Service Manual

ORDER NO.
ARP3011

PLASMA DISPLAY
PDP-501MX

●Refer to the service manual ARP2997 for PDP-501MX/KUC.

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	Remarks
	PDP-501MX		
TYVL	◯	AC100-240V	

CONTENTS

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1. CONTRAST OF MISCELLANEOUS PARTS

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Ref. No.: Numbers following P and hyphen (–) indicate the page(s) and location number(s) in the ARP2997 service manual, respectively.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 → 56 x 10^1 → 561 ..... RD1/4PU 5 6 1 J
47k → 47 x 10^3 → 473 ..... RD1/4PU 4 7 3 J
0.5 → R50 ..... RN2H R 5 0 K
1 → 1R0 ..... RS1P 1 R 0 K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k → 562 x 10^1 → 5621 ..... RN1/4PC 5 6 2 1 F

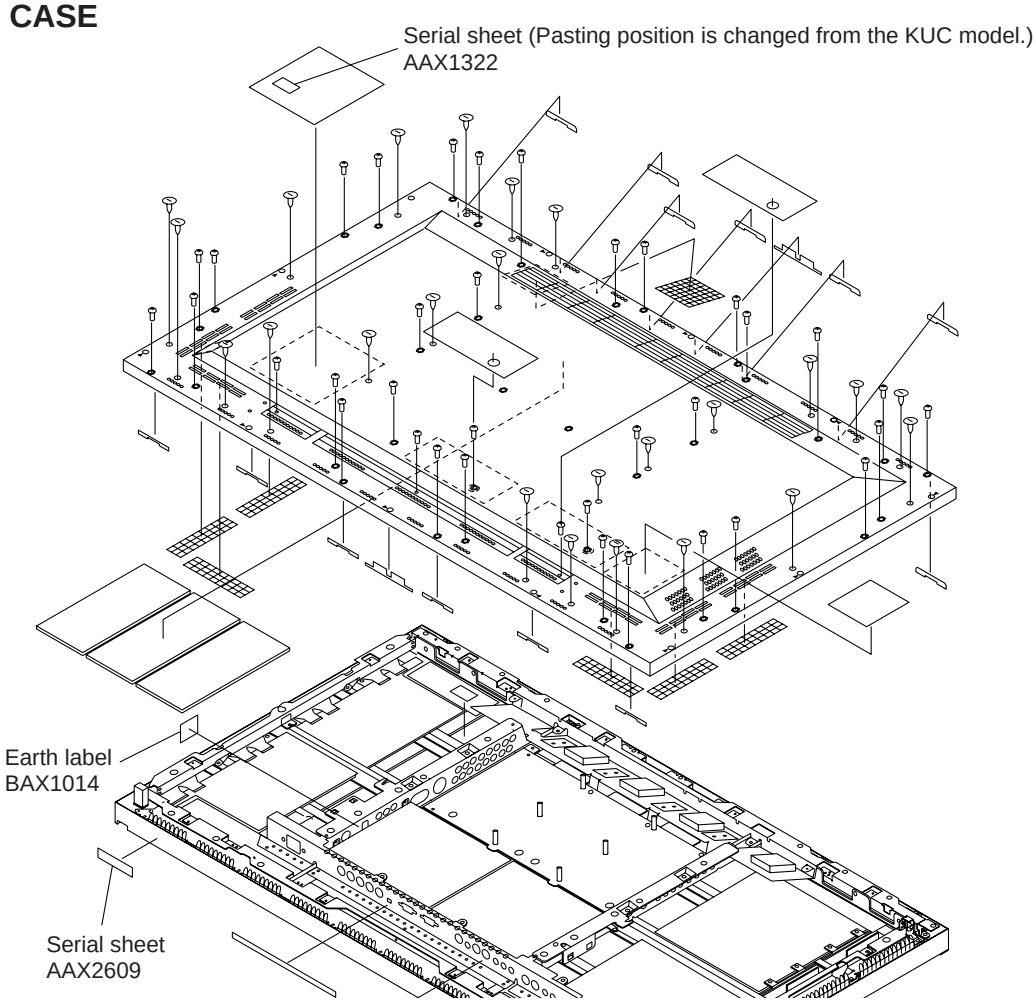
CONTRAST OF PDP-501MX/TYVL AND PDP-501MX/KUC

PDP-501MX/TYVL and PDP-501MX/KUC are constructed the same except for the following :

