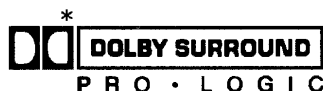


Service Manual

AV Control Stereo Receiver

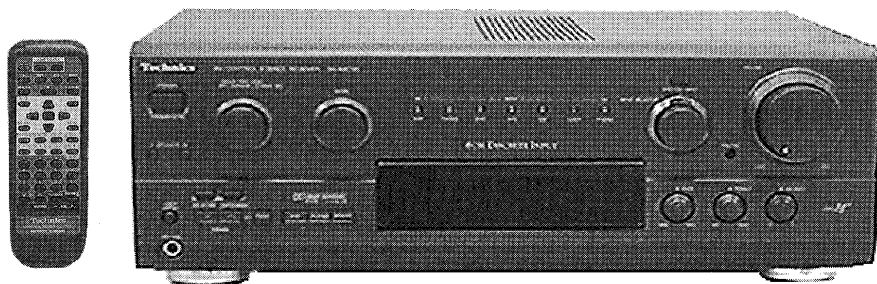


Receiver

SA-AX720

Colour

(K) Black Type



Area

Suffix for Model No.	Area	Colour
(P)	U.S.A.	(K)
(PC)	Canada	

* Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S. numbers 3,632,886,3,746,792 and 3,959,590; Canadian numbers 1,004,603 and 1,037,877. "Dolby" and the double-D symbol are trade marks of Dolby Laboratories Licensing Corporation.

■ Specifications

■ FM Tuner Section

Frequency range	87.9 — 107.9 MHz
Sensitivity	11.2 dBf (2 μ V, IHF '58)
50 dB quieting Sensitivity	
MONO	18.3 dBf (4.5 μ V, IHF '58)
STEREO	38.3 dBf (45 μ V, IHF '58)
Total harmonic distortion	
MONO	0.2%
STEREO	0.3%
S/N	
MONO	73 dB
STEREO	67 dB
Frequency response	20 Hz — 15 kHz (+1dB, -2dB)
Alternate channel selectivity	65 dB
Capture ratio	1.5 dB
Image rejection at 98MHz	40 dB
Spurious response rejection at 98MHz	75 dB
AM suppression	50 dB
Stereo separation	
1 kHz	40 dB
10kHz	30 dB
Antenna terminal(s)	75 Ω (unbalanced)

■ AM Tuner Section

Frequency range	530 — 1710 kHz
Sensitivity	20 μ V, 330 μ V/m
Selectivity	55 dB
IF rejection at 1000kHz	50 dB

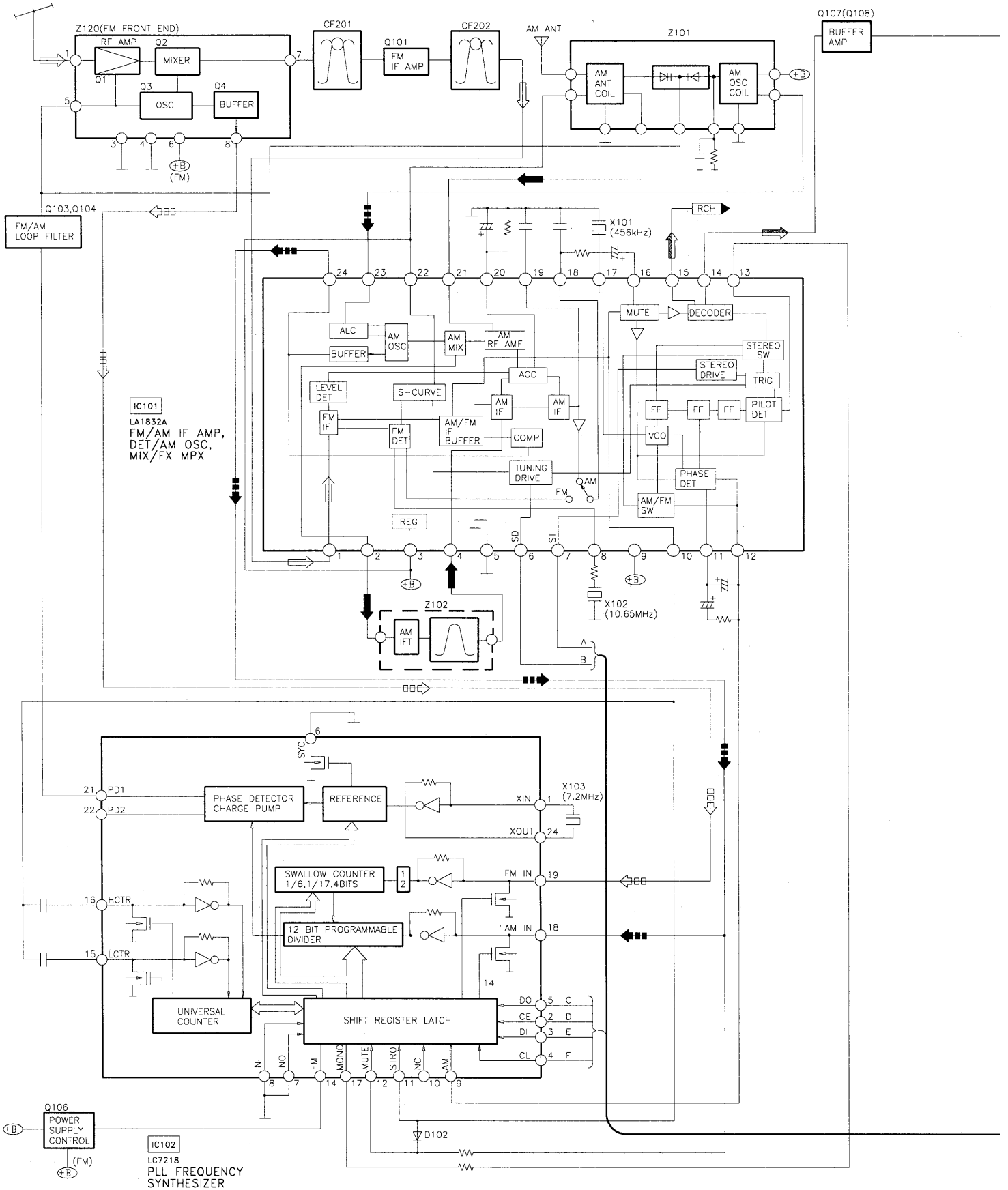
■ Video Section

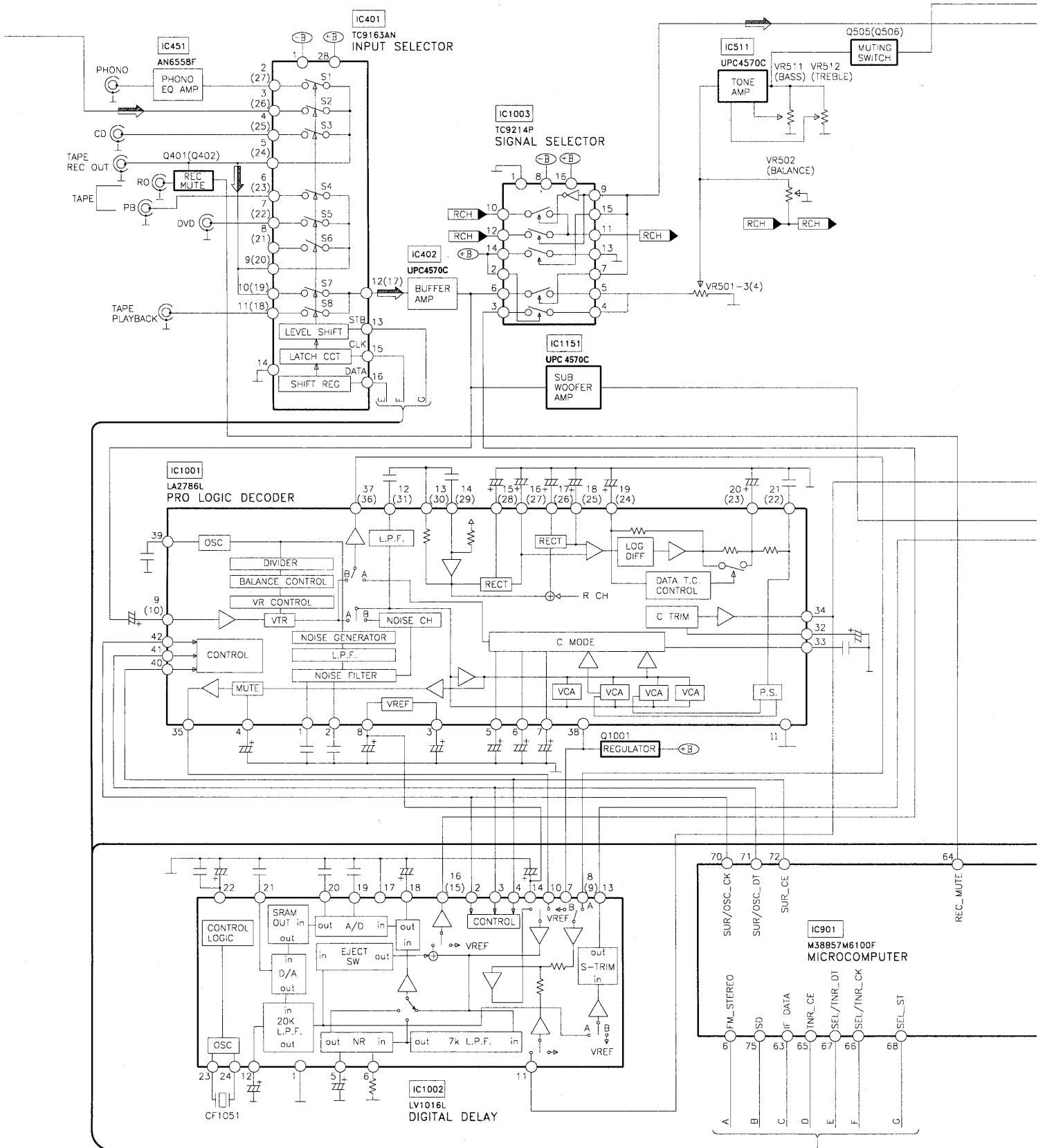
Output voltage at 1 V input (unbalanced)	1 \pm 0.1 Vp-p
Maximum input voltage	1.5 Vp-p
Input/output impedance	75 Ω

