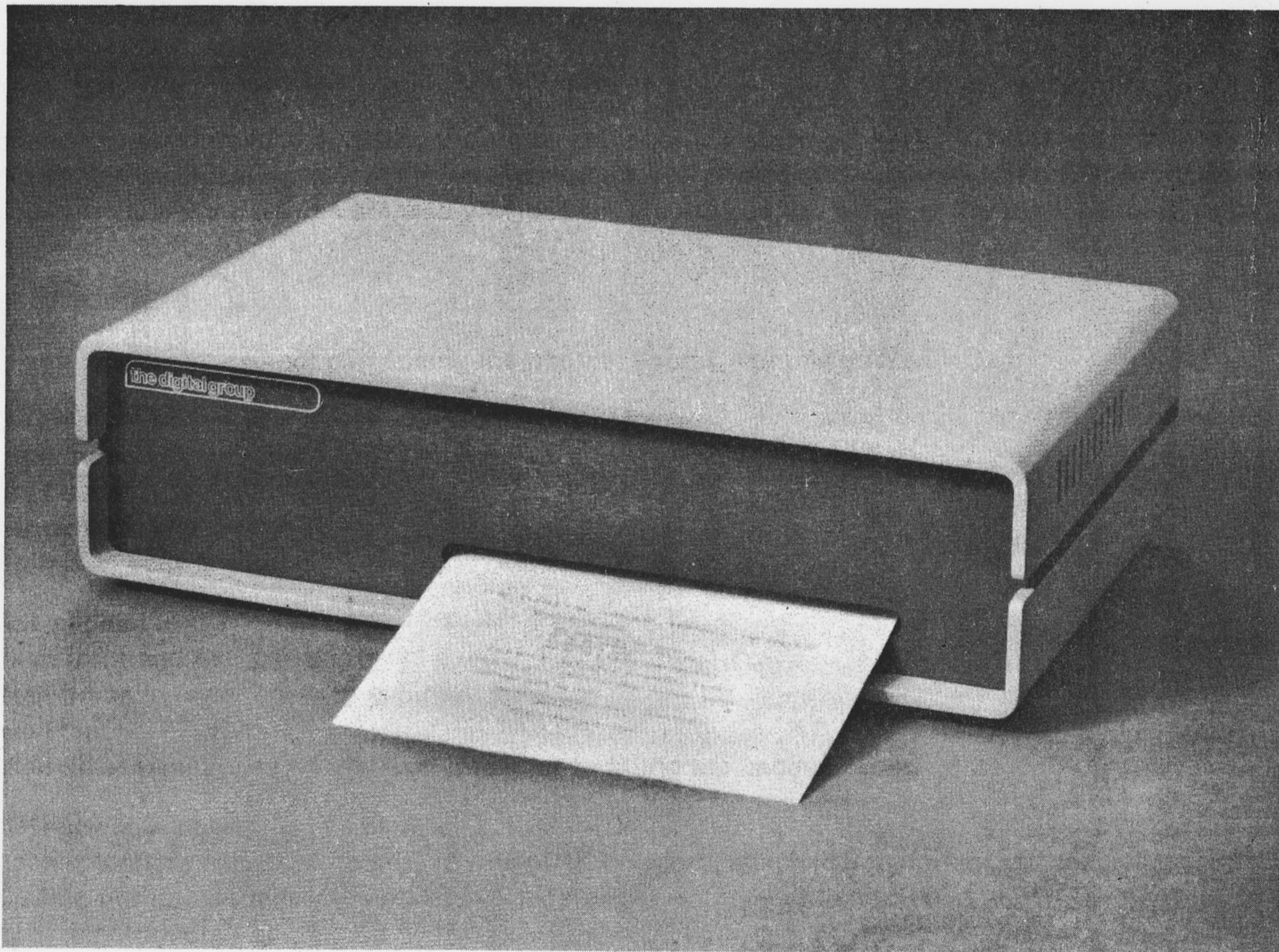


THE DIGITAL GROUP PRINTER CABINET



the digital group
INC

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THE DIGITAL GROUP PRINTER CABINET

INTRODUCTION

The Printer Cabinet is a welcome addition to the Digital Group system and provides an attractive and well-designed enclosure for the Digital Group Printer. The cabinet accommodates the printer interface card, the printer mechanism, the AC and DC power supplies, and the interconnect cables within the cabinet. Also included are the AC supply parts which connect to the rear panel, i.e., a line cord and strain relief, fuse holder, rear panel power switch, and fan, and all necessary mounting hardware.

Connections to a computer are made through one of two slots on the rear panel; paper may be fed through a third, wider slot. The I/O connections are made on the printer rear panel to a 22-pin dual edge connector. The printer connects to a Digital Group system via a cable terminated at both ends with 22-pin dual-sided paddlecards. All cables and edge connectors for connecting the interface card with a Digital Group system are provided when ordering a printer cabling kit or a complete Digital Group Printer.

Inspect the printer cabinet, front dress panel, and cabinet parts, and match them with the illustration shown for identification and placement. Also refer to the photos and figures provided for information about installation and insight into assembly technique.

If you have any questions or problems concerning the instructions or cabinet pieces, contact The Digital Group or a Digital Group dealer.

ASSEMBLY INSTRUCTIONS

The recommended procedure for assembling the printer cabinet and installing the printer is outlined briefly below, with more explanation and figures appearing later in the documentation. The photos included show several stages of assembly for the Digital Group printer cabinet; figures are also provided for the AC and DC wiring in the Digital Group cabinet.

Assembly Procedure

1. Inspect and identify all cabinet parts using the photos, figures and parts list included.
2. Install AC supply parts and a 22-pin connector in rear panel
 - a. Line cord and strain relief
 - b. Fuse holder
 - c. Rear panel power switch
 - d. 22-pin dual edge connector
3. Assemble cabinet frame
 - a. Attach front and rear panels
 - b. Install frame in lower cover of cabinet
 - c. Install fan
 - d. Install dress panel (may be installed just prior to fitting top cabinet cover)
4. Install DC power supply
 - a. Attach solderless connector to ground wire of AC line cord; attach to transformer and cabinet chassis mount when installing the transformer
 - b. Install transformer
 - c. Mount capacitors C27, C28
 - d. Assemble and install DC wiring harness
 - e. Connect AC line cord, fuse holder, power switch, fan, and transformer primary leads

5. Mount interface card
 - a. Mount "L" brackets first to the interface card, and then to the cabinet bottom cover
 - b. Install interface card
 - c. Connect DC power supply to interface card connector
 - d. Make connections between interface card, connector 3, and printer rear panel connector
6. Install printer mechanism
7. Install rubber feet
8. Install paper, make all electrical and cable connections, and test printer
9. Install top cover and fasten top thumbscrews if desired

Estimated assembly time: 3 - 5 hours

To assemble and install the Digital Group Printer you will need the following tools and equipment:

Fine-tipped soldering iron (approximately 25 watts)
 Solder — 60/40 resin wire solder, 20 - 30 gauge
Do not use acid core solder!
 Solder flux
 Diagonal cutters — small micro-shear type preferred
 Wire stripping tool if available
 Long-nosed pliers
 Large pliers
 Standard small-tipped screw driver
 Wrenches
 Molex crimping tool
 Allen wrenches
 Volt-ohm meter

Keyp nuts have lock washers attached and can be tightened with a screw driver while holding the nut with one hand. **Do not over-tighten the hardware.**

STEPS

1. Inspect all cabinet parts and hardware received, and check off each item on the Parts List. Be careful not to scratch or mar the cabinet top, bottom and dress panel during assembly.
2. Install the AC power supply parts (the AC line cord and strain relief, fuse holder, and power switch) and a 22-pin connector in the brushed aluminum rear panel.
 Note: The 22-pin dual edge connector is supplied with the printer cabling kit which must be ordered separately or is included with a complete Digital Group Printer.
 - Refer to Photo 1 for the location and placement of the parts.
 - Prepare the line cord by stripping off 10" of outside insulation only; do not remove the insulation from the individual wires until the AC parts are connected.
 - Install the line cord in the cabinet using the plastic-bodied strain relief and allowing 10" of wire inside the cabinet. At a position 1/2" back from the stripped line cord, slide the strain relief onto the line cord. Close the clip on the line cord (attached to the strain relief with a plastic band) and, with a large pliers, compress the strain relief and install it in the printer rear panel.
 - Mount the fuse holder as shown in the photo and fasten with a hex nut, using a pliers or wrench to tighten the nut.
 - Mount the power switch just above the fuse holder so that the wire connection terminals are on the left as you face the rear panel (inside). Carefully tighten the round bezel nut with a pliers.
 - Mount the 22-pin connector in the rear panel using two 4-40 x 1/2" screws and two 4-40 key nuts. Refer to Photos 1 and 2.

