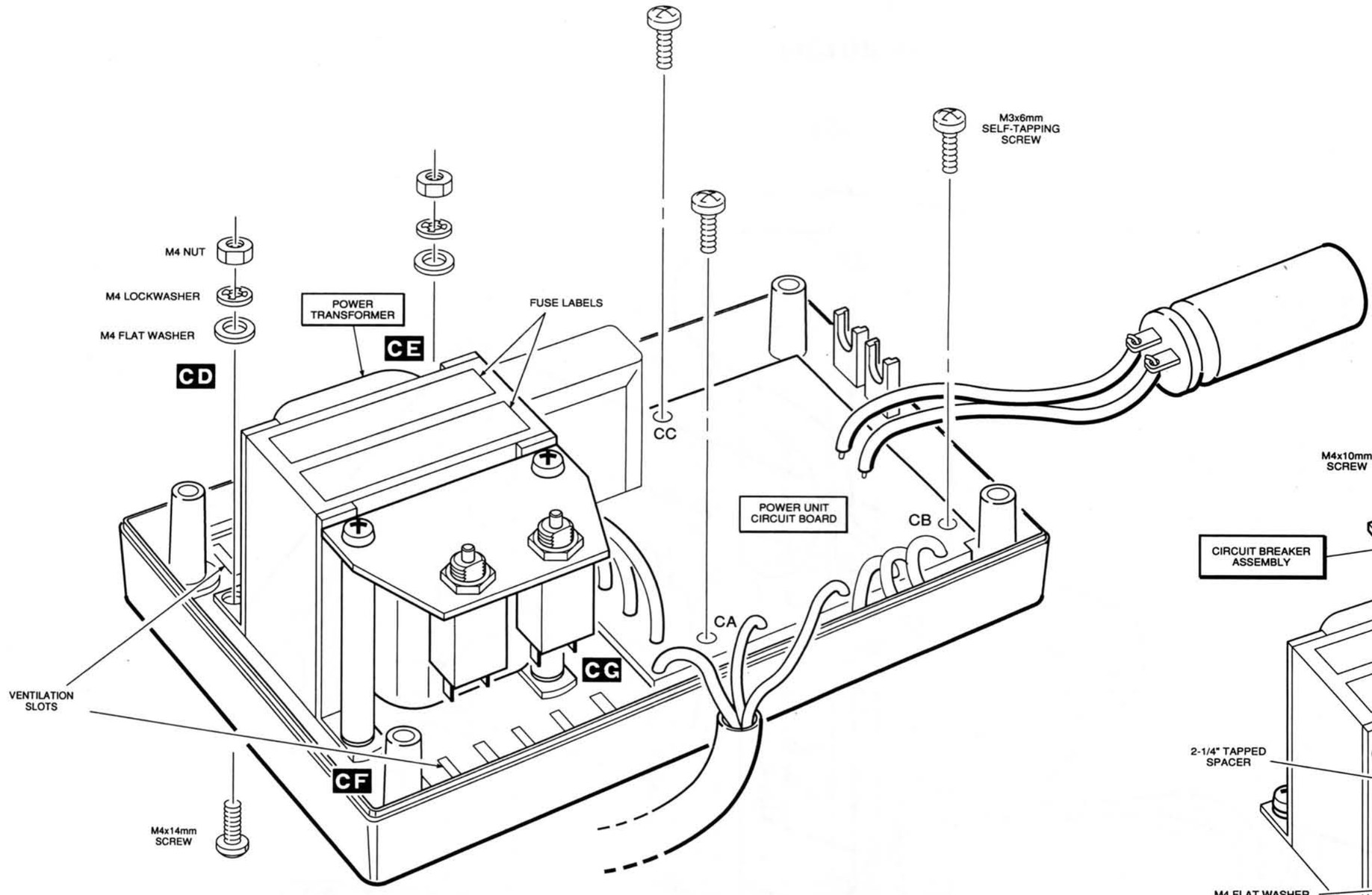
PICTORIAL 1-5



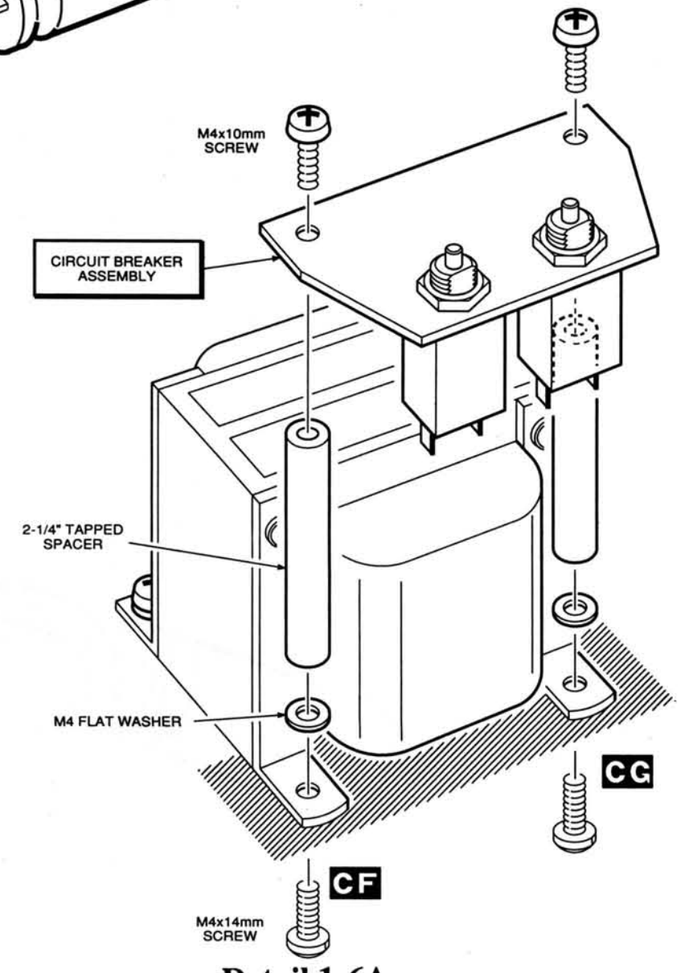
Detail 1-5A



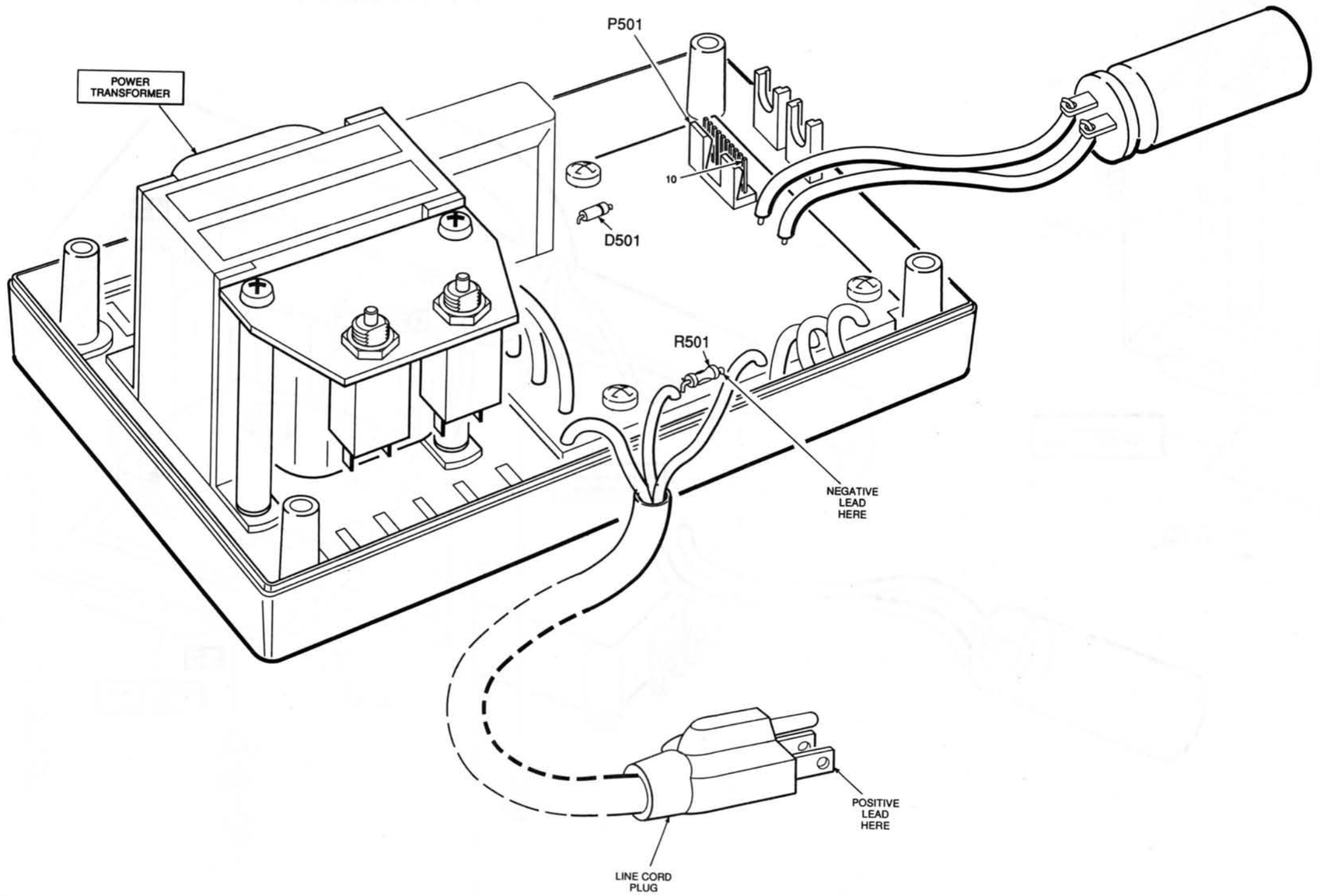
Detail 1-5B



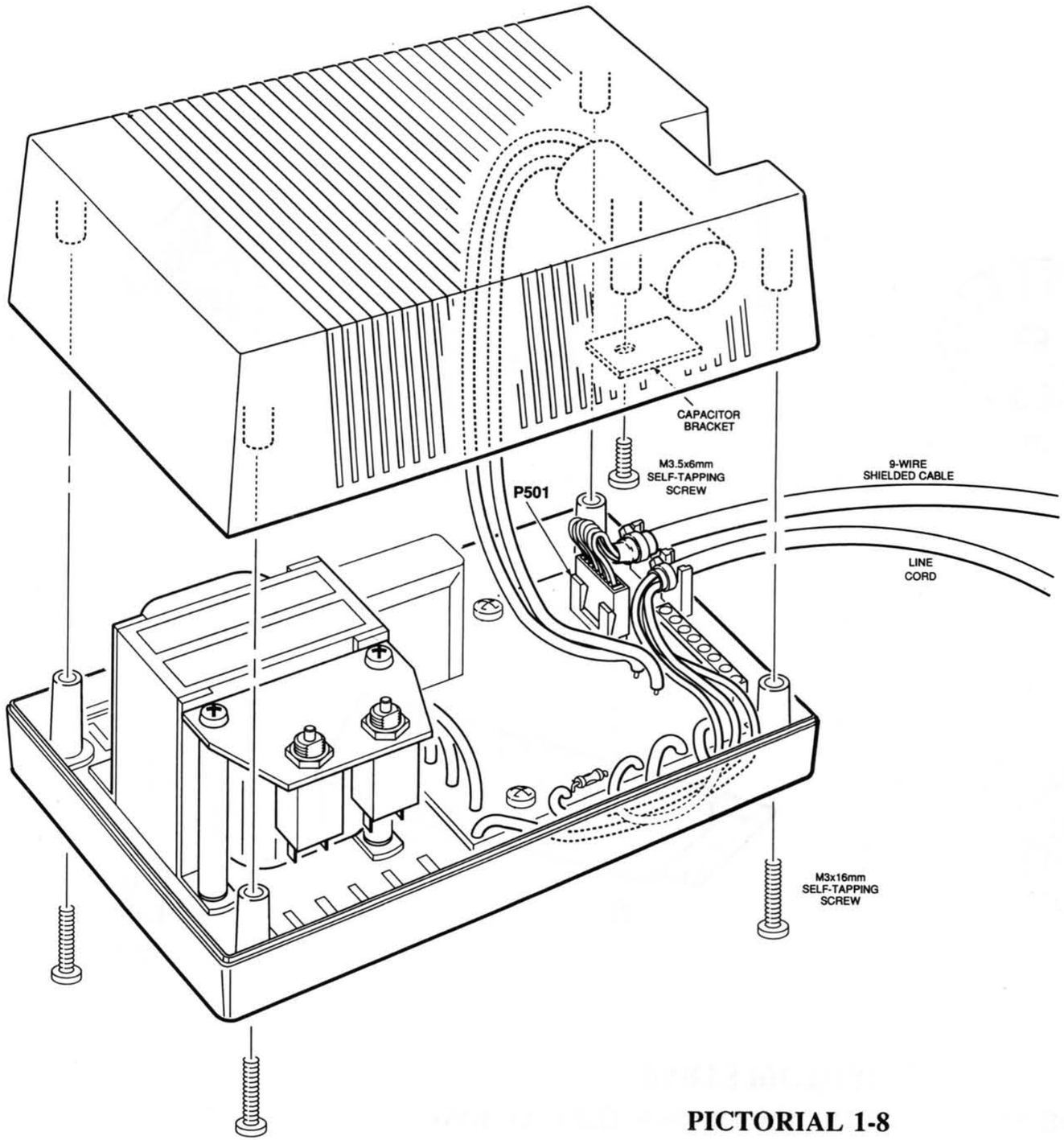
PICTORIAL 1-6

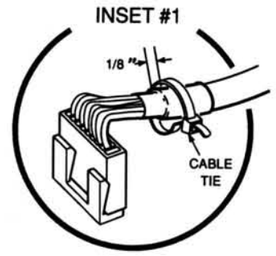


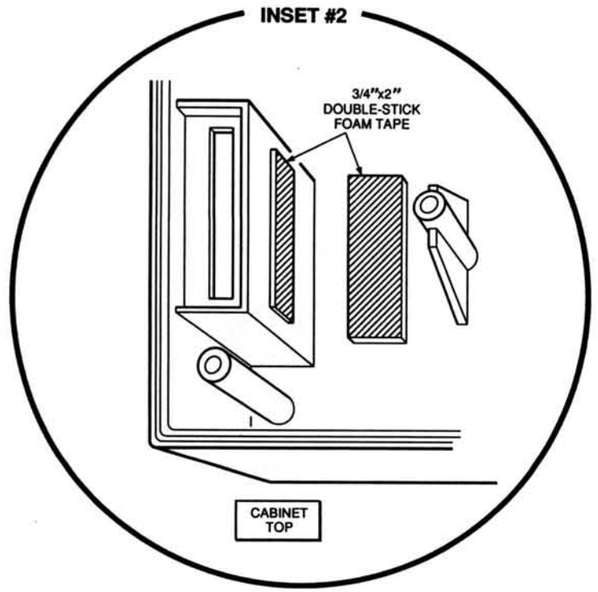
Detail 1-6A



PICTORIAL 1-7





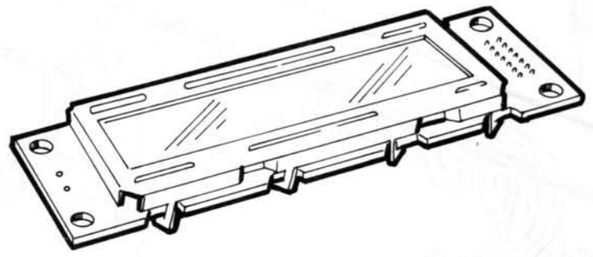


PICTORIAL 1-8

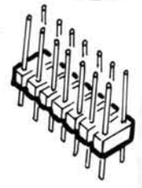