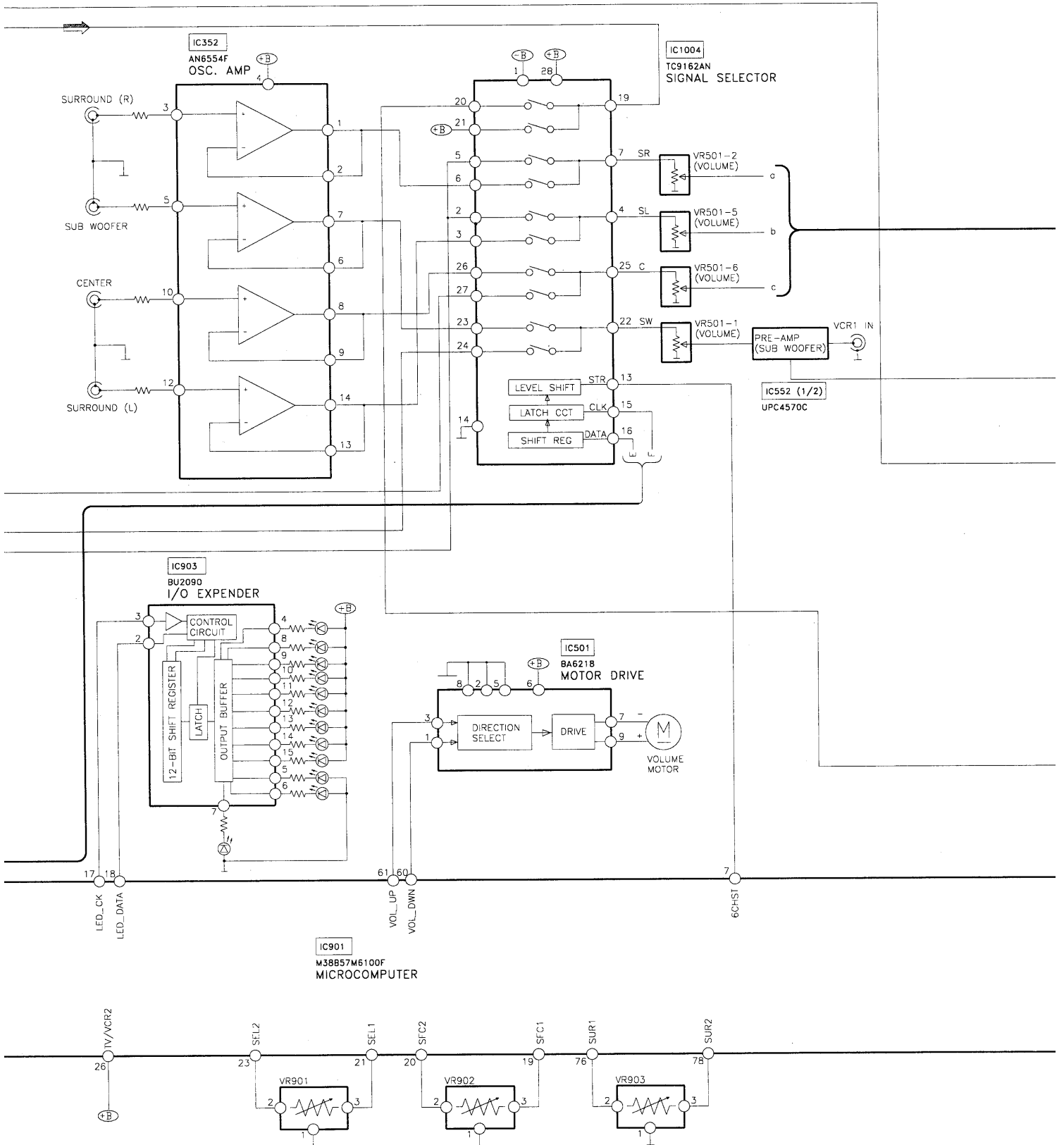
■ Amplifier Section

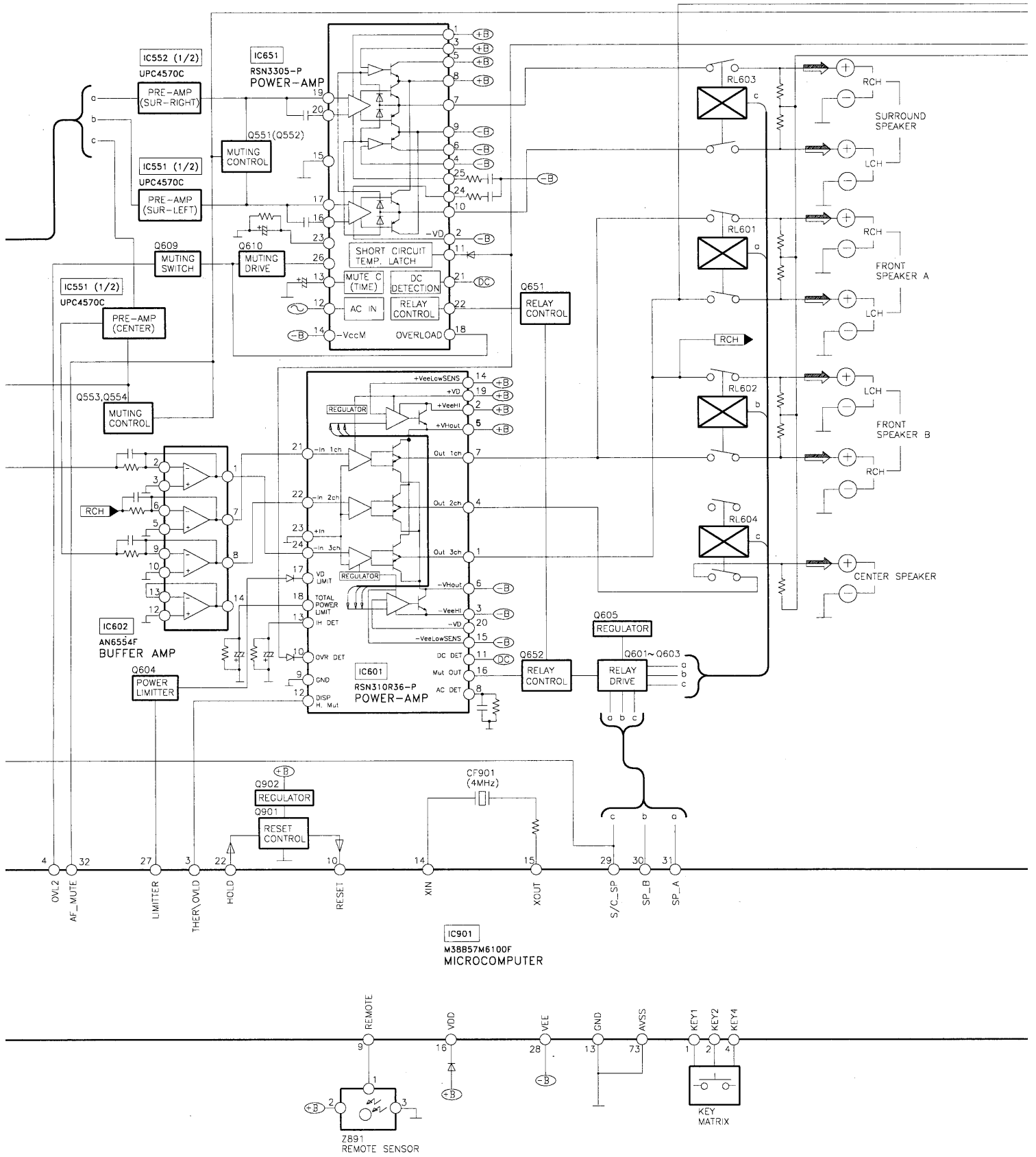
Rated minimum sine wave RMS power output	
20 Hz—20 kHz both channels driven	
0.05% total harmonic distortion	100 W per channel (8 Ω)
1 kHz continuous power output	
both channels driven 0.05% total harmonic distortion	105 W per channel (8 Ω)
Total harmonic distortion	
Rated power at 20 Hz — 20 kHz	0.05% (8 Ω)
Half power at 1 kHz	0.03% (8 Ω)
Power output at the Dolby Pro Logic operation	
0.9% at 1 kHz,	
Front	2 X 100 W (8 Ω)
Center	100 W (8 Ω)
Surround	2 X 100 W (8 Ω)
Low frequency damping factor	30 (8 Ω)
Load impedance	
Front	
A or B	8 Ω
A and B	8 Ω
Center	8 Ω
Surround	8 Ω
Dynamic headroom	2 dB (8 Ω)
Frequency response	
PHONO	RIAA standard curve \pm 0.8 dB
CD, TAPE, DVD, VCR, TV/DSS	10 Hz — 70 kHz, \pm 3 dB
Input sensitivity	
PHONO	0.4 mV (3mV, IHF '66)
CD, TAPE, DVD, VCR, TV/DSS	27 mV (200mV, IHF '66)
S/N (IHF A)	
PHONO	70 dB (80dB, IHF '66)
CD, TAPE, DVD, VCR, TV/DSS	75 dB (85dB, IHF '66)
Input impedance	
PHONO	47 k Ω
CD, TAPE, DVD, VCR, TV/DSS	22 k Ω
Tone controls	
BASS	50 Hz, +10 to -10 dB
TREBLE	20 kHz, +10 to -10 dB
Sub-Woofer frequency response	7-100 Hz, \pm 3 dB

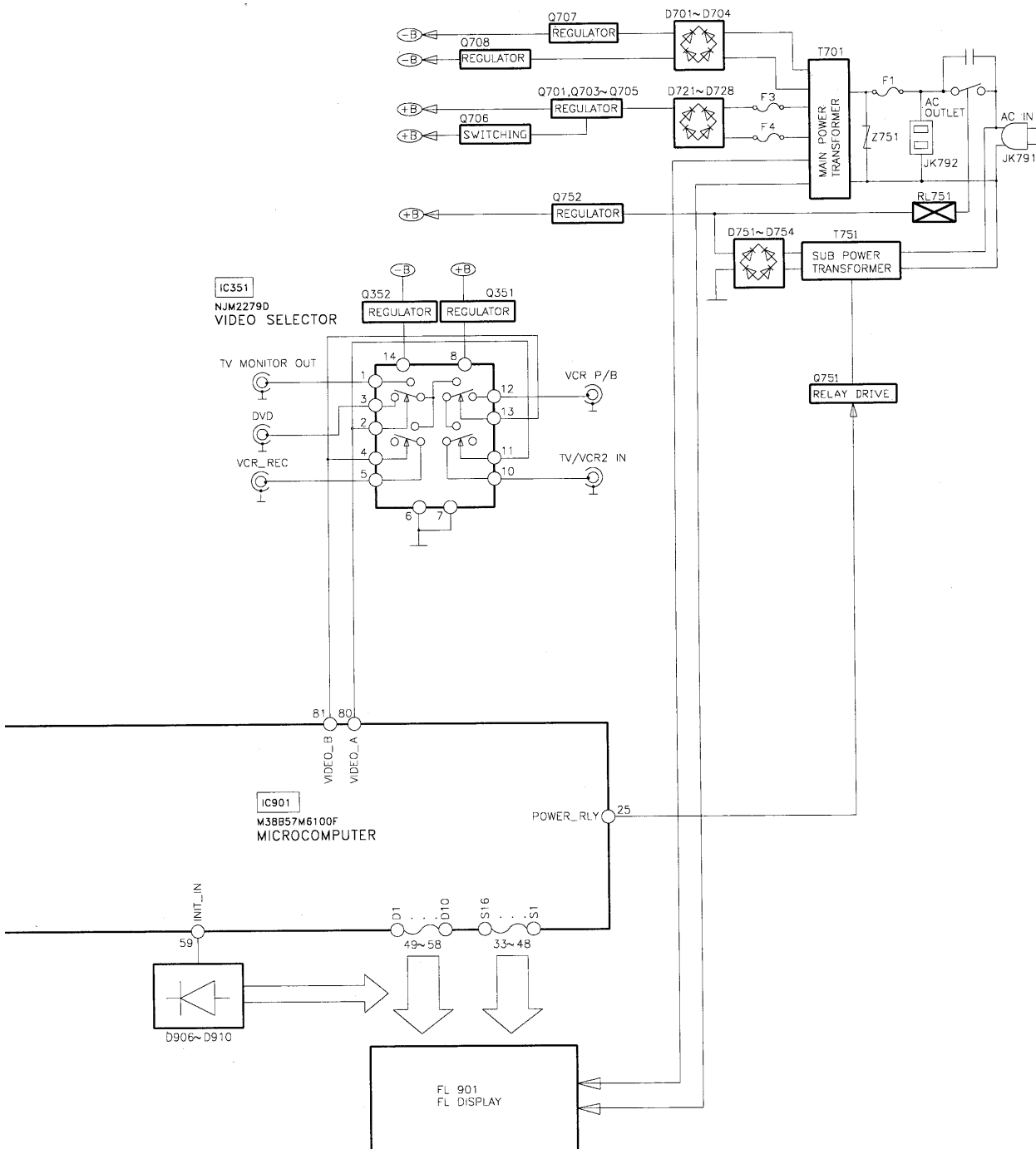
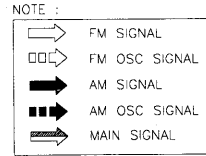
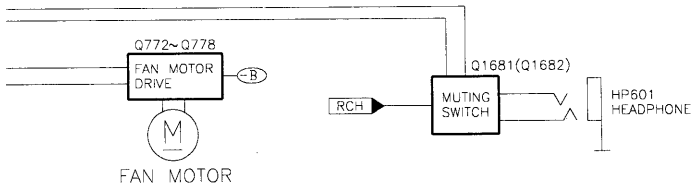
■ Block Diagram