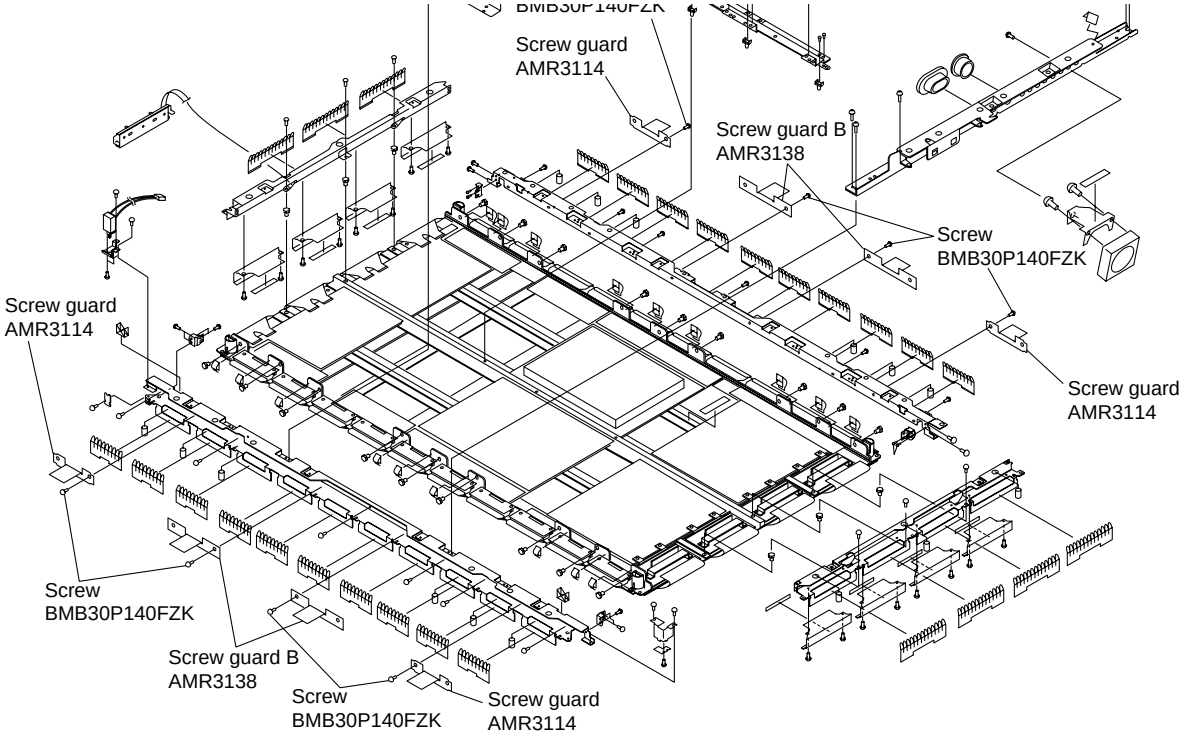
Ref. No.	Mark	Symbol and Description	Part No.		Remarks
			PDP-501MX/KUC	PDP-501MX/TYVL	
		PACKING SECTION			
P5-7	⚠	AC POWER CORD	ADG1178	Not Used	
P5-13		UPPER CARTON	AHD2980	AHD2991	
P5-15		PLASMA CAUTION SHEET	ARM1145	ARM1149	
P5-17		CAUTION SHEET	ARM1146	ARM1154	
P5-21		INSTRUCTION MANUAL (English,French)	ARE1337	ARE1341	
		INSTRUCTION MANUAL (German,Italian,Dutch,Spain)	Not Used	ARC1499	
P5-25	NSP	WARRANTY CARD	ARY1094	Not Used	
		EXTERIOR SECTION			
P6-1	NSP	REAR CASE	AMR3097	AMR3100	
P6-9	NSP	NAME LABEL	AAL2287	AAL2277	
P6-10		TERMINAL LABEL L	AAX2662	AAX2680	
P6-16		TERMINAL LABEL R	AAX2663	AAX2679	
P6-20		BOLT CAUTION LABEL	AAX2656	AAX2681	
		MANUFACTURED LABEL	AAX-372	Not Used	
P6-21		IC PROTECTOR LABEL	AAX2642	Not Used	
P6-22		IC PROTECTOR LABEL(F)	AAX2675	Not Used	
		SOLDER WARNING LABEL	AAX2644	Not Used	
		UPC CODE LABEL	AAX2673	Not Used	
	NSP	EARTH LABEL	Not Used	BAX1014 *1	*1 Refer to page 3.
P7-25	⚠	AC INLET WITH FILTER	AKP1190	AKP1192	
P7-38		CONTROL NAME PLATE	AAK2719	AAK2720	
	NSP	SERIAL SHEET	Not Used	AAX2609 *2	*2 Refer to page 3.
P8-3		FRONT CASE	AMB2632	AMB2624	
P11-35	NSP	3D Y/C HOLDER	ANG2293	Not Used	
		TERMINAL COVER(232C)	ANG2294	Not Used	
		TERMINAL COVER	AMR3099	Not Used	
		SCREW GUARD	Not Used	AMR3114 *3	
		SCREW GUARD B	Not Used	AMR3138 *3	*3 Refer to page 3.
		PCB SECTION			
	NSP	ANALOG VIDEO ASSY	AWV1685	AWV1691	
		├VIDEO ASSY	AWZ6305	AWZ6331 *4	*4 Refer to page 6 and 13.
		└ 3 LINE Y/C ASSY	Not Used	AWZ6306 *5	*5 Refer to page 6,12 and 14.
		3D Y/C SEP. ASSY	AWV1709	Not Used	
		├3D Y/C SEP. ASSY	AWZ6332		
		└SIDE SWITCH ASSY	AWZ6315		
		SIDE SWITCH ASSY	Not Used	AWV1727	
		└SIDE SWITCH ASSY		AWZ6315	
		POWER SUPPLY MODULE	AXY1029	AXY1044 *6	*6 AXY1044 have no service part.

