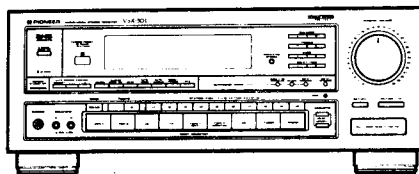


PIONEER
The Art of Entertainment

5

Service Manual



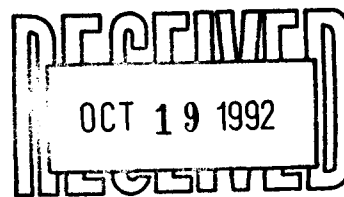
ORDER NO.
ARZ2558

AUDIO/VIDEO STEREO RECEIVER

VSX-501

VSX-511S

VSX-52

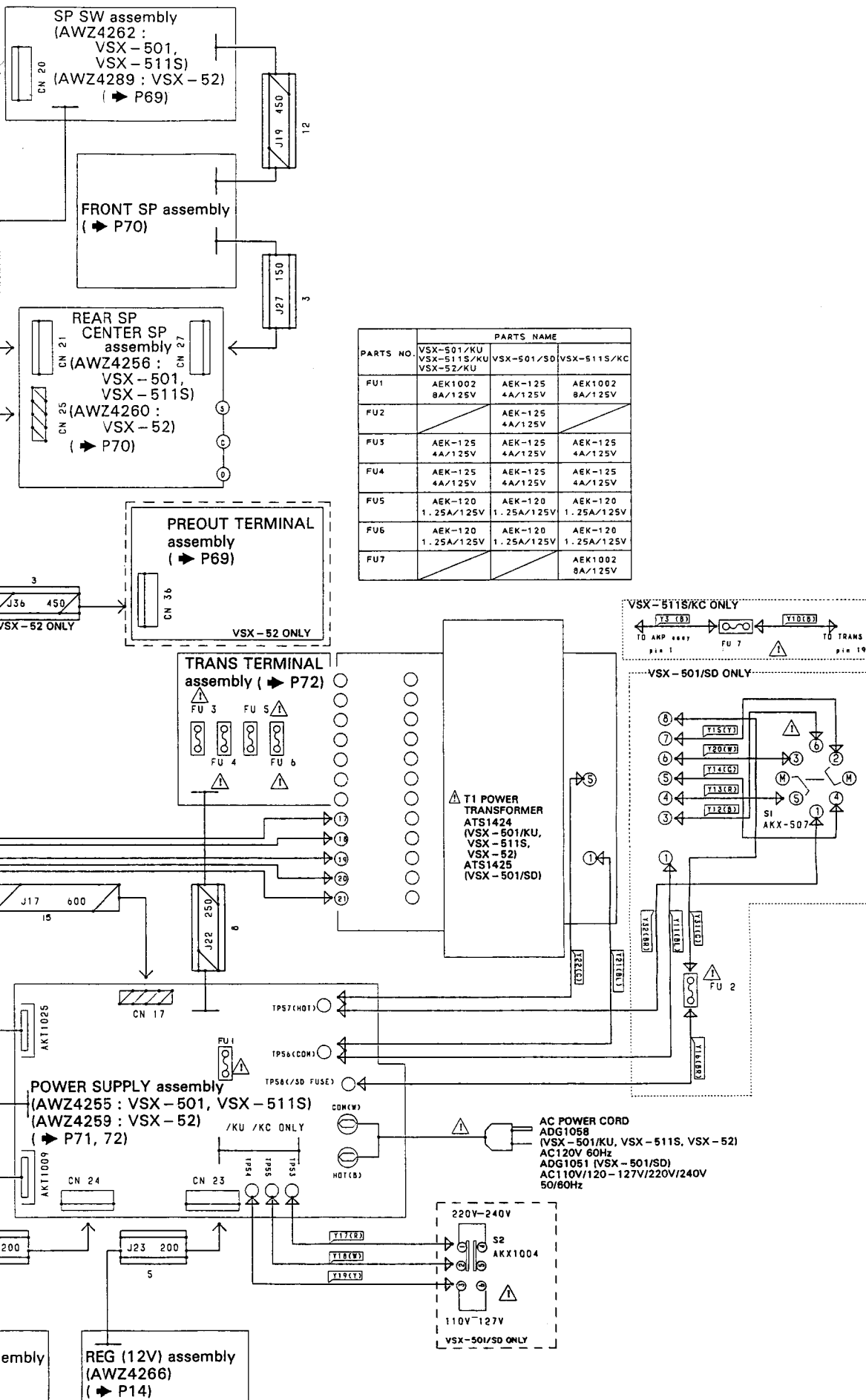


**CIRCUIT DIAGRAMS &
PATTERN LAYOUTS
WITH MICROFICHE**

(MICROFICHE PORTION LOCATED INSIDE BACK COVER)

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
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PIONEER ELECTRONIC CORPORATION 1992

DFG JUNE 1992 Printed in Japan



A

B

C

D



5. SCHEMATIC AND PCB CONNECTIONS DIAGRAMS

5.1 OVERALL SCHEMATIC DIAGRAM

Note:

(Type 1)

1. When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".

2. Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.

3. RESISTORS:

Unit: k: k Ω , M: M Ω , or Ω unless otherwise noted.

Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.

Tolerance: (F): $\pm 1\%$, (G): $\pm 2\%$, (K): $\pm 10\%$, (M): $\pm 20\%$ or $\pm 5\%$ unless otherwise noted.

4. CAPACITORS:

Unit: p: pF or μ F unless otherwise noted.

Ratings: capacitor (μ F)/ voltage (V) unless otherwise noted.

Rated voltage: 50V except for electrolytic capacitors.

5. COILS:

Unit: m: mH or μ H unless otherwise noted.

6. VOLTAGE AND CURRENT:

$\square$ V : Signal voltage at rated output.

$\square$: DC voltage (V) at no input signal unless otherwise noted.

Value in () is DC voltage at rated power.

$\square$ mA or $\square$ mA : DC current at no input signal unless otherwise noted.

7. OTHERS:

$\bullet \rightarrow$: Signal route.

$\odot$: Adjusting point.

$\blacktriangledown$ (Red) : Measurement point.

The Δ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.

8. SWITCHES (Underline indicates switch position):

S1 LINE VOLTAGE SELECTOR (VSX-501/SD ONLY)
AC110V/120-127V/220V/240V

S2 LINE VOLTAGE SELECTOR (VSX-501/SD ONLY)
AC110-127V/220-240V

S3 CH. STEP (VSX-501/SD ONLY)
9kHz - 10kHz

FL. U-COM assembly

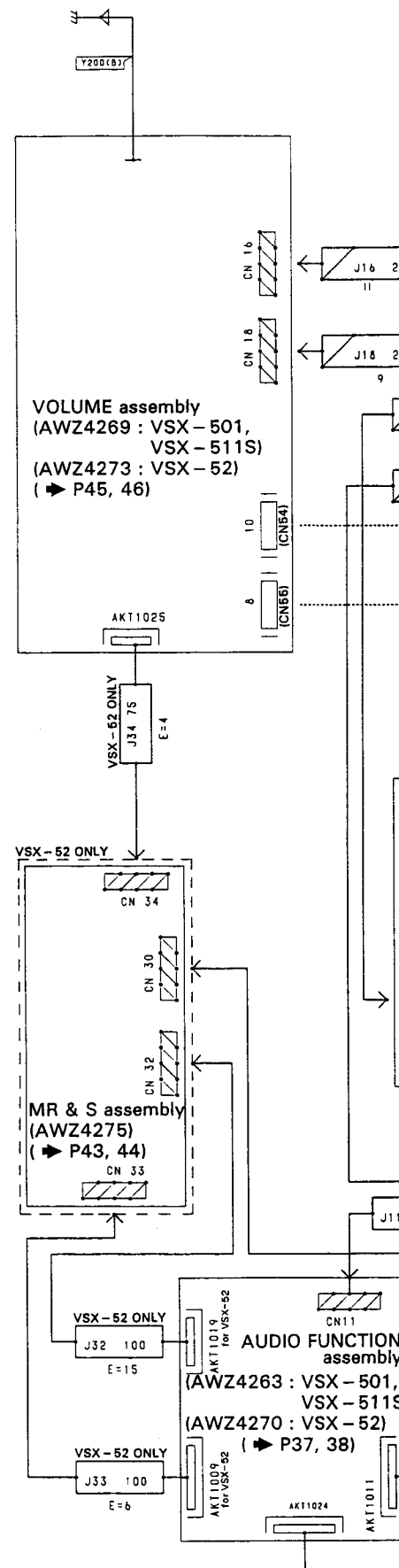
S601 SIMULATED STEREO
S602 OSD SELECT (VSX-52 ONLY)
S603 POWER
S604 ASC MEMORY
S605 SIMULATED SURR.
S606 VIDEO SELECTOR
S607 BAND
S608 ASC 1
S609 STUDIO
S610 MR & S (VSX-52 ONLY)
S611 TUNING DOWN
S612 ASC 2
S613 EFFECT DOWN
S614 VCR 1
S615 TUNING UP
S616 MEMORY
S617 BASS DOWN
S618 VCR 2
S619 1
S620 CUSTOM SELECT
S621 TREBLE DOWN
S622 LD
S623 2
S624 SCAN
S625 PROLOGIC
S626 TV
S627 3
S628 AUTO MONO
S629 BALANCE LCH

S631 4

S632 AUTO MANUAL
S633 EFFECT UP
S634 TAPE 1/DAT
S635 5
S636 DIRECT ACCESS
S637 BASS UP
S638 TAPE 2/MONITOR
S639 6
S640 HITS
S641 3CH LOGIC
S642 CD
S643 7
S645 TREBLE UP
S646 TUNER
S647 8
S649 BALANCE RCH
S650 PHONO
S651 9
S653 RETURN
S654 ACOUSTIC SELECT
S655 0
S657 MUTING
S658 ACOUSTIC MEMORY
S659 RESET