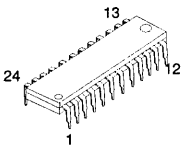
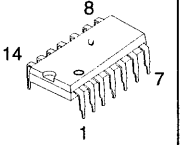
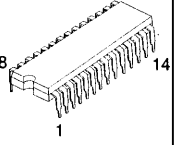
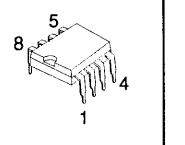
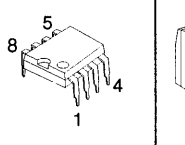
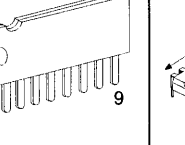
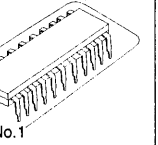
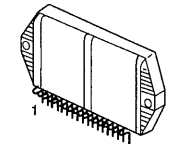
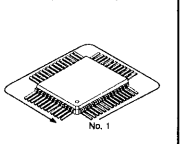
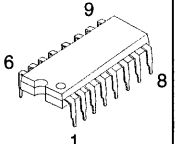
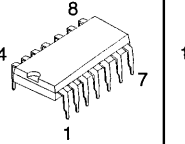
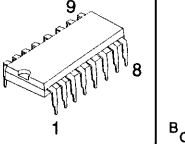
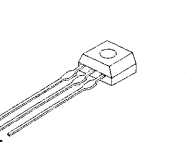
Terminal Functions Of ICs

• IC901 (M38B57M6100F) System Microprocessor

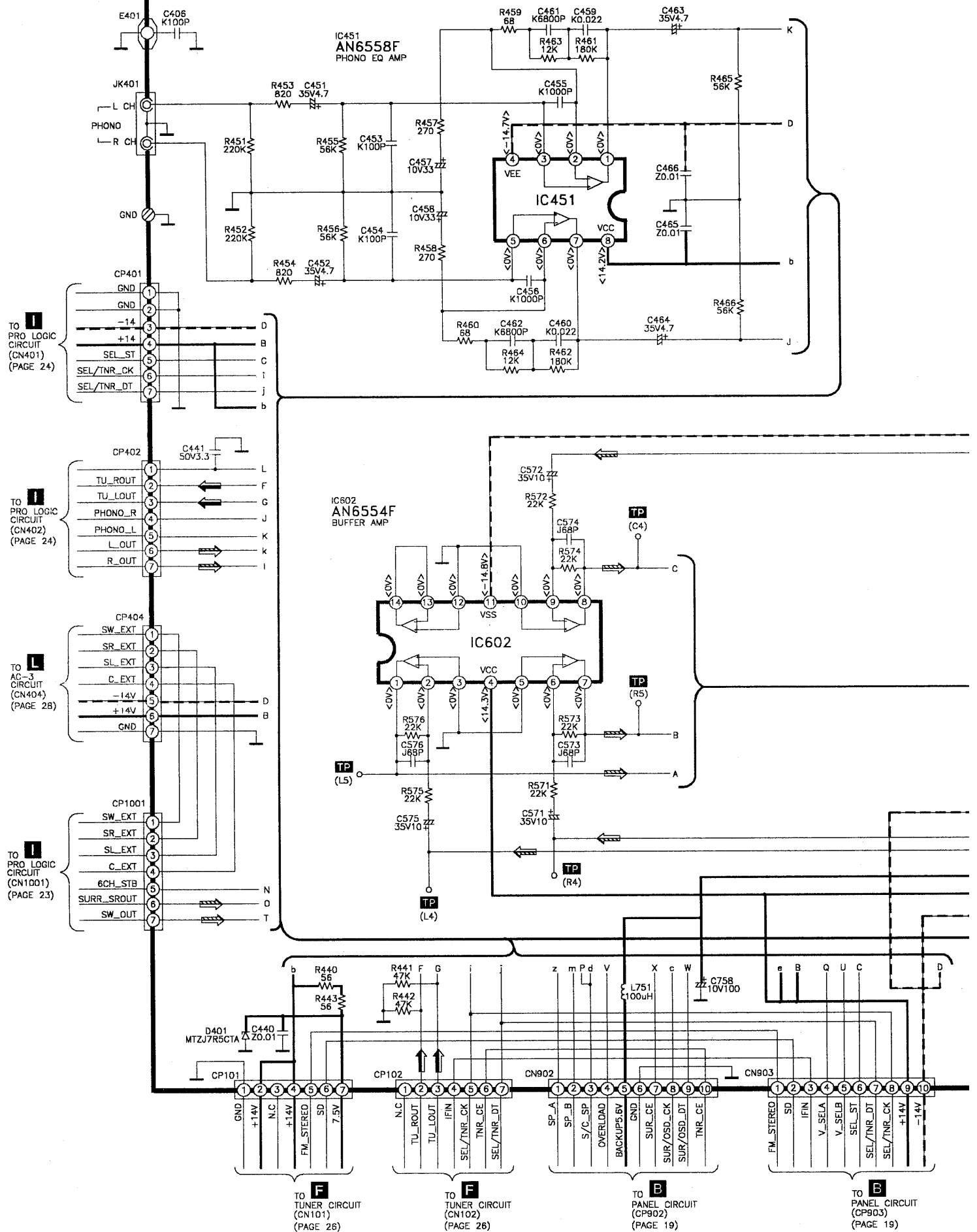
Pin No.	Mark	I/O	Function
1~2	KEY2~KEY1	I	Key Input 1 ~ 2
3	THERM/OVLD1	I	Thermal/Over load input 1
4	KEY4	I	Key Input 4
5	THERM/OVLD2	I	Thermal/Over load input 2
6	FM_ST	I	Stereo signal detect terminal
7	WAKE_LED	O	Wake up timer LED
8	RDS_ST	I	Control of RDS IC (ST) stereo signal
9	REMOTE	I	Remote control terminal
10	RESET	-	Reset detect terminal
11	RDS_CK	I	Control of RDS IC (CK) clock signal
12	RDS_DT	I	Control of RDS IC (DT) data signal
13	GND	-	GND terminal
14	OCS	-	Crystal oscillator terminal (4 MHz)
15	OCS	-	Crystal oscillator terminal (4 MHz)
16	VDD (+5V)	-	Power supply terminal +5V
17	LED_IC_CK	O	LED driver IC (CK) clock signal
18	LED_IC_DT	O	LED driver IC (DT) data signal
19	SFC/PTY_ENCD1	I	SFC mode encoder input 1
20	SFC/PTY_ENCD2	I	SFC mode encoder input 2
21	SEL_ENCD1	I	Selector encoder for input 1
22	HOLD	I	Blackout detection terminal
23	SEL_ENCD2	I	Selector encoder for input 2
24	FRT_VCR2	I	VCR2 control input
25	RELAY	-	Relay control output
26	ABS	O	ABS control output
27	6ch_SW_ST	O	6 ch sw control output (ST)
28	Vee (-22V)	-	Power supply for FL driver
29	S/C_SP	O	Surround/Center speaker control output

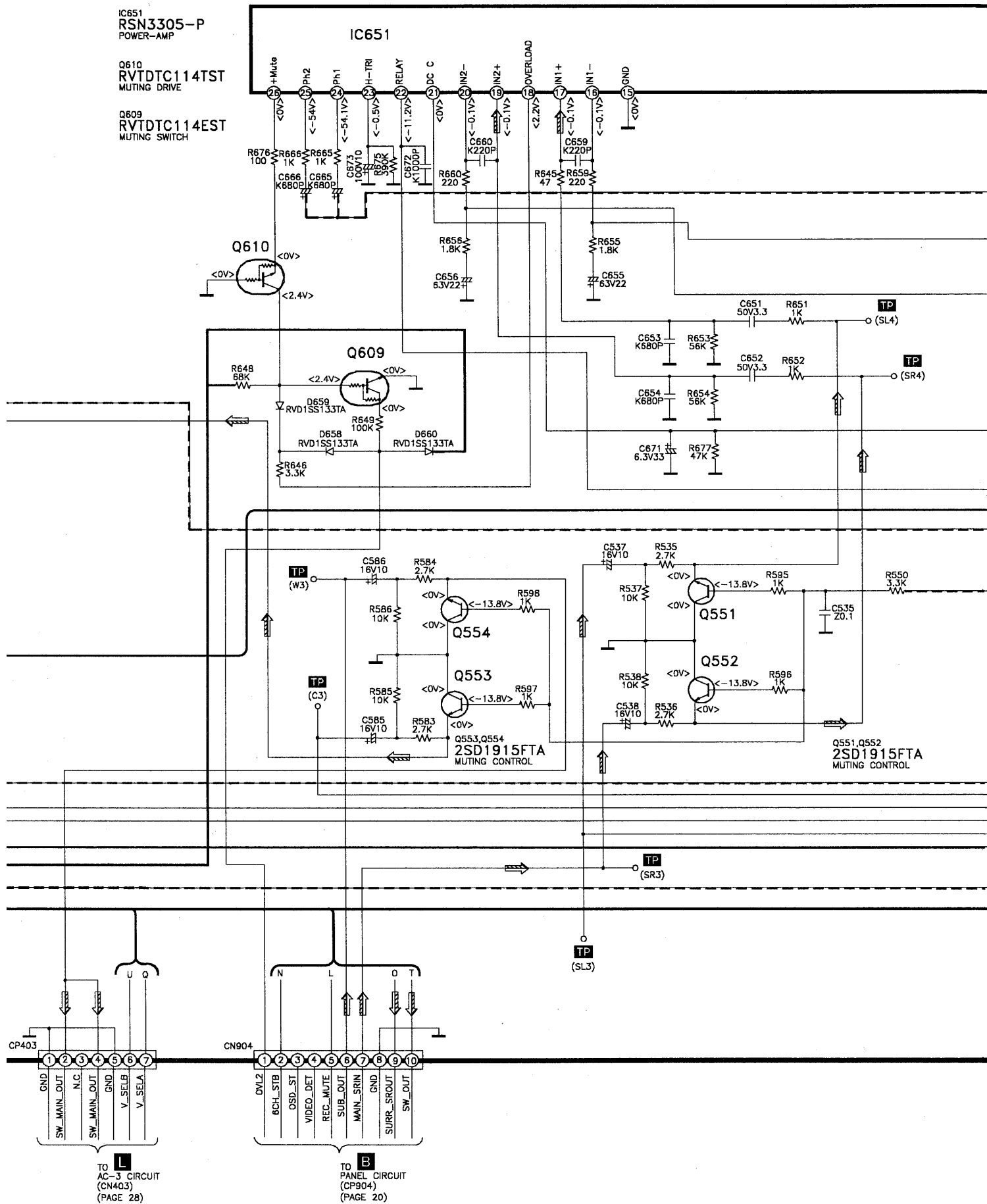
Pin No.	Mark	I/O	Function
30	SP_B	O	Speaker B control output
31	SP_A	O	Speaker A control output
32	AF_MUTE	O	Muting control output
33~48	SEG16~SEG1	O	FL segment signal output
49~58	DEG1~DEG10	O	FL digit signal output
59	INIT_IN	I	Diode input initial settings
60	VOL_DOWN	O	Volume control output (Down)
61	VOL_UP	O	Volume control output (Up)
62	REC_MUTE	O	REC Mute control
63	IF_DATA	I	Serial data signal
64	LIMITTER	O	Power limiter control output
65	TNR_CE	O	Tuner control (CE) chip enable signal
66	SEL/TNR_CK	O	Selector/Tuner (CK) clock signal
67	SEL/TNR_DT	O	Selector/Tuner (DT) data signal
68	SEL_ST	O	Selector control terminal
69	MMD_CTRL	O	MMD control terminal
70	SURR_CK	O	Surround control (CK) clock signal
71	SURR_DT	O	Surround control (DT) data signal
72	SURR_CE	O	Surround control (CE) chip enable signal
73	AVSS	-	GND for A-D converter
74	VREF	-	Reference voltage for A-D converter
75	SD	I	SD signal detect input
76	SUR_ENCD1	I	Encoder of surround mode selector input1
77	HELP_LED	O	Help LED control output
78	SUR_ENCD2	I	Encoder of surround mode selector input2
79	VIDEO_A	O	Video selector control output A
80	VIDEO_B	O	Video selector control output B