• EXPLODED VIEWS

REAR CASE

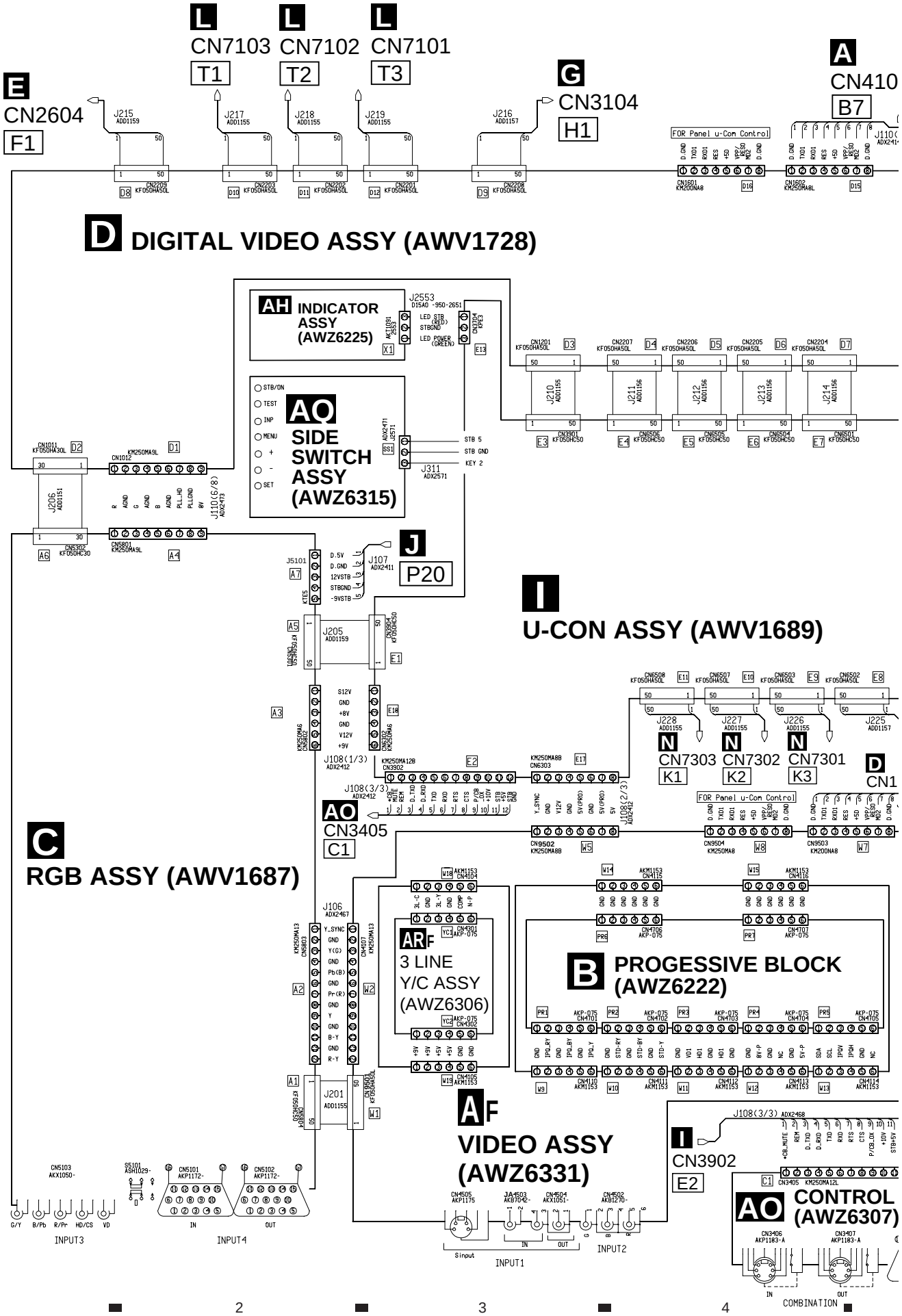


MAIN SECTION (1)

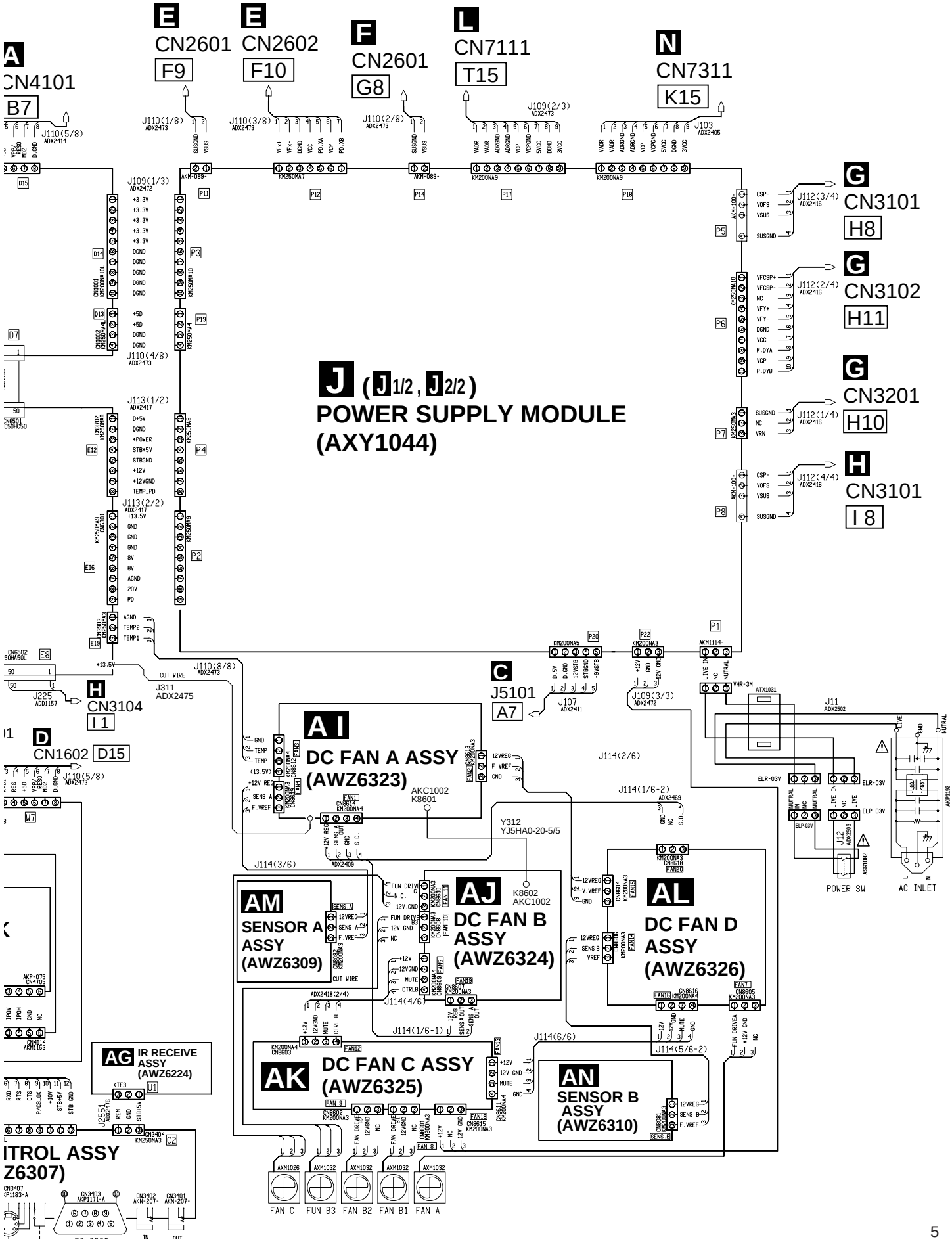


2. SCHEMATIC DIAGRAM

2.1 OVERALL CONNECTION DIAGRAM (1/2)



Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST"



3. PCB PARTS LIST

NOTES: ● *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
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0.5	→	*R50*		····· *RN2H R 5 0 K*
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Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k	→	*562 x 10^1*	→	*5621* ····· *RN1/4PC 5 6 2 1 F*

Mark	No.	Description	Part No.

ARF 3 LINE Y/C ASS'Y

SEMICONDUCTORS

	IC4302		CXA1686M
	IC4301		CXD2044Q
	IC4303,IC4304		MC14577CF
	Q4301 ,Q4302 ,Q4304 -Q4306		2SA1037K
	Q4307		2SC2412K
	Q4303		DTC124EK

COILS AND FILTERS

	F4301 -F4304		ATF1124
	F4305 -F4307		ATF1191
	L4301		CTA100J3225

CAPACITORS

	C4313		CCSQCH100D50
	C4337		CCSQCH101J50
	C4335		CCSQCH120J50
	C4336		CCSQCH150J50
	C4332		CCSQCH330J50
	C4319 ,C4324 ,C4333 ,C4348 ,C4351		CEV101M6R3
	C4329		CEV1R0M50
	C4346		CEV220M6R3
	C4311 ,C4347 ,C4350,C4352		CEV221M10
	C4349		CEV470M16
	C4334		CEV470M6R3
	C4326		CEVR22M50
	C4353 ,C4354		CFHSP563J16
	C4308 ,C4309 ,C4312 ,C4327 ,C4345		CFHSQ103J16
	C4320 ,C4328		CKSQYB102K50
	C4325 ,C4330 ,C4338 -C4344 ,C4355		CKSQYB103K50
	C4331		CKSQYB223K50
	C4301 -C4307 ,C4310 ,C4314 -C4318		CKSQYF104Z50
	C4321 -C4323		CKSQYF104Z50

RESISTORS

	Other Resistors		RS1/10S□□□J

OTHERS

	K4301 -K4303		AKX9002
	X4303	(500kHz)	ASS1098
	X4301	(14.31818MHz)	ASS1134
	X4302	(17.73447MHz)	ASS1135

Mark	No.	Description	Part No.