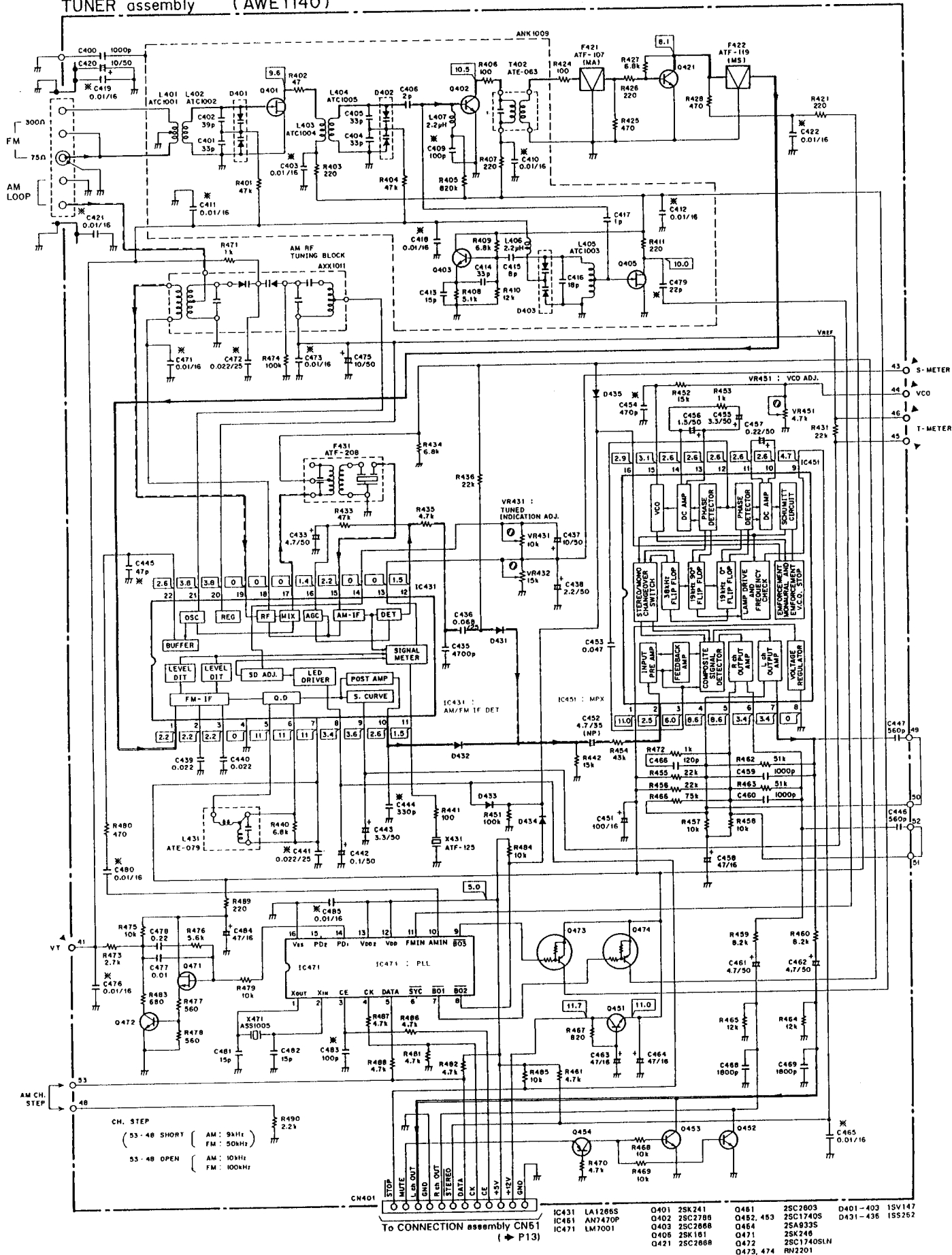
SP SW assembly

S251 SP-A ON/OFF
SP-B ON/OFF



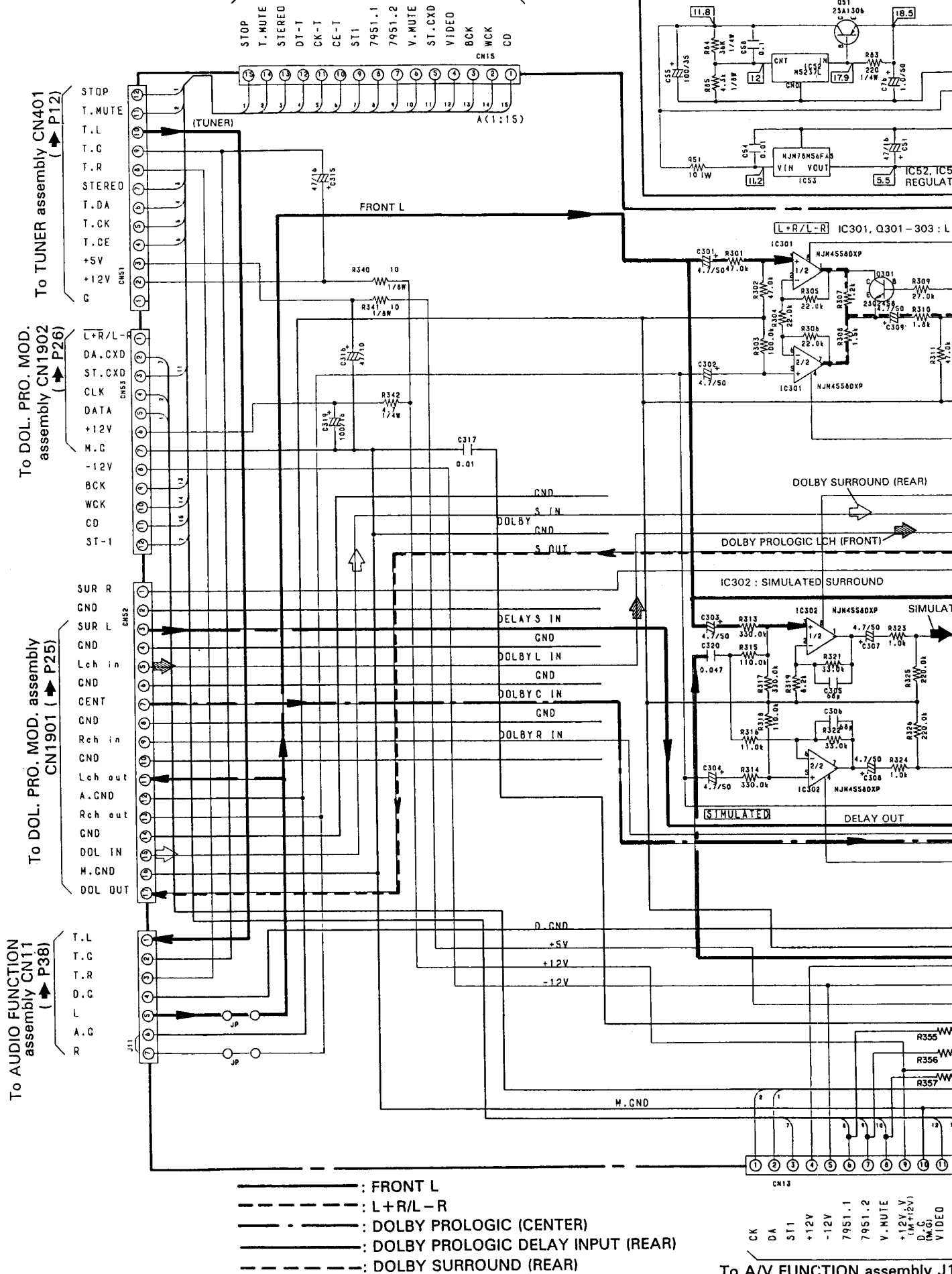
5.2 TUNER ASSEMBLY, CONNECTION ASSEMBLY, REG (12V) ASSEMBLY AND REG (5.6V) ASSEMBLY

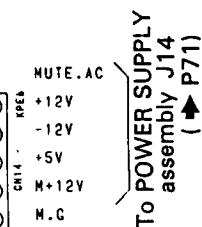
TUNER assembly (AWE1140)

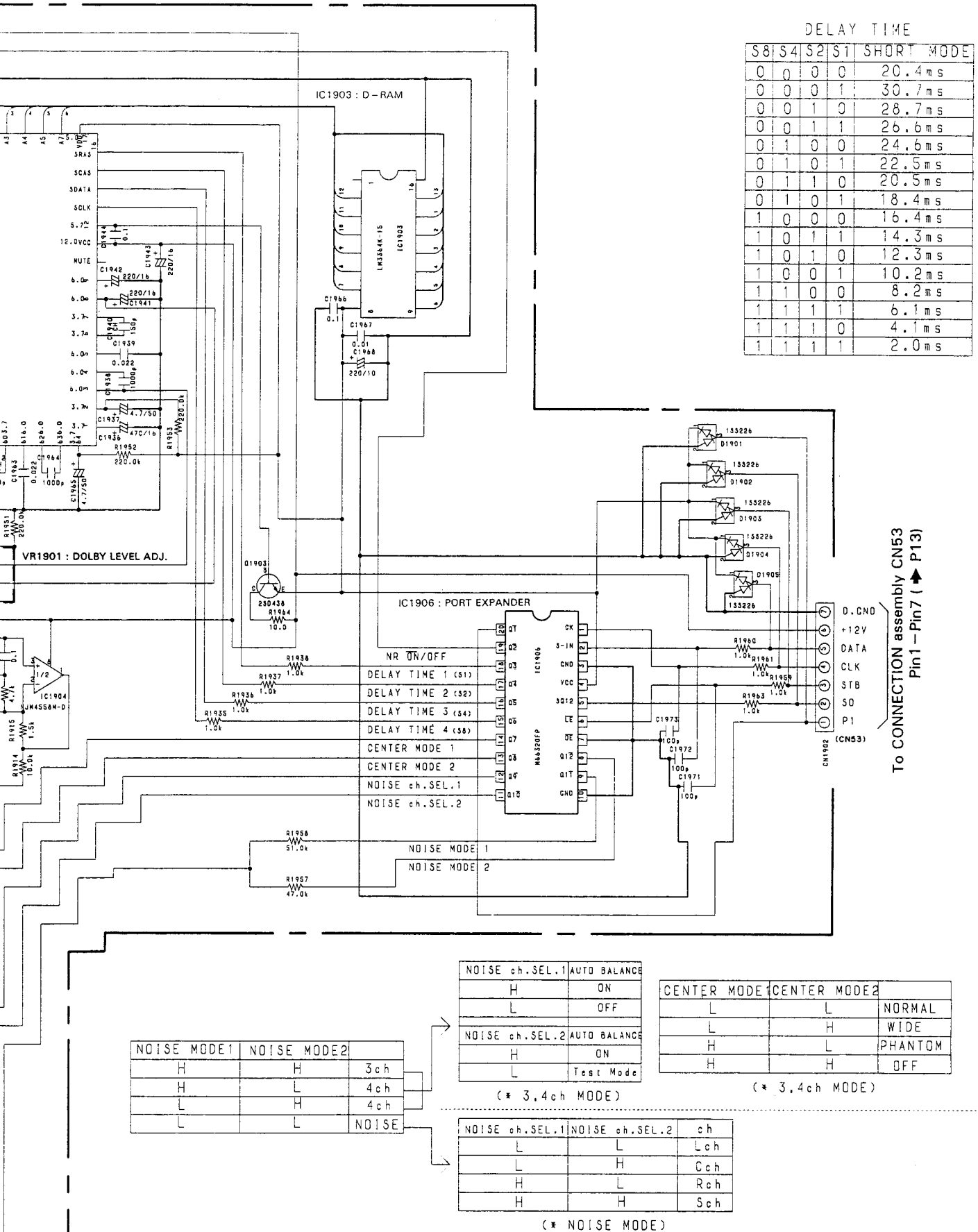


To FL. U-COM assembly J15 (→ P57)

REG (5.6V) assembly (AWZ4267)







