

INSTRUCTION MANUAL

Serial Number B050327



Tektronix, Inc.

S.W. Millikan Way • P. O. Box 500 • Beaverton, Oregon 97005 • Phone 644-0161 • Cables: Tektronix
070-0799-00

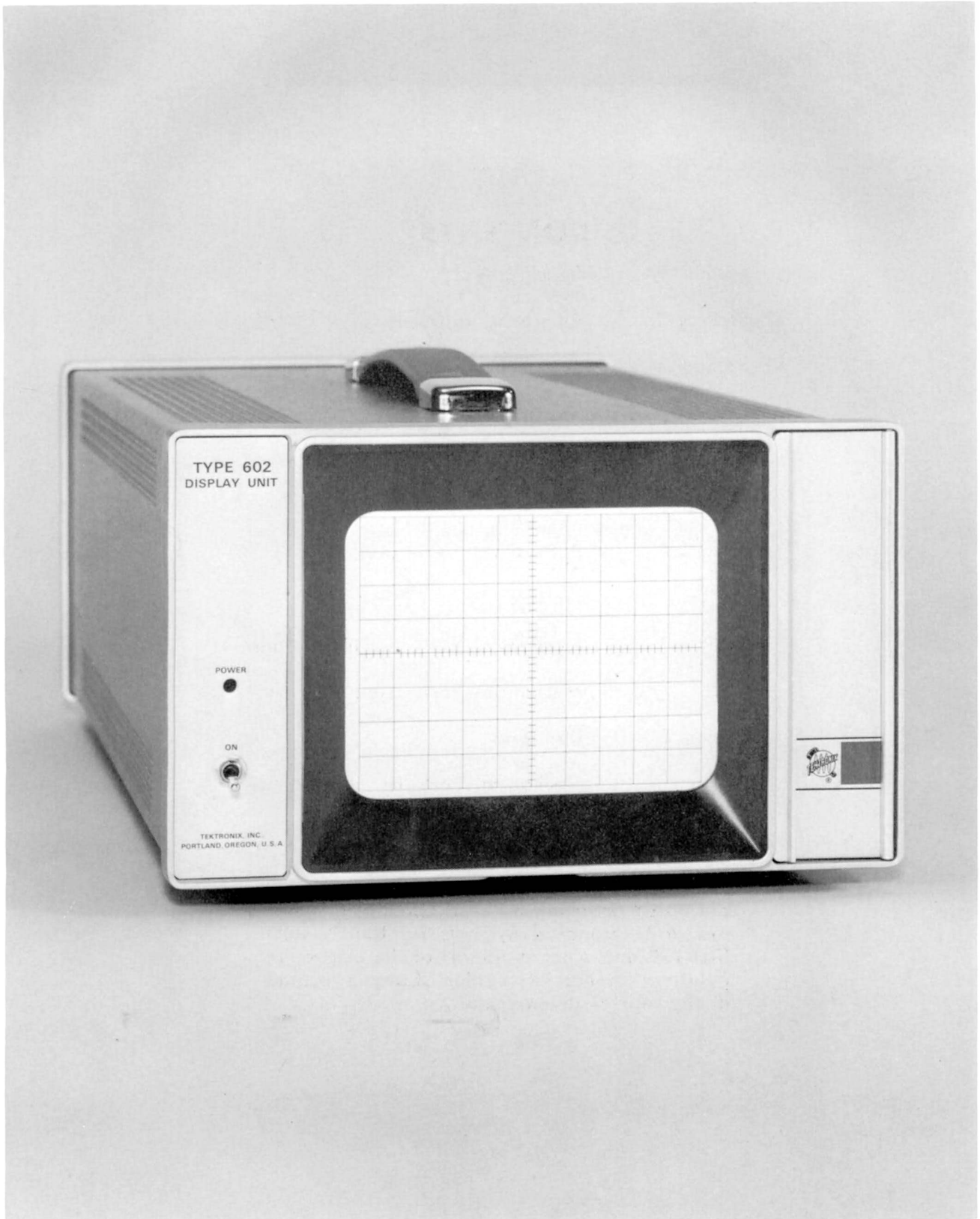


Fig. 1-1. Type 602 Display Unit.

SECTION 1

SPECIFICATION

Change information, if any, affecting this section will be found at the rear of this manual.

Introduction

The Type 602 Display Unit is a special purpose monitor designed for use in applications requiring an X-Y presentation.

The cathode ray tube used in the Type 602 is a rectangular 5 inch ceramic tube with an internal graticule.

This instrument will perform as stated under the "Performance" heading, within an ambient temperature range of 0° C to +50° C (after a one minute warmup) provided that the instrument was calibrated within an ambient temperature range of +20° to +30° C.

The "CHECK" portion of the Calibration Procedure, Section 5, provides a convenient method of checking the performance of this instrument.

The Type 602 may be used with the Tektronix, Inc. Type C-30 Camera.

