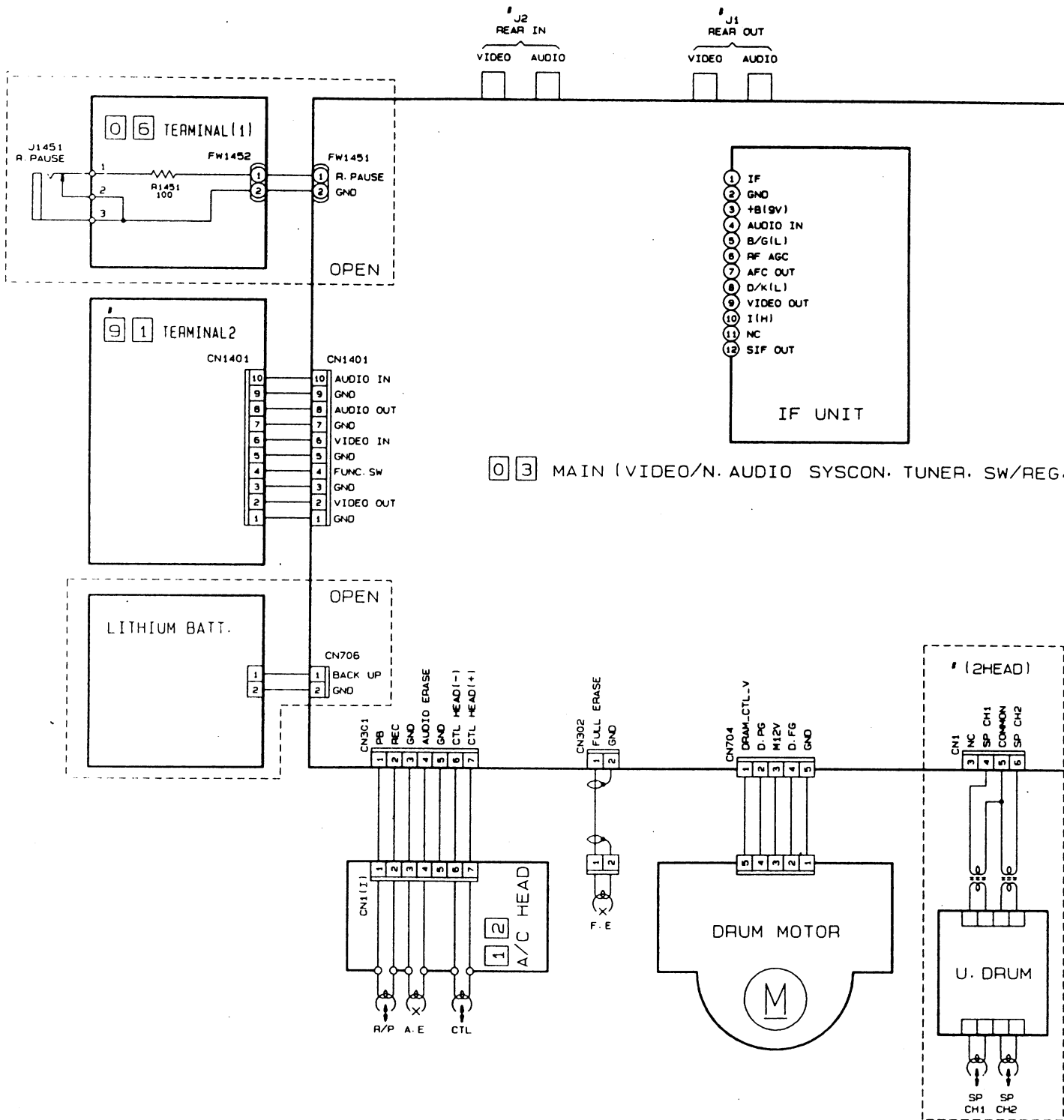


# 4.1 BOARD INTERCONNECTIONS



0 3 MAIN (VIDEO/N. AUDIO SYSCON. TUNER. SW/REG.)

9 1	TERMINAL (2)
9 0	LED
1 2	A/C HEAD
0 3	MAIN
NO	NAME

NOTE : COMPARISON CHART OF MODELS & MARKS(#!)

MODEL (PHILIPS)	FRONT A/V J1201 J1203	REAR A/V J1 J2	9 1 TERMINAL2 (PERI 21P) CN1401	DRUM TYPE 2-HEAD /DA4	9 0 LED FW1201
VR297/55	NOT USED	USED	NOT USED	2 HEAD	NOT USED
VR397/55	USED	NOT USED	USED	2 HEAD	USED
VR497/55	USED	USED	NOT USED	4 HEAD	NOT USED
VR597/55	USED	NOT USED	USED	4 HEAD	USED

# 4.12 REMOCON SCHEMATIC DIAGRAMS

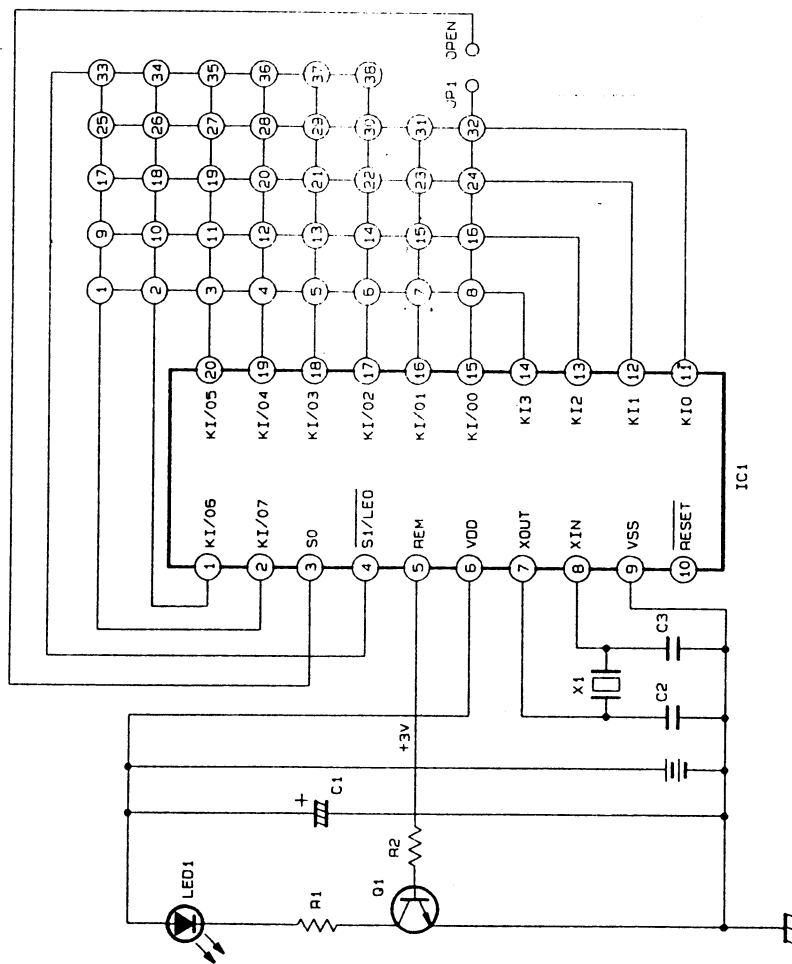
[VR297/55 & VR397/55]

- NOTES:  
 1. All parts shown in this schematic are critical for safety.  
 2. This schematic is only for reference.  
 Avoid replacing individual parts.  
 Replace the entire unit only.

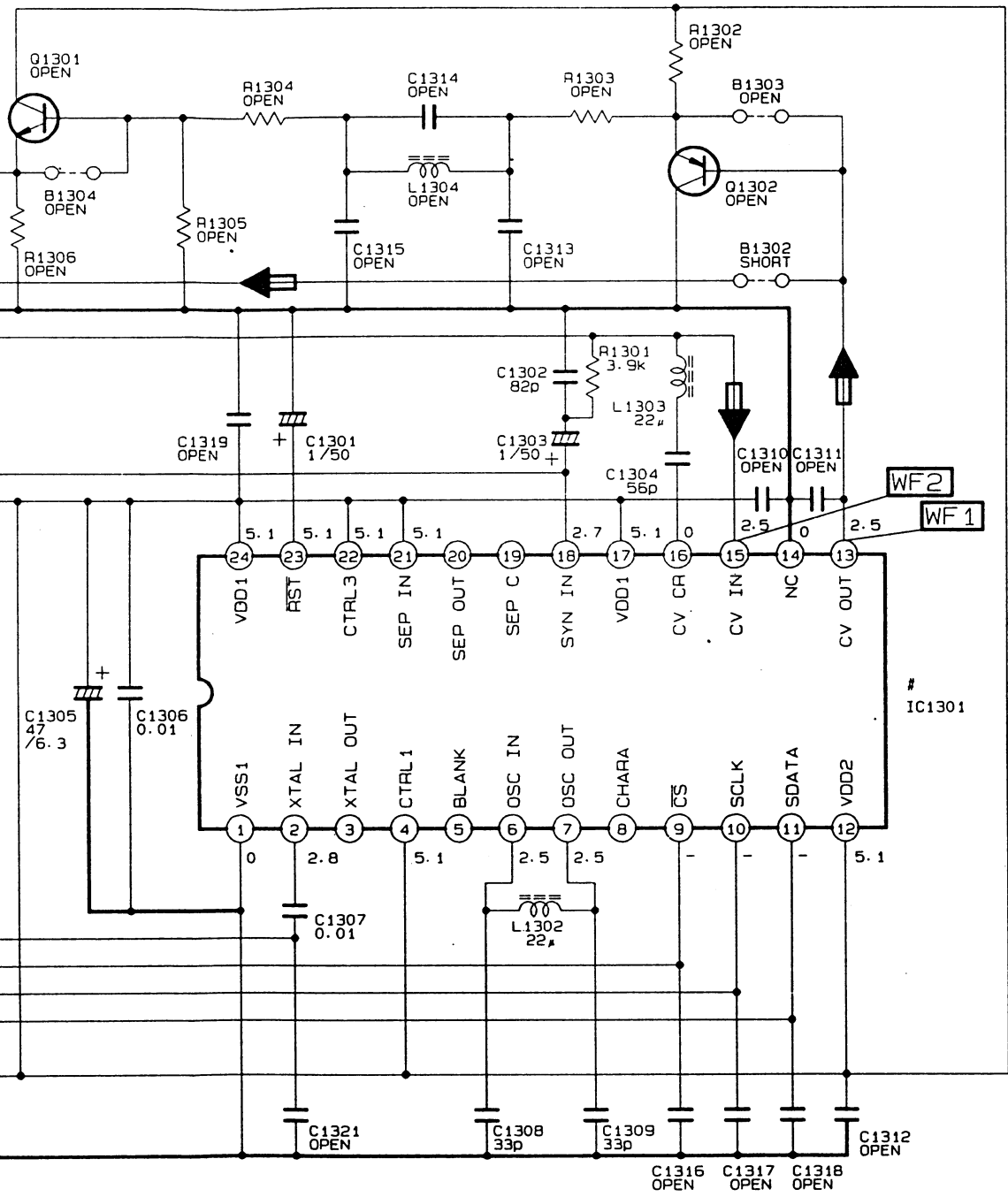
Key No.	Key Name
1	TV VOLUME +
2	TV VOLUME -
3	1
4	4
5	7
6	100 -/---
7	EXIT/STATUS
8	MENU
9	TV CHANNEL +
10	TV CHANNEL -
11	2
12	5
13	8
14	0
15	INDEX K1
16	REW
17	MUTE
18	X2 PLAY
19	3
20	6
21	9
22	GO-TO
23	INDEX DX
24	PLAY
25	EJECT
26	MEMORY
27	VCR CHANNEL +
28	VCR CHANNEL -
29	TRACKING +
30	TRACKING -
31	SLOW
32	FF
33	CLEAR
34	REC/OTR
35	STOP
36	PAUSE/STILL
37	VCR POWER
38	TV POWER