A

B

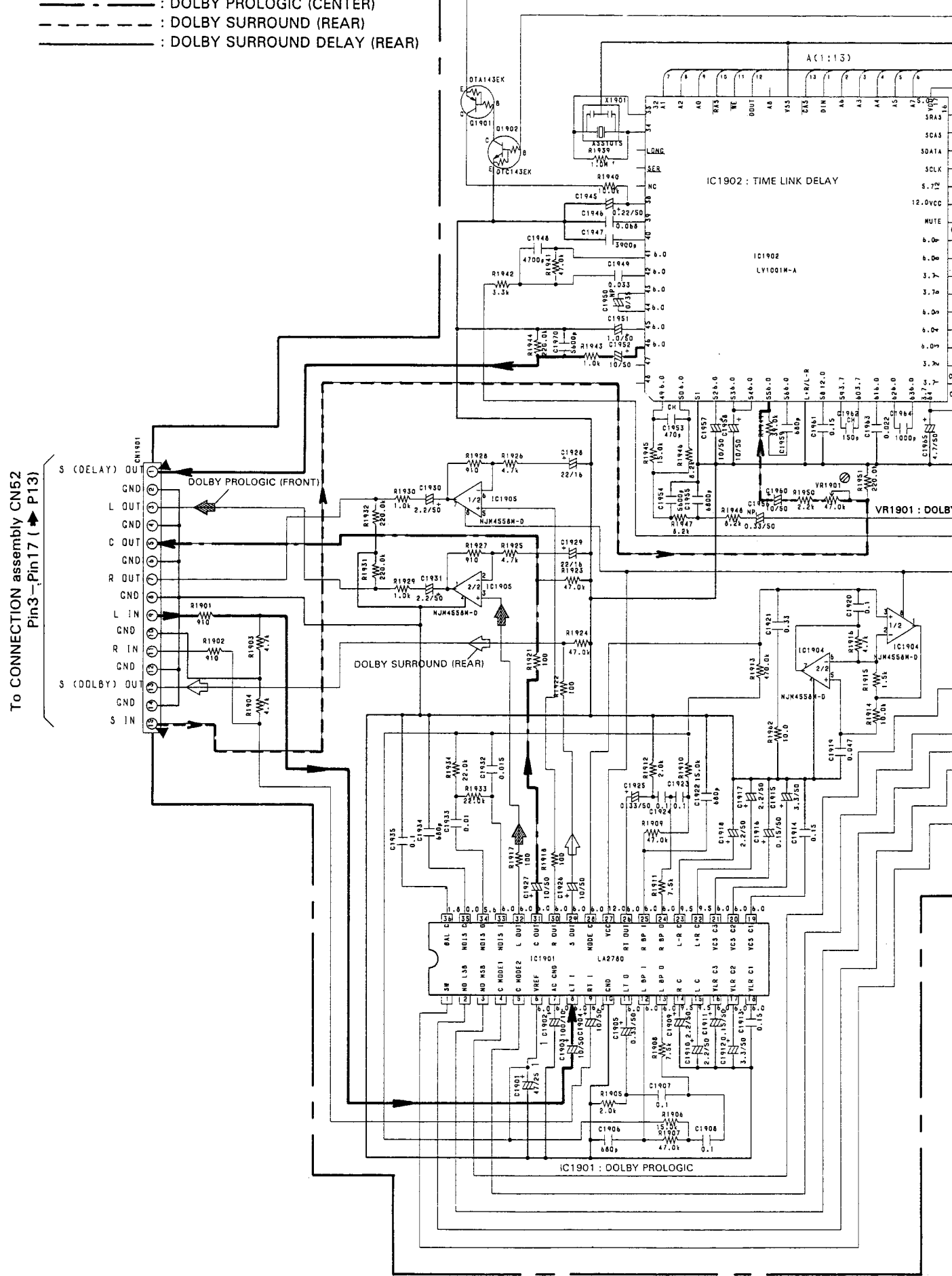
C

D

- : FRONT Lch
- - - - : DOLBY PROLOGIC (CENTER)
- : DOLBY SURROUND (REAR)
- ~~~~~ : DOLBY SURROUND DELAY (REAR)

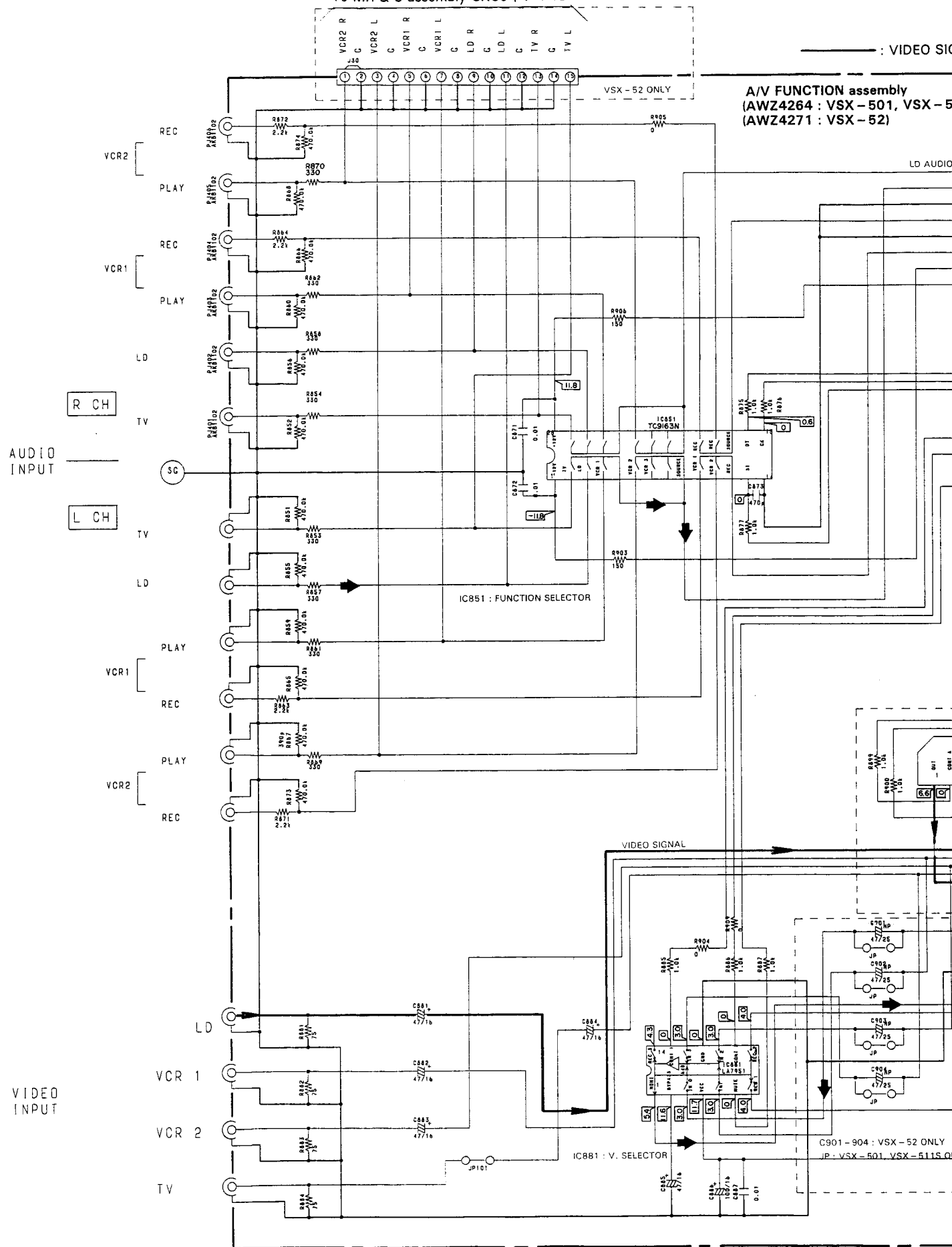
To CONNECTION assembly CN52
Pin3—Pin17 (▲ P13)

DOL. PRO. MOD. assembly (AXQ1009)

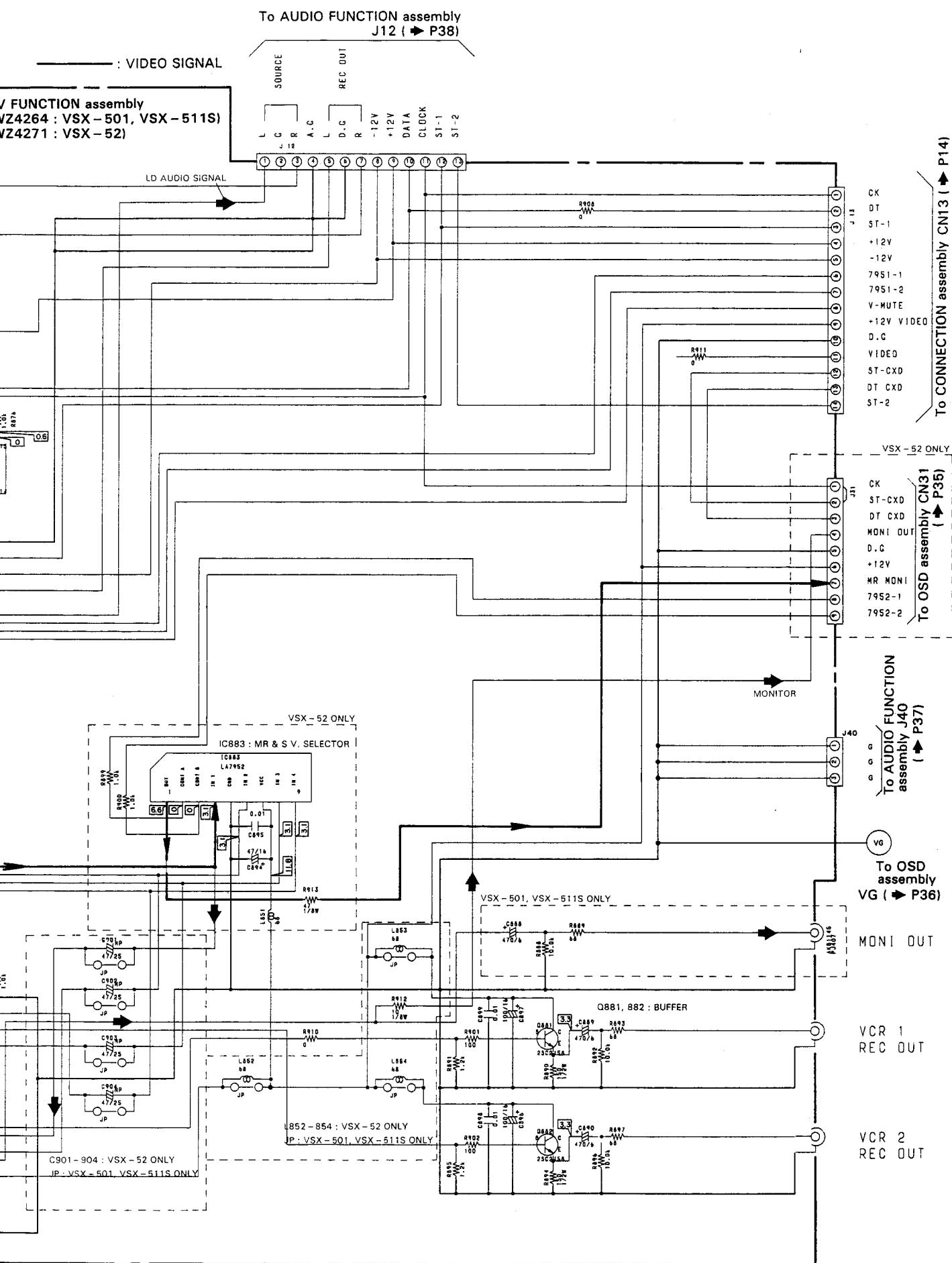


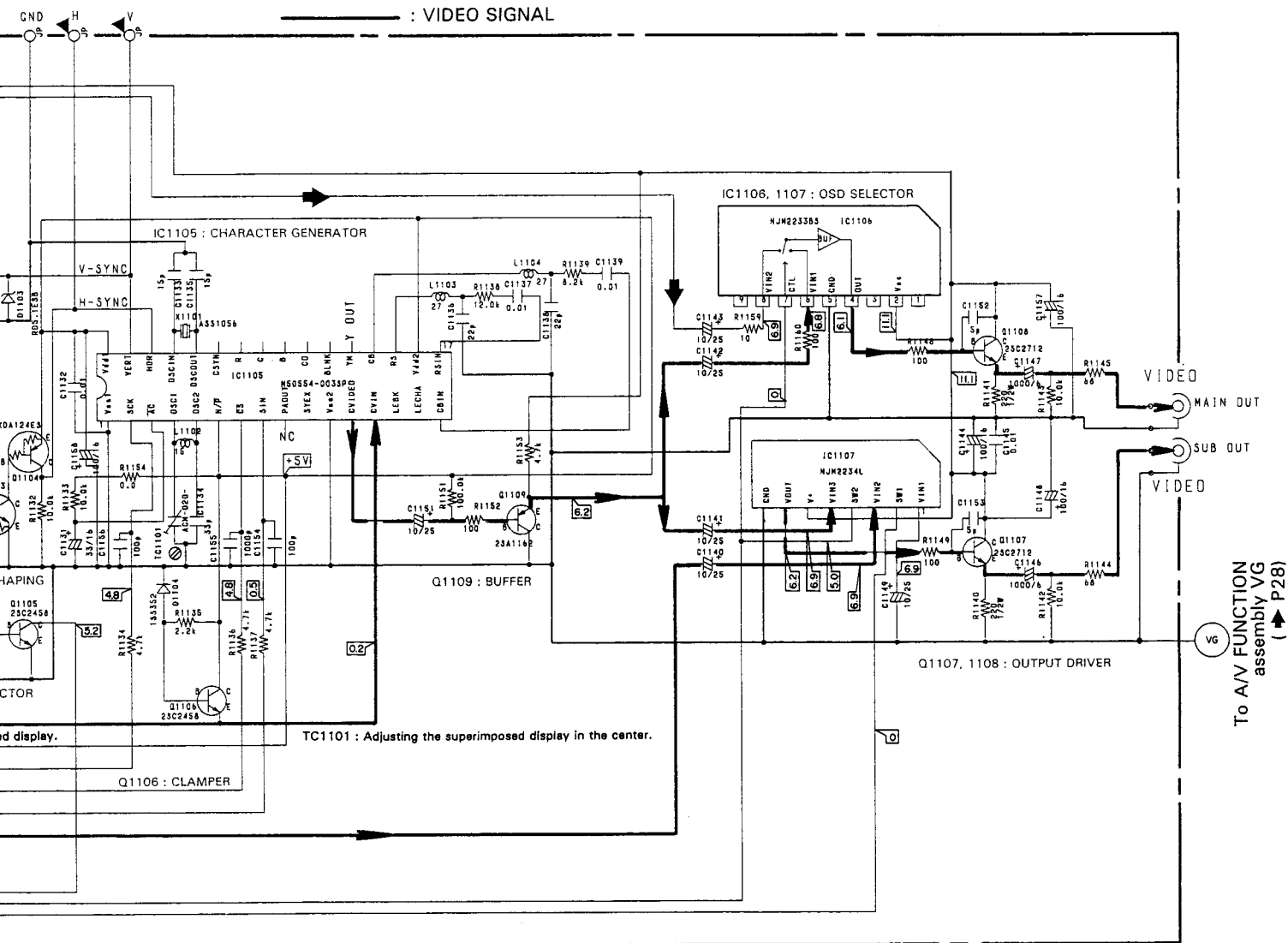
- : VIDEO SIC

A/V FUNCTION assembly
(AWZ4264 : VSX - 501, VSX - 502)
(AWZ4271 : VSX - 52)

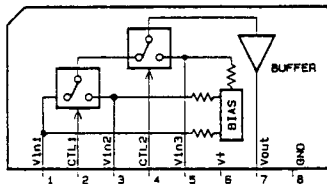


C901-904: VSX-52 ONLY
JP: VSX-501, VSX-511S Q





IC1101 NJM2234L



A

B

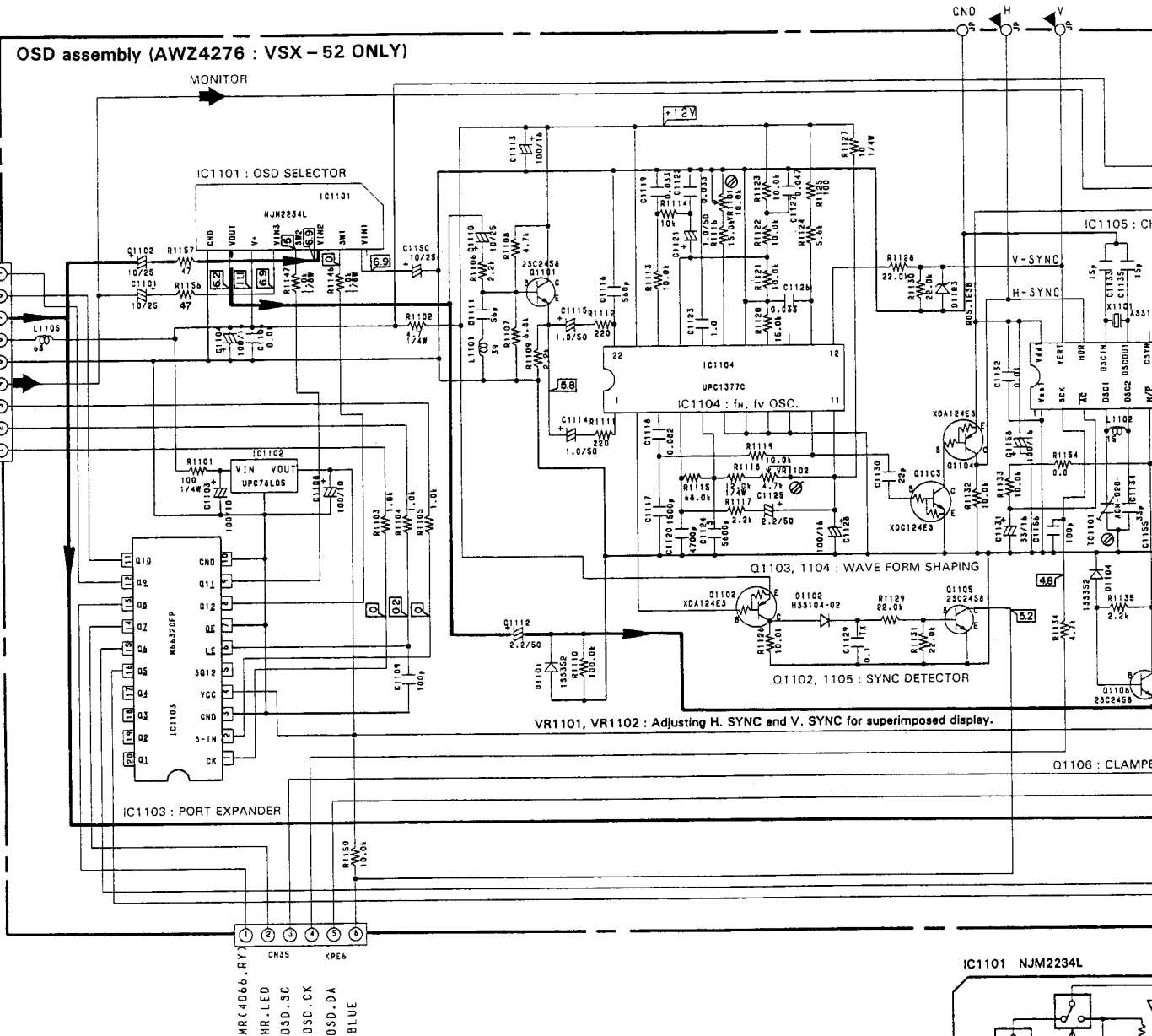
C

D

To A/V FUNCTION assembly J31 (→ P28)