DISPLAY, LED, AND KEYBOARD CIRCUIT BOARD
PARTS PICTORIAL

A1

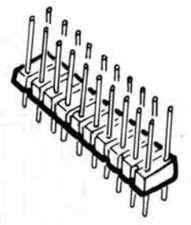
A2



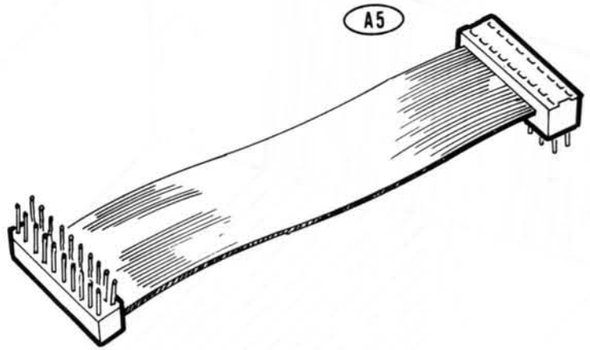
A3



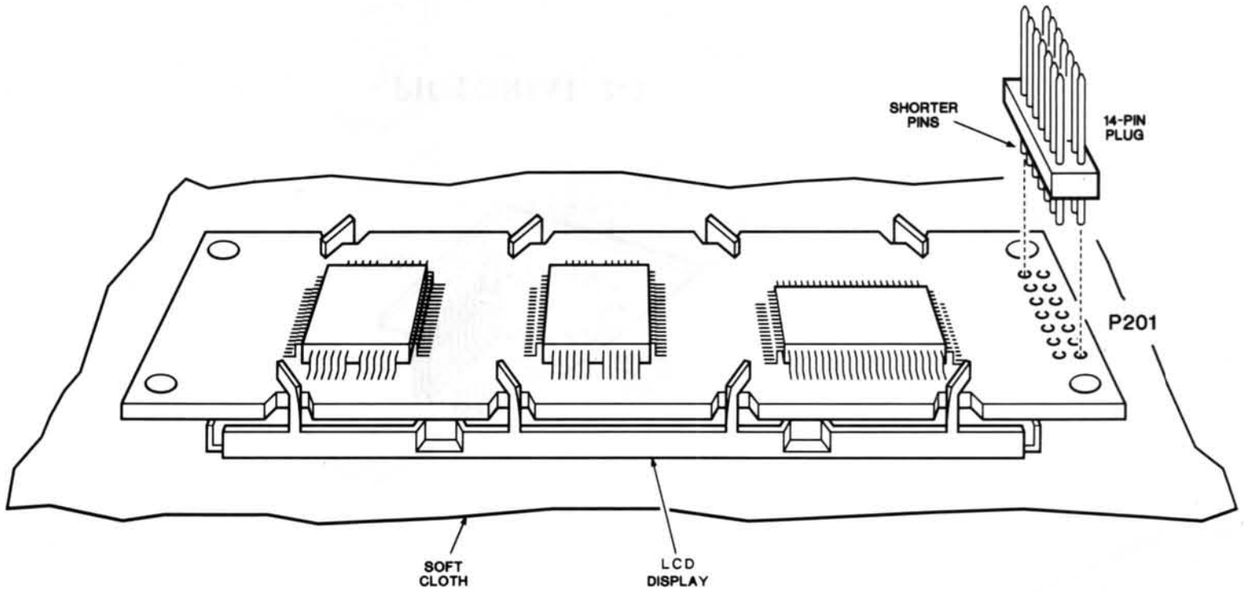
A4



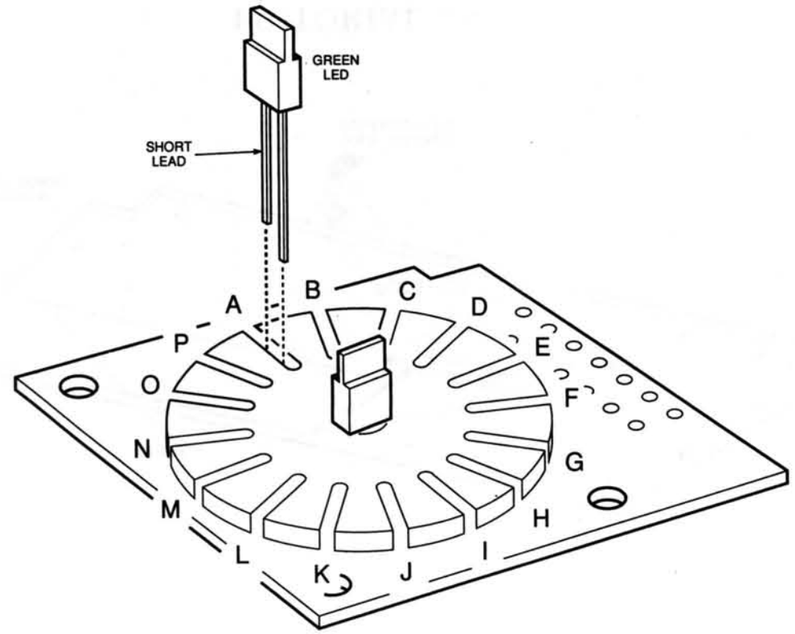
A5



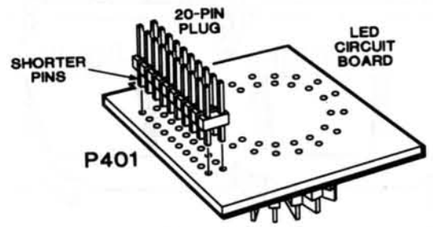
A6



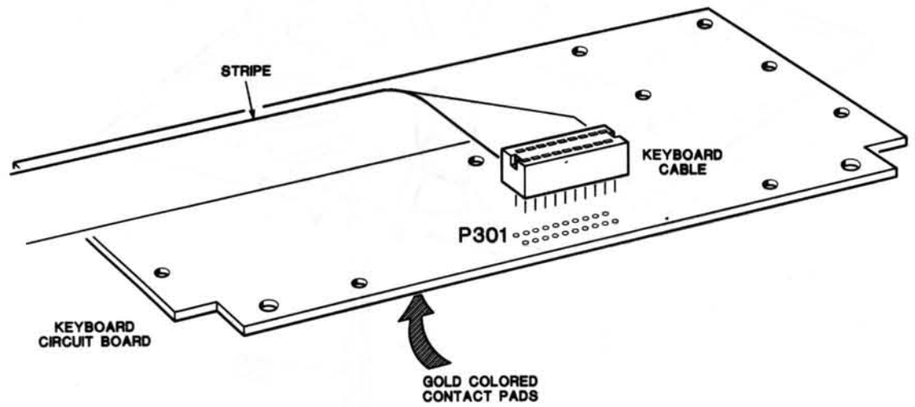
PICTORIAL 2-1



PICTORIAL 2-2



PICTORIAL 2-3

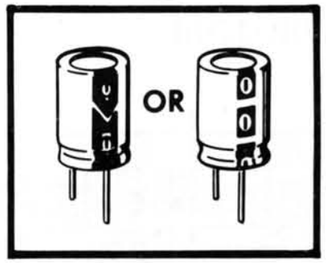