VERTICAL AND HORIZONTAL CHANNELS

Characteristics	Performance
Deflection Factor	
Vertical (Y), 8 div full screen	Internally variable from 0.09 V/div to 0.135 V/div
Horizontal (X), 10 div full screen	Internally variable from 0.09 V/div to 0.11 V/div
Polarity	(+) Vertical input moves beam up (+) Horizontal input moves beam to right
Maximum Input Voltage	±10 V, DC + peak AC
Signal Source Impedance Level	1 kΩ or less recommended

VERTICAL AND HORIZONTAL CHANNELS

Characteristics	Performance
Input R and C	100 kΩ, within 10%, parallel by 30 pF or less
Bandwidth (X and Y Amplifiers)	1 MHz, minimum
Phase Difference	Within 1° between X and Y to 1 MHz
Vertical and Horizontal Position Ranges	Allows setting zero signal position anywhere on screen
Spot Position Stability	0.1 div or less/hour after 20 minute warmup

Z AMPLIFIER

Characteristics	Performance
Input Signal	Analog input DC to 1 MHz over a 0.0 V to +1 V range. (Linear amplifier modulates writing beam)
Maximum Input Voltage	±10 V, DC + peak AC
Input R and C	100 kΩ, within 10%, paralleled by 70 pF or less.
Source Impedance	1 kΩ or less recommended
Bandwidth	DC to 1 MHz

DISPLAY

Characteristics	Performance
CRT TYPE	Electrostatic deflection
Phosphor	Standard P31; optional P7
Display Quality Area	8 div by 10 div
Linearity (Low Frequency)	
Vertical Axis	1%, or less, difference in any 2 cm
Horizontal Axis	6%, or less, difference in any 2 cm
Geometry	
Vertical	0.1 div or less deviation from straight line.
Horizontal	0.1 div or less deviation from straight line.
Graticule	Standard, internal 8 x 10 div Optional internal 8 x 10 div outline (no graticule lines).
Trace Width	14 mils at 0.5 μA beam current

POWER SUPPLY

Characteristics	Performance
Line Voltage Range	
115 V	Low 90 V to 110 V Medium 104 V to 126 V High 112 V to 136 V
230 V	Low 180 V to 220 V Medium 208 V to 252 V High 224 V to 272 V
Maximum Power Consumption at 115 V, 60 Hz	50 W, 0.48 A
Line Frequency	48 Hz to 440 Hz

Specification—Type 602

ENVIRONMENTAL

Characteristics	Performance
Temperature	
Non-operating	—40° C to +65° C
Operating	0° C to 50° C
Altitude	
Non-operating	To 50,000 feet
Operating	To 15,000 feet
Transportation	Qualified under National Safe Transit Committee test procedure 1A.

PHYSICAL

Finish		
Cabinet	Blue vinyl painted aluminum	
Front Casting	Aluminum	
CRT mask	DELRIN ¹ plastic	
Dimensions	Without cabinet	With cabinet
Height	5¼ inches	6 inches
Width	8½ inches	8½ inches
Length	17½ inches	17½ inches

¹DELRIN is a registered trademark of E. I. Du pont De Nemours Co., Wilmington, Delaware.

For optional accessories available for use with this instrument, see current Tektronix, Inc., catalog.

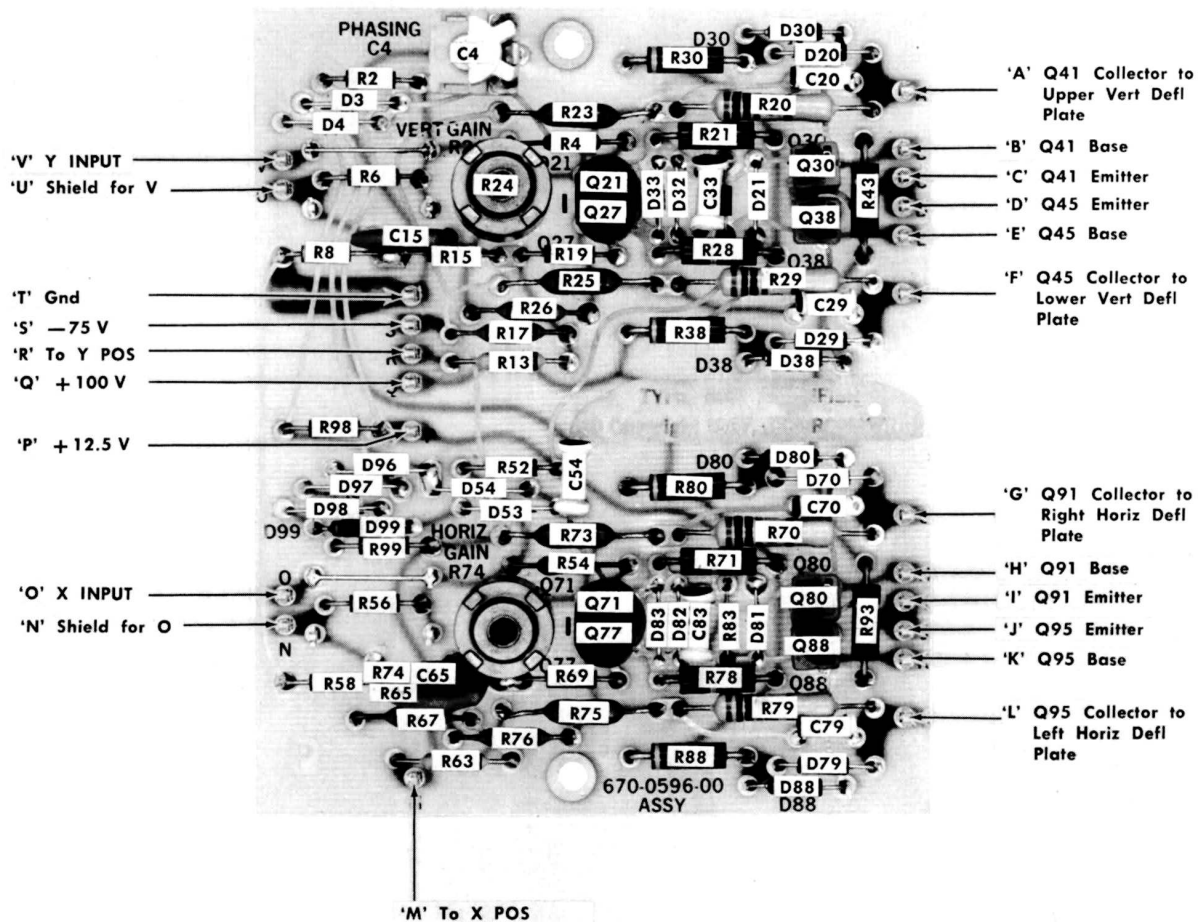


Fig. 4-16. Deflection Amplifier Circuit Board.

