

Service Manual



TV/VCR Combination
TC-25GV10R
 M17V chassis



SPECIFICATIONS\ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ
LOCATIONS OF CONTROLS AND CIRCUIT BOARDS FOR TV\РАСПОЛОЖЕНИЕ ОРГАНОВ УПРАВЛЕНИЯ И МОНТАЖНЫХ ПЛАТ ТЕЛЕВИЗОРА
SERVICE HINTS FOR TV\СЕРВИСНАЯ ИНФОРМАЦИЯ ДЛЯ ТЕЛЕВИЗОРА
SERVICE HINTS FOR VCR\СЕРВИСНАЯ ИНФОРМАЦИЯ ДЛЯ ВИДЕОМАГНИТОФОНА
SAFETY NOTICE\МЕРЫ БЕЗОПАСНОСТИ
SPECIAL SERVICING PROCEDURE FOR VCR\СПЕЦИАЛЬНАЯ СЕРВИСНАЯ ПРОЦЕДУРА ДЛЯ ВИДЕОМАГНИТОФОНА
DISASSEMBLY AND ASSEMBLY PROCEDURE OF MECHANISM\РАЗБОРКА И СБОРКА МЕХАНИЗМА
MECHANICAL ADJUSTMENT PROCEDURE FOR VCR\МЕТОДИКА МЕХАНИЧЕСКОЙ НАСТРОЙКИ ВИДЕОМАГНИТОФОНА
SERVICING FIXTURE AND TOOLS\СЕРВИСНЫЕ ПРИСПОСОБЛЕНИЯ
ELECTRICAL ADJUSTMENT PROCEDURES (VCR BLOCK)\МЕТОДИКА ЭЛЕКТРИЧЕСКОЙ НАСТРОЙКИ (БЛОК ВИДЕОМАГНИТОФОНА)
BLOCK DIAGRAMS\БЛОК-СХЕМЫ

Power supply (TV block)\источник питания (блок телевизора)
 Video (TV block)\видео (блок телевизора)
 Audio (TV block)\аудио (блок телевизора)
 Control (TV block)\управление (блок телевизора)
 System control, servo\система управления и серво привод
 Luminance and chrominance (VCR block)\каналы яркости/цветности (блок видеомангитона)
 HI-FI Audio (VCR block)\HI-FI аудиоусилитель (блок видеомангитона)
 Power supply (VCR block)\электропитание (блок видеомангитона)

SCHEMATIC DIAGRAMS\ПРИНЦИПИАЛЬНЫЕ СХЕМЫ

TV BLOCK\БЛОК ТЕЛЕВИЗОРА
 Schematic diagrams of remote controller\принципиальная схема пульта дистанционного управления
 Schematic diagrams of D/P-boards\принципиальная схема плат D/P
 Schematic diagrams of A/X1-board\принципиальная схема плат A/X1
 Schematic diagrams of B3/Q-board and control panel\принципиальная схема плат B3/Q и панели управления
 Schematic diagrams of S/W-boards\принципиальная схема плат S/W
 Schematic diagrams of G/U/Z-boards\принципиальная схема плат G/U/Z
 Schematic diagrams of J/L/V-boards\принципиальная схема плат J/L/V
 Schematic diagrams of H2-board\принципиальная схема платы H2
 Schematic diagrams of Y2-board\принципиальная схема платы Y2
 Schematic diagrams of K/M/N-boards\принципиальная схема плат K/M/N

VCR BLOCK\БЛОК ВИДЕОМАГНИТОФОНА

VCR power supply schematic diagrams\принципиальная схема электропитания
 Main video schematic diagrams\принципиальная схема главного блока
 System control and servo schematic diagrams\принципиальная схема системы управления и сервопривода
 DDR pack schematic diagrams\принципиальная схема блока обработки ТВ сигнала ГДР
 Luminance and chrominance pack schematic diagrams\принципиальная схема каналов яркости/цветности
 Sub video pack schematic diagrams\принципиальная схема подмодуля обработки видеосигнала
 Head AMP schematic diagrams\принципиальная схема усилителя видеоголовок
 HI-FI audio pack schematic diagrams\принципиальная схема HI-FI аудиоусилителя
 Search pack schematic diagrams\принципиальная схема подмодуля поиска
 Drive pack schematic diagrams\принципиальная схема привода

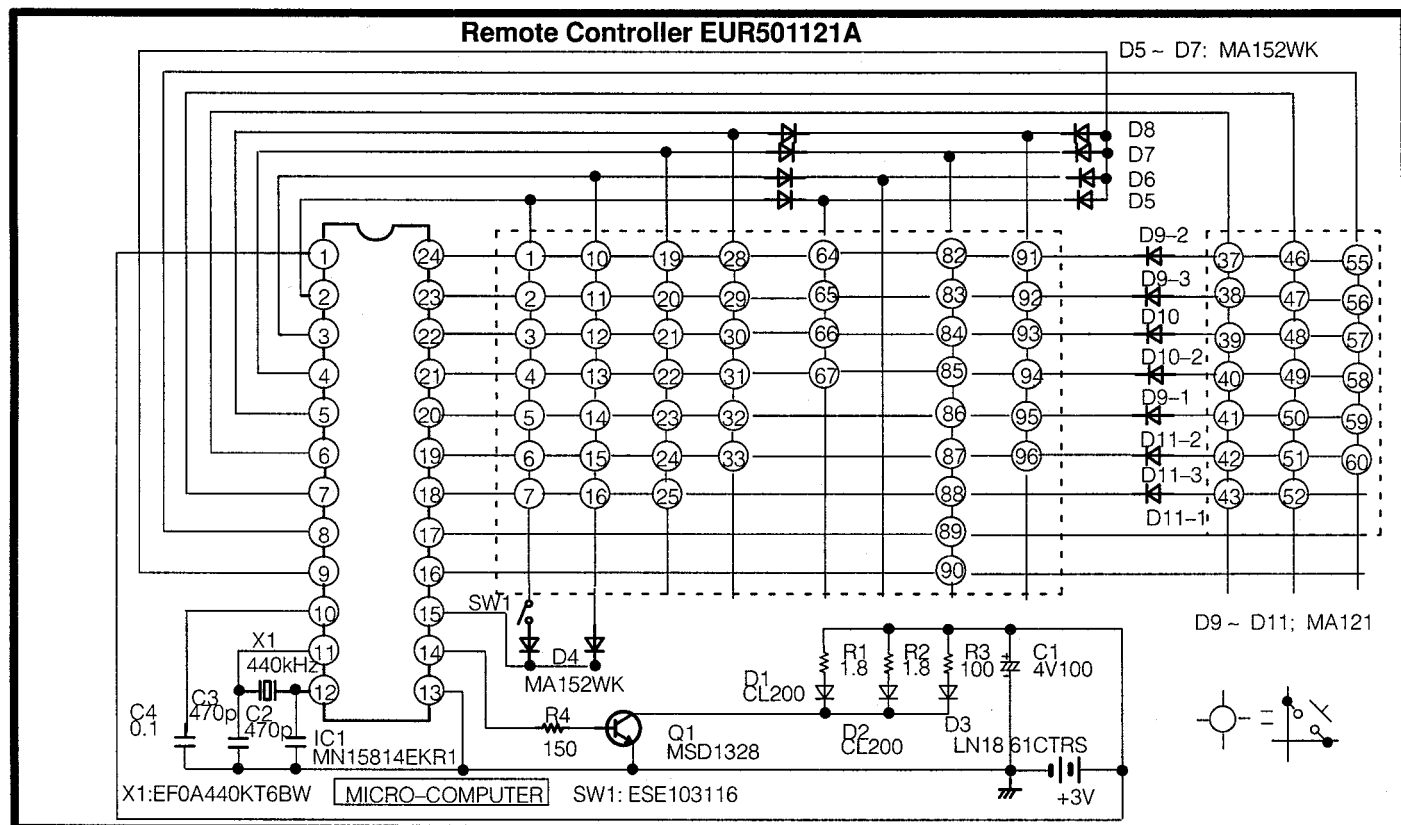
PARTS LOCATION AND PARTS LIST\РАСПОЛОЖЕНИЕ ЧАСТЕЙ И СПИСОК ЗАПАСНЫХ ЧАСТЕЙ

TV BLOCK\БЛОК ТЕЛЕВИЗОРА

VCR BLOCK\БЛОК ВИДЕОМАГНИТОФОНА

Panasonic

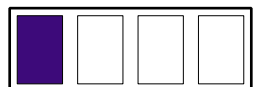
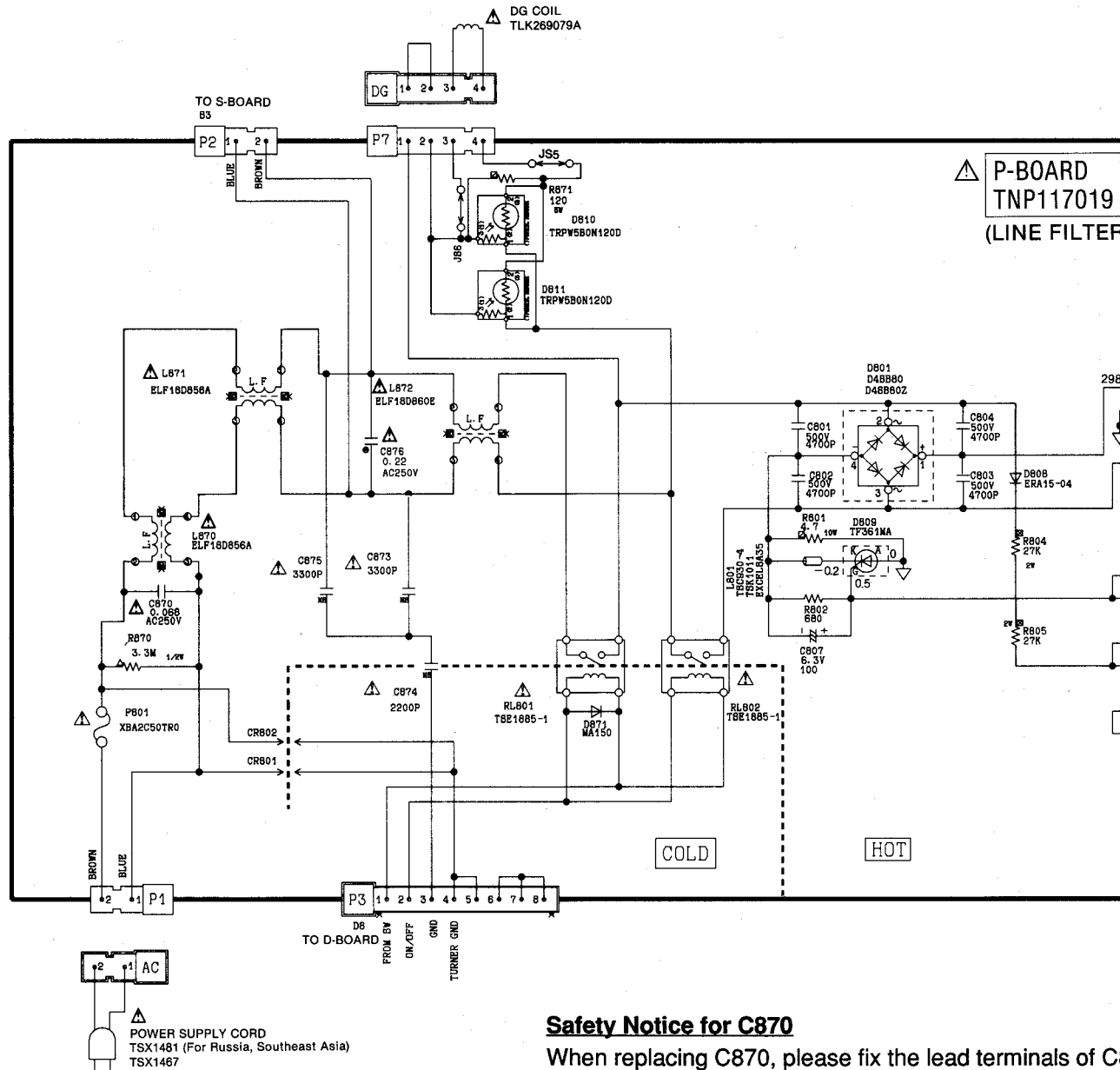
TC-25GV10R

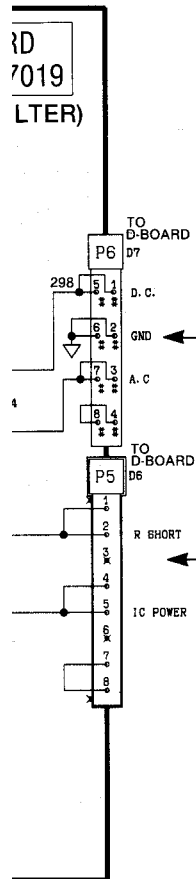


Key Function Table

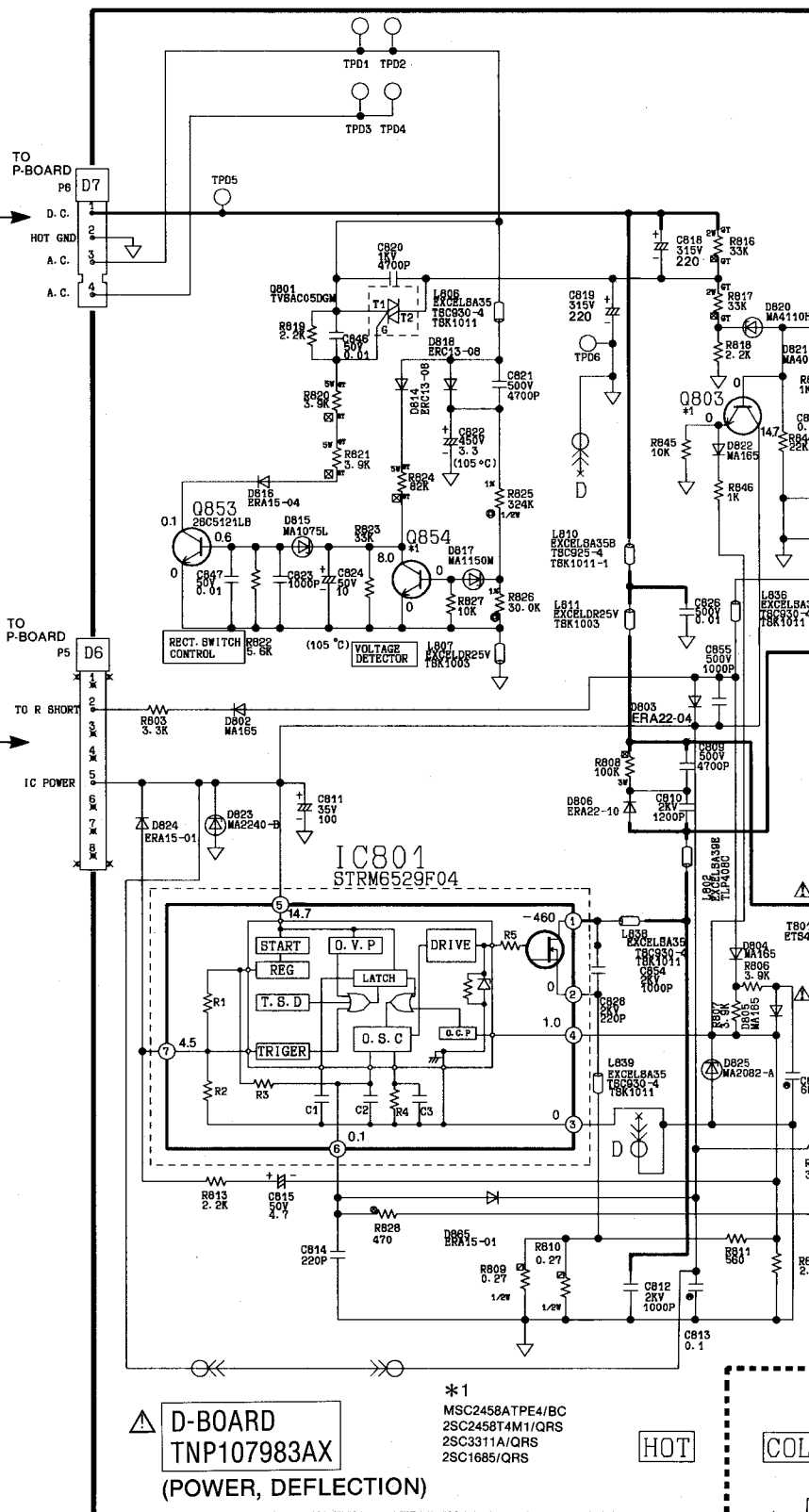
Key No.	Data Code	Function	Key No.	Data Code	Function	Key No.	Data Code	Function
1	15	6	37	3A	CHANNEL SELECT			---
2	16	7	38	19	0			---
3	17	8	39	3B	2 DIGIT - / -			---
4	02	REW	40	21	VOL -			---
5	0A	PLAY	41	35	POS DOWN			---
6	03	FF	42	34	POS UP			---
7	08	RECORD	43	20	VOL +			---
10	10	1	46	10	1			---
11	11	2	47	14	5			---
12	12	3	48	15	6			---
13	14	5	49	13	4			---
14	13	4	50	11	2	82	09	HOLD
15	18	9	51	12	3	83	52	FEATURE / MENU
16	19	0	52	16	7	84	4A	CURSOR UP
19	0A	SP / LP	55	17	8	85	50	VIDEO MRNUE
20	CC	OTR (MENU)	56	18	9	86	4E	CURSOR LEFT
21	06	PAUSE / STILL	57	03	FF	87	4B	CURSOR DOWN
22	0F	F.ADV / SLOW	58	02	REW	88	0C	NORMAL N
23	00	STOP	59	0A	PLAY	89	4F	CURSOR RIGHT
24	B1	TRACKING UP	60	00	STOP	90	51	SOUND MENUE
25	B2	TRACKING DOWN	64	3D	POWER ON / OFF	91	73	KARAOKE
28	39	COUNTER CALL	65	05	TV / AV	92	74	ECHO / MIC
29	54	COUNTER RESET	66	32	MUTE	93	40	INTRO / INDEX
30	91	MONITOR	67	39	RECALL	94	56	KARAOKE MENU
31	0F	OFF TINDER			---	95	CB	VCR MENU
32	31	SURROUND			---	96	B4	TIMER REC
33	33	∞/∇ I / II			---			---

Schematic Diagrams of D-board, P-board





of C870



Safety Notice for D865

When replacing D865, please fix the lead terminals of D865 with the glue as same original condition for safety.