PICTORIAL 2-4

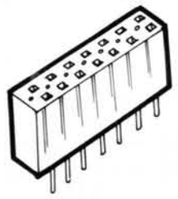
MAIN CIRCUIT BOARD PARTS PICTORIAL

A1

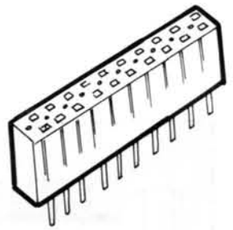
A2



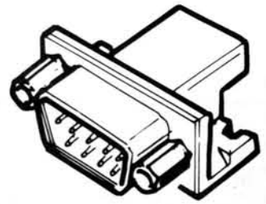
B1



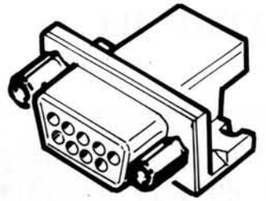
B2



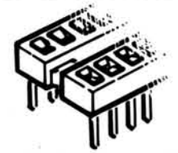
B3



B4



B5



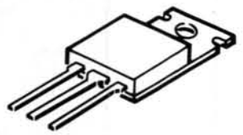
ALWAYS IDENTIFY AN I.C SOCKET BY COUNTING ITS PINS.
NOTE: THE STYLE MAY BE SLIGHTLY DIFFERENT THAN SHOWN.