OSD assembly (AWZ4276 : VSX - 52 ONLY)

MONITOR

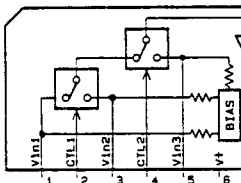


VR1101, VR1102 : Adjusting H. SYNC and V. SYNC for superimposed display.

Q1106 : CLAMP

To FL. U - COM assembly J35 (→ P57)

IC1101 NJM2234L



5.6 AUDIO FUNCTION ASSEMBLY

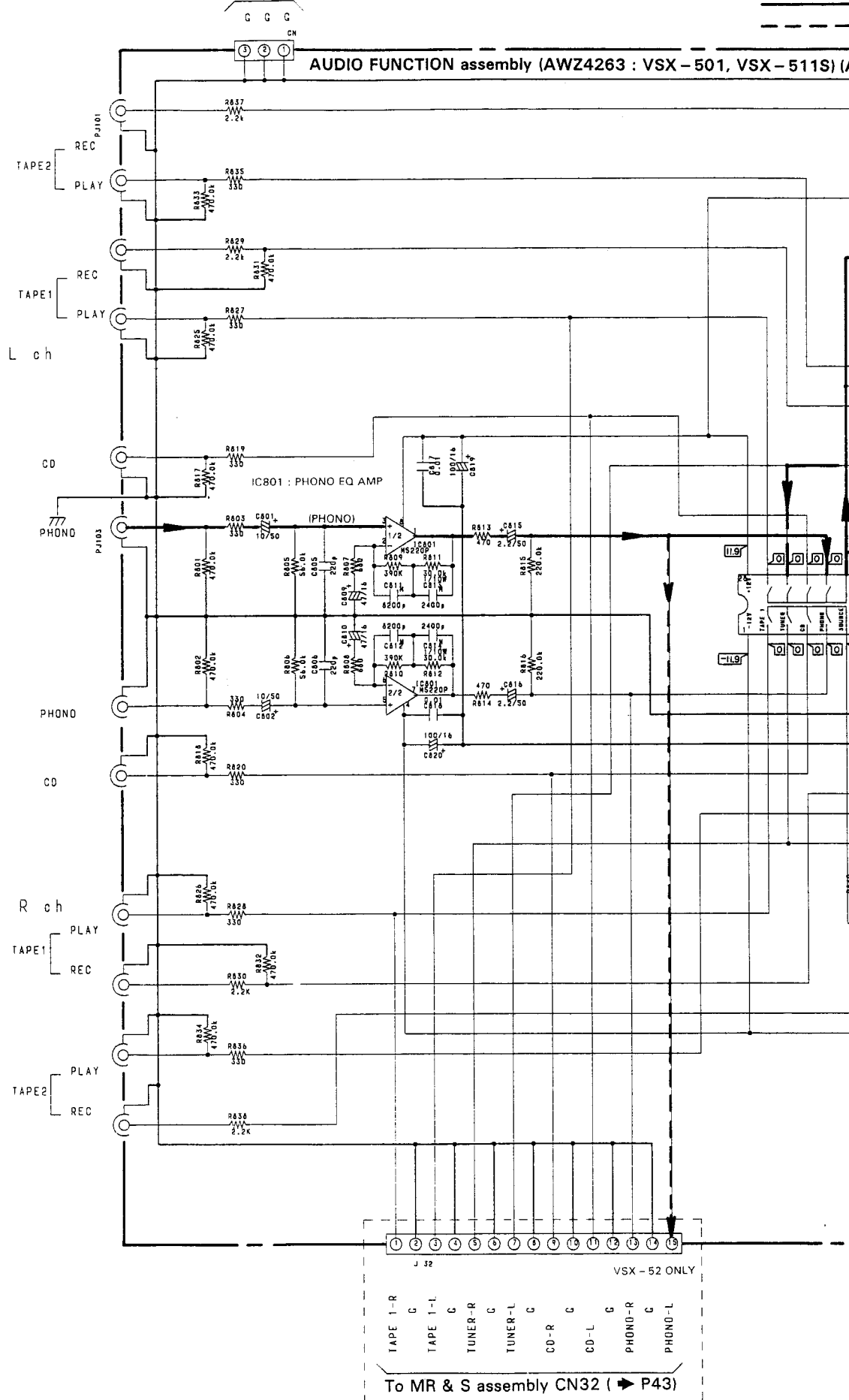
To A/V FUNCTION assembly J40 (➔ P28)

A

B

C

D



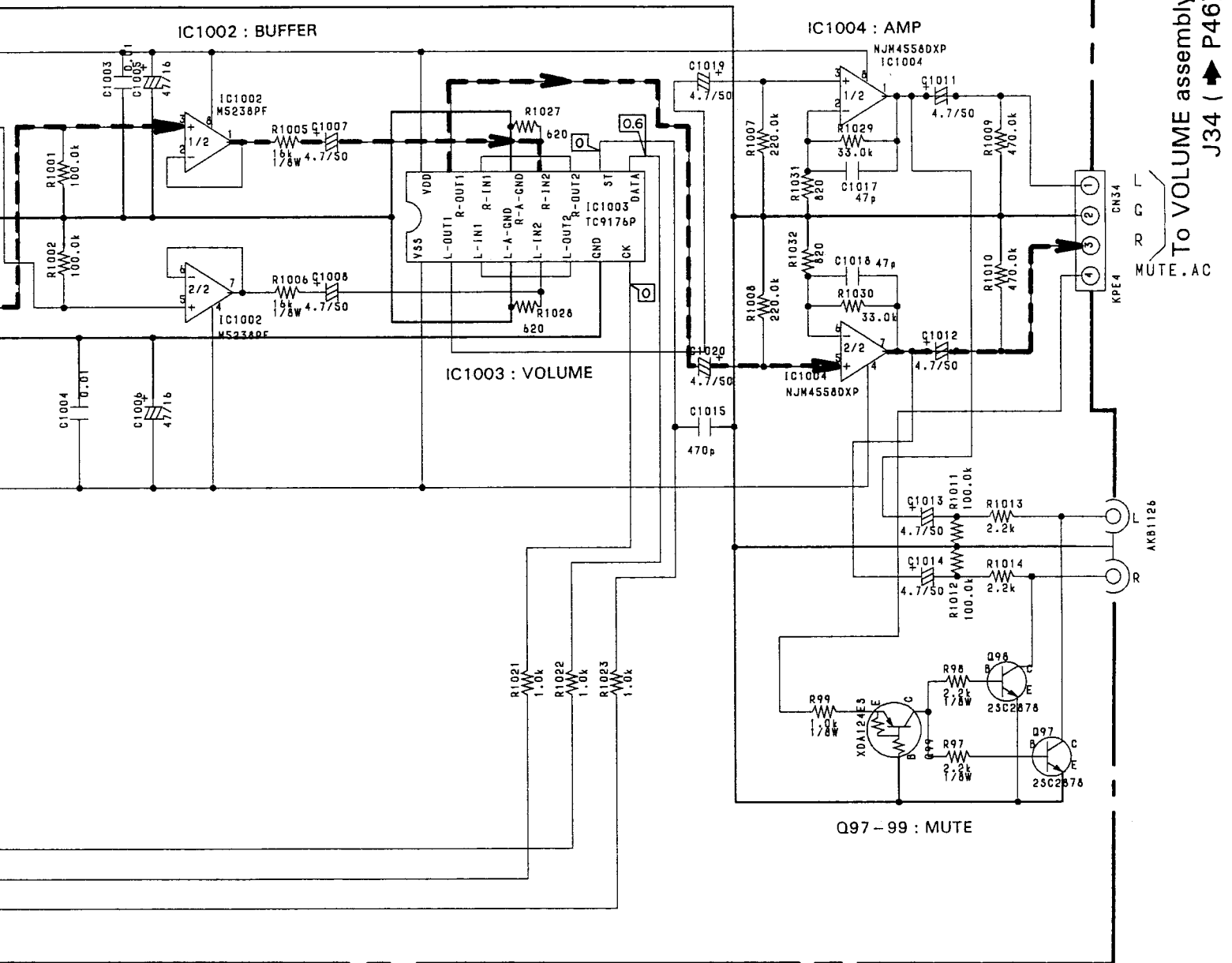
P27)

R

19

----- : REAR L

MR & S assembly (AWZ4275 : VSX-52 ONLY)



A

C

D

To AUDIO FUNCTION assembly
J32 (➔ P37)

To AUDIO FUNCTION
assembly J33 (➔ P38)

-12V
D.GND
+12V
DATA
CLOCK
STROBE2

PHONO
CD
TUNER
TAPE1

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