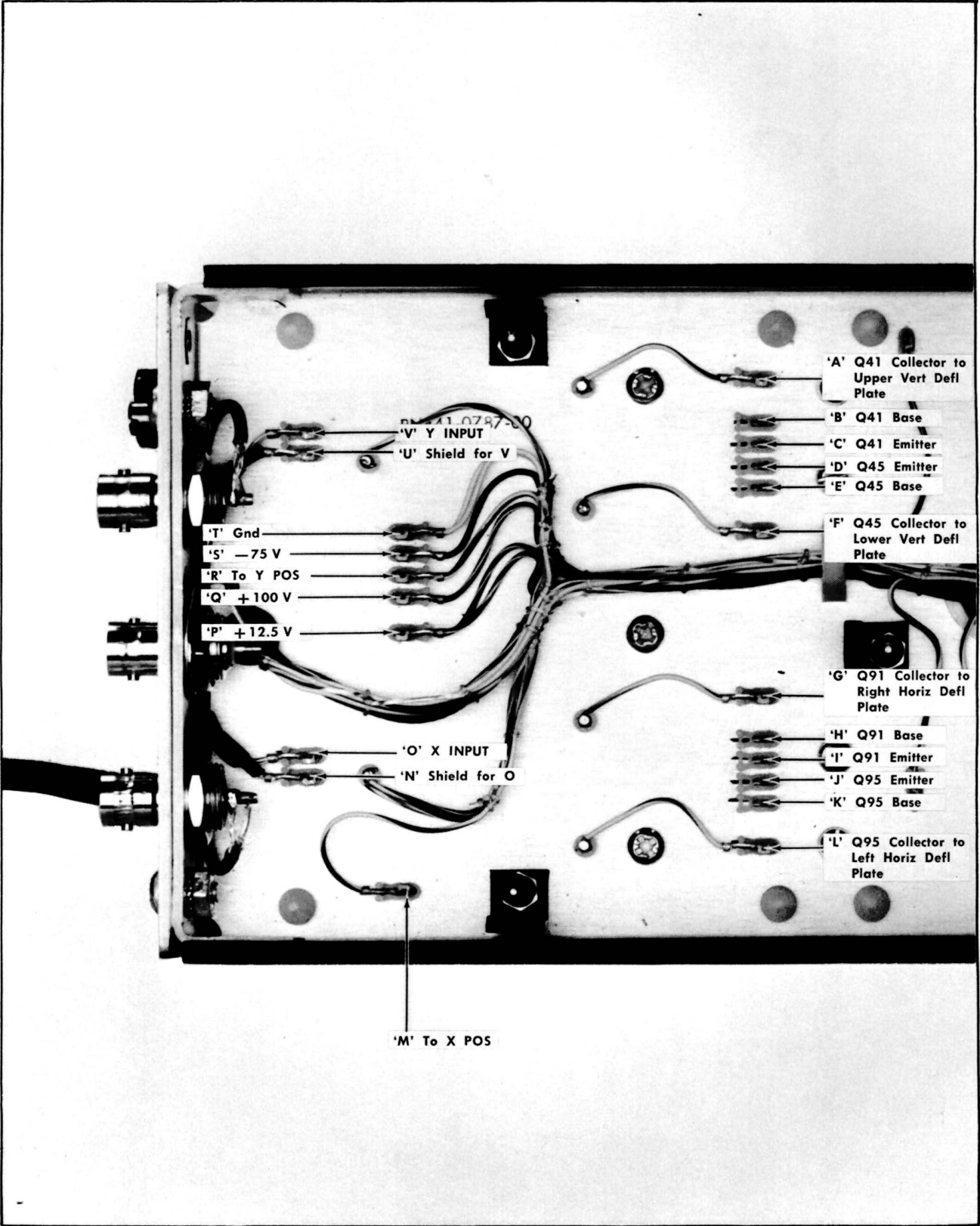


Fig. 4-17. Connecting Pin and Lead Designations, Deflection Amplifiers.