C1

C2

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

C3

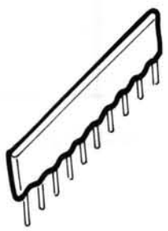


D1

D2

D3

D4



D5

D6

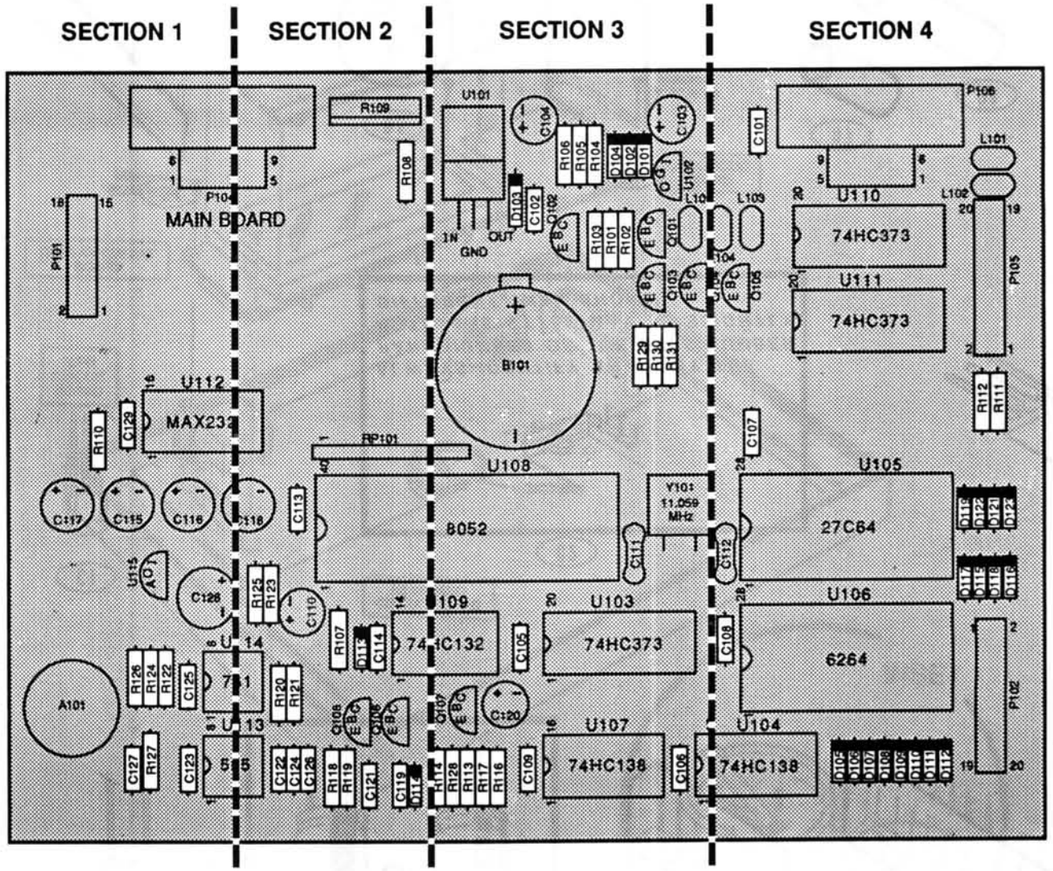
D7

D8

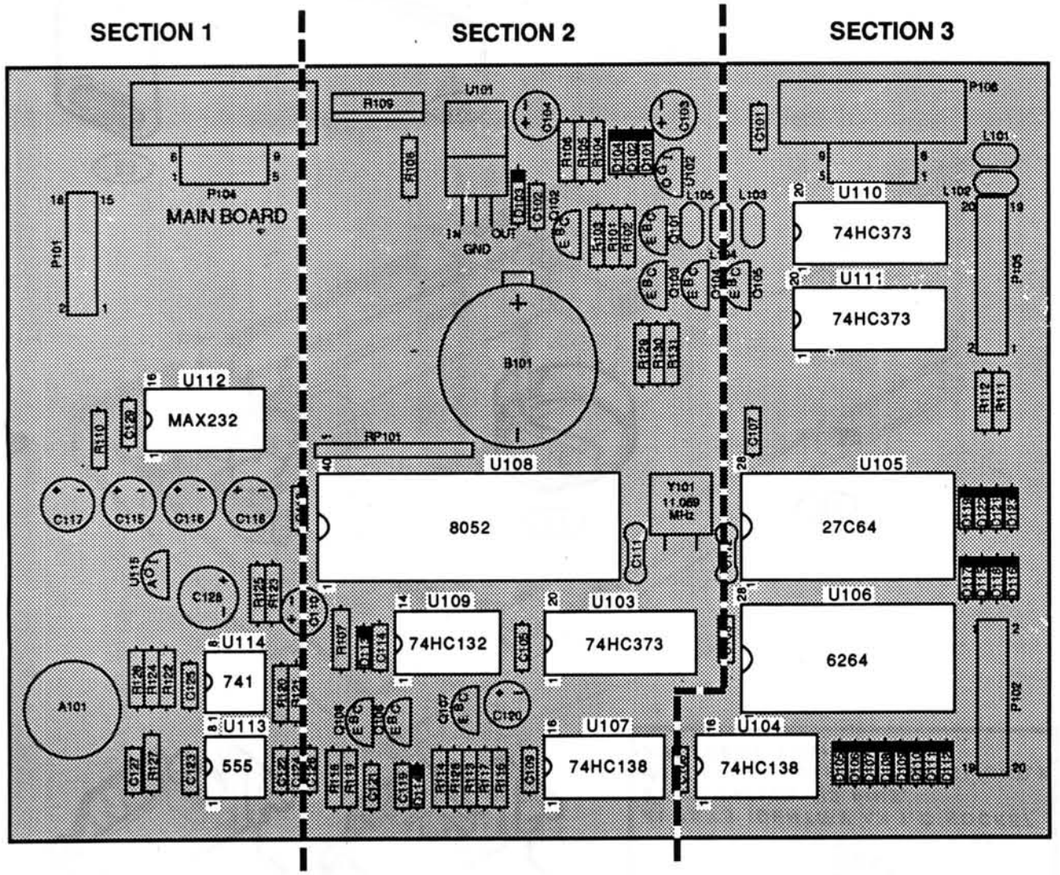
D9

D10

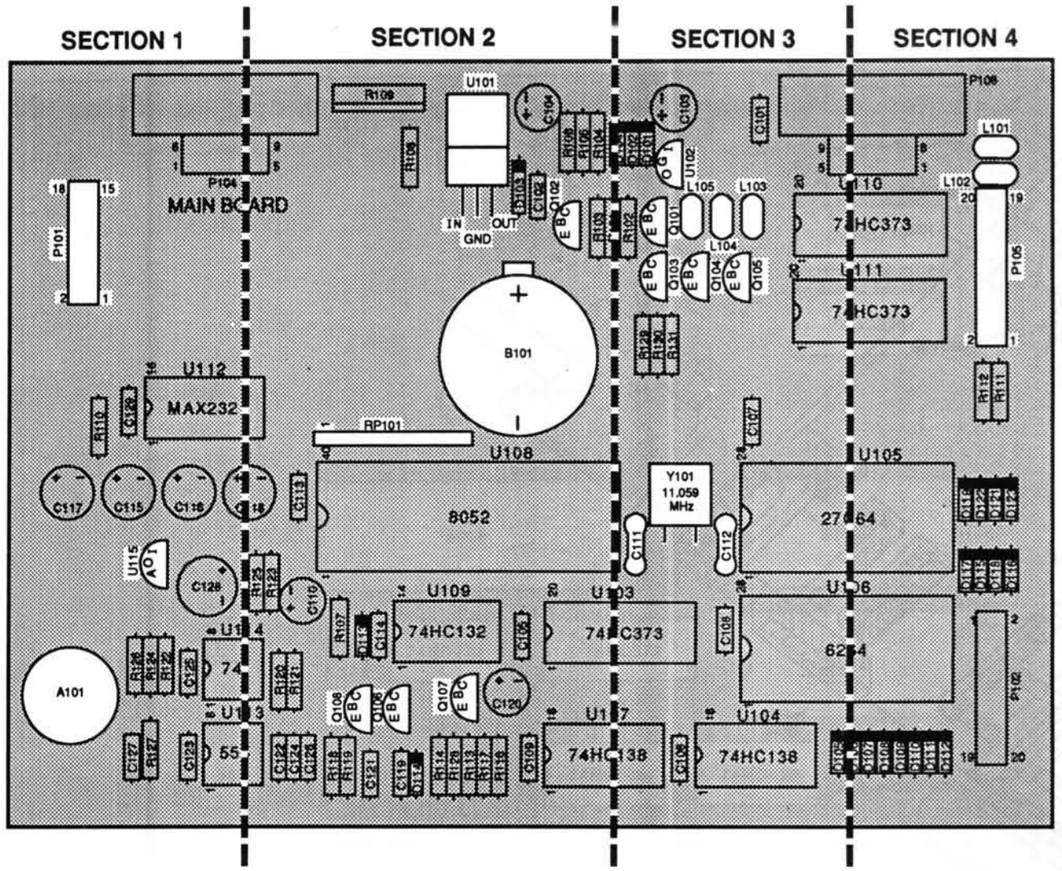
D11



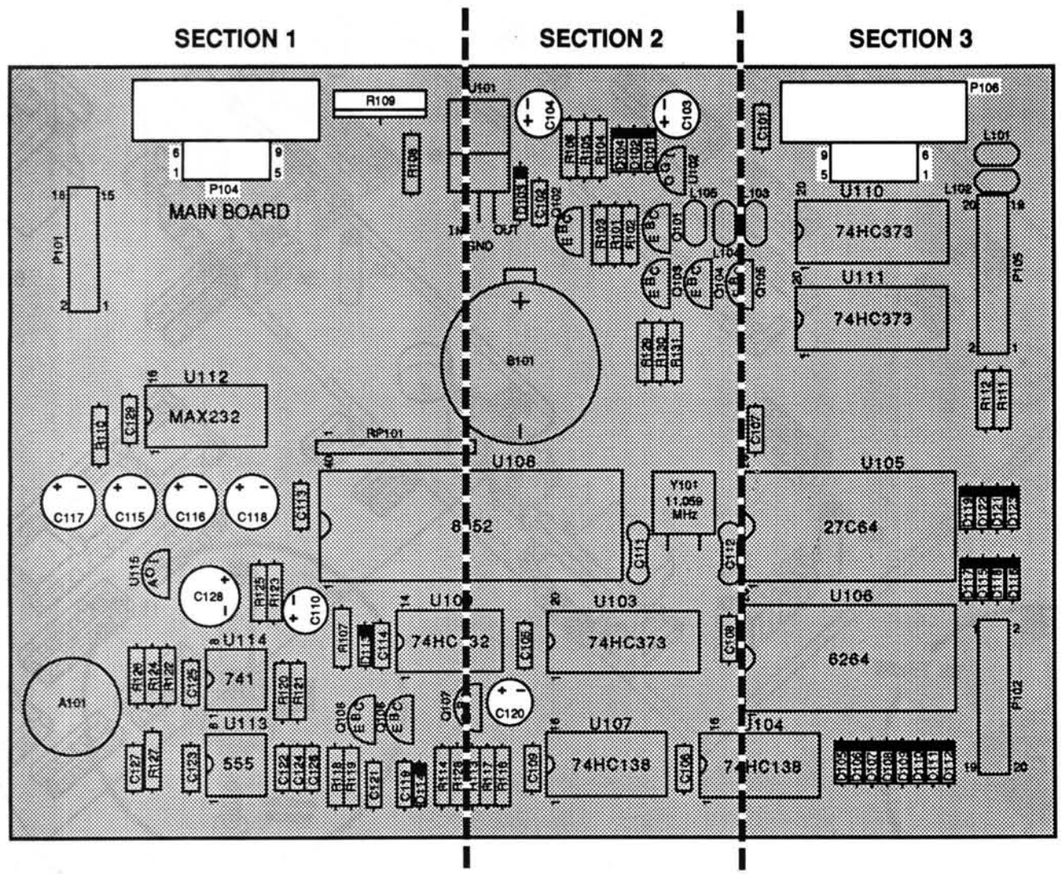
PICTORIAL 3-1



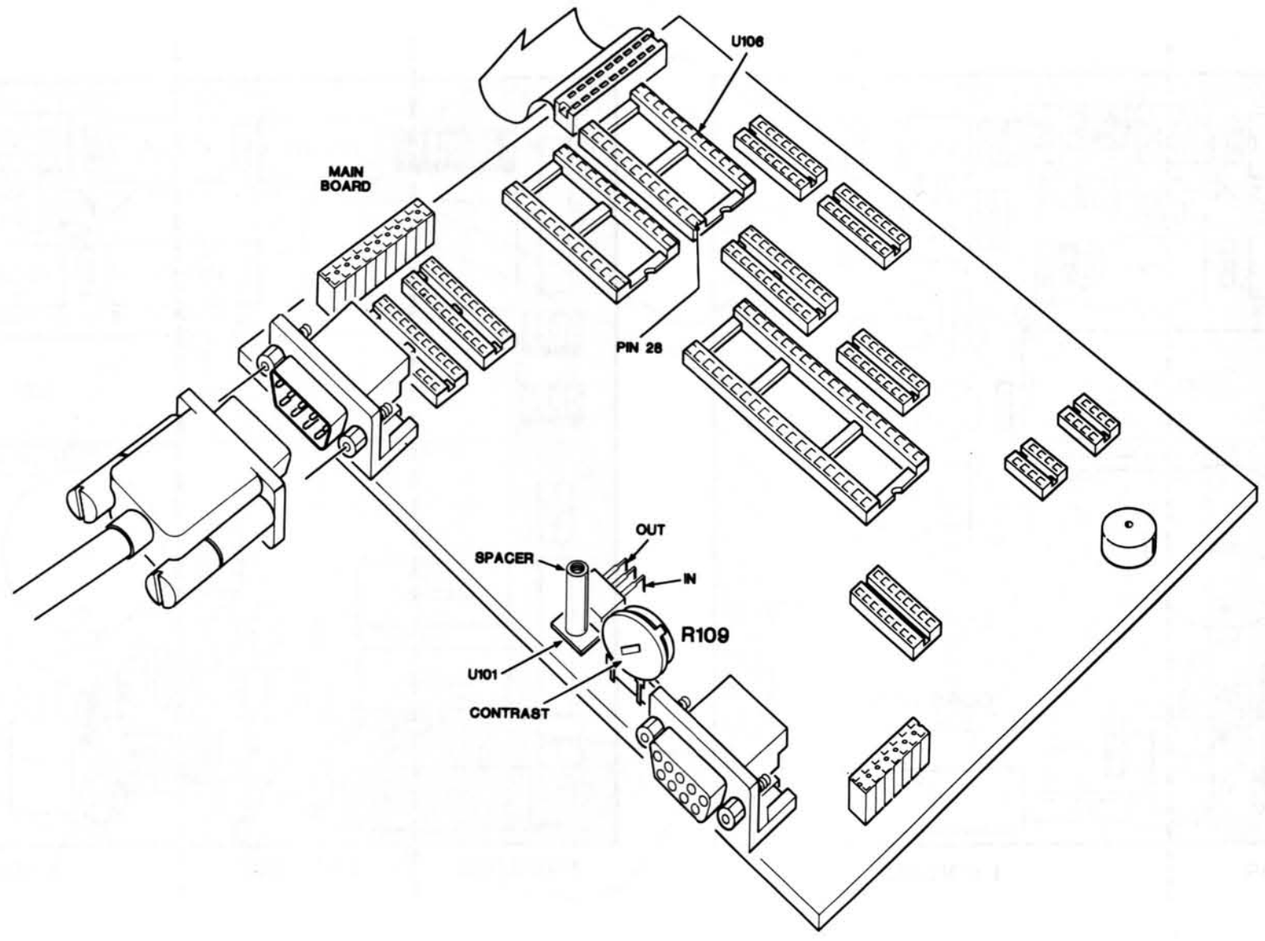
PICTORIAL 3-2



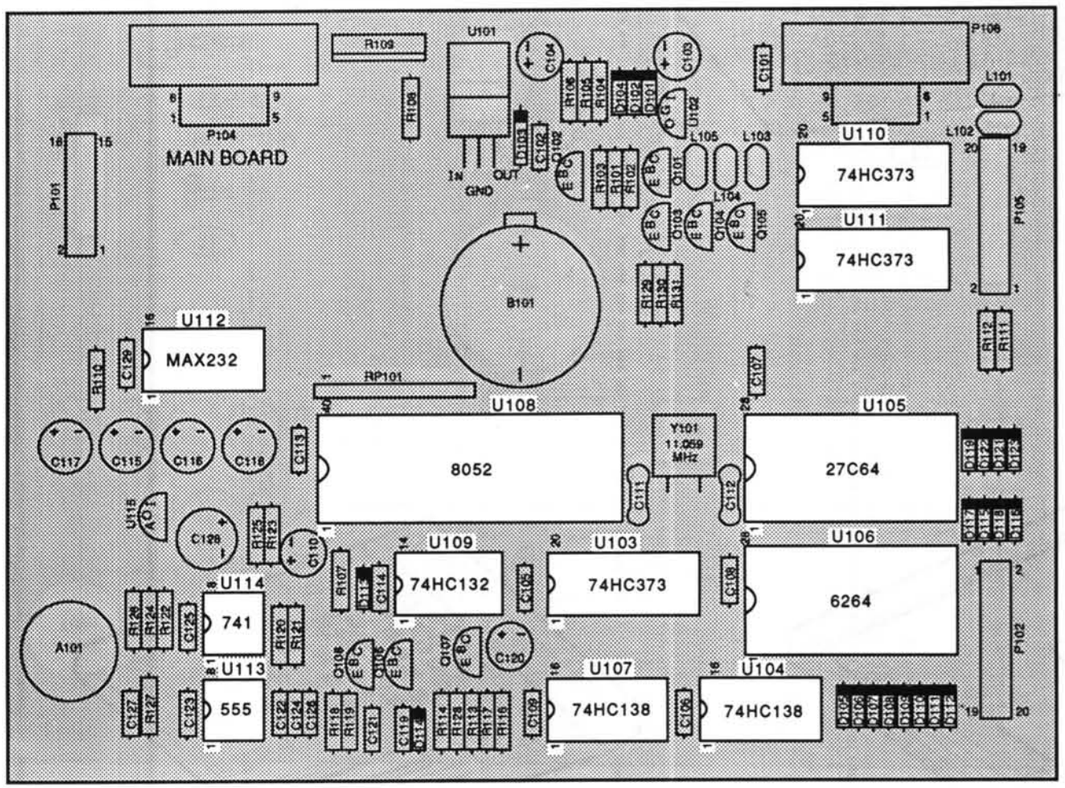
PICTORIAL 3-3



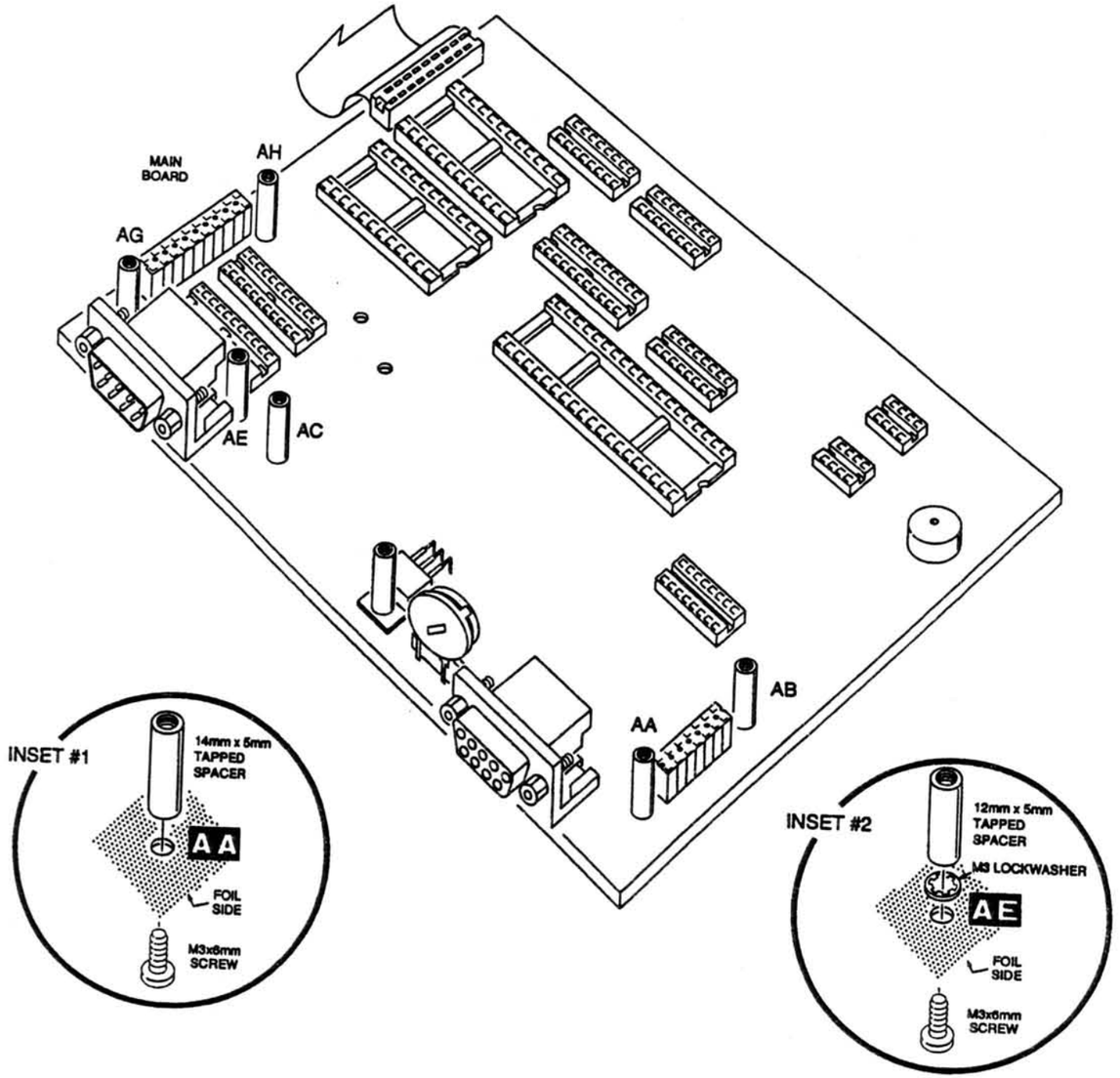
PICTORIAL 3-4



PICTORIAL 3-5



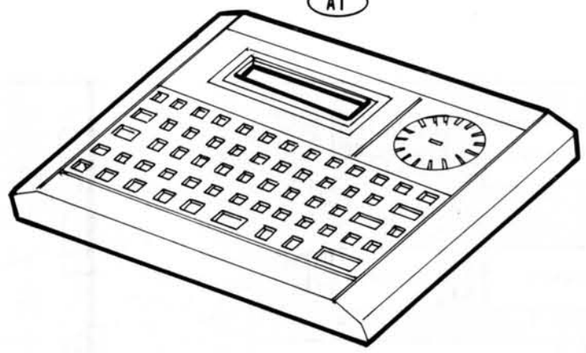
PICTORIAL 3-6



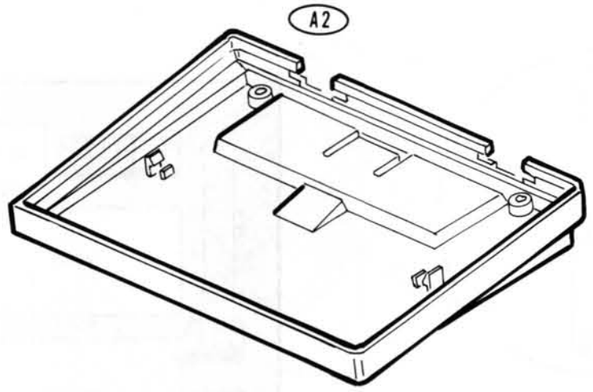
PICTORIAL 3-7

FINAL ASSEMBLY PARTS PICTORIAL

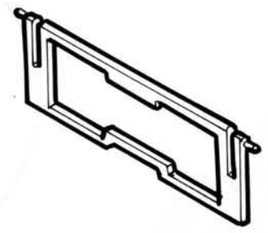
A1