87013979-01

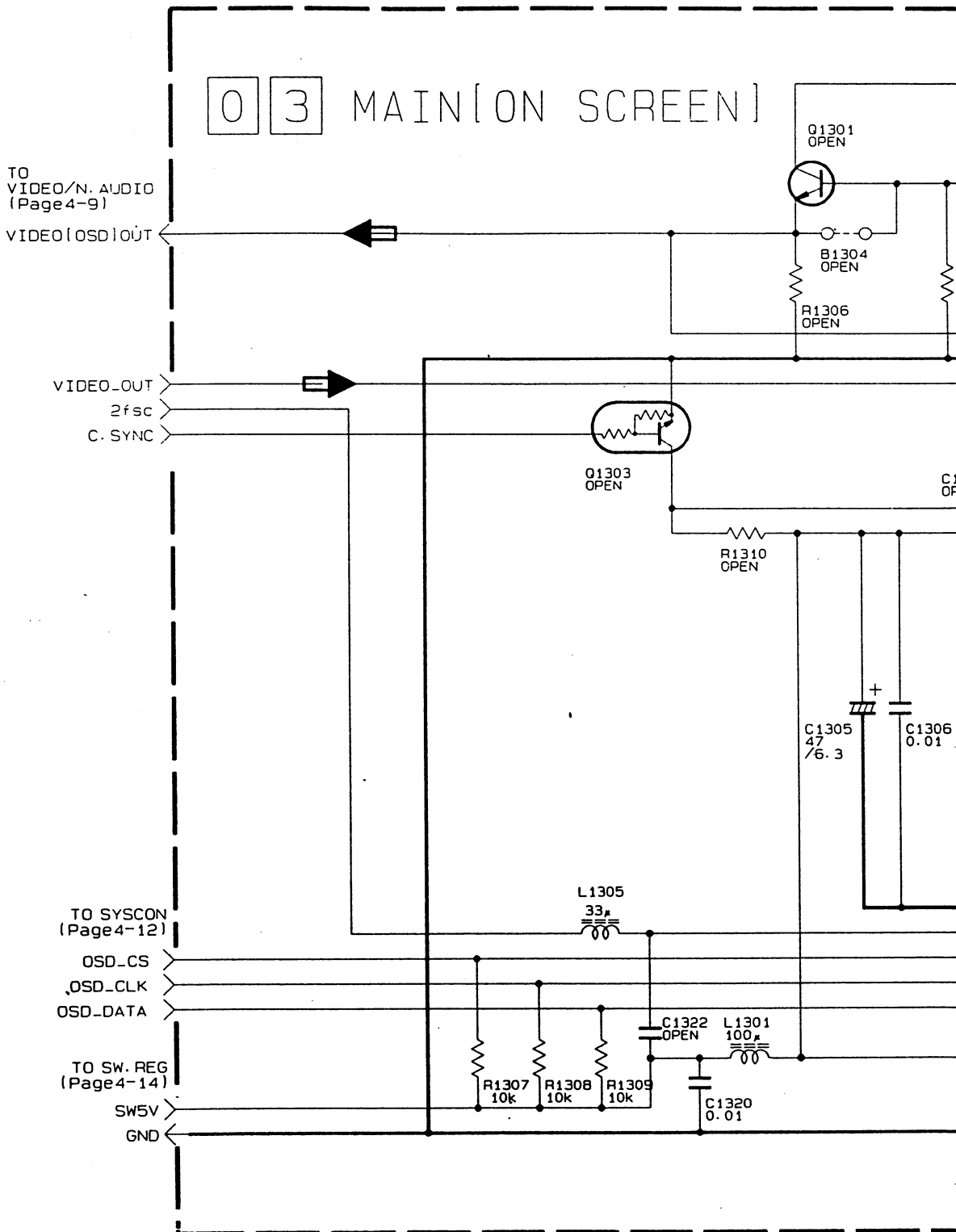
REMOTE CONTROLLER



A B C D



4.9 ON SCREEN SCHEMATIC DIAGRAM



NOTES : 1. For ON SCREEN waveforms, refer to page 4  
 2. COMPARISON CHART OF MODELS & MARKS(#)

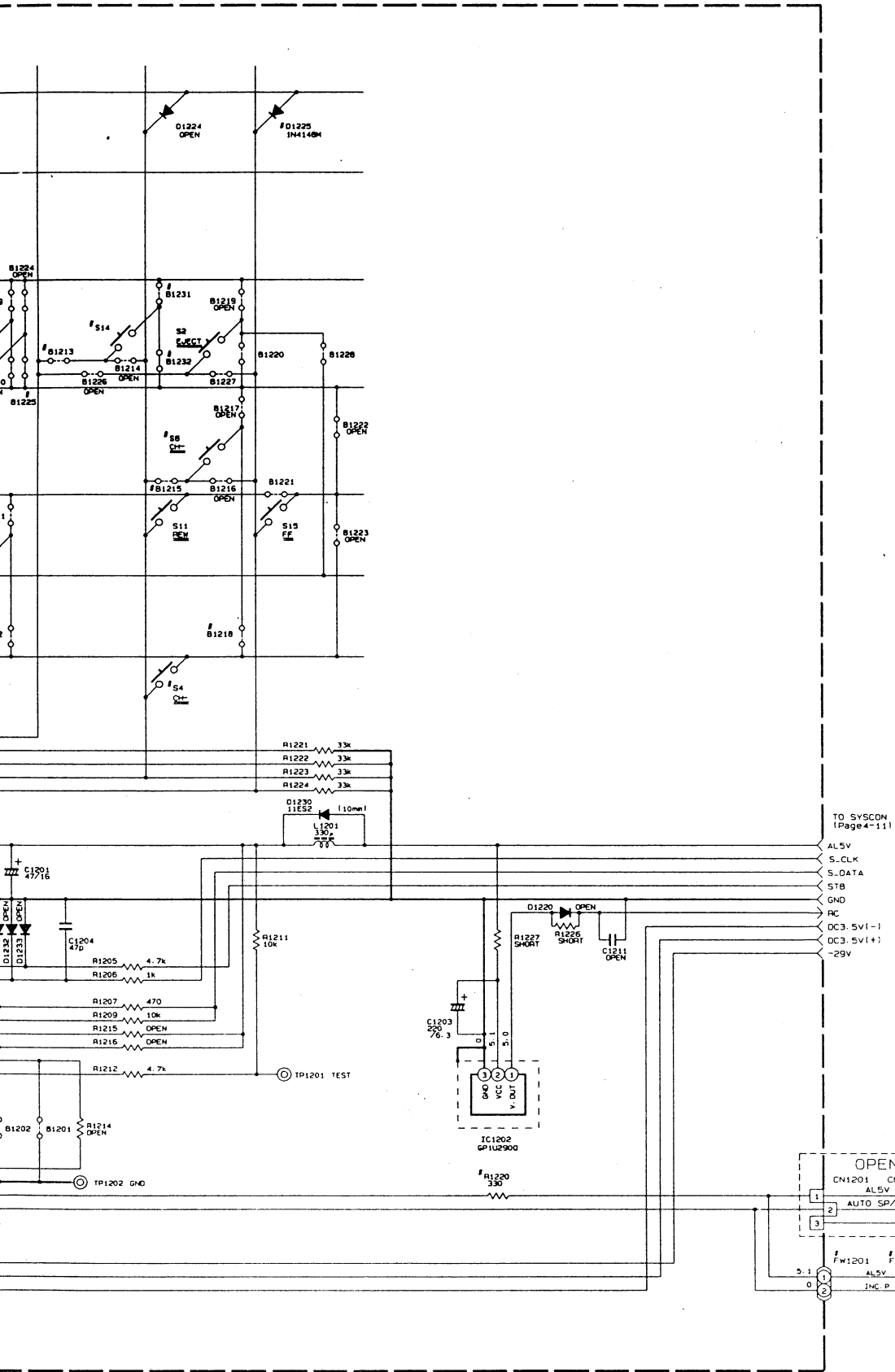
REF. NO	MODELS	
		VR297/55 VR497/55
IC1301	LC74784-9665	LC74783-9194

A

B

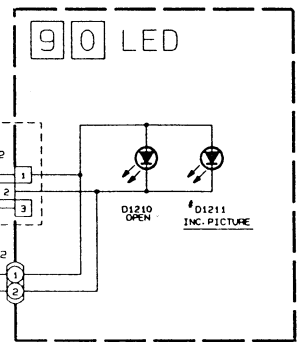
C

D



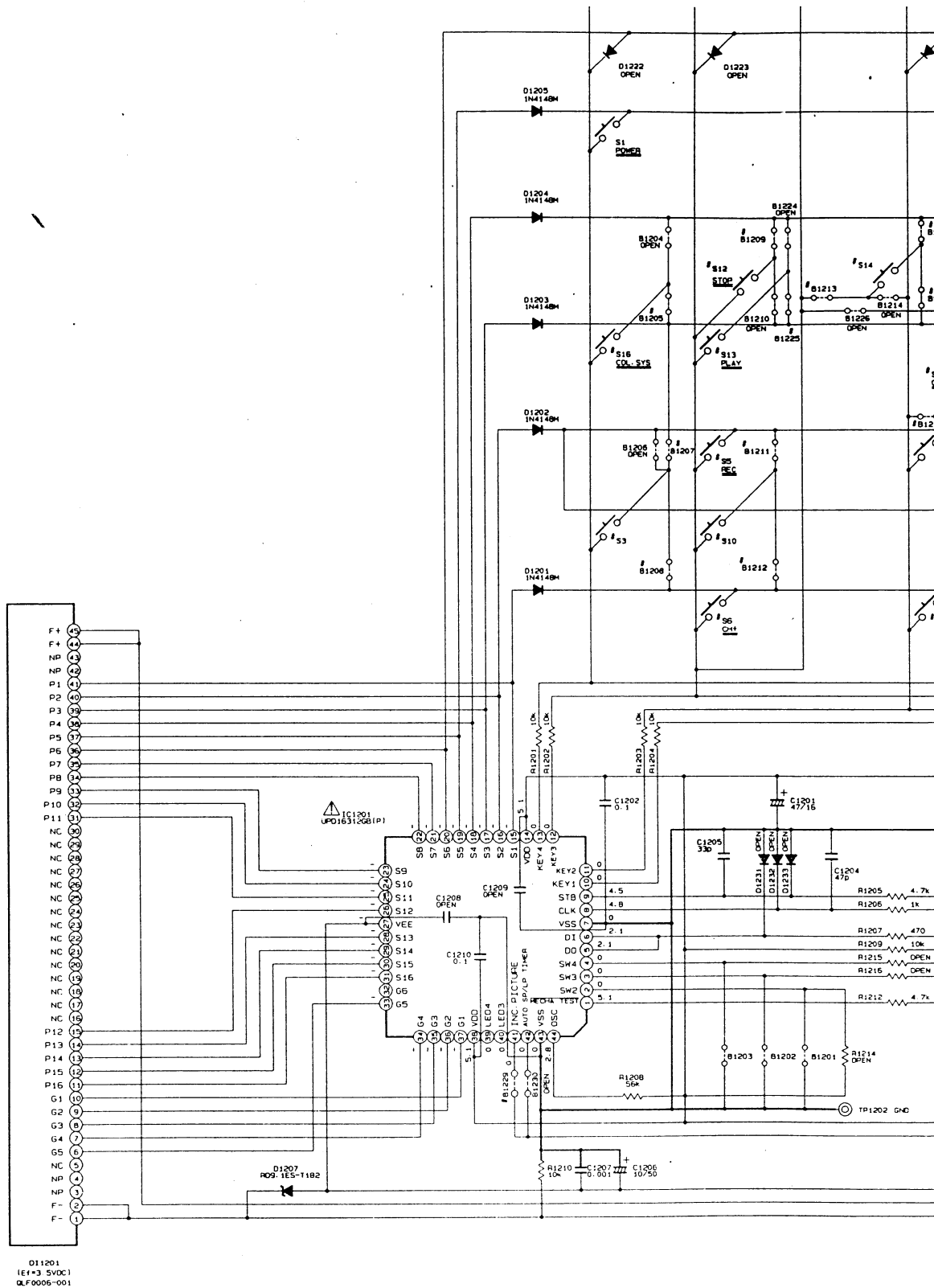
NOTE 1. COMPARISON CHART OF MODELS & MARKS (#)

REF. NO	MODELS			
	VR297/55	VR397/55	VR497/55	VR597/55
D1225	NOT USED	NOT USED	USED	USED
R1220	OPEN	330	OPEN	330
S3	COL. SYS	INC. P	COL. SYS	INC. P
S4	NOT USED	USED	USED	USED
S5	USED	NOT USED	NOT USED	NOT USED
S6	NOT USED	USED	USED	USED
S8	USED	NOT USED	NOT USED	NOT USED
S10	CH+	REC	REC	REC
S12	NOT USED	USED	USED	USED
S13	USED	NOT USED	USED	NOT USED
S14	STOP	PLAY	NOT USED	PLAY
S16	NOT USED	USED	NOT USED	USED
B1205	OPEN	SHORT	OPEN	SHORT
B1207	SHORT	OPEN	SHORT	OPEN
B1208	OPEN	SHORT	OPEN	SHORT
B1209	OPEN	SHORT	SHORT	SHORT
B1211	OPEN	SHORT	SHORT	SHORT
B1212	SHORT	OPEN	OPEN	OPEN
B1213	SHORT	SHORT	OPEN	SHORT
B1215	SHORT	OPEN	OPEN	OPEN
B1218	SHORT	OPEN	OPEN	OPEN
B1225	SHORT	OPEN	SHORT	OPEN
B1229	OPEN	SHORT	OPEN	SHORT
B1231	SHORT	OPEN	OPEN	OPEN
B1232	OPEN	SHORT	OPEN	SHORT
D1211	NOT USED	USED	NOT USED	USED
FW1201	NOT USED	USED	NOT USED	USED
FW1202	NOT USED	USED	NOT USED	USED