3. Next, assemble the printer frame. Refer to Photo 2.

- Attach the side rails to the rear panel using four 8-32 \times $\frac{3}{8}$ " screws. Look at the side rails and at the cabinet illustration carefully. The end of the rail with the shortest top rail segment mounts away from the rear panel.
- Similarly install the front panel using four 8-32 \times $\frac{3}{8}$ " screws.
- Drop the assembled frame into the lower cover. No screws are required for this step. The dress panel may be installed at this point if you feel it will not be damaged by further assembly or handling. Two 6-32 \times $\frac{3}{8}$ " screws mount through the rear panel into the lower cabinet cover and secure the cabinet. It is recommended that the lower two screws be installed to secure the lower cover. Two 6-32 thumbscrews mount in the top set of rear panel holes and secure the top. The top cover can still be easily removed by loosening the thumbscrews, sliding the cover back approximately an inch, and lifting up.

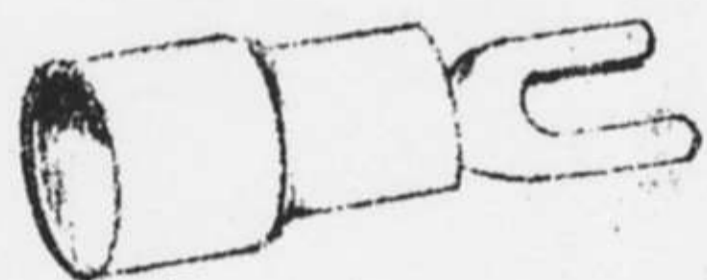
4. Install the DC power supply parts inside the cabinet using the predrilled mounting holes.

- Look at the photos and figures provided for the mounting position of the 28V AC transformer and the capacitor brackets.
- Attach a solderless connector to the green (ground) wire of the line cord.
- Install the DC transformer in the position shown in Photo 3 using two 6-32 \times $\frac{3}{8}$ " screws and two 6-32 nuts. Use one mounting screw to ground the wire to the cabinet chassis
- Next, mount the capacitors in their respective mounting brackets using two 6-32 \times $\frac{1}{2}$ " screws and two 6-32 nuts. Note the capacitor placement in Figures 1 and 2 and in Photos 3 and 4.
- Install the capacitors and brackets on the lower cabinet cover using two 6-32 \times $\frac{3}{8}$ " screws and two 6-32 nuts. Refer to Photos 3 and 4 for the correct placement.

- Assemble and install the DC wiring harness using Figure 1 and 2 and Photo 3. Cut four 15" lengths, two 12" lengths and one 10" length from 16 gauge wire.

Note: Figures 1 and 2 show the DC power connections made to interface connector 8 with mating Molex blocks. These have been provided with the DC power supply cable pack.

- Solder one end of three 15" lengths to the transformer secondary as shown in Figure 2. Crimp on three Molex pins to the other ends of these wires, making sure the pins are securely attached.
- Using the fourth 15" length of wire, crimp a solderless connector on one end and a Molex pin on the other.



Solderless connector



Molex pin

- Using one 12" wire, crimp a solderless connector on one end and a Molex pin on the other.
- Crimp into one solderless connector one end of the remaining 12" wire and the 10" wire length.
- Crimp a Molex pin on the other end of the 12" wire; crimp a solderless connector on the other end of the 10" wire.
- Referring to Figure 2, install the Molex pins into the corresponding positions in the Molex block. **Be sure the lead from the center tap position on the transformer is mounted in the fourth position on the Molex block.**

- Attach the wire lengths to the capacitor terminals as shown in Figure 2. Note the polarities on the capacitors.
 - This completes the assembly and installation of the DC wiring harness. The Molex block will be attached to the interface card in Step 5.
 - Cut the black wire of the line cord to 2" inside the cabinet and solder it to the center lug on the fuse holder. Before soldering the wires, strip back 1/4" - 3/8" and dip the wire ends in flux to ease soldering. Save the 8" section of the line cord for use in later steps. Refer to Figure 2 and Photo 4 for proper installation.
 - Cut a 3 1/2" segment from the remnant of black wire and solder it between the unconnected lug of the fuse holder and the center terminal on the rear panel power switch.
 - Solder the nearest wire from the fan to the outside terminal on the switch as shown in Photo 4. Connect and solder a 10" length of 16 gauge wire to one of the transformer primary terminals (bottom two lugs on the transformer) and to the same outside switch terminal. An ohmmeter should be used to verify that the switch is normally open and that it closes the circuit when depressed.
 - Connect and solder the white wire of the line cord and the second fan lead to the remaining transformer primary terminal.
5. Mount the interface card.
- Using two 6-32 x 3/8" screws, mount the two "L" brackets to the interface card as shown in Photo 5. The cables shown on the interface card connect to the rear panel edge connector and the printer mechanism. An 8-position Molex connector mounted on connector 8 of the card is connected to the DC wiring harness after the card is installed in the cabinet.
 - Using two 8-32 x 1/4" screws mount the interface card inside the cabinet. Be sure that the interface card has clearance from the sides of the cabinet. The screws mount to the threaded brackets from underneath the printer cabinet.
 - Connect the DC power supply Molex block to the interface card as shown in Figure 2.
 - Connect the cables from the interface card, connector 3, to the rear panel connector. See Photo 6. Connections are made to the bottom row of pins using the wiring convention established on the CPU backplane. Numbering on the rear panel connector is from left to right as viewed from inside the cabinet; the top row is 1 - 22, the bottom row is A - Z. Pins opposite 4 - 11 on the printer rear panel are designated OUTPUT PORT pins (LSB through MSB) and pins opposite 12 - 19 are designated INPUT PORT pins (MSB through LSB). Photo 5 shows the cables routed and connected to the rear panel via Molex connector blocks. Other connection techniques may be used. Consult the printer documentation and schematic for confirming I/O connections.
- Note: All cabling and cabling documentation is provided for connecting the printer interface card to the CPU cabinet when ordering a printer cabling kit or when ordering a complete printer. It is not included when ordering only a printer and interface card.
6. Install the printer mechanism.
- Remove the paper cutting strip from the front edge of the printer mechanism by removing the two screws as shown in Figure 3. The dress panel edge will be used as a paper cutting edge instead.
 - Mount the two "L" brackets as shown in Figure 3, using the two front screws that previously held the paper cutting edge in place. These "L" brackets are used as paper feeding guides.
 - With four 6-32 x 3/8" screws mount the printer mechanism in the cabinet using the holes referenced in Figure 4. The screws mount from the bottom of the cabinet into the threaded holes on the printer mechanism.
 - Connect the cable from connector 6 on the interface card to the printer mechanism. Check to see that all wires are connected correctly.

7. Install the four rubber feet on the lower cover of the printer cabinet, using four 8-32 × ¼" screws in the four 8-32 tapped holes located approximately 1½" from the edges on all four corners. See the cabinet illustration for the location.
8. Install the paper, make all electrical and cable connections, and test the printer.
 - Install the paper roll as shown in the P.A. manual or feed the paper through the rear panel slot.
 - Check all electrical connections, install the fuse, and connect the printer cabinet to your computer system.
 - Test the printer using commands in BASIC or using the printer routines.
 - Use the line feed commands in BASIC to provide line feed operation and feed the paper through the front dress panel. Paper can be removed by using the upper edge of the dress panel as a paper cutting edge.
9. Install the top cover and fasten the top thumbscrews if desired.