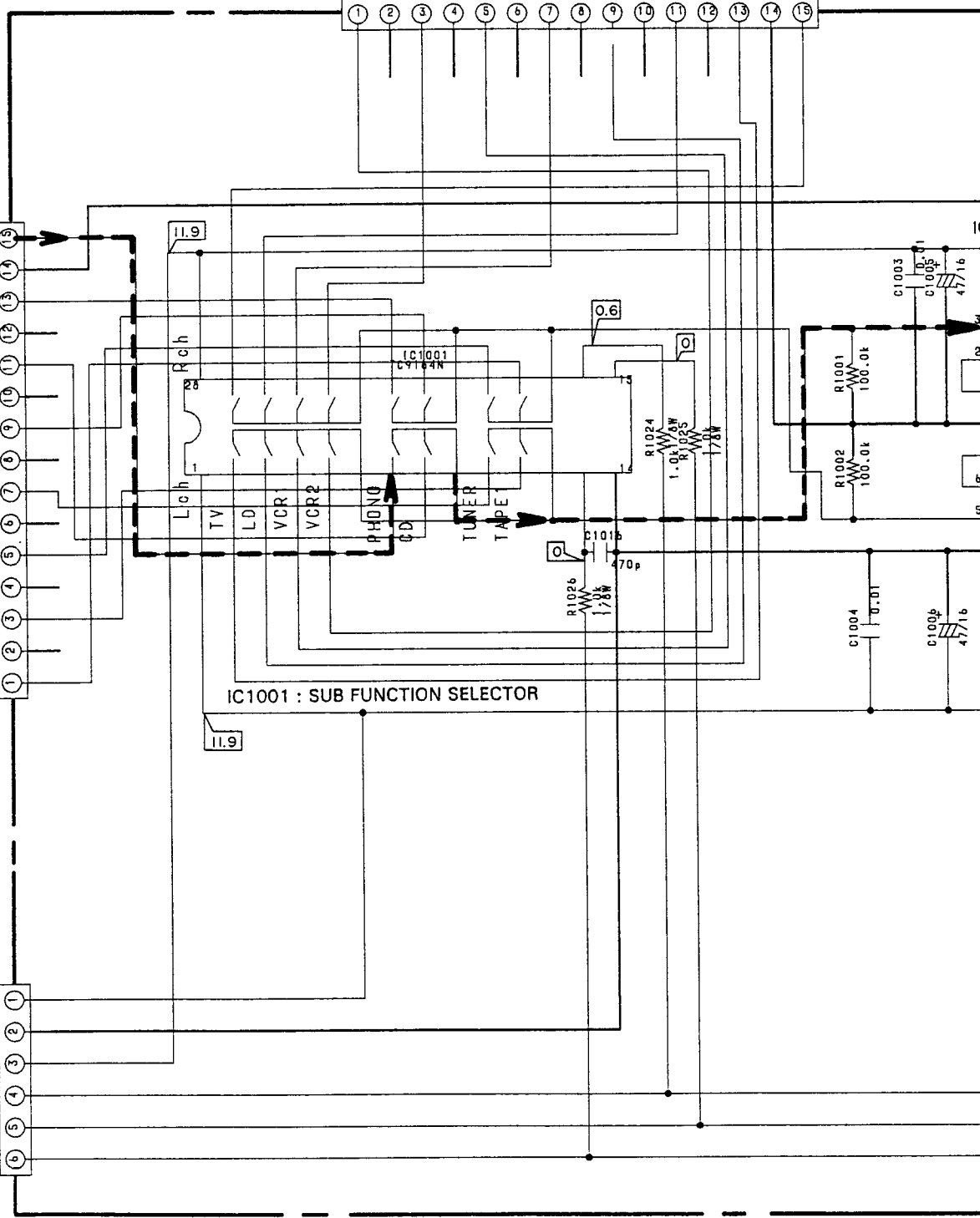
1 2 3 4 5 6

To A/V FUNCTION assembly J30 (➔ P27)

VCR2 VCR1 LD TV
L G R G L G R G L G R G L G R

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

IC1001 : SUB FUNCTION SELECTOR



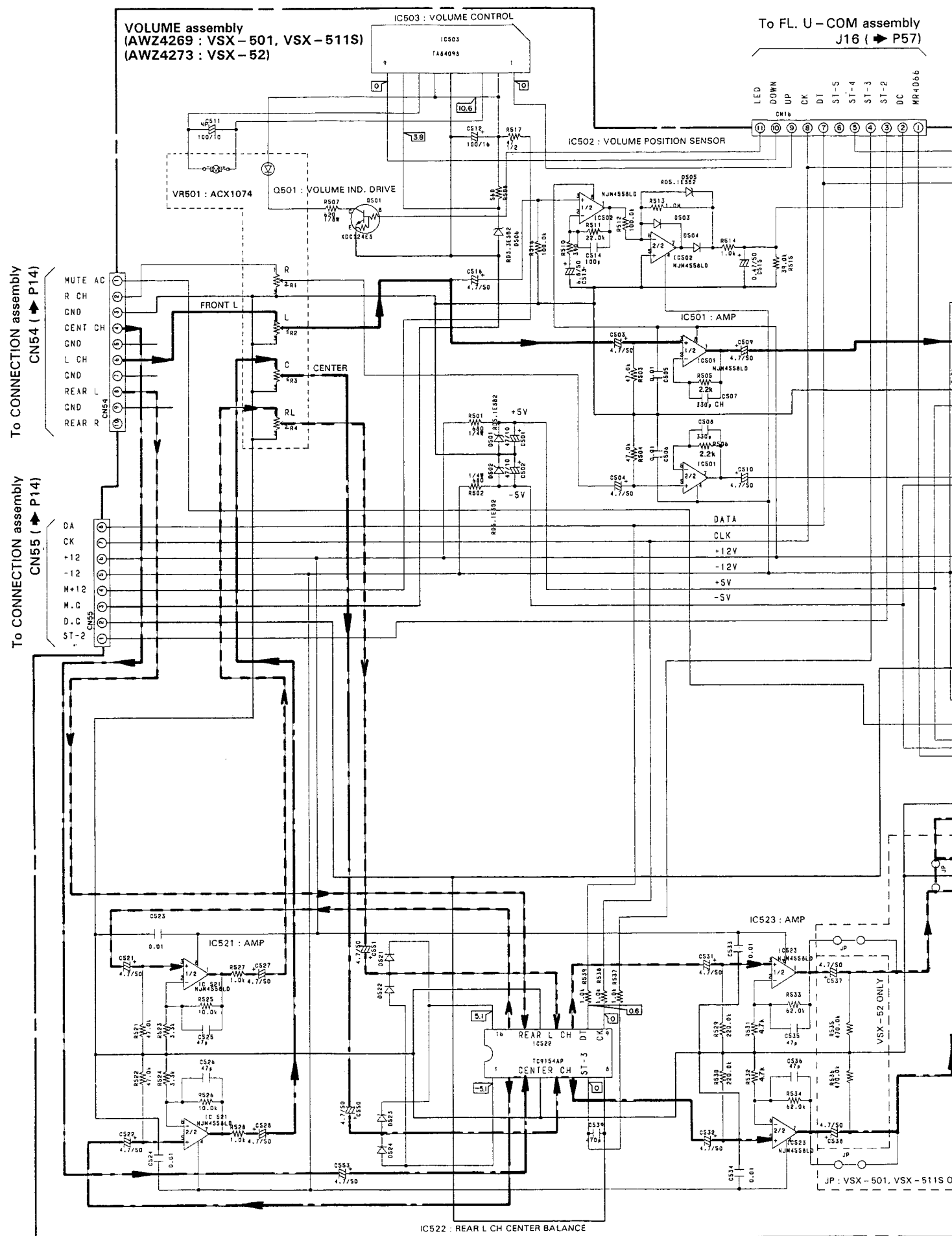
5.8 VOLUME ASSEMBLY

A

B

C

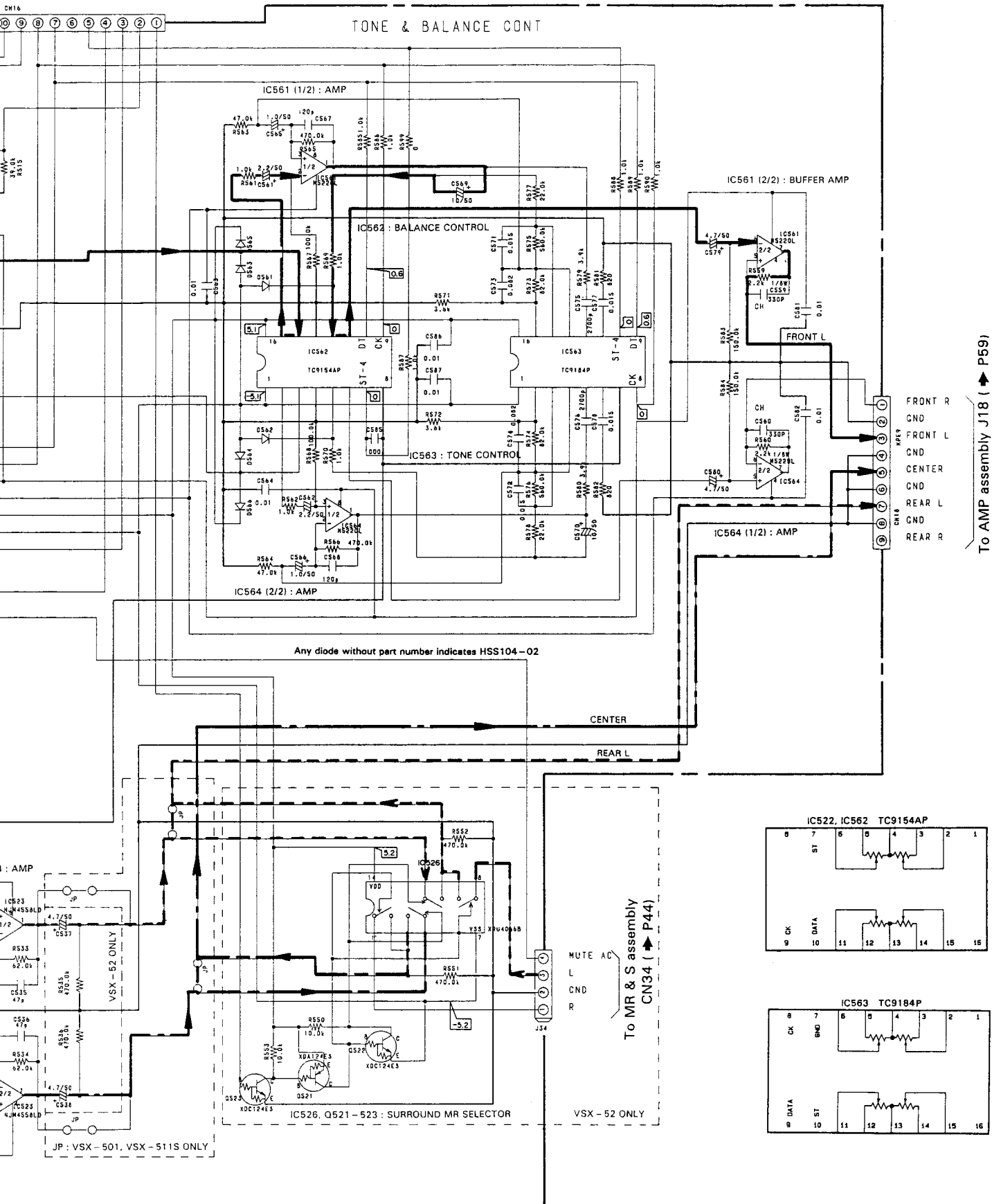
D

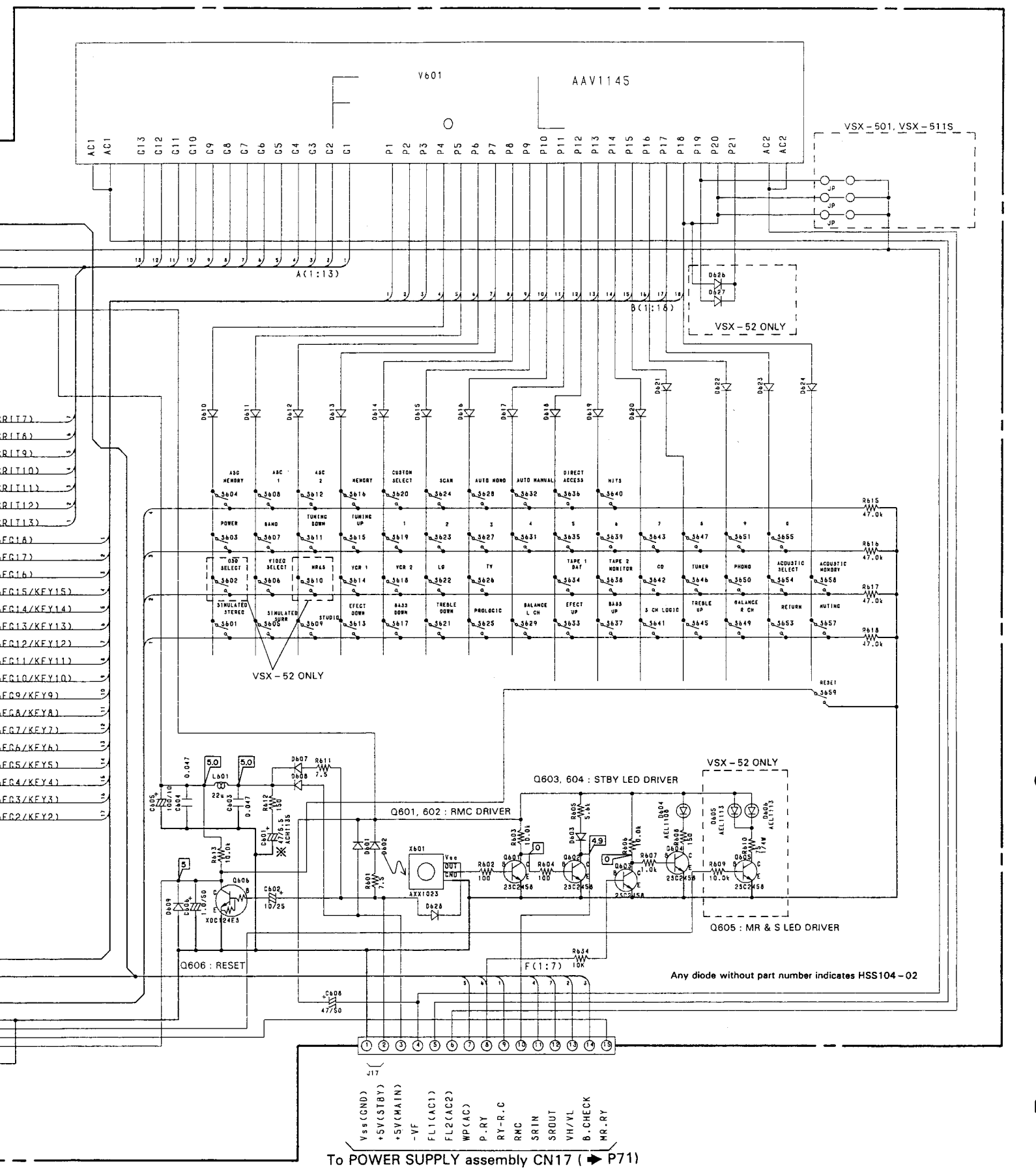


6 FL. U - COM assembly
J16 (► P57)

— : FRONT L
- - : CENTER
--- : REAR L

DOWN
UP
CK
DT
ST-5
ST-4
ST-3
ST-2
DC
MR4056





FL. U-COM assembly (AWK1556 : VSX - 501, VSX - 511S)
(AWK1544 : VSX - 52)

To CONNECTION assembly
CN15 (▶ P13)

STOP
T.MUTE
STEREO
DT-T
CK-T
CE-T
ST1
7951.1
7951.2
V.MUTE