4.8 SW/DISPLAY SCHEMATIC DIAGRAM

03 MAIN(SW/DISPLAY)

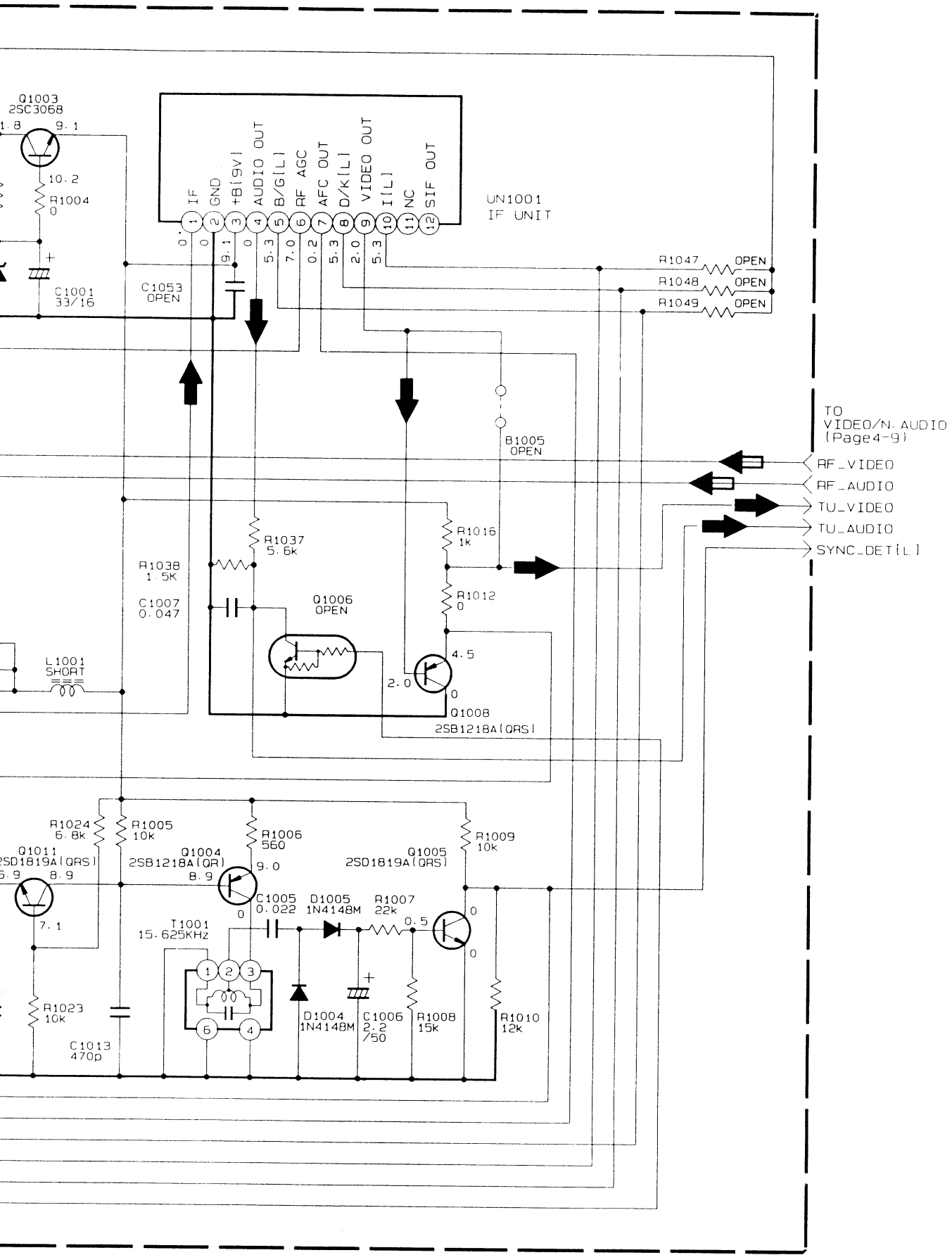


A

B

C

D



TO VIDEO/N. AUDIO (Page 4-9)

- RF\_VIDEO
- RF\_AUDIO
- TU\_VIDEO
- TU\_AUDIO
- SYNC\_DET(L)