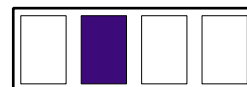
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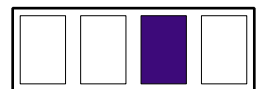
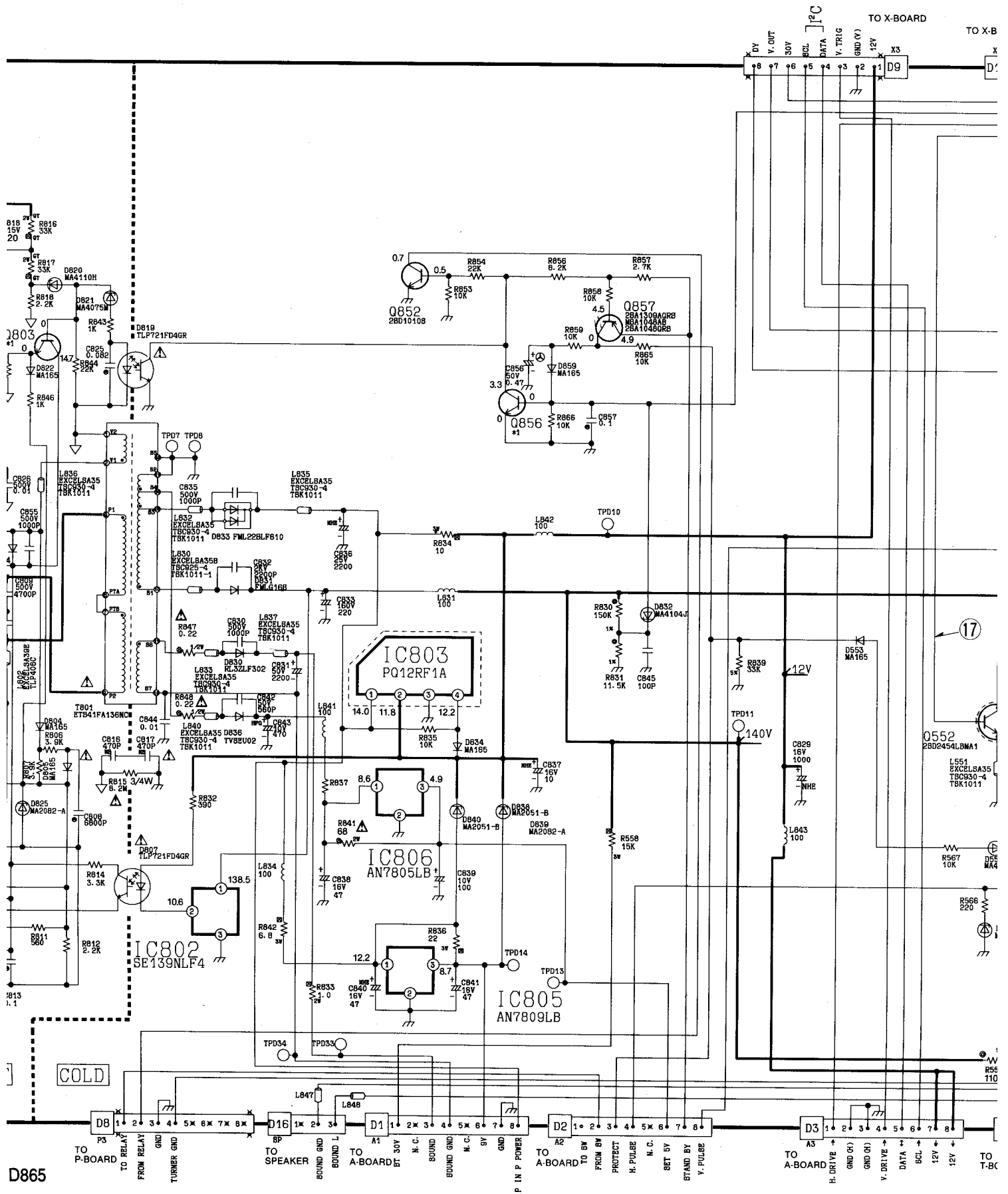
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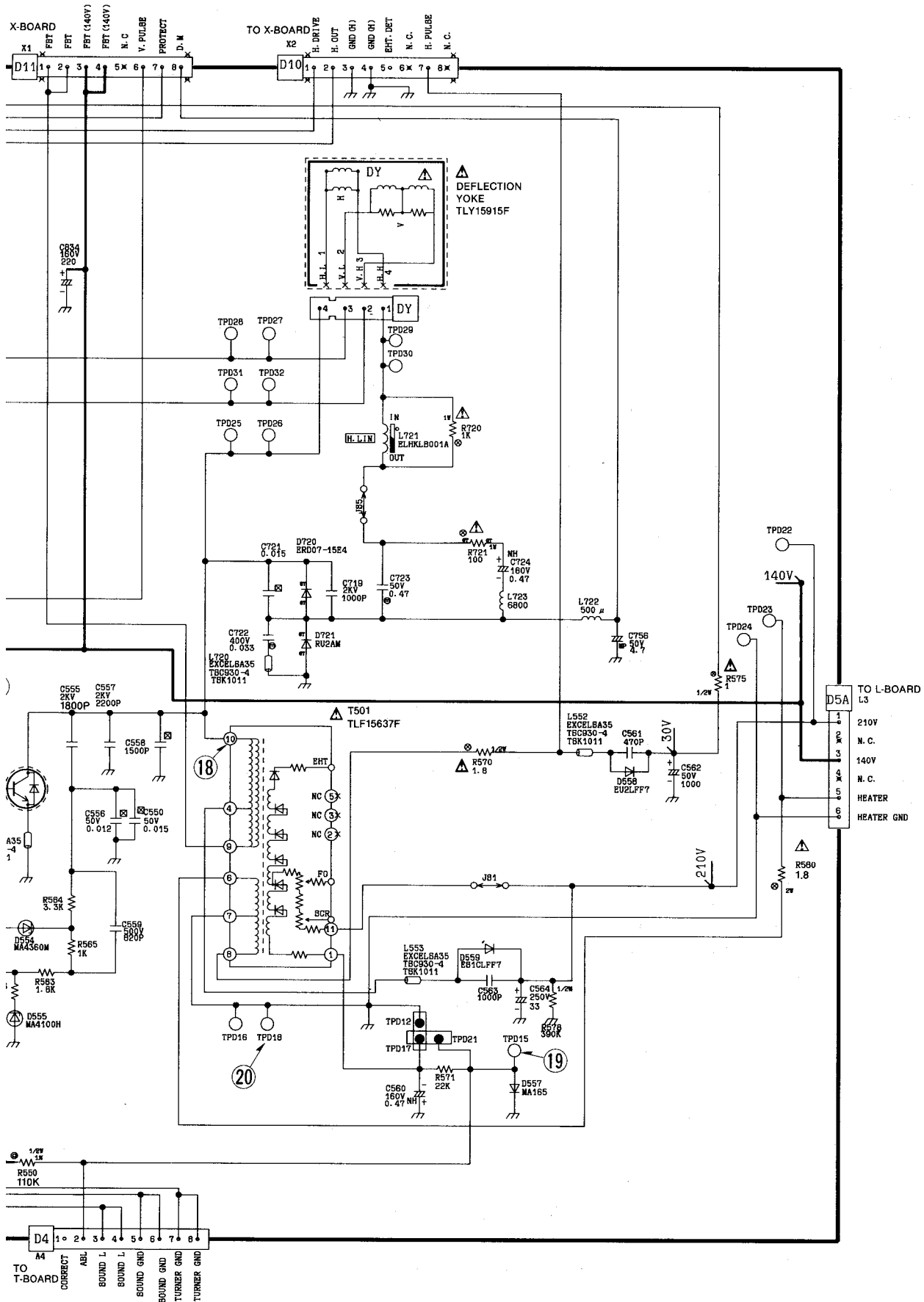
G

H

J







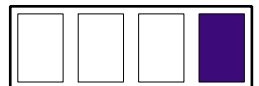
O

P

Q

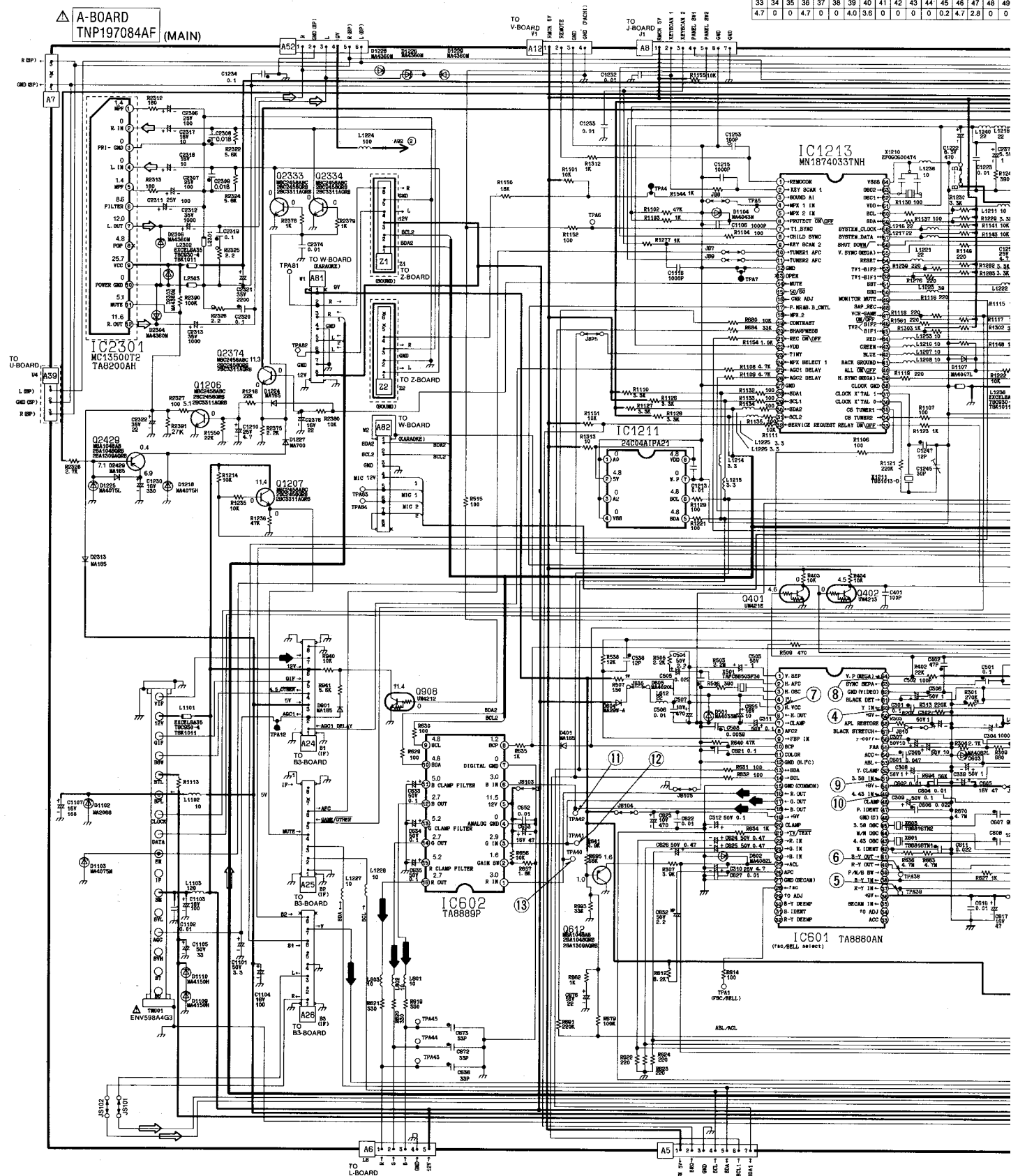
R

S



Schematic Diagrams of A-board, X1-board

Voltage Table for 17-Input Multiplexer																
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
4.8	4.8	4.8	0	2.0	0.2	0	4.3	4.8	2.5	2.2	0	2.4	0	0	2.2	0
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
4.7	0	0	4.7	0	0	4.0	3.6	0	0	0	0	0.2	4.7	2.8	0	0



A

B

C

D

F

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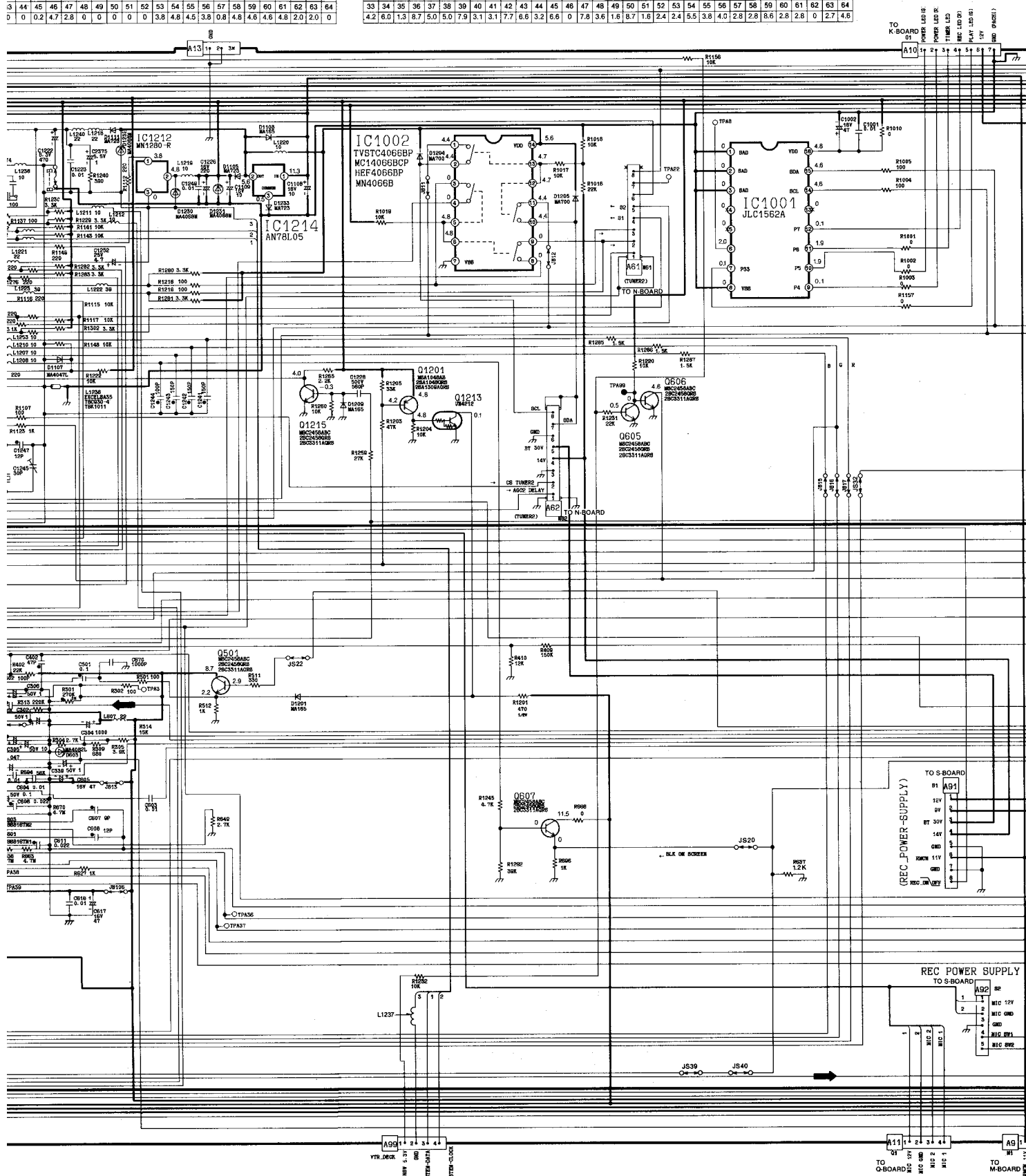
TC-25GV10R

Voltage Table for IC1213

1	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
2	0	2.4	0	0	2.2	0	0	4.4	2.3	1.7	0	3.5	0	2.6	2.6	0	3.8	4.0	4.8	4.8	4.8
3	4.4	4.5	4.6	4.7	4.8	4.9	5.0	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8	5.9	6.0	6.1	6.2	6.3	6.4
0	0	0.2	4.7	2.8	0	0	0	0	0	3.8	4.8	4.5	3.8	0.8	4.8	4.6	4.6	4.8	2.0	2.0	0

Voltage Table for IC601

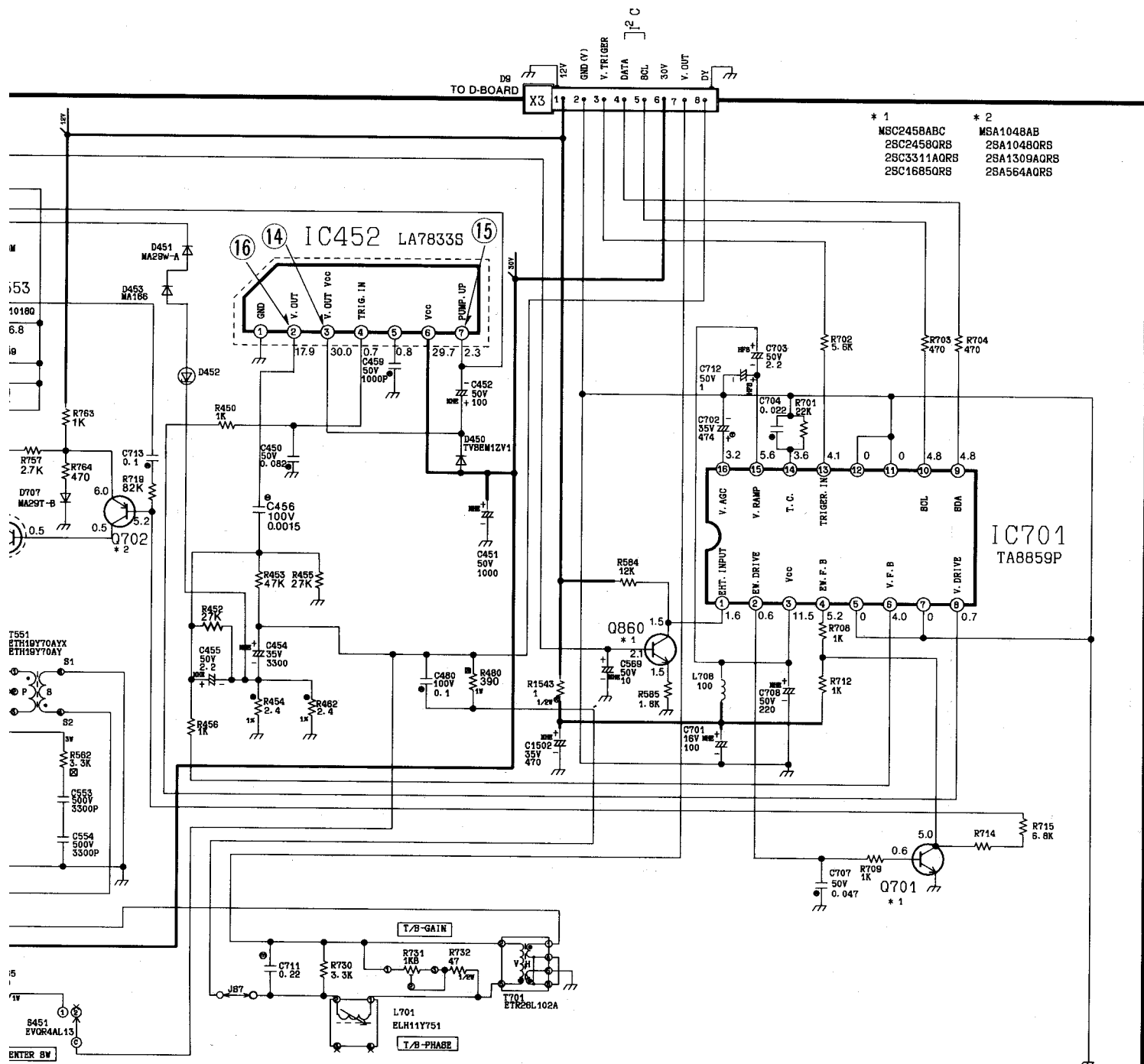
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
6.9	8.7	7.2	3.5	10.1	2.2	4.2	7.6	0.3	1.7	3.0	0	4.7	4.8	0	3.0	2.9	3.0	8.7	4.0	0	3.6	3.6	3.7	2.0	6.1	0	3.7	7.0	4.3	5.0	4.4
3.2	34	36	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
43	64	3.3	1.3	8.7	5.0	5.0	7.9	3.1	3.1	4.7	6.6	3.2	6.6	0	7.8	3.6	1.6	2.4	2.4	5.5	3.8	4.0	2.8	2.8	8.6	2.8	2.8	2.8	2.8	2.7	4.8