Printer Cabinet Parts List

	Description	Qty.	Digital Group Part #
<input type="checkbox"/>	Front panel assembly	1	216-004
<input type="checkbox"/>	Rear panel assembly	1	216-003
<input type="checkbox"/>	Side rail	2	216-002
<input type="checkbox"/>	Lower (bottom) cover assembly	1	216-001
<input type="checkbox"/>	Upper (top) cover assembly	1	216-000
<input type="checkbox"/>	Dress panel (with Digital Group logo)	1	216-005
<input type="checkbox"/>	Paper guide ("L" bracket)	2	221-010
<input type="checkbox"/>	Interface card mounting bracket ("L" bracket)	2	216-007

AC Supply Parts

<input type="checkbox"/>	Fan	1	190-003
<input type="checkbox"/>	Fan and power switch (bezel nut included)	1	100-002
<input type="checkbox"/>	Fuse holder (base and cap included)	1	190-006
<input type="checkbox"/>	Fuse holder washer	2	228-456
<input type="checkbox"/>	Fuse holder nut	2	228-255
<input type="checkbox"/>	Fuse (2 amp)	1	123-005
<input type="checkbox"/>	Line cord (3-wire, rubber insulated)	1	088-002
<input type="checkbox"/>	Line cord strain relief (one piece)	1	230-000
<input type="checkbox"/>	Capacitor mounting bracket	2	221-011
<input type="checkbox"/>	Rubber feet	4	221-000

Hardware

<input type="checkbox"/>	8-32 × ¼" screw	14	228-002
<input type="checkbox"/>	8-32 × ⅜" screw	4	228-003
<input type="checkbox"/>	8-32 kep nut	4	228-256
<input type="checkbox"/>	6-32 × ⅜" screw	10	228-000
<input type="checkbox"/>	6-32 thumbscrew	2	228-019
<input type="checkbox"/>	6-32 kep nut	4	228-250
<input type="checkbox"/>	4-40 × ½" screw	6	228-006
<input type="checkbox"/>	4-40 kep nut	6	228-254
<input type="checkbox"/>	6-32 × ½" screw	2	228-007