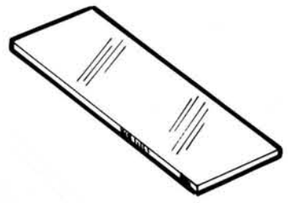
A2



A3



A4



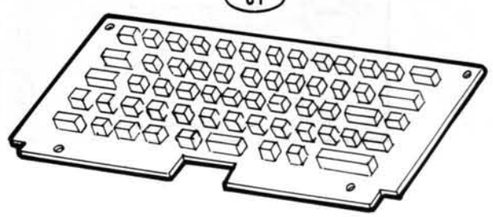
B1

B2

B3

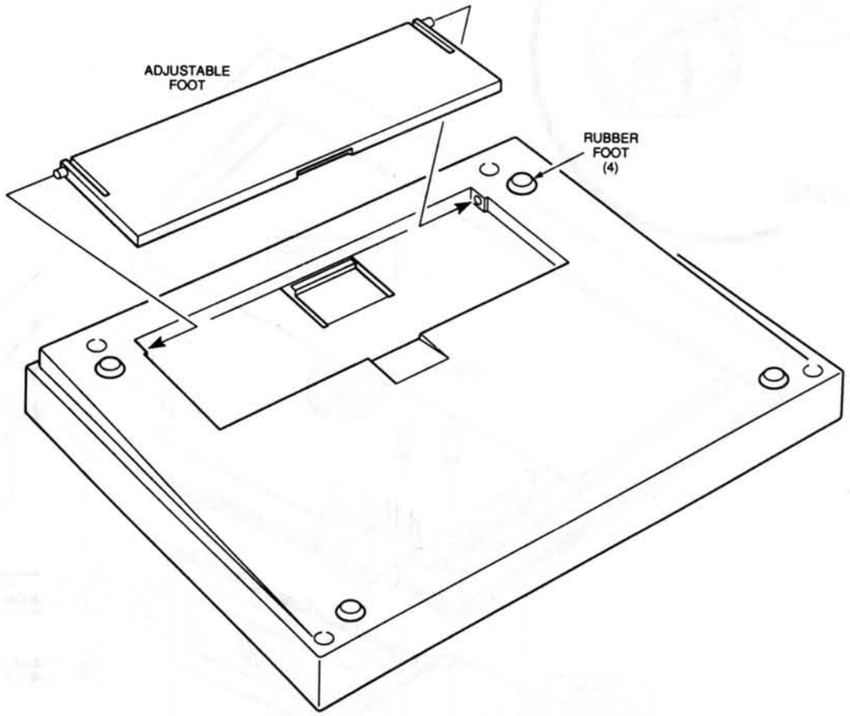
B4

C1

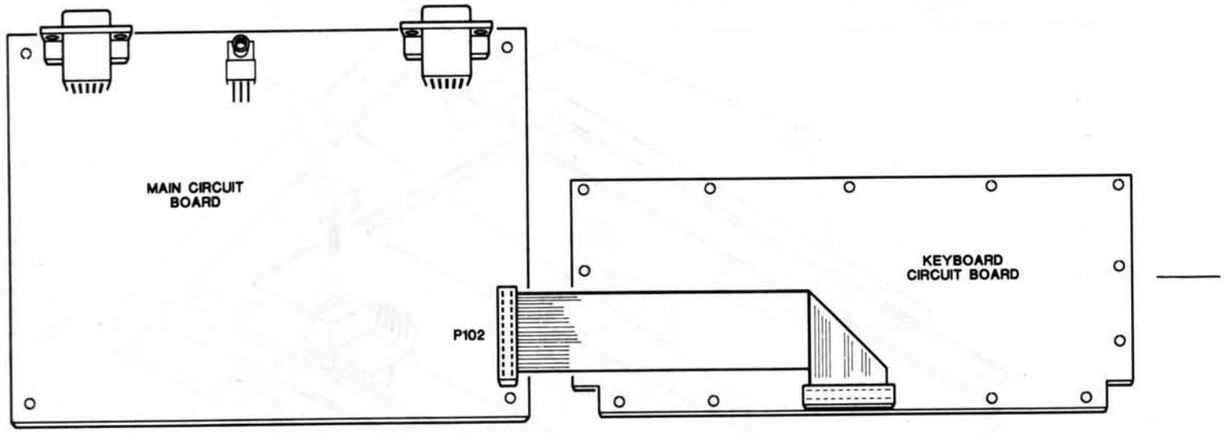


C2

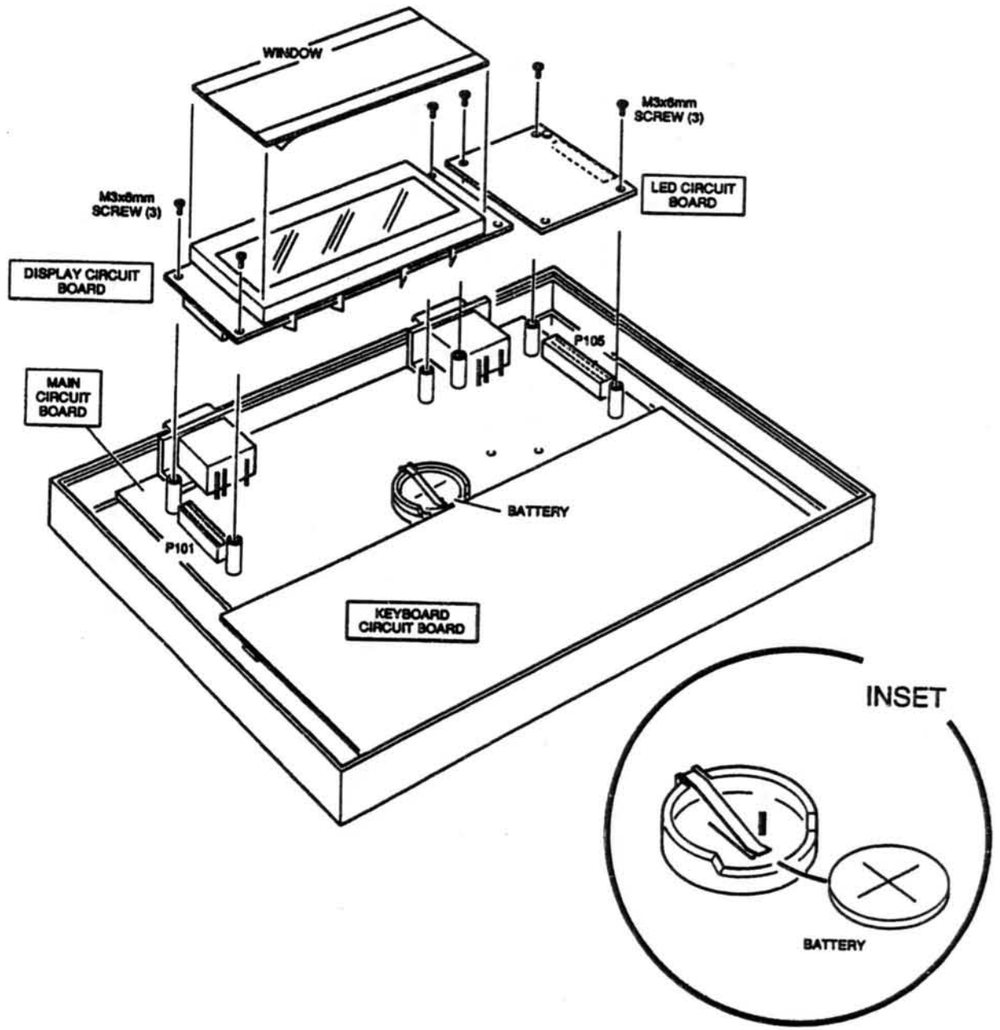
C3



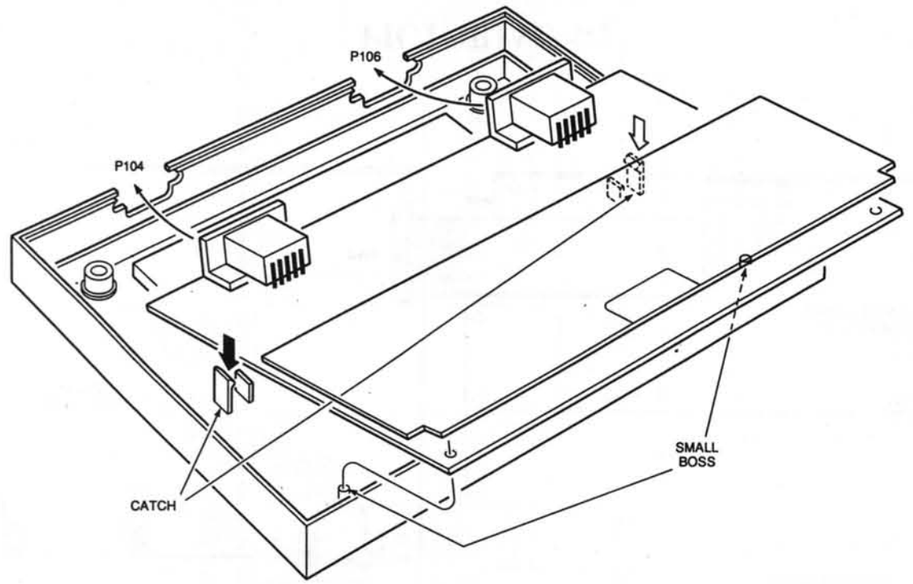
PICTORIAL 4-1



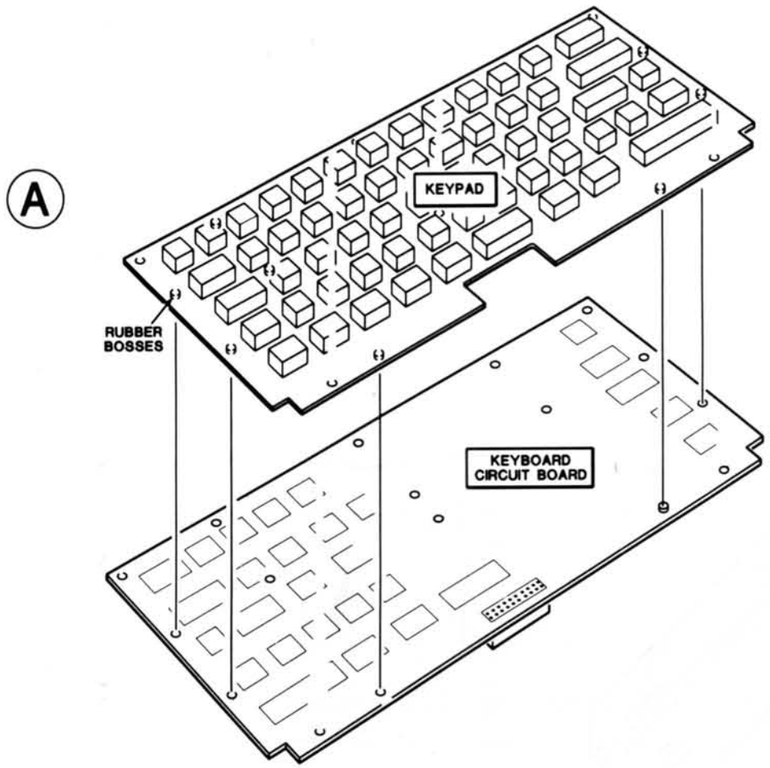
PICTORIAL 4-2

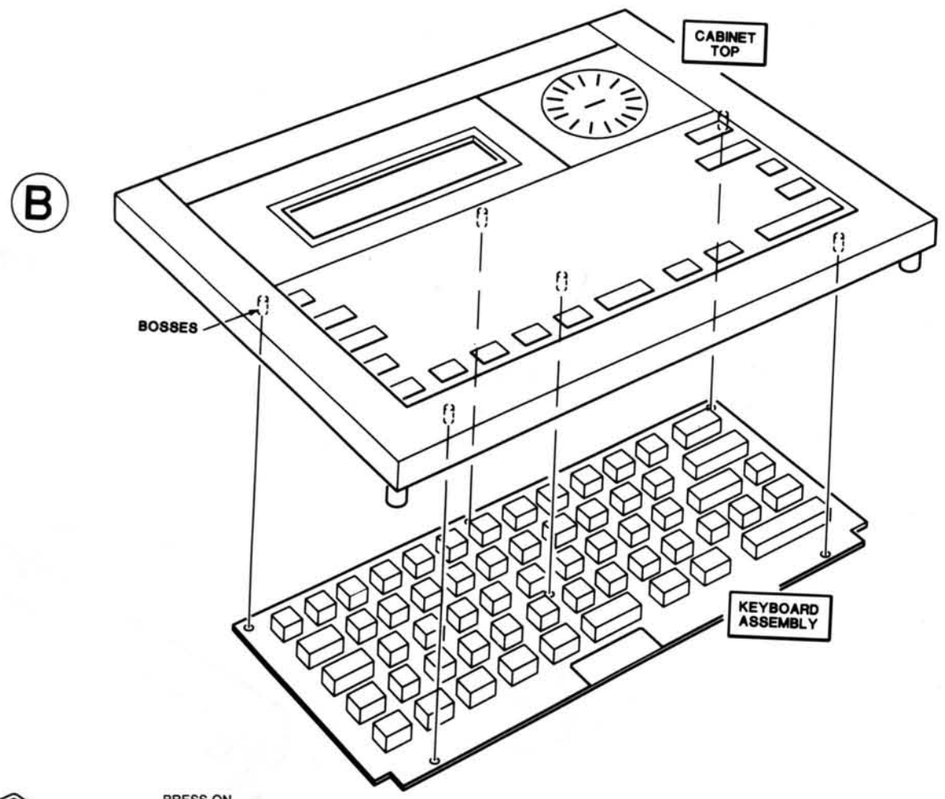


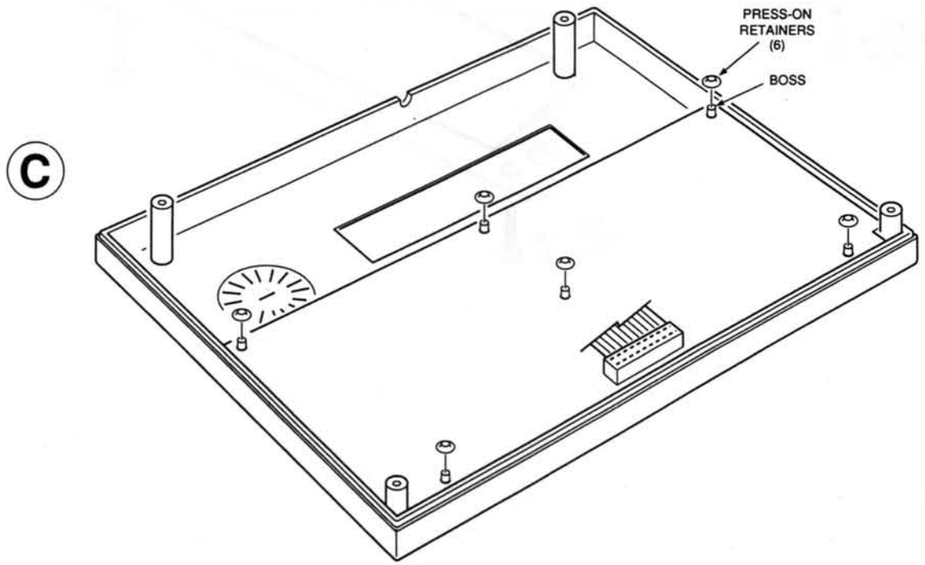
PICTORIAL 4-3



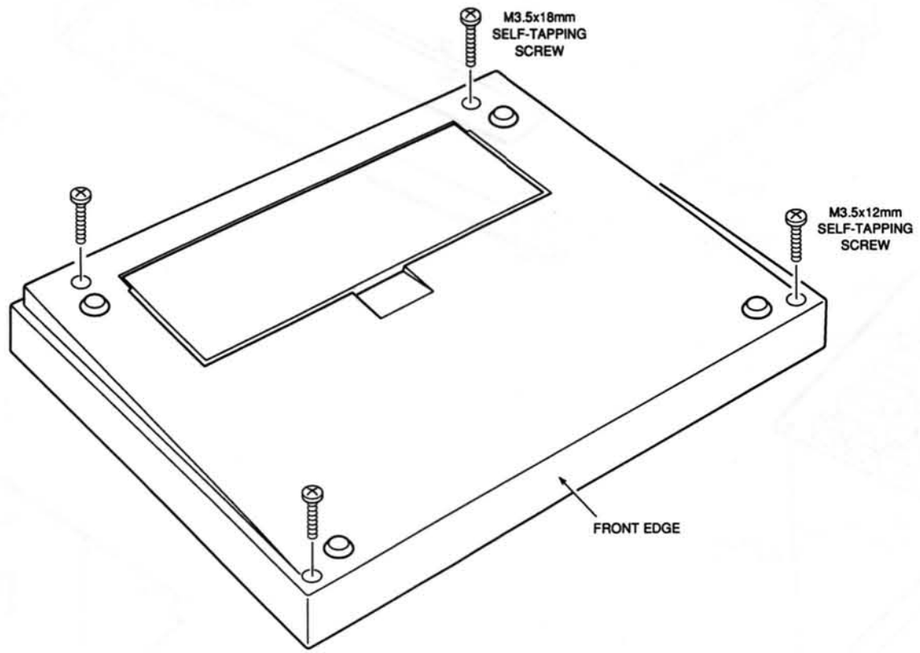
Detail 4-3A







PICTORIAL 4-4



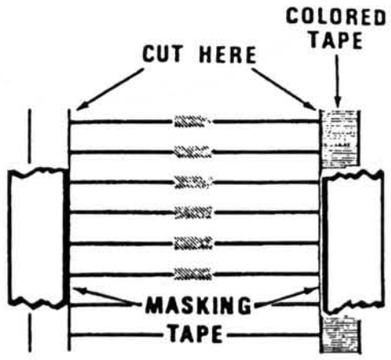
PICTORIAL 4-5

TAPED COMPONENTS CHART

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

