

TEKTRONIX®



INSTRUCTION MANUAL

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MODIFICATION INSERT

Serial Number 6296880

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528 MOD W2X
MODIFICATION INSERT
SUPPLEMENT TO STANDARD MANUAL



528

MOD W2X

OPERATING INSTRUCTIONS

Apply power (approximately 24V) between Pins 1 and 2 of J370 and internal relay K380 will energize and automatically switch the 528 MOD W2X into the 2 field (2V) and Ext Sync operating mode. When K380 is energized, the Sync switch (2W85) will have no control of the 528. The 528 will switch the sweep to the 2 Field (2V) position. In the 2V MAG and 1 u sec/div mode there will be a magnified 2 Field display. When K380 is deenergized the Sweep switch (SW240) and Sync switch (2W85) will again have normal control. The input to the 528 MOD W2X has been DC coupled, therefore, the DC restorer will not function properly unless the strap from TP2 to TP8 is removed.

The operational characteristics of the 528 MOD W2X are the same as the standard Tektronix Type 528 Television Waveform Monitor, when relay K380 is not energized. The 528 MOD W2X has been modified for 625/50 Composite Video.

CALIBRATION

Additional Test Equipment Required:

1. Type 114 Pulse Generator (or equivalent).

With no power being applied to the added Relay (K380) and the wire strap connecting TP2 to TP8 lifted the 528 MOD W2X can be calibrated as a standard Tektronix Type 528 Television Waveform Monitor. Substitute 625/50 Composite Video for 525/60 Video, and use the Manual Calibration Procedure, SECTION 5. Do not adjust the Chroma filter (step 18) at this time.

1. Reconnect TP2 to TP8 and begin the calibration of the modified portion of the instrument.

2. Connect a VOM between Pin M of the Power Supply Circuit board and ground to check the voltage available to run the three graticule lights. Turn the Scale Illum control R590 fully CCW. Vary the line voltage from 91 VAC to 132 VAC. The voltage on Pin M will vary from 12.5V to 17.5V.

Turn the Scale Illum control fully CW and again vary the line voltage. The voltage on Pin M will vary from 10V to 15V. At normal line voltage, the full range of the Scale Illum control is approximately 10V.

3. Connect a Type 191 Constant Amplitude Signal Generator to Channel A input connector. Set the response switch to FLAT and adjust the 191 for 1V of 4.43MHz output frequency. Change the RESPONSE switch to CHROMA and adjust the 4.43MHz filter for a 1V display. Check that the response at 4.43MHz does not vary more than 1% between FLAT and CHROMA. Check and adjust Chroma response for:

30% down between 3.83MHz and 4.23MHz

30% down between 4.59MHz and 5.07 MHz.

4. For power to energize the relay (for testing only) use +26V from Pin U or T of the Power Supply Circuit board. Ground Pin 2 of J370 and connect a jumper between Pin 1 of J370 and Pin U or Pin T of the Power Supply Circuit board.

CALIBRATION (Cont.)

5. Connect the output of a 114 Pulse Generator via a "T" connector to the A input and the EXT SYNC input of the 528 MOD W2X. Energize the relay and check:
 - a. The 528 automatically selects the 2 Field and Ext Sync mode of operation.
 - b. The EXT SYNC switch (SW85) has no effect on the operation of the instrument.
 - c. The 528 has a two field display. In the 2v MAG and 1 u sec/div mode there will be a magnified display.
 - d. The instrument triggers while applying a signal with a 4CmSec period and 3mSec width.
 - e. The instrument remains triggered while varying the amplitude of the signal from 1.5V to 4.5V. This completes the Calibration Procedure.

528 MOD W2X

ELECTRICAL PARTS LIST

CHASSIS

CKT NO.	STATUS	Tektronix PART NO.	DESCRIPTION
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The Manual Electrical Parts List for the Circuitry 4 on the 528 MOD W2X is correct with the following noted changes:

BULBS

B594	Change	150-0059-00	14V #386
B595	Change	150-0059-00	14V #386
B596	Add	150-0059-00	14V #386

CAPACITORS

C592	Add	290-0218-00	Cap. 500 μ f 30V DC EMT
C45	Change	283-0159-00	Cap. Cer. 18 pf 5% 50V
C47	Change	283-0640-00	Cap. Mica 160pf 1% 100V
C253	Add	285-0633-00	Cap. Mylar. .22 μ fd 10% 100V DC
C250	Add	285-0683-00	Cap. Mylar. .022 μ fd 5% 100V DC
C593	Add	281-0623-00	Cap. Cer. 650 pf 500V

