Manual Supplement to Troubleshooting and Repair Manual

HP 85662A Spectrum Analyzer IF-Display Section

HEWLETT PACKARD

HP Part No. 85662-90089
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1212 Valley House Drive, Rohnert Park, CA 94928-4999, USA

Changes

Insert the following pages in the "A4A1 Video Processor" section of the HP *85662A* ***IF-Display Section Tmubleshooting and Repair Manual, Vol. 2.***

- Insert pages 2a and 2b after page 2.
- Insert parts list (part number 85662-60241) after existing parts list (part number 85662-60122).
- Insert component location at the end of the section.
- Insert schematic (drawing number D-85662-60241-1) at the end of the section.

Note

This supplement does not replace existing information. This supplement only applies to serial number prefixes 3144A and above.

A4A1 Video Processor (85662-60241), Circuit Description (Serial Number Prefixes: 3144A and Above)

Overall Theory of Operation

The Video Processor is the interface between the Log Amp/Detector, and the Track and Hold function blocks. It provides switchable video bandwidths, log offset, and expanded log scale. The Video Processor also provides the switching necessary for Recorder Video and Recorder Sweep functions.

Input Amplifier Ⓐ

The detector on the A4A2 log amp board provides a video voltage ranging from 0 V to 1 V which is conveyed to the video processor via the motherboard. U101 inverts the video signal and provides a gain of two, then the Unity Gain amplifier U102 reinverts the signal. U101 pin 2 provides a summing node for the log offsets. The output of this block is 0 to 2 V for signals at or below the reference level.

Video Filter Ⓑ

The Video Filter consists of a network of resistor-capacitor low-pass filters corresponding to video bandwidths from 1 Hz to 1 MHz. Each video bandwidth filter is selected by U105, a 16-input multiplexer, via VBWA through VBWD logic levels. The video signal is buffered by U106 for output to the next block. When the 3 MHz video bandwidth is selected the video bandwidth low-pass filters are all off, and the Video Processor board is at its maximum bandwidth ($\approx$ 11 MHz).

Log Offset and Reference Ⓒ

Log offsets are DC voltages summed into the video signal to simulate additional gain in the IF signal path. VR101 and U151 generate a 4.0 V reference which produces currents through switched resistors R160, R161, and R162 into the virtual ground summing node of U101.

When U153C is closed, 4.0 V across R161 provides 0.2 mA through R103. The voltage drop across R103 is (0.2 mA)(R103) = 0.4 V. Since full scale deflection is 2 V, and the graticule is divided into 10 major divisions, applying 0.4 V to U101 offsets the incoming video signal by two major divisions or 20 dB in Log 10 dB/DIV.

Log Expand Ⓓ

Log scales of 1, 2, 5, and 10 dB/DIV are implemented here. In LINEAR mode the video processor remains in the 10 dB/DIV state.

U107 inverts the signal and has a gain of three. U107 also offsets the signal by 6 V, which sets the top-of-screen signal at 0 V and bottom screen signal at 6 V. (Measurements taken at Test Point 2.)

R127 through R130 form a voltage divider with selectable attenuations of 1 (1 dB/DIV), 0.5 (2 dB/DIV), 0.2 (5 dB/DIV) and 0.1 (10 dB/DIV).

U109 is a unity gain buffer, U110 reinverts the signal and provides a gain of 3.333 and an offset of 2 V to set the output of the board to 2 V at top screen.

The output of the A4A1 Video Processor goes to the A3A9 Track and Hold board via the video loop, and to the Recorder Output Video on the rear panel via the Recorder Output circuit, block F.

Power Supplies Ⓔ

L103, Cl32 form a 14 kHz low-pass filter for the +15 V supply. L104 and Cl33 form a 14 kHz low-pass filter for the -15 V supply.

Recorder Output Ⓕ

The Recorder Output circuit provides both signal and calibration outputs for an X-Y plotter.

The control line REC CAL from the IF Control board A4A9 controls the state of analog switch U111. When REC CAL is high, the 0 to 1 V video from the Log Scale circuit and the 0 to 10 V ramp from AUX SWEEP have closed paths through the switch to provide video and sweep signal outputs to the rear panel. Note that in this state, switches U11B and UUA are closed and U11C and U11D are open. When REC CAL is low, the switch changes state and provides calibration voltages developed across the R170, R171, R172 divider stick to the rear panel. When Lower Left (LL) is activated, control line REC ZERO from A4A9 IF Control board is low and the switch inputs are pulled to approximately 0 V. When REC ZERO is high, its open collector output will be set to the voltage determined by the divider stick: +10 V for X_r out, and 1.0 V for Y_r out.