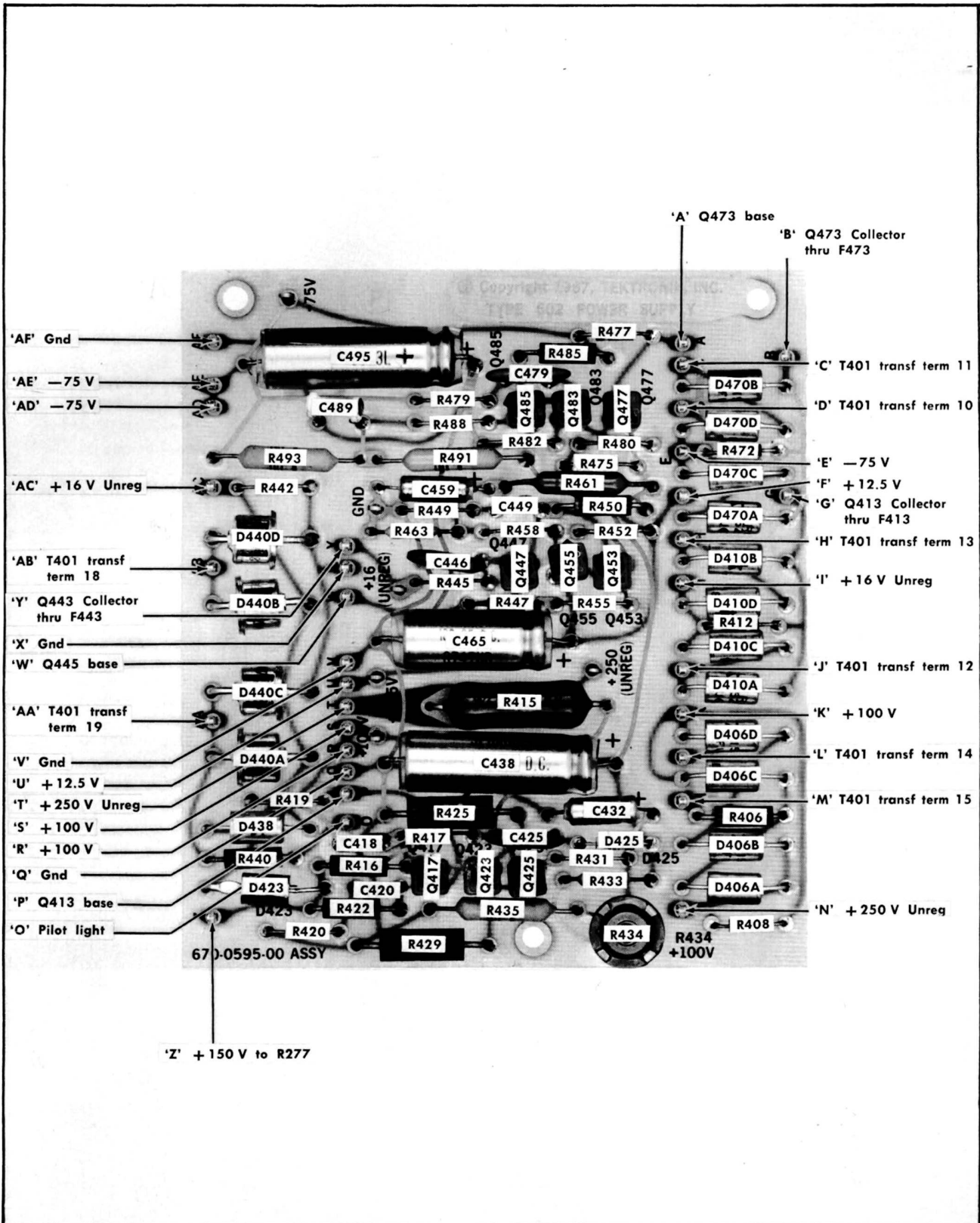


Fig. 4-18. Power Supply Circuit Board.

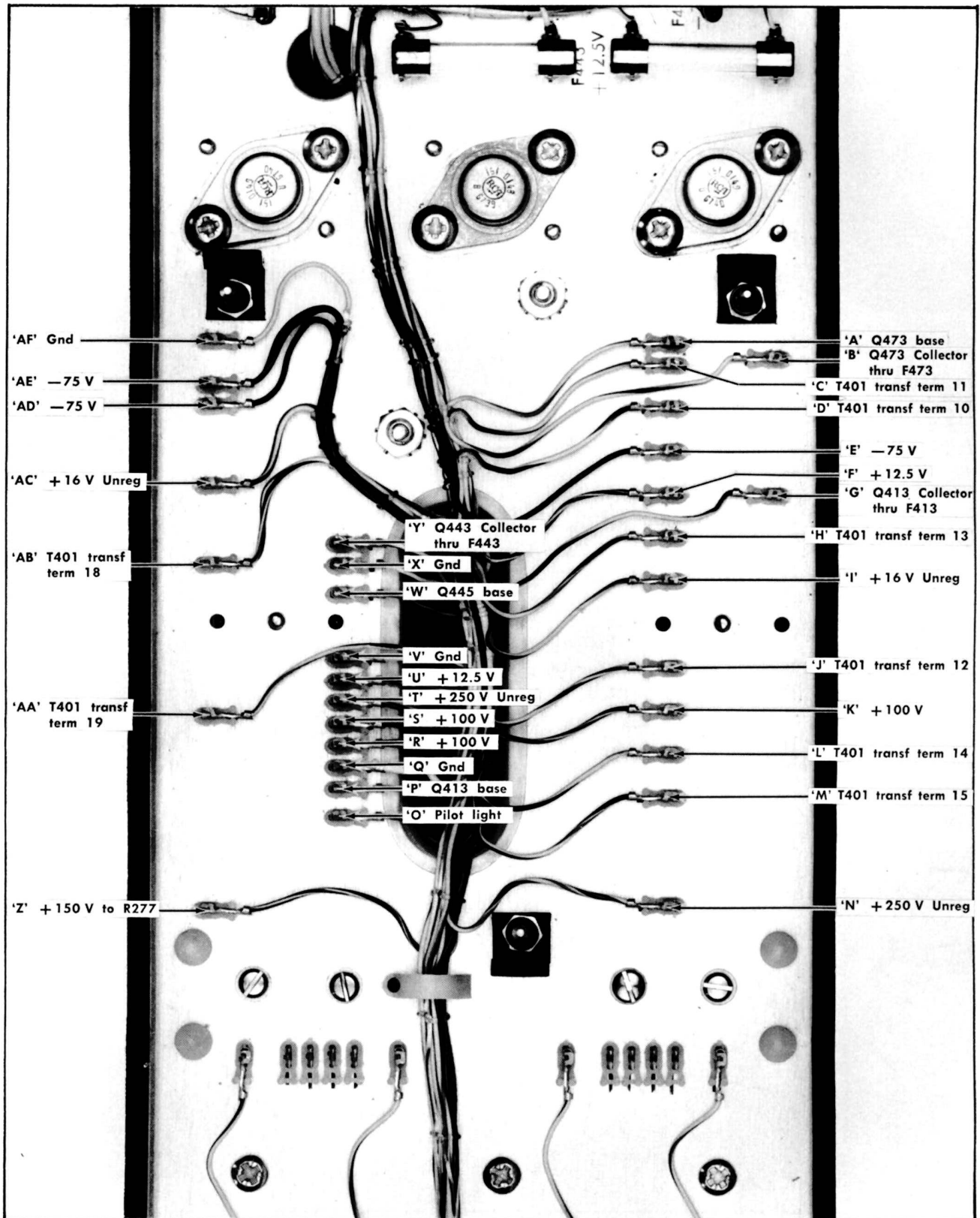


Fig. 4-19. Connecting Pin and Lead Designations, Power Supply.