Use masking tape, as shown in the Taping Detail, to secure the component strips over the component drawings. Make sure that each component matches the color bands or part number next to its illustration. Cut the tapes, as necessary, so that you can properly align the components in each section. Do not remove any components from the strip until they are called for in the assembly instructions.

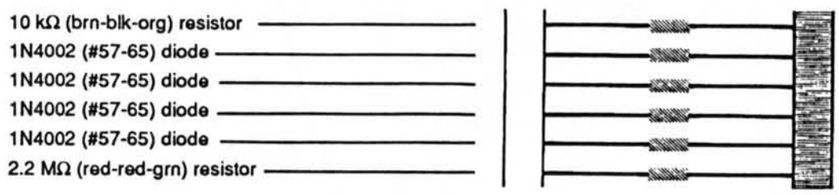
NOTE: Never attempt to pull the compoennts from the tape unless you are instructed to do so in a step; gum residue from the tape could cause an intermittent solder connection. Use diagonal cutters to remove each part as it is called for in the assembly instructions. Cut the leads at the inside edge of the tape as shown.



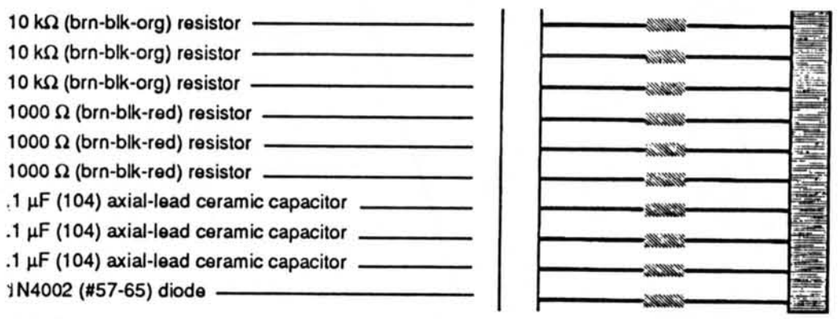