HP Part Number 85662-60241

A4A1 Video Processor

Reference Designation	HP Part Number	CD	Qty	Description	Mfr Code	Mfr Part Number
A4A1	85662-60241	1	1	BOARD ASSEMBLY, VIDEO PROCESSOR (SERIAL PREFIX: 3144A)	28480	85662-60241
A4A1C101	0160-4807	3	1	CAP-FXD 33pF +-5% 100 V CER COG	02010	SA102A330JAAH
A4A1C104	0160-4832	4	1	CAP-FXO 0.01uF +-10% 100 V CER X7R	02010	SA101C103KAAH
A4A1C105	0160-4832	4	1	CAP-FXD 0.01uF +-10% 100 V CER X7R	02010	SA101C103KAAH
A4A1C107	0160-4832	4	1	CAP-FXD 0.01uF +-10% 100 V CER X7R	02010	SA101C103KAAH
A4A1C108	0160-4835	7	1	CAP-FXD 0.1uF +-10% 50 V CER X7R	02010	SA105C104KAAH
A4A1C109	0160-4832	4	1	CAP-FXD 0.01uF +-10% 100 V CER X7R	02010	SA101C103KAAH
A4A1C111	0160-4804	0	1	CAP-FXD 56pF +-5% 100 V CER COG	02010	SA102A560JAAH
A4A1C112	0160-4811	9	1	CAP-FXD 270pF +-5% 100 V CER COG	02010	SA101A271JAAH
A4A1C113	0160-4811	9	1	CAP-FXD 270pF +-5% 100 V CER COG	02010	SA101A271JAAH
A4A1C114	0160-4574	1	1	CAP-FXD 1000pF +-10% 100 V CER X7R	02010	SA101C102KAAH
A4A1C115	0160-5099	7	1	CAP-FXD 3300pF +-5% 100 V CER COG	02010	SA301A332JAAH
A4A1C116	0160-4832	4	1	CAP-FXD 0.01uF +-10% 100 V CER X7R	02010	SA101C103KAAH
A4A1C117	0160-6588	1	1	CAP-FXD 0.033uF +-10% 100 V CER X7R	02010	SA301C333KAAH
A4A1C119	0160-4835	7	1	CAP-FXO 0.1uF +-10% 50 V CER X7R	02010	SA105C104KAAH
A4A1C120	0180-4225	1	1	CAP-FXD 0.33uF +-10% 35 V TA	12340	T322A334K035AS
A4A1C121	0180-4129	4	1	CAP-FXD 1uF +-10% 35 V TA	04200	173D105X9035V
A4A1C122	0180-3736	7	1	CAP-FXD 3.3uF +-10% 50 V TA	04200	173D335X9050X
A4A1C123	0180-4136	3	1	CAP-FXD 10uF +-10% 20 V TA	04200	173D106X9020W
A4A1C124	0180-4135	2	1	CAP-FXD 33uF +-10% 10 V TA	04200	173D336X9010X
A4A1C125	0160-4832	4	1	CAP-FXD 0.01uF +-10% 100 V CER X7R	02010	SA101C103KAAH
A4A1C128	0160-4832	4	1	CAP-FXD 0.01uF +-10% 100 V CER X7R	02010	SA101C103KAAH
A4A1C130	0160-4835	7	1	CAP-FXD 0.1uF +-10% 50 V CER X7R	02010	SA105C104KAAH
A4A1C131	0160-4832	4	1	CAP-FXD 0.01uF +-10% 100 V CER X7R	02010	SA101C103KAAH
A4A1C132	0180-3847	1	1	CAP-FXO 22uF +-10% 25 V TA	04200	299D226X9025DB1
A4A1C133	0180-3847	1	1	CAP-FXO 22uF +-10% 25 V TA	04200	299D226X9025DB1
A4A1C134	0160-4835	7	1	CAP-FXD 0.1uF +-10% 50 V CER X7R	02010	SA105C104KAAH
A4A1C150	0160-4835	7	1	CAP-FXD 0.1uF +-10% 50 V CER X7R	02010	SA105C104KAAH
A4A1C151	0160-4835	7	1	CAP-FXD 0.1uF +-10% 50 V CER X7R	02010	SA105C104KAAH
A4A1C152	0160-4832	4	1	CAP-FXD 0.01uF +-10% 100 V CER X7R	02010	SA101C103KAAH
A4A1C153	0160-4832	4	1	CAP-FXD 0.01uF +-10% 100 V CER X7R	02010	SA101C103KAAH
A4A1CR101	1901-0179	7	1	DIODE-SWITCHING 15V 50MA 750PS DO-7	03406	FD777
A4A1CR102	1901-0050	3	1	DIODE-SWITCHING 80V 200MA 2NS DO-35	03406	
A4A1J1	1250-0690	6	1	CONNECTOR-RF SMB M SGL-HOLE-FR 50-OHM	05769	51-047-4610
A4A1J2	1250-0690	6	1	CONNECTOR-RF SMB M SGL-HOLE-FR 50-OHM	05769	51-047-4610
A4A1J3	1250-0690	6	1	CONNECTOR-RF SMB M SGL-HOLE-FR 50-OHM	05769	51-047-4610
A4A1J4	1250-0690	6	1	CONNECTOR-RF SMB M SGL-HOLE-FR 50-OHM	05769	51-047-4610
A4A1L103	9100-1618	1	1	INDUCTOR RF-CH-MLD 5.6UH +-10%	05826	1537-30
A4A1L104	9100-1618	1	1	INDUCTOR RF-CH-MLD 5.6UH +-10%	05826	1537-30
A4A1L105	9100-3548	0	1	INDUCTOR RF-CH-MLD 470NH +-5%	03273	15M470J
A4A1Q103	1854-0637	1	1	TRANSISTOR NPN 2N2219A SI TO-5 PD=800MW	02037	2N2219A
A4A1R2	2100-3109	2	1	RESISTOR-TRMR 2K 10% TKF SIDE-ADJ 17-TRN	04568	89PR2K
A4A1R14	2100-3123	0	1	RESISTOR-TRMR 500 10% TKF SIDE-ADJ	04568	89PR500
A4A1R32	2100-3094	4	1	RESISTOR-TRMR 100K 10% TKF SIDE-ADJ	04568	89PR100K
A4A1R36	2100-3123	0	1	RESISTOR-TRMR 500 10% TKF SIDE-ADJ	04568	89PR500
A4A1R101	0698-6355	9	1	RESISTOR 400 +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9