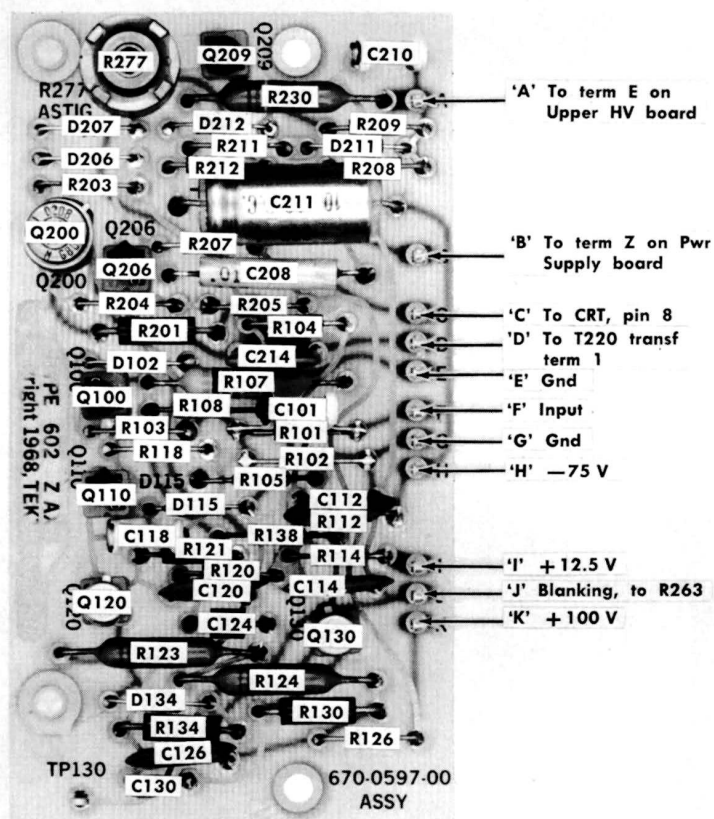


Fig. 4-20. Z Amplifier Circuit Board.