RELAYS

K380	Add	148-0024-01	24V DC 700 Ω
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TUBES

V859	Change	154-0818-00	CRT T5281-31-9.20 CCIR
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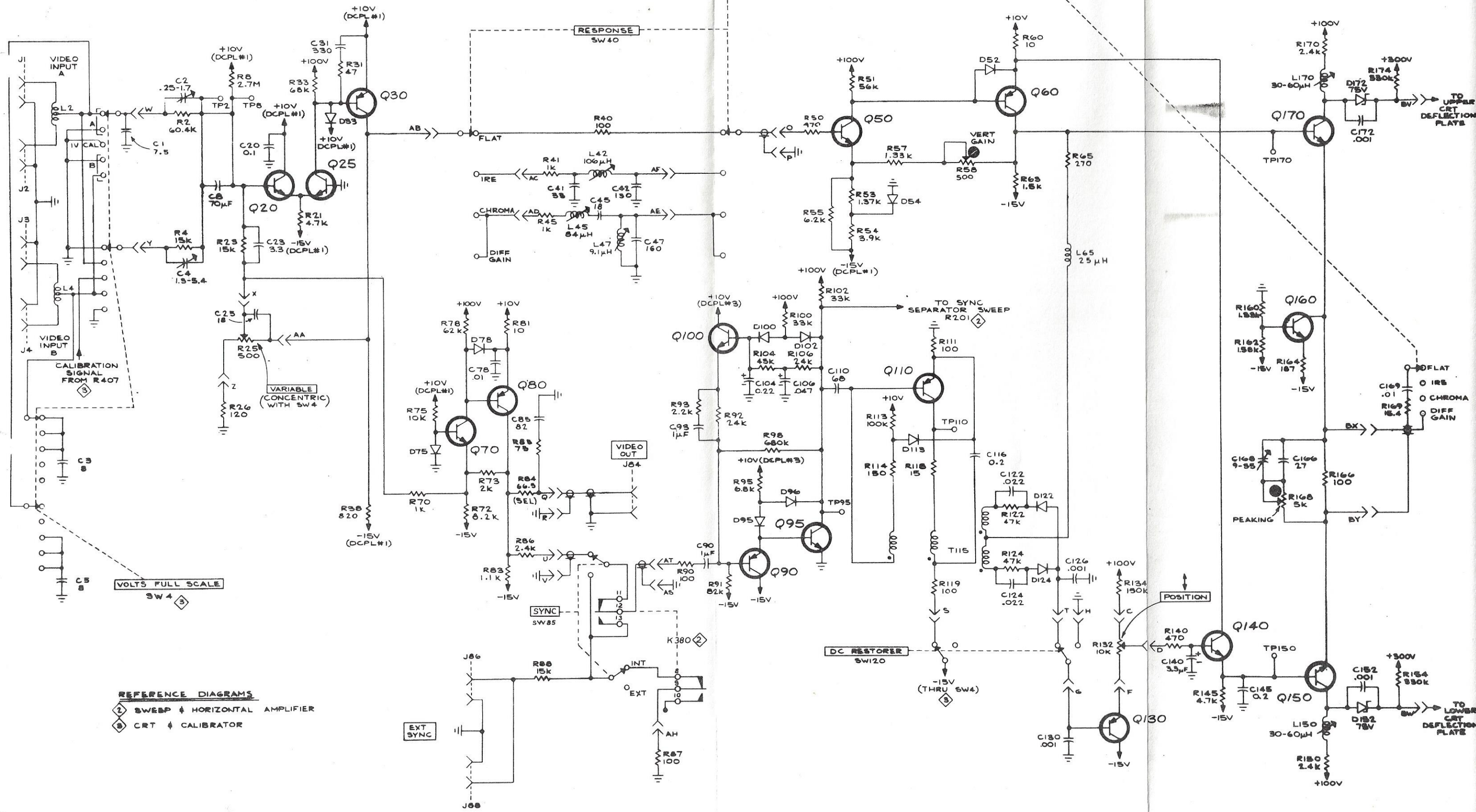
528 MOD W2X