# 4.7 TUNER SCHEMATIC DIAGRAM

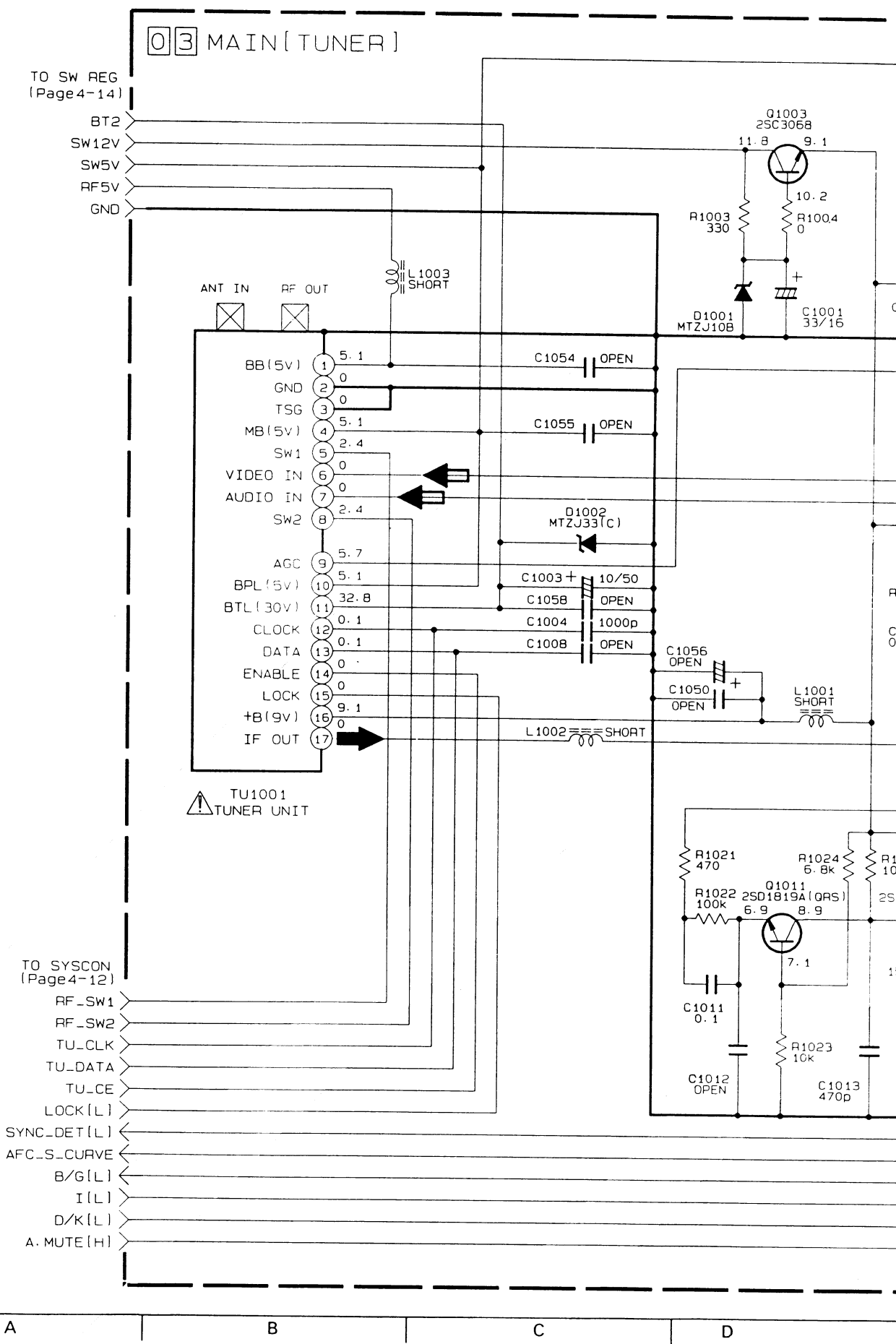
5

4

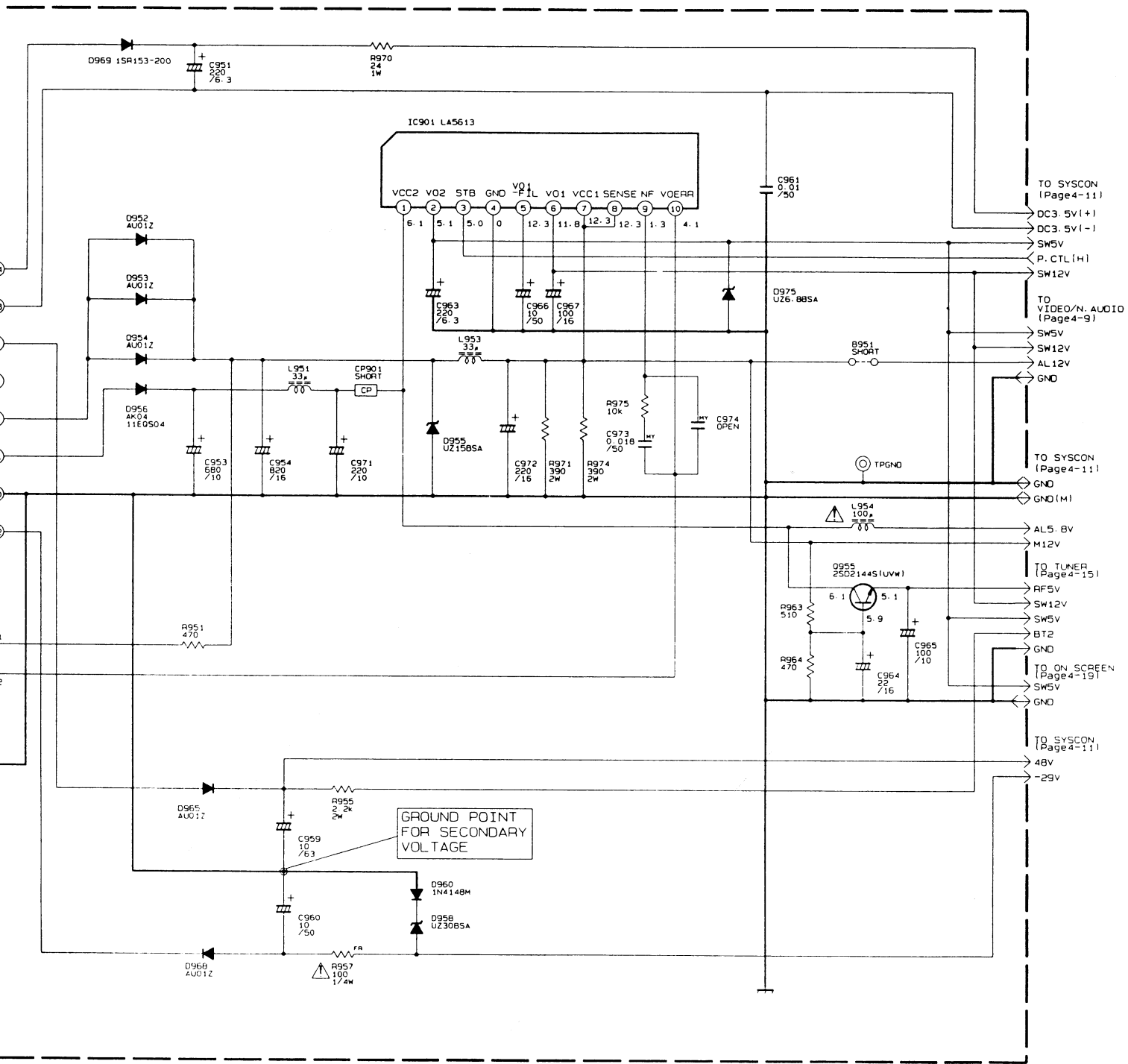
3

2

1

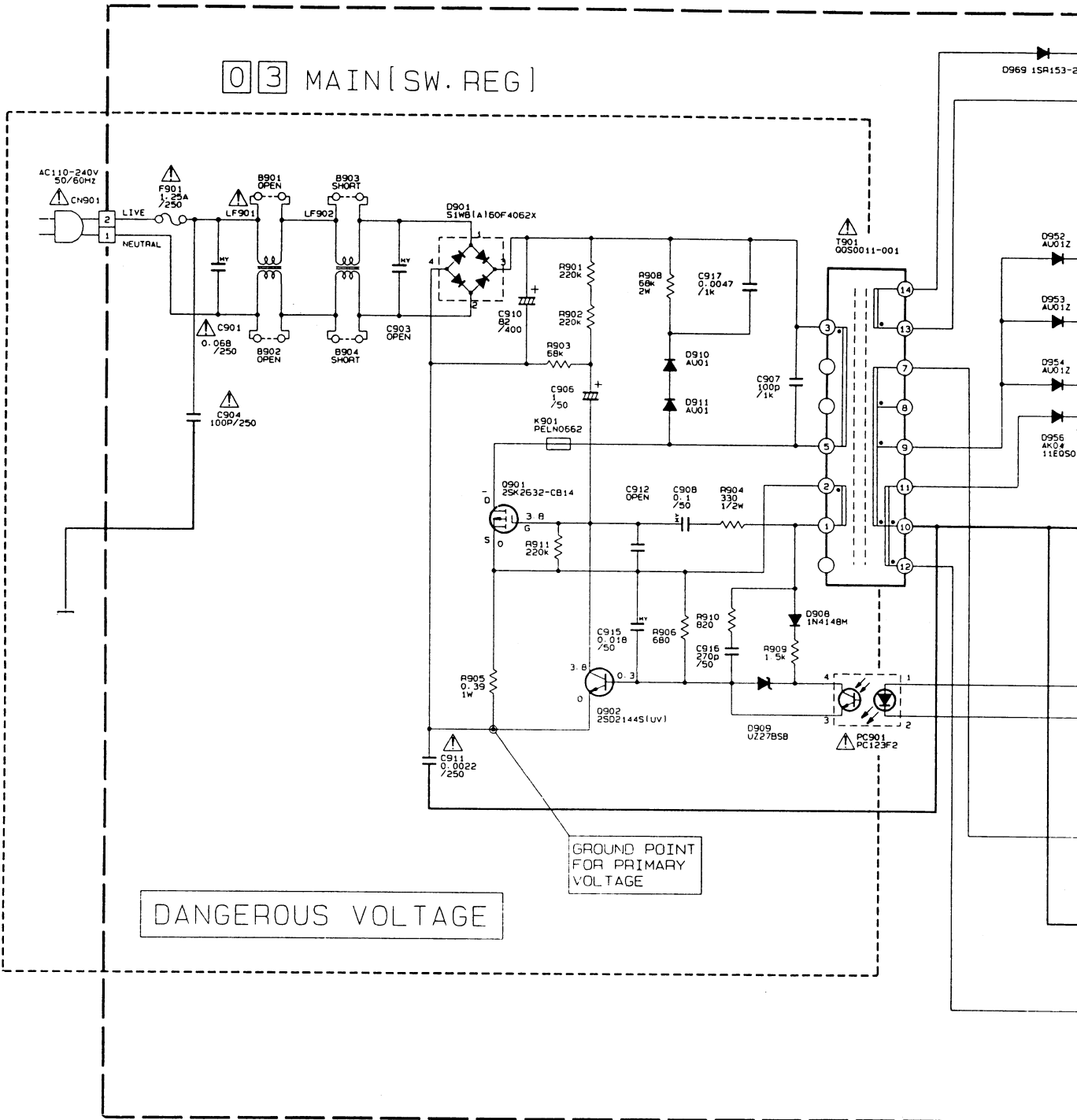




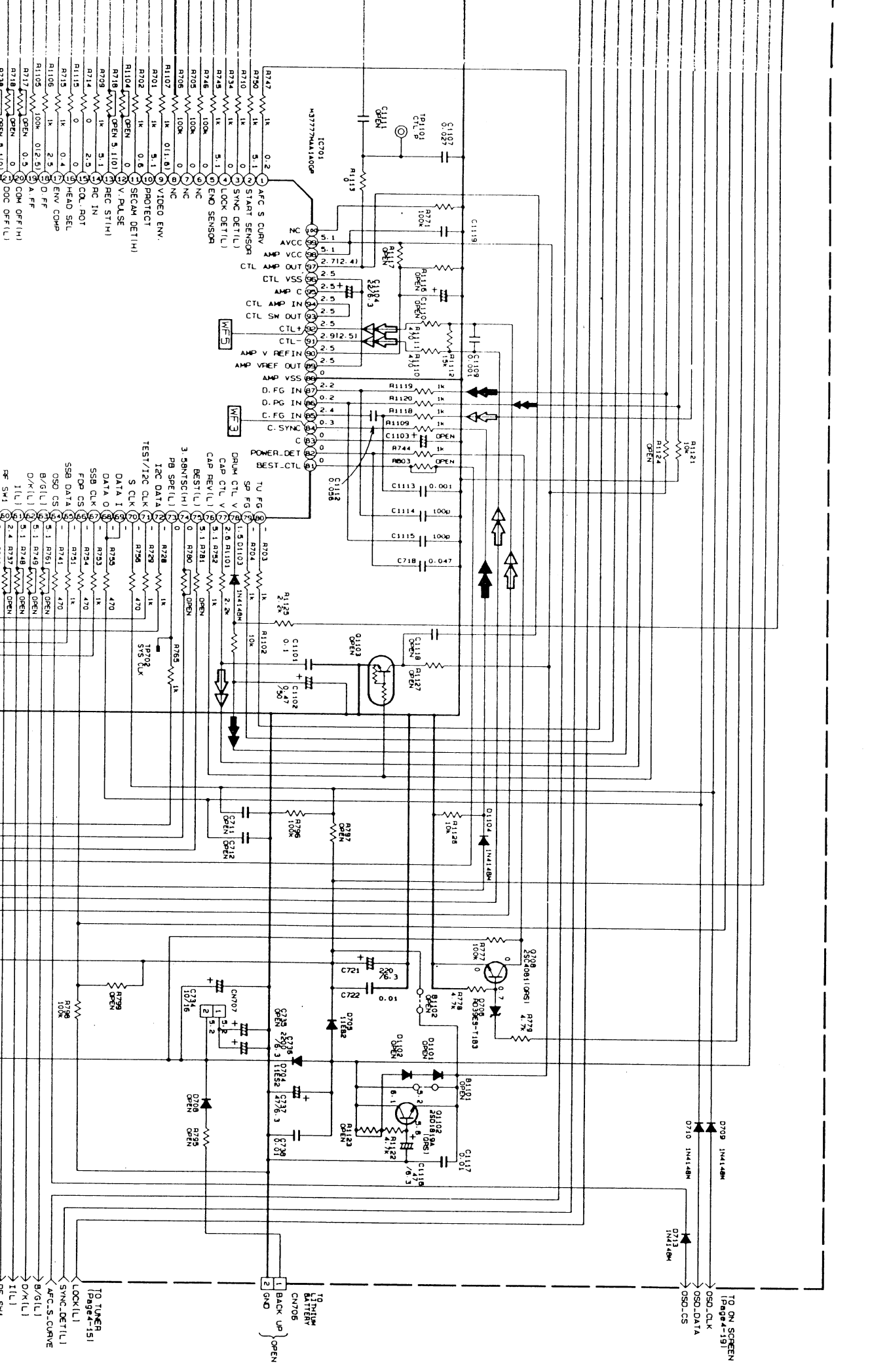


# 4.6 SWITCHING REGULATOR SCHEMATIC DIAGRAM

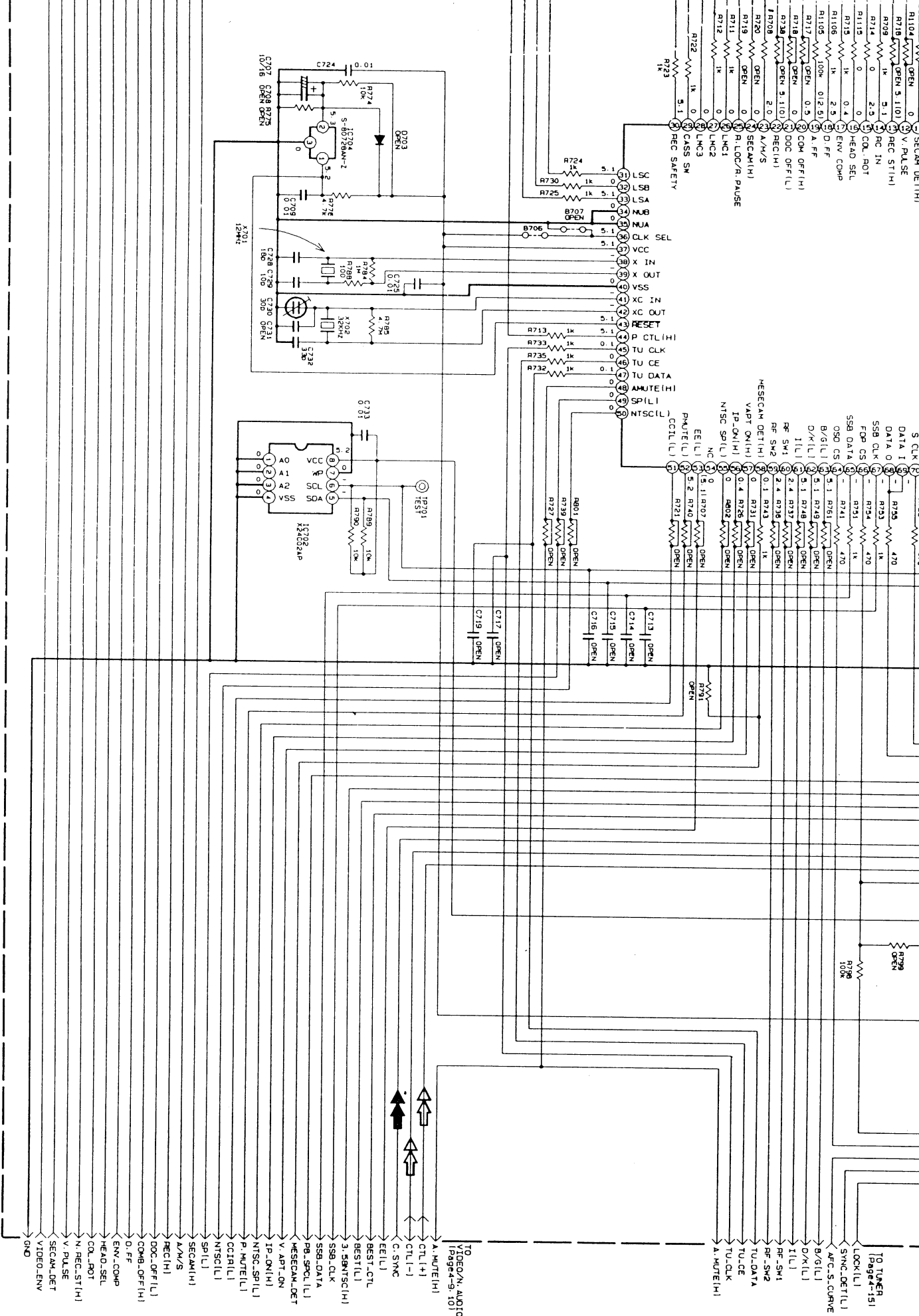
5  
4  
3  
2  
1



A B C D



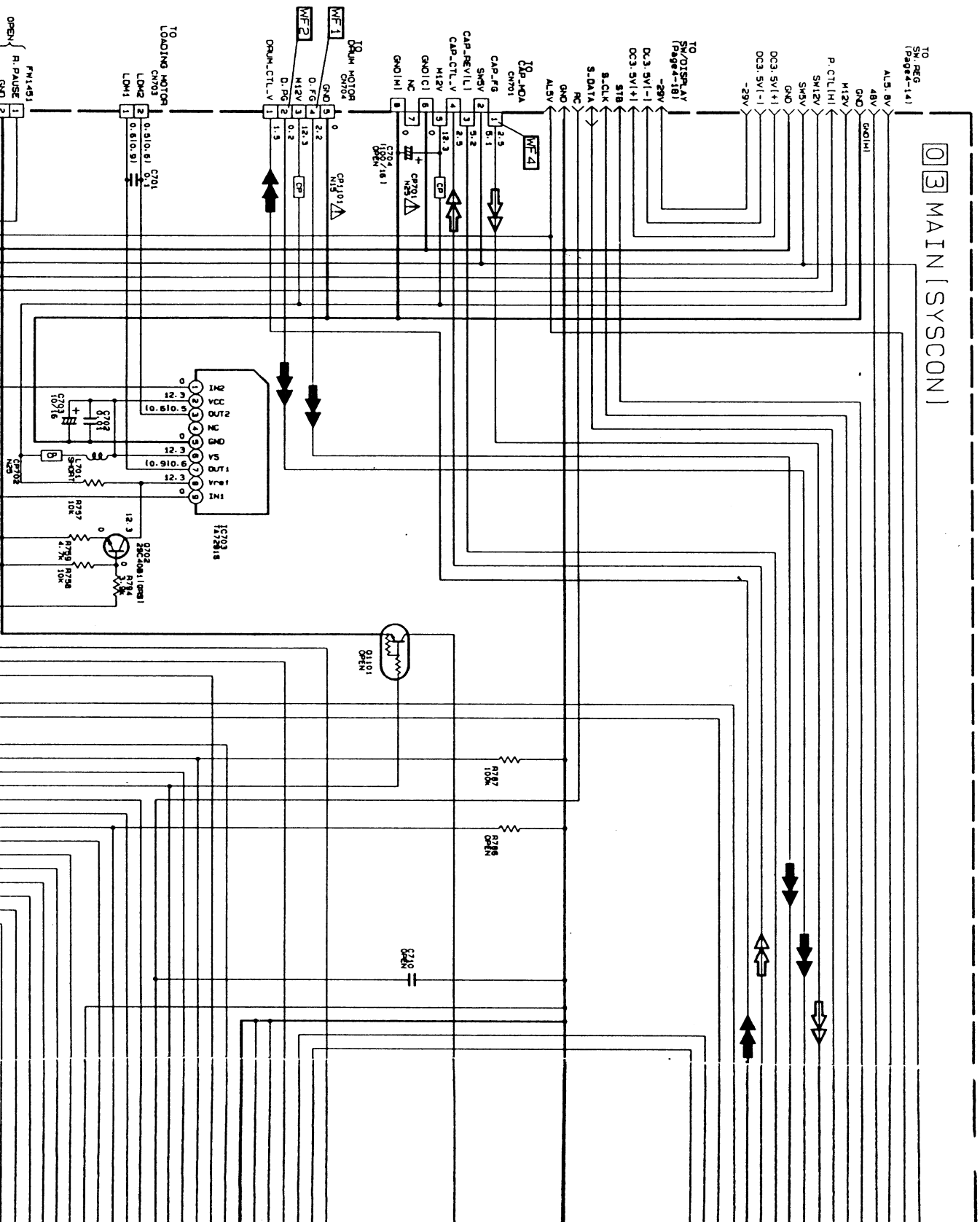
D E F G

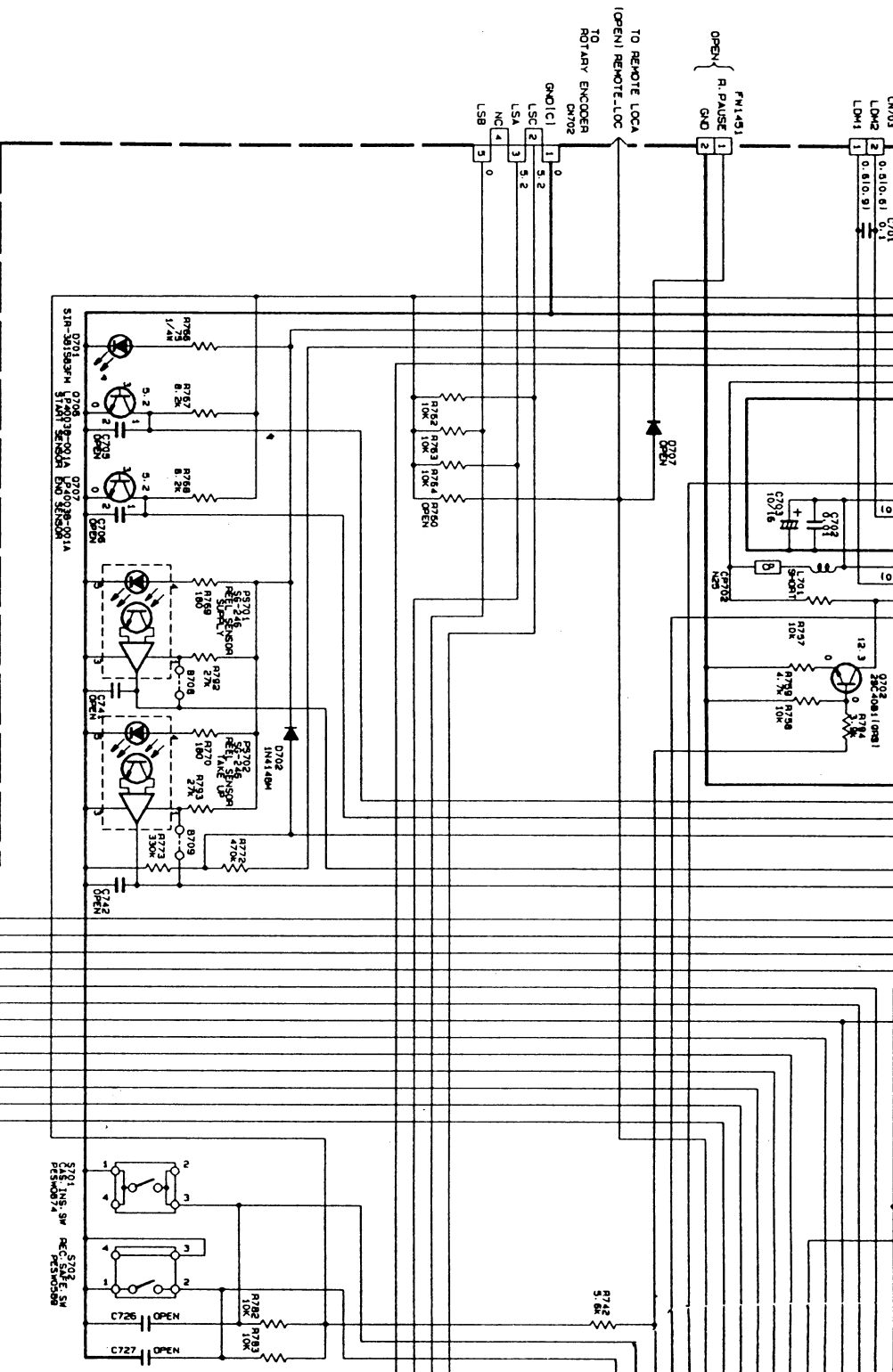


TO TUNER  
101  
102  
LOCK  
SYNC  
AFC-S  
CURVE  
B/G  
I/L  
RF-SW1  
RF-SW2  
TU-CE  
TU-CLK  
A-MUTE(H)

TO VIDEO/AUDIO  
PAGE 4-9-101  
A-MUTE(H)  
CTL(+)  
CTL(-)  
C-SYNC  
FE(L)BEST-CTL  
BEST-IL  
3.5BNTSC(H)  
SSB-CLK  
SSB-DATA  
PB-SPOL(L)  
MESECAN-DET  
V-APT-ON  
JP-ON(H)  
NISC-SP(L)  
P-MUTE(L)  
CCTA(L)  
NTSC(L)  
SECAM(H)  
A/M/S  
REC(H)  
DOC-OFF(L)  
COMP-OFF(H)  
O-FF  
ENV-COMP  
HEAD-SEL  
COL-ROT  
N-REC-ST(H)  
V-PULSE  
SECAM-DET  
VIDEO-ENV  
GND

# 4.5 SYSTEM CONTROL SCHEMATIC DIAGRAM





NOTES : 1. COMPARISON CHART OF MODELS & MARKS (#1)  
 2. FOR SYSCON waveforms refer to page4-21.

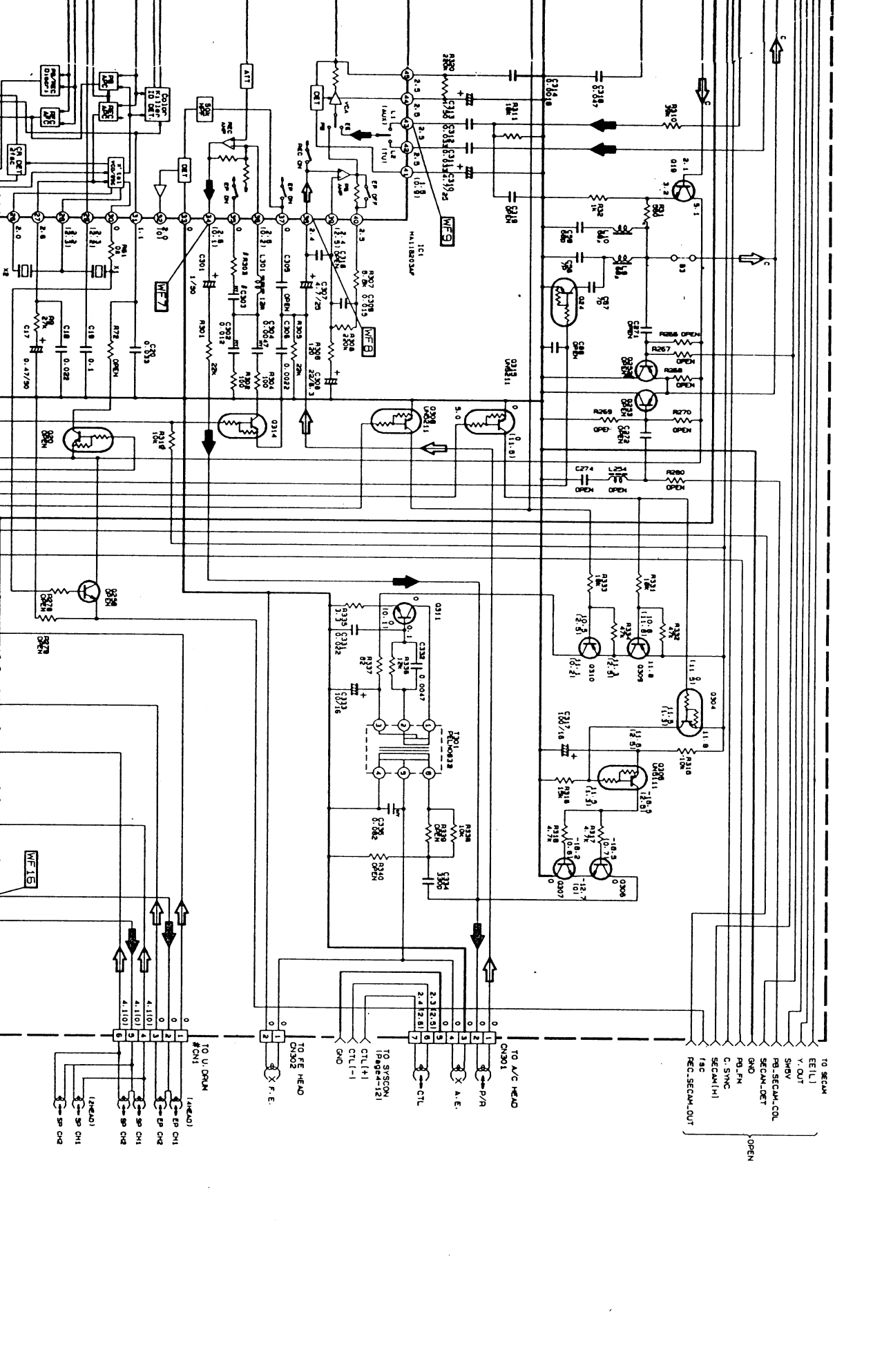
MODELS			
REF. NO	VA87/55	VA87/55	
	VA87/55	VA87/55	
R708	OPEN	1K	

A

B

C

D



TO SECAM  
E[LL]  
V. OUT  
SHV  
SECAM-DET  
GND  
PA. FN  
C. SYNC  
SECAM(H)  
REC. SECAM. OUT  
OPEN

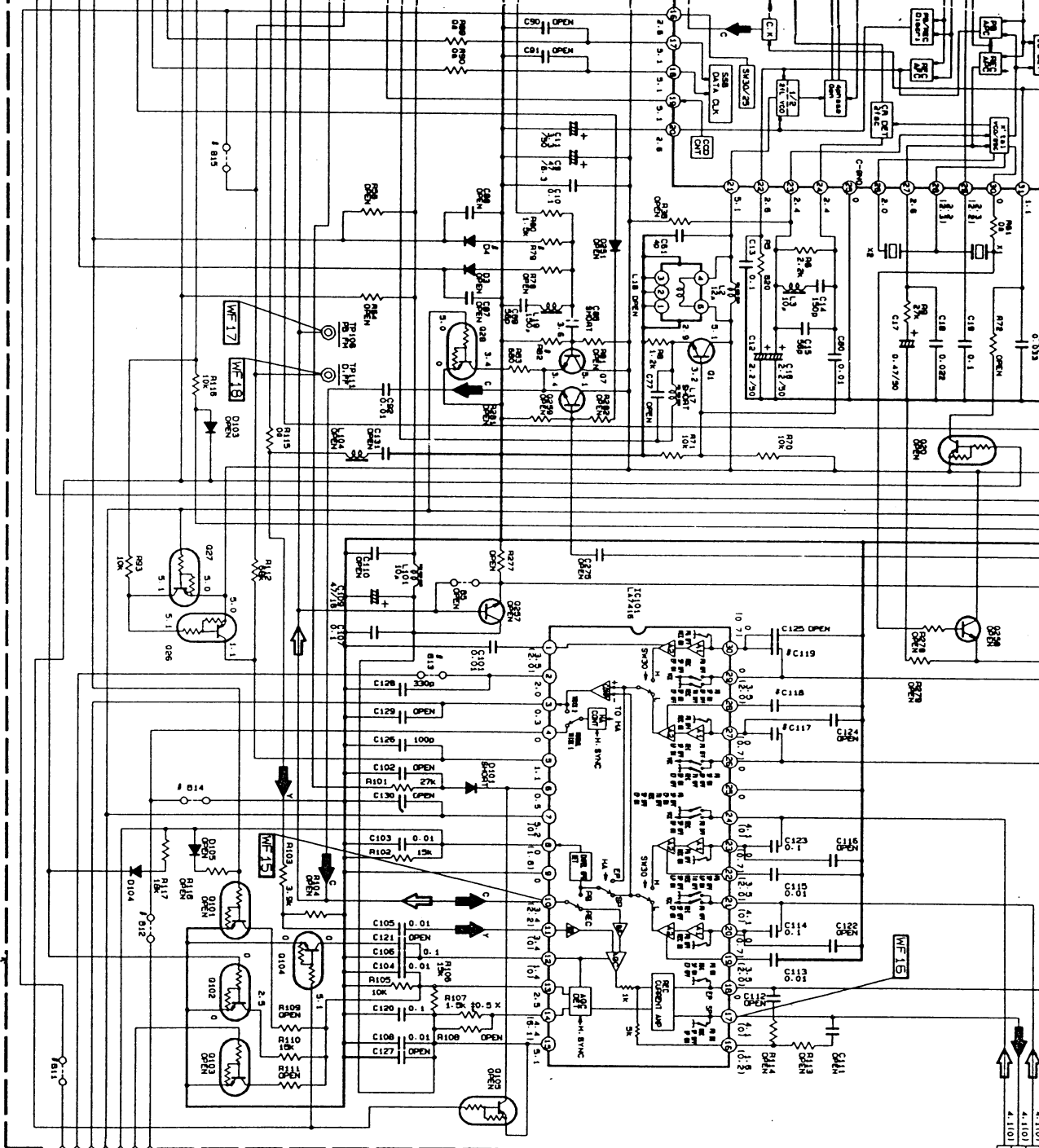
TO U/C HEAD  
CH301

TO SE HEAD  
CH302  
F. E.  
TO SYNC  
PAGE-12  
CTL(+)  
CTL(-)  
GND

TO U/DRUM  
#CH1

(HEAD)  
EP CH1  
EP CH2  
EP CH3  
EP CH4  
EP CH5  
EP CH6  
EP CH7  
EP CH8  
EP CH9  
EP CH10  
EP CH11  
EP CH12  
EP CH13  