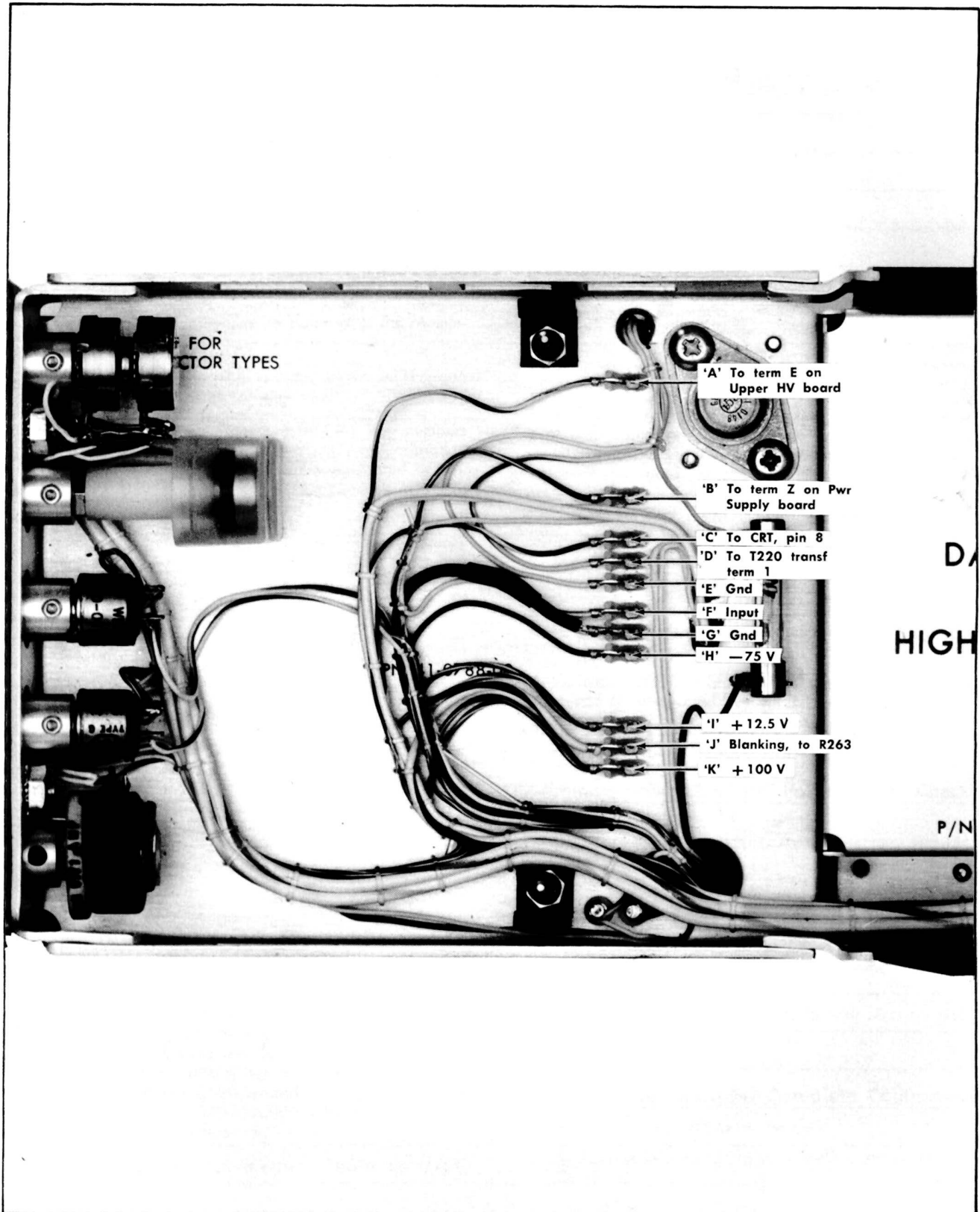
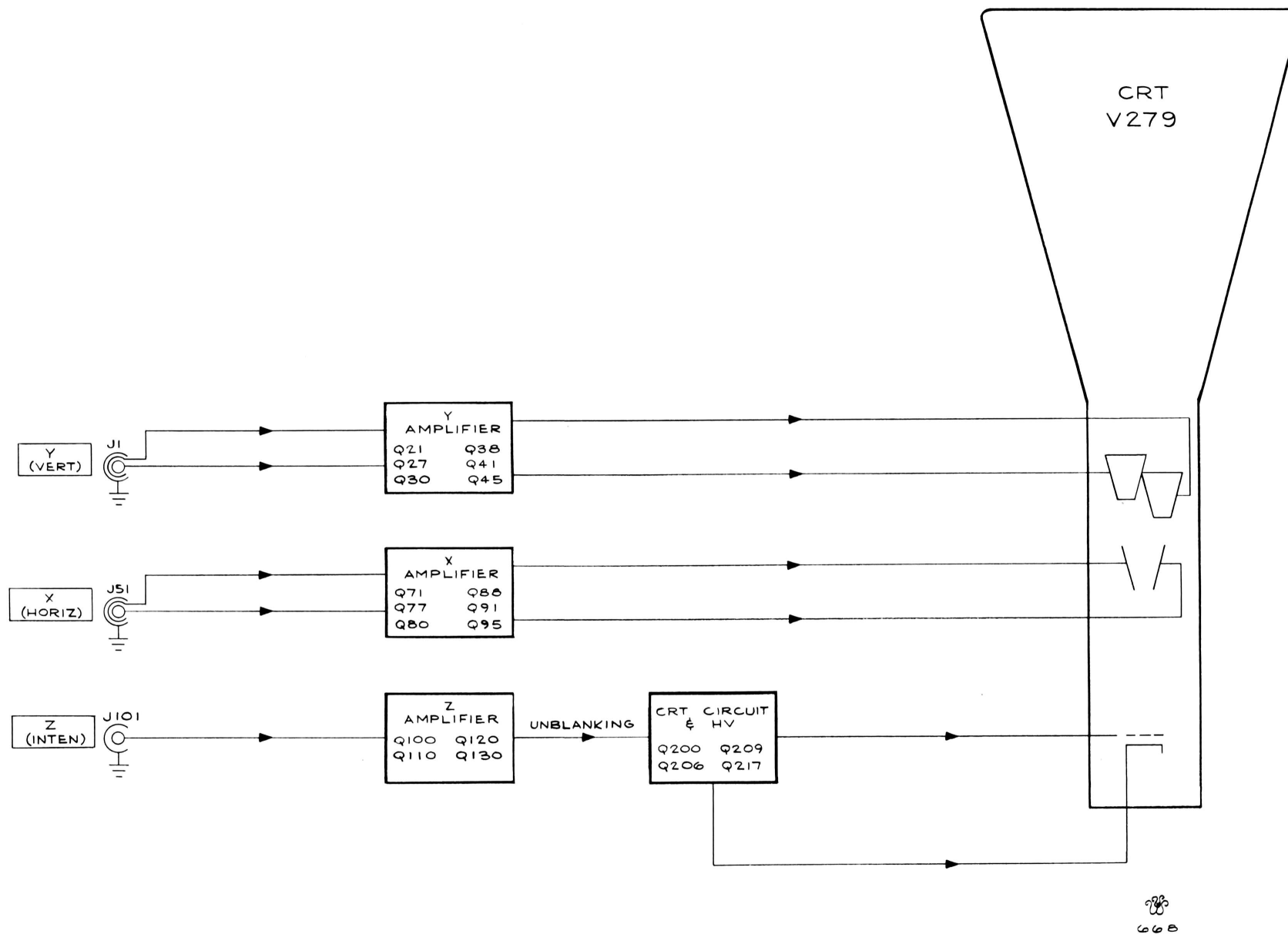