STCXD
VIDEO
BCK
WCK
CD

To VOLUME assembly
CN16 (▶ P46)

LED
DOWN
UP
CK
DA
ST5
ST4
ST3
ST-2
DC
MR4066

IC601 : SYSTEM CONTROL

IC601
PDG083A

VSX - 52 ONLY

MR(4066,RY)
MR.LED
OSD-CS
OSD-CK
OSD-DA
BLUE

To OSD assembly
CN35 (▶ P35)

A



D

59

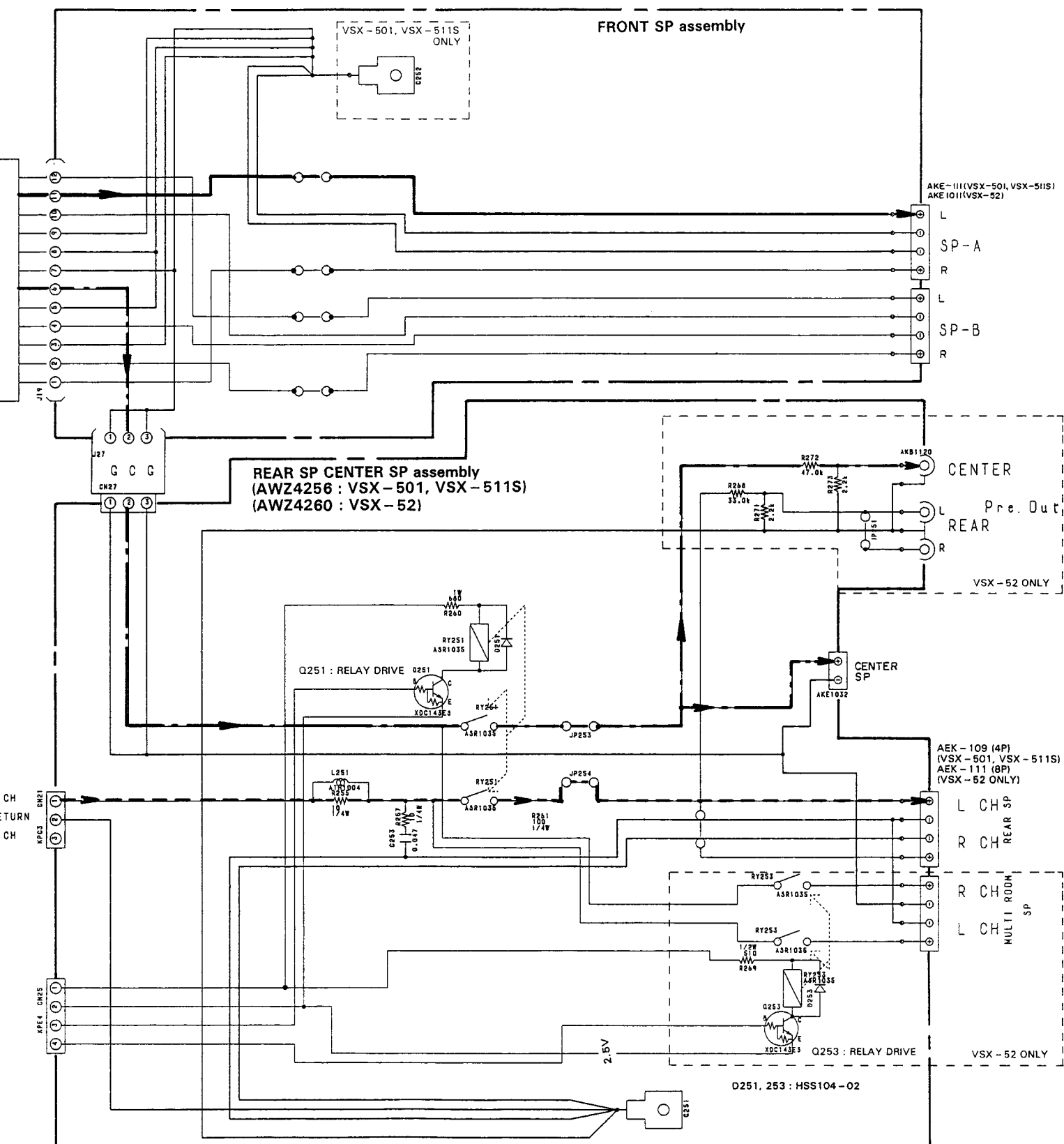
To POWER SUPPLY assembly



	V _H	V _L
LOAD	± 54.0	± 41.8
OPEN	± 68.0	± 50.3

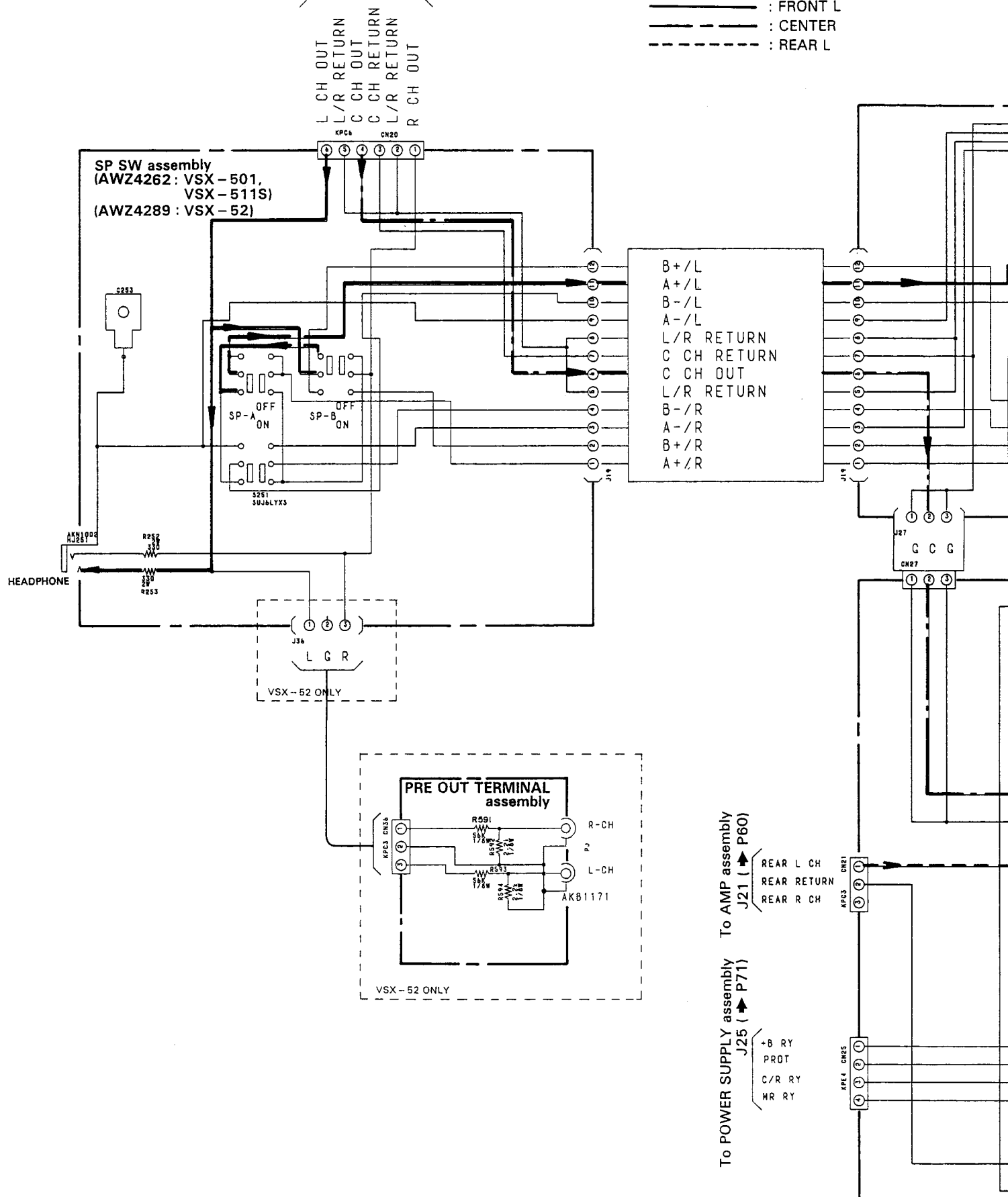
POWER SUPPLY assembly J29 (➡ P72)

ONT L
TER
AR L

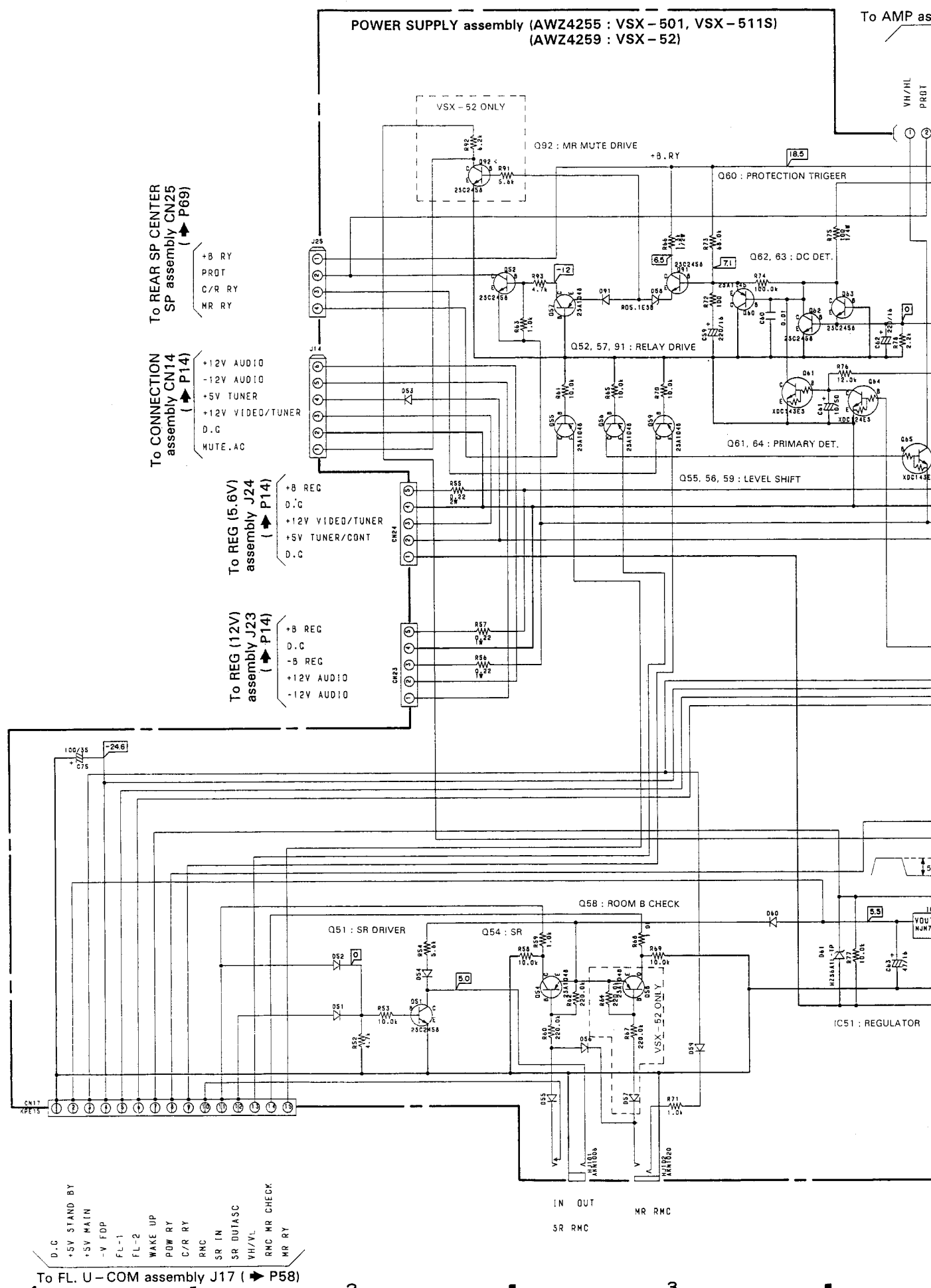


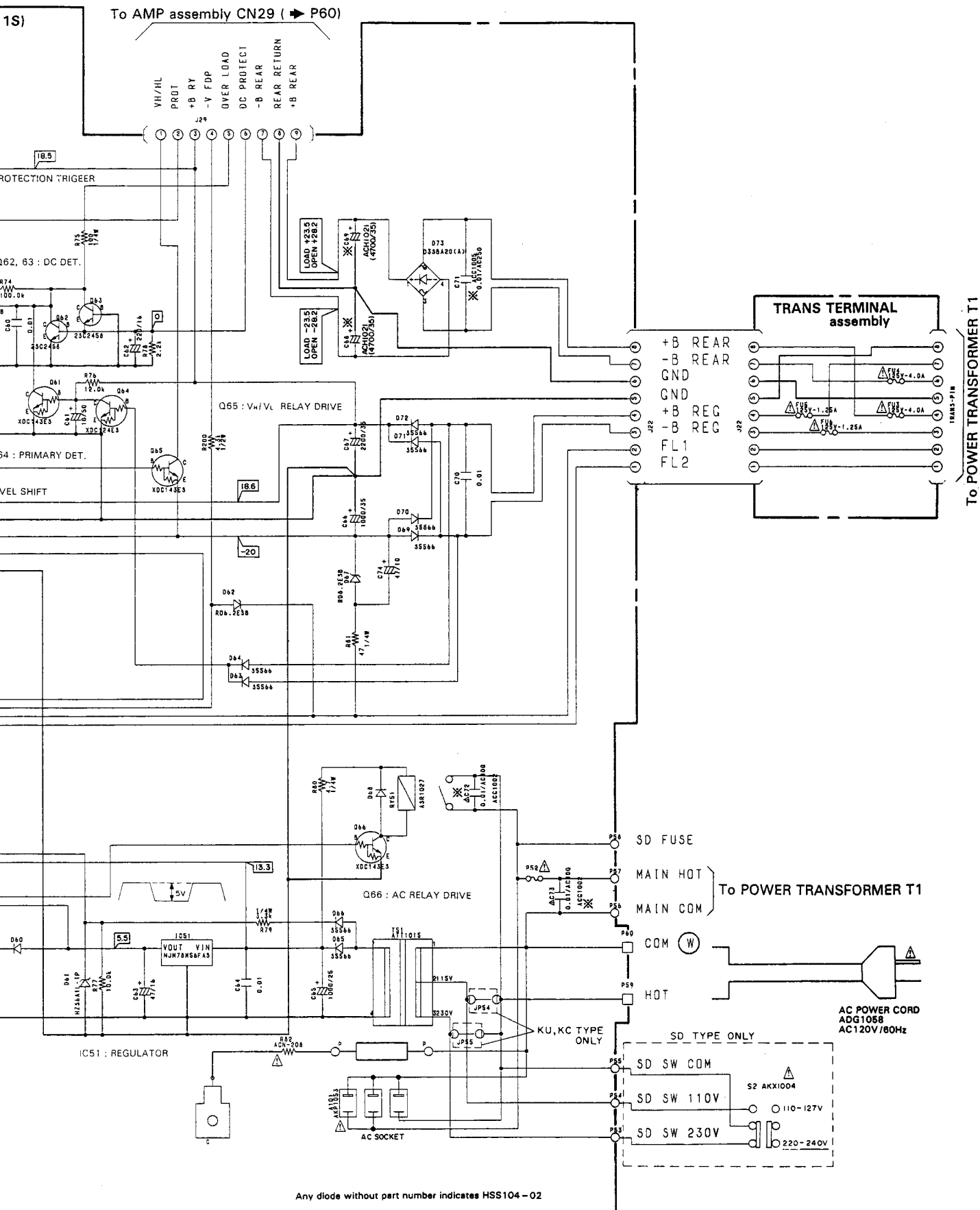
To AMP assembly J20 (➡ P60)

 : FRONT L
 : CENTER
 : REAR L

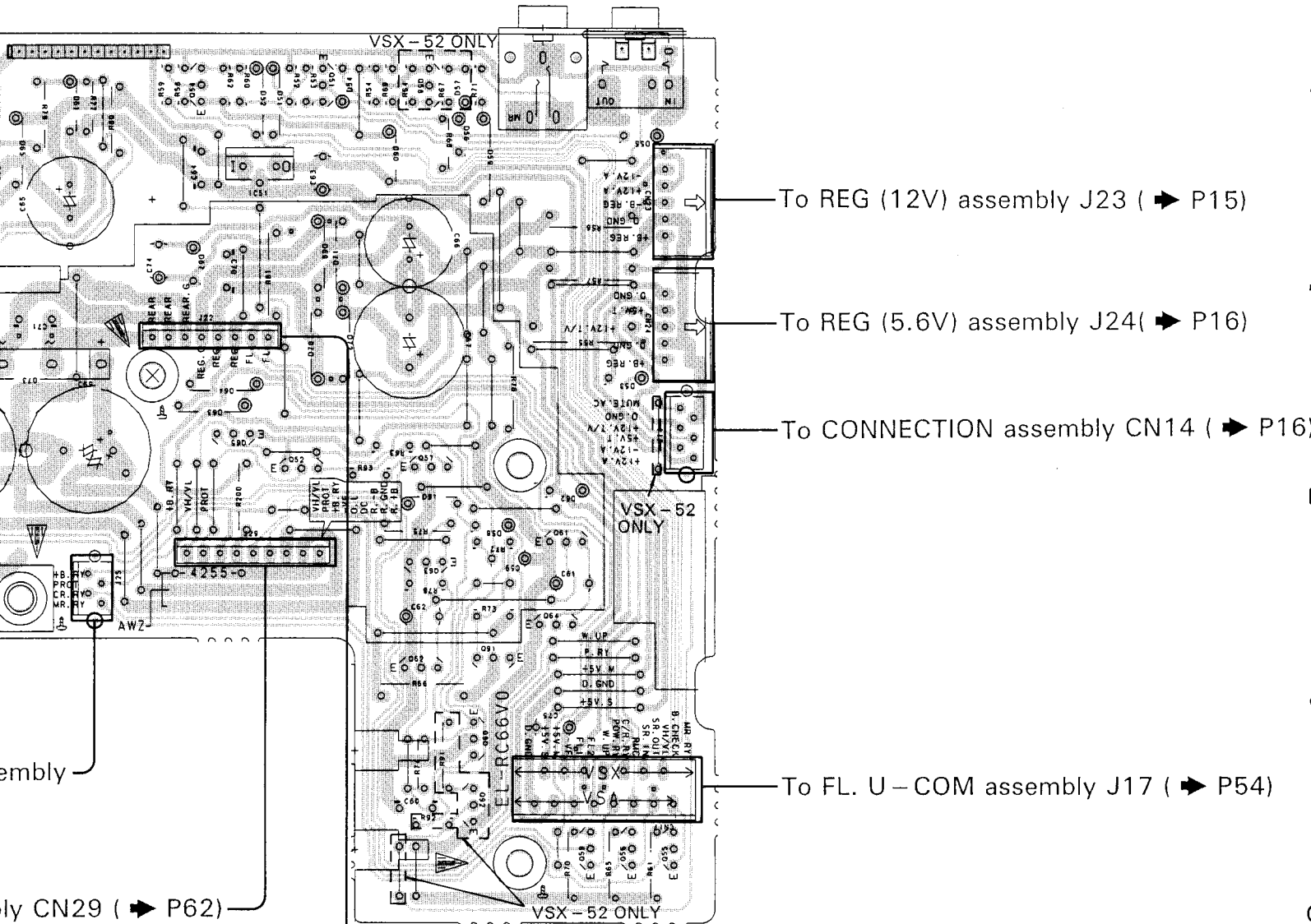


5.12 POWER SUPPLY ASSEMBLY AND TRANS TERMINAL ASSEMBLY





