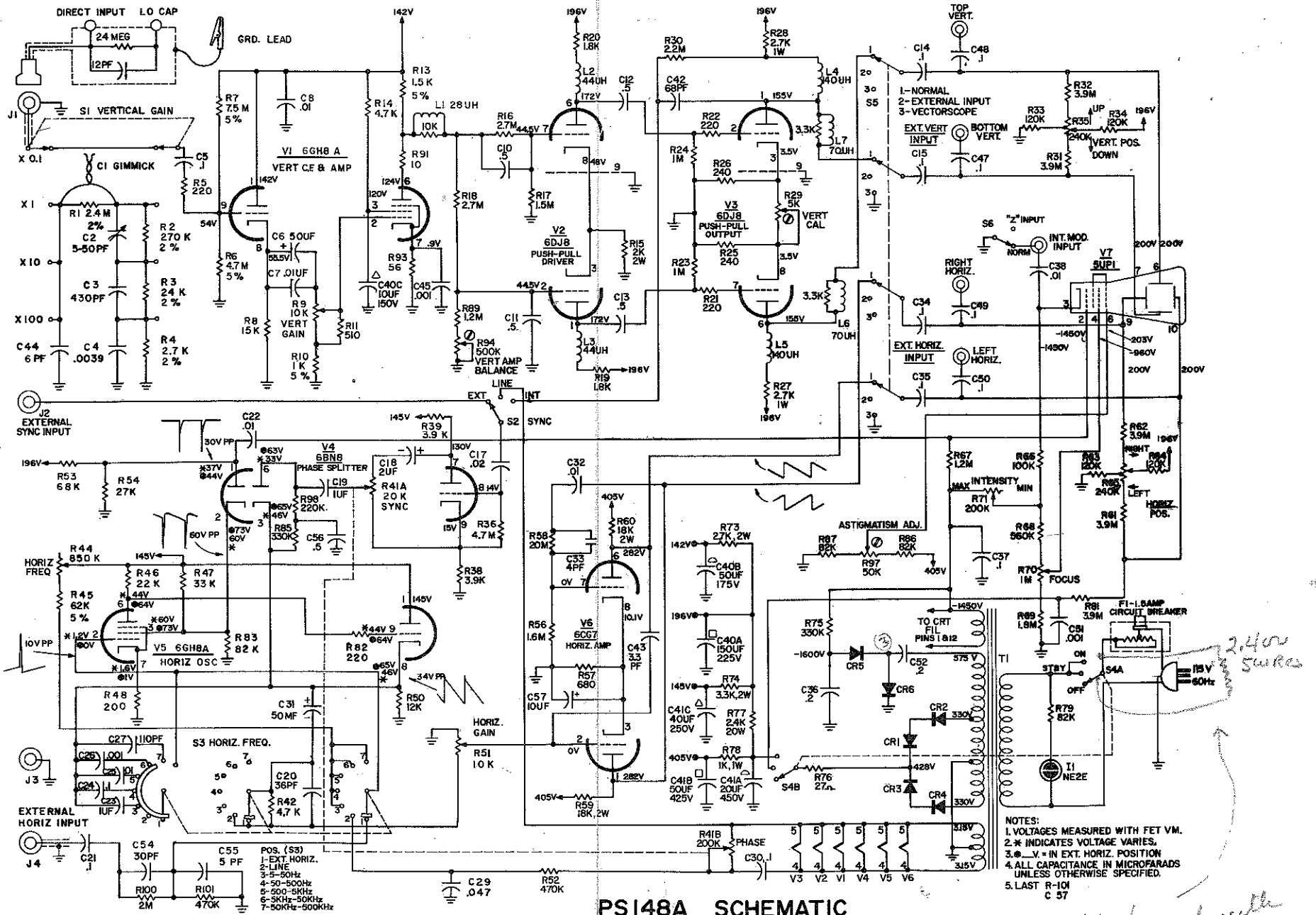


PS148A SCHEMATIC

11/87 changed with parallel 5W 5W Res

SENCORE
NO. 1 MANUFACTURER OF ELECTRONIC MAINTENANCE EQUIPMENT
3200 SENCORE DRIVE, SIOUX FALLS, SO. DAKOTA 57107

ADDENDUM, SCHEMATIC, AND PARTS LIST FOR THE PS148A

REFERENCE NO.	PART NO.	DESCRIPTION	PRICE
RESISTORS			
R1	14G150	2.4 Meg, 1/2W 2%	$ .65
R2	14G151	270K, 1/2W, 2%	.65
R3	14G152	24K, 1/2W, 2%	.65
R4	14G178	2.7K, 1/2W, 2%	.65
R77	14G245	2.4K, 20W, 5%	.75
CONTROLS			
R9	15A33	10K, 10% POT	1.50
R29	15G10	5K, 30% POT	1.50
R35, R65	15A34	240K, 20% POT	1.95
R41 A & B	15A32	20K, 200K, 30% Dual POT	4.95
R44	15G43	850K, 10% POT	1.95
R51	15A37	10K LOG POT	1.50
R70	15G36	1 Meg, 30% POT	1.50
R71	15G35	200K, 30% POT	1.50
R94	15A57	500K, 20% VERT P.C. MT.	.75
R97	15A97	50K, 30% TAB MT	1.50
TUBES AND DIODE			
CR1, CR2, CR3, CR4	16G11	600 PIV @250 mA	1.50
CR5, CR6	16G12	2500 PIV @ 1 mA	2.25
V7	18G20	5UPI (F) CRT	31.50
CAPACITORS			
C19	24G160	1ufd, 5% @ 200 VDC	1.00
C23	24G210	1ufd, 5% @ 50 VDC	1.00
C36, C52	24G211	.2 ufd, 1700 VDC	1.65
C37	24G101	.1 ufd, 1500 VDC	1.40
C40	24C213-1	150, 50, 10 ufd Lytic	3.25
C41	24C213-2	20, 50, 40 ufd Lytic	3.25
SWITCHES			
S1	25G69	2P4P Rotary	2.50
S2, S4	25G64	2P3P Slide	.75
S3	25G68	3P7P Rotary	2.75
S5	25G108	4P3P Slide	1.95
S6	25G4A	SPDT Slide	.50
MISC.			