EP CH14  
EP CH15  
EP CH16  
EP CH17  
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EP CH89  
EP CH90  
EP CH91  
EP CH92  
EP CH93  
EP CH94  
EP CH95  
EP CH96  
EP CH97  
EP CH98  
EP CH99  
EP CH100

WFC 15



NOTES: 1. FOR VIDEO/AUDIO WAVEFORMS please refer to page 21.  
 2. Unless otherwise specified:  
 All NPN type transistors are 2SD1819 (P81).  
 All PNP type digital transistors are UM232E.  
 All PNP type digital transistors are UM232E.  
 All diodes are JN140M or 1S5133.  
 3. COMPONENT CHART OF MODEL S & MARKS (I#)

REF. NO	MODEL S	MARKS (I#)	MODEL S	MARKS (I#)
R1401	NOT USED	USED	NOT USED	USED
D4	NOT USED	NOT USED	NOT USED	USED
R43	20	0	0	0
R79	OPEN	OPEN	8.2K	8.2K
R82	8.2K	8.2K	OPEN	OPEN
R88	0	2.2K	2.2K	2.2K
R91	OPEN	20	20	20
R92	OPEN	56	56	56
R93	OPEN	OPEN	100	100
R322	100	OPEN	100	OPEN
R1401	OPEN	47K	OPEN	47K
R1402	OPEN	1K	OPEN	1K
R1403	OPEN	330(1/2W)	OPEN	330(1/2W)
C5	0.01	0.01	280P	280P
C84	OPEN	OPEN	0.012	0.012
C117	OPEN	OPEN	0.1	0.1
C118	OPEN	OPEN	0.01	0.01
C119	OPEN	OPEN	0.1	0.1
C303	OPEN	OPEN	0.022	0.022
L13	OPEN	OPEN	470 $\mu$	470 $\mu$
L1401	OPEN	SHORT	SHORT	SHORT
L1402	OPEN	SHORT	SHORT	SHORT
L1403	SHORT	OPEN	SHORT	SHORT
L1404	SHORT	OPEN	SHORT	OPEN
B8	SHORT	OPEN	OPEN	OPEN
B11	OPEN	OPEN	SHORT	SHORT
B12	OPEN	OPEN	SHORT	SHORT
B13	OPEN	OPEN	SHORT	SHORT
B14	SHORT	SHORT	OPEN	OPEN
B15	SHORT	SHORT	OPEN	OPEN
B304	SHORT	OPEN	OPEN	OPEN
J1	USED	NOT USED	USED	NOT USED
J1201	NOT USED	USED	USED	NOT USED
J1203	NOT USED	USED	USED	USED
CN1	UNINDICATED	UNINDICATED	UNINDICATED	UNINDICATED
CN1401	NOT USED	USED	NOT USED	USED