MECHANICAL PARTS LIST

QUANTITY	PARTS LIST	STATUS	DESCRIPTION
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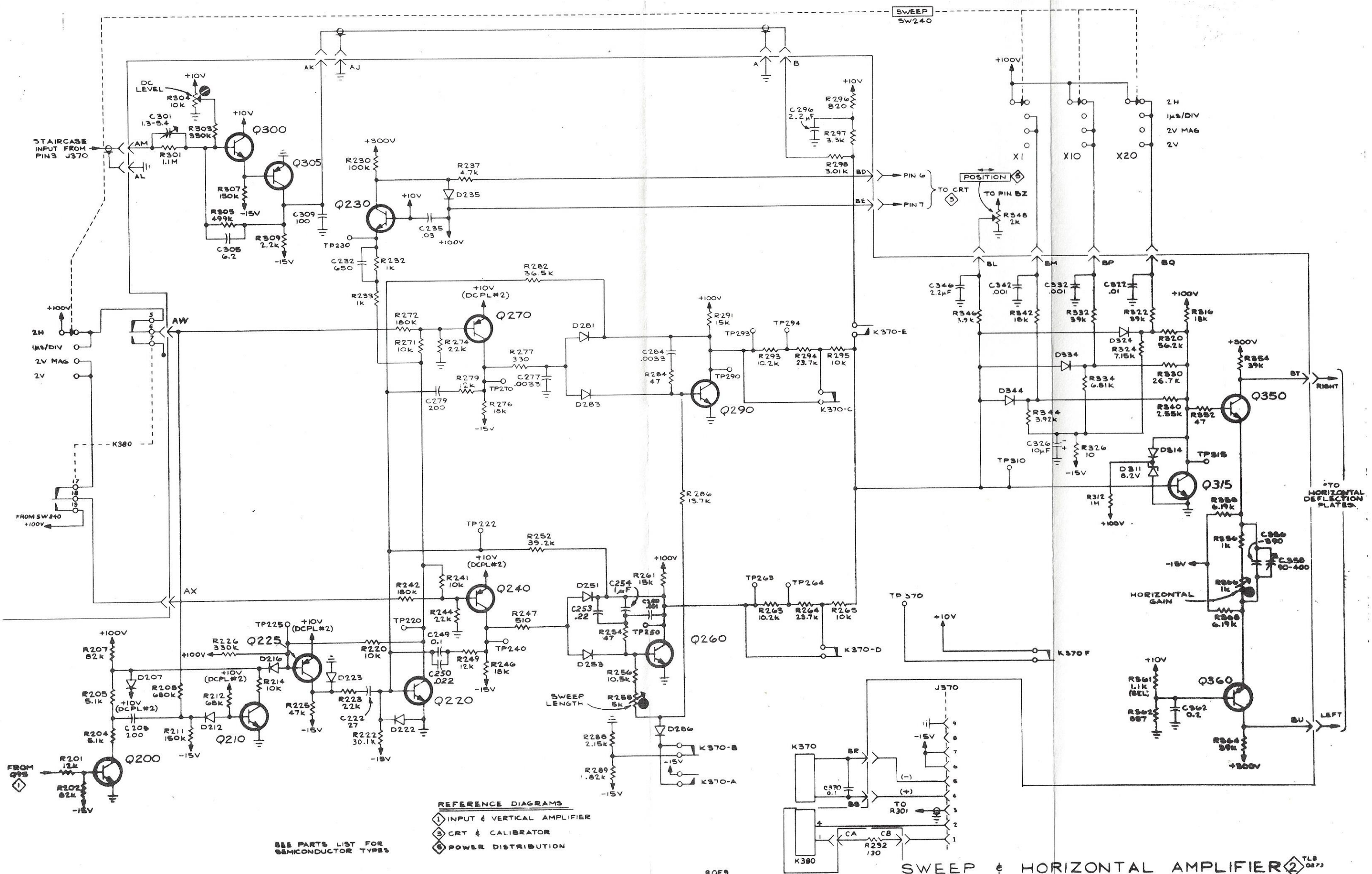
The Manual Mechanical Parts List for the Chassis on the 528 MOD W2X is correct with the following noted changes:

1	TV2-1518-00	Add	Wiring harness (relay)
3	337-1013-01	Change	Shield light black plastic
1	136-0273-00	Change	Lampholder, sub-min single
1	136-0215-00	Add	Relay socket
1	214-1208-00	Add	Heat sink, transistor
1	220-0502-00	Add	Nut, strip, w/36-32 holes
1	344-0117-00	Add	Clip, capacitor mounting 3/4" dia.
2	348-0090-00	Add	Sponge, shockmount
1	352-0142-00	Add	Holder, light conductor white
1	354-0327-00	Add	CRT, shockmount
1	378-0114-00	Add	Light conductor, graticule illumination
1	TV0-0137-03	Add	Bracket, Relay
1	333-0208-01	Delete	Graticule, CRT External
1	337-1017-00	Add	Shield, implosion
1	378-0586-00	Add	Filter, smoke gray
1	437-0100-01	Delete	Cabinet, wraparound