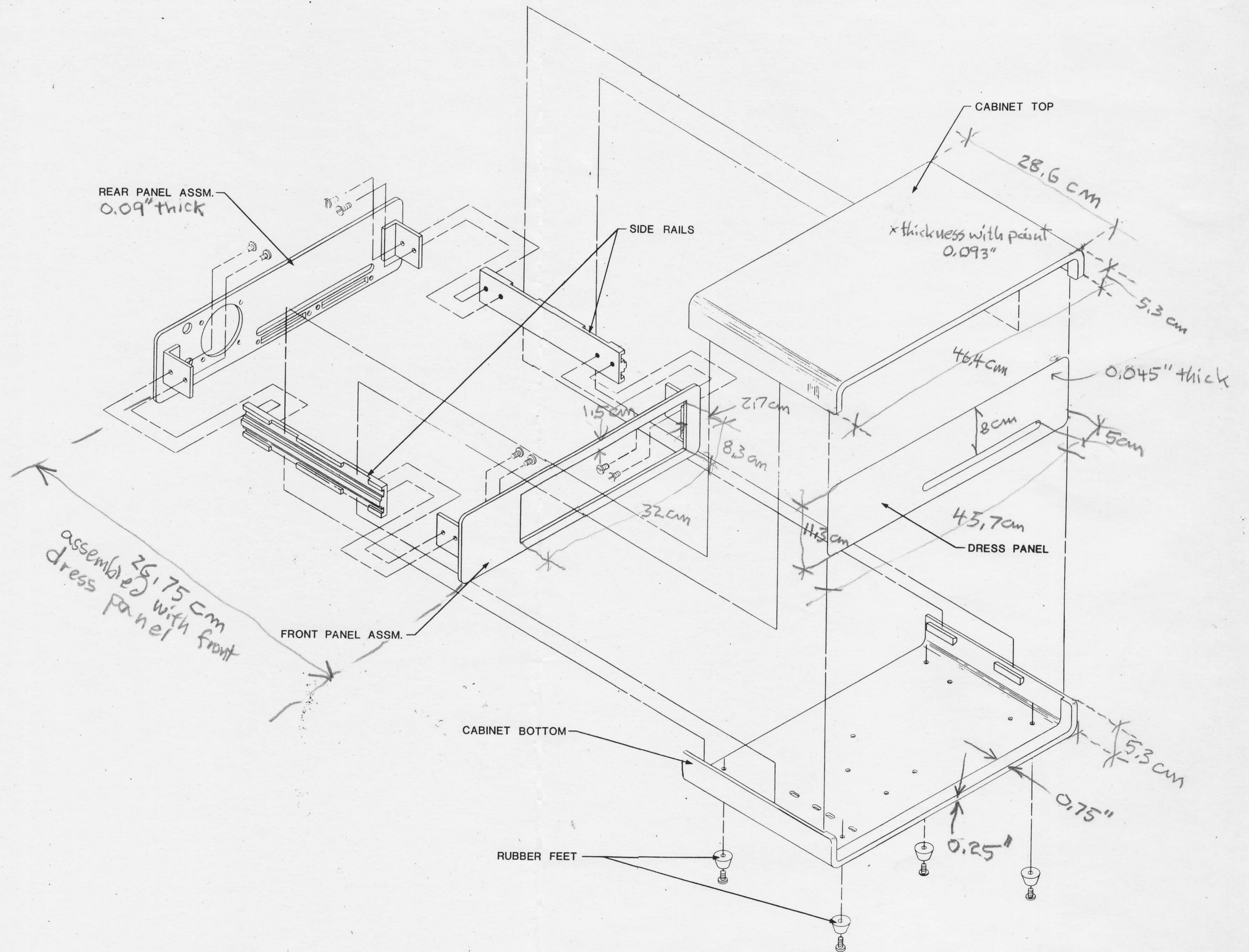


Photo 1

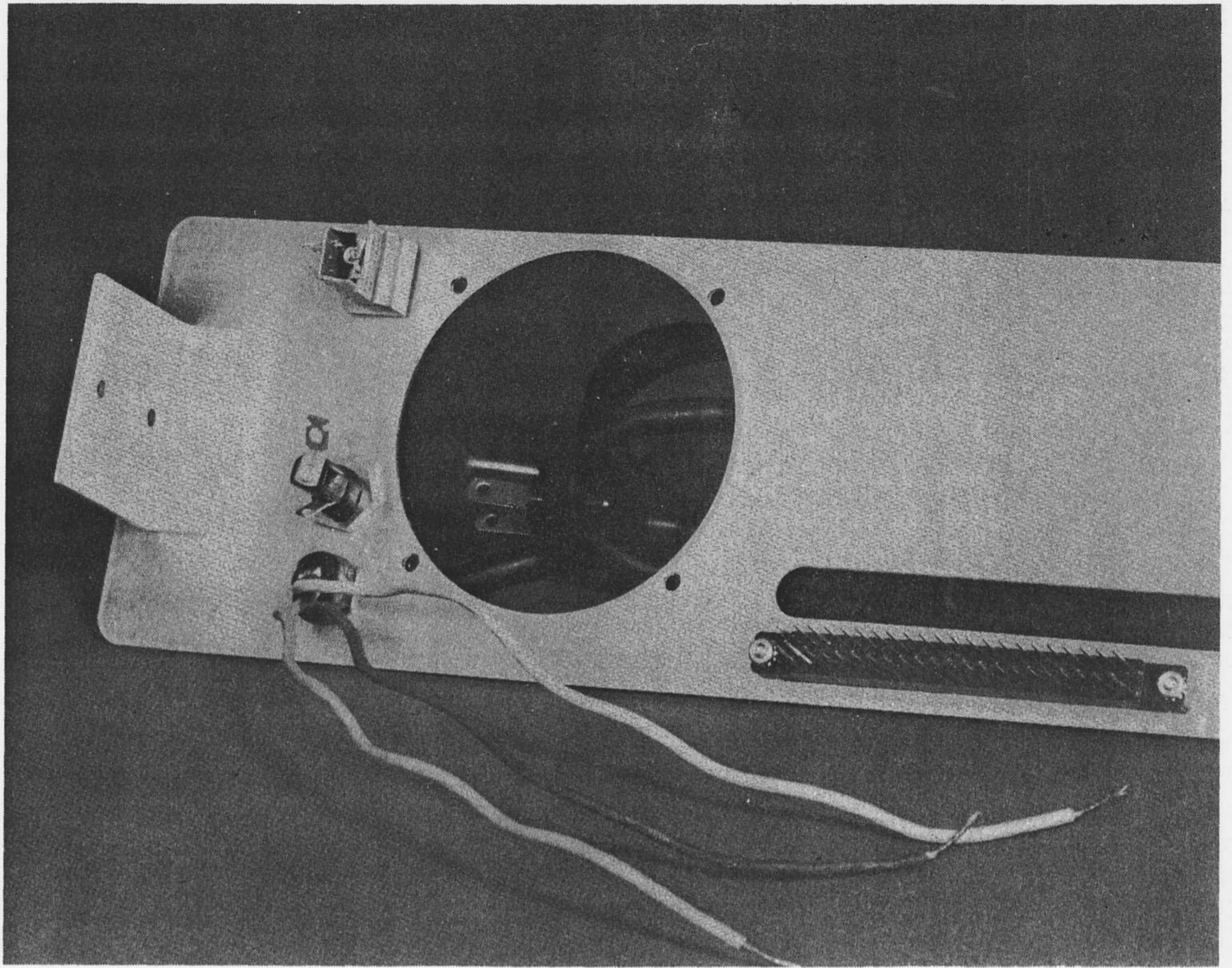


Photo 2