AF VIDEO ASS'Y

SEMICONDUCTORS

	IC9203		24LC01B
	IC9003,IC9504		BA7655AF
	IC9204,IC9205		CXA1875AM
	IC9207,IC9208		M5223FP
	IC4502,IC4503		MC14577CF
	IC4501		NJM2234M
	IC9961		PA0030
	IC9001		TA8759BN
	IC4101		TC4052BF
	IC4102,IC9502		TC4053BF
	IC9505		TC74ACT541FS
	IC9503,IC9801		TC74HC4053AF
	IC9002,IC9507		TC74HC4538AF
	IC9004		TC7S66FU
	IC9501		TDA4566
	IC9506		UPC1862GS
	Q4103 ,Q4104 ,Q4107 ,Q4122 ,Q4123		2SA1037K
	Q4137 ,Q4520 ,Q9007 ,Q9008 ,Q9126		2SA1037K
	Q9204 ,Q9205 ,Q9522 ,Q9523 ,Q9542		2SA1037K
	Q9544 ,Q9547 ,Q9551 ,Q9552		2SA1037K
	Q9801 -Q9803 ,Q9844 ,Q9858 ,Q9874		2SA1037K
	Q9895 ,Q9912 ,Q9921 -Q9923 ,Q9926		2SA1037K
	Q9941 ,Q9944		2SA1037K
	Q4101 ,Q4105 ,Q4108 -Q4111 ,Q4113		2SC2412K
	Q4115 ,Q4116,Q4121 ,Q4124 -Q4129		2SC2412K
	Q4132 -Q41 34 ,Q4136 ,Q4138		2SC2412K
	Q4511 -Q4513 ,Q4521 ,Q9001 -Q9006		2SC2412K
	Q9009 -Q9014 ,Q9101 ,Q9102		2SC2412K
	Q9127 ,Q9128 ,Q9206 ,Q9501		2SC2412K
	Q9503 -Q9507 ,Q9509 -Q9521		2SC2412K
	Q9525 -Q9527 ,Q9530 -Q9536		2SC2412K
	Q9538 -Q9541 ,Q9543 ,Q9545 ,Q9546		2SC2412K
	Q9548 -Q9550,Q9821 ,Q9823 -Q9825		2SC2412K
	Q9841 -Q9843 ,Q9855 -Q9857		2SC2412K
	Q9871 -Q9873 ,Q9911 ,Q99132SC2412K		

Mark	No.	Description	Part No.
	Q9942 ,Q9943 ,Q9945 -Q9947 ,Q9971		2SC2412K
	Q4114		2SK208
	Q4117 -Q4120 ,Q4509 ,Q9103 ,Q9105		DTC124EK
	Q9201 -Q9203 ,Q9207 ,Q9508 ,Q9524		DTC124EK
	Q9528 ,Q9529 ,Q9972 ,Q9973		DTC124EK
	D4502 -D4508 ,D9208 ,D9209		1SS226
	D4102 -D4104 ,D4523 ,D9001 ,D9002		1SS352
	D9004 ,D9005 ,D9202 -D9204		1SS352
	D9501 -D9504 ,D9801 ,D9841		1SS352
	D9003		RD5.1MB
COILS AND FILTERS			
	F9202 ,F9501 -F9508		ATF1124
	L9003		ATG1009
	L9001		ATG1026
	L9002 ,L9005		ATG1027
	L9008		ATG1033
	DL9941,DL9942		ATN1029
	DL9001		ATN1051
	L4109 ,L9962		LCTA100J3225
	L4107		CTA101J3225
	L4106		CTA120J3225
	L4108		CTA150J3225
	L4114		CTA1R8J3225
	L4103 ,L9006 ,L9007		CTA270J3225
	L4110 ,L4112 ,L4113		CTA3R9J3225
	L4102 ,L4104 ,L4111		CTA470J3225
	L9963 ,L9964		LCTA4R7J3225
	L9961		CTA5R6J3225
	L4105 ,L9855 ,L9871		CTA6R8J3225
	L9004		CTA8R2J3225
CAPACITORS			
	C9056 ,C9579 (0.22µF/16V)		ACE9008
	C9554 ,C9963 -C9965 ,C9967		CCSQCH100D50
	C9061		CCSQCH101J50
	C9563 ,C9586		CCSQCH102J50
	C9004		CCSQCH120J50
	C4111 ,C4122		CCSQCH121J50
	C9961		CCSQCH150J50
	C4129		CCSQCH151J50
	C4124 ,C9005 ,C9013 ,C9014		CCSQCH181J50
	C4101 ,C9001 ,C9018 ,C9027 ,C9941		CCSQCH220J50
	C4110 ,C4125 ,C4126 ,C9030 ,C9032		CCSQCH221J50
	C9055 ,C9555 ,C9561		CCSQCH221J50
	C4103 ,C9008 ,C9053		CCSQCH270J50
	C9002 ,C9576 ,C9855 ,C9871 ,C9962		CCSQCH330J50
	C9003 ,C9577		CCSQCH390J50
	C9553		CCSQCH470J50
	C9049 ,C9050		CCSQCH471J50
	C4102 ,C9856 ,C9872		CCSQCH560J50
	C4123 ,C9029 ,C9031 ,C9232		CCSQCH680J50
	C9028		CCSQCH7R0D50
	C4109		CCSQCH821J50
	C9017		CCSQCH8R0D50
	C4112		CCSQSL122J50
	C9560		CCSQSL152J50
	C9578		CCSQSL1R0C50