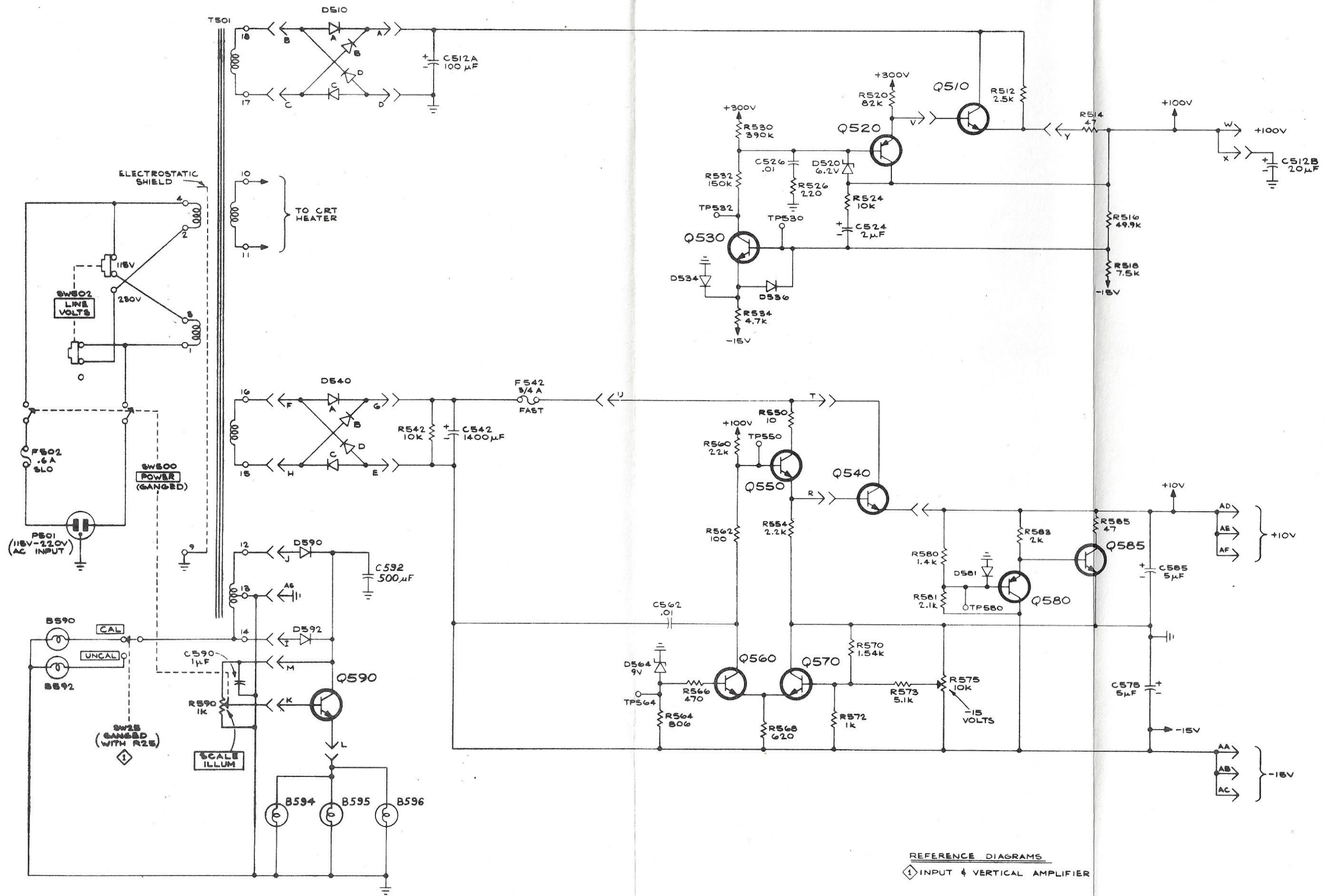
REFERENCE DIAGRAMS
 2 SWEEP & HORIZONTAL AMPLIFIER
 3 CRT & CALIBRATOR

SEE PARTS LIST FOR SEMICONDUCTOR TYPES



- REFERENCE DIAGRAMS**
- ① INPUT & VERTICAL AMPLIFIER
 - ② CRT & CALIBRATOR
 - ③ POWER DISTRIBUTION

SEE PARTS LIST FOR SEMICONDUCTOR TYPES



526 MOD W2X
021673

REFERENCE DIAGRAMS
① INPUT & VERTICAL AMPLIFIER

SEE PARTS LIST FOR
SEMICONDUCTOR TYPES

F

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POWER SUPPLY ④

0173

102 4-48 731