



JSR-400

Dolby Pro-Logic® Audio/Video
Surround Receiver

The **JSR-400** is part of the
ARC Cinema II System

SERVICE MANUAL



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H A Harman International Company

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ARC CINEMA II SPECIFICATIONS

Total System Output	280 watts
Front Channels:	50 watts x 3 @ .1% THD;
Surround Channels:.	25 watts x 2 @ .1% THD;
Subwoofer:	80 watts x 1 @ 1% THD
System Frequency Response	(-6dB) 45Hz – 20kHz
Input Impedance	20k ohms
Input Sensitivity	220mV
Receiver	
Dimensions (H x W x D)	4-5/8 x 10-1/4 x 9-3/4 inches
.	117 x 260 x 248mm
Weight	5 lbs/2.3 kg

Occasional refinements may be made to existing products without notice, but will always meet or exceed original specifications unless other-wise stated.

SPECIFICATIONS

Measuring methods are based on IHF and IEC standard 268-3

Measurement conditions, unless otherwise noted:

Output resistive load = (8) ohms / Both channels driven

Tone (Base, Treble), Balance, EQ control : Center Position, Other SW's : OFF

Nominal input level: 5mV for MM, 0.5mV for MC, 500mV for general purpose inputs

Power figures should be kept minimum 10 minutes between 15 and 35°C

Terminator: 100 ohm for MC, 1kohm for MM for MM and general purpose inputs

Filter: IHF-A filter

R/O = Rated Output

Power Supply: 120V, 60Hz

Front Amp Section

NO.	DESCRIPTION	INPUT	FREQ.	REMARK	UNIT	LIMIT L/R	NOMINAL L/R	L	R
1	INPUT SENSITIVITY	CD	1kHz		mV	200±30	200±30		
		MM	1kHz		mV				
		MC	1kHz		mV				
		MIC	1kHz		mV				
2	CHANNEL BALANCE	CD	1kHz	R/O TO -40dB	dB	±3	±2		
			1kHz						
4	RESIDUAL NOISE	CD	1kHz	VOL min.	mV	1			
			1kHz	VOL max.	mV				
5	TOTAL HARMONIC DISTORTION	CD (500mV)	(40)Hz	R/O / 1W	%	1	≤0.3		
			1kHz	R/O / 1W	%	1	≤0.3		
			(20)KHz	R/O / 1W	%	1	≤0.3		
6	CONTINUOUS AVERAGE POWER	CD	(40)Hz	(8)ohms	W	50	52		
			1kHz	(8)ohms	W	50	52		
			(20)KHz	(8)ohms	W	50	52		
7	S/N RATIO, IHF-A FILTER	CD (500mV)	1kHz	R/O	dB	≥65	70		
			1kHz	1W	dB				
		MM (5mV)	1kHz	R/O	dB				
			1kHz	1W	dB				
		MC (0.5mV)	1kHz	R/O	dB				
			1kHz	1W	dB				
8	CHANNEL SEPARATION	CD (500mV)	100Hz	R/O-3dB	dB				
			1kHz	R/O-3dB	dB	45	55		
			10kHz	R/O-3dB	dB	40	45		
9	FUNCTION CROSSTALK	TAPE→AUX	1/10kHz	R/O-3dB	dB	60/40	≥65/45		
		AUX→TAPE	1/10kHz	R/O-3dB	dB	60/40	≥65/45		
		MM→CD	1/10kHz	R/O-3dB	dB				
10	FREQUENCY RESPONSE (-3DB)	CD (500mV)		1W	Hz~kHz	40~20k	20~50k		
11	TONE CONTROL, ±(10)dB	CD	100Hz	1W	dB	10 2	10 1		
			10kHz	1W	dB	10 2	10 1		

Rear Amp Section

NO.	DESCRIPTION	INPUT	FREQ.	REMARK	UNIT	LIMIT L/R	NOMINAL L/R
1	POWER OUTPUT 0.9% THD	CD	1kHz	(8) ohms	W	50	≥52
2	TOTAL HARMONIC DISTORTION	CD	1kHz	1W	%	1	≤0.7
3	S/N RATIO DOLBY IHF-A FILTER, THEATER HALL STADIUM CHURCH	CD		R/O	dB	60	≥65
		CD		R/O	dB		
		CD		R/O	dB	60	≥65
		CD		R/O	dB		
		CD		R/O	dB		
4	FRE RES. (ONLY DOLBY) 3dB	CD	1kHz	1W	Hz~kHz	100~6	80~7

Center Amp Section

NO.	DESCRIPTION	INPUT	FREQ.	REMARK	UNIT	LIMIT L/R	NOMINAL L/R
1	POWER OUTPUT 0.9% THD	CD	1kHz	(8) ohms	W	50	≥52
2	TOTAL HARMONIC DISTORTION	CD	1kHz	1W	%	1	≤0.3
3	S/N RATIO IHF-A FILTER	CD		R/O	dB	73	≥78
4	FRE RES. LARGE DOLBY MODE SMALL	CD		1W	Hz~kHz	50~15k	30~17k
		CD		1W	Hz~kHz	120~15k	100~17k

Video Section

NO.	DESCRIPTION	INPUT	FREQ.	REMARK	UNIT	LIMIT L/R	NOMINAL L/R
1	OUTPUT LEVEL at 75OHMS	VCR1 (1Vp-p)	1MHz		Vp-p	1±0.2	1±0.1
2	FREQUENCY RESPONSE	VCR1 (1Vp-p)	1MHz		Hz~MHz	DC~6	DC~6.3
3	S/N RATIO	VCR1 (1Vp-p)	1MHz		dB	40	45
4	CROSS TALK	VCR1 (1Vp-p)	1MHz		dB	40	45

TUNER

Measuring methods in conformity with IEC standard 315

Measurement conditions FM:

Radio frequency = 98.1 MHz,

Audio frequency = 1 kHz

Reference level = 1mV on (75ohms, 300ohms)

Test Point: TP 1 = 90.1MHz, TP 2 = 98.1 MHz, TP 3 = 106.1 MHz

Filter = B.P.F at STEREO

Power Supply: 120V, 60Hz

FM Section

NO.	DESCRIPTION		UNIT	LIMIT L/R	NOMINAL L/R
1	TUNING RANGE	LOW ~ HIGH	MHz	87.5~107.9M	
	STEP	AUTO/Man.	kHz	100	
2	USABLE SENSITIVITY S/N = 30dB	TP 1	dBf	23.2	≤17.2
		TP 2	dBf	23.2	≤17.2
		TP 3	dBf	23.2	≤17.2
3	FULL LIMITING SENSE -3dB	OUTPUT =	dBf	15.2	≤12.2
4	AUTO STOP LEVEL		dBf	31.2 5	31.2±3
5	S/N RATIO	MONO	dBf	65	≥72
	IHF-A FILTER	STEREO	dBf	59	≥70
6	TOTAL HARMONIC DISTORTION	MONO	%	1	≤0.5
		STEREO	%	1.5	≤1
7	50dB QUIETING SENS.	MONO	dBf	23.2	≤20.2
		STEREO	dBf	45.2	≤43.2
8	CHANNEL SEPARATION	250Hz	dBf	20	≥40
		1kHz	dBf	26	≥45
		6.3kHz	dBf	18	≥35
9	FREQUENCY RESPONSE AT 1.5dB		Hz	30~12.5k	20~15k
10	SPURIOUS RESPONSE		dB	60	≥70
11	IF REJECTION	TP 1	dB	60	≥70
12	IMAGE REJECTION	TP 3	dB	30	≥40
13	AM REJECTION RATIO		dB	25	≥30
14	ALTERNATIVE CH SELECTIVITY	(400)KhZ	dB	55	≥65
15	OUTPUT LEVEL MONO		mV	500 200	500 150

Measuring methods in conformity with IEC standard 315

Measurement conditions AM - MW: Radio frequency = 1000/999kHz

Audio frequency = 400Hz

LW: Radio frequency = 207kHz

Audio frequency = 400Hz

Reference level = 5mV/m, 10mV/m on 50ohms

Modulation = 30%

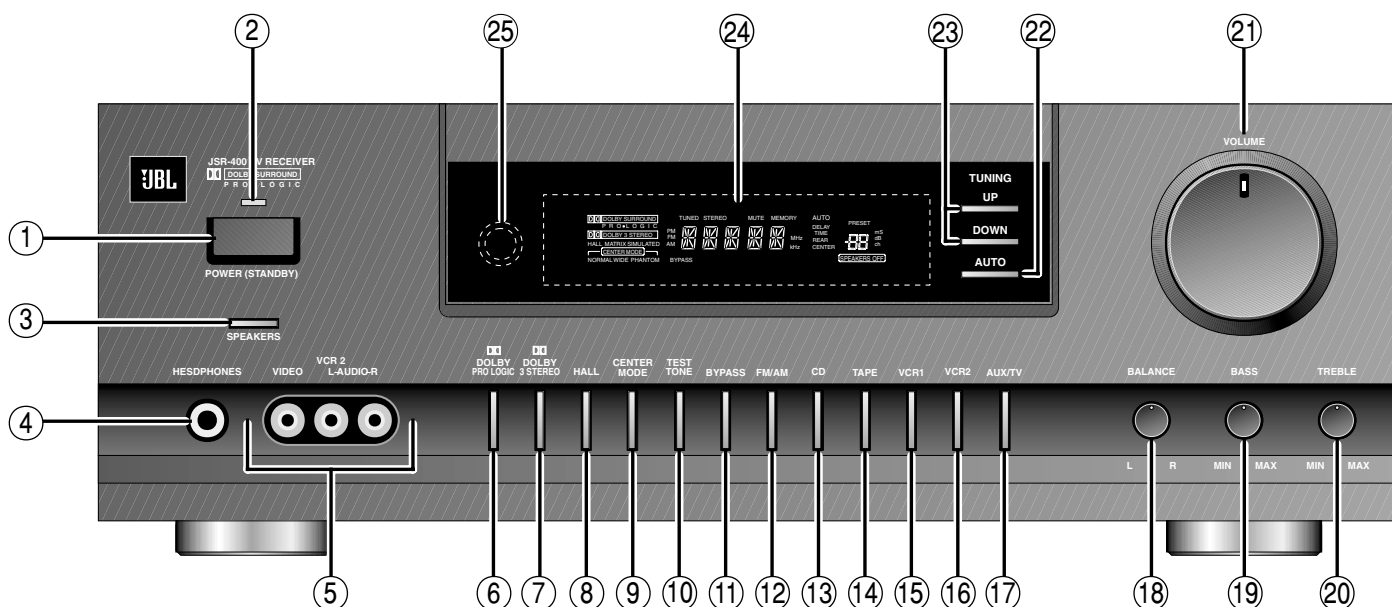
Test Point: MW TP1 = (600)kHz TP2 = (1000)kHz TP3 = (1400)kHz