Mark	No.	Description	Part No.
	C9565		CCSQSL222J50
	C4522		CEV100M16
	C9039 ,C9966		CEV100M50
	C9518 ,C9971		CEV101M16
	C4514 ,C4517 ,C9225 ,C9583		CEV101M6R3
	C9057 ,C9122 ,C9564 ,C9566 ,C9569		CEV1R0M50
	C4121 ,C4501 ,C4502 ,C4511 ,C4526		CEV220M16
	C9505 -C9507 ,C9570 ,C9896		CEV220M16
	C9102 ,C9103 ,C9534 -C9536		CEV220M6R3
	C9822 -C9824 ,C9913 ,C9925		CEV220M6R3
	C9969		CEV330M25
	C4506 ,C4525 ,C9023 ,C9025 ,C9047		CEV470M16
	C9060 ,C9522 ,C9537 ,C9539 ,C9590		CEV470M16
	C9801 ,C9804 ,C9806 ,C9858 ,C9891		CEV470M16
	C9911 ,C9943		CEV470M16
	C4518 ,C4527 ,C9069 ,C9520 ,C9524		CEV470M6R3
	C9526 ,C9528 ,C9530 ,C9532 ,C9567		CEV470M6R3
	C9573 ,C9574 ,C9588		CEV470M6R3
	C4523 ,C9559 ,C9580		CEV4R7M35
	C4107 ,C4115 ,C4116,C9217 ,C9228		CEVL100M16
	C9230 ,C9547 ,C9550,C9552		CEVL100M16
	C9593 ,C9594		CEVL100M16
	C4108 ,C4117 ,C4120 ,C9065 ,C9123		CEVL220M16
	C9235 ,C9238 ,C9511 ,C9512		CEVL220M16
	C9544 ,C9545 ,C9548 ,C9551 ,C9777		CEVL220M16
	C9592		CEVL220M6R3
	C4118 ,C4127 ,C4131 ,C9223 ,C9503		CEVL470M16
	C9509 ,C9514 ,C9516,C9541		CEVL470M16
	C9067 ,C9068 ,C9843 ,C9857 ,C9873		CEVNP100M16
	C9916		CEVNP100M16
	C9058		CEVNP1R0M50
	C9007		CEVNP2R2M50
	C9026 ,C9582		CEVR47M50
	C9043		CFHS223J16
	C9045		CFHSP104J16
	C9011 ,C9012 ,C9059		CFHSP563J16
	C4532 ,C9006 ,C9009 ,C9044 ,C9581		CFHSQ103J16
	C9587		CFHSQ103J16
	C9046		CFHSQ472J16
	C9020 ,C9037		CKSQYB102K50
	C4104 ,C4106 ,C4119 ,C4128 ,C4130		CKSQYB103K50
	C4132 ,C4134 ,C4136 -C4139 ,C4505		CKSQYB103K50
	C4513 ,C4515 ,C4516,C4524		CKSQYB103K50
	C4530 ,C4531 ,C4534 ,C9010 ,C9015		CKSQYB103K50
	C9019 ,C9021 ,C9022 ,C9033 ,C9038		CKSQYB103K50
	C9051 ,C9052 ,C9054 ,C9062 -C9064		CKSQYB103K50
	C9070 -C9072 ,C9101 ,C9519 ,C9521		CKSQYB103K50
	C9523 ,C9525 ,C9556 ,C9557 ,C9562		CKSQYB103K50
	C9571 ,C9585 ,C9802 ,C9805 ,C9807		CKSQYB103K50
	C9821 ,C9841 ,C9842 ,C9844 ,C9859		CKSQYB103K50
	C9892 ,C9912 ,C9923 ,C9942 ,C9968		CKSQYB103K50
	C9972 -C9976		CKSQYB103K50
	C4113		CKSQYB392K50
	C9209 ,C9210 ,C9213 ,C9214		CKSQYF102Z50
	C9224 ,C9226 ,C9227 ,C9229 ,C9231		CKSQYF103Z50

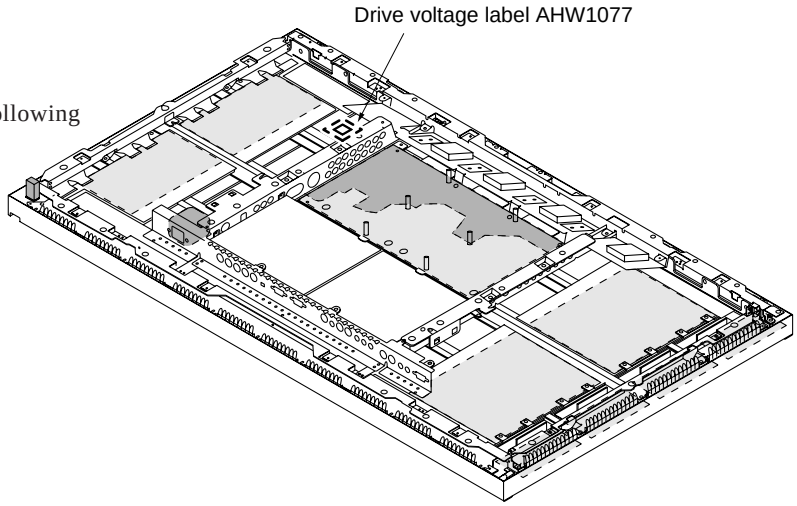
Mark	No.	Description	Part No.
	C9236 ,C9239 ,C9504 ,C9508 ,C9510		CKSQYF103Z50
	C9513 ,C9515 ,C9517 ,C9527 ,C9529		CKSQYF103Z50
	C9531 ,C9533 ,C9538 ,C9540		CKSQYF103Z50
	C9542 ,C9543 ,C9549 ,C9558 ,C9568		CKSQYF103Z50
	C9572 ,C9575 ,C9584 ,C9589 ,C9591		CKSQYF103Z50
	C9770 ,C9771		CKSQYF103Z50
	C4504 ,C9024 ,C9034 -C9036		CKSQYF104Z50
	C9040 -C9042 ,C9048 ,C9066 ,C9501		CKSQYF104Z50
	C9803		CKSQYF104Z50
	C4519		CKSQYF473Z50
RESISTORS			
	R9988		RD1/4PU471J
	R9713		RN1/10SE8202D
	VR9005		VRTS6VS102
	VR9002		VRTS6VS103
	VR9001		VRTS6VS471
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN4502	PIN JACK(3P-AU)	AKB1270
	JA4503	JACK	AKB7096
	CN4505	SIN SOCKET	AKP1175
	CN4504	CONNECTOR	AKX1051
	K4501 ,K4502 ,K9502 ,K9924 ,K9961		AKX9002
	K9971 -K9973		AKX9002
	X9003	(503KHz)	ASS1019
	X9502	CRYSTAL (14.31818MHz)	ASS1056
	X9002	CRYSTAL (3.579545MHz)	ASS1091
	X9001	CRYSTAL (4.433619MHz)	ASS1092
	X9501	(503KHz)	ASS1112
	CN9501	50P CONNECTER	KF050HA50L
	CN4107	PLUG 12-P	KM250MA13
	CN9502	PLUG 8-P	KM250MA8B
	5001	SCREW TERMINAL	VNE1949