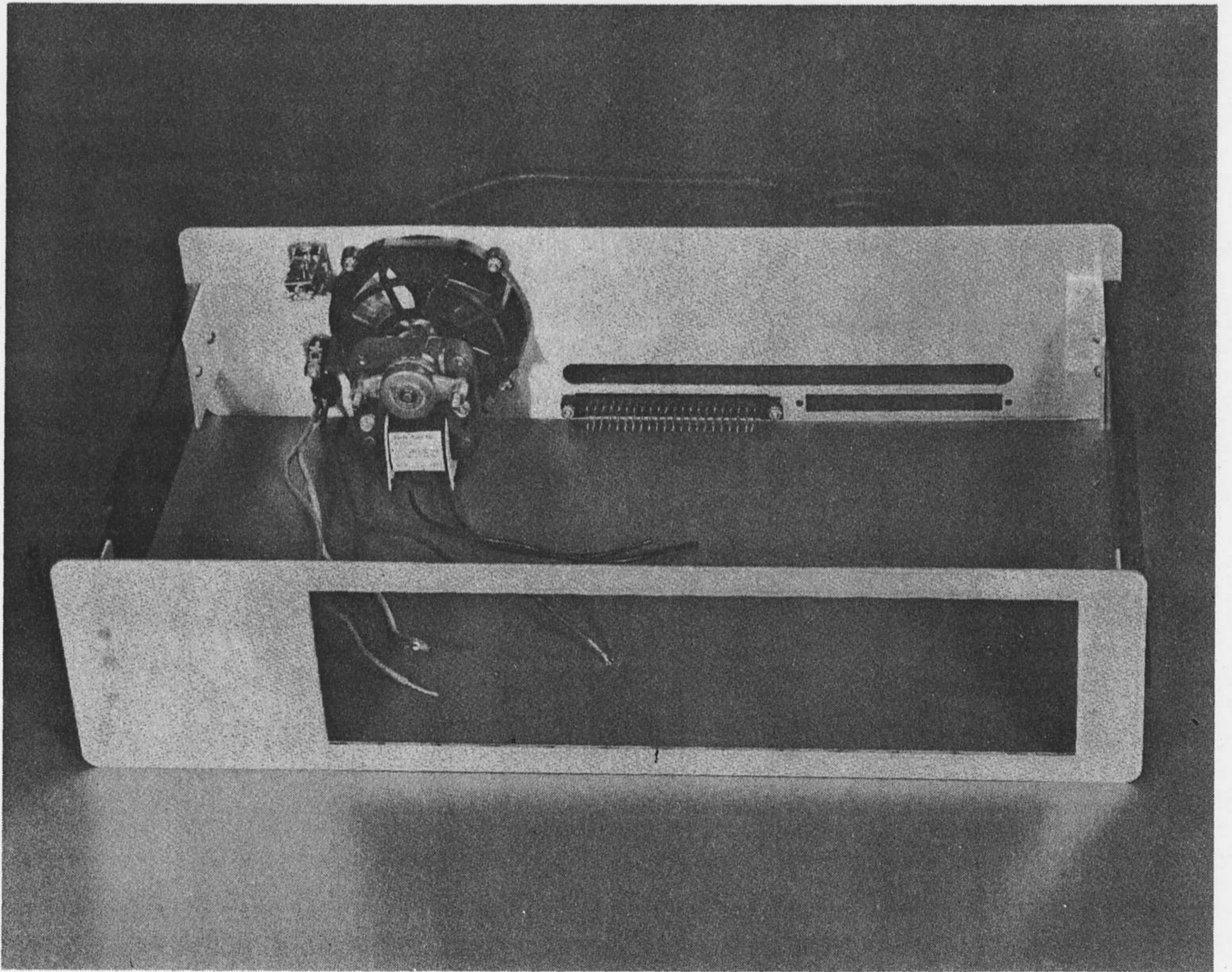


Photo 3

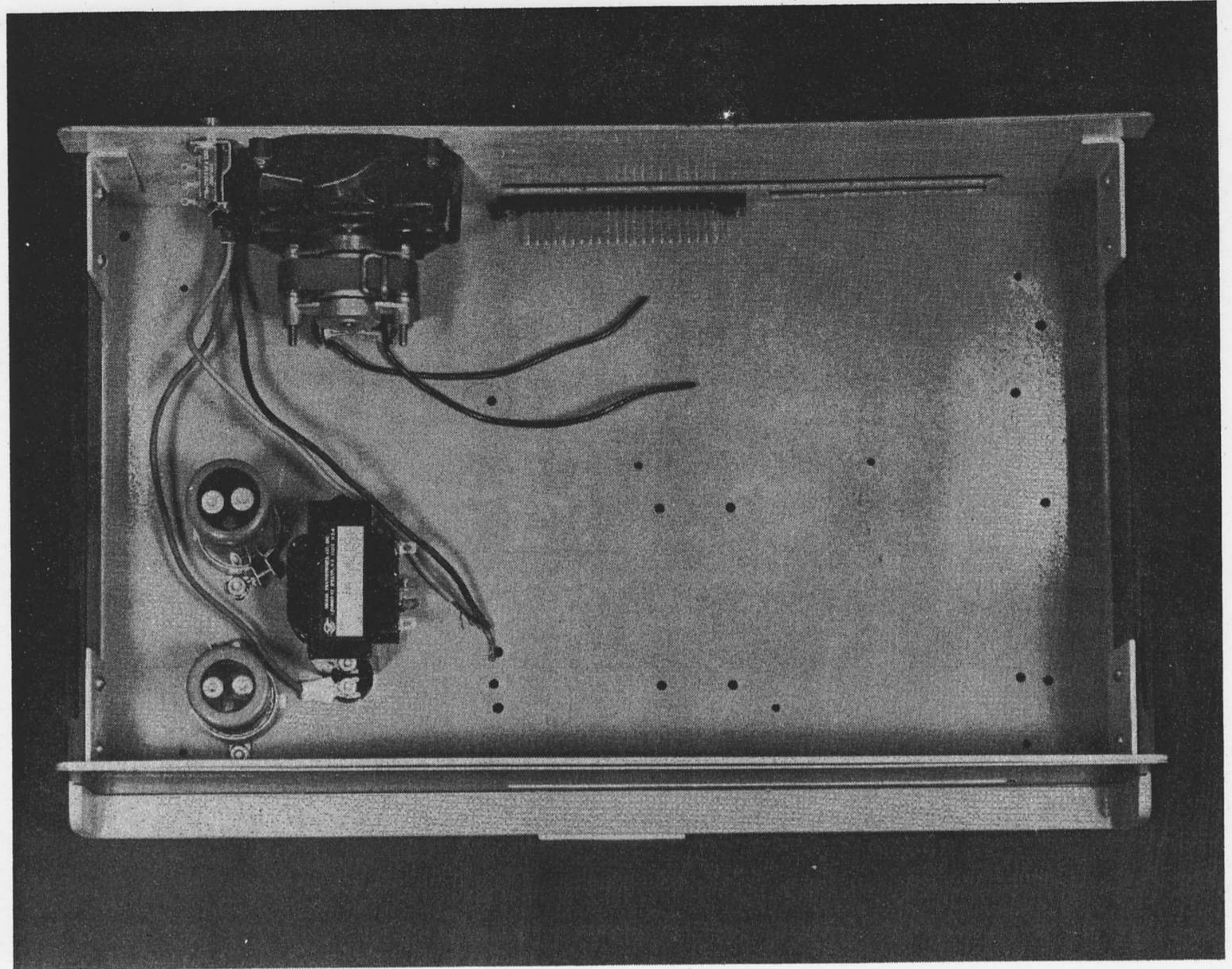


Photo 4