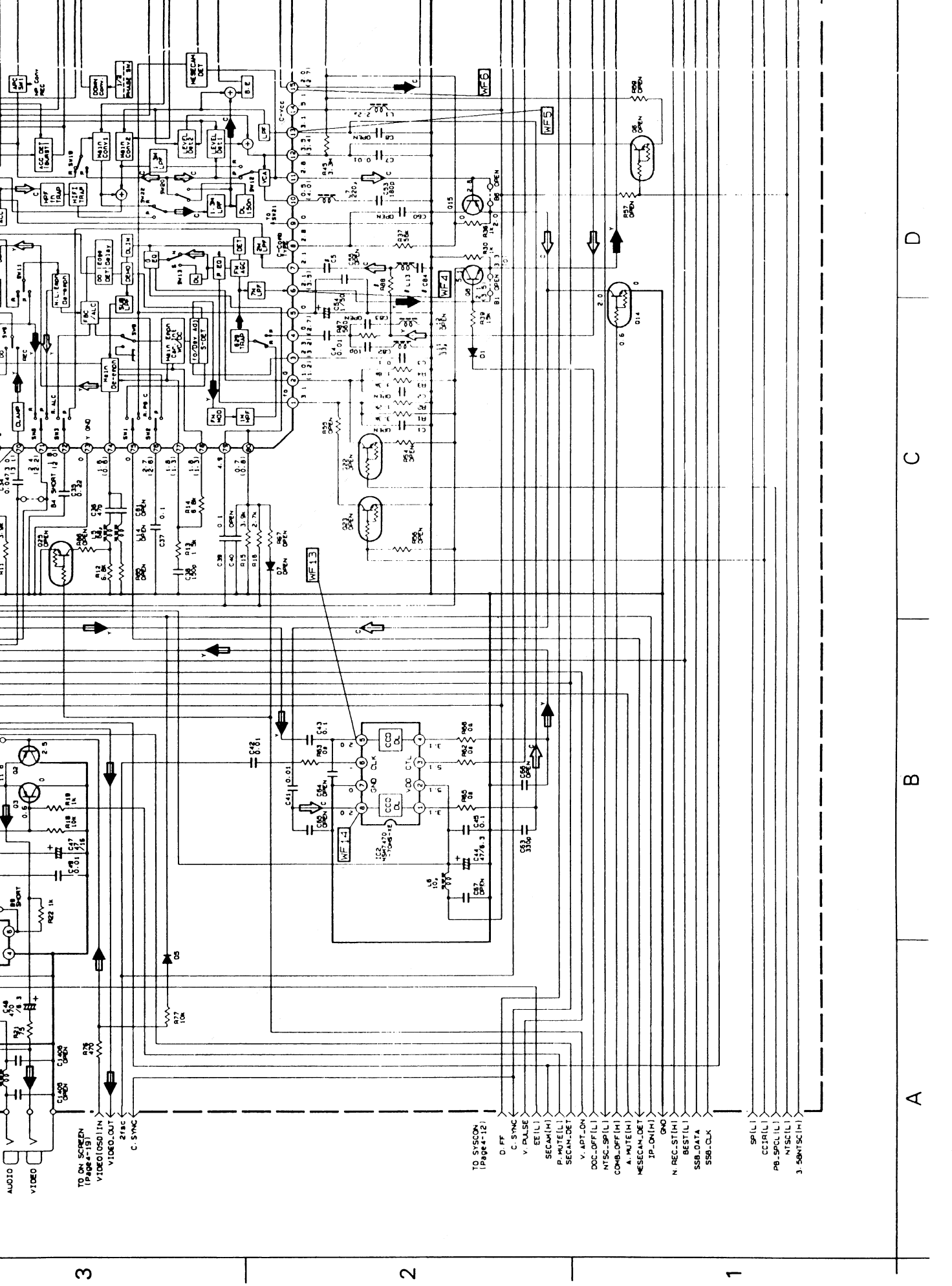
E

F

G

H





3

2

1

A

B

C

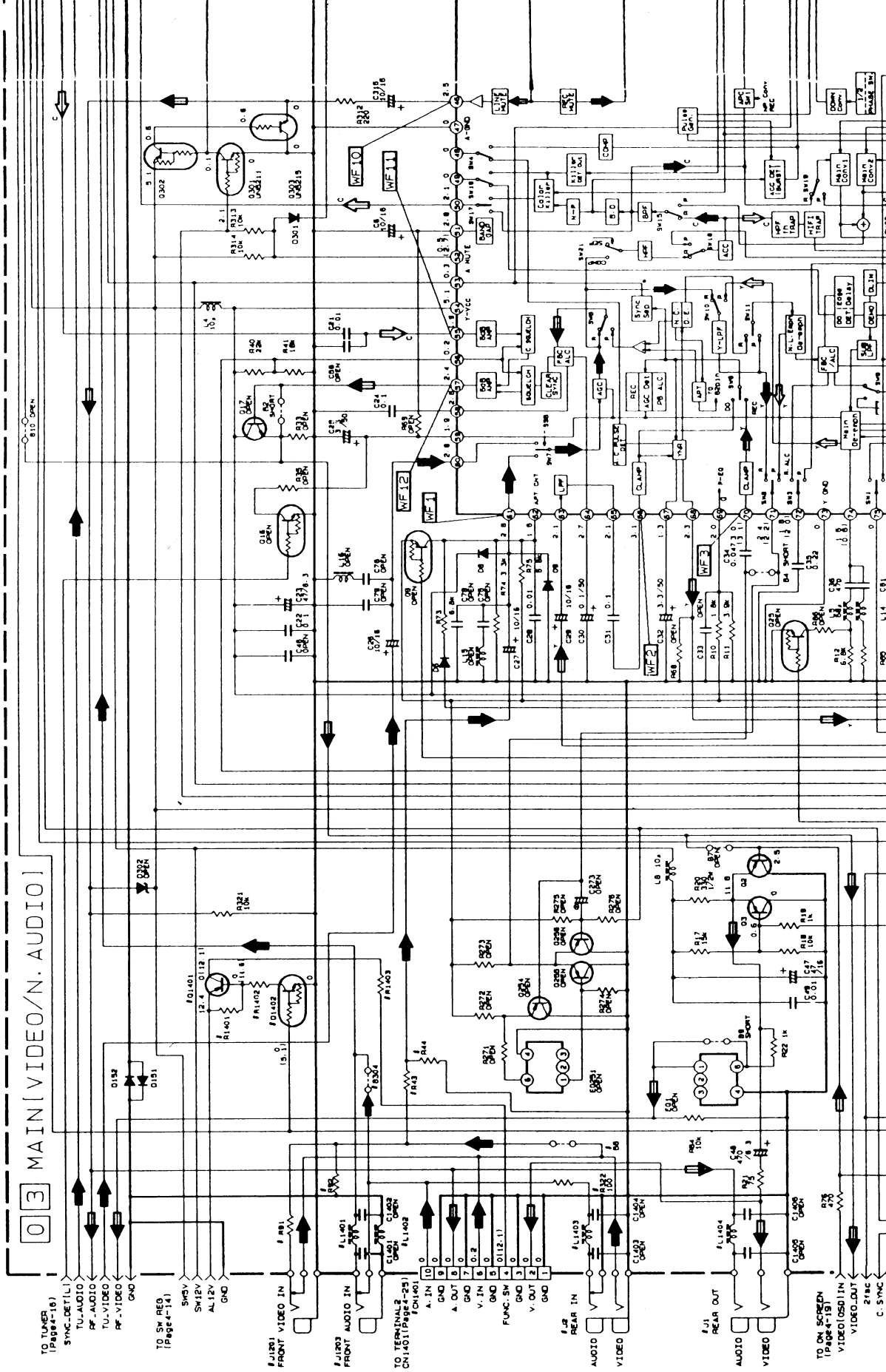
D

TO ON SCREEN  
(Page 4-12)

D.F.F.  
C.SYNC  
V.PULSE  
EE(L)  
SECM(N)  
MUTE(L)  
SECM-DET  
V.APT-ON  
DOC-OFF(L)  
NTSC-SP(L)  
COMB-OFF(H)  
A.MUTE(H)  
MESECM-DET  
IP-ON(H)  
GND  
N.REC-ST(H)  
BEST(L)  
SSB-DATA  
SSB-CLK

SP(L)  
CC(L)  
PB-SP(L)  
NIS(L)  
3-5NTSC(H)

# 4.4 VIDEO, PRE/REC AND N.AUDIO SCHEMATIC DIAGRAM



0 3 MAIN VIDEO/N. AUDIO

TO TUNER  
(Page 4-18)  
SYNC DET (L1)  
TU-AUDIO  
PF-AUDIO  
TU-V-VIDEO  
HF-V-VIDEO  
GND

TO SW REQ  
(Page 4-14)  
SW12V  
SW12V  
AL12V  
GND

F1401  
FRONT VIDEO IN

F1403  
FRONT AUDIO IN

TO TERMINAL 2  
(Page 4-25)  
CH1401  
A. IN 10  
GND 9  
A. OUT 8  
GND 7  
V. IN 6  
GND 5  
D112.11  
GND 4  
GND 3  
V. OUT 2  
GND 1

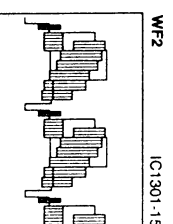
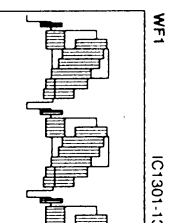
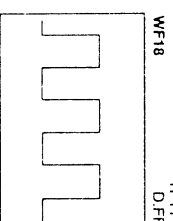
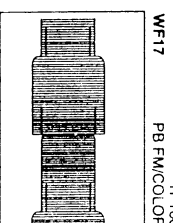
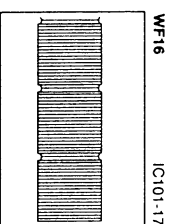
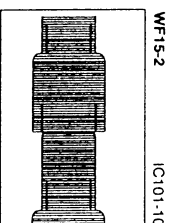
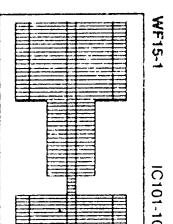
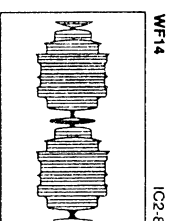
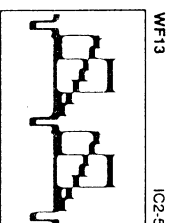
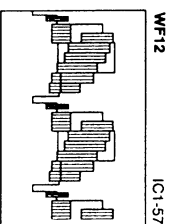
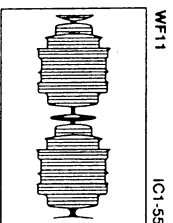
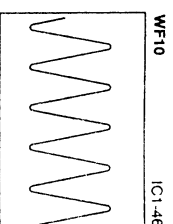
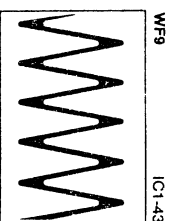
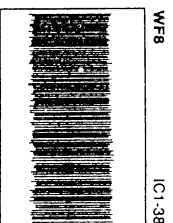
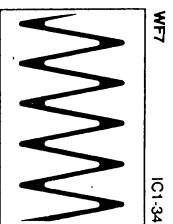
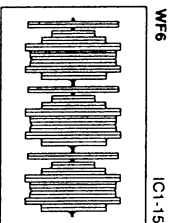
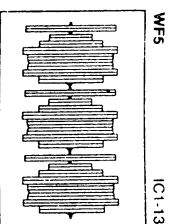
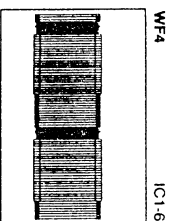
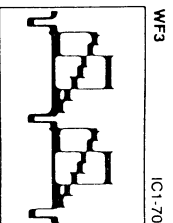
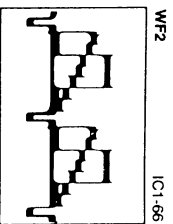
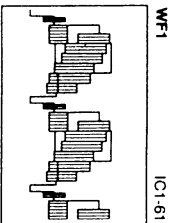
F1403  
FRONT REAR AUDIO  
VIDEO

F1404  
FRONT REAR AUDIO  
VIDEO

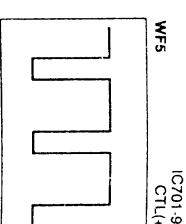
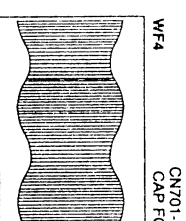
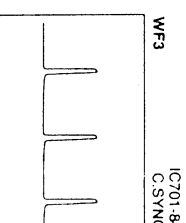
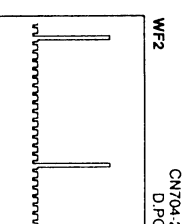
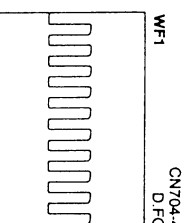
TO ON SCREEN  
(Page 4-13)  
VIDEO (GND) IN  
VIDEO (GND) OUT  
2 SYNC  
C SYNC