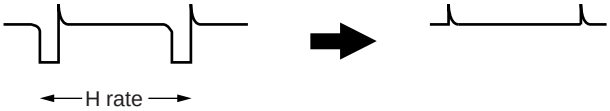
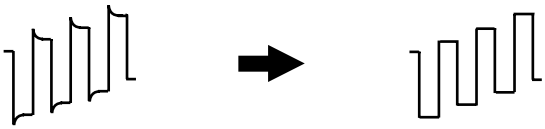
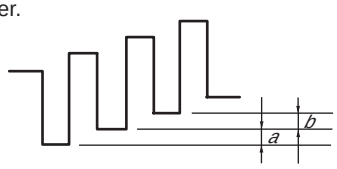
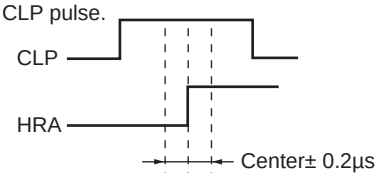
4. ADJUSTMENT

4.1 Adjustments of Parts

Note)
In these adjustments, assembly are indicated by the following symbols.
A:ANALOG VIDEO ASSEMBLY
B:PROGRESSIVE BLOCK
J:POWER SUPPLY MODULE
G:Y DRIVE (A) ASSEMBLY
H:Y DRIVE (B) ASSEMBLY

Note: Position for pasting the drive voltage label



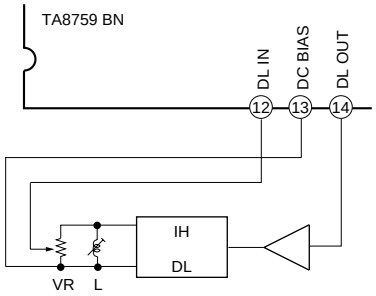
Procedure	Adjusting Item	Input Signal	Adjusting Point	Adjusting Method
1	PAL IH DELAY	PAL DEMO pattern (SG:Phillips PM5518)	VR9001 L9003 (**A**)	Refer to the separate sheet. Refer to page 11.
2	SECAM ID VOLTAGE	SECAM color bar	L9001 (**A**)	Adjust so that the DC voltage of Pin ㉓ of IC9001 becomws maximum.
3	SECAM R-Y DETECTION	SECAM black burst (With color sub carrier)	L9002 (**A**)	Match the DC level between the video and BLK periods as shown in the figure at the Q9014 and Q9013 emitters. 
4	SECAM B-Y DETECTION		L9005 (**A**)	
5	SECAM BELL FILTER	SECAM color bar	L9008 (**A**)	Adjust so that the color difference waveform protrusion becomes minimum at the Q9013 emitter. 
6	TINT(NTSC)	Chroma modulation ramp signal (NTSC)	VR9002 (**A**)	Adjust so that the output of Pin ② of CN9505 (R-Y signal) becomes minimum.
7	Demodulation angle (NTSC)	NTSC EIA colour bar (100/0/75/0)	VR9005 (**A**)	Adjust so that the amplitudes of a and become equal with the output of Q9518 emitter. 
8	Deflection PLL adjustment	Any standard signal	L4715 (**B**)	Adjust so that the voltage of TP K4701 becomes 2.6 ± 0.1V.
9	Acquisition PLL adjustment	Any standard signall	L4706 (**B**)	Adjust the timing of the waveforms of Pin ③ (CLP) of CN4703 and TP K4702 (HRA) so that the rising edge of the HRA pulse are at the center of the CLP pulse. 

Procedure	Adjusting Item	Input Signal	Adjusting Point	Adjusting Method
10	V_{H_A}, V_{H_B} voltage adjustment	100% white signal	VR3302 (G) VR3301 (H)	$V_{H\,A}$ (Scan IC power supply voltage A) Check the drive voltage label value at the upper left side of the unit inside, and adjust RV3302 so that the voltage between Pin ① (VH_A) and Pin ④ (GND H_A) of the check connector CN3303 becomes that value. $V_{H\,B}$ (Scan IC power supply voltage B) Check the drive voltage label value at the upper left side of the unit inside, and adjust VR3301 so that the voltage between Pin ① (VH_B) and Pin ④ (GND H_B) of the check connector CN3304 becomes that value.
11	V_{SUS}, V_{OFS}, V_{ADR}, V_{CSP}, V_{RN} voltage adjustment	100% white signal	RV7, RV5, RV3, RV4, RV9 (J)	V_{SUS} (Sustain power supply voltage) Check the drive voltage label value at the upper left side of the unit inside, and adjust RV7 so that the value between TP CH24 (175V) and TP-CH25 (175 GND) becomes that value. V_{OFS} (Offset power supply voltage) Check the drive voltage label value at the upper left side of the unit inside, and adjust RV5 so that the value between Pin ① of CN3106 (150V) and Pin ④ of CN3105 (SUS, GND) inside the Y drive assembly becomes that value. V_{ADR} (Address power supply voltage) Check the drive voltage label value at the upper left side of the unit inside, and adjust RV3 so that the value between TP CH22 (30V) and TP-CH23 (30V GND) becomes that value. V_{CSP} (CSP power supply voltage) Check the drive voltage label value at the upper left side of the unit inside, and adjust RV4 so that the potential between Pin ④ (CSP) and Pin ① (150V) of CN3106 of the Y drive assembly becomes that value. V_{RN} (Minus reset power supply voltage) Check the drive voltage label value at the upper left side of the unit inside, and adjust RV9 so that the value between TP CH26 (190V) and TP CH25 (175 GND) becomes that value.

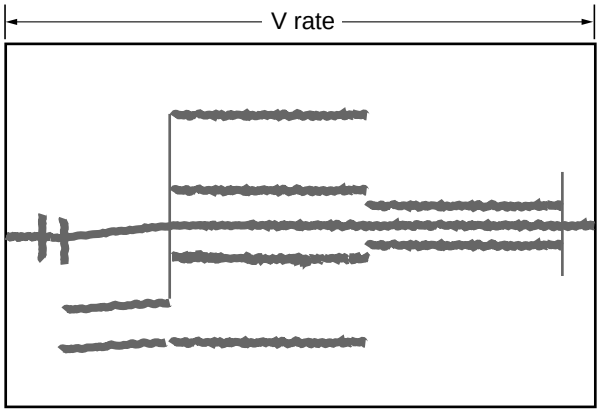
Note: CSP, GNDH_A, and GNDH_B differ from the GND potential in the unit. The potentials are also different .