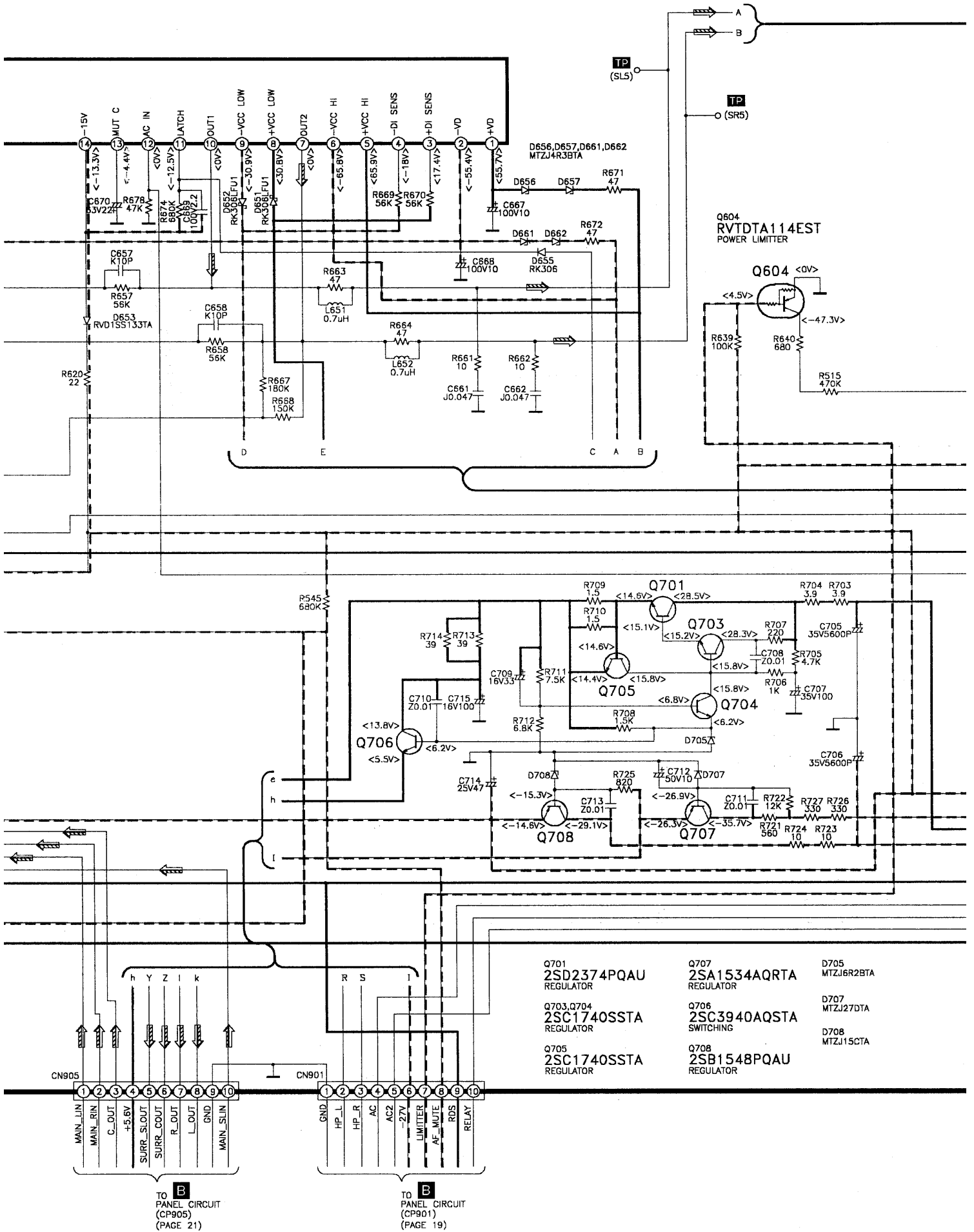
Terminal Guide of ICs, Transistors and Diodes

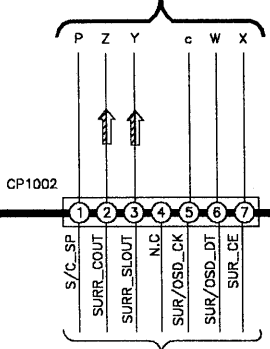
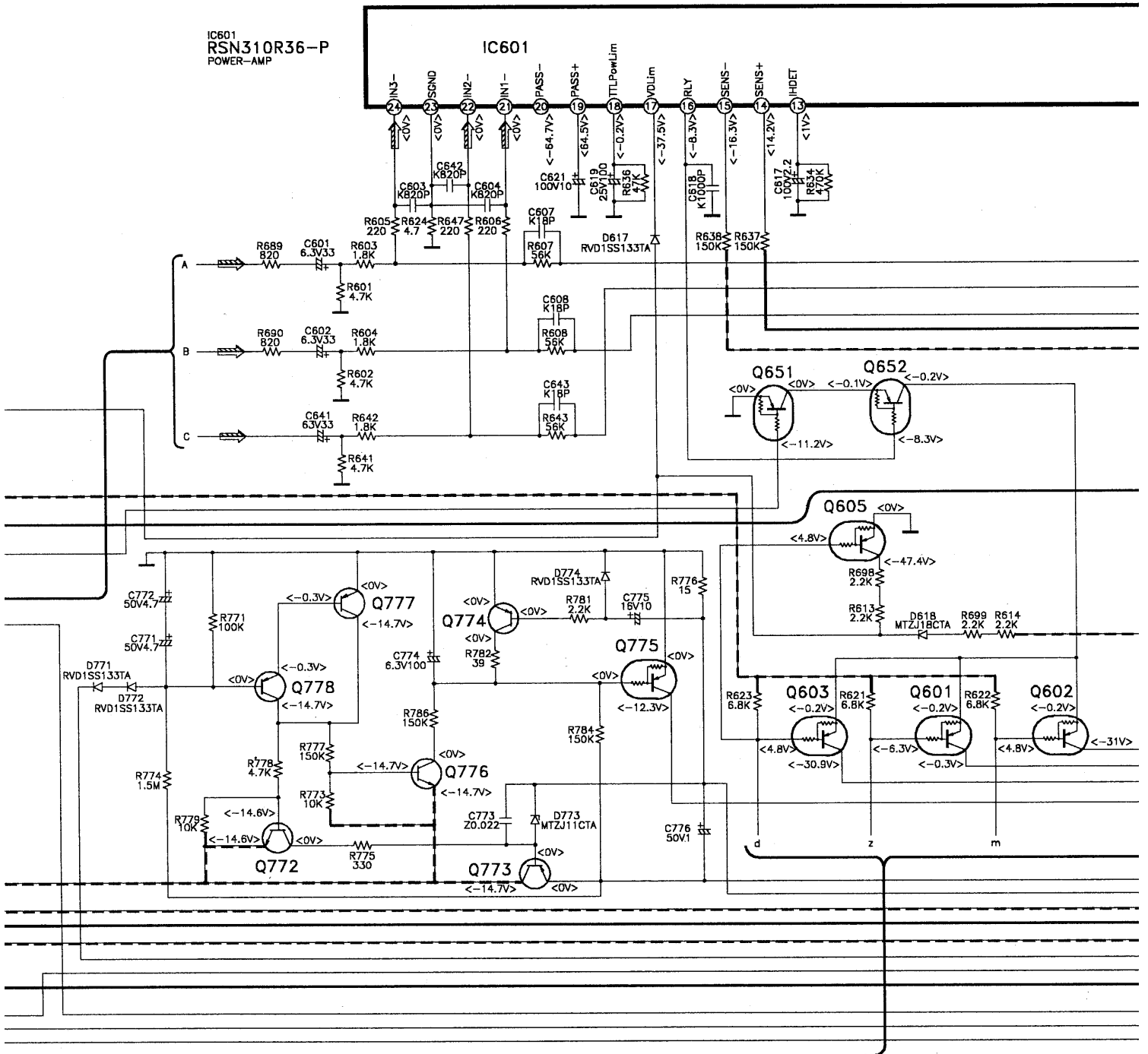
<p>LA1832A LC7218 LV1016L</p> 	<p>NJM2279D</p> 	<p>TC9163AN TC9162AN</p> 	<p>UPC4570C</p> 	<p>AN6558F</p> 	<p>BA6218</p> 	<p>LA2786L (42Pin)</p> 
<p>RSN3305-P RSN310R36-P</p> 	<p>M38B57M6100F (80 Pin)</p> 	<p>TC9214P</p> 	<p>AN6554F</p> 	<p>BU2090</p> 	<p>2SC2785FETA 2SC2786MTA</p> 	<p>2SC2787FL1TA 2SC2787LTA 2SD1915FTA 2SA933SSTA 2SC3311ARTA</p>