**Indicates factory-selected value*

HP Part Number 85662-60241

A4A1 Video Processor

Reference Designation	HP Part Number	CD	Qty	Description	Mfr Code	Mfr Part Number
A4A1R102	0698-6317	3	1	RESISTOR 500 +-0.1% .125W TF TC=0+-25	05524	CMF-55-1. T-9
A4A1R103	0698-6624	5	1	RESISTOR 2K +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9
A4A1R104	0698-6624	5	1	RESISTOR 2K +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9
A4A1R105	0757-0394	0	1	RESISTOR 51.1 +-1% .125W TF TC=0+-100	05524	CMF-55-1
A4A1R107	0698-6624	5	1	RESISTOR 2K +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9
A4A1R108	0757-0394	0	1	RESISTOR 51.1 +-1% .125W TF TC=0+-100	05524	CMF-55-1
A4A1R112	0698-6362	8	1	RESISTOR 1K +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9
A4A1R113	0757-0279	0	1	RESISTOR 3.16K +-1% .125W TF TC=0+-100	05524	CMF-55-1
A4A1R114	0757-0428	1	1	RESISTOR 1.62K +-1% .125W TF TC=0+-100	05524	CMF-55-1
A4A1R115	0757-0428	1	1	RESISTOR 1.62K +-1% .125W TF TC=0+-100	05524	CMF-55-1
A4A1R116	0757-0428	1	1	RESISTOR 1.62K +-1% .125W TF TC=0+-100	05524	CMF-55-1
A4A1R117	0757-0438	3	1	RESISTOR 5.11K +-1% .125W TF TC=0+-100	05524	CMF-55-1
A4A1R118	0757-0438	3	1	RESISTOR 5.11K +-1% .125W TF TC=0+-100	05524	CMF-55-1
A4A1R119	0698-6362	8	1	RESISTOR 1K +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9
A4A1R120	0757-0394	0	1	RESISTOR 51.1 +-1% .125W TF TC=0+-100	05524	CMF-55-1
A4A1R123	0757-0394	0	1	RESISTOR 51.1 +-1% .125W TF TC=0+-100	05524	CMF-55-1
A4A1R124	0698-6362	8	1	RESISTOR 1K +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9
A4A1R125	0698-6348	0	1	RESISTOR 3K +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9
A4A1R126	0698-6624	5	1	RESISTOR 2K +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9
A4A1R127	0698-6317	3	1	RESISTOR 500 +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9
A4A1R128	0698-6346	8	1	RESISTOR 300 +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9
A4A1R129	0698-6323	1	1	RESISTOR 100 +-0.1% .125W TF TC=0+-25	05524	CMF-55-1. T-9
A4A1R130	0698-6323	1	1	RESISTOR 100 +-0.1% .125W TF TC=0+-25	05524	CMF-55-1. T-9
A4A1R131	0698-6355	9	1	RESISTOR 400 +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9
A4A1R132	0698-6377	5	1	RESISTOR 200 +-0.1% .125W TF TC=0+-25	05524	CMF-55-1. T-9
A4A1R133	0698-6322	0	1	RESISTOR 4K +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9
A4A1R134	0757-0465	6	1	RESISTOR 100K +-1% .125W TF TC=0+-100	05524	CMF-55-1
A4A1R136	0757-0394	0	1	RESISTOR 51.1 +-1% .125W TF TC=0+-100	05524	CMF-55-1
A4A1R137	0813-0050	5	1	RESISTOR 100 +-5% 3W PWI TC=0+-20	05524	RS-2B
A4A1R138	0757-0199	3	1	RESISTOR 21.5K +-1% .125W TF TC=0+-100	05524	CMF-55-1
A4A1R139	0698-6624	5	1	RESISTOR 2K +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9
A4A1R140	0757-0814	9	1	RESISTOR 511 +-1% .5W TF TC=0+-100	05524	CMF-65-2
A4A1R141	0757-0394	0	1	RESISTOR 51.1 +-1% .125W TF TC=0+-100	05524	CMF-55-1
A4A1R142	0698-6323	1	1	RESISTOR 100 +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9
A4A1R143	0698-6323	1	1	RESISTOR 100 +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9
A4A1R144	0757-0394	0	1	RESISTOR 51.1 +-1% .125W TF TC=0+-100	05524	CMF-55-1
A4A1R150	0757-0280	3	1	RESISTOR 1K +-1% .125W TF TC=0+-100	05524	CMF-55-1
A4A1R152	0698-6322	0	1	RESISTOR 4K +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9
A4A1R153	0698-6322	0	1	RESISTOR 4K +-0.1% .125W TF TC=0+-25	05524	CMF-55-1. T-9
A4A1R154	0698-6320	8	1	RESISTOR 5K +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9
A4A1R155	0698-6348	0	1	RESISTOR 3K +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9
A4A1R157	0698-6320	a	1	RESISTOR 5K +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9
A4A1R158	0757-0394	0	1	RESISTOR 51.1 +-1% .125W TF TC=0+-100	05524	CMF-55-1
A4A1R159	0757-0394	0	1	RESISTOR 51.1 +-1% .125W TF TC=0+-100	05524	CMF-55-1
A4A1R160	0698-6630	3	1	RESISTOR 20K +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9
A4A1R161	0698-6630	3	1	RESISTOR 20K +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9
A4A1R162	0698-6363	9	1	RESISTOR 40K +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9
A4A1R163	0757-0199	3	1	RESISTOR 21.5K +-1% .125W TF TC=0+-100	05524	CMF-55-1