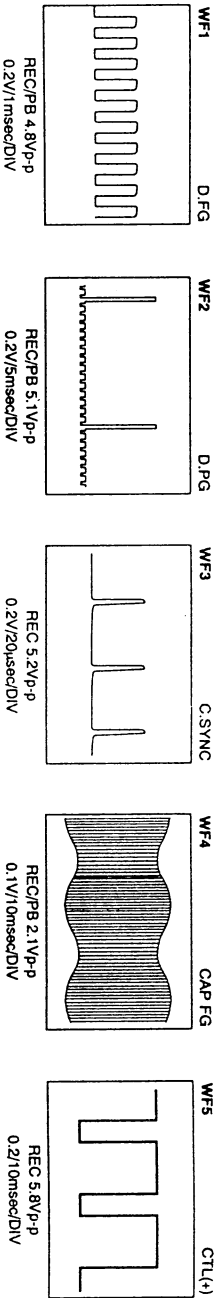
# WAVEFORMS

— VIDEO/N. AUDIO —



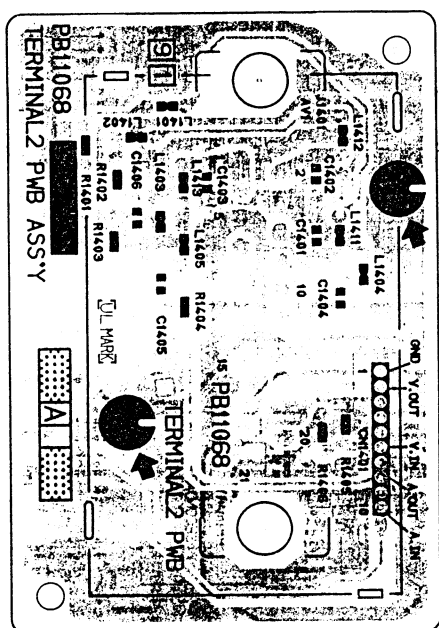
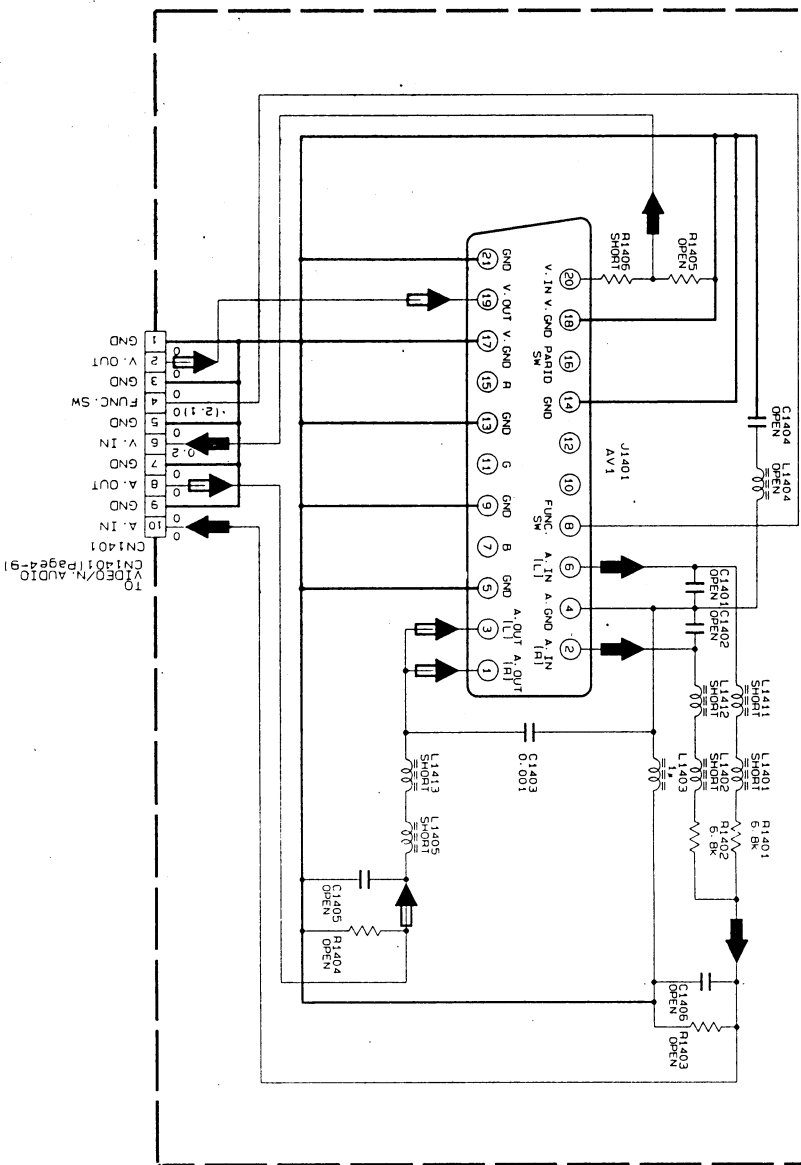
— SYSCON —





4.11 TERMINAL 2 SCHEMATIC DIAGRAM AND CIRCUIT BOARD

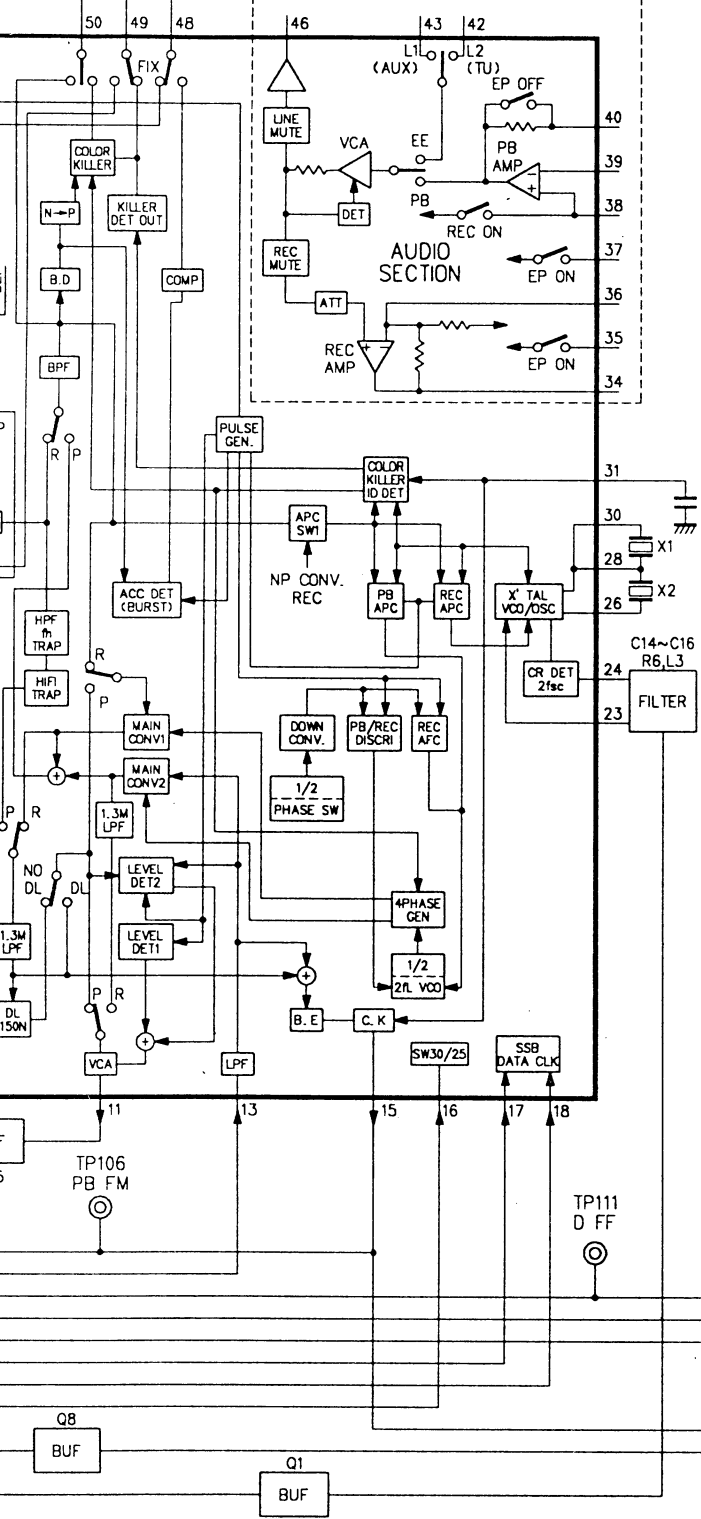
9 1 TERMINAL 2



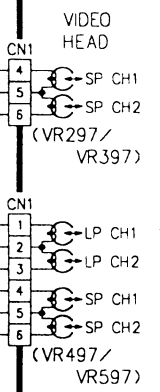
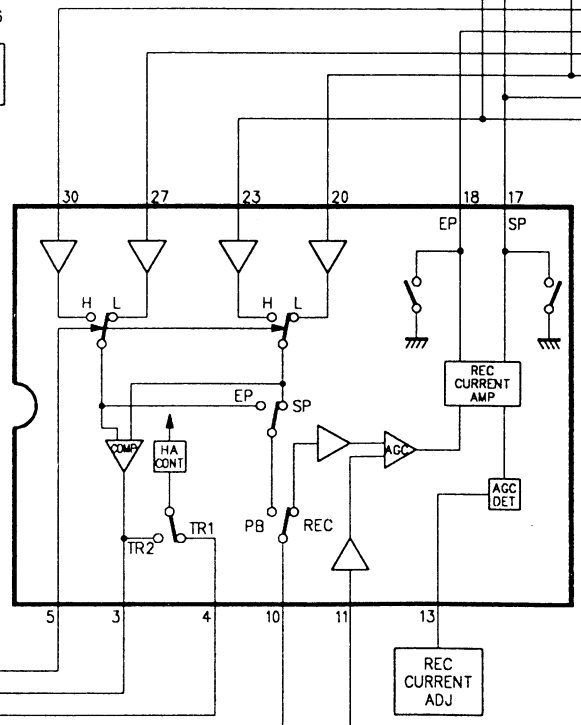
A B C D E F G

R31,R32  
L,C56,C57,C59  
FILTER

IC1  
(VIDEO & N. AUDIO SIGNAL PROCESSOR)



IC101  
(HEAD AMP)



# 4.3 VIDEO BLOCK DIAGRAM

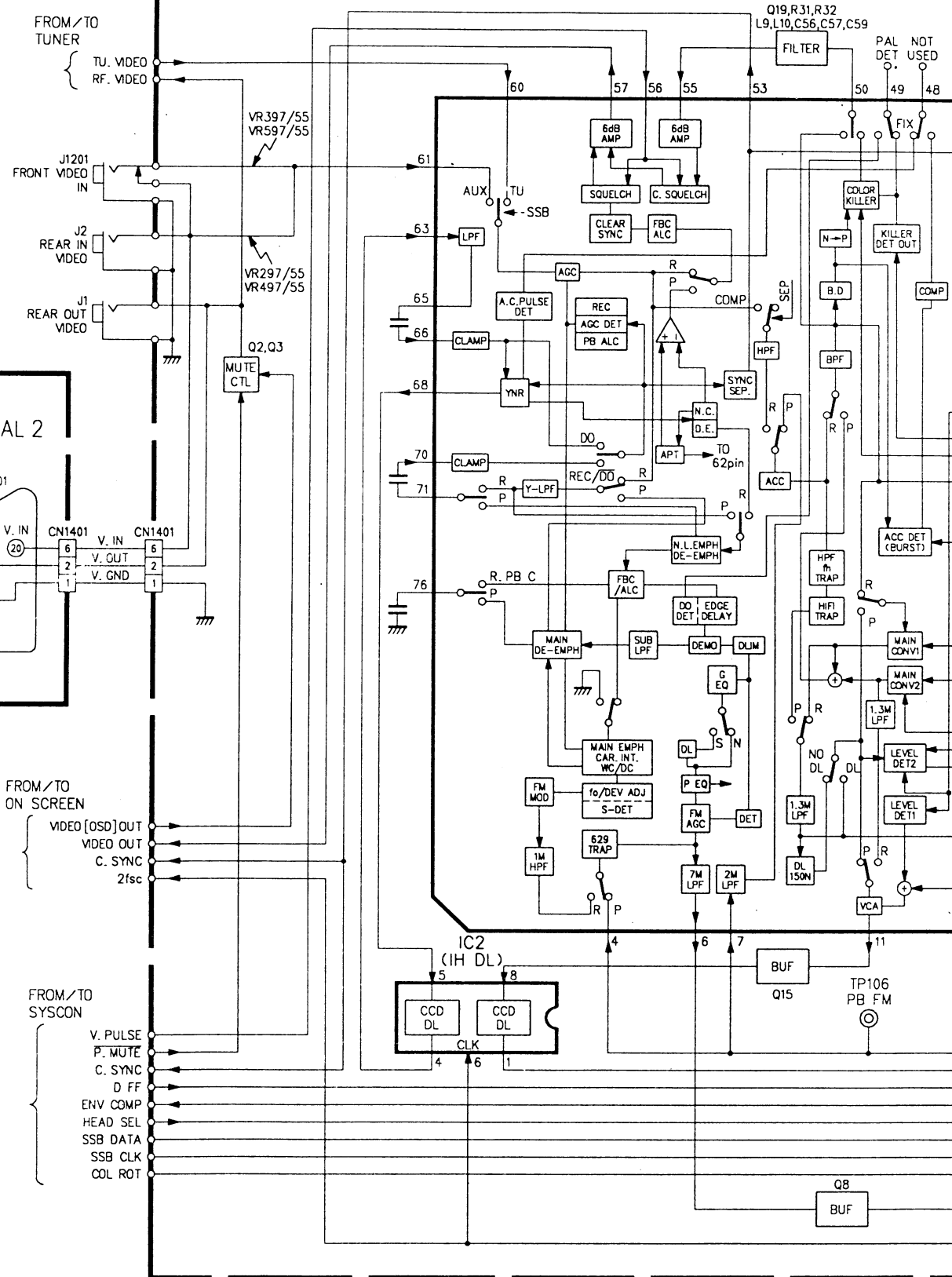
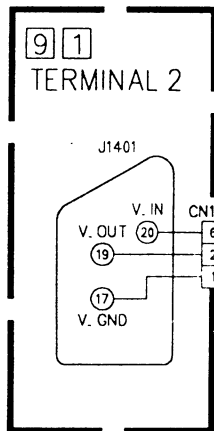
5