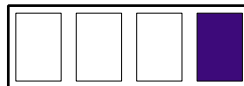
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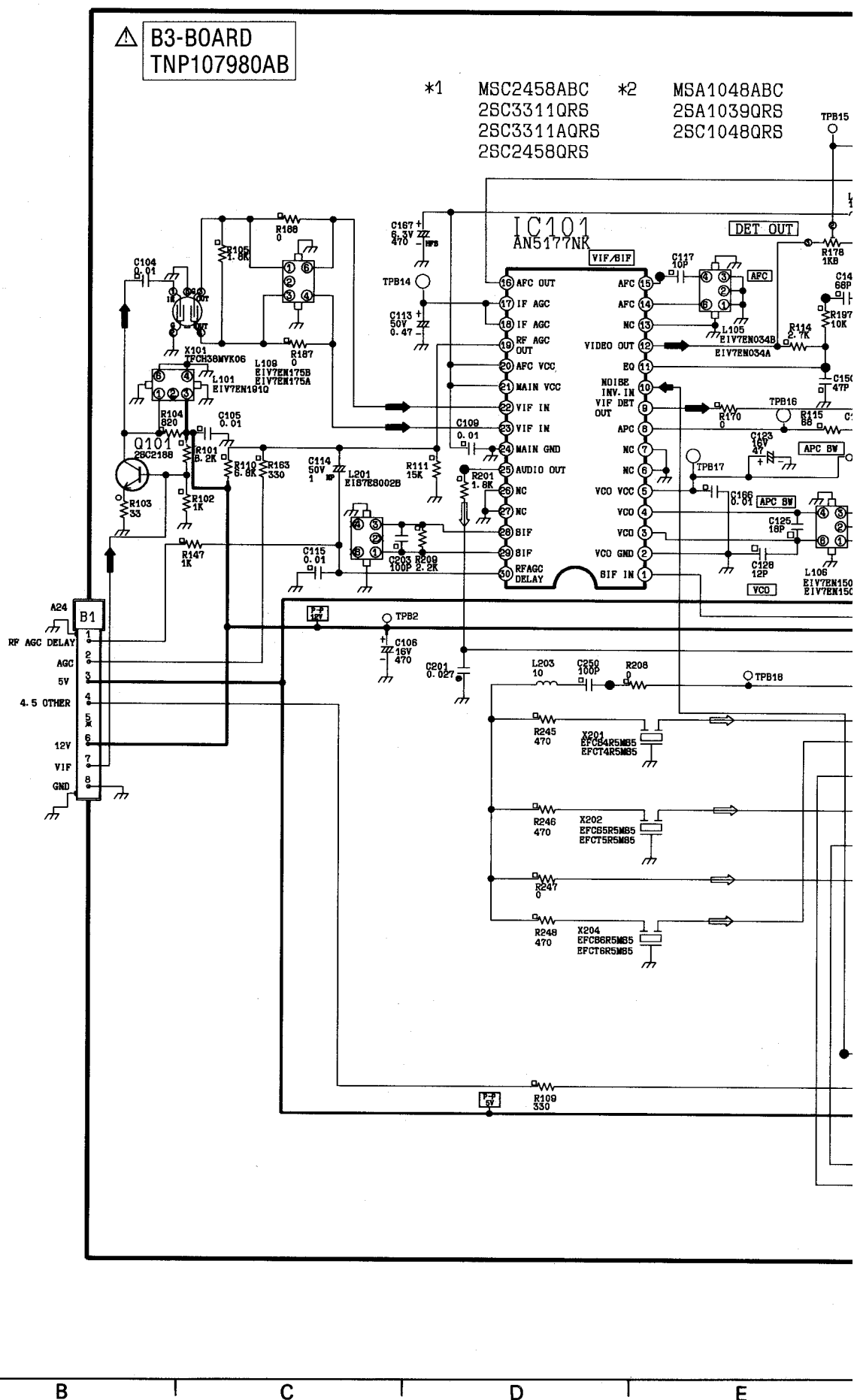
TC-25GV10R



S



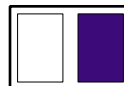
Schematic Diagrams of B3-board, Q-board and Control Panel

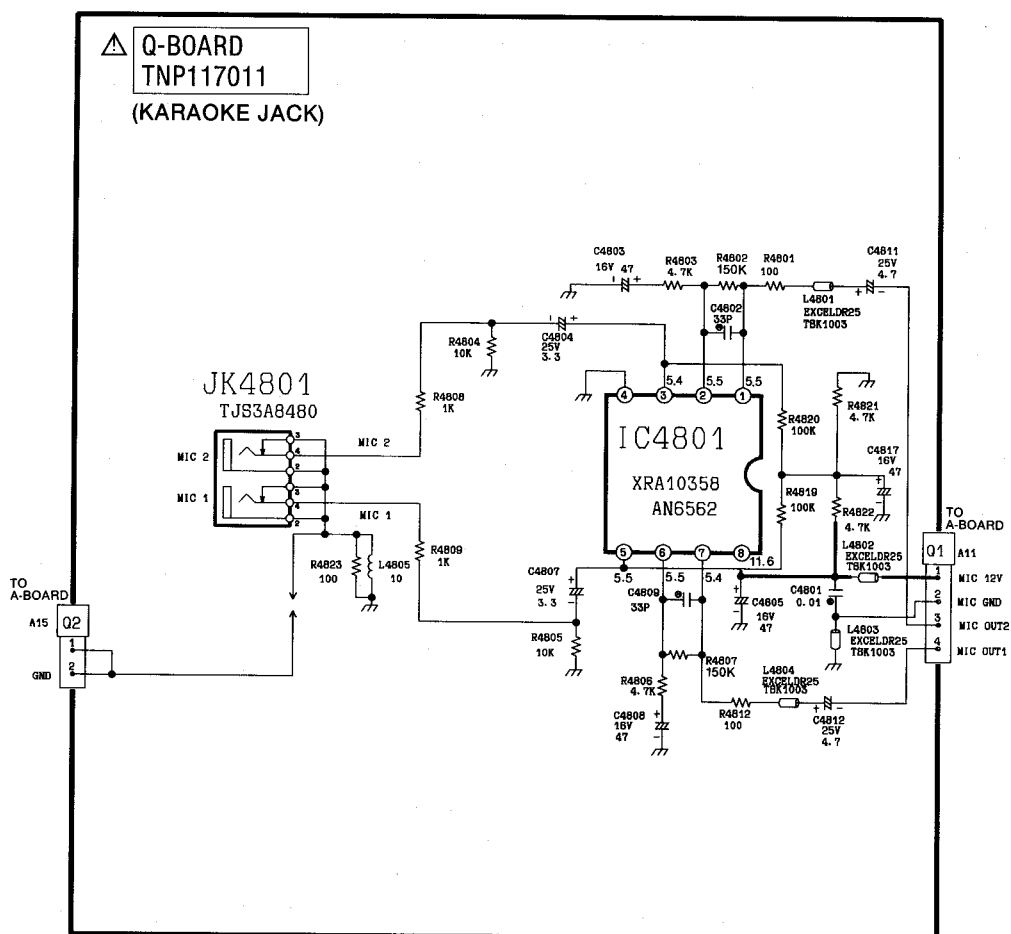


TPB15



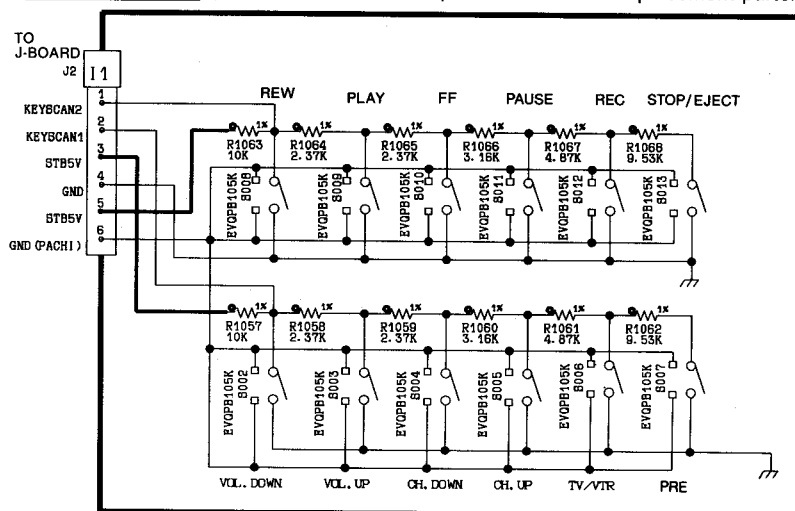
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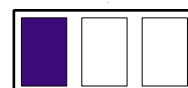


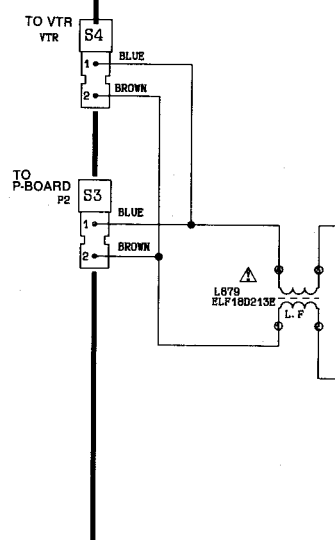
ESU12401A (CONTROL PANEL)

Note:
Components on control
panel are not supplied
as a replacement parts.



1

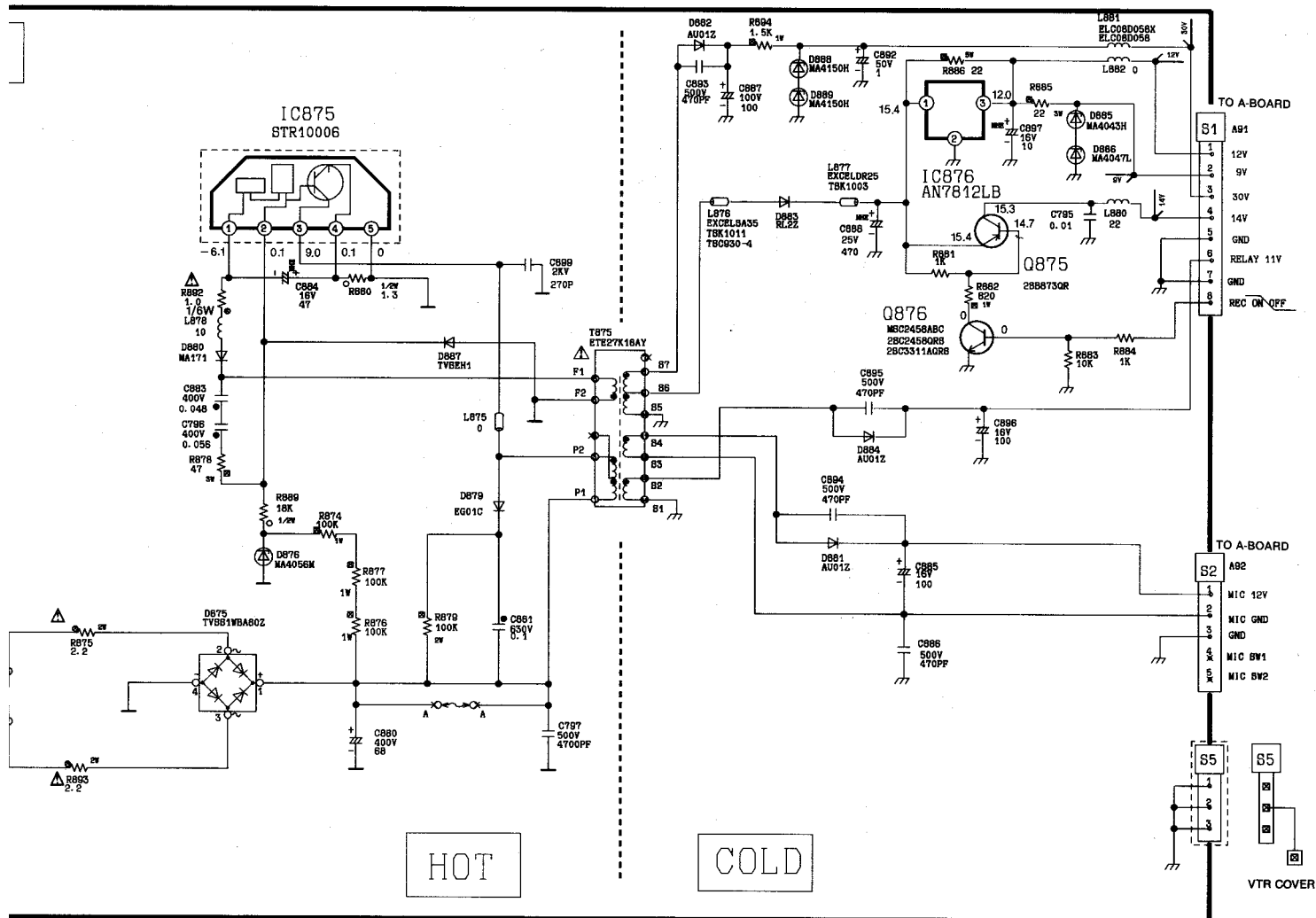




When r is fixed



TC-25GV10R



Notice

When repairing S-Board, please make sure that long lead wire is soldered with glue on the component side as same original condition for safety.

J

K

L

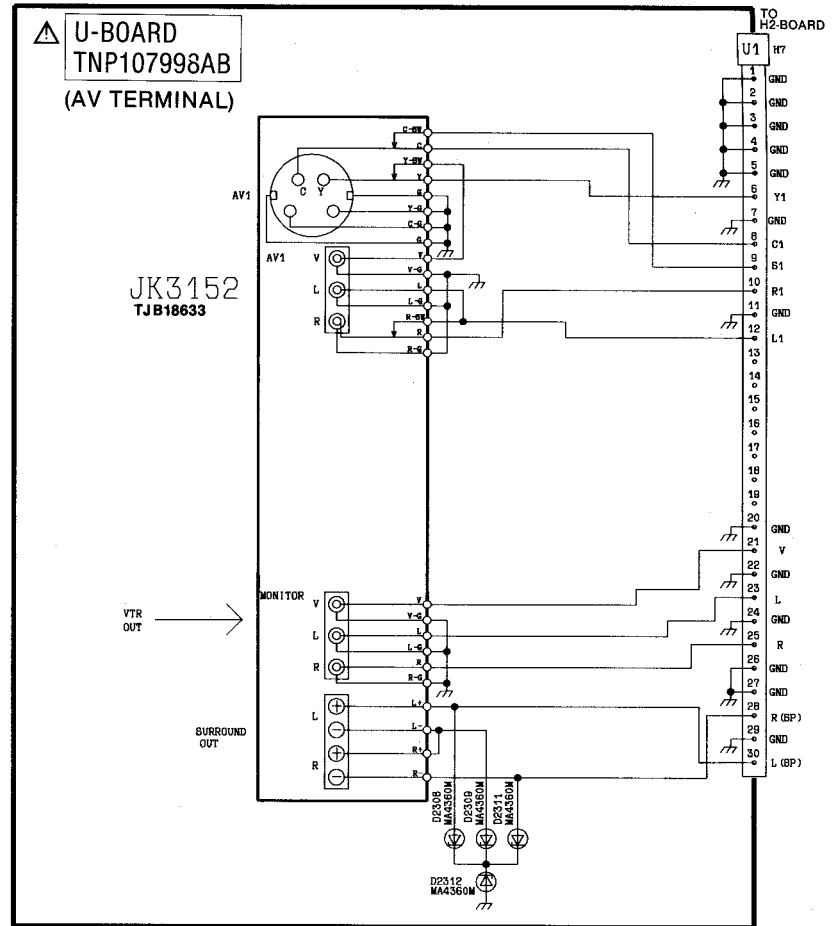
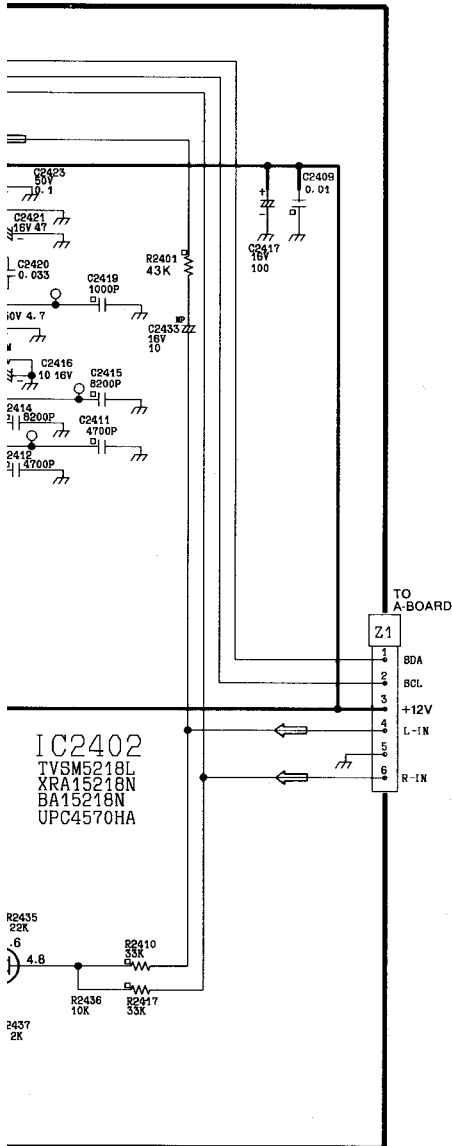
M

N

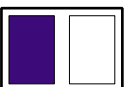


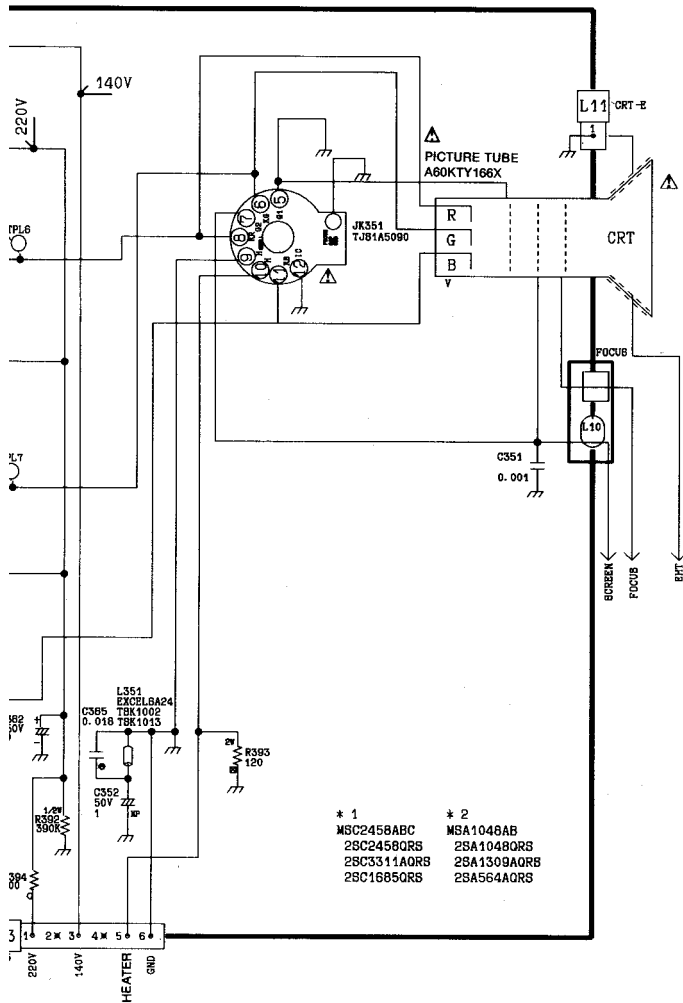
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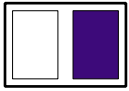
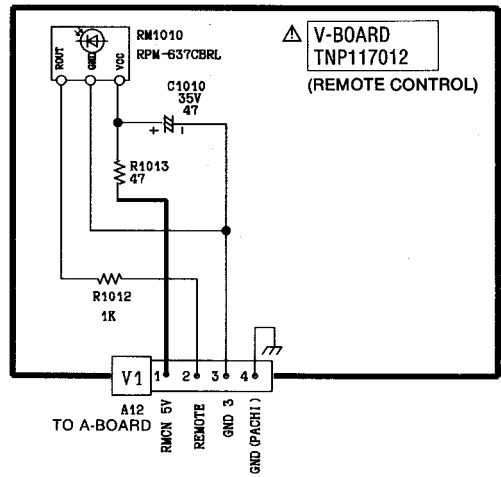
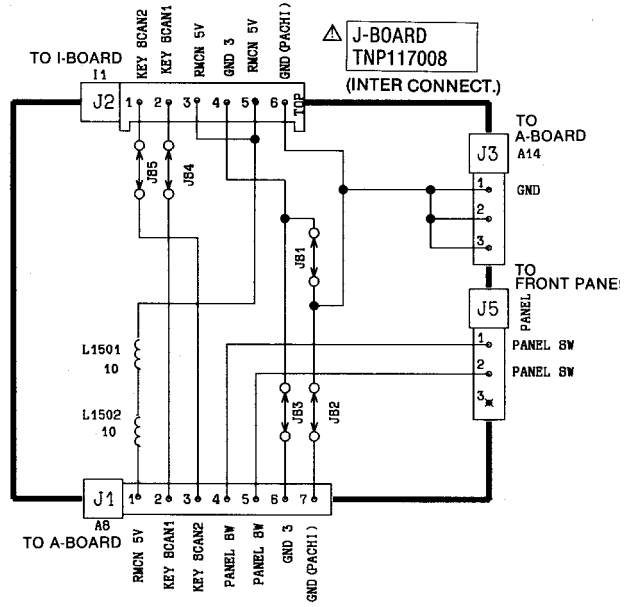