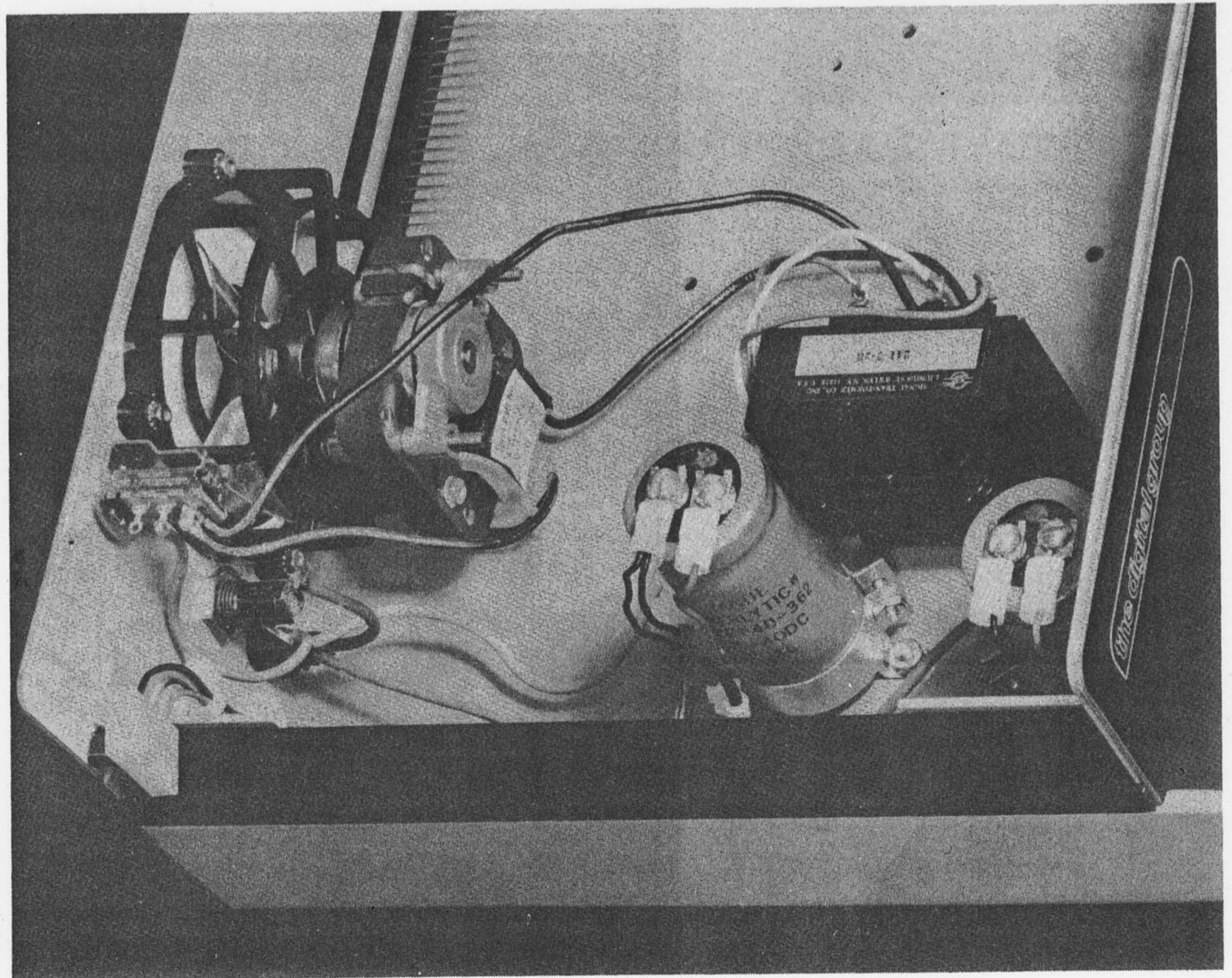


Photo 5

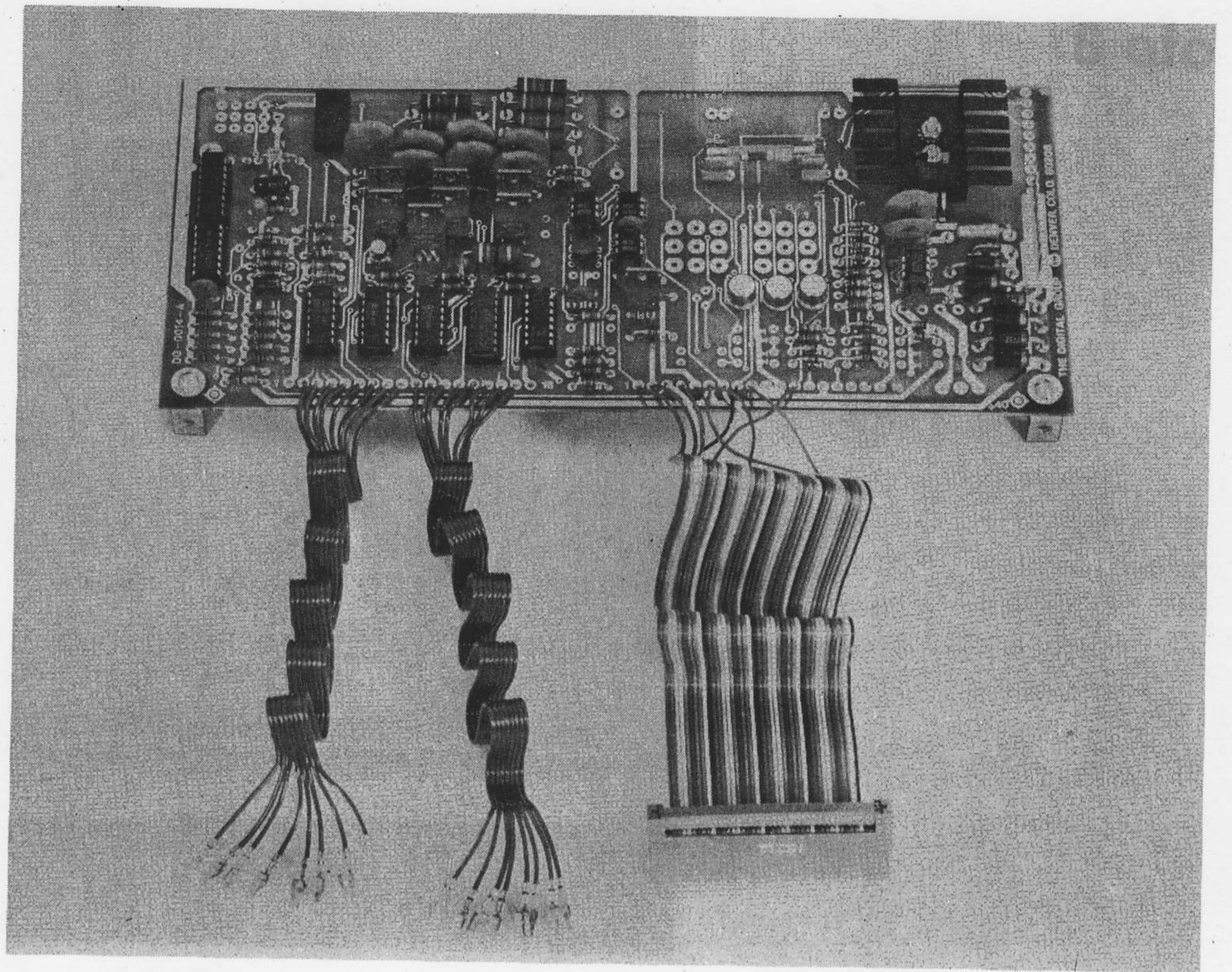


Photo 6

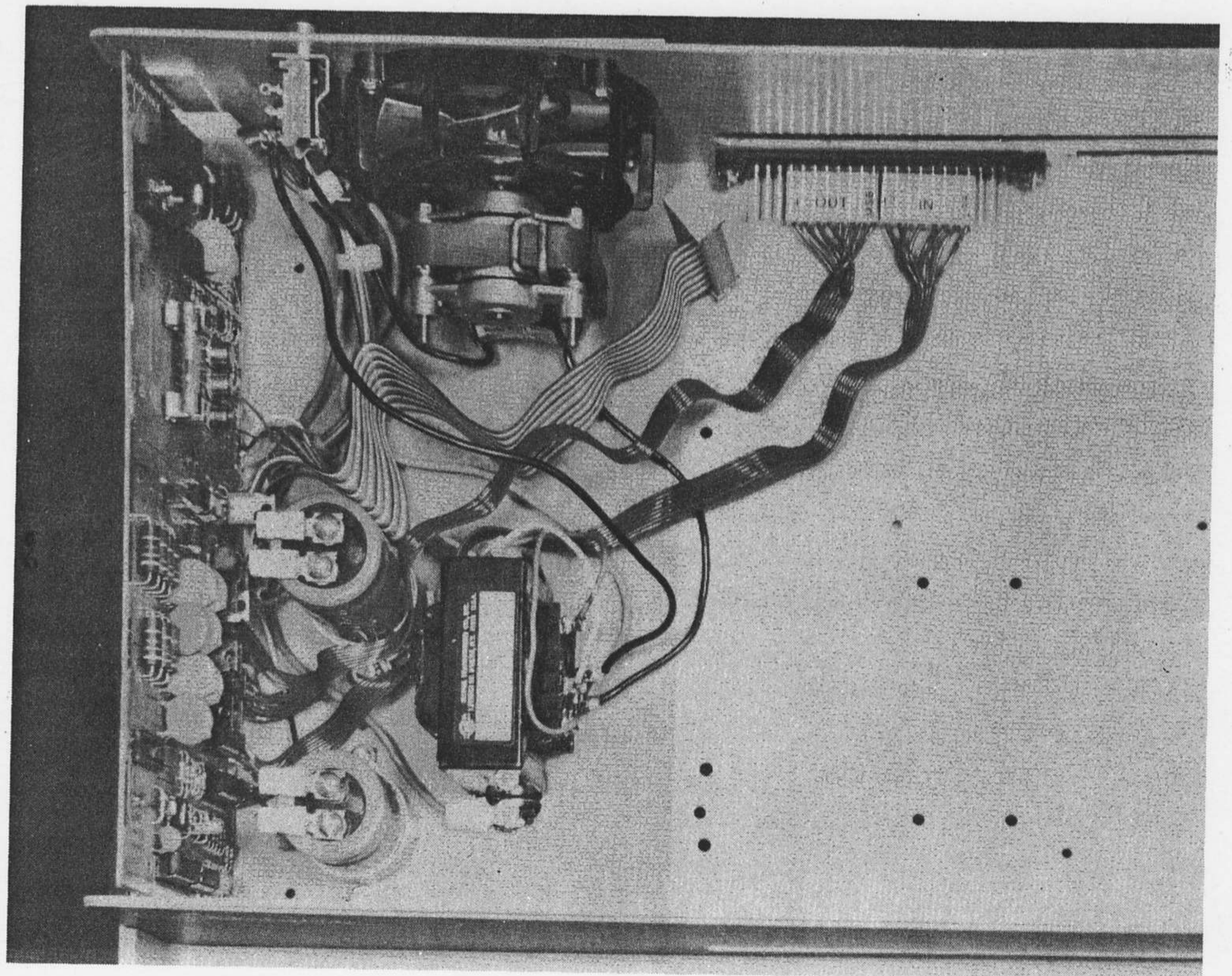