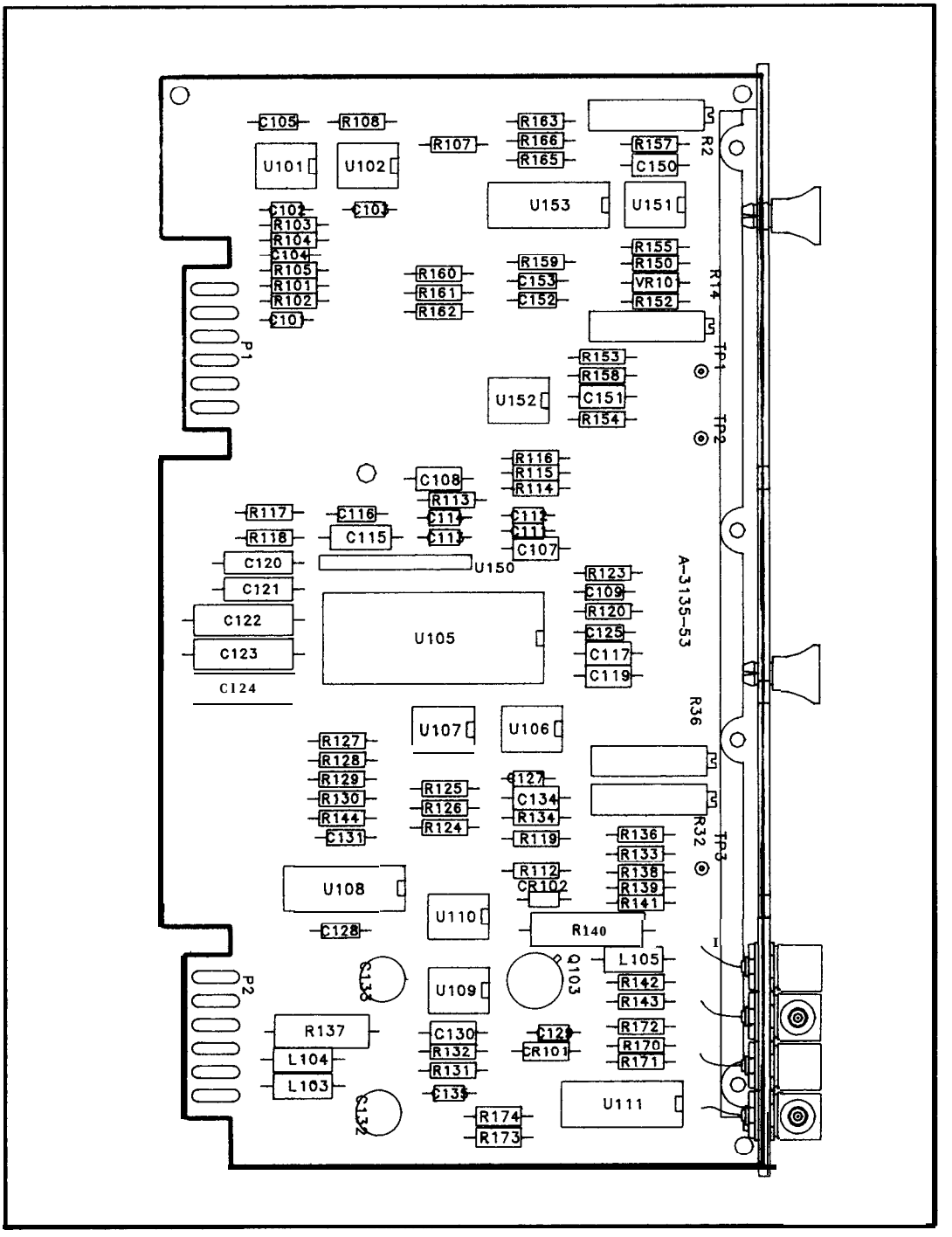
**Indicates factory-selected value*

HP Part Number 85662-60241

A4A1 Video Processor

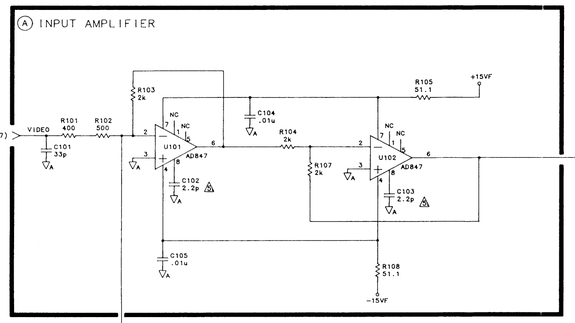
Reference Designation	HP Part Number	CD	Qty	Description	Mfr Code	Mfr Part Number
A4A1R165	)757-0199	3	1	RESISTOR 21.5K +-1% .125W TF TC=0+-100	05524	CMF-55-1
A4A1R166	)757-0199	3	1	RESISTOR 21.5K +-1% .125W TF TC=0+-100	05524	CMF-55-1
A4A1R170	)757-0416	7	1	RESISTOR 511 +-1%.125W TF TC=0+-100	05524	CMF-55-1
A4A1R171	)698-3155	1	1	RESISTOR 4.64K +-1% .125W TF TC=0+-100	05524	CMF-55-1
A4A1R172	)698-6631	4	1	RESISTOR 2.5K +-0.1% .125W TF TC=0+-25	05524	CMF-55-1, T-9
A4A1R173	)698-3157	3	1	RESISTOR 19.6K +-1% .125W TF TC=0+-100	05524	CMF-55-1
A4A1R174	)757-0442	9	1	RESISTOR 10K +-1% .125W TF TC=0+-100	05524	CMF-55-1
A4A1TP1	1251-0600	0	1	CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	03418	16-06-0034
A4A1TP2	1251-0600	0	1	CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	03418	16-06-0034