Taping Detail

POWER UNIT

Section 1



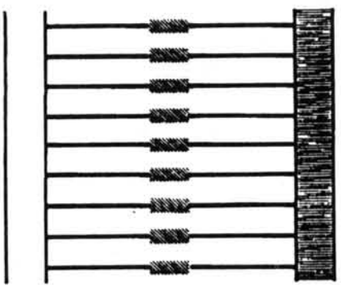
Section 2



MAIN CIRCUIT BOARD

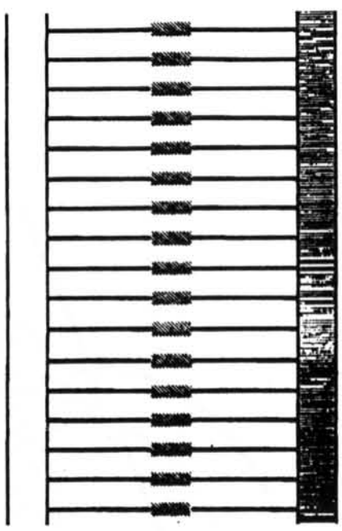
Section 1

3300 Ω (org-org-red) resistor
.1 µF (104) axial-lead ceramic capacitor
27 kΩ (red-viol-org) resistor
100 kΩ, 1% (brn blk-blk-org) resistor
100 kΩ, 1% (brn-blk-blk-org) resistor
.1 µF (104) axial-lead ceramic capacitor
.1 µF (104) axial-lead ceramic capacitor
270 Ω (red-viol-brn) resistor
.1 µF (104) axial-lead ceramic capacitor



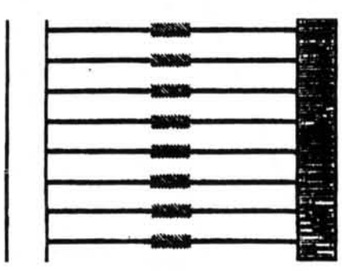
Section 2

27 kΩ (red-viol-org) resistor
.1 µF (104) axial-lead ceramic capacitor
150 Ω (brn-grn-brn) resistor
100 kΩ, 1% (brn-blk-blk-org) resistor
3300 Ω (org-org-red) resistor