A MAIN CIRCUIT



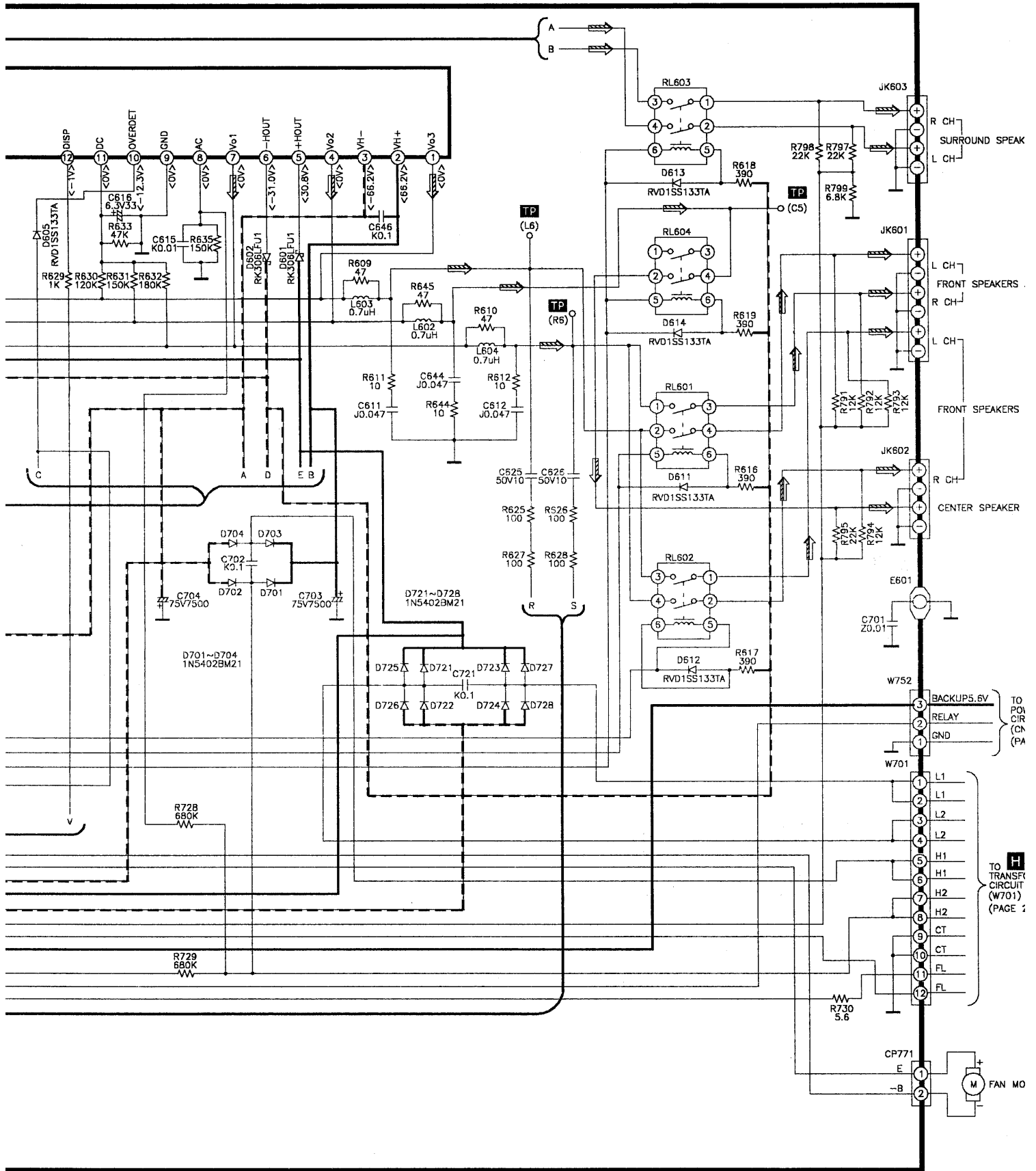




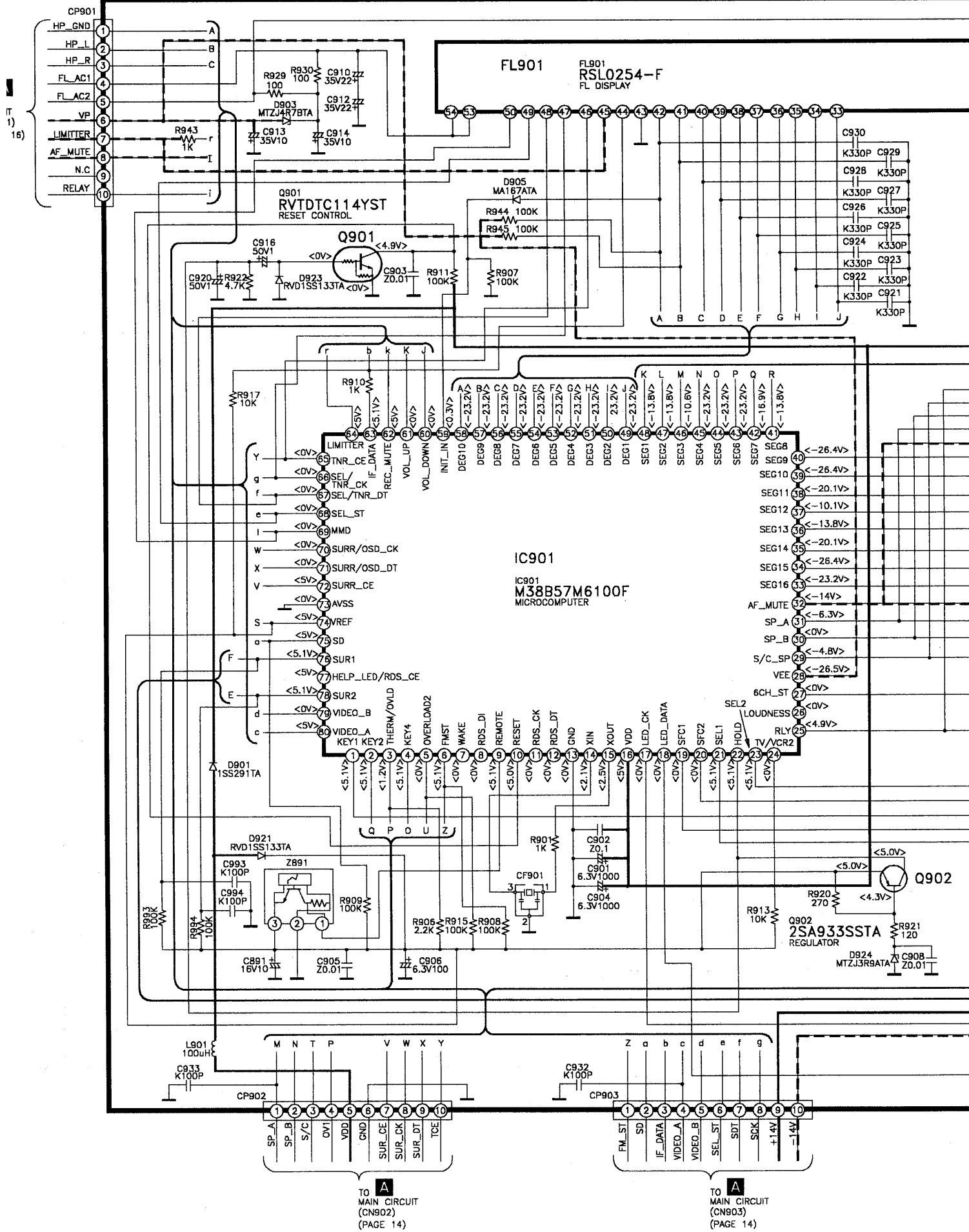


- | | | |
|--|--|---|
| Q603
RVTDTA143XST
RELAY DRIVE | Q651,Q652
RVTDTA143XST
RELAY CONTROL | Q774
2SA933SSTA
FAN MOTOR DRIVE |
| Q605
RVTDTA114EST
REGULATOR | Q772
2SC1740SSTA
FAN MOTOR DRIVE | Q777
2SA933SSTA
FAN MOTOR DRIVE |
| Q601,Q602
RVTDTA143XST
RELAY DRIVE | Q773
2SB621AQSTA
FAN MOTOR DRIVE | Q775
RVTDTA114EST
FAN MOTOR DRIVE |
| | Q776
2SC1740SSTA
FAN MOTOR DRIVE | Q778
2SA933SSTA
FAN MOTOR DRIVE |

TO PRO LOGIC CIRCUIT (CN1002) (PAGE 23)

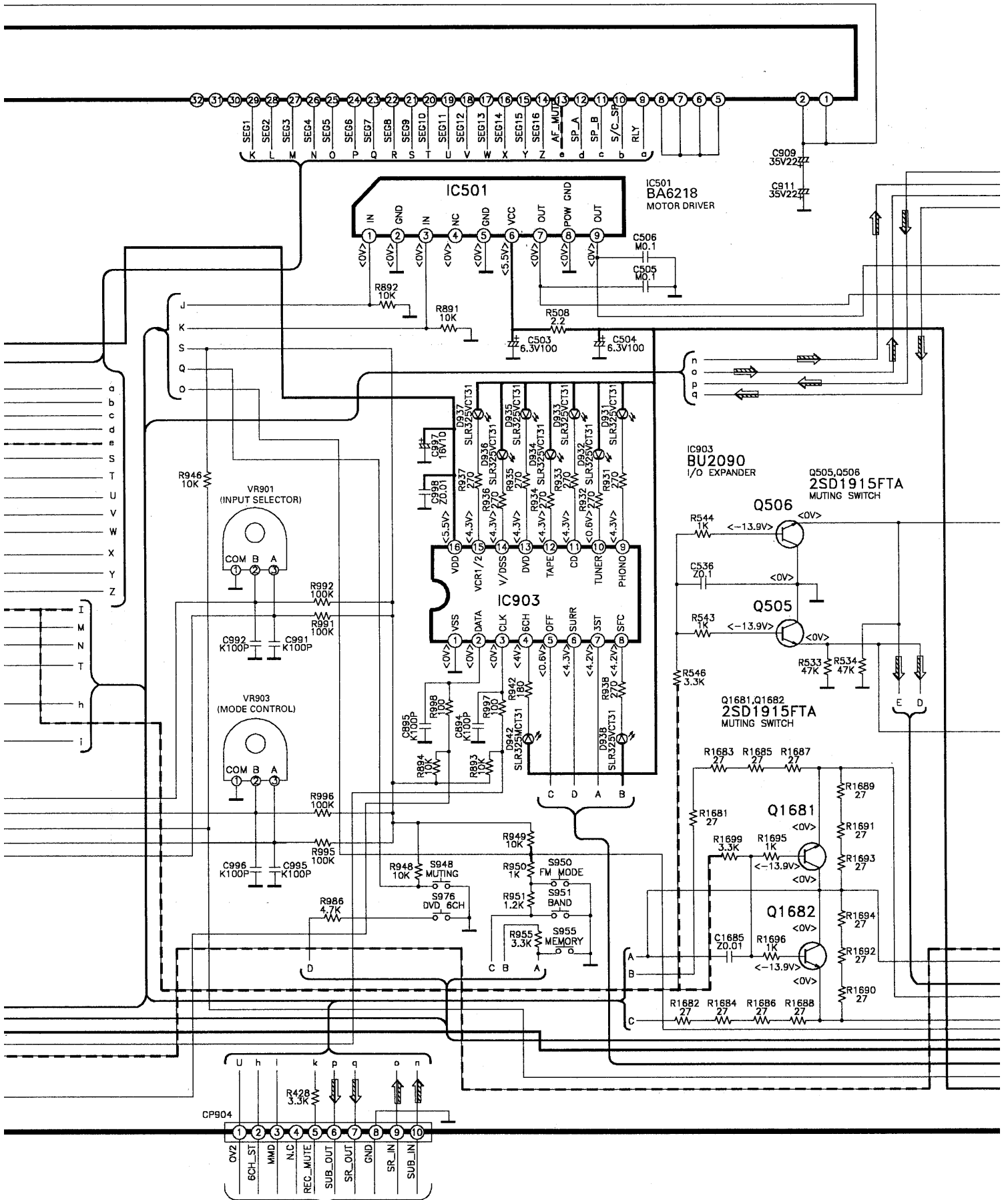


B PANEL CIRCUIT

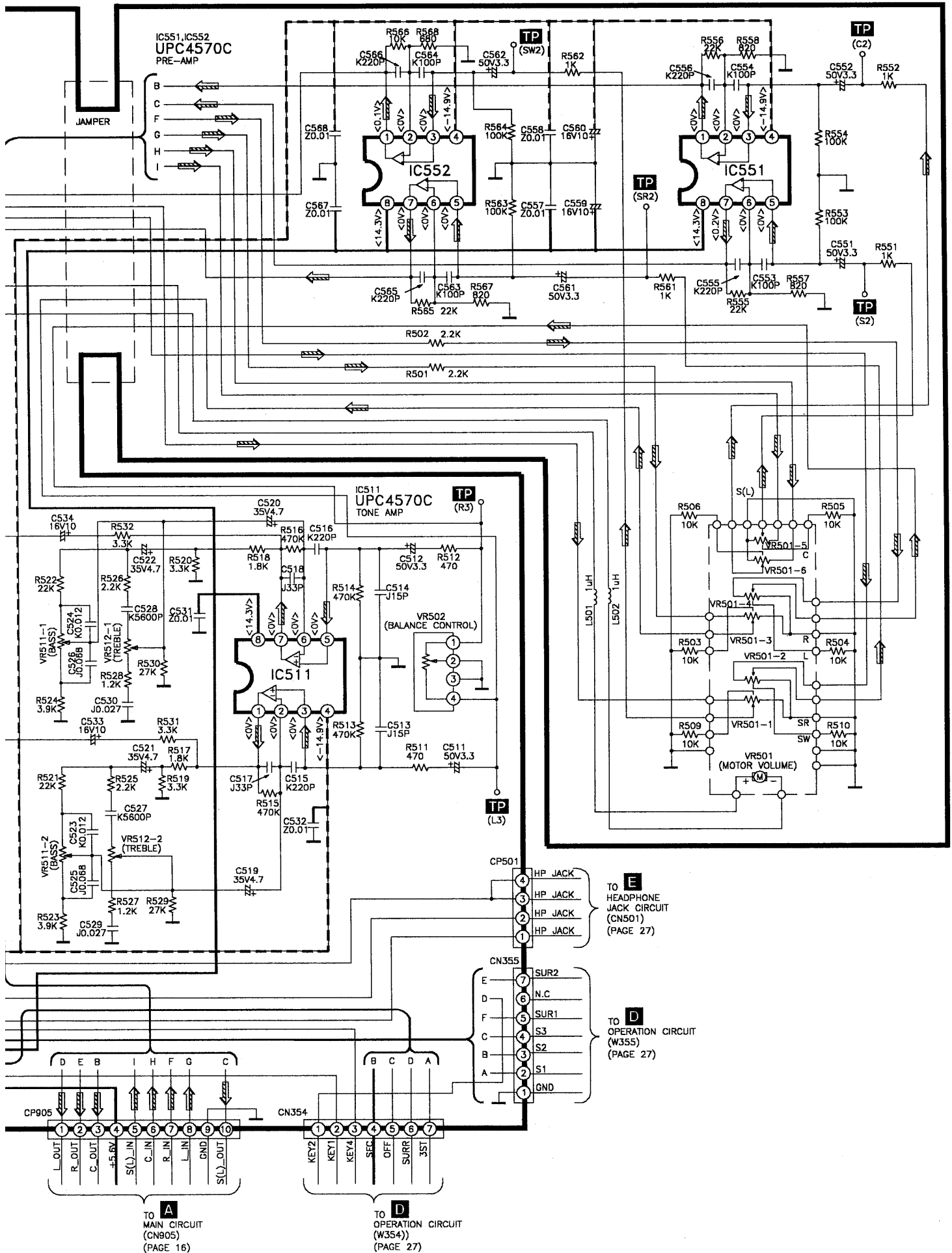


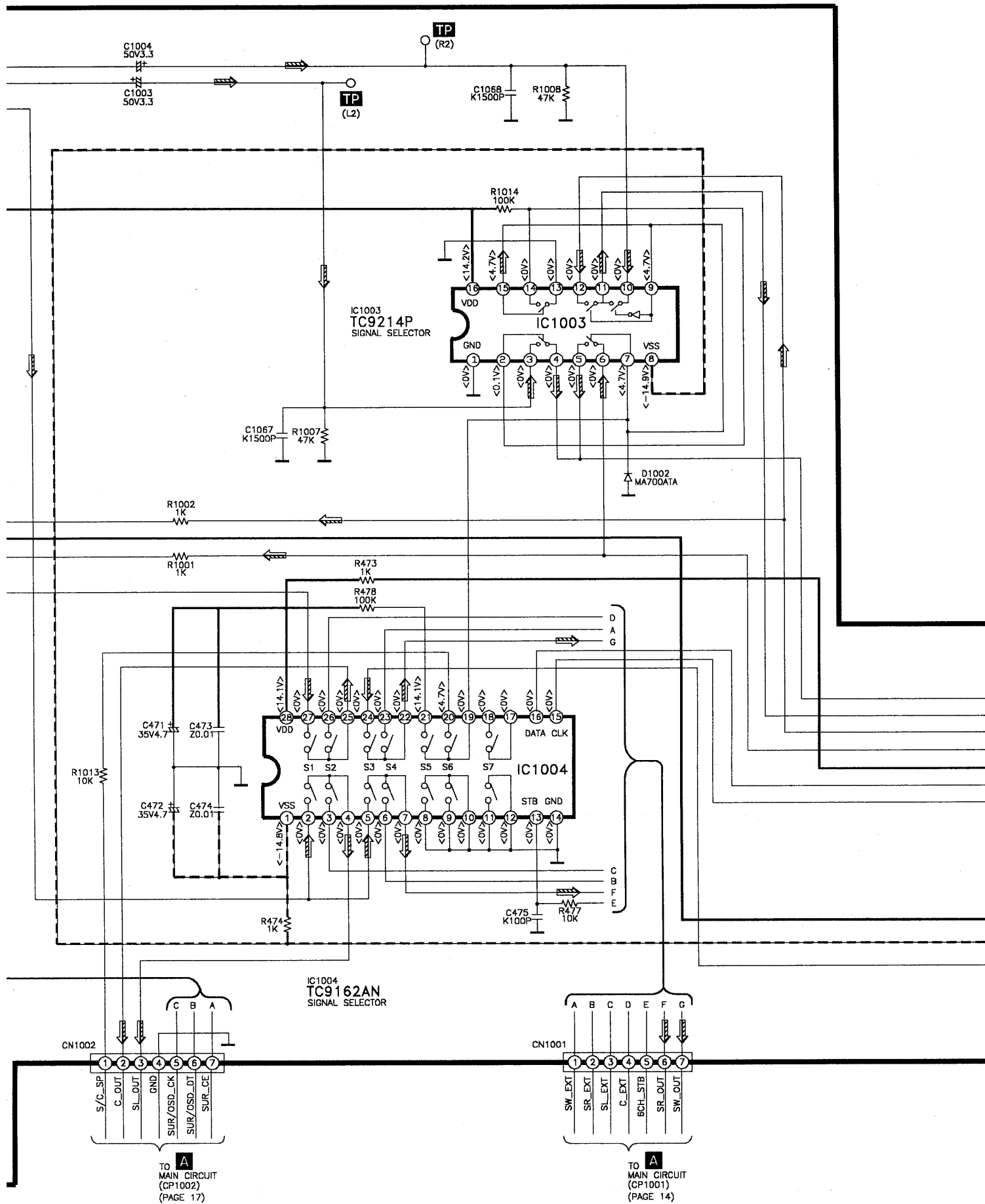
TO MAIN CIRCUIT (CN902) (PAGE 14)

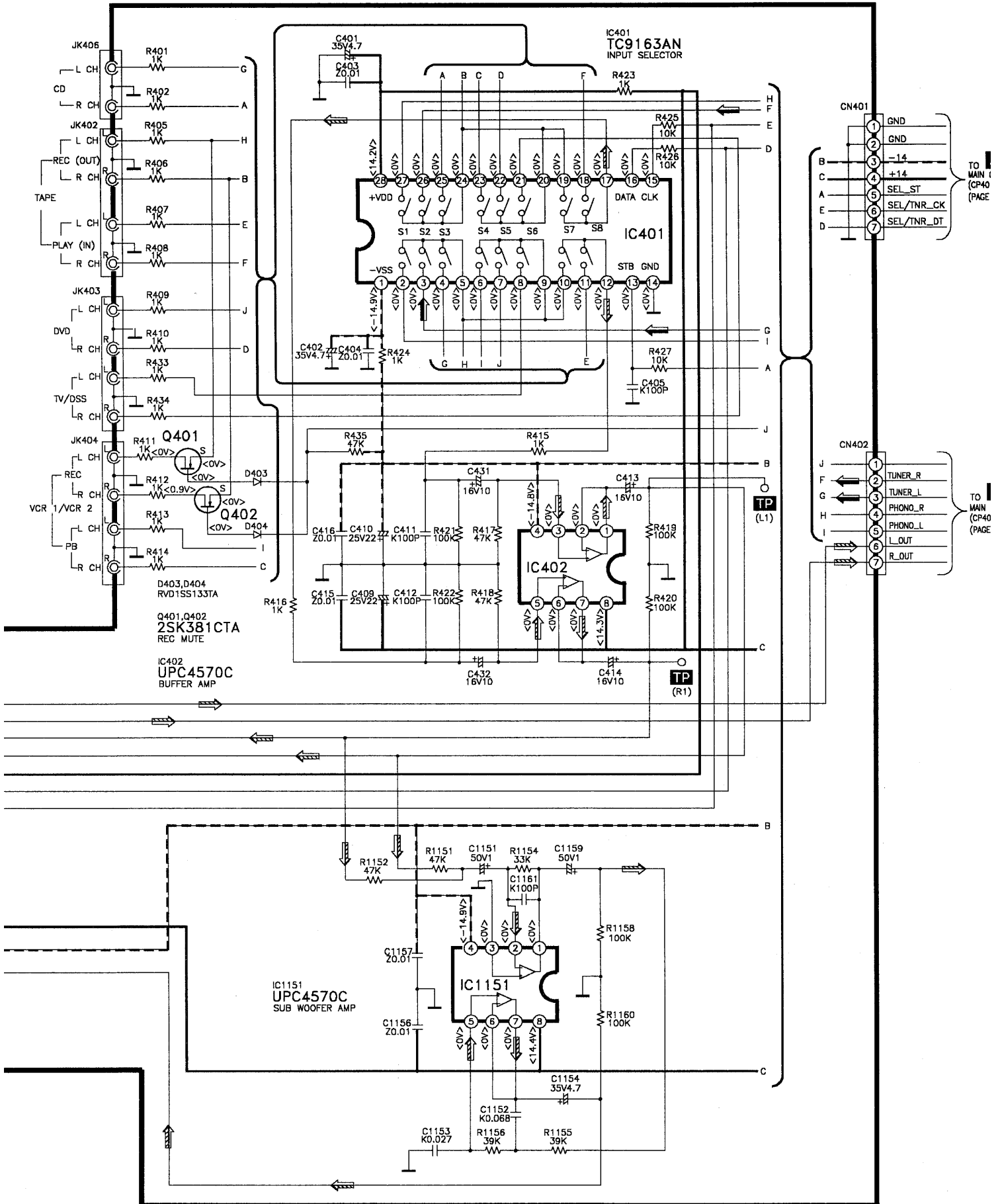
TO MAIN CIRCUIT (CN903) (PAGE 14)



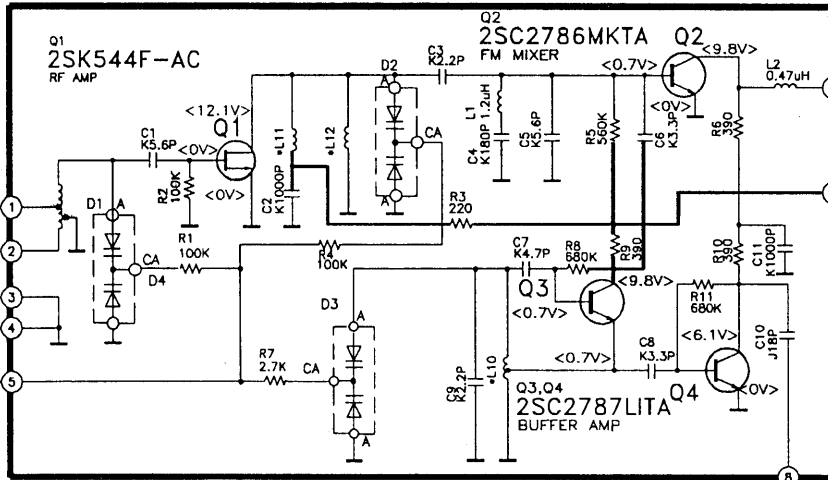
TO MAIN CIRCUIT
(CN904)
(PAGE 15)



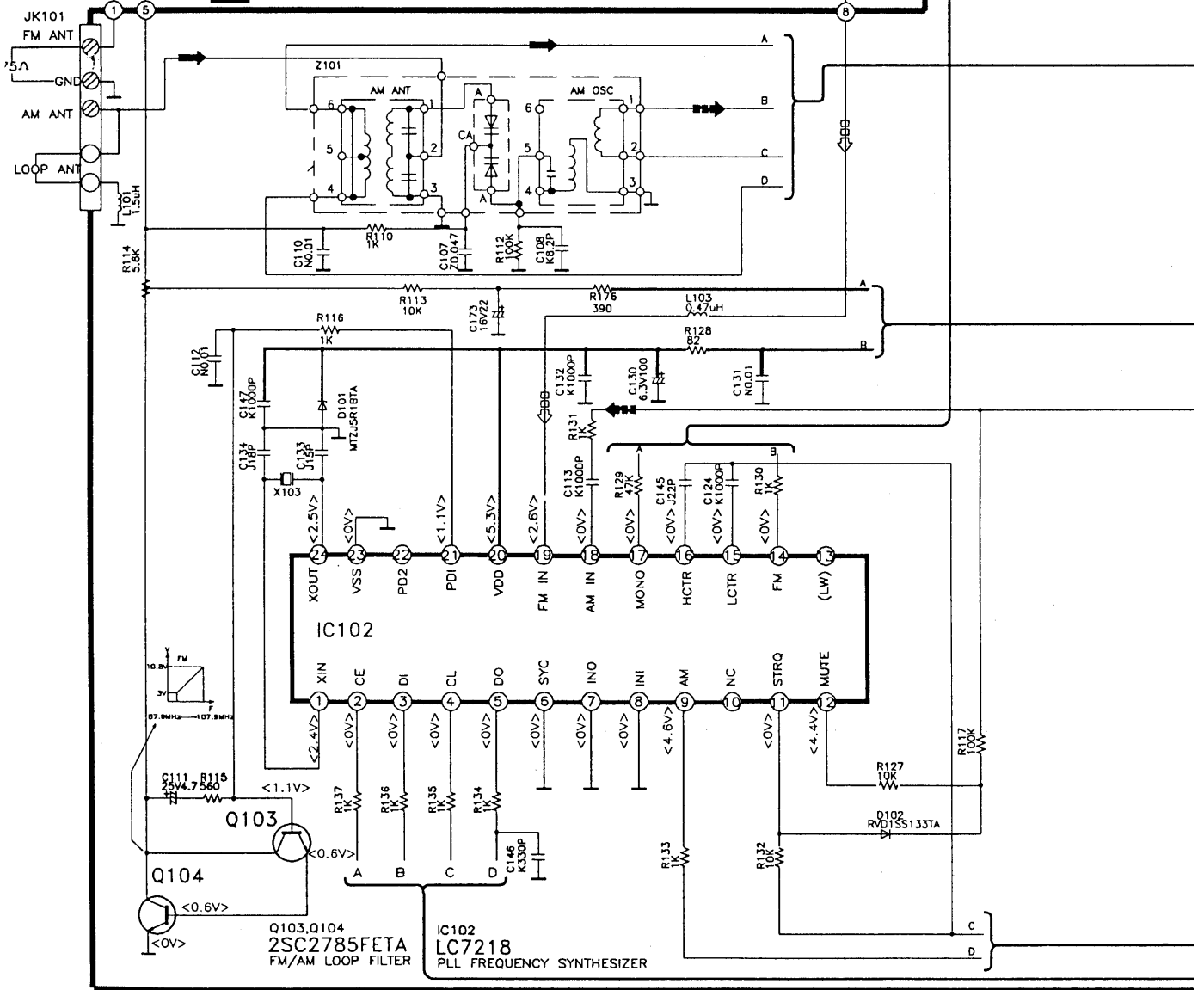


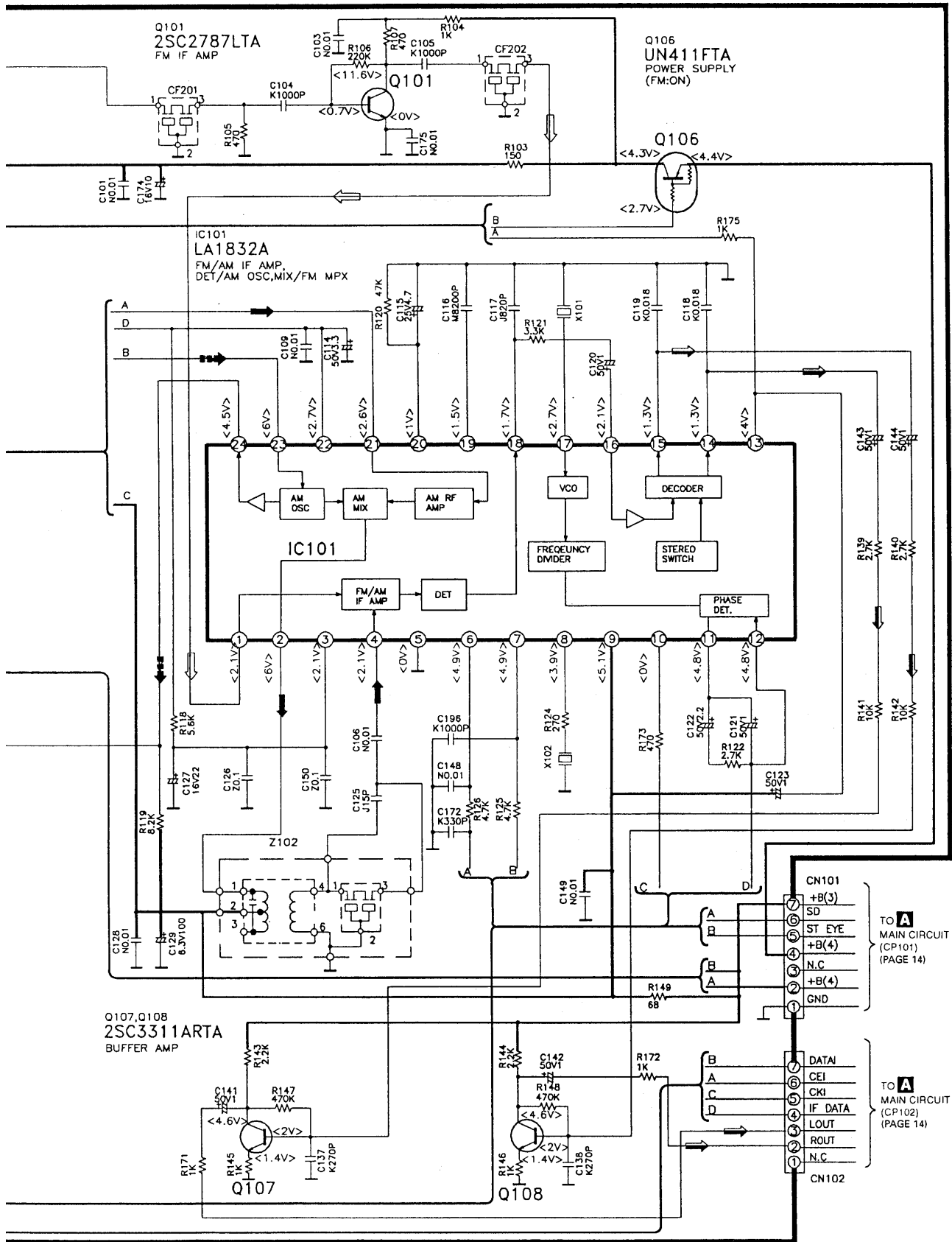


G TUNER PACK CIRCUIT

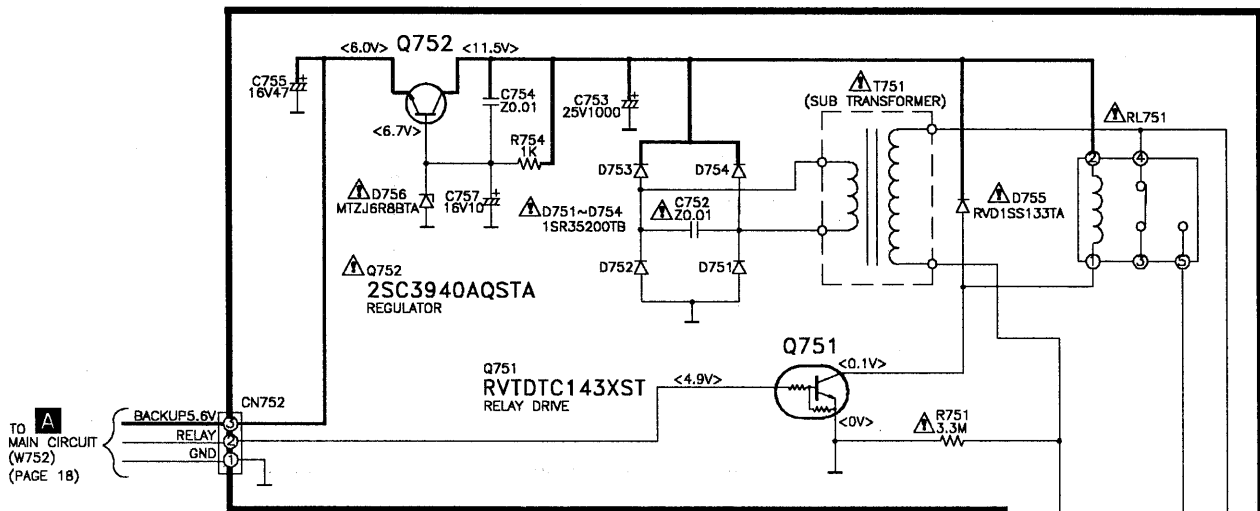


F TUNER CIRCUIT

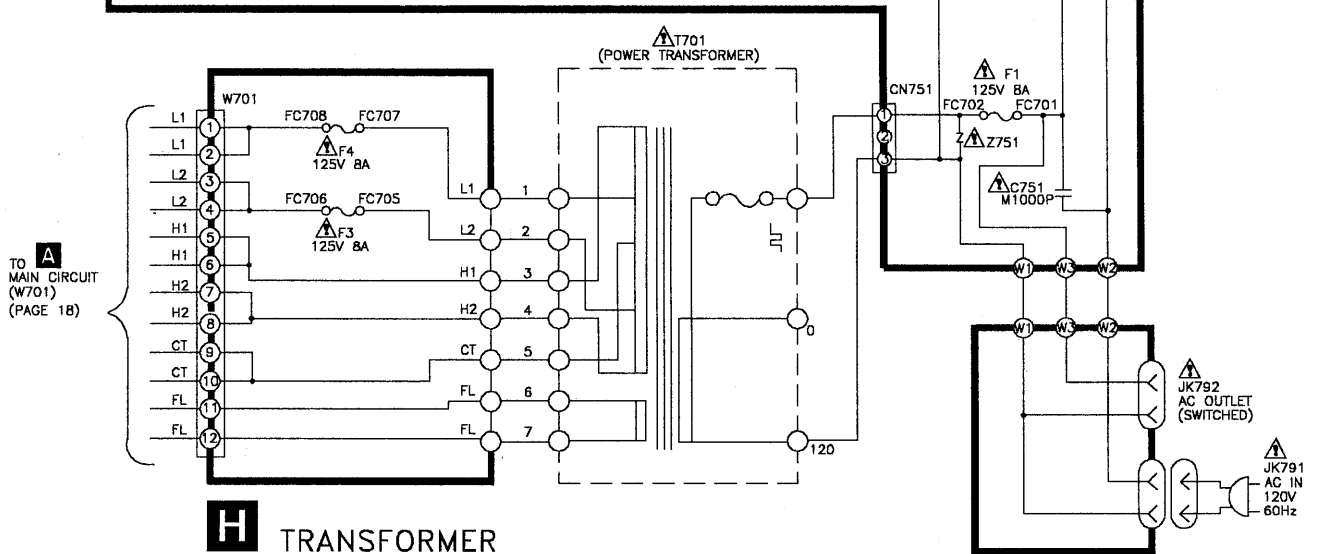




J POWER CIRCUIT

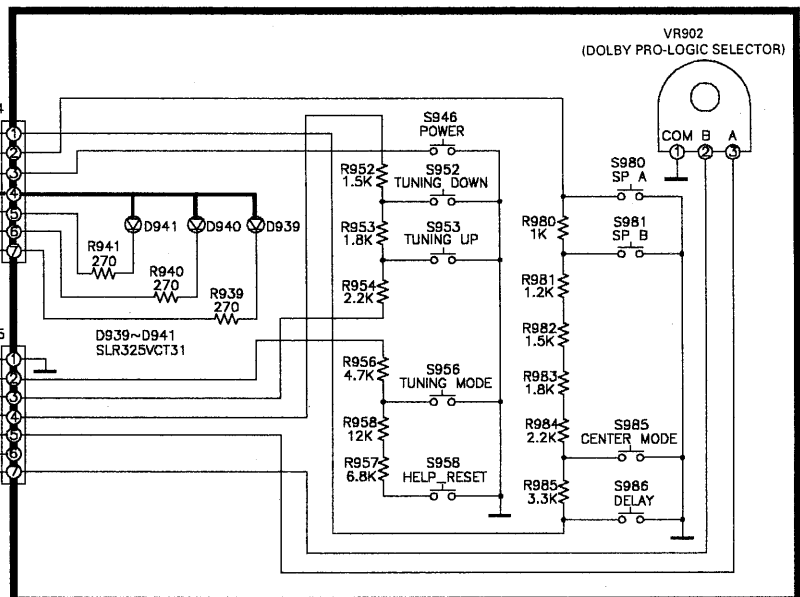


H TRANSFORMER CIRCUIT

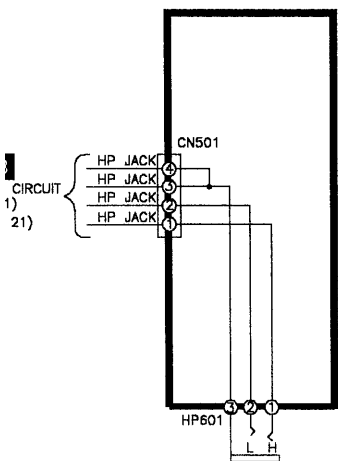


C AC IN/OUT CIRCUIT

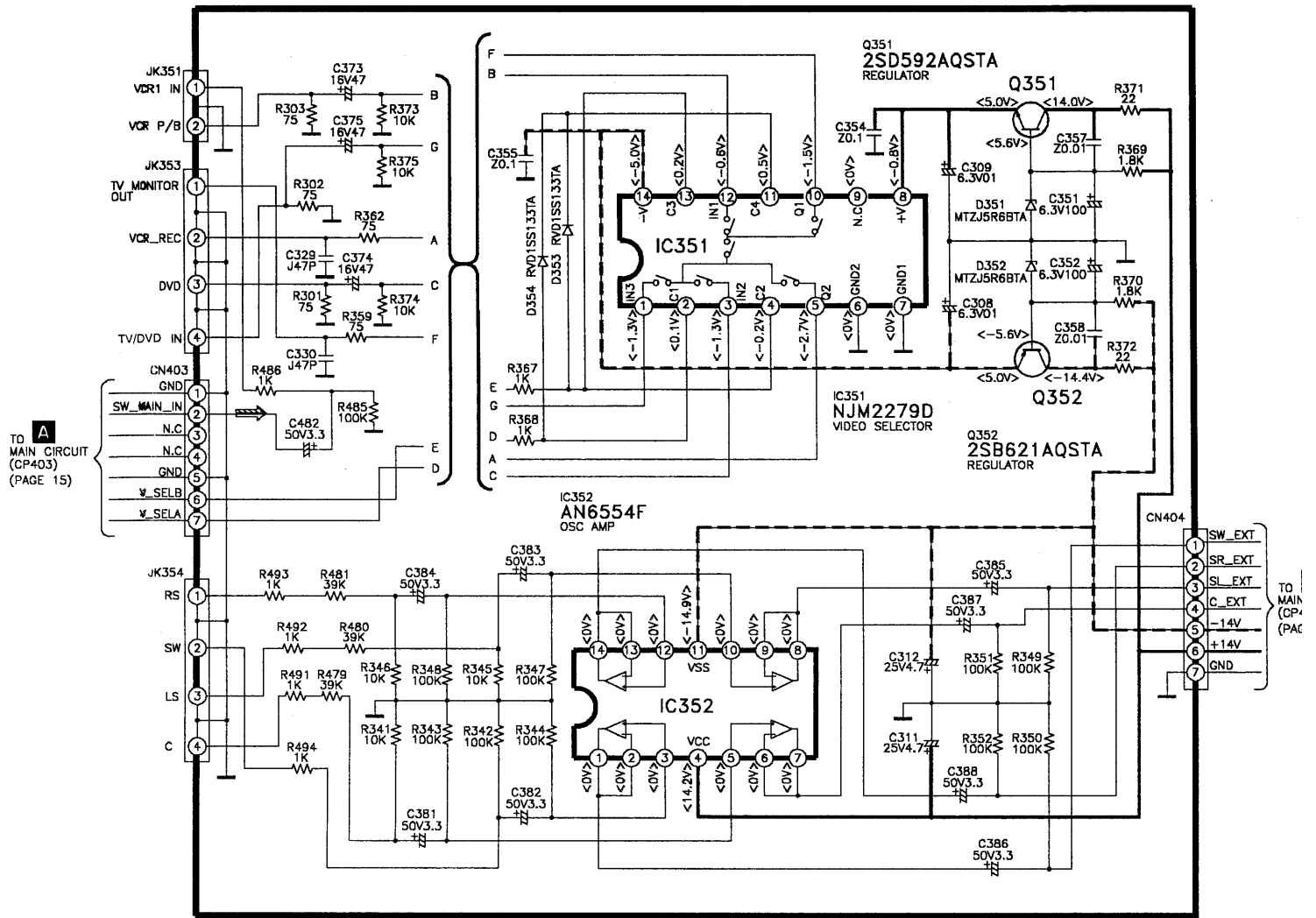
D OPERATION CIRCUIT



E HEADPHONE JACK CIRCUIT



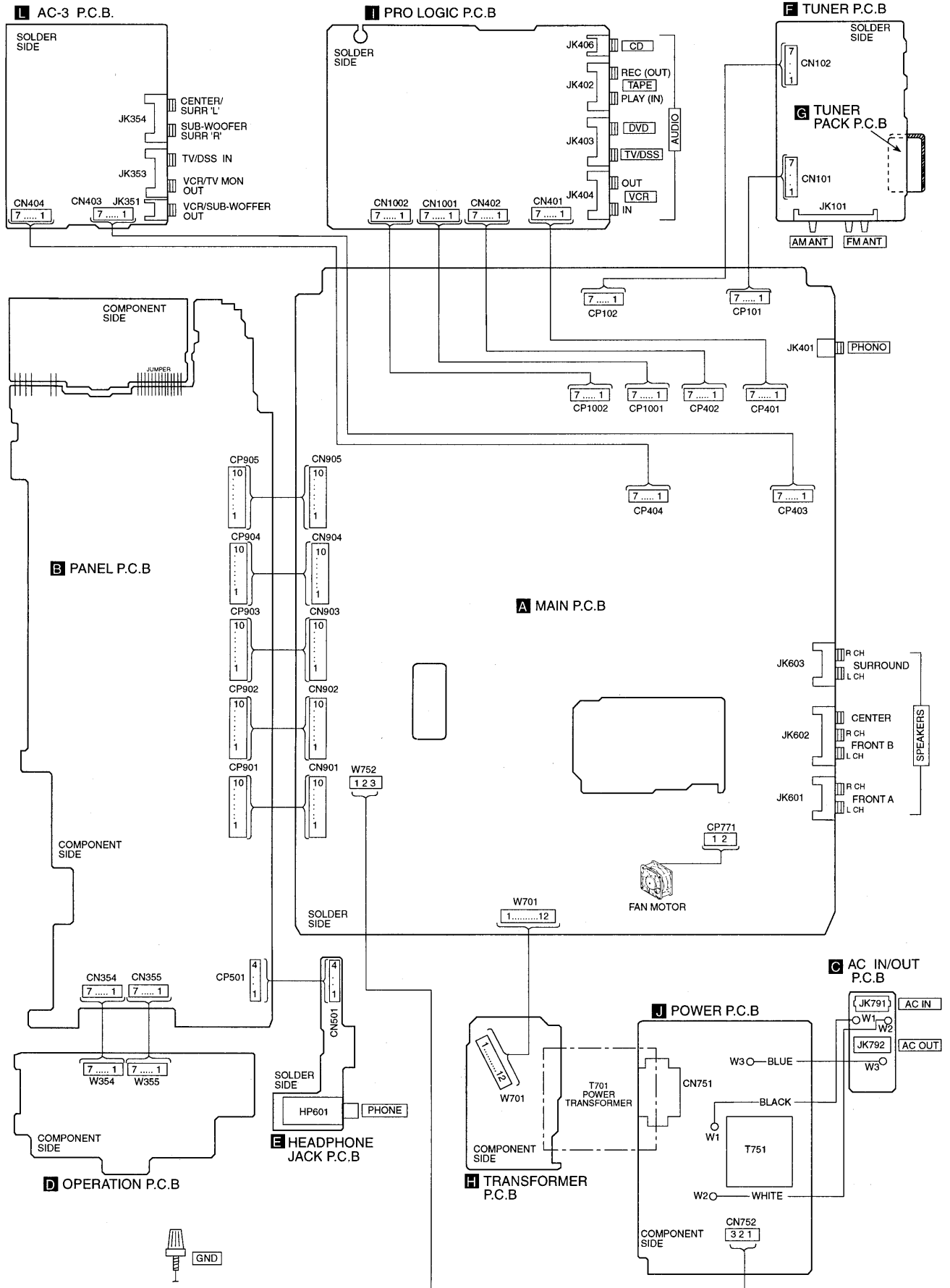
L AC-3 CIRCUIT



A
TO MAIN CIRCUIT
(CP403)
(PAGE 15)

TO MAIN
(CP403)
(PAGE 15)

Wiring Connection Diagram



Cabinet Parts Location