A4A1TP3	1251-0600	0	1	CONNECTOR-SGL CONT PIN 1.14-MM-BSC-SZ SQ	03418	16-06-0034
A4A1U101	1826-1940	2	1	IC OP AMP HS 8 PIN DIP-P	03285	AD847JN
A4A1U102	1826-1940	2	1	IC OP AMP HS 8 PIN DIP-P	03285	AD847JN
A4A1U105	1826-1177	7	1	ANALOG MULTIPLEXER 16 CHNL 28 -CERDIP	02180	MUX-16-FT
A4A1U106	1826-1940	2	1	IC OP AMP HS 8 PIN DIP-P	03285	AD847JN
A4A1U107	1826-1940	2	1	IC OP AMP HS 8 PIN DIP-P	03285	AD847JN
A4A1U108	1826-0610	1	1	ANALOG MULTIPLEXER 4 CHNL 16 -CERDIP	02180	MUX-24FQ
A4A1U109	1826-1940	2	1	IC OP AMP HS 8 PIN DIP-P	03285	AD847JN
A4A1U110	1826-1940	2	1	IC OP AMP HS 8 PIN DIP-P	03285	AD847JN
A4A1U111	1826-0417	6	1	ANALOG SWITCH 4 SPST 16 -CBRZ	03406	LF13333D
A4A1U150	1810-0279	5	1	NETWORK-RES 10-SIP 4.7K OHM X 9	05524	MSP10A01
A4A1U151	1826-1048	1	1	IC OP AMP PRCN 8 PIN DIP-C	02180	OP-07CZ
A4A1U152	1826-1048	1	1	IC OP AMP PRCN 8 PIN DIP-C	02180	OP-07CZ
A4A1U153	1826-2191	7	1	ANALOG SWITCH 4 SPST 16 -DIP-P	02883	DG441DJ
A4A1VR101	1902-0625	0	1	DIODE-ZNR 1N829 6.2V 5% DO-35 PD=.4W	02037	1N829