T1	28C40	Power Transformer	19.95
F1	44G3	1.5 AMP "BREAKER"	2.00
	33B238	Scope Screen	1.25
	33A239	Visor	.95
	39G11	Test Cable (Complete)	9.95
	39G3	Demod Probe (Optional)	5.75
COIL			
L1	46G2	28 Micro H on 10K	.95
L2, L3	46G3	44 Micro H	.95
L4, L5	46A46	140 Micro H	.95
L6, L7	46A45	70 Micro H on 3.3 K	.95

ASTIGMATISM ADJUSTMENT

The astigmatism of the PS148A may vary somewhat as the CRT and other components in the scope age. This control located on the rear of the scope can be adjusted to bring the scope back into its original sharp overall focus with the steps below:

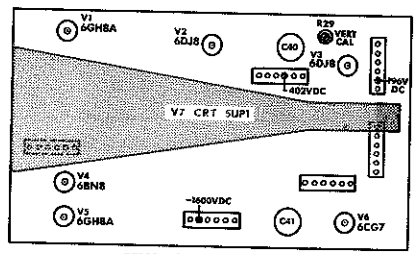
1. Plug the PS148A in and allow it to warm up for at least one hour.
2. Set the Horizontal selector switch to EXT. and adjust the Horizontal gain control for minimum gain or fully counter clockwise.
3. Set the vertical course control to X100 and the fine control to 5 or fully counter clockwise.
4. Center the resultant spot on the screen with the centering controls.
5. Adjust the brightness control for a spot that does not have a halo around it.
6. Adjust the front panel focus control for the best focus of the spot.
7. Adjust the astigmatism control on the rear of the scope for the best spot shape.
8. Repeat steps 6 and 7 several times until the best focus and spot shape are obtained.