LW TP1 = 162kHz TP2 = 207kHz TP3 = 252kHz

AM Section

NO.	DESCRIPTION		UNIT	LIMIT L/R	NOMINAL L/R
1	TUNING RANGE	LOW ~ HIGH	kHz	520~1710	
	MW		kHz		
	STEP	LW AUTO/Man.	kHz	10	
2	USABLE SENSITIVITY	MW TP 1 TP 2 TP 3	uV/m	800	≤500
			uV/m	800	≤500
			uV/m	800	≤500
	S/N = 20dB	LW TP 1 TP 2 TP 3	uV/m		
			uV/m		
			uV/m		
3	S/N RATIO	MW	dB	35	≥45
		LW	dB		
4	TOTAL HARMONIC DISTORTION		%	1.5	≤1.0
5	OVER LOAD DISTORTION 5mV 80% MOD		%	10	≤5
6	FREQUENCY RESPONSE at -6dB	MW	Hz	100~2k	80~2.3k
		LW	Hz		
7	SELECTIVITY 10kHz/9kHz	MW	dB	20	≥25
		LW	dB		
8	AGC FIGURE OF MERIT	INPUT 100mV	dB	40	≥45
9	IMAGE REJECTION	MW = TP 3	dB	30	≥35
		LW = TP 3	dB		
10	FREQUENCY RESPONSE AT 1.5dB		%	15	≤10
			%	15	≤10
11	AUTO STOP LEVEL	MW	uV/m	800(-6dB)	800(±5dB)
		LW	uV/m		
12	TUNED LEVEL	MW	uV/m	800(-6dB)	800(±5dB)
		LW	uV/m		
13	OUTPUT LEVEL		mV	120 40	120±30

CONTROLS AND THEIR FUNCTION



1. Power: Once the unit is plugged in, it is in either STANDBY or ON. This button switches from STANDBY to ON, or can be operated from the remote control. In either state the receiver is NOT disconnected from the AC main power supply.

2. LED: In the STANDBY mode the LED is RED, when ON the LED is Off.

3. Speaker Switch: Press this button to mute the output to all speakers.

4. Headphone Jack: Normally the speaker switch (#3) is pressed to mute speaker output for headphone listening.

5. Video 3 Input: Audio or Video sources connected to these jacks may be selected by pressing the **VCR2 button (16)**.

6. Dolby Pro-Logic: Press this button to engage Dolby Pro-Logic sound decoding. All five speakers are active in this mode.

7. Dolby 3 Stereo: Press this button to engage Dolby 3 Stereo; only the front and center loudspeakers are active in this mode.

8. Hall: Press this button to create a surround image from a 2 channel recording.

9. Center Mode: Press this button to change the center speaker effect between NORMAL, WIDE and PHANTOM when in the surround modes.

10. Test Tone: The test tone is used to calibrate the volume settings of the speakers. A static noise will be heard cycling, in order, from the front left, center, right, and both surround speakers. When the test tone is cycling, you may adjust the volume level of the center and surround speakers with the CENTER LEVEL or REAR LEVEL buttons on the remote control. Press the Test Tone button once more to return to normal mode.

NOTE: The test tone is used to calibrate the performance of the system. When listening to an actual recording, the volume level of the surround channels is generally much lower than that of the front channels. In fact, when listening to a movie, virtually all of the dialogue and a substantial amount of the effects are reproduced through the center channel.

11. By Pass: Press this button to engage traditional 2 channel Stereo listening. Only the front speakers will be active.

12. AM/FM Tuner Selector: Press this button once to select the tuner. Press it again to switch between AM and FM.

13. CD: Press this button to select the CD player.

14. Tape: Press this button to select the Cassette tape player.

15. VCR1: Press this button to select a VCR or video source connected to the rear panel on the unit.

16. VCR2: Press this button to select a VCR or video source connected to the front panel on the unit.

17. AUX/TV Input: Press this button to select the source connected to the TV Input.

18. Balance: This knob adjusts the balance between the front left and right speakers.

19. Bass: This knob adjusts the tone of low-frequency sounds. Turn it to the right to boost bass frequencies or to the left to cut bass frequencies.

20. Treble: This knob adjusts the tone of high-frequency sounds. Turn it to the right to boost high frequencies or to the left to cut high frequencies.

21. Volume Control: Turn the knob clockwise to increase volume, counterclockwise to decrease the volume.

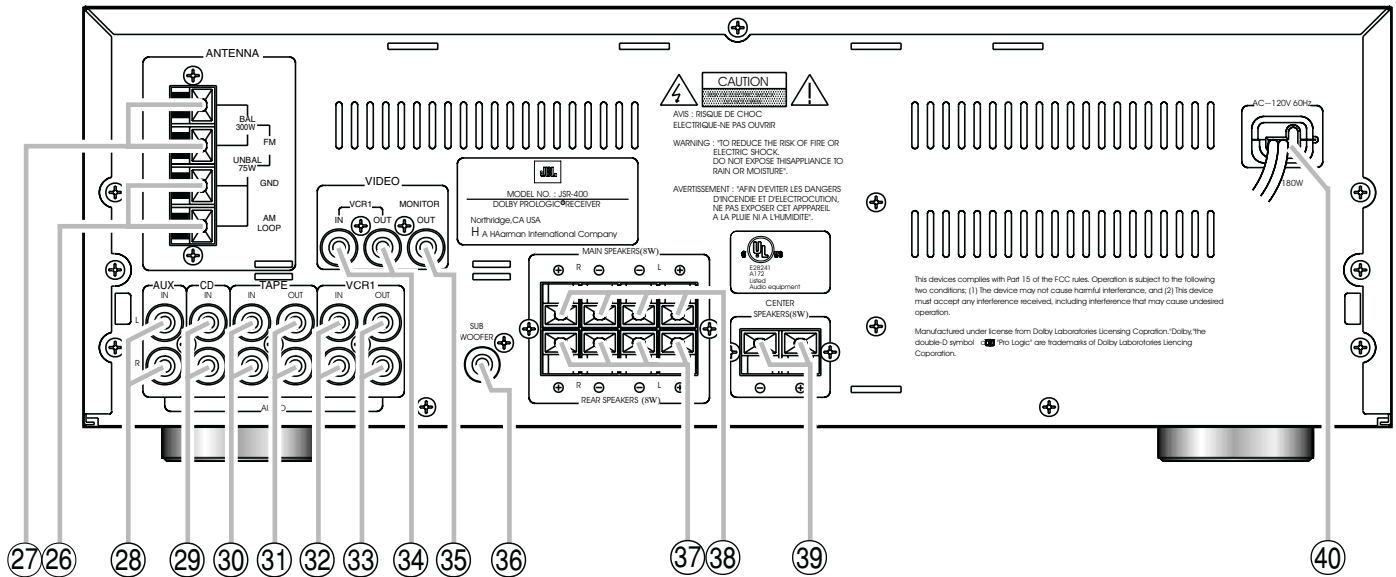
22. Auto tune: Press this button when in the AM/FM mode to direct the receiver to seek only the strongest stations when pressing the TUNING button #23.

23. Tune: Press this button to manually scan up or down through the FM or AM bands.

24. Information Display: This display delivers messages and status indications to help you operate the receiver.

25. Remote Sensor Window: The sensor behind this window receives infrared signals from the remote control. Aim the remote at this area and do not block or cover it.

REAR PANEL CONNECTIONS



26. AM Antenna: Connect the AM loop antenna supplied with the receiver to these terminals.

27. FM Antenna: Connect the FM antenna supplied with the receiver to these terminals.

28. AUX In: Connect a TV output or any auxiliary audio source (except for a phonograph) to these jacks. A phonograph will need a phono pre-amp before being connected to these jacks

29. CD IN: Connect these jacks to the output of a compact disk player or CD changer.

30. Tape In: Connect these jacks to the PLAY/OUT jacks of an audio recorder.

31. Tape Out: Connect these jacks to the RECORD/INPUT jacks of an audio recorder.

32. VCR In: Connect these jacks to the audio output jacks of a stereo VCR.

33. VCR Out: Connect these jacks to the audio input jacks of a stereo VCR.

34. Video - VCR1: Connect the single input jack to the video output jack of a VCR, and the output jack to the video input jack of the same VCR.

35. TV Monitor Video Output: Connect this jack to the standard (composite) video input of a TV monitor or video projector to view the output of any standard video source selected by the receiver's video switch.

36. Subwoofer Pre-Out: Connect this jack to the line level input of a powered subwoofer. If an external subwoofer amplifier is used, connect this jack to the subwoofer amplifier input.