100 kΩ, 1% (brn-blk-blk-org) resistor
8200 Ω (gry-red-red) resistor
1N4149 (#56-56) diode
.1 µF (104) axial-lead ceramic capacitor
.1 µF (104) axial-lead ceramic capacitor
.01 µF (103) axial-lead ceramic capacitor
.1 µF (104) axial-lead ceramic capacitor
3300 Ω (org-org-red) resistor
10 kΩ (brn-blk-org) resistor
.001 µF (102) axial-lead ceramic capacitor
.1 µF (104) axial-lead ceramic capacitor
1N4149 (#56-56) diode

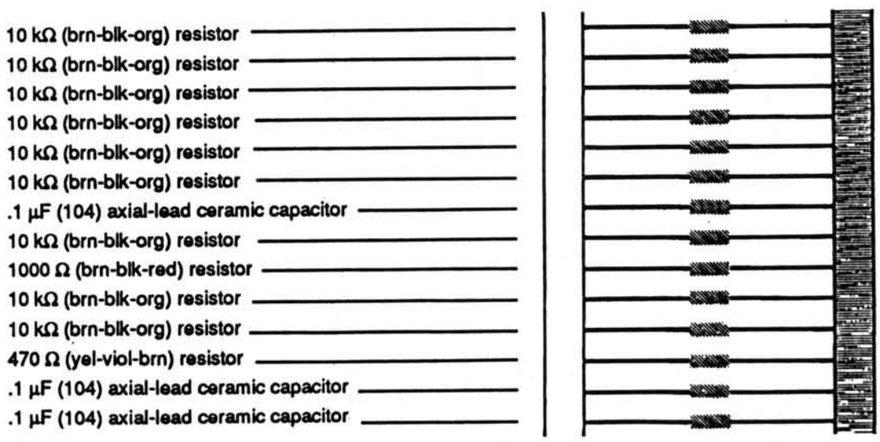


Section 3

1N6263 (#56-655) diode
.1 µF (104) axial-lead ceramic capacitor
2200 Ω (red-red-red) resistor
10 kΩ (brn-blk-org) resistor
1000 Ω (brn-blk-red) resistor
1N4149 (#56-56) diode
1N4149 (#56-56) diode
1N4149 (#56-56) diode



Section 3 (cont'd)



Section 4