DISASSEMBLY INSTRUCTIONS

To remove the PS148A from its case, remove the three screws at the rear of the scope, the two screws on the bottom of the front and the single screw on the bottom near the center of the case. Slide the scope chassis forward while guiding the line cord through the hole in the rear of the case. To re-assemble, simply reverse the procedure.

CALIBRATION AND MAINTENANCE

All the calibration and maintenance instructions in the PS148 manual still apply to the PS148A with the exception of the disassembly and the astigmatism adjustment described in this addendum.



PS148A CHASSIS DIAGRAM

ADDENDUM TO PS148 MANUAL

The Sencore PS148A is identical to the PS148 described in the instruction manual with improvements. These improvements include a sharper, brighter trace, more stable sync and increased sensitivity of the horizontal amplifier for sweep alignment. Lower power consumption through the use of a solid state power supply makes the PS148A more reliable for years to come.
Here are the specifications on the PS148A:

SPECIFICATIONS

Frequency Response (6 DB limits)

Vertical Amplifier
5 HERTZ to 6.5 MHz
RISE TIME 80 nanoseconds

Horizontal Amplifier
5 HERTZ to over 750 KHz

Deflection Sensitivity

Vertical Amplifier
Direct Terminal .017 ± 5% volts RMS/inch
Low Capacity Terminal .15 ± 5% volts RMS/inch

Horizontal Amplifier
At Horizontal Input Jack .17 volts RMS/inch

Input Impedance

At vertical input Jack-2.7 megohms shunted by 20 mmf
Through vertical input cable-direct input jack, 2.7 megohms shunted by 107 mmf
Through vertical input cable-low capacity jack, 27 megohms shunted by 11 mmf
At horizontal input jack 2.6 megohms shunted by approximately 30 mmf
At sync input jack 7.2 megohms shunted by approximately 20 mmf

Output Impedance

Vertical amplifier: 2700 ohms each plate to ground
Horizontal amplifier: 18,000 ohms each plate to ground

Deflection Sensitivity of CRT thru External Deflection Jacks

Vertical Plates (External-Direct Position)
13.5 ± 10% Volts RMS/inch
Horizontal Plates (External-Direct Position)
17 ± 10% Volts RMS/inch

Horizontal Sweep Generator (Phantastron Type Oscillator Circuit)

Frequency Ranges continuously adjustable with approximately 10% overlap on all ranges.

Range 1 - 5 Hertz to 50 Hertz
Range 2 - 50 Hertz to 500 Hertz
Range 3 - 500 Hertz to 5 KHz
Range 4 - 5 KHz to 50 KHz
Range 5 - 50 KHz to 500 KHz

TV Horizontal (7875 Hertz) and Vert. (30 Hertz) are marked on Horizontal Range Control with an "H" and a "V" for fast selection of these ranges.

Synchronization (Selectable and adjustable to over 4 MHz)

Internal
External
Line Frequency
} Sync adjustable between plus and minus

Maximum Input Voltages

Thru Direct INPUT JACK or at Cable INPUT JACK - 1000 volts P/P in presence of 1000 volts DC
Thru LO-CAP JACK - 7000 volts P/P in presence of 1000 volts DC
Thru Horizontal Input Jack - 10 volts P/P in presence of 400 volts DC
Thru Sync Input Jack - 12 volts P/P in presence of 600 volts DC

Power Requirements

Input Voltages - 105-125 volts AC: 50 to 60 Hertz
Power Consumption - Approximately 75 watts:
30 watts in Standby Position

Physical Characteristics

Height - 11 inches
Width - 9 inches
Length - 15-1/2 inches
Weight - 22 pounds

Tube Complement

V1 - 6GH8A Vertical Input Cathode Follower and First Vertical Amplifier.
V2 - 6DJ8 Balance Push-Pull Vertical Driver.
V3 - 6DJ8 Balance Push-Pull Vertical Output Amplifier.
V4 - 6BN8 Sync Phase Splitter, Sync Pulse Clipper and Blanking Pulse Clipper.
V5 - 6GH8A Horizontal Sweep Oscillator and Horizontal Input Cathode Follower.
V6 - 6CG7 Balanced Push-Pull Horizontal Output Amplifier
V7 - 5UP1 Cathode Ray Tube