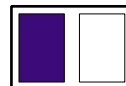
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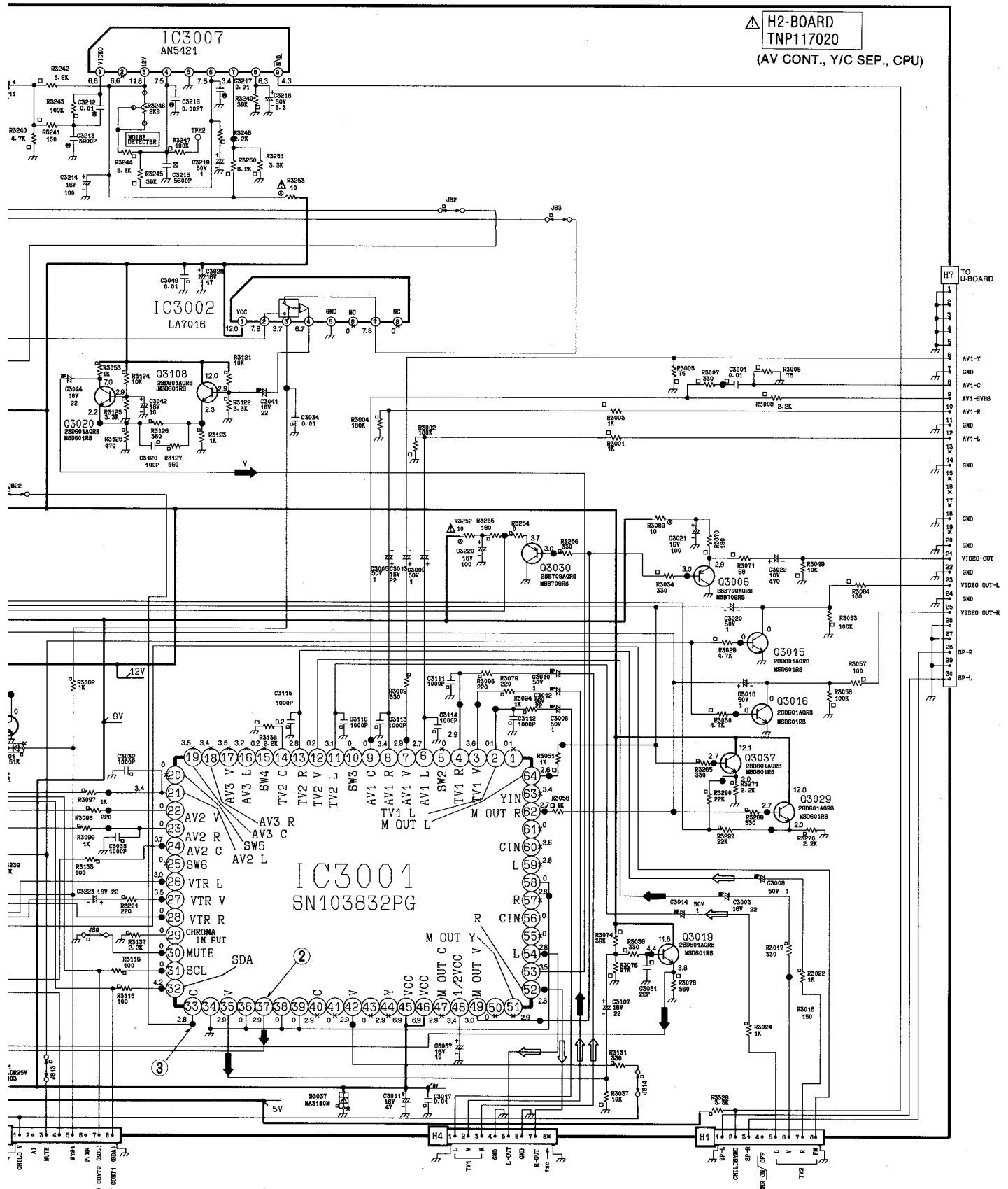




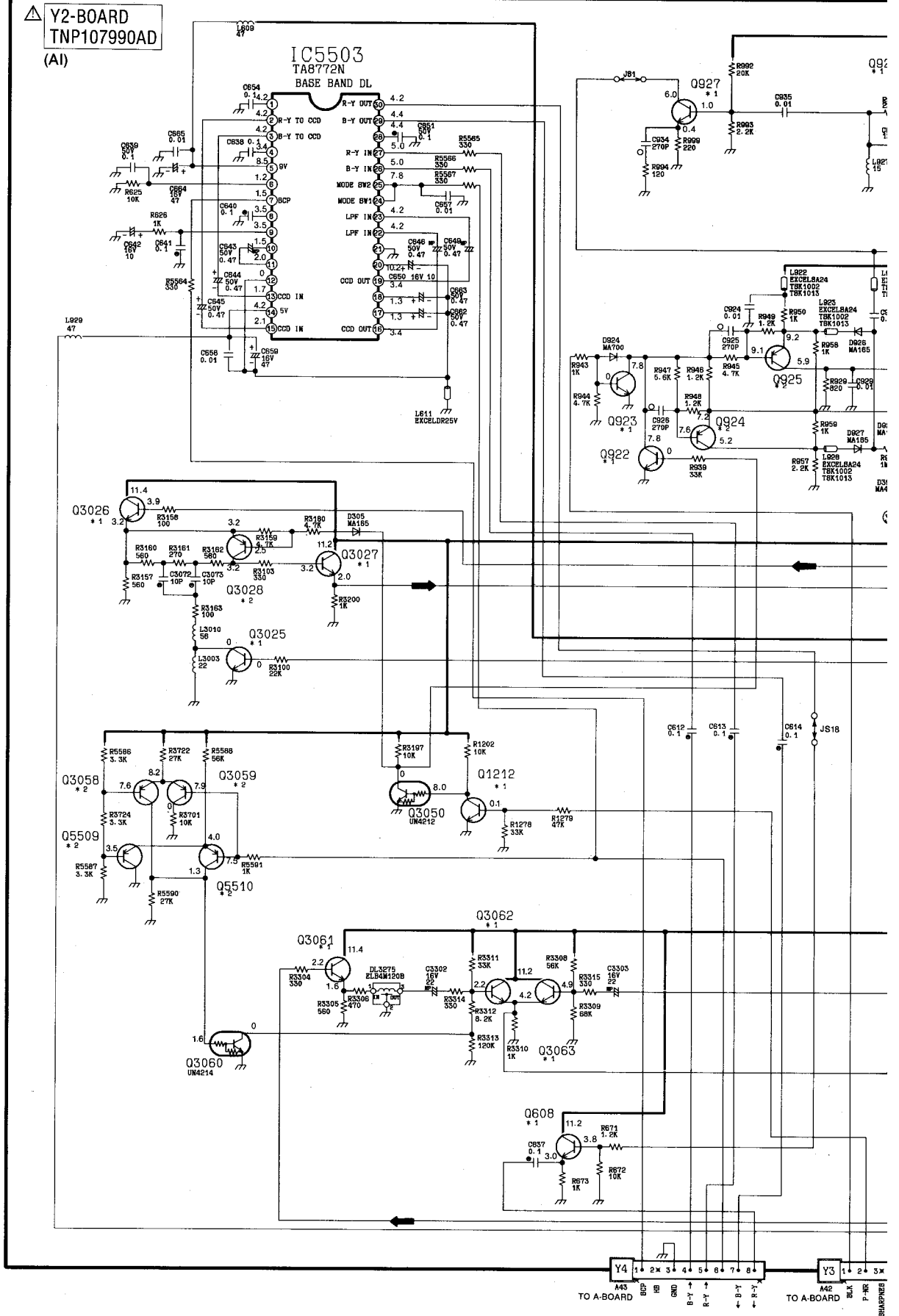
- | | |
|-------------|-------------|
| * 1 | * 2 |
| MSC2458ABC | MSA1046AB |
| 28C2458QRS | 28A1048QRS |
| 28C3311AQRS | 28A1309AQRS |
| 28C1685QRS | 28A564AQRS |

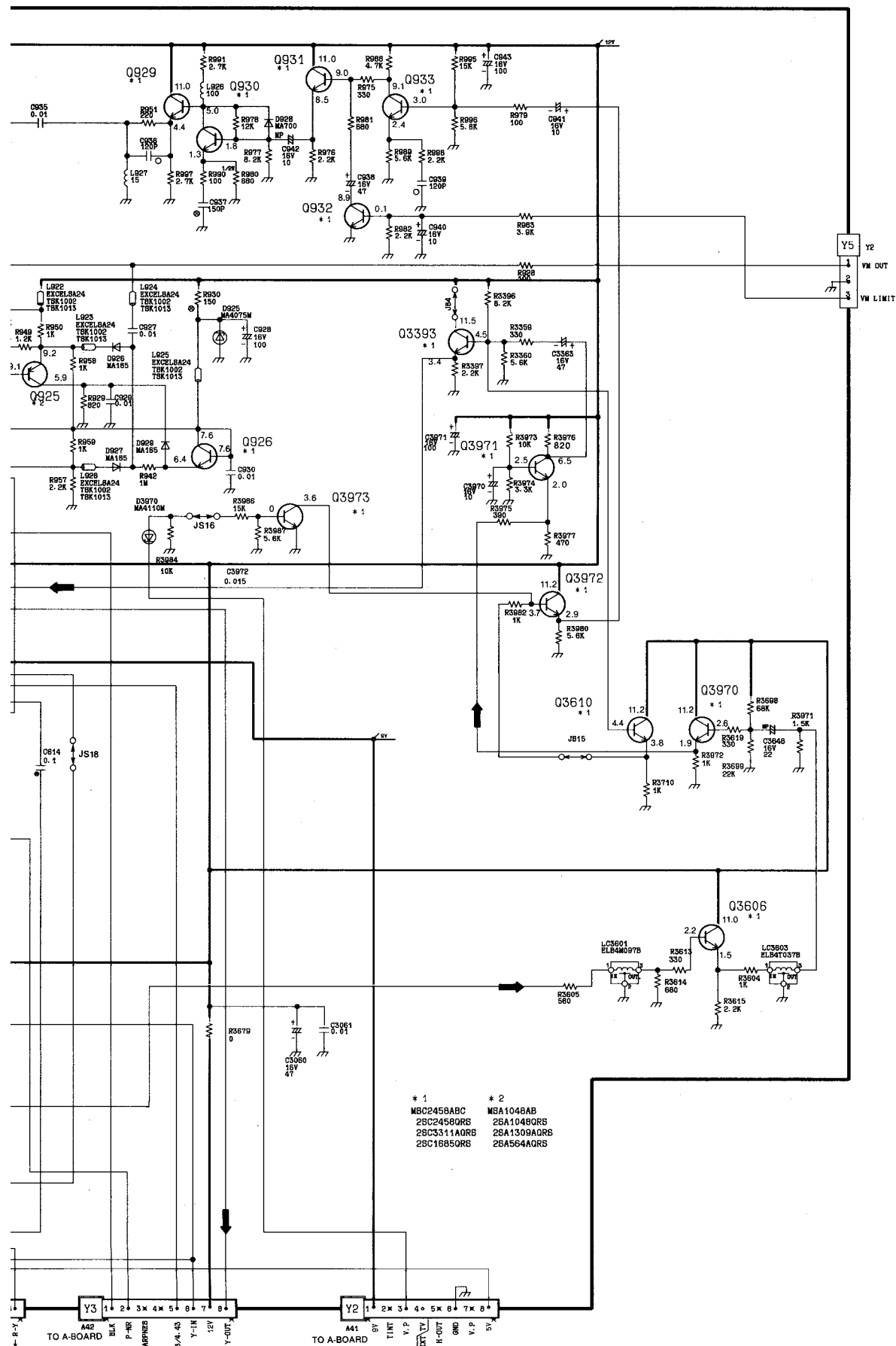




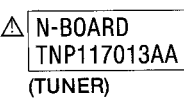
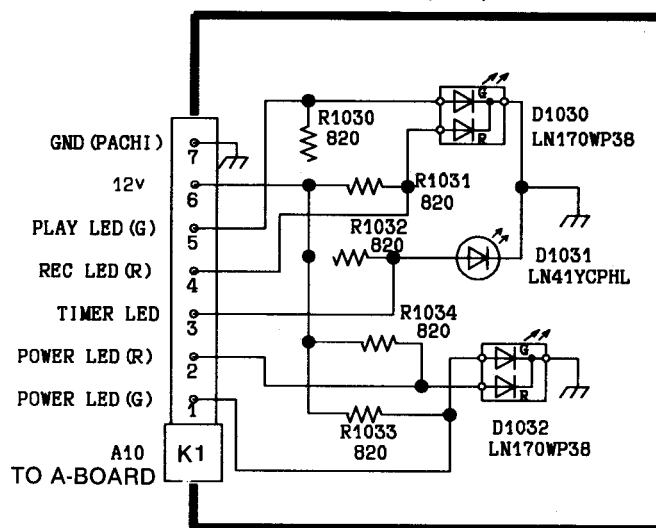
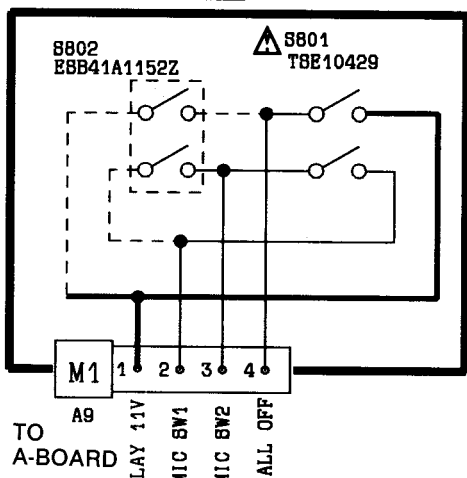


Schematic Diagrams of Y2-board

△ Y2-BOARD
TNP107990AD
(A1)



A vertical axis with tick marks and labels 1, 2, 3, 4, 5, 6. The labels are positioned to the left of the axis line.



A

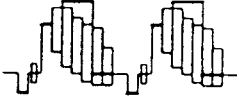
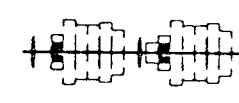
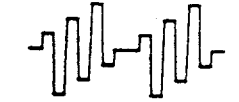
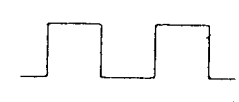
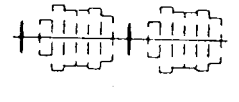
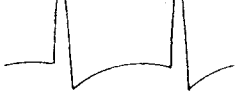
B