- The adjustment tolerance of the drive voltage label is ± 0.5V.
- The adjustments of the ANALOG VIDEO ASSEMBLY (step 1), (step 2), (step 3), (step 4), (step 5), (step 6), (step 7), (step 8), and (step 9) is not necessary when replacing the assembly.
- Adjusting points which need not be adjusted again in the POWER SUPPLY MODULE after replacing the module are as follows.
  RV8 (+5V)
  RV6 (+3.3V)
  RV2 (+12V)
  RV1 (+5VSTB)
- If the above adjustment controls are rotated by mistake, adjust to the following values;
  RV8 (+5V): Adjust the DC voltage between TP CH16 (5V) and TP CH19 (5V GND) to 5.0V ± 0.1V.
  RV6 (+3.3V): Adjust the DC voltage between TP CH17 (3.3V) and TP CH19 (5V GND) to 3.3V ± 0.066V.
  RV2 (+12V): Adjust the DC voltage between TP CH18 (12V) and TP CH19 (5V GND) to 12.0V ± 0.24V.
  RV1 (+5VSTB): Adjust the DC voltage between TP CH4 (5V) and TP CH19 (5V GND) to 5.0V ± 0.1V.

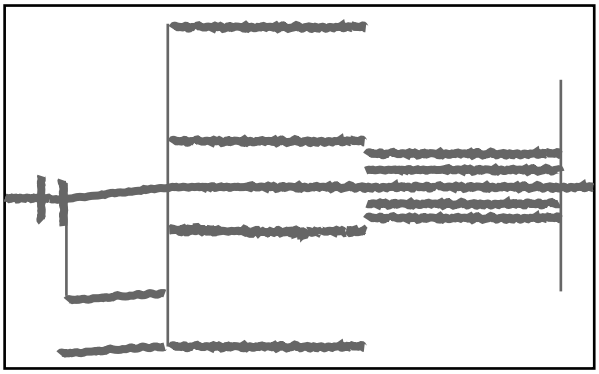
Adjusting PAL 1H delay



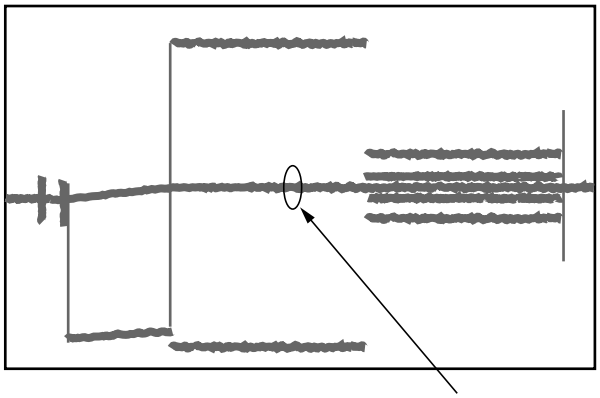
Input Signal: PAL: DEMO PATTERN
Phillips SG PM5518
Measuement Point: Q9013, Q9014 Emitter
Adjusting Point: VR9001, L9003



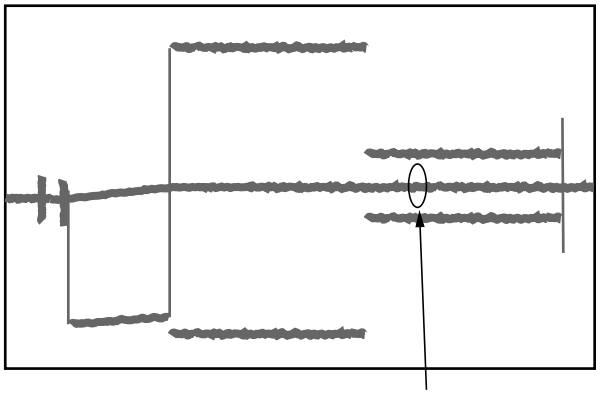
(1) Phillips DEMO pattern waveform when VR 9001 and L9003 are set to the preset (center) values.



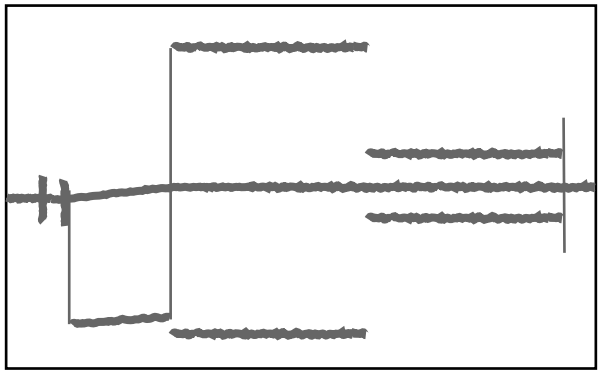
(2) Rotate the VR to the left completely, so that Pins ⑫ and ⑬ of IC9001 become short-circuitted.



(3) Adjust L9003 at the (2) state so that the level of this part becomes minimum.



(4) Next, adjust VR9001 so that the level of this part becomes minimum.



(5) Repeat steps (3) and (4) so that the level of the center of each waveform becomes minimum.

4.2 White Balance Adjustment

Set COLOUR to minimum and the other video settings to the standard setting in the following measurements.

1. Black level adjustment

1) Input the RAMP signal.
2) Monitor the output TP terminals of the RGB assembly (R:P5802, G:P5801, B:P5803), and adjust R,G,B LOW LIGHT so that the black level (0IRE) becomes 2.4V.

2. LOW LIGHT adjustment

Input the RAMP signal, and adjust R, G, B:LOW LIGHT so that the point which starts to light up becomes gray.

3. HIGH LIGHT adjustment

1) Input the RAMP signal.
2) Monitor the TP terminals of the RGB assembly (R:P5802, G:P5801, B:P5803), and adjust R,G,B HIGH LIGHT so that the white level (100IRE) becomes 4.4V.
3) Input the white signal (80IRE).
4) Adjust R,G,B HIGH LIGHT so that the screen becomes reddish white (T=6500K, dev=0.000uv).

4. Adjusting voltage check

Input the RAMP signal, monitor the TP terminals of the RGB assembly (R:P5802, G:P5801, B:P5803), and check that the black level (0IRE) is 2.4V ± 0.1. The white level (100IRE) value is not specified.