4

3

2

1



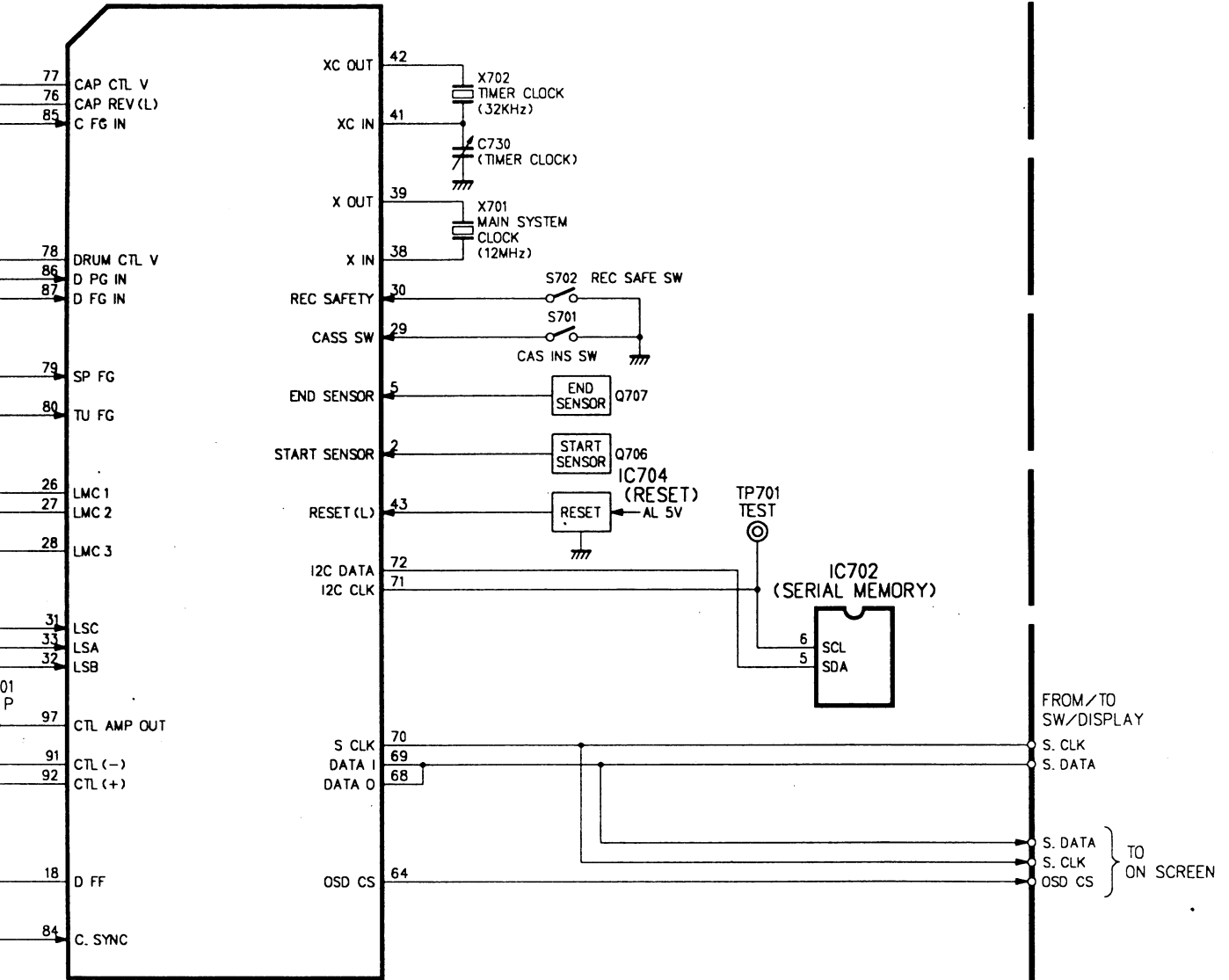
A

B

C

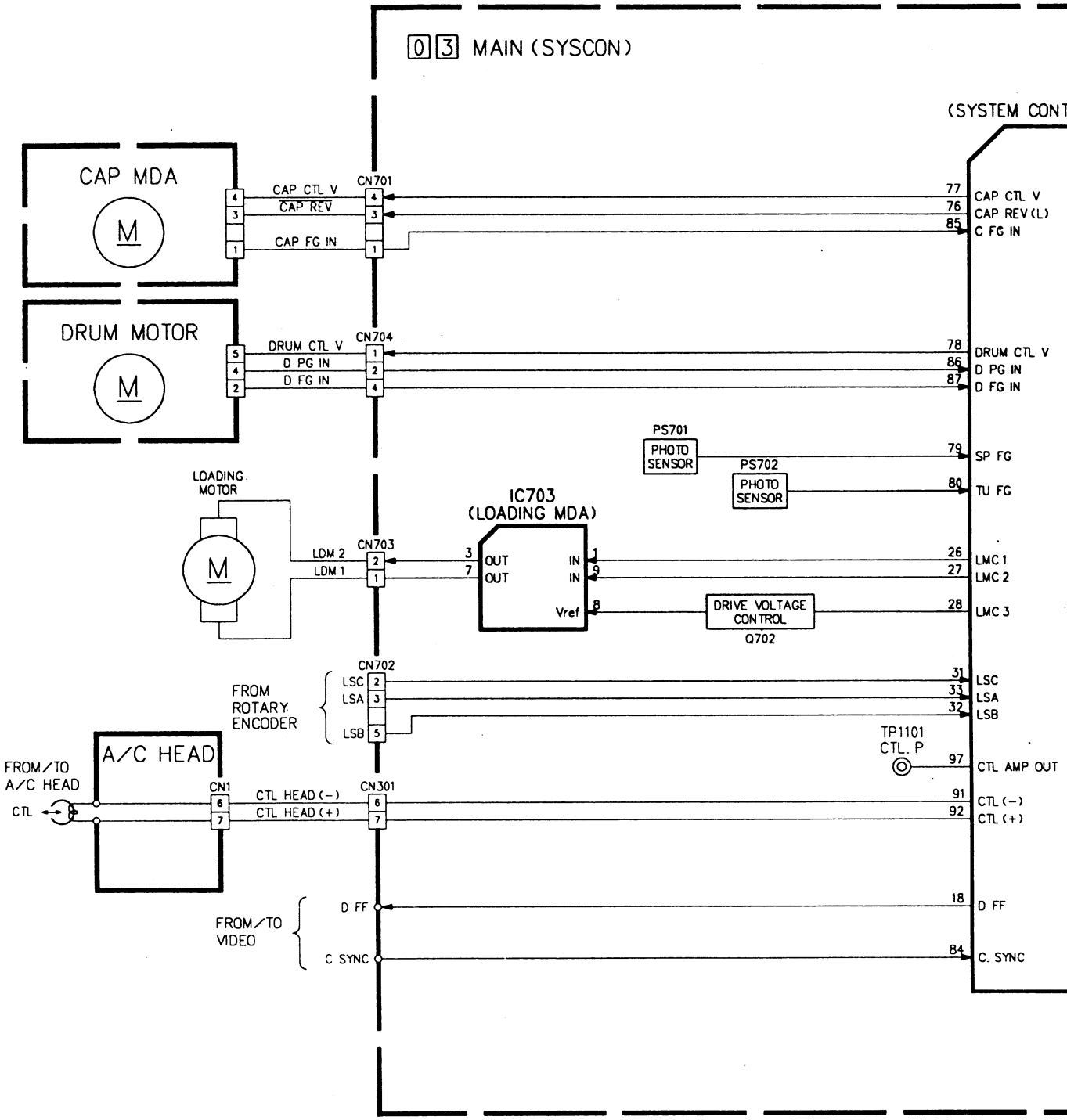
D

IC701  
(SYSTEM CONTROL MICRO PROCESSOR)

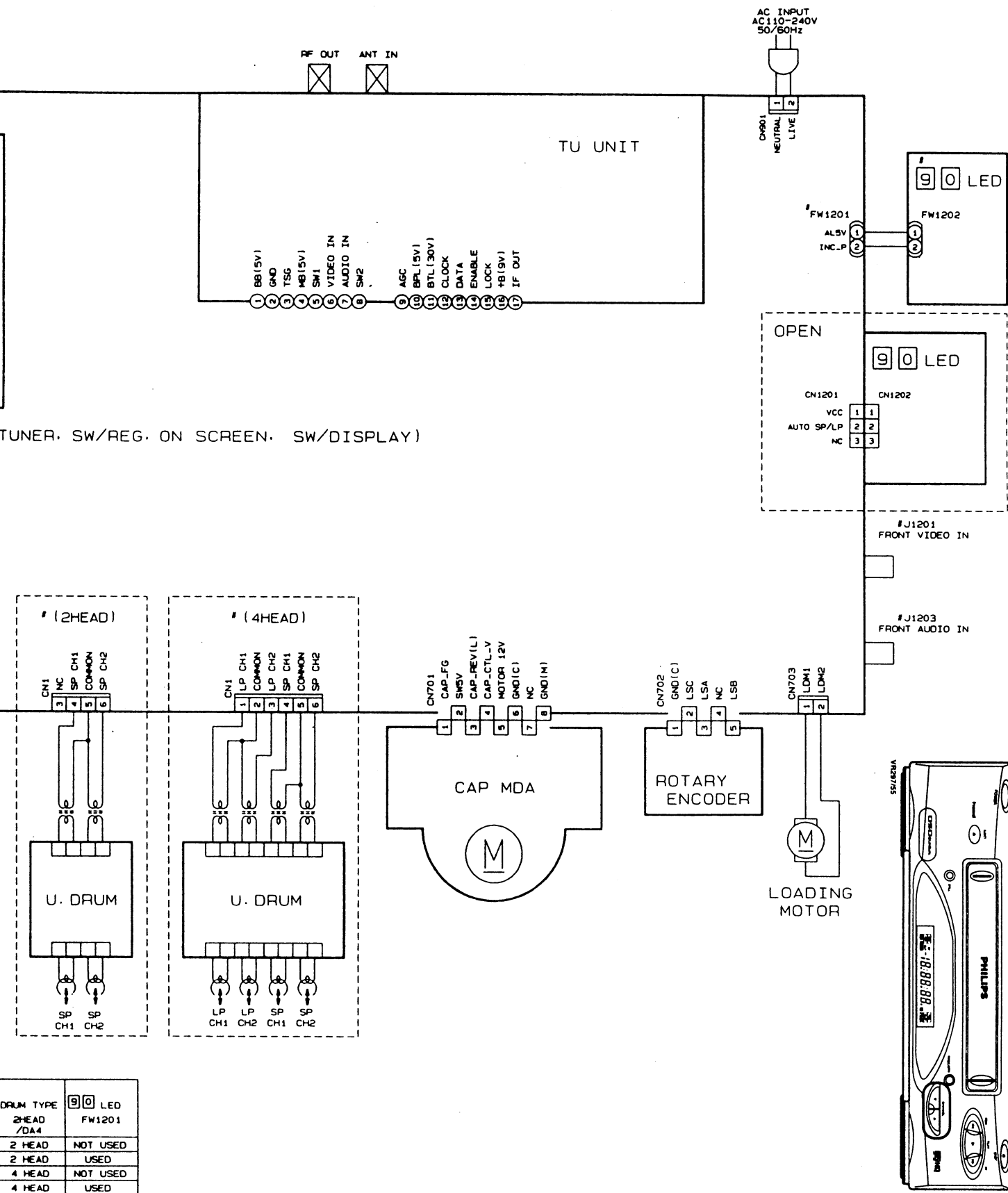


# 4.2 SYSTEM CONTROL BLOCK DIAGRAM

5  
4  
3  
2  
1







TUNER. SW/REG. ON SCREEN. SW/DISPLAY)

DRUM TYPE	9 0 LED
2-HEAD /DA4	FW1201
2 HEAD	NOT USED
2 HEAD	USED
4 HEAD	NOT USED
4 HEAD	USED

NOTES:  
 1.All parts shown in this schematic are critical for safety.  
 2.This schematic is only for reference.  
 Avoid replacing individual parts.  
 Replace the entire unit only.

Key No.	Key Name
1	7
2	MUTE
3	8
4	9
5	4
6	VCR POWER
7	5
8	6
9	1
10	F. ADV
11	2
12	3
13	STATUS/EXIT
14	MEMORY
15	MENU
16	CLEAR
17	X2PLAY
18	A. CH
19	STOP
20	SKIP/AUDIO
21	REW
22	TVPOWER
23	PLAY
24	FF
25	TV CH-
26	TV CH+
27	PAUSE/STILL
28	VCR CH-
29	100 +/-
30	EJECT
31	0
32	GO-TO
33	REC/OTR
34	VAR. SLOW-
35	TV VOL+
36	TRACKING+
37	-
38	VCR CH+
39	VAR. SLOW+
41	SPEED
42	VCR/TV
43	TV VOL-
44	TRACKING-
45	-
46	-
47	SLOW

REMOTE CONTROLLER