Photo 7

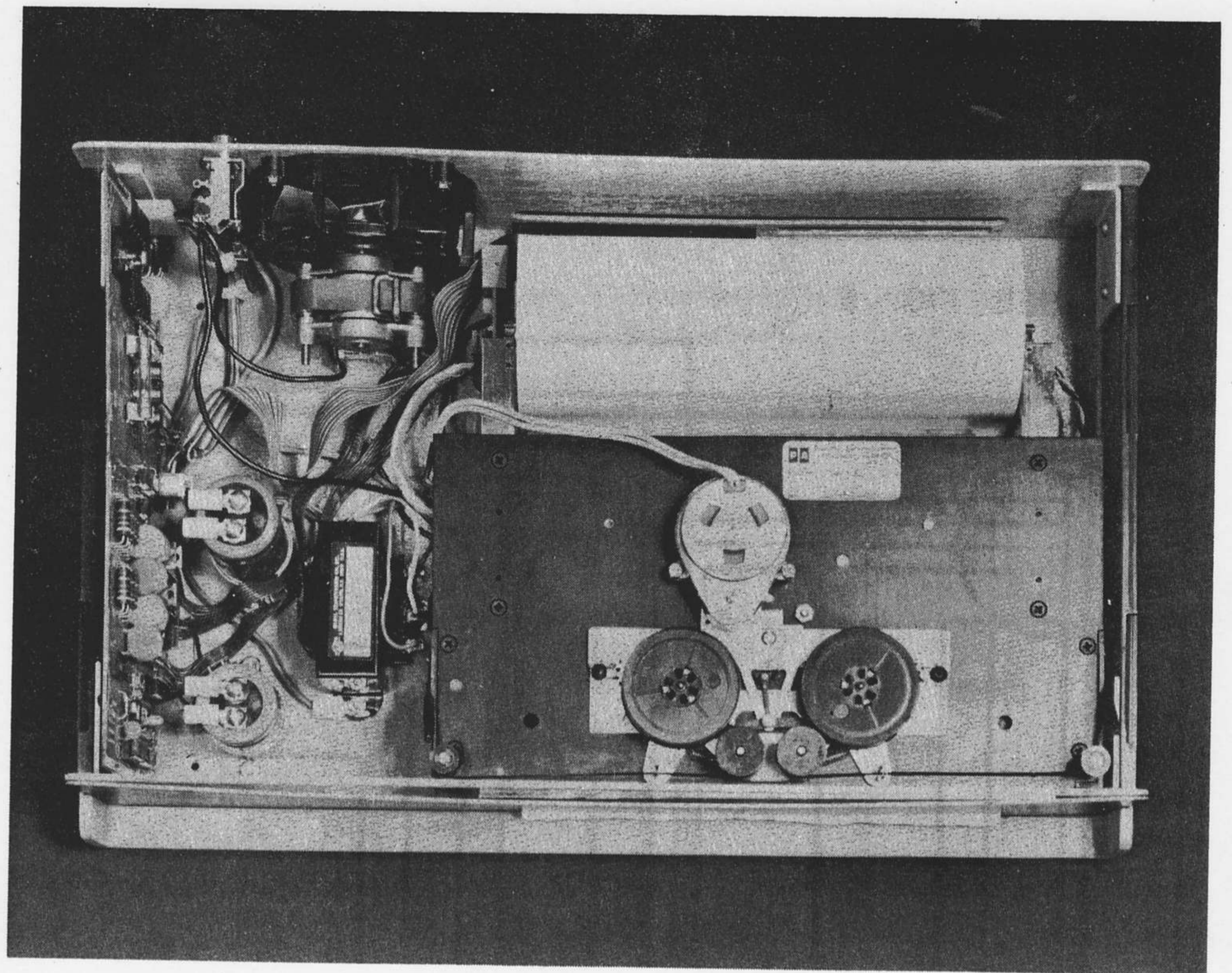
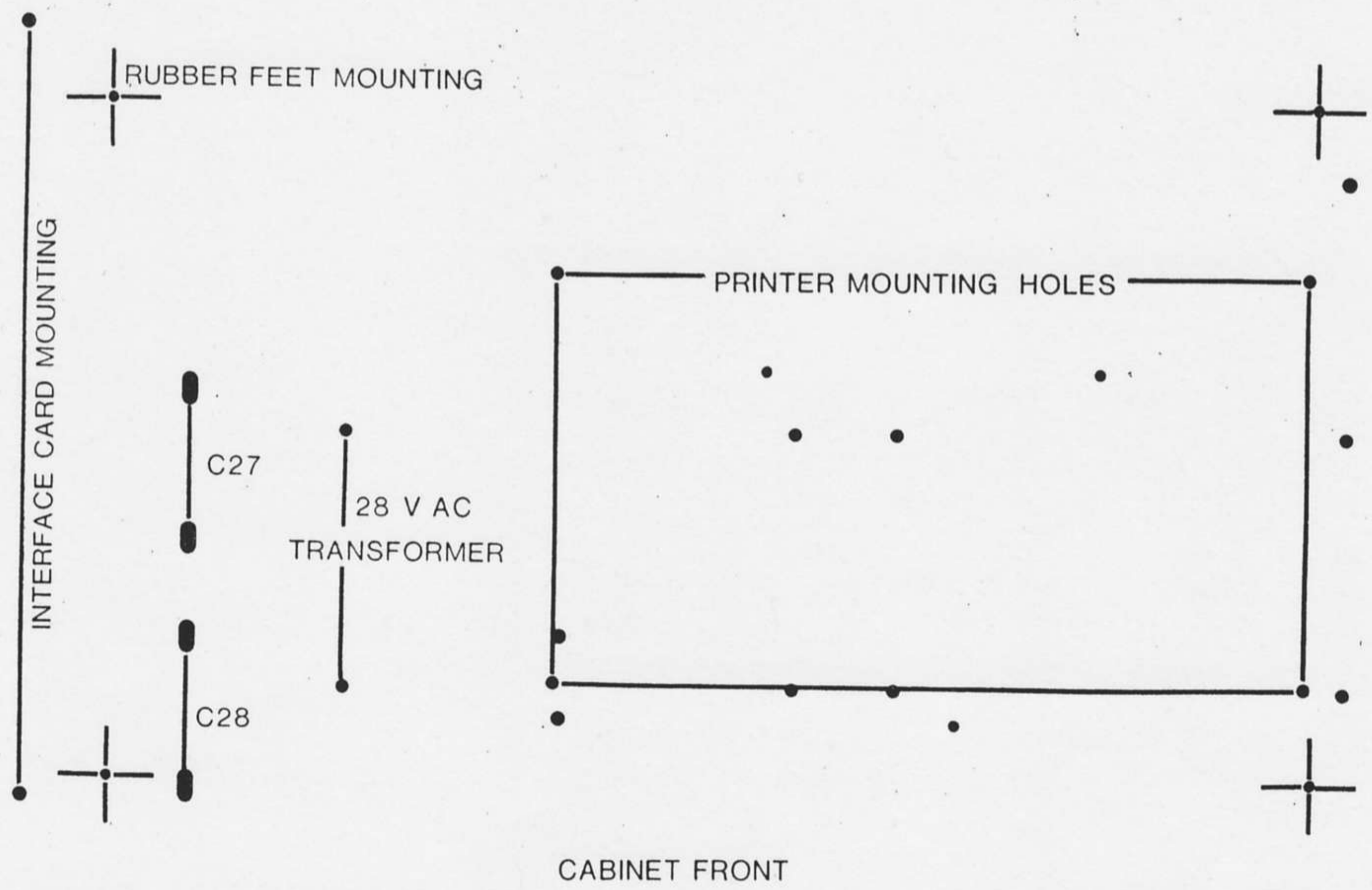