(Reference)

Adjustment values using the Minolta colour-difference meter CA-100

80% window step -3dB

[PAL] [SECAM] [4.43NTSC] [NTSC] [HDTV]	[RGB]
x=317	x=317
y=324	y=332
$Y=52\ ^{+20}_{-15}$ cd/m²	$Y=23\ ^{+10.0}_{-7.5}$ cd/m² (20% 1.9cd/m²)

(20% 3.5cd/m² (NTSC, HDTV, PAL SECAM, 4.43NTSC))

Checking picture quality

1. Face colour check (Colour balance check)

After adjusting the white balance, check the face colour of figures in LD still pictures.

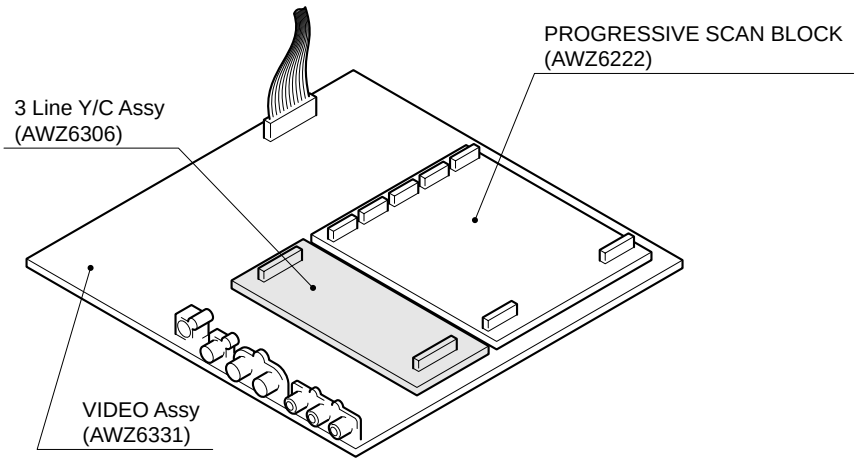
If the colour is not natural, adjust COLOUR and TINT and memorize the value.

2. Picture quality check

Set the sharpness to 120 for both NTSC and HDTV, and the detail setting to 110 for NTSC, 140 for PAL/SECAM/4.43NTSC and 65 for HDTV, and check the picture quality.

Note: Adjust the white balance and check the picture quality in each NTSC screen mode (natural wide, zoom, etc.) and HDTV (MUSE).

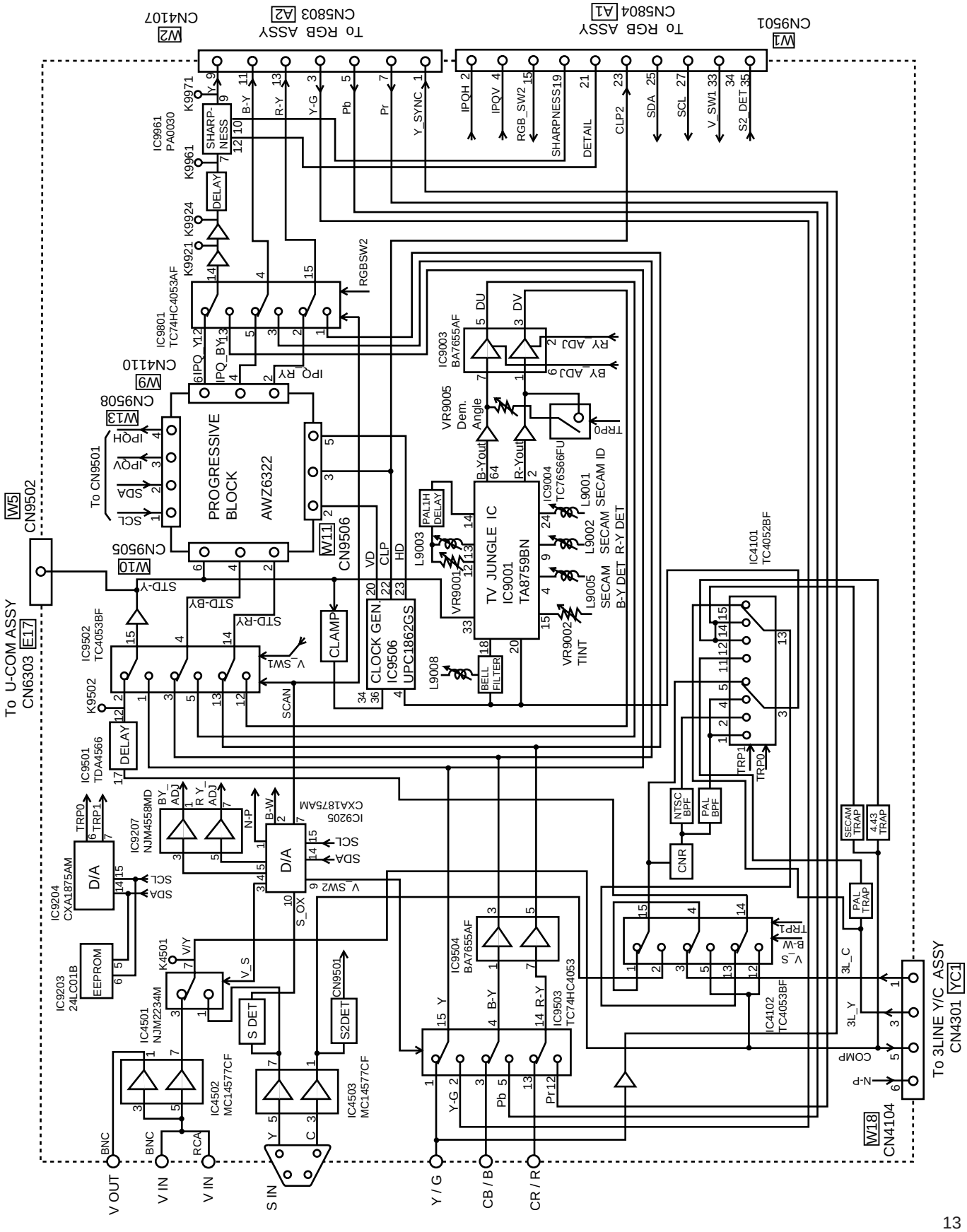
• 3 LINE Y/C ASSY LOCATION



5. GENERAL INFORMATION

5.1 Block Diagram

5.1.1 Analog Video Assy



5.1.2 3 Line Y/C Assy