37. Rear Speakers: Connect these terminals to the surround speakers.

38. Main Speakers: Connect these terminals to the front speakers.

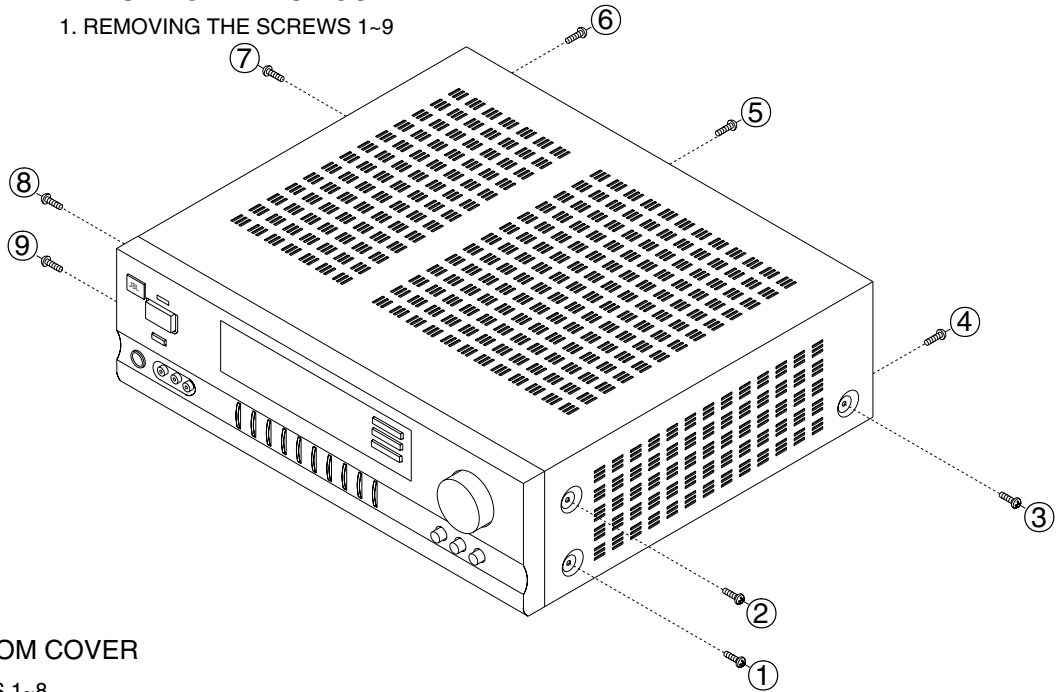
39. Center: Connect these terminals to the center speaker.

40. Power Cable: Connect the AC plug to a non-switched AC wall output.

DISASSEMBLY PROCEDURES

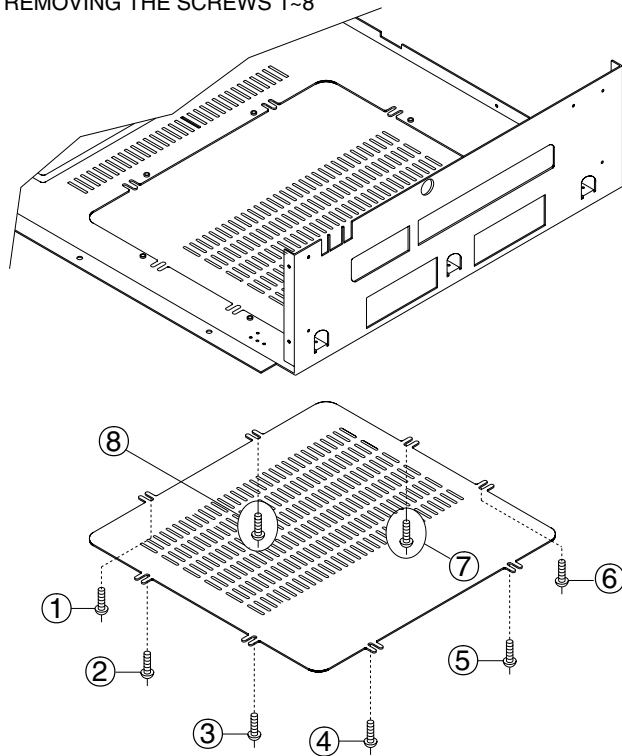
STEP 1.
REMOVING THE TOP COVER

1. REMOVING THE SCREWS 1-9



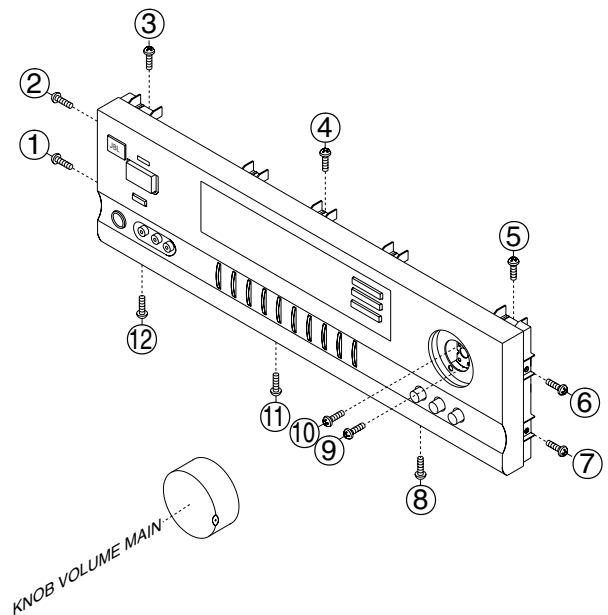
STEP 2.
REMOVING THE BOTTOM COVER

1. REMOVING THE SCREWS 1-8



STEP 3.
REMOVING THE FRONT PANEL

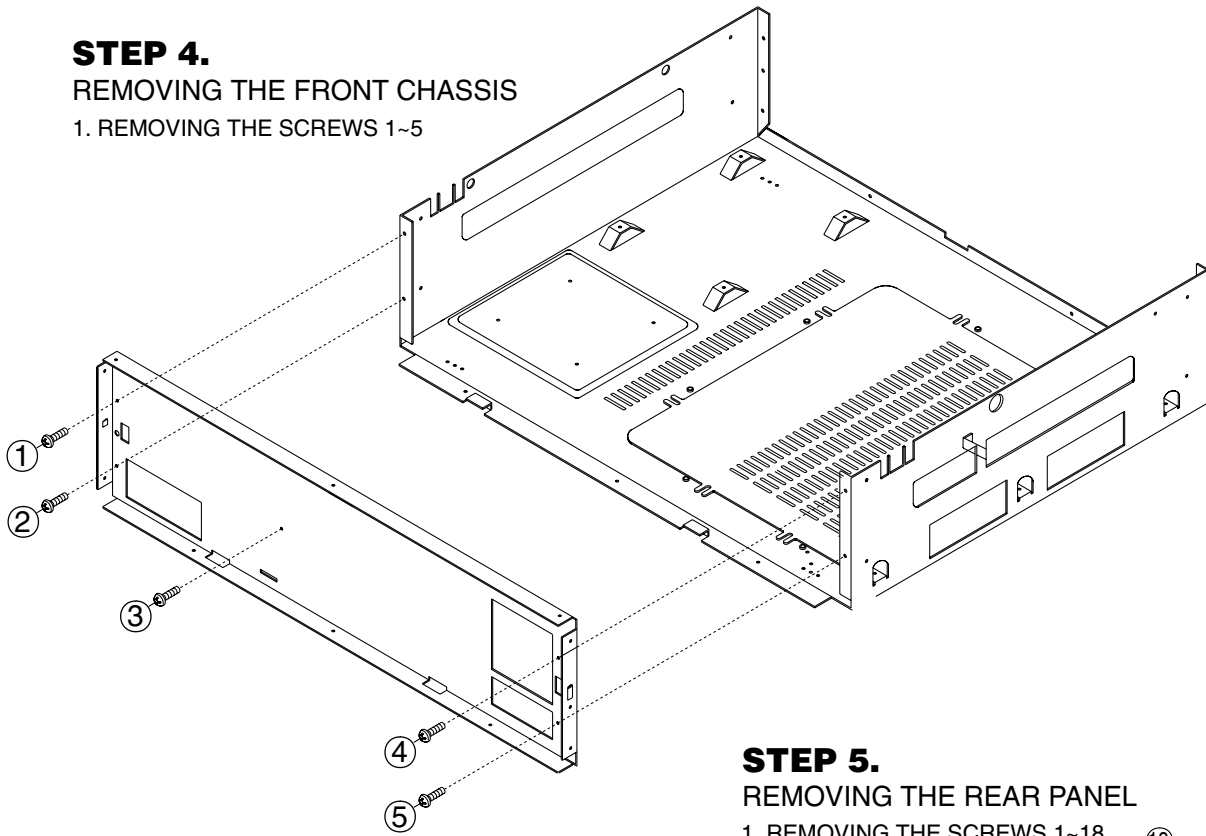
1. REMOVING KNOB VOLUME MAIN FROM FRONT PANEL
2. REMOVING THE SCREWS 1-12



DISASSEMBLY PROCEDURES (continued)