Q54 IC51 Q51 Q58
Q65 Q52 Q57 Q63 Q54 Q61
Q62 Q60 Q92 Q91 Q59 Q56 Q55



NOTE

1. This P.C.B. connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.
3. The capacitor terminal marked with ⊙ (double circles) shows negative terminal.
4. The diode terminal marked with ⊙ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
Q504 EO		Transistor
Q215		Radiator type transistor
D203		Diode
R237		Resistor
C513		Capacitor (Polarized)
C518		Capacitor (Non-polarized)

Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

(FOR CANADIAN MODEL ONLY)

Fuse symbols (Fast Operating Fuse) and/or (Slow Operating Fuse) on P.C.B. indicate that replacement parts must be of identical designation.

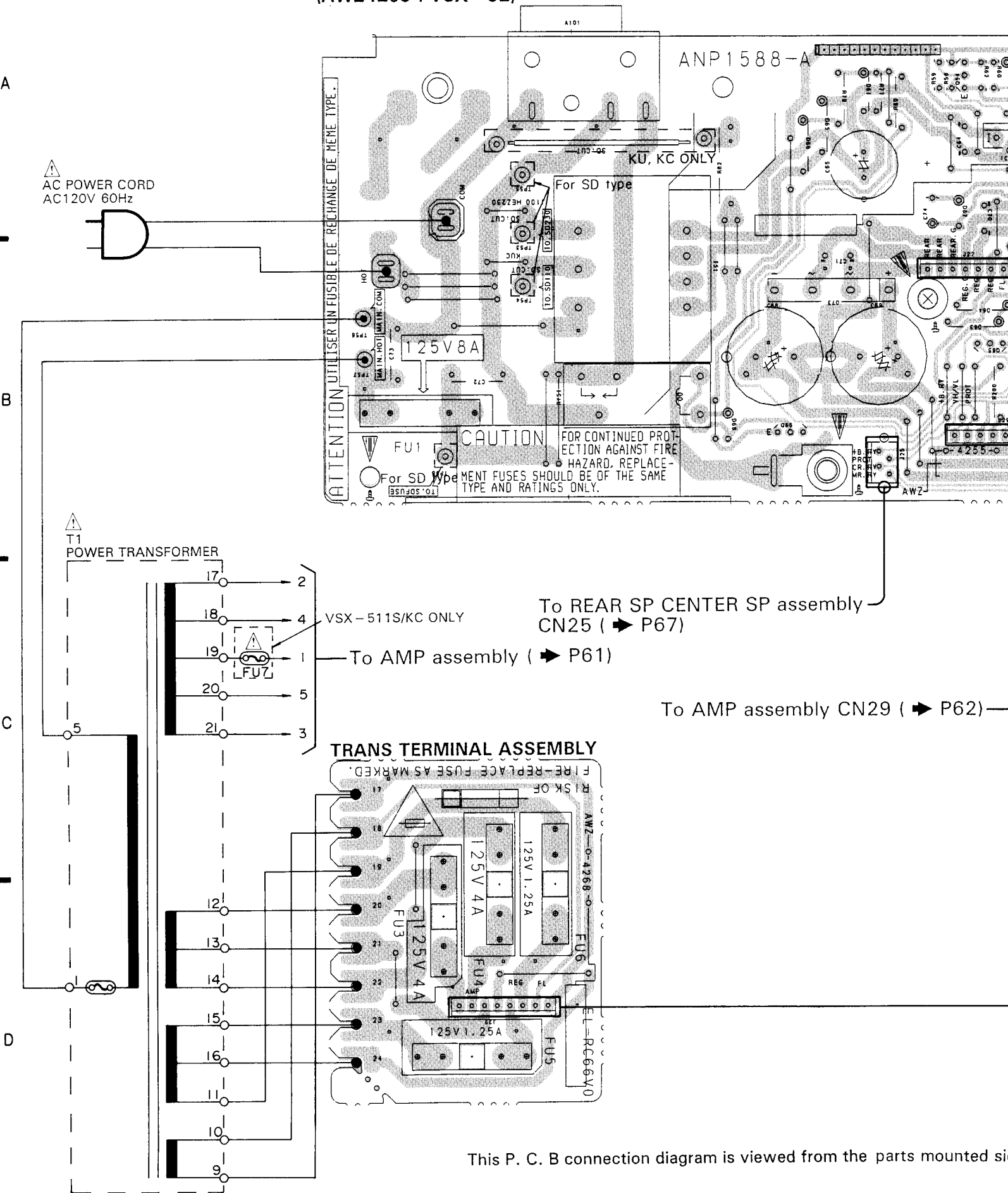
(POUR MODÈLE CANADIEN SEULEMENT)

Sur P.C.I., les symboles de fusible (Fusible de type rapide) et/ou (Fusible de type lent) indiquent que les pièces de remplacement doivent avoir la même désignation.

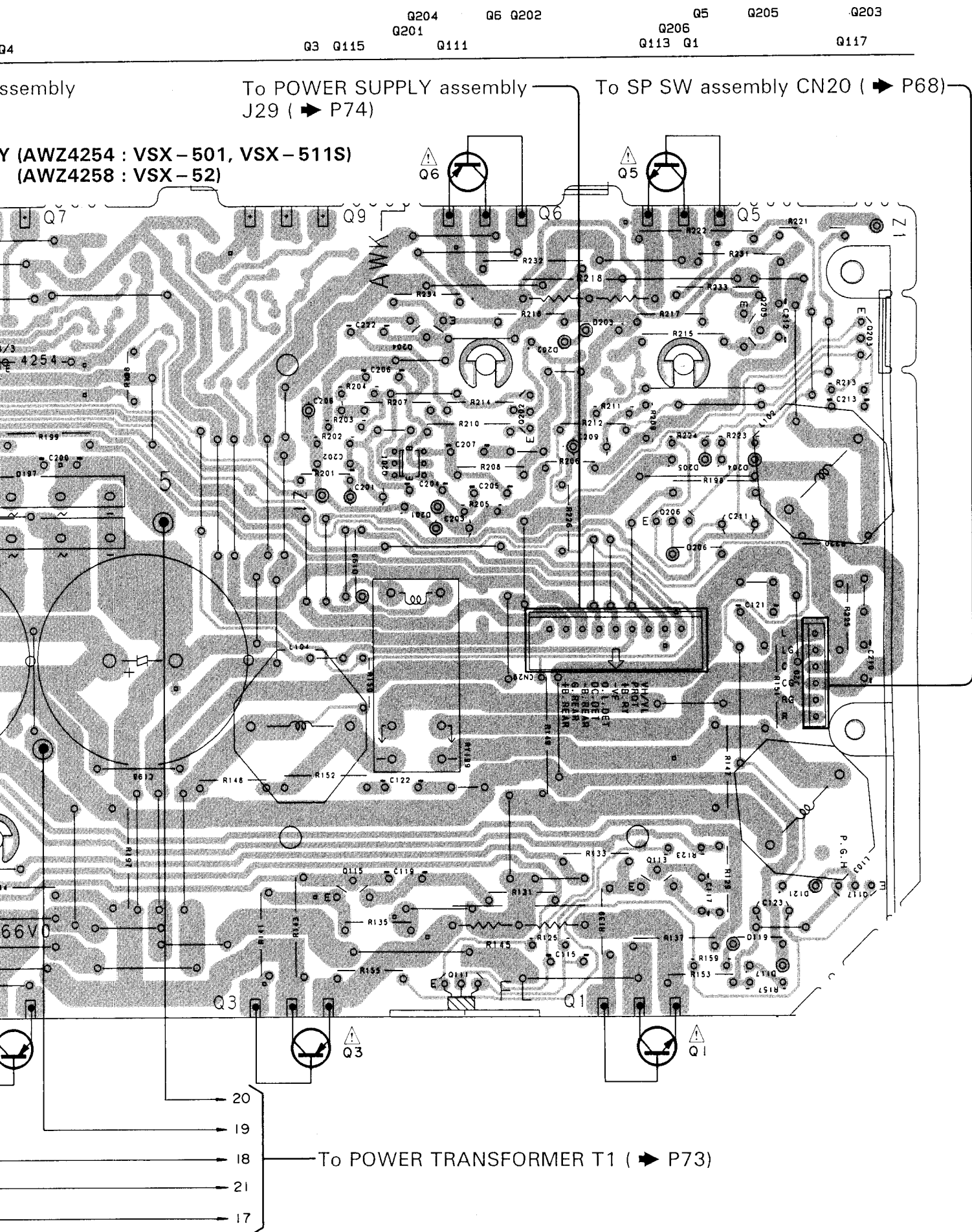
POWER SUPPLY ASSEMBLY
(AWZ4255 : VSX-501, VSX-511S)
(AWZ4259 : VSX-52)

Q66

Q54 IC5
Q65



ved from the parts mounted side.



IC162	Q164	Q162	Q10	Q8
Q106	Q104	Q102	Q103	Q101
Q118	Q108	Q114	Q109	Q105
	Q110	Q2	Q116	Q112
			Q107	Q4

-To VOLUME assembly CN18 (➡ P48)

-To REAR SP CENTER SP assembly
CN21 (➡ P67)

AMP ASSEMBLY (AWZ4254 : VSX—
(AWZ4258 : VSX—