C

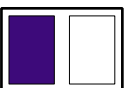
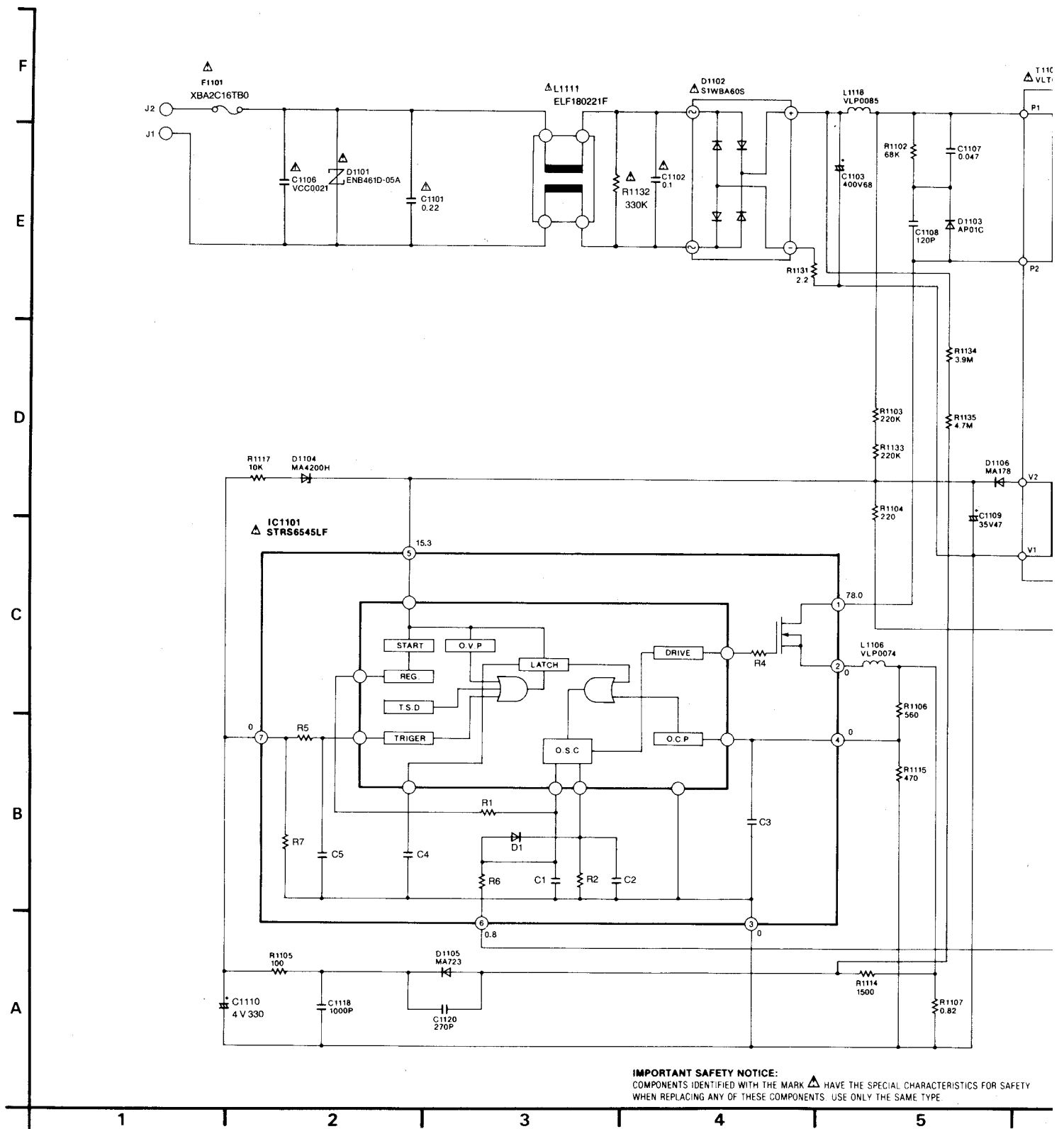
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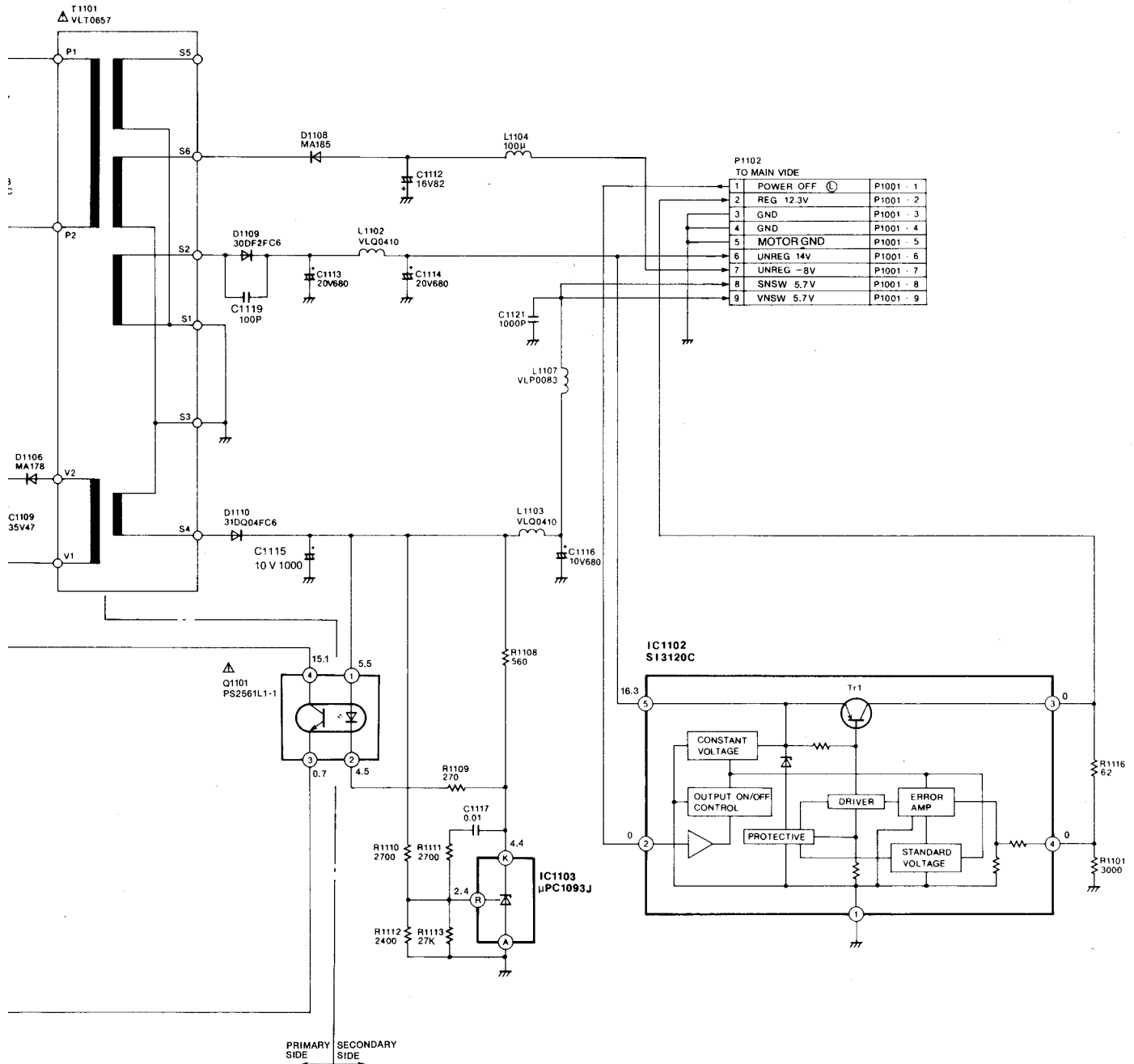
E

WAVEFORM PATTERN TABLE

①  1.1 Vp-p (20µs)	②  2.7 Vp-p (20µs)	③  0.6 Vp-p (20µs)	④  0.9 Vp-p (20µs)
⑤  1.9 Vp-p (20µs)	⑥  1.2 Vp-p (20µs)	⑦  5 Vp-p (20µs)	⑧  10 Vp-p (5ms)
⑨  1.1 Vp-p (20µs)	⑩ SECAM  0.29 Vp-p (20µs)	⑪  3.3 Vp-p (20µs)	⑫  3.3 Vp-p (20µs)
⑬  3.2 Vp-p (20µs)	⑭  2.5 Vp-p (5ms)	⑮  56 Vp-p (5ms)	⑯  6.3 Vp-p (5ms)
⑰  5 Vp-p (20µs)	⑱  1200 Vp-p (20µs)	⑲  230 Vp-p (20µs)	⑳  12 Vp-p (20µs)
㉑  116 Vp-p (20µs)	㉒  120 Vp-p (20µs)	㉓  114 Vp-p (20µs)	

VCR Power Schematic Diagrams





NOTE 1. WHEN MEASURE THE VOLTAGE OR WAVEFORM ON THE POWER TRANSFORMER CIRCUIT, SET THE GND TERMINAL OF MEASURING POINT AS FOLLOWS.

PRIMARY SIDE IC1101-(3)

SECONDARY SIDE TP GND OF MAIN C.B.A

NOTE 2. THE DC VOLTAGE INDICATED IN PRIMARY SIDE IS SHOWN THE VOLTAGE WHEN INPUT AC IS 240V.

NOTE. DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

FOR SAFETY

6

7

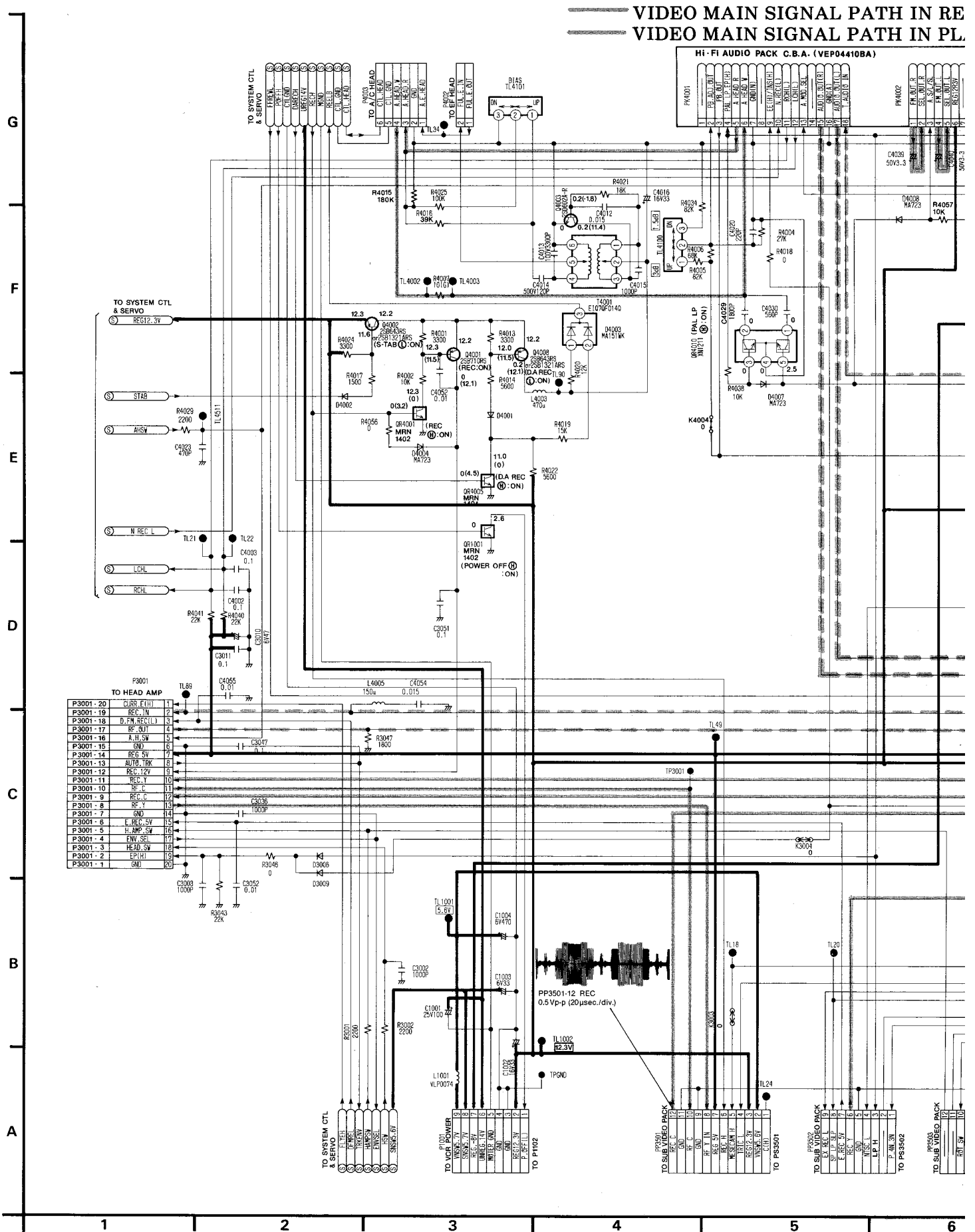
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9

10

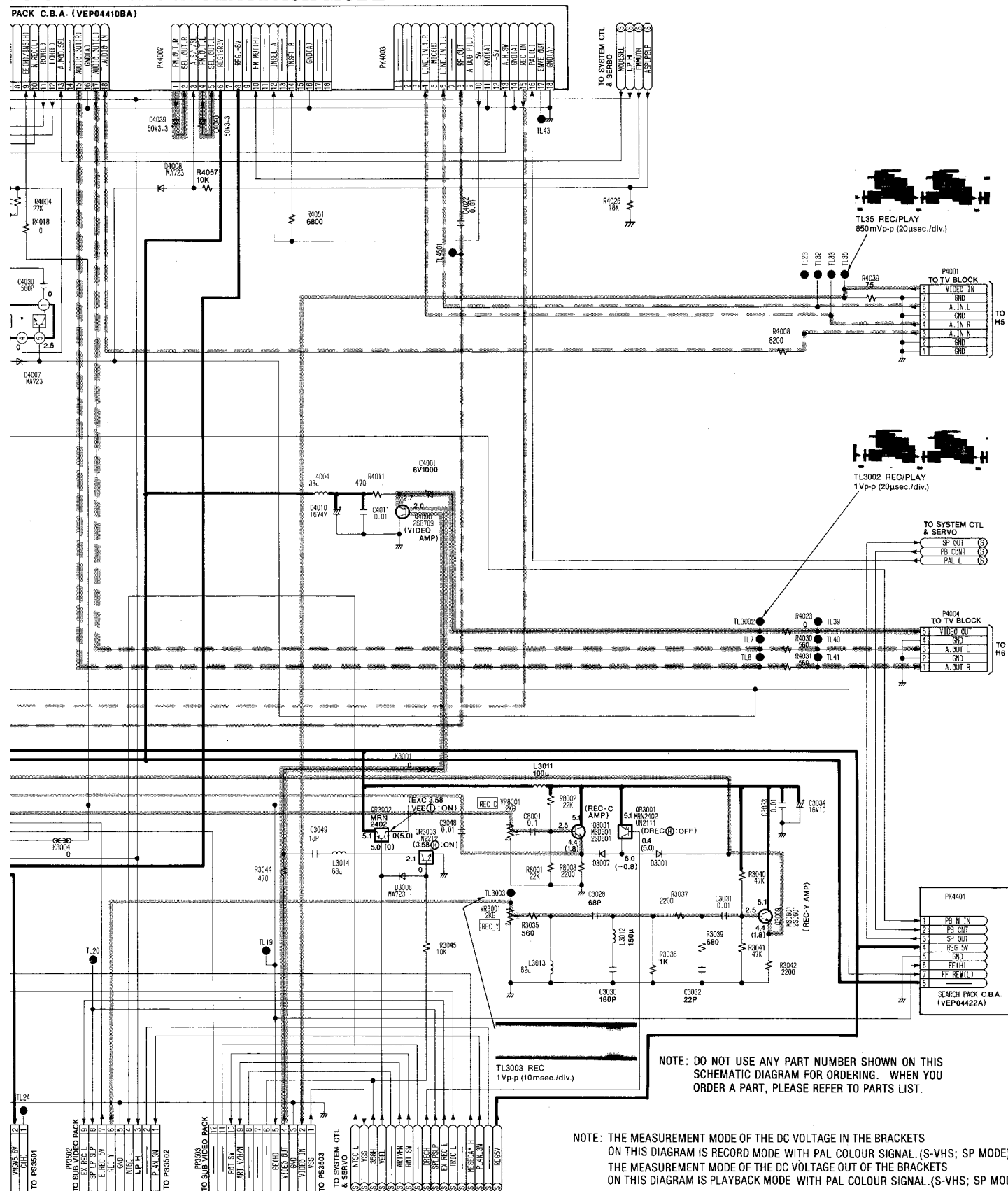


Main Video Schematic Diagrams

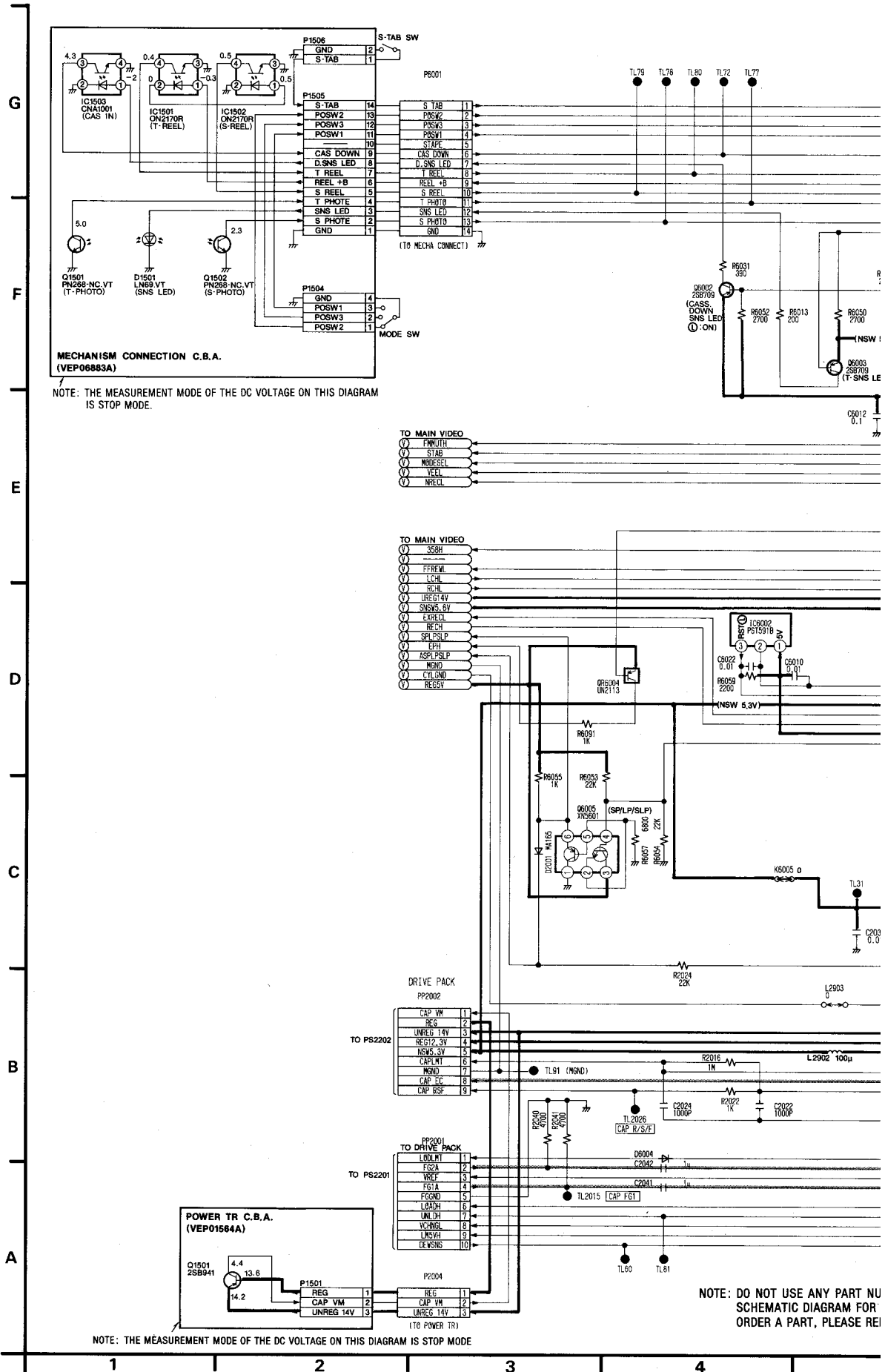


VIDEO SIGNAL PATH IN REC MODE VIDEO SIGNAL PATH IN PLAYBACK MODE

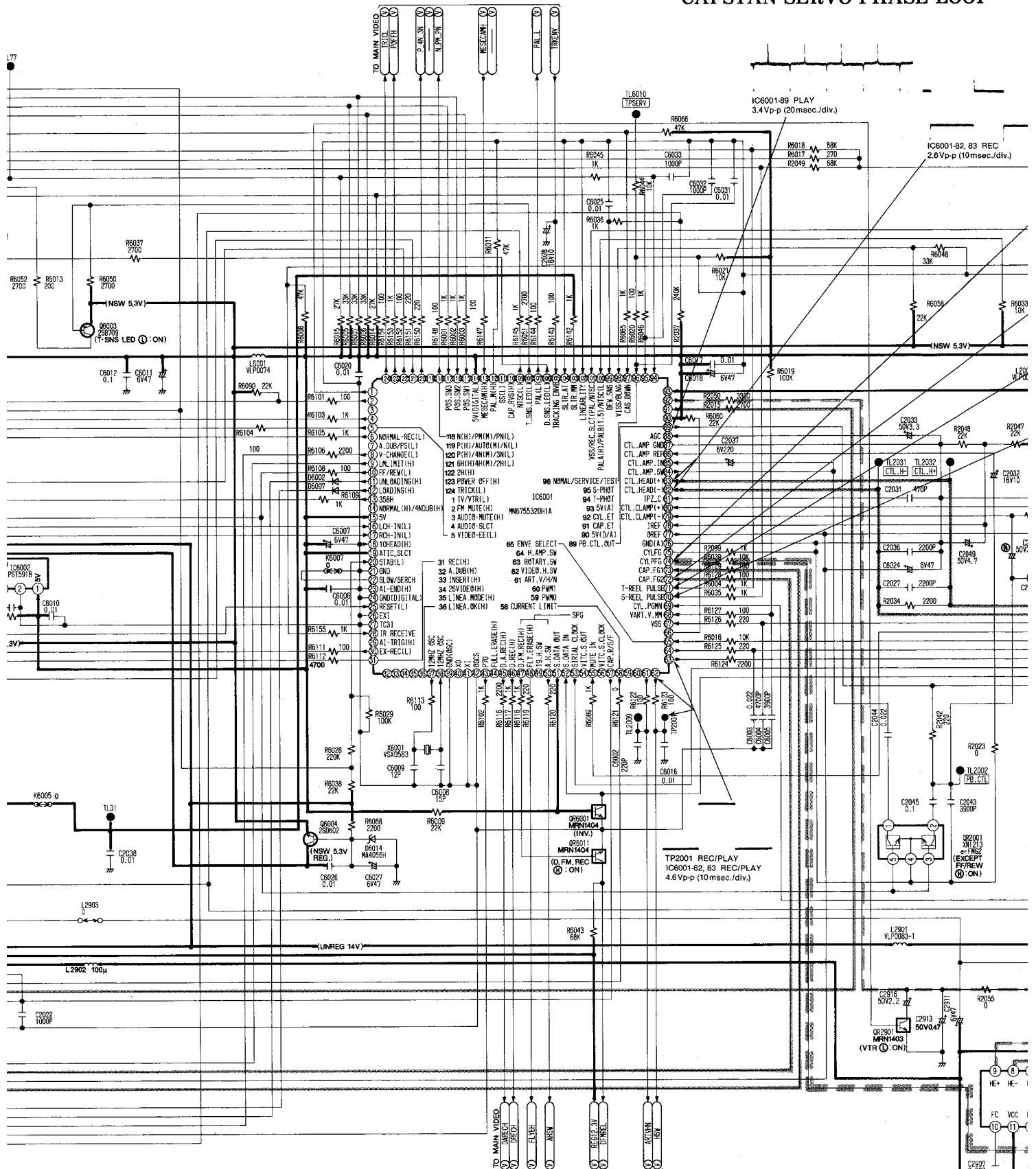
AUDIO MAIN SIGNAL PATH IN REC MODE AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE



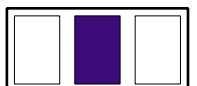
System Control and Servo Schematic Diagrams



CAPSTAN SERVO SPEED LOOP CAPSTAN SERVO PHASE LOOP



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CYLINDER SERVO SPEED LOOP
CYLINDER SERVO PHASE LOOP



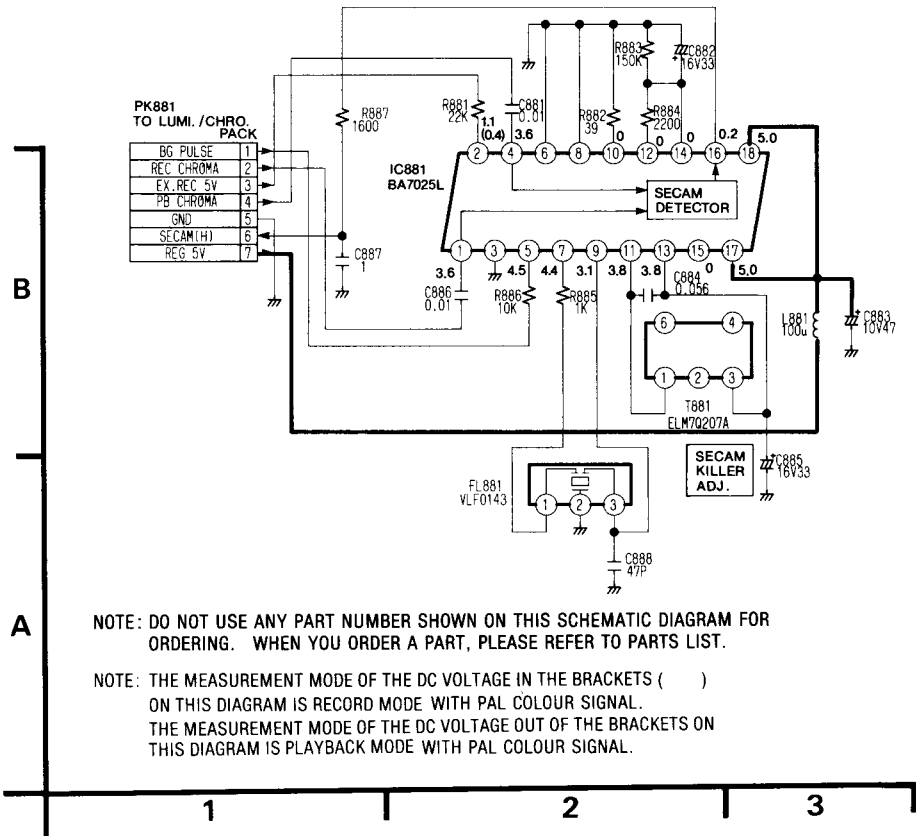
SYSTEM CONTROL & SERVO ICs DC VOLTAGE CHART (SP MODE)

REF. NO.	IC2901																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
STOP	14.0	15.1	0	0.4	0	2.4	2.4	2.4	2.3	2.6	5.0	3.7	3.6	3.4	1.0	14.5	15.0	0		
PLAY	13.3	14.7	0	0.4	0	1.5	1.6	2.2	1.5	2.2	0.8	3.4	3.0	3.6	1.0	14.2	14.0	0		
F.F	13.3	14.5	0	0.4	0	2.4	2.3	2.4	2.3	2.6	5.0	3.6	3.6	3.7	0.5	14.2	13.2	0		
REF. NO.	IC8001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	0	0	5.0	0	5.0	5.0	5.0	5.0	4.9	0	0	0	0	5.0	0	0	0	5.0	0
PLAY	0	0	0	5.0	5.0	5.0	5.0	5.0	0	4.9	0	0	0	0	5.0	0	0	0	5.0	0
F.F	0	0	0	5.0	0	5.0	5.0	4.9	0	0	0	0	0	0	5.0	0	0	0	5.0	0
REF. NO.	IC8001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	0	0	0	0	5.0	0	0	5.0	0	0	0	0	0	5.0	5.0	0	2.6	2.6	0	5.0
PLAY	0	0	0	0	5.0	0	0	4.9	0	0	0	0	0	5.0	5.0	0	2.6	2.5	0	5.0
F.F	0	0	0	0	5.0	0	0	5.0	0	0	0	0	0	5.0	5.0	0	2.6	2.6	0	5.0
REF. NO.	IC8001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	0	0	0	0	0	0	0	0	5.0	0	3.4	0.5	5.0	0.1	0	1.8	2.0	0	3.8	2.5
PLAY	0	0	0	0	0	0	0	0	5.0	4.7	3.4	0.5	4.9	1.8	0	0	0	5.0	3.8	2.4
F.F	0	0	0	0	0	0	0	0	5.0	0	3.4	0.3	4.9	0.5	0	0.2	0	5.0	3.7	2.4
REF. NO.	IC8001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	0	4.5	4.4	0	0.4	5.0	2.4	0.1	3.6	4.2	0.1	2.5	2.4	1.3	0	0	2.5	2.4	2.3	2.5
PLAY	0	3.6	0	0	3.9	5.0	2.4	0	0	4.2	4.4	2.4	2.4	0	0	0	2.4	2.4	0	0
F.F	0	4.0	5.0	0	0.4	5.0	2.4	0.1	3.4	1.6	2.3	2.4	2.4	1.4	0	0	2.5	2.4	2.7	2.4
REF. NO.	IC8001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
STOP	5.0	0	0	0	2.5	2.5	0	2.6	2.4	5.0	0.1	2.4	5.0	5.0	5.0	5.0	5.0	5.0	0	5.0
PLAY	5.0	0	0	0	2.4	2.4	0	3.0	2.4	5.0	2.5	2.3	5.0	4.9	5.0	5.0	5.0	5.0	0	5.0
F.F	5.0	0	0	0	2.5	2.4	0	3.0	2.2	5.0	2.1	2.3	5.0	4.9	5.0	5.0	5.0	5.0	0	0.7
REF. NO.	IC8001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
STOP	5.0	0	5.0	0	1.6	5.0	0	5.0	5.0	0	5.0	0	0.5	4.8	0	0	4.7	0	5.0	5.0
PLAY	5.0	0	5.0	0	3.8	5.0	0	0	5.0	0	5.0	0	0.7	5.0	0	0	5.0	0	5.0	5.0
F.F	5.0	0	5.0	0	2.6	5.0	0	0	5.0	0	5.0	0	0.7	4.8	0	5.0	5.0	0	5.0	4.8
REF. NO.	IC8001																			
MODE	121	122	123	124																
STOP	0	4.7	0.1	5.0																
PLAY	0	5.0	0	5.0																
F.F	0	5.0	0	5.0																
REF. NO.	IC8002																			
MODE	1	2	3																	
STOP	5.0	0	5.0																	
PLAY	5.0	0	5.0																	
F.F	5.0	0	5.0																	

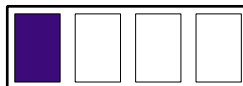
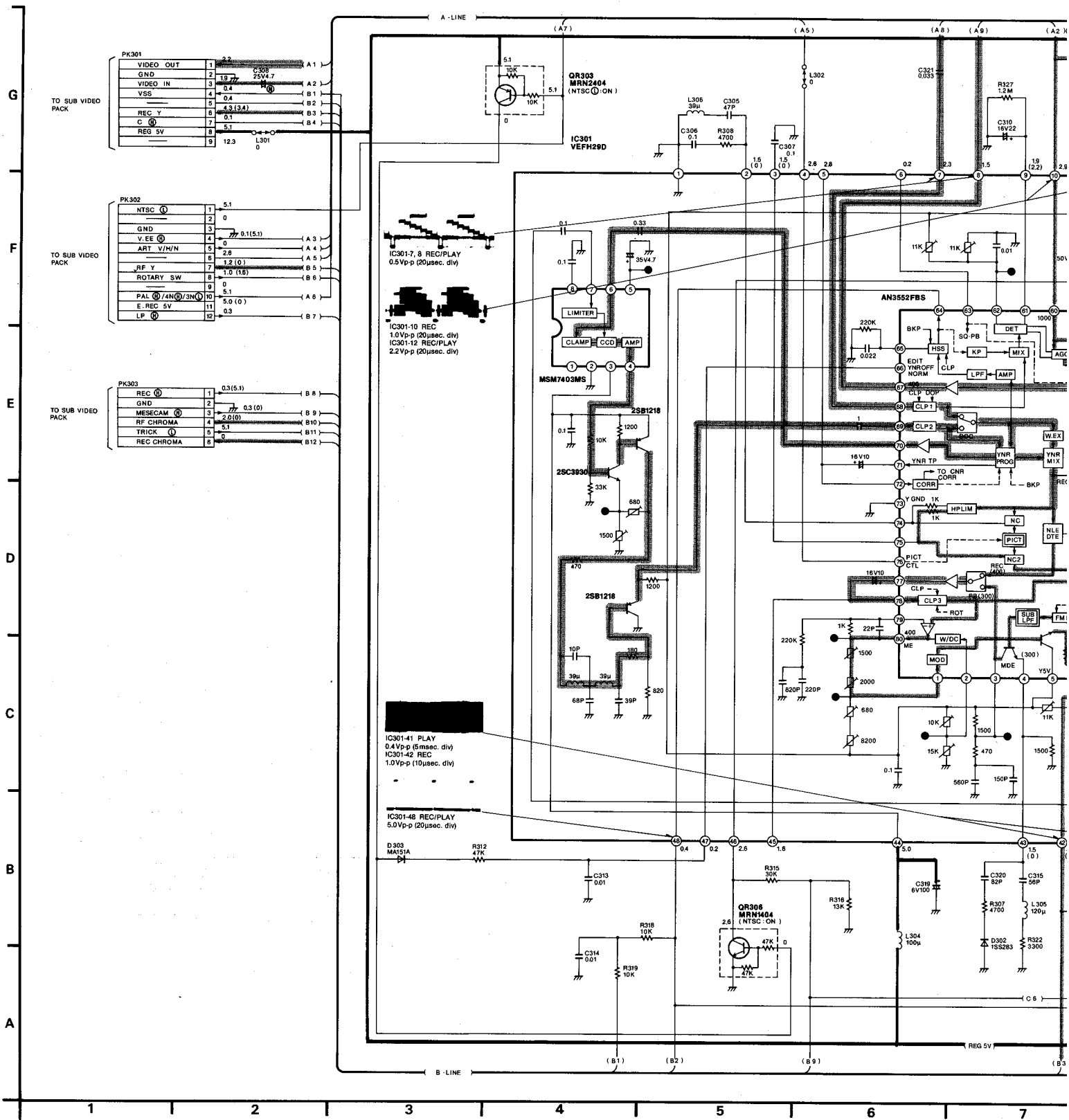
SYSTEM CONTROL & SERVO TRs DC VOLTAGE CHART (SP MODE)

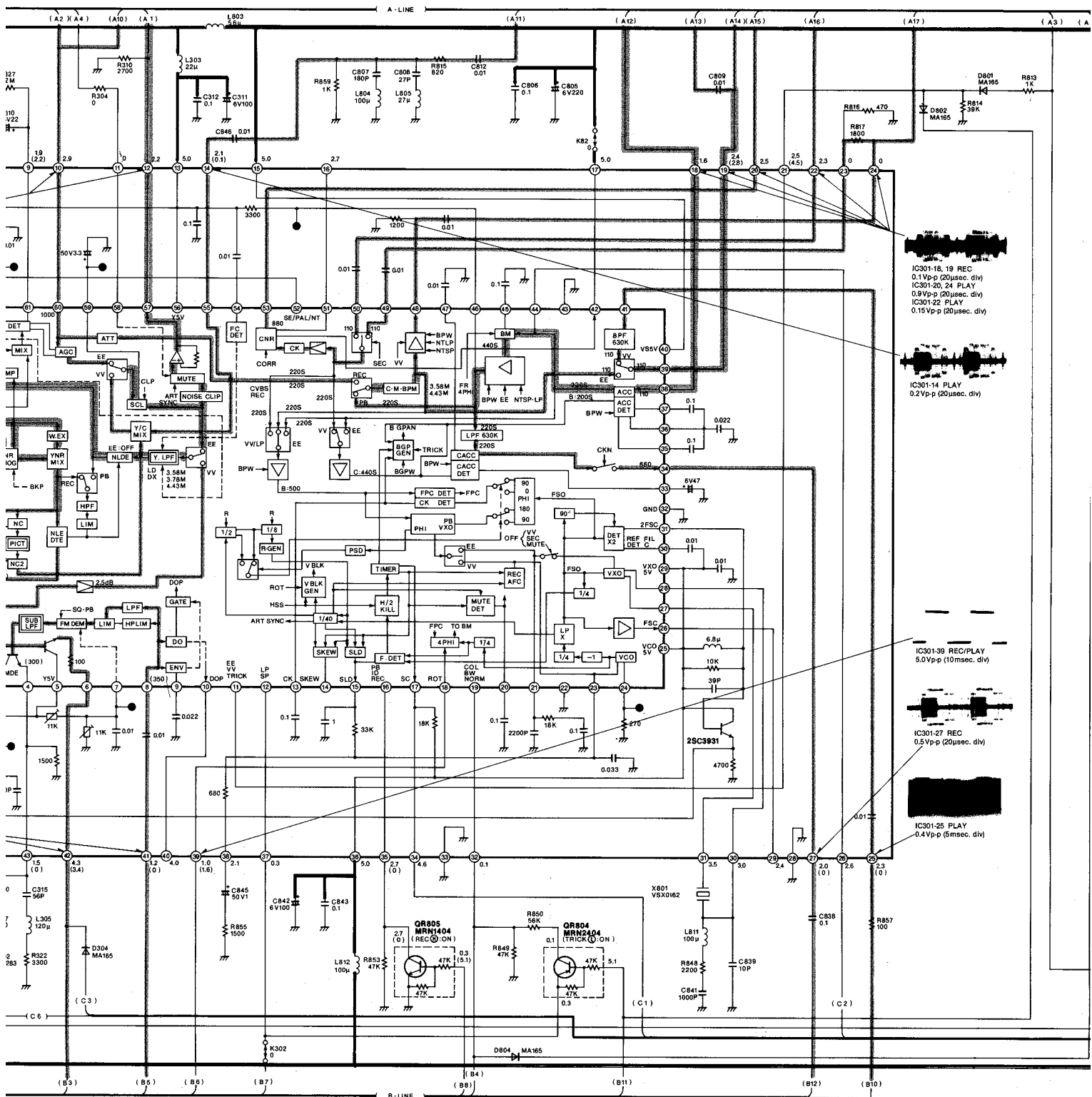
[illegible]

DDR Pack Schematic Diagrams



Luminance and Chrominance Pack Schematic Diagrams





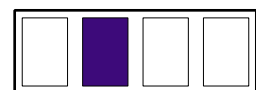
IC301-18, 19 REC
0.1Vp-p (20µsec. div)
IC301-20, 24 PLAY
0.9Vp-p (20µsec. div)
IC301-22 PLAY
0.15Vp-p (20µsec. div)

IC301-14 PLAY
0.2Vp-p (20µsec. div)

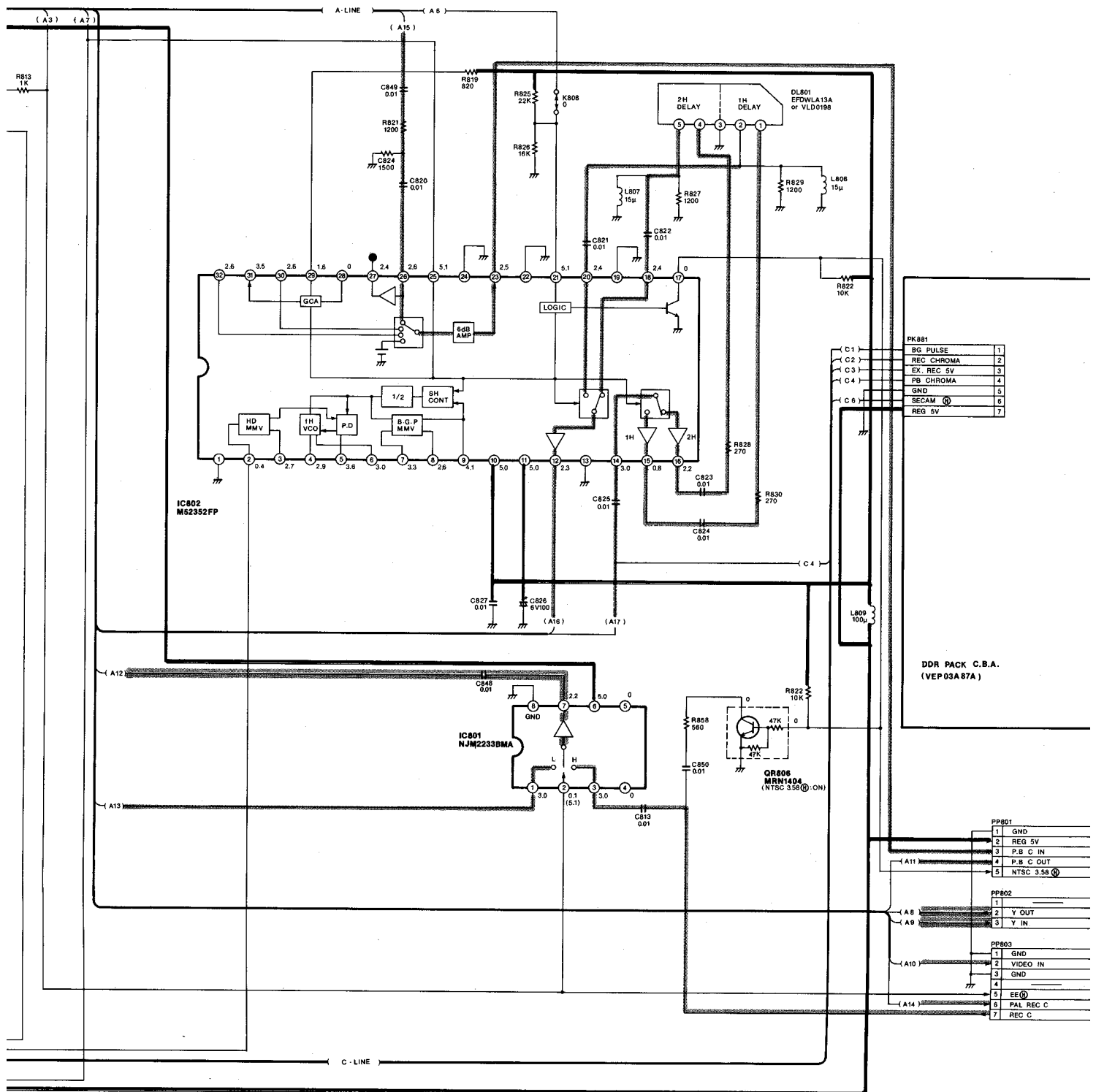
IC301-39 REC/PLAY
5.0Vp-p (10msec. div)

IC301-27 REC
0.5Vp-p (20µsec. div)

IC301-25 PLAY
0.4Vp-p (5msec. div)



MAIN SIGNAL PATH



NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS () ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

14

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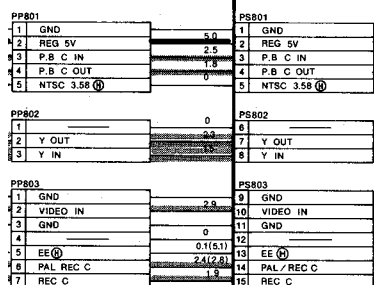


AL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE

1
2
3
4
5
6
7

A.