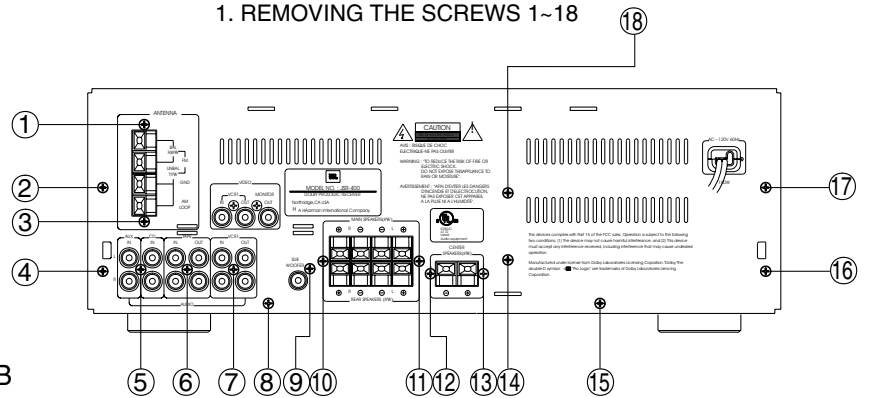
STEP 4.
REMOVING THE FRONT CHASSIS

1. REMOVING THE SCREWS 1~5



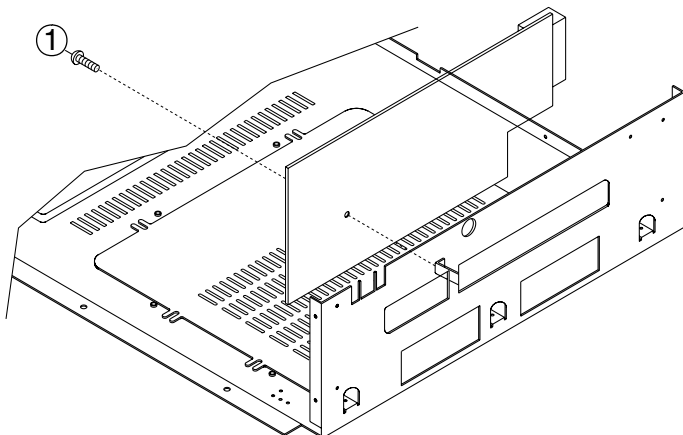
STEP 5.
REMOVING THE REAR PANEL

1. REMOVING THE SCREWS 1~18

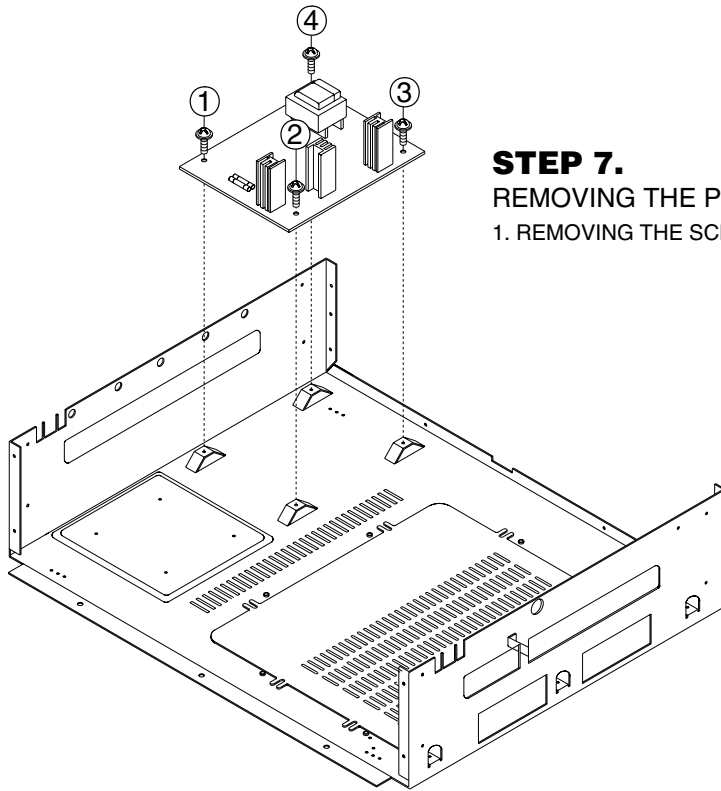


STEP 6.
REMOVING THE TUNER PCB

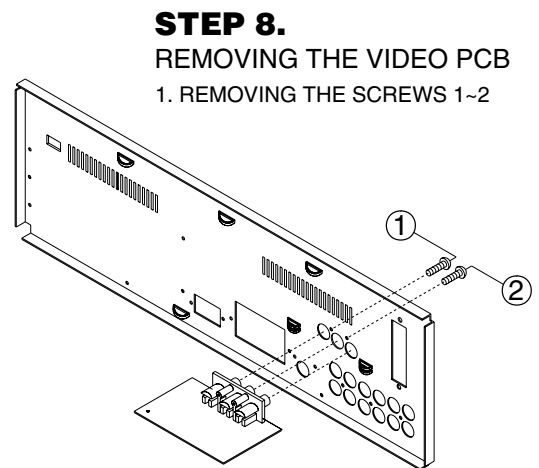
1. REMOVING THE SCREWS 1



DISASSEMBLY PROCEDURES (continued)

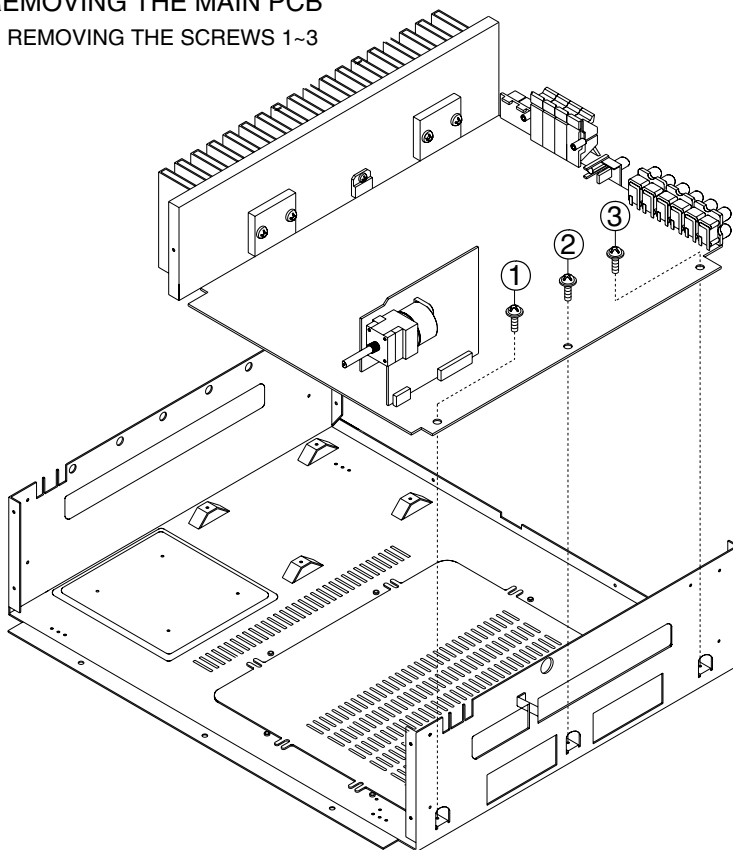


STEP 7.
REMOVING THE POWER PCB
1. REMOVING THE SCREWS 1-4



STEP 8.
REMOVING THE VIDEO PCB
1. REMOVING THE SCREWS 1-2

STEP 9.
REMOVING THE MAIN PCB
1. REMOVING THE SCREWS 1-3



CIRCUIT DESCRIPTION

1. Surround Circuits

This model incorporates a surround processor circuit.

Fig. 1 is a block diagram of the surround processor circuit. The microprocessor transfers the data to the Dolby Pro-Logic decoder and Time Delay Device to operate the circuits in each mode.

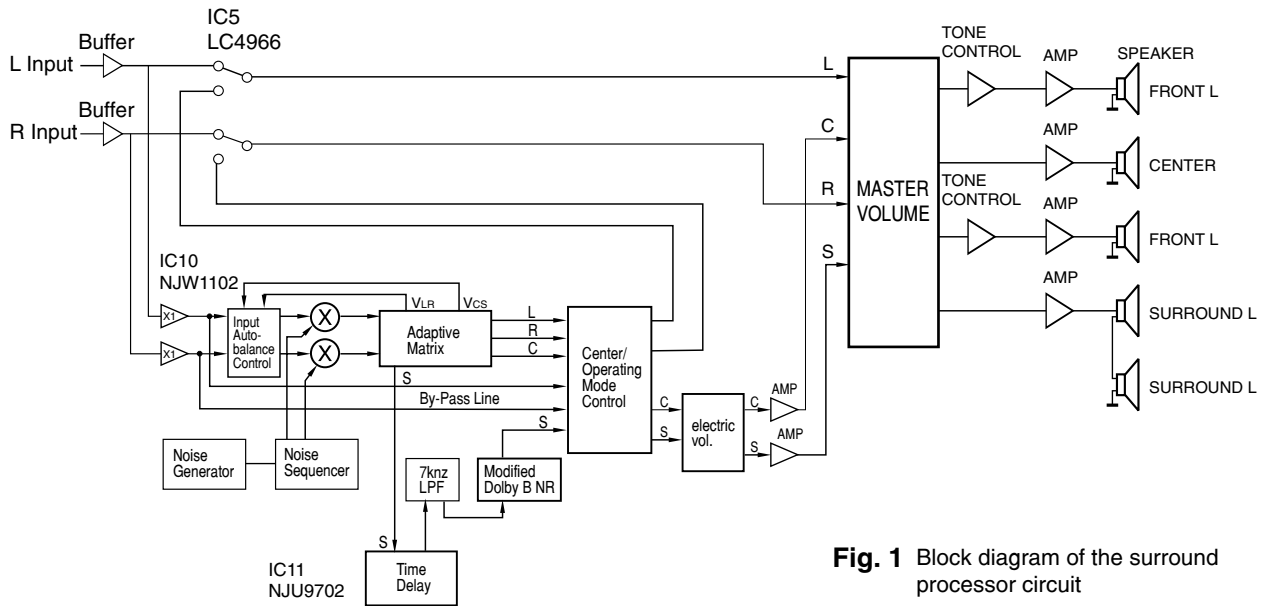


Fig. 1 Block diagram of the surround processor circuit

1) BYPASS

Set to this mode to listen to ordinary stereo sound. The rear L/R and center outputs will be muted.