Figure 4



PRINTER CABINET (POWER SUPPLY) COMPONENT PLACEMENT

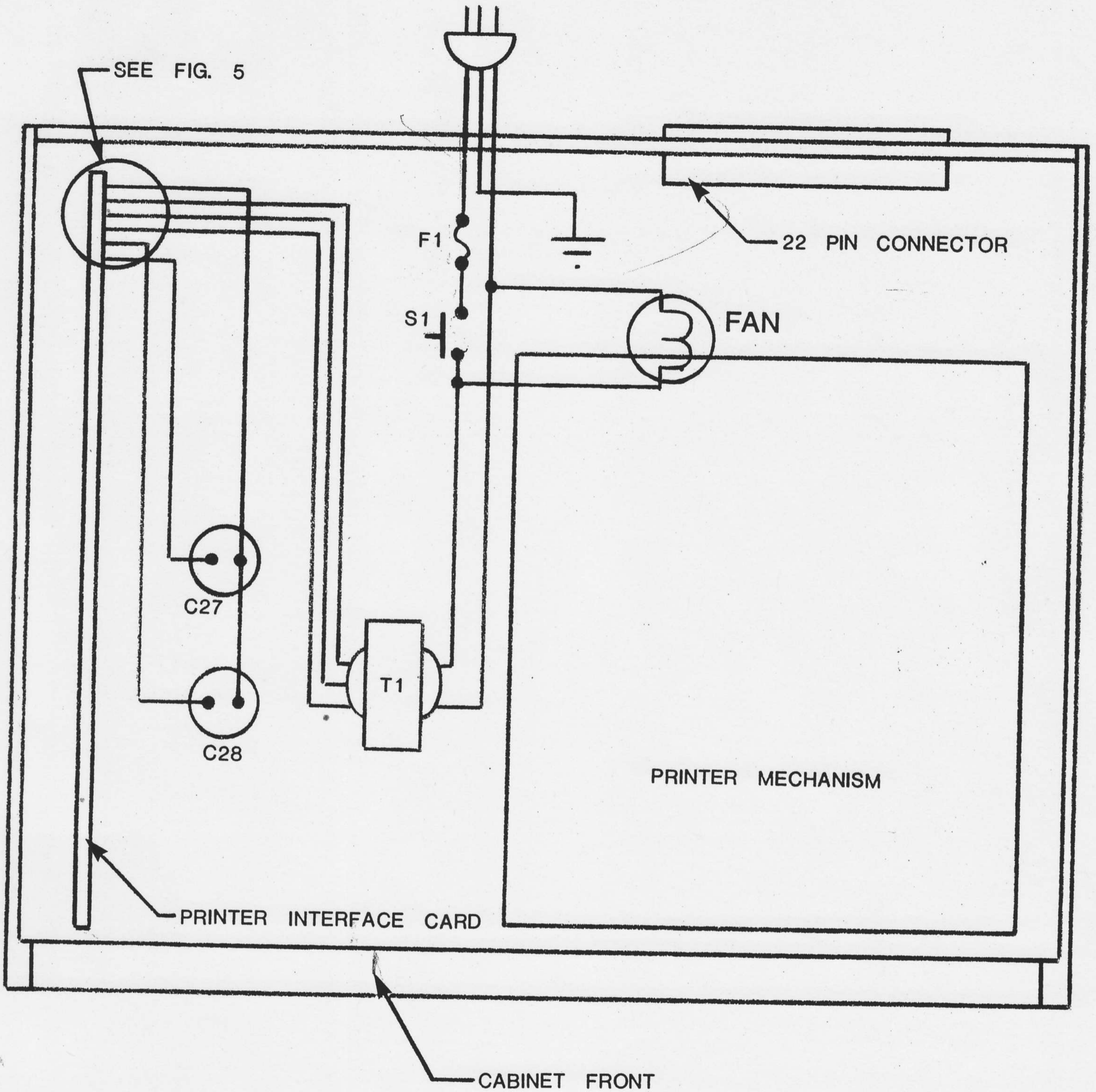


FIG. 1

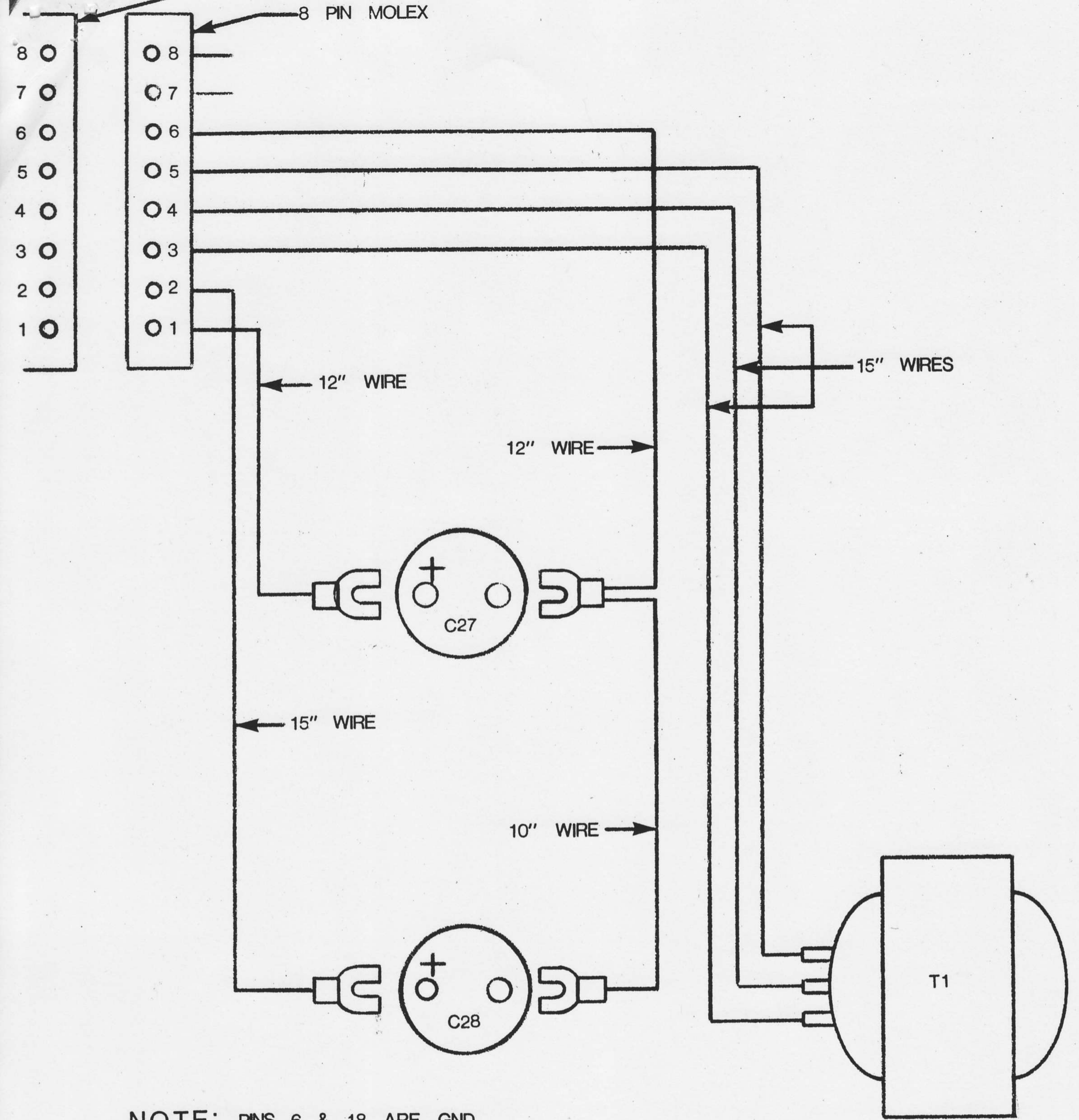
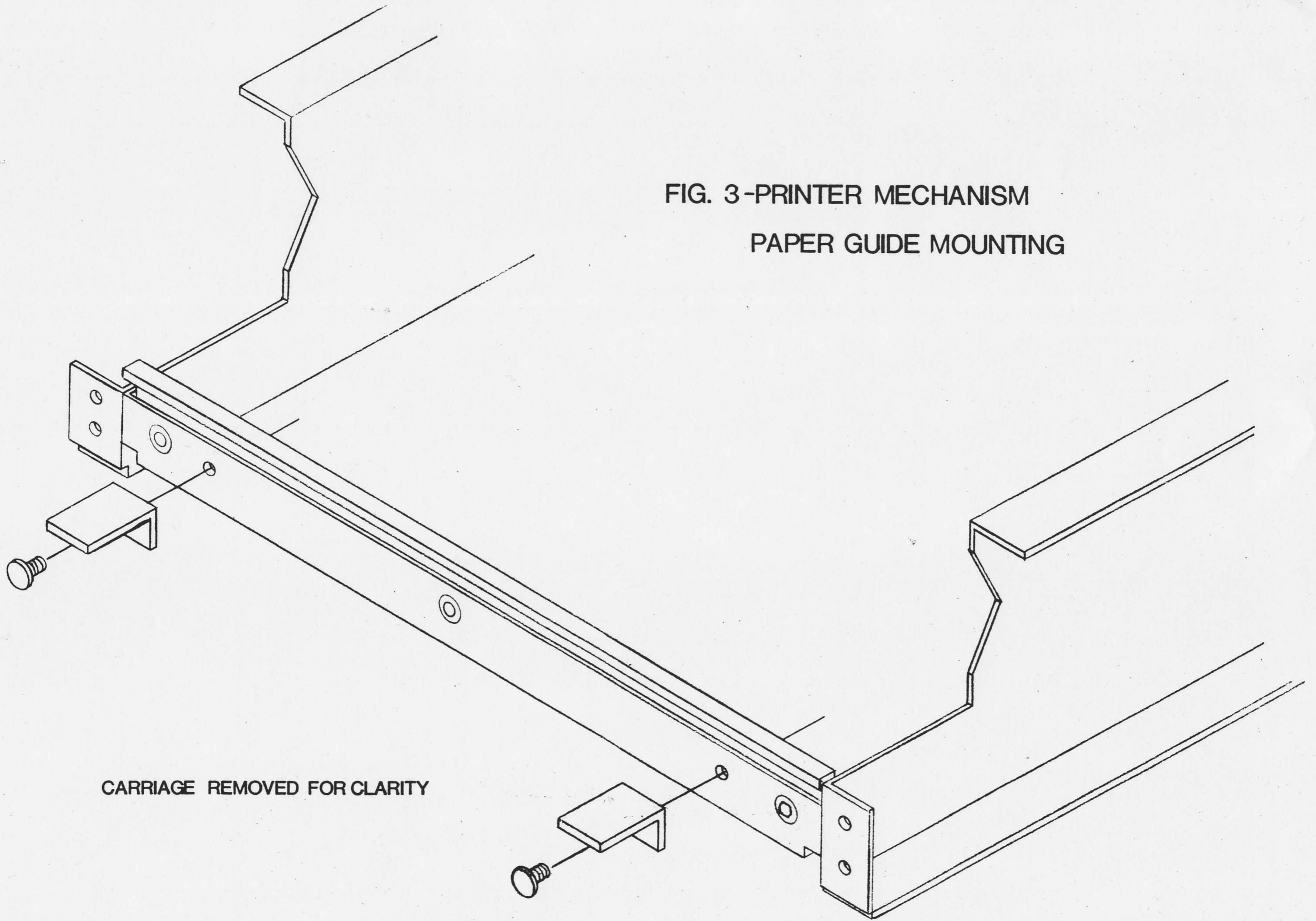


FIG. 2

FIG. 3-PRINTER MECHANISM
PAPER GUIDE MOUNTING



CARRIAGE REMOVED FOR CLARITY