3.58-4.43 CON V. PACK C.B.A. (VEP03886C)

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

20

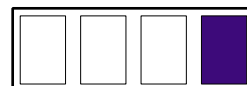
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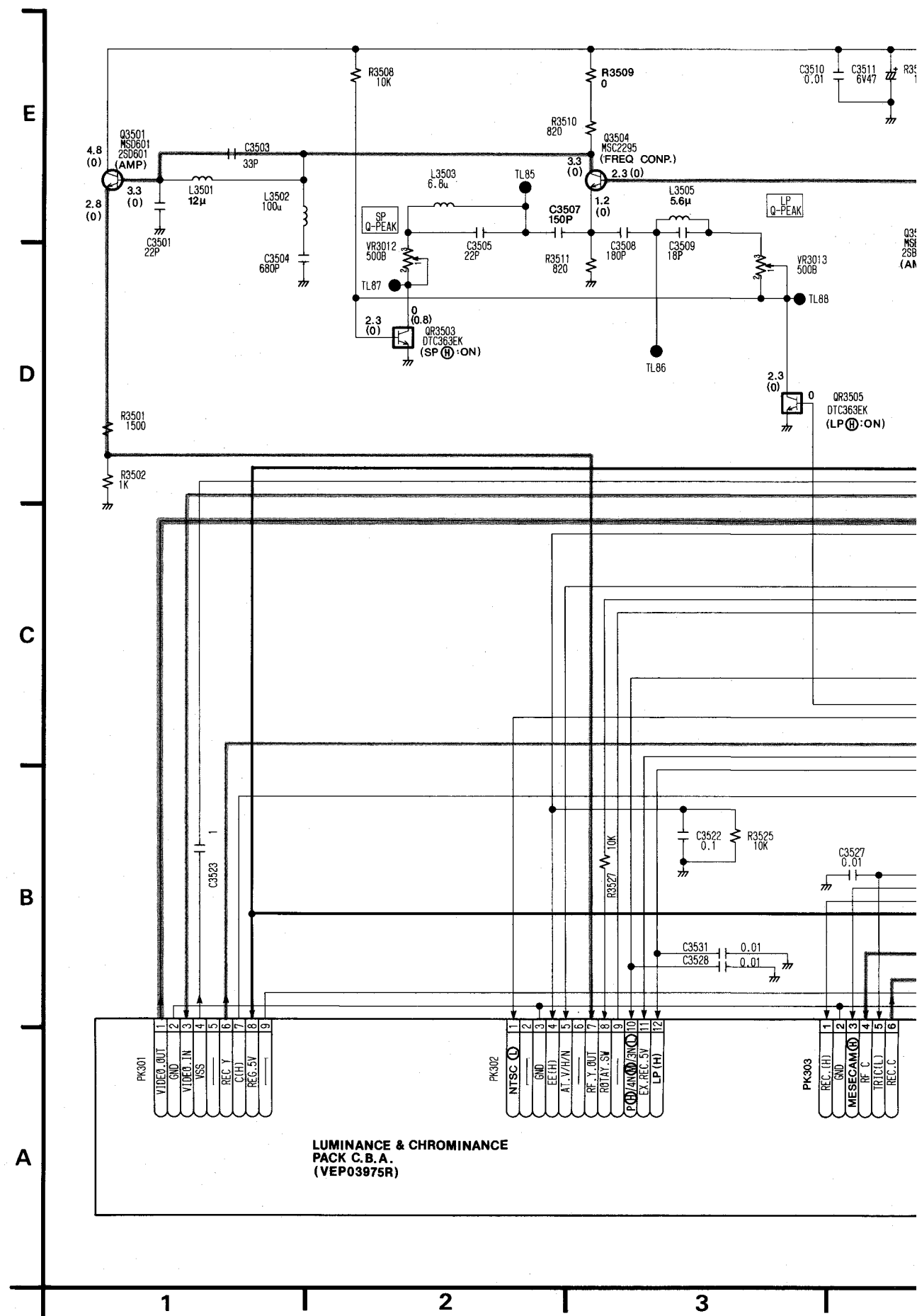
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23

24

25

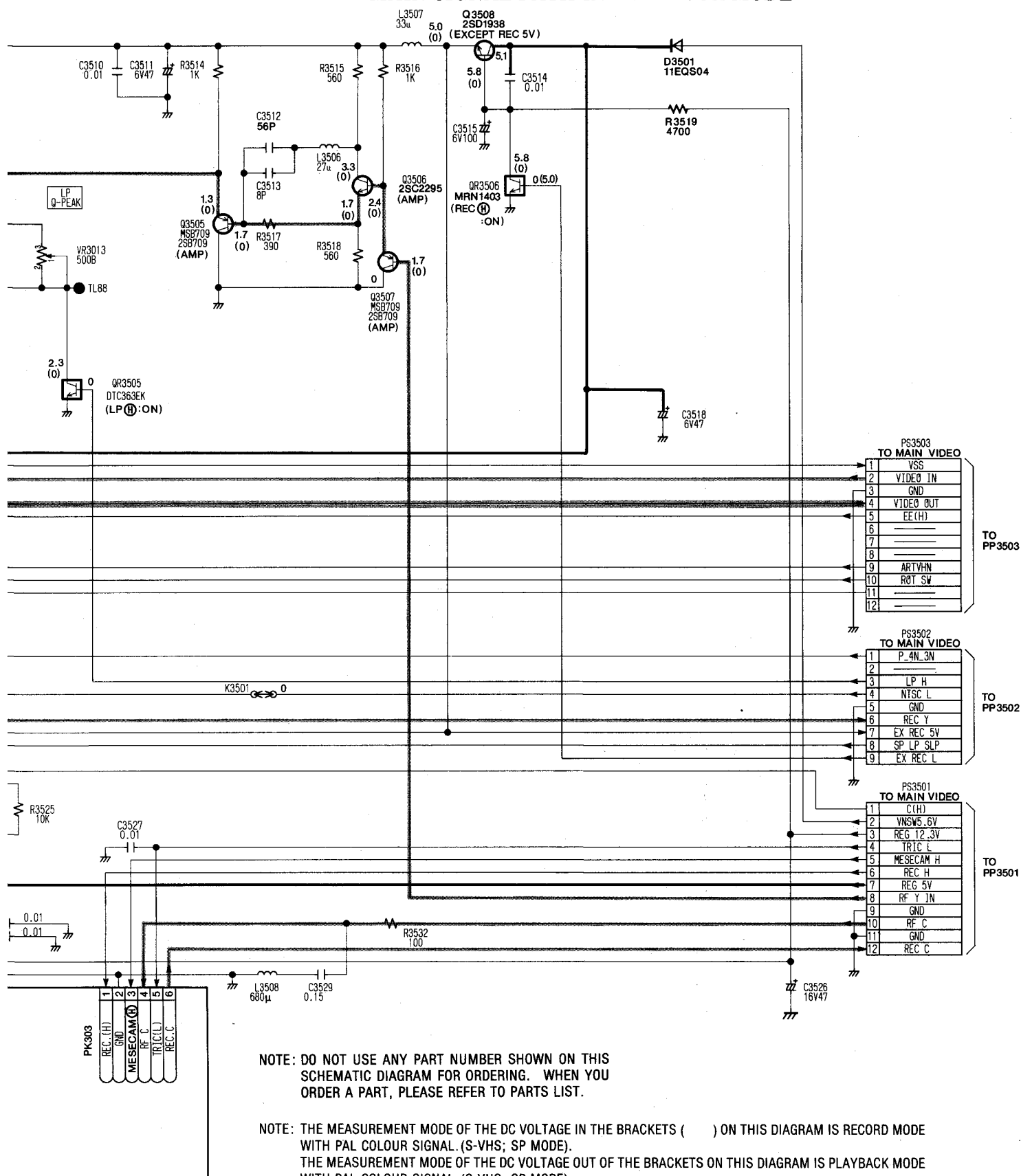




0R

TC-25GV10R

—— MAIN SIGNAL PATH IN REC MODE
 —— MAIN SIGNAL PATH IN PLAYBACK MODE

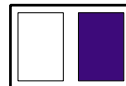


4

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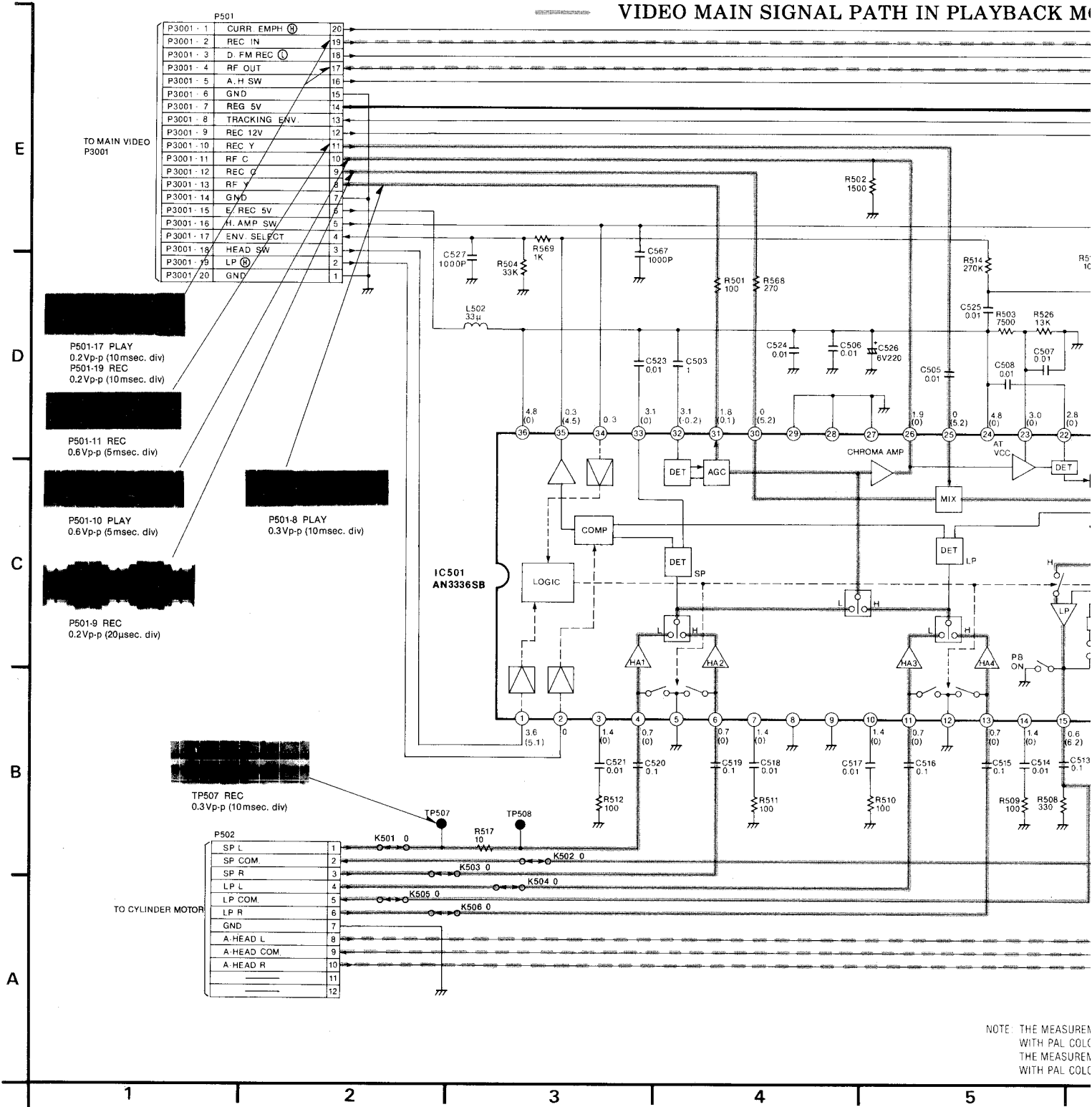
6

7



Head Amp Schematic Diagrams

VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK M

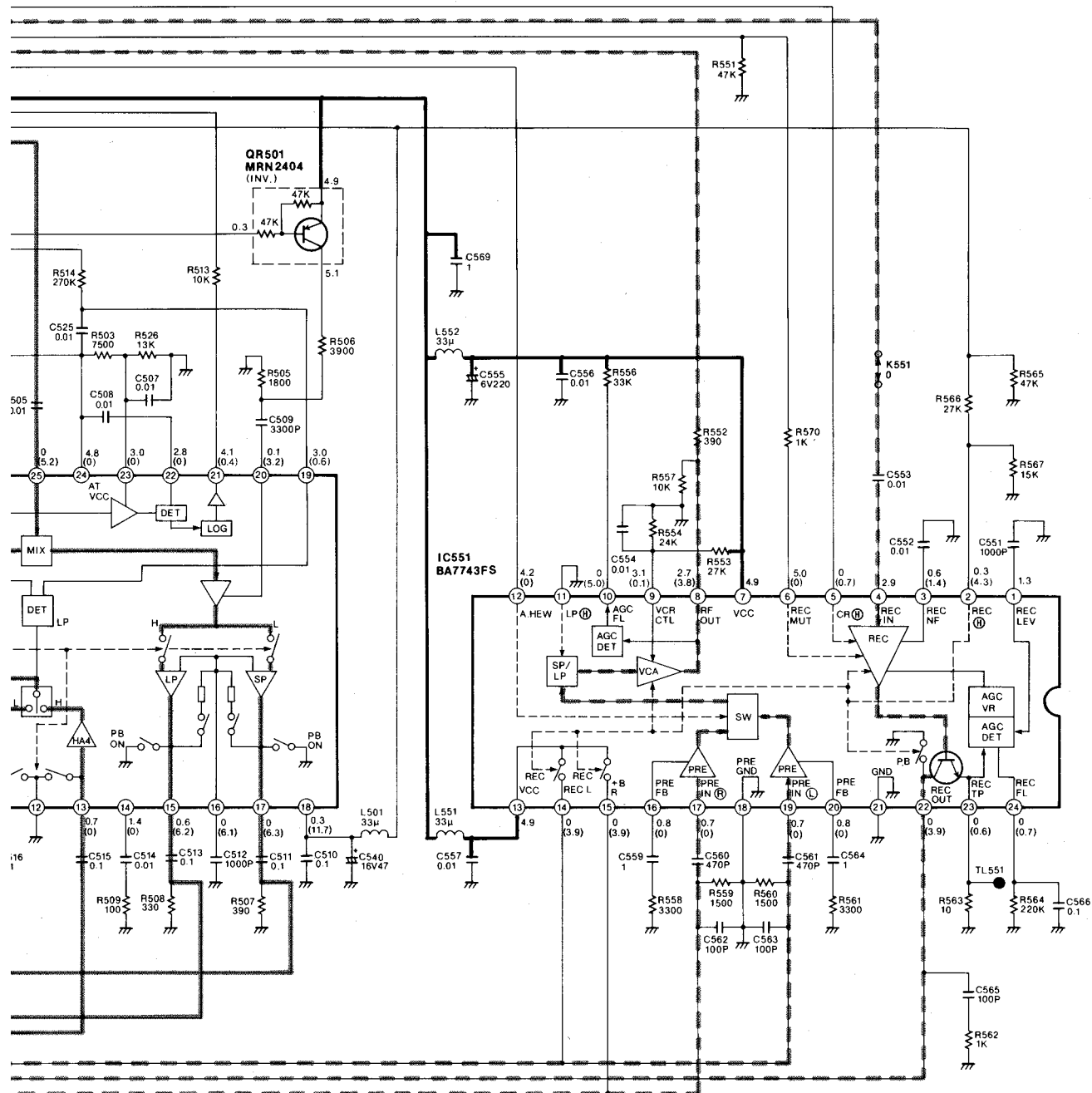


N REC MODE

Hi-Fi AUDIO MAIN SIGNAL PATH IN REC MODE

N PLAYBACK MODE

Hi-Fi AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE



NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS () ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