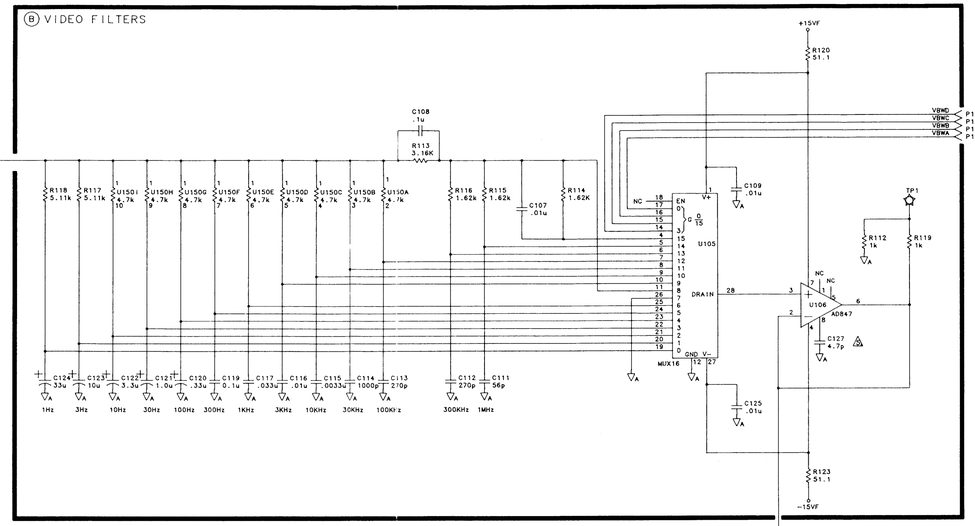
**Indicates factory-selected value*

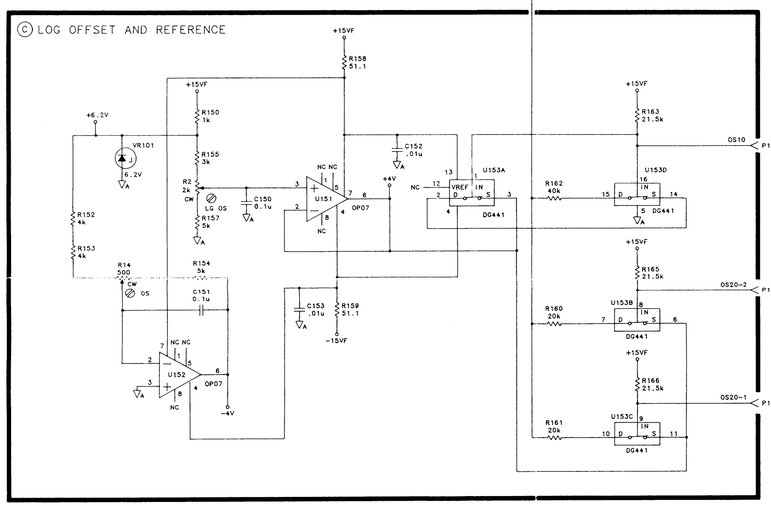


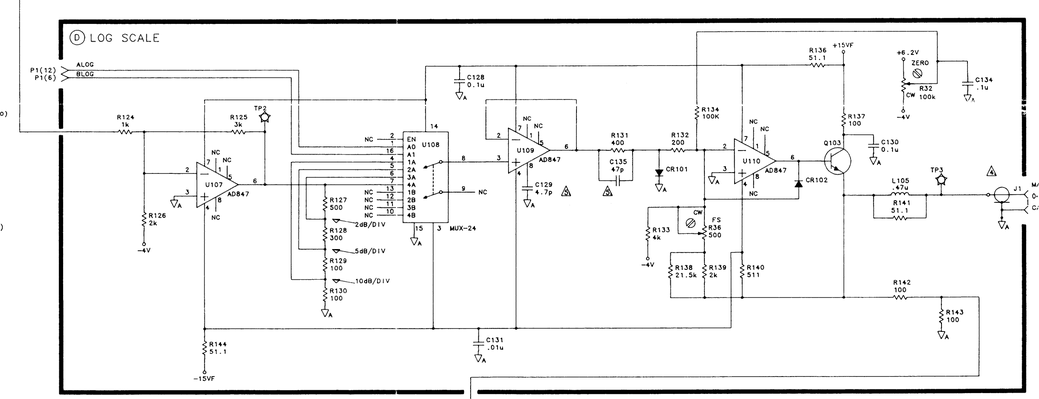
A4A1 Video Processor Component Locations, 85662-60241

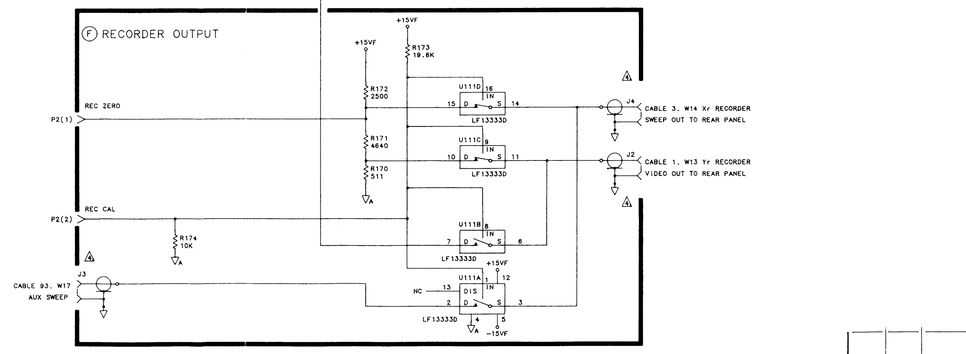
SYM	REVISIONS	APPROVED	DATE
A	AS ISSUED PER PCO 53-06516		7-26-91

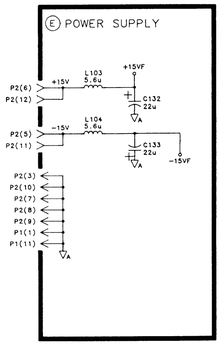












NOTES:

1. REFERENCE DESIGNATORS WITHIN THIS ASSEMBLY ARE ABBREVIATED. PREFIX ABBREVIATION WITH ASSEMBLY NUMBER FOR COMPLETE REFERENCE DESIGNATOR.

2. UNLESS OTHERWISE INDICATED:
RESISTANCE IN OHMS
CAPACITANCE IN MICROFARADS
INDUCTANCE IN MICROHENRIES

3. MNEMONIC TABLE

MNEMONIC	DESCRIPTION
VBWA	VIDEO BANDWIDTH(LSB)
VBWB	VIDEO BANDWIDTH
VBWC	VIDEO BANDWIDTH
VBWD	VIDEO BANDWIDTH(MSB)
ALOG	LOG SCALE(LSB)
BLOG	LOG SCALE(MSB)
OS10	LOG OFFSET 10dB
OS20-1	LOG OFFSET 20dB-1
OS20-2	LOG OFFSET 20dB-2
VIDEO	DETECTED IF SIGNAL
MAIN VIDEO	FILTERED, LOG SCALED VIDEO

⚠ CONNECTOR PHYSICALLY MOUNTED TO AND GROUNDED BY COVER PLATE.

⚠ FACTORY SELECT PART. MAY NOT BE PRESENT ON PC BOARD.