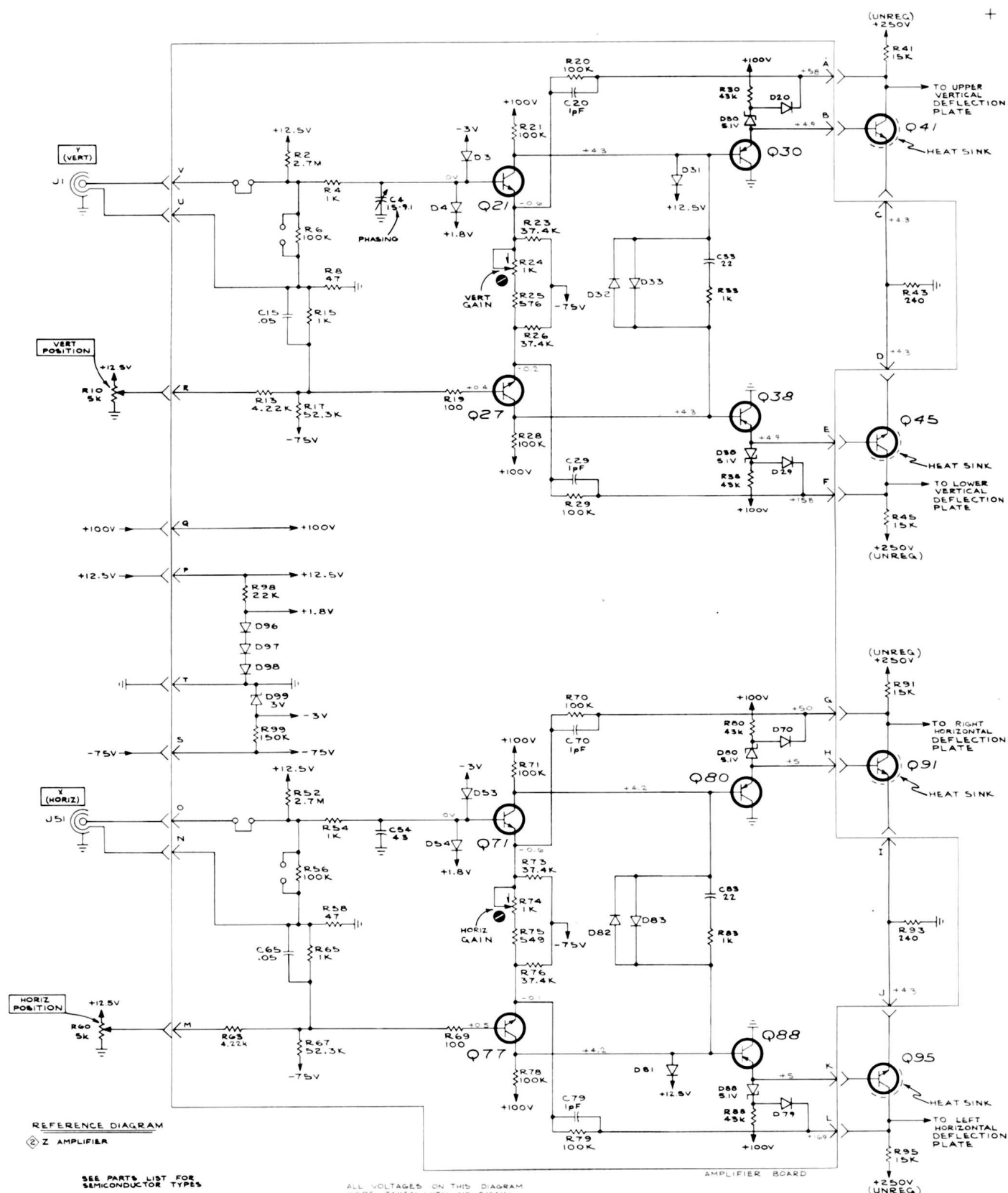