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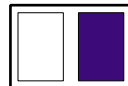
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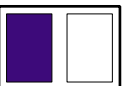
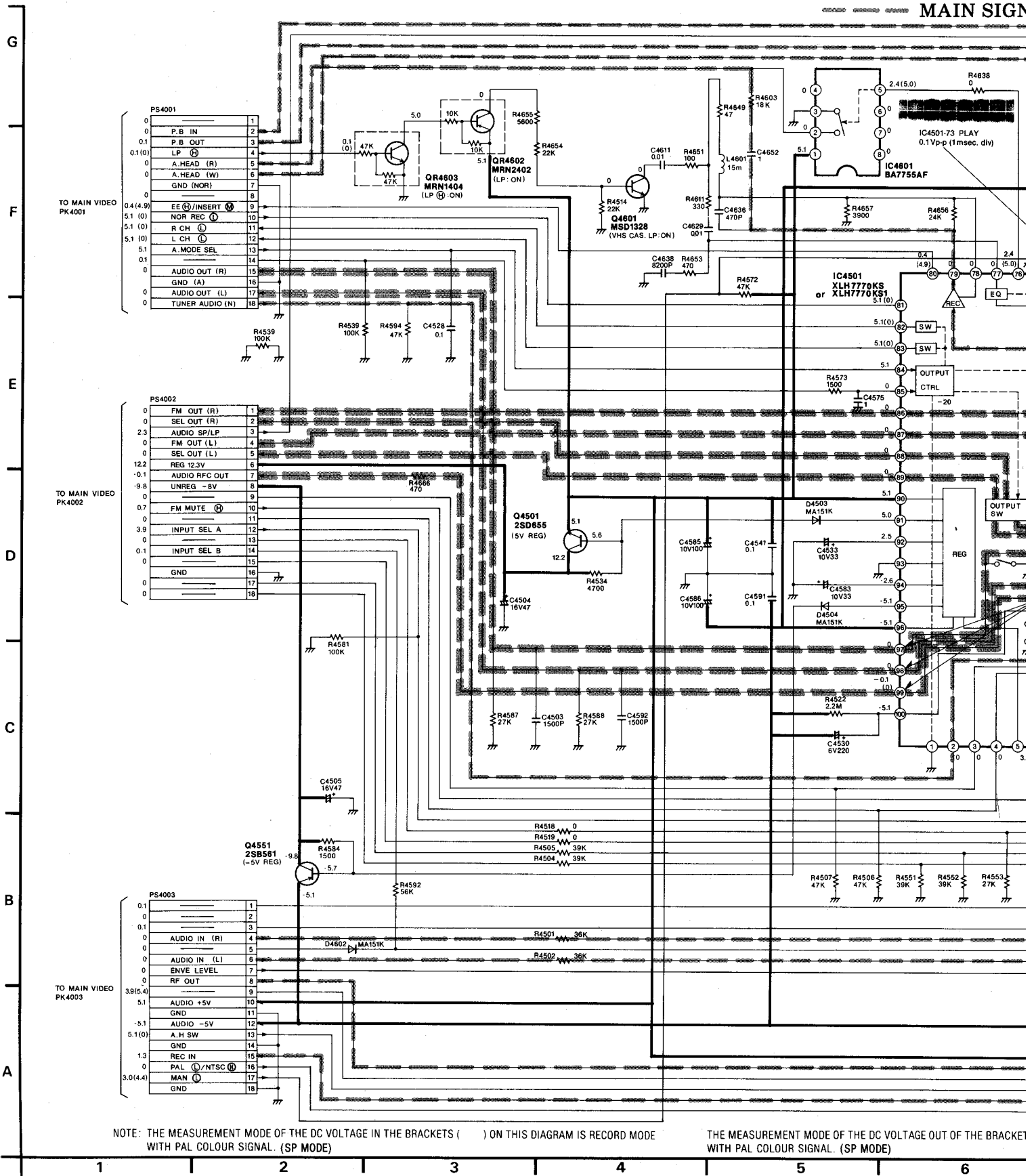
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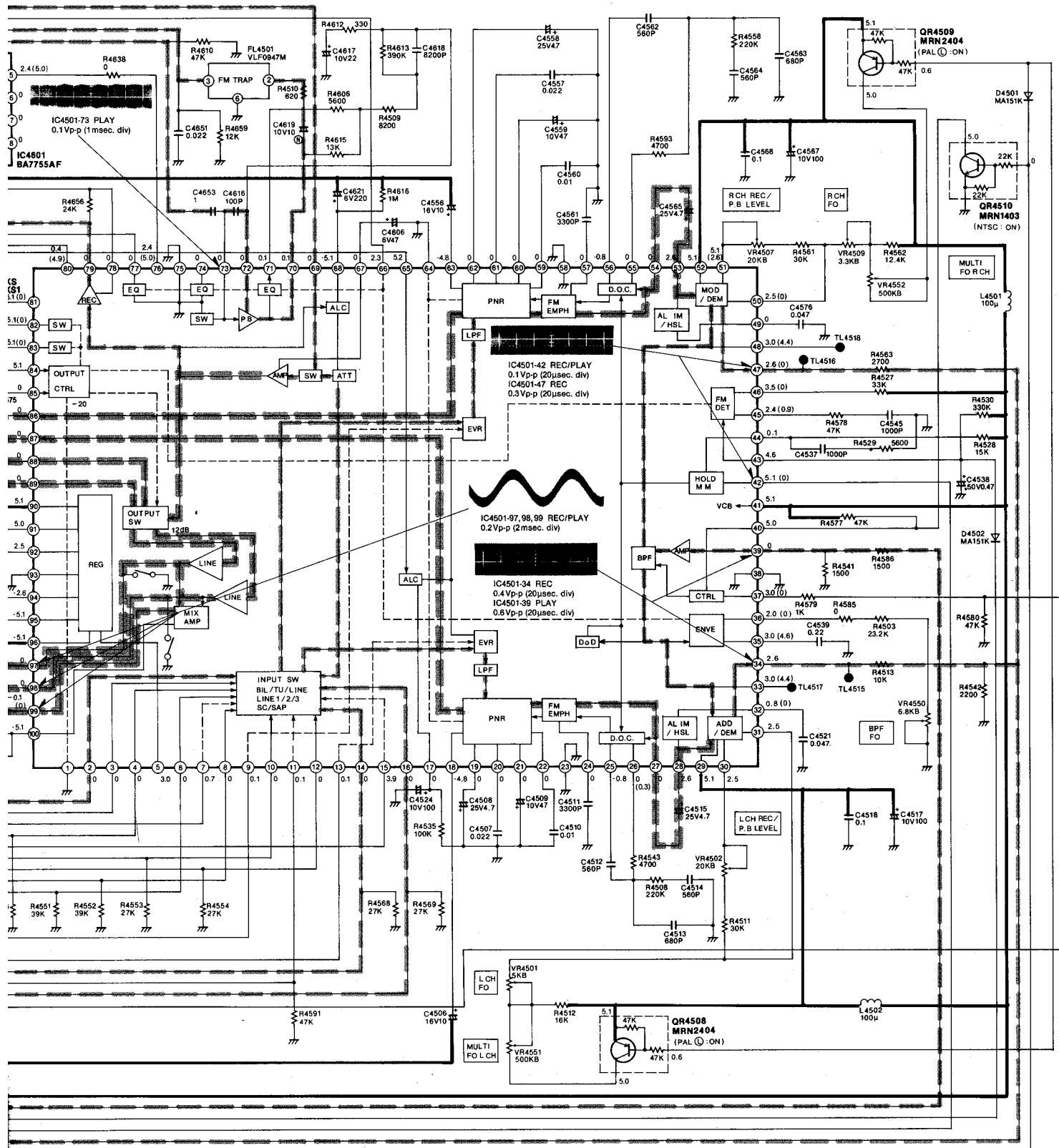
Hi-Fi Audio Pack Schematic Diagrams



TC-25GV10R

MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE



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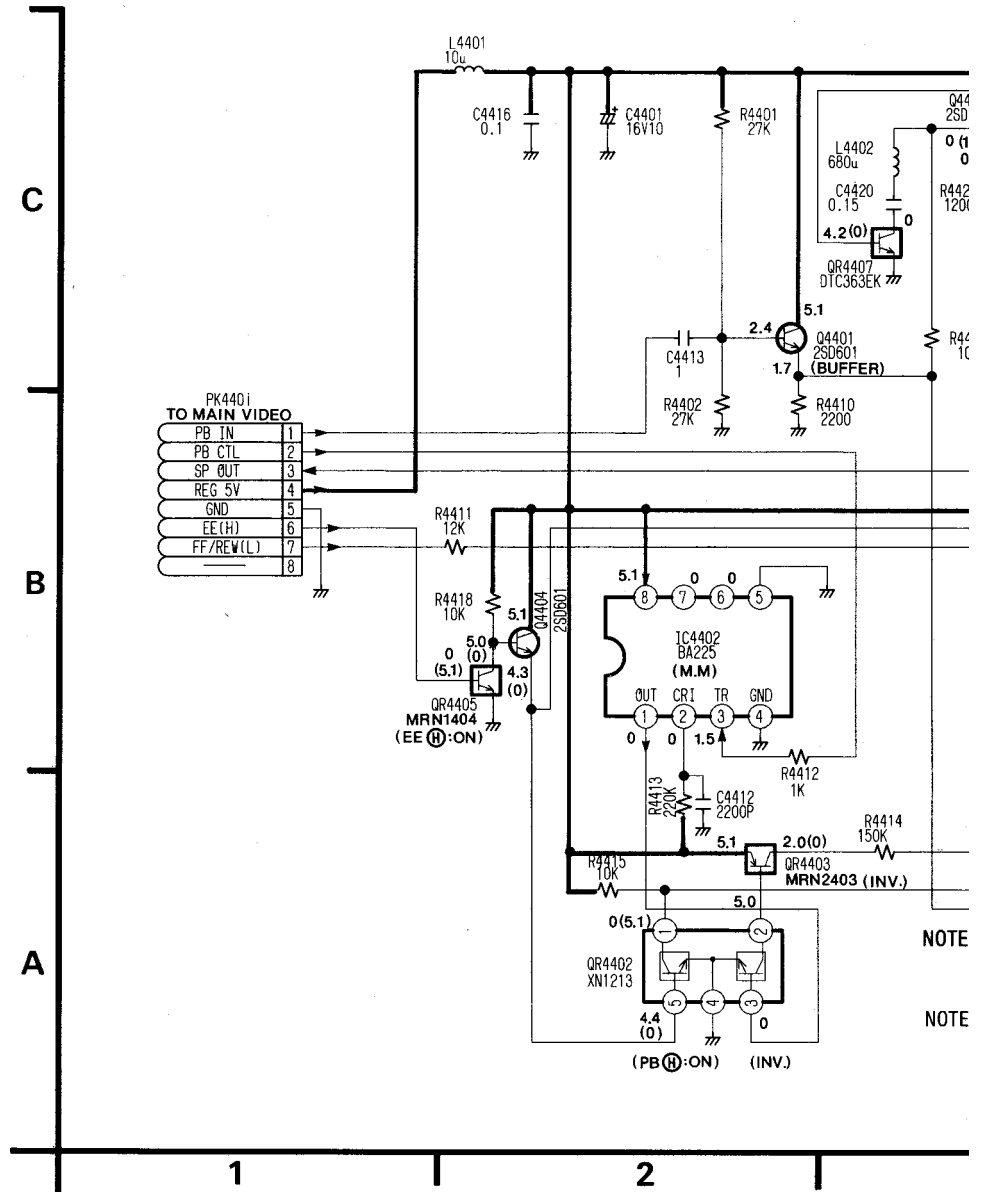
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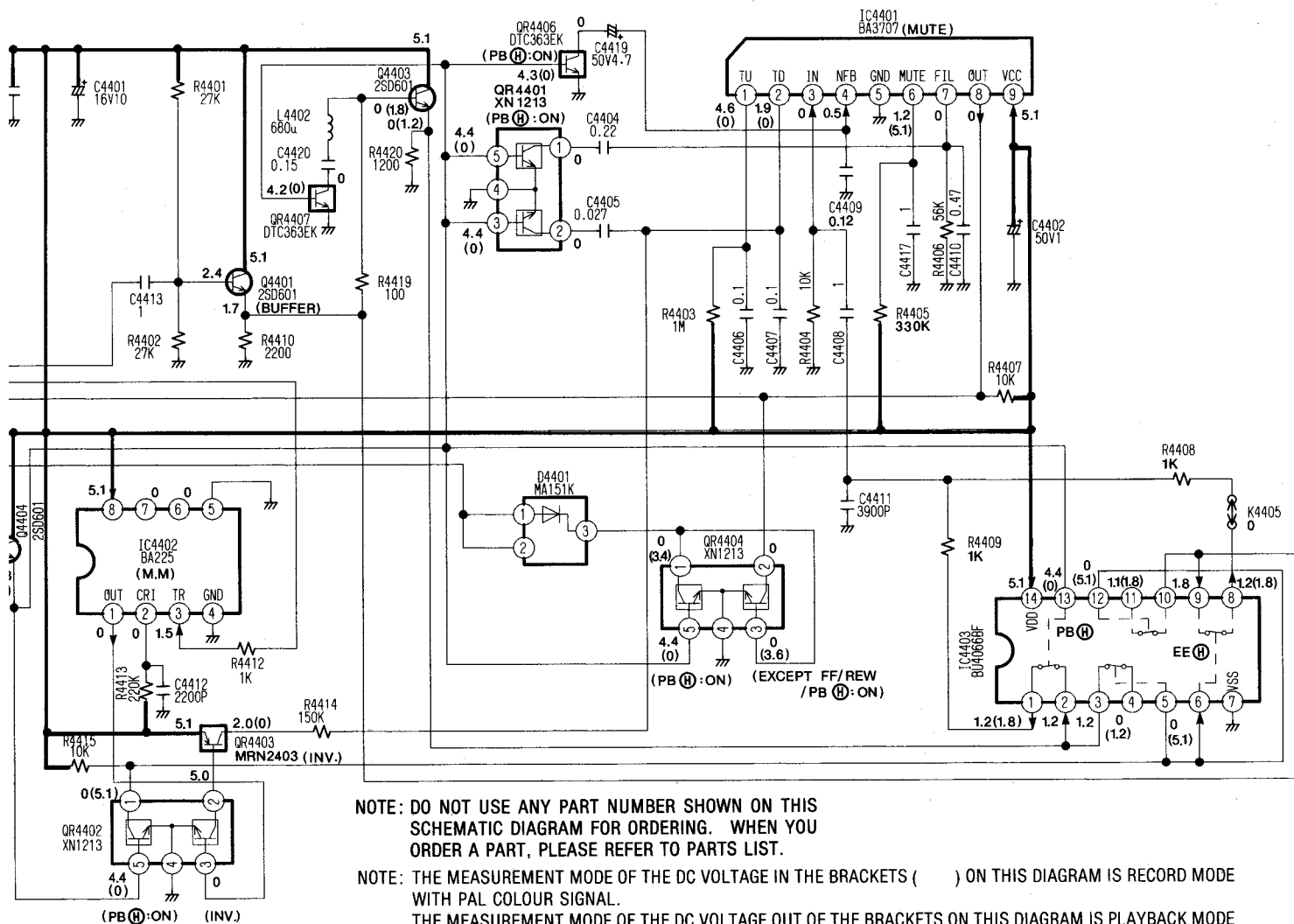
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11

Search Pack Schematic Diagrams



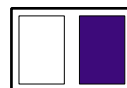


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Drive Pack Schematic Diagrams

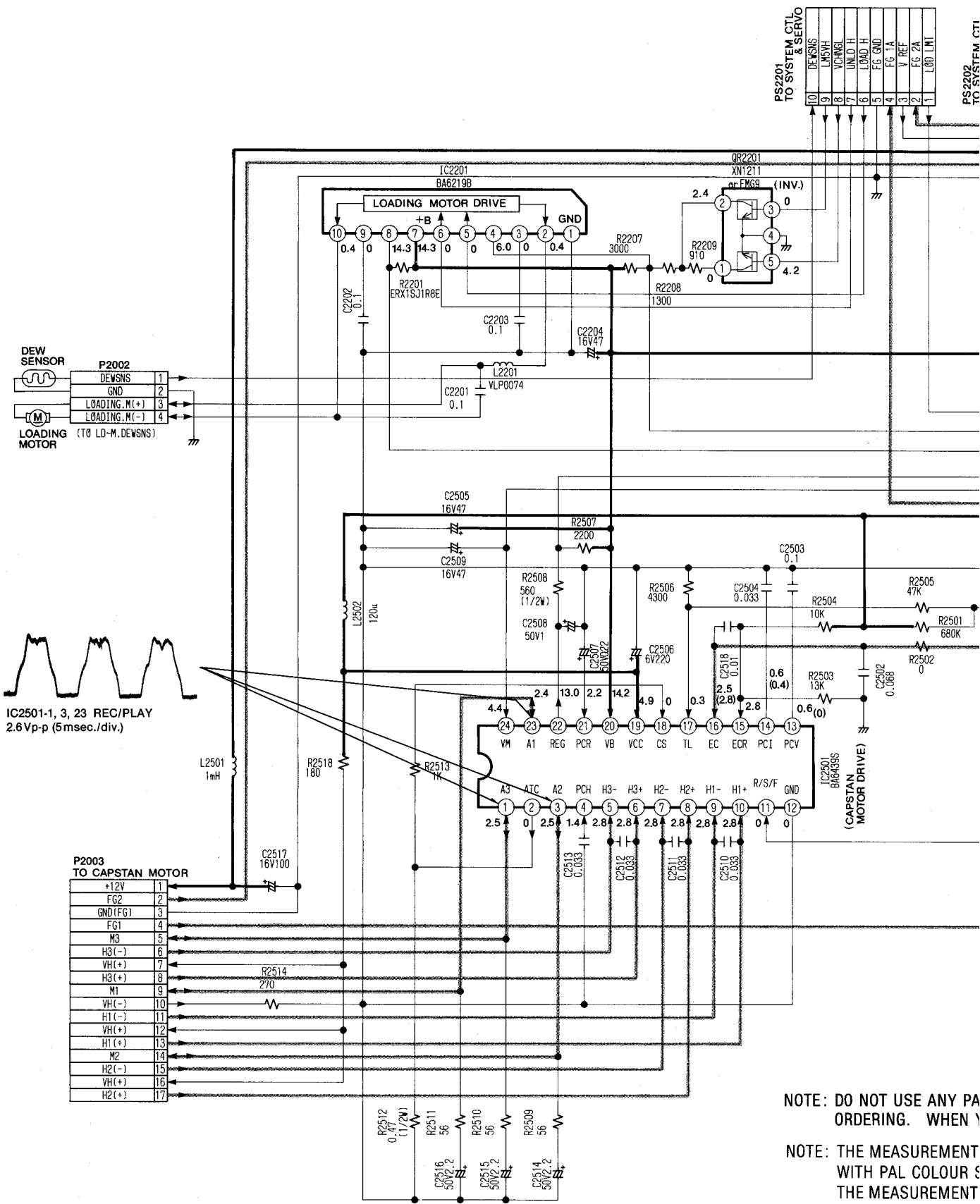
E

D

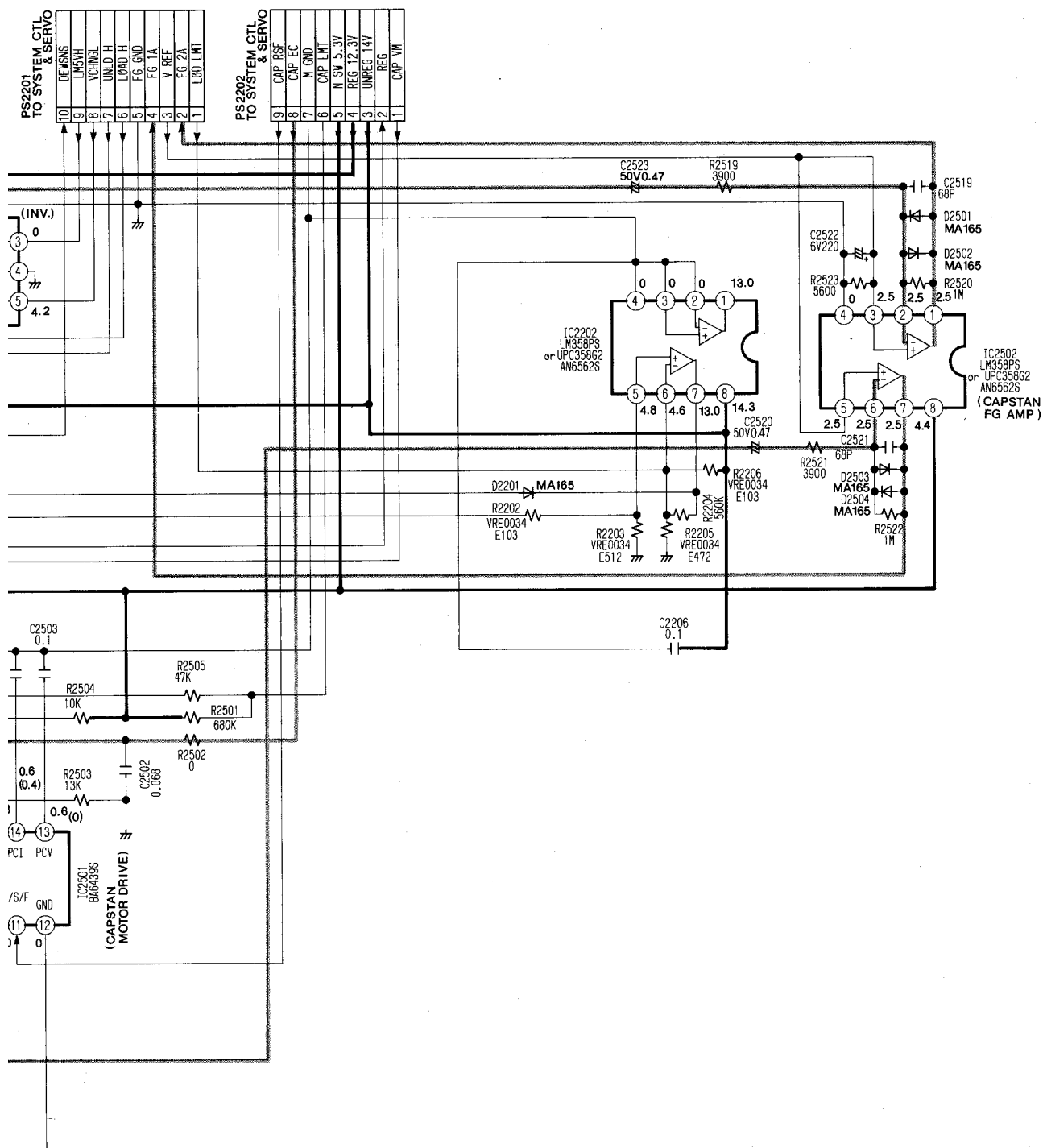
C

B

A



CAPSTAN SERVO SPEED LOOP



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THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE).