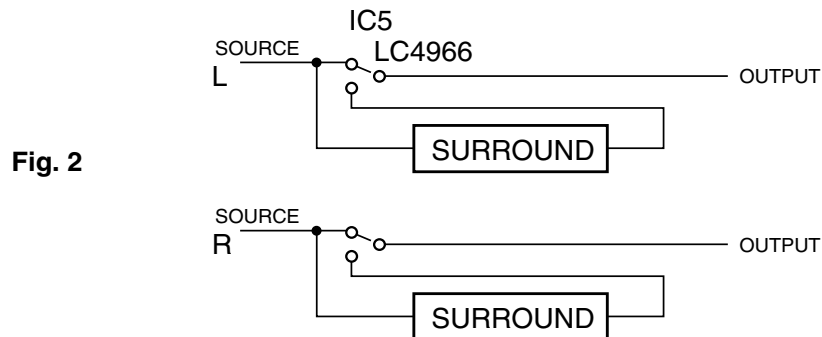


Fig. 2

2) DOLBY PRO-LOGIC CIRCUIT

Dolby Pro-Logic is a sound effect system for movies developed by the Dolby Laboratories Licensing Corp. IC10 (NJW1102) is a Dolby Pro-Logic decoder IC. When an audio signal recorded using the Dolby Pro-Logic system is sent to this IC, the left, right, center and surround components are separated. The surround signal component is delayed by the delay IC11 (NJU9702). Fig. 3 shows the configuration of the Dolby decoder.

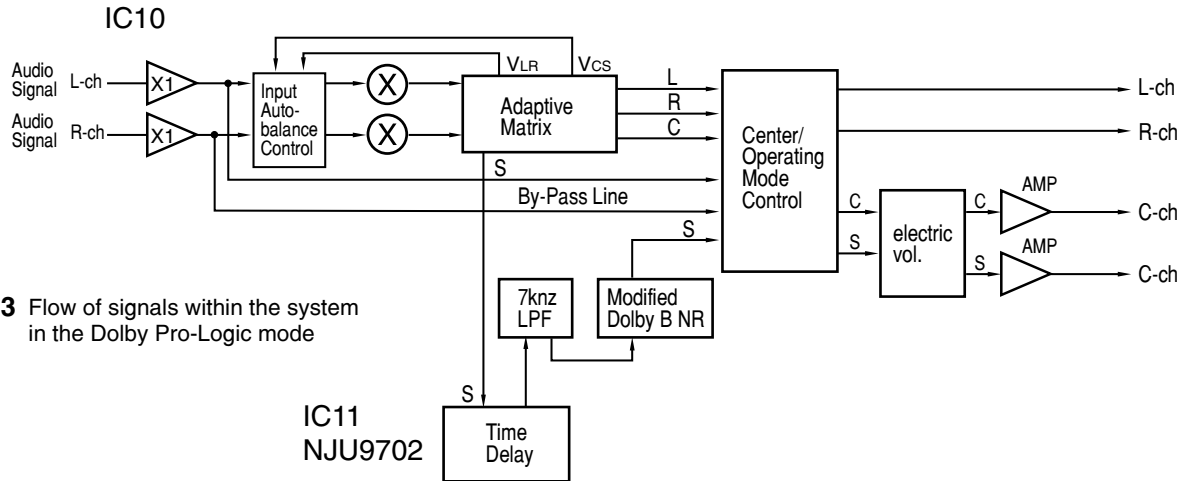


Fig. 3 Flow of signals within the system in the Dolby Pro-Logic mode

With Dolby Pro-Logic, three center modes depend on the use of a center speaker as follows.

NORMAL:	Bass frequencies are sent only to the Left and Right Front channels. Select this mode when the Center Speaker is smaller than the left and Right speakers.
WIDE:	Bass frequencies are sent to the Left, Center and Right speakers. Select this mode when the Center speaker is approximately the same size as the Left and Right speakers.
PHANTOM:	Center channel information is sent to the Left and Right speakers. Select this mode when you do not have a center channel speaker.

3) STEREO CIRCUIT

In 3-stereo mode, surround sound is sent to front Left channel and front Right channel and no surround sound is sent to surround channel.

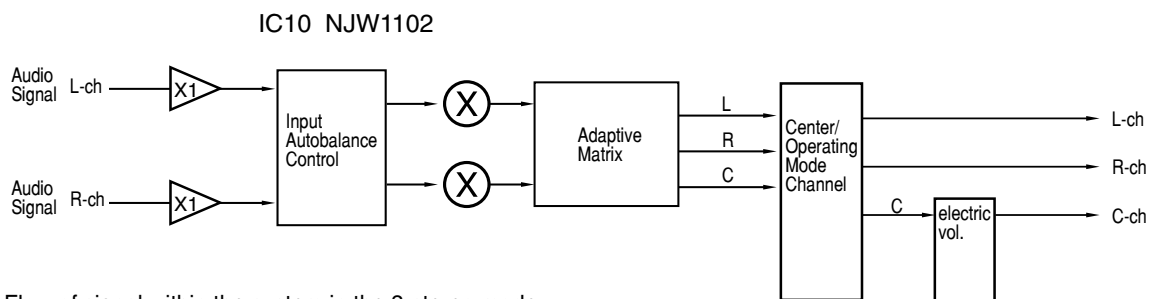
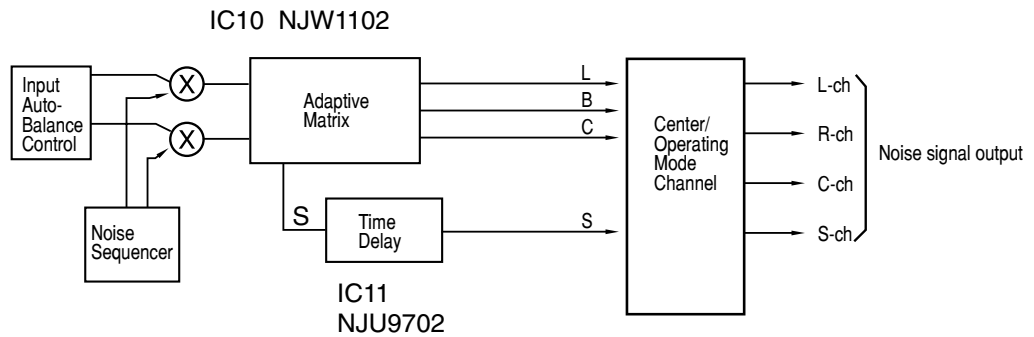


Fig. 4 Flow of signal within the system in the 3-stereo mode

4) TEST TONE GENERATOR

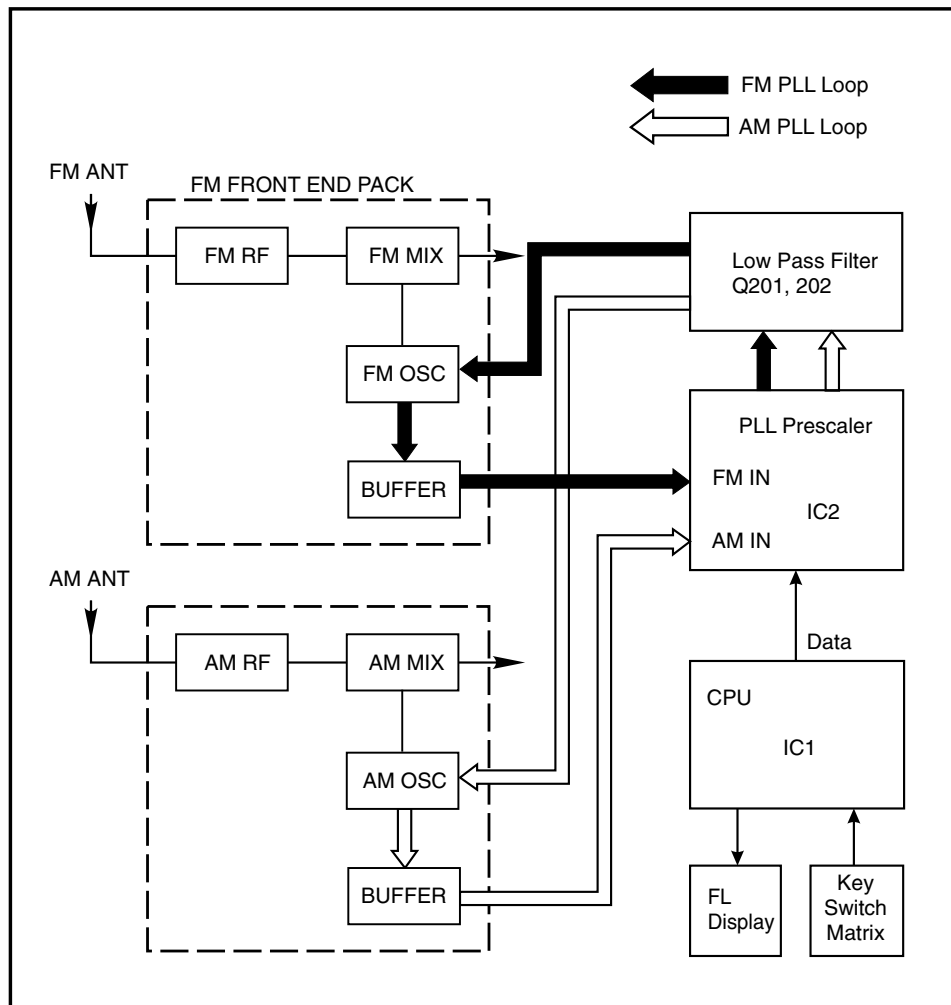
The test tone generator generates a test tone (noise) to check the balance of sound output from each speaker in the Dolby Pro-Logic mode. (This circuit is produced under license of the Dolby Laboratories Licensing Corp.) The test tone to the loudspeakers at 2 second intervals in the following sequence: Left, Center, Right, Rear (both rear channels).