Fig. 4-21. Connecting Pin and Lead Designations, Z Amplifier.



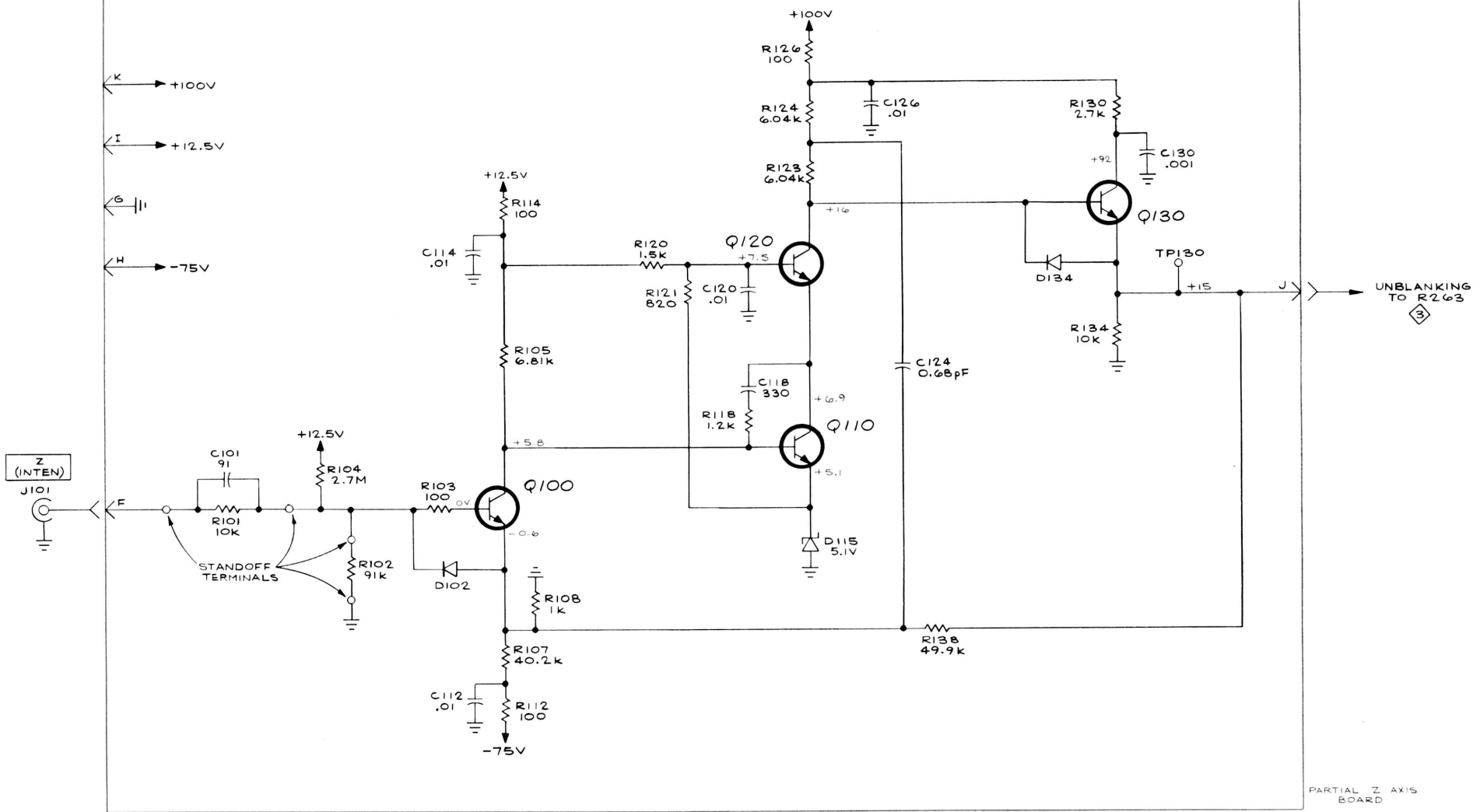
BLOCK DIAGRAM



TYPE 602 DISPLAY UNIT

DEFLECTION AMPLIFIERS

+



ALL VOLTAGES ON THIS DIAGRAM WERE TAKEN WITH NO SIGNAL APPLIED AND WITH X, Y, AND Z INPUTS TERMINATED IN 50Ω.

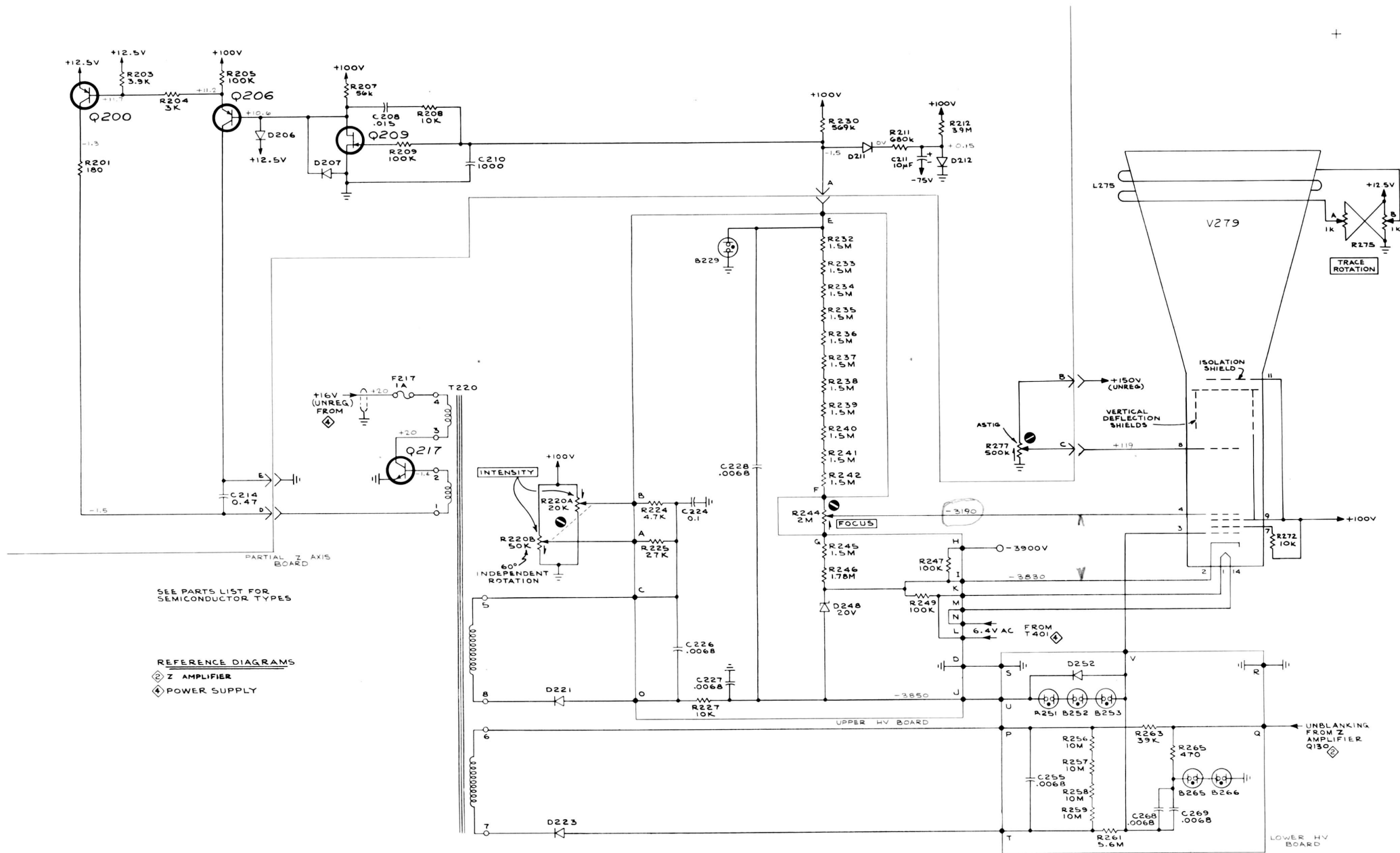
REFERENCE DIAGRAM
3 CRT CIRCUIT

Z AMPLIFIER 2

TYPE 602 DISPLAY UNIT

A

+



TYPE 602 DISPLAY UNIT

A

CRT CIRCUIT <3>

 $+$

▲

POWER SUPPLY 4