P1

PIN	SIGNAL	TO/FROM	FUNCTION BLOCK
1	AGND		E
2	VBWD	A4ASP1-32	B
3	VBWC	A4ASP1-33	B
4	VBWB	A4ASP1-34	B
5	VBWA	A4ASP1-35	B
6	BLOG	A4ASP1-20	D
7	VIDEO IN	A4AJP1-1	A
8	OS10-1	A4ASP1-14	C
9	OS20-1	A4ASP1-15	C
10	OS20-2	A4ASP1-16	C
11	A GND		E
12	ALOG	A4ASP1-19	D

P2

PIN	SIGNAL	TO/FROM	FUNCTION BLOCK
1	REC ZERO	A4ASP1-2	F
2	REC CAL	A4ASP1-1	F
3	A GND		E
4	NC		E
5	-15V		E
6	+15V		E
7	A GND		E
8	A GND		E
9	A GND		E
10	A GND		E
11	-15V		E
12	+15V		E

TRUTH TABLES:

1. UNLESS OTHERWISE INDICATED, LOGIC LEVELS ARE TTL:
+3.6V TO +5.0V = LOGIC 1 = HIGH
0V TO +0.8V = LOGIC 0 =LOW

2. OFFSET GAIN STEPS TRUTH TABLES:

LOG REF LEVEL RES BW ≥3KHz	LOG REF LEVEL RES BW <3KHz	OS10	OS2-1	OS2-2
-70 TO -79.9dBM	-90 TO -99.9	0V	>+14V	>+14V
-80 TO -89.9dBM	-100 TO -109.9	>+14V	0V	>+14V
-90 TO -99.9dBM	-110 TO -119.9	0V	0V	>+14V
-100 TO -109.9dBM	-120 TO -129.9	>+14V	0V	0V
-110 TO -119.9dBM	-130 TO -139.9	0V	0V	0V
IMPUT ATTENUATOR 0dB SHIFT ATTENUATOR (FOR EXTENDED RANGE)				

3. VIDEO BANDWIDTH TRUTH TABLE:

VIDEO BANDWIDTH	VBWD	VBWC	VBWB	VBWA
3MHz	H	H	H	H
1MHz	H	H	H	L
300KHz	H	H	L	H
100KHz	H	H	L	L
30KHz	H	L	H	H
10KHz	H	L	H	L
3KHz	H	L	L	H
1KHz	H	L	L	L
300Hz	L	H	H	H
100Hz	L	H	H	L
30Hz	L	H	L	H
10Hz	L	H	L	L
3Hz	L	L	H	H
1Hz	L	L	H	L

4. LOG EXPAND TRUTH TABLE:

LOG SCALE	B LOG	A LOG
10 dB / DIV	L	H
5 dB / DIV	L	L
2 dB / DIV	H	L
1 dB / DIV	H	H

5. RECORDER OUTPUT TABLE:

	REC CAL	REC ZERO	J4 OUTPUT	J2 OUTPUT
LOWER	0V	0V	0V	0V
LEFT ACTIVATED				
UPPER	0V	+10V	+10V	+1V
RIGHT ACTIVATED				
RECORDER LIMITS NOT ACTIVATED	+5V	+10V	SWEEP	VIDEO

6. LOG EXPAND FIDELITY TABLE:

INSTRUMENT CONTROL SETTINGS ARE AS FOLLOWS:

INSTRUMENT PRESET:

CENTER FREQUENCY	20MHz
FREQUENCY SPAN	0Hz
ATTENUATOR	0dB
REF LEVEL	-10dBm

CONNECT 355D ATTENUATOR BETWEEN RF SECTION CALIBRATOR OUTPUT AND SIGNAL INPUT.

EXTERNAL ATTENUATOR	TP1	TP2	TP3	SIGNAL POSITION
0dB	+1V	0V	+2V	TOP SCREEN
50dB	+0.5V	+3V	+1V	MID SCREEN
50dB*	0V	+6V	0V	BOTTOM SCREEN

* PUSH LINEAR BUTTON

ITEM	QTY.	PART/MATERIAL-DESCRIPTION	MAT'L-PART NO.	MAT'L-DWG. NO.	MAT'L-SPEC.

DRAWN BY | DATE
ENGINEER/CHECKER
RELEASE TO PROD.
SUPERSEDES DWG.

TITLE: BOARD ASSEMBLY-VIDEO PROCESSOR (SCHEMATIC)

HEWLETT PACKARD

PART NUMBER 85662-60241

SCALE NONE | FILENAME=S241A004 | SHEET 1 OF 1

D-85662-60241-1

** For HP Internal Reference Only **

Manufacturing Part Number

85662-90089

Customer Order Number

Printed in USA