Fig. 5 Flow of noise signals within the system

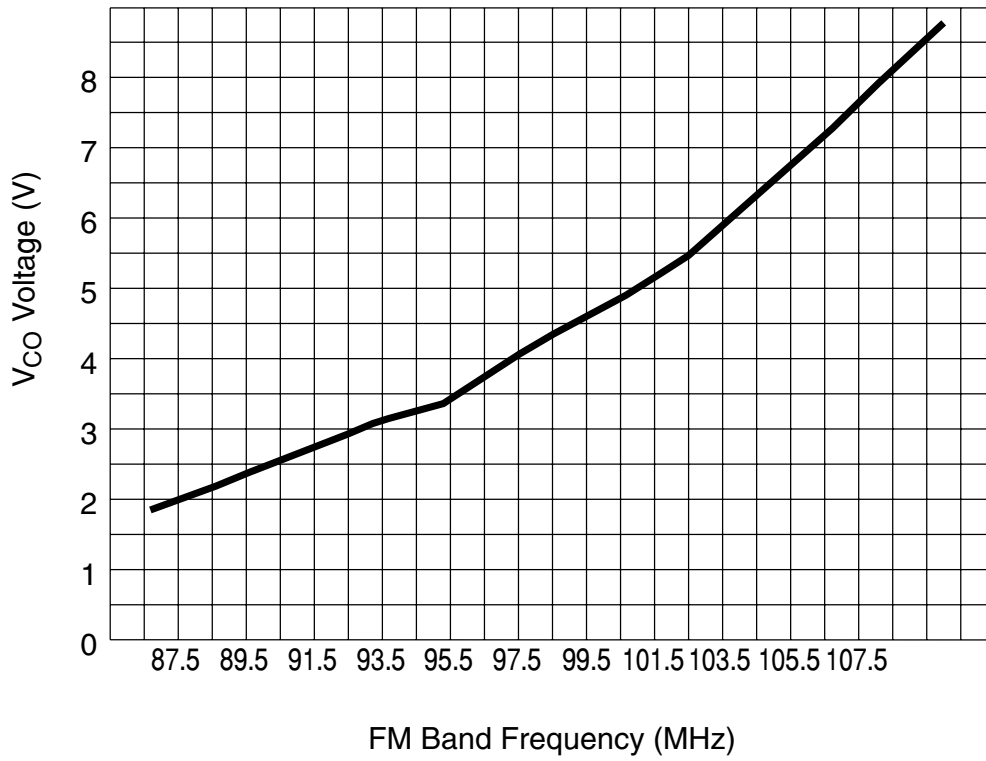


2. DIGITAL TUNING SYSTEM DESCRIPTION.

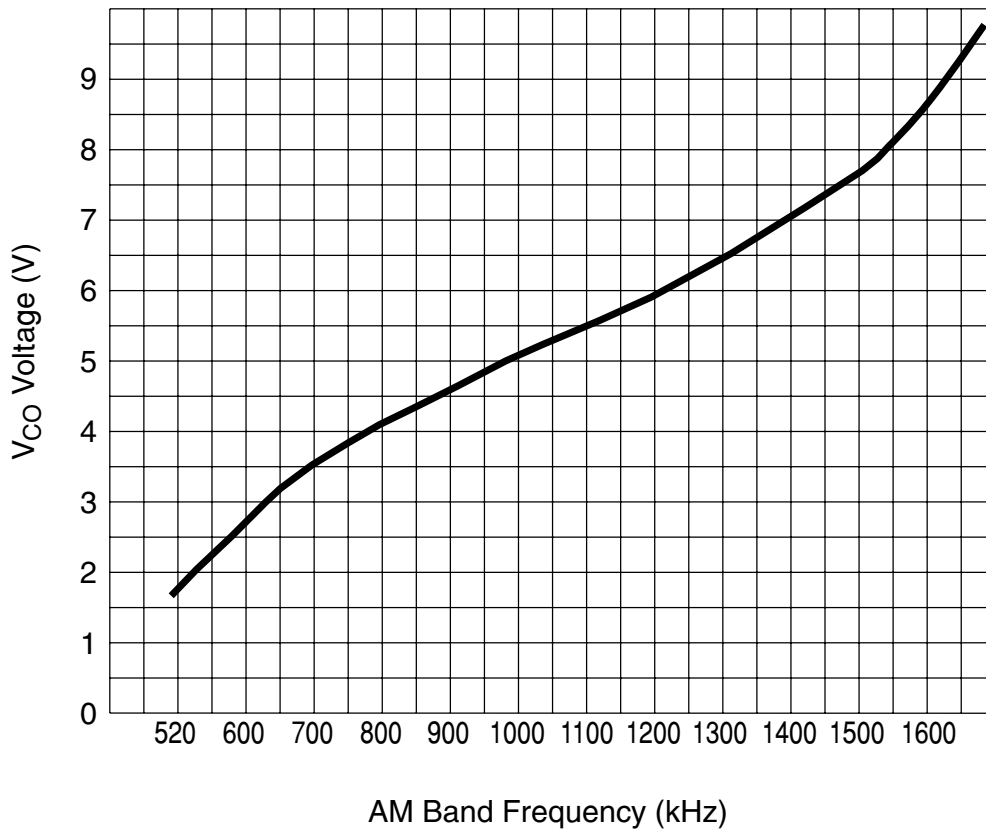
1) DIGITAL TUNING SYSTEM



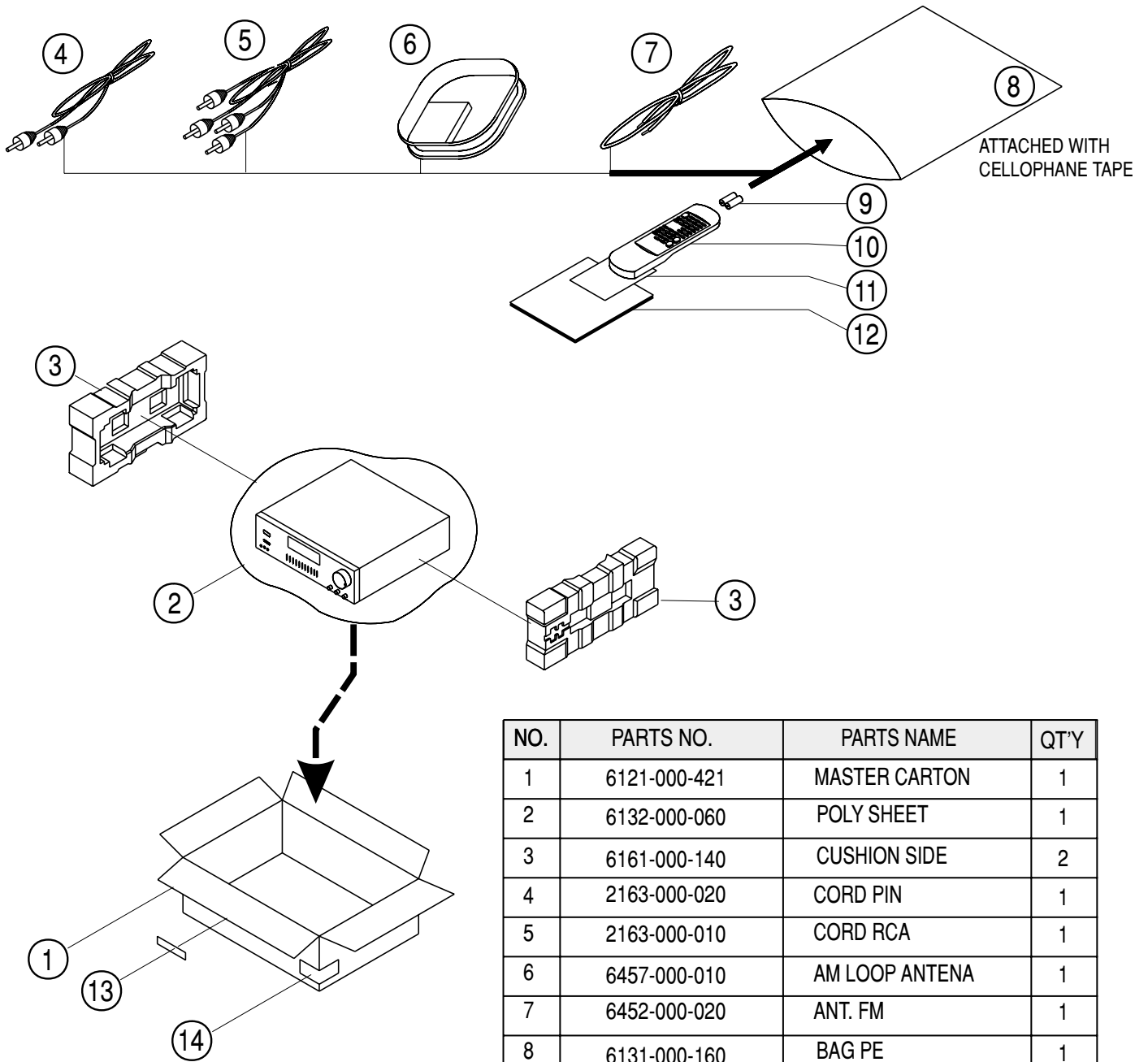
2) VCO VS. FM BAND FREQUENCY CURVE.



3) VCO VS. AM BAND FREQUENCY CURVE.

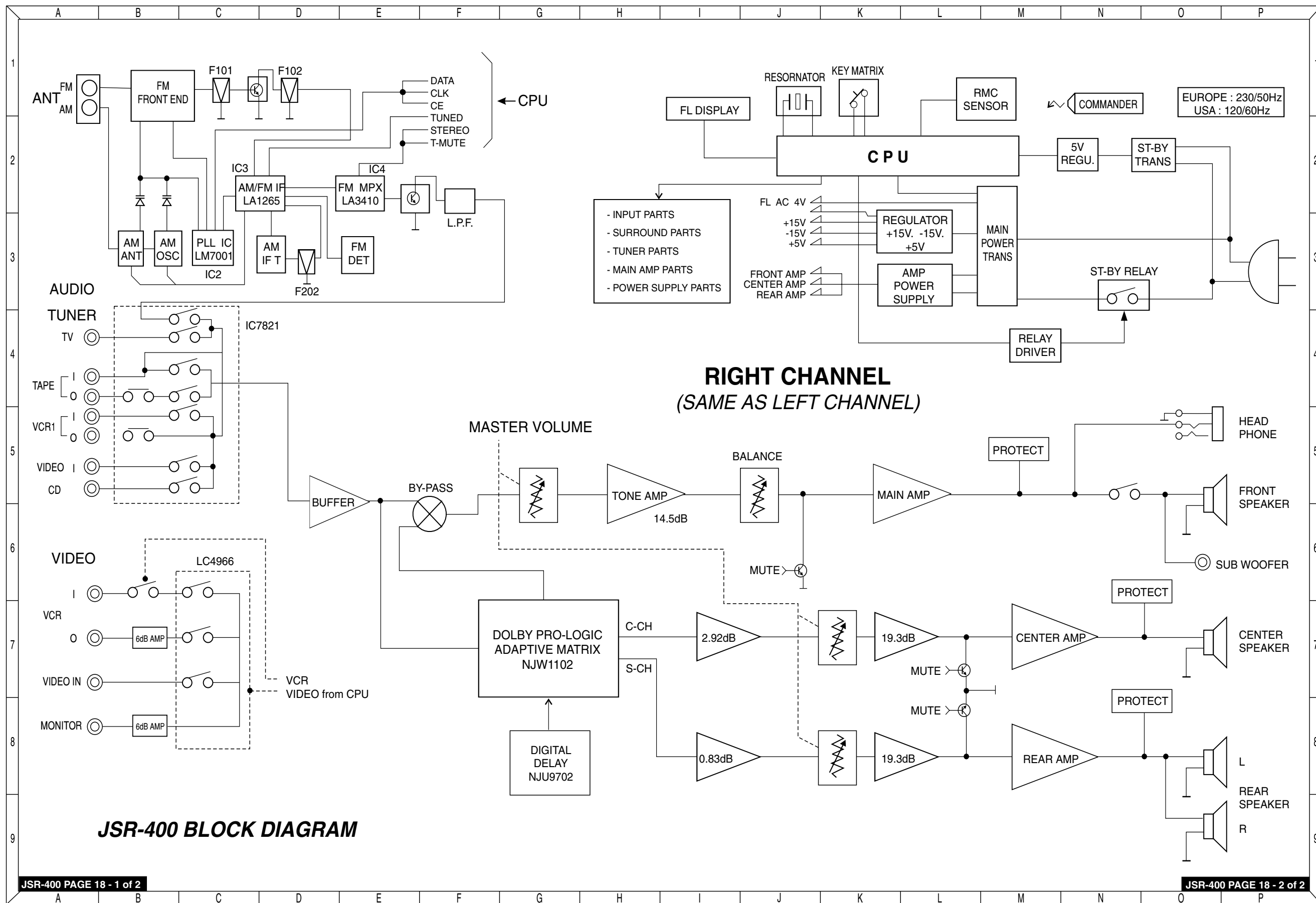


JSR400 PACKING

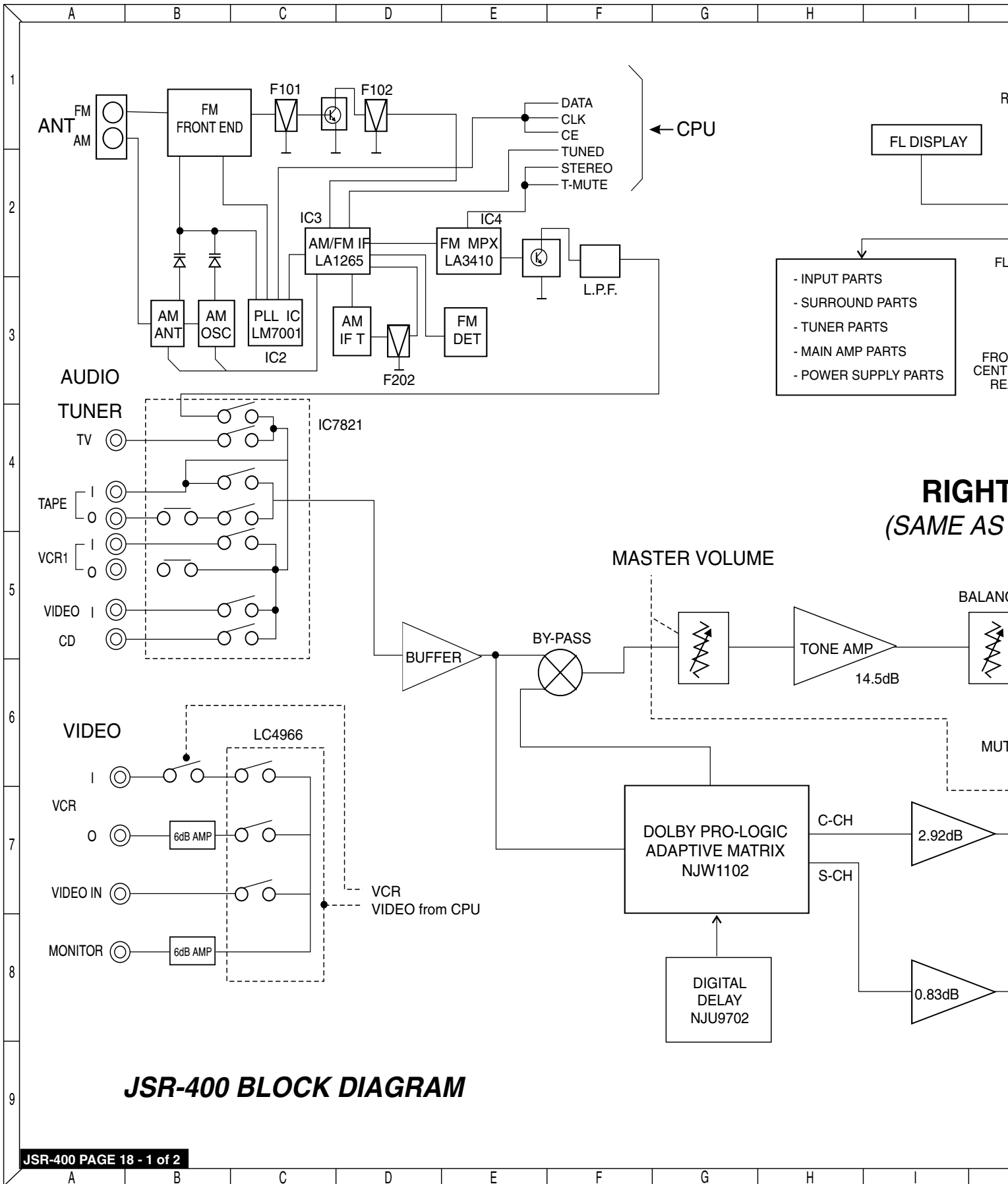


NO.	PARTS NO.	PARTS NAME	QTY
1	6121-000-421	MASTER CARTON	1
2	6132-000-060	POLY SHEET	1
3	6161-000-140	CUSHION SIDE	2
4	2163-000-020	CORD PIN	1
5	2163-000-010	CORD RCA	1
6	6457-000-010	AM LOOP ANTENA	1
7	6452-000-020	ANT. FM	1
8	6131-000-160	BAG PE	1
9	6453-000-002	BATTERY	2
10	6425-000-240	REMOCON ASS'Y	1
11	6231-001-011	CARD WARRANTY	1
12	1111-ARCCINII	INSTRUCTION MANUAL	1
13	6234-002-000	LABEL SERIAL NO	1
14	6234-001-021	LABEL BARCODE #39	1

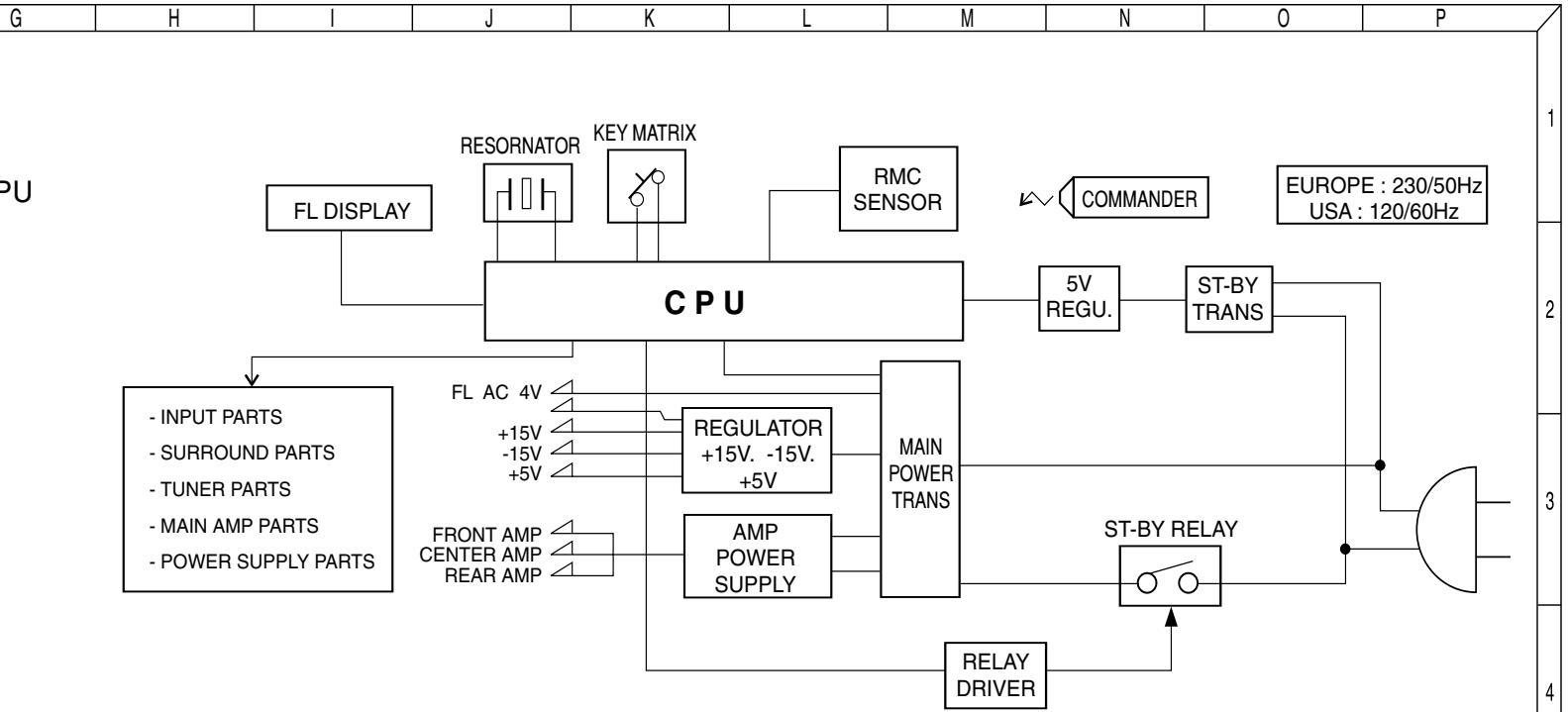
JSR400 BLOCK DIAGRAM



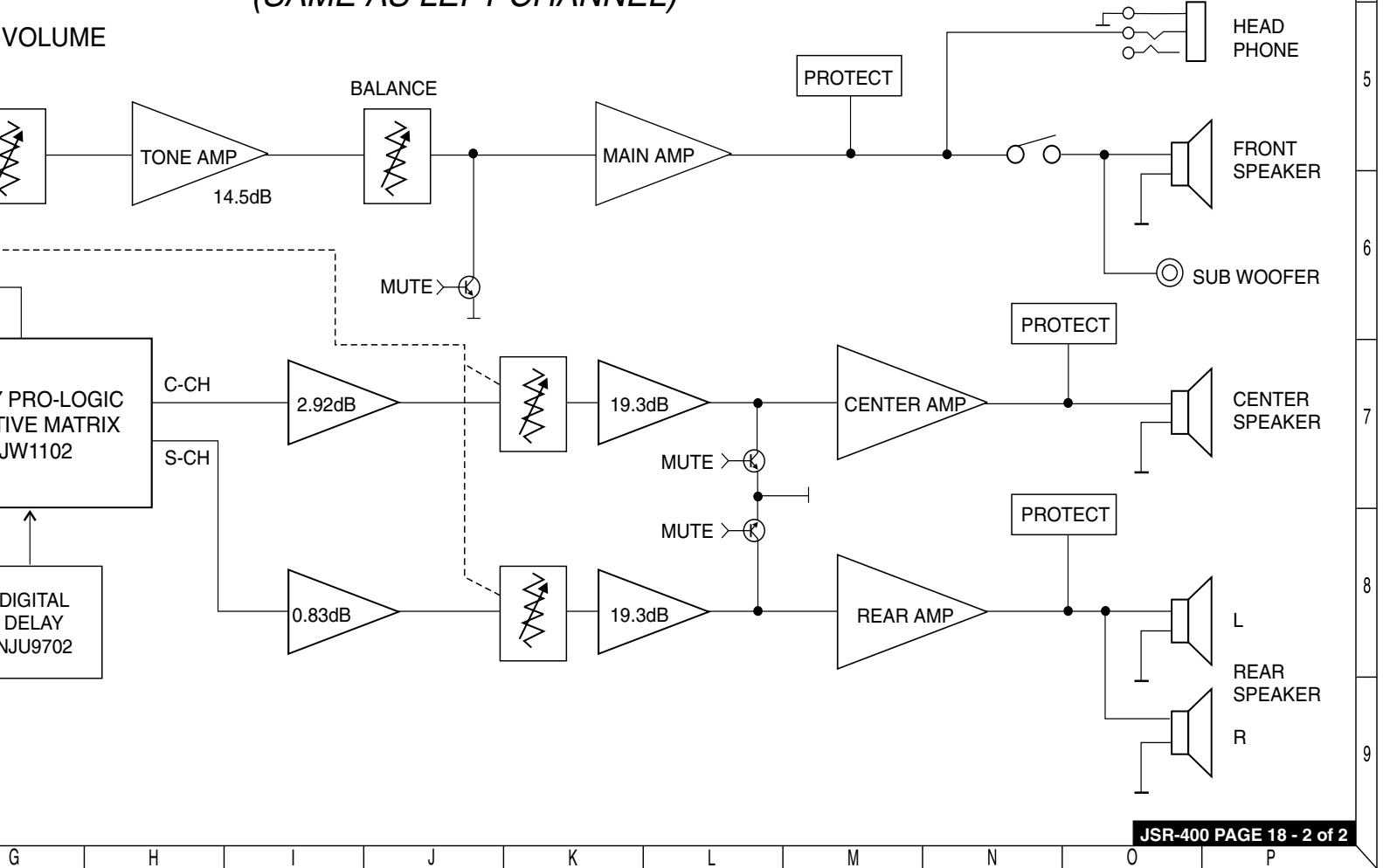
JSR-400 BLOCK DIAGRAM



JSR400 BLOCK DIAGRAM

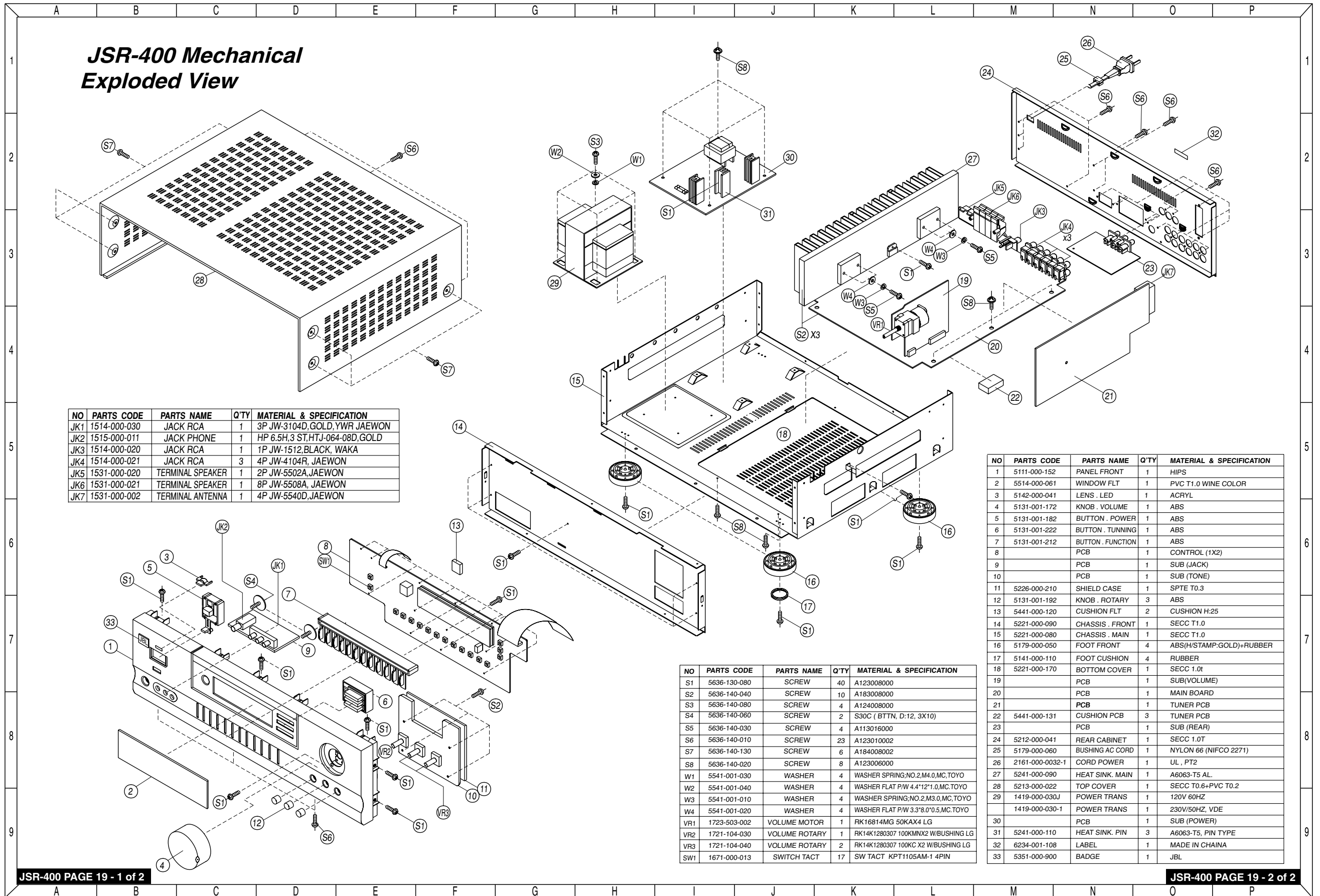


RIGHT CHANNEL
(SAME AS LEFT CHANNEL)



JSR-400 UNIT EXPLODED VIEW

JSR-400 Mechanical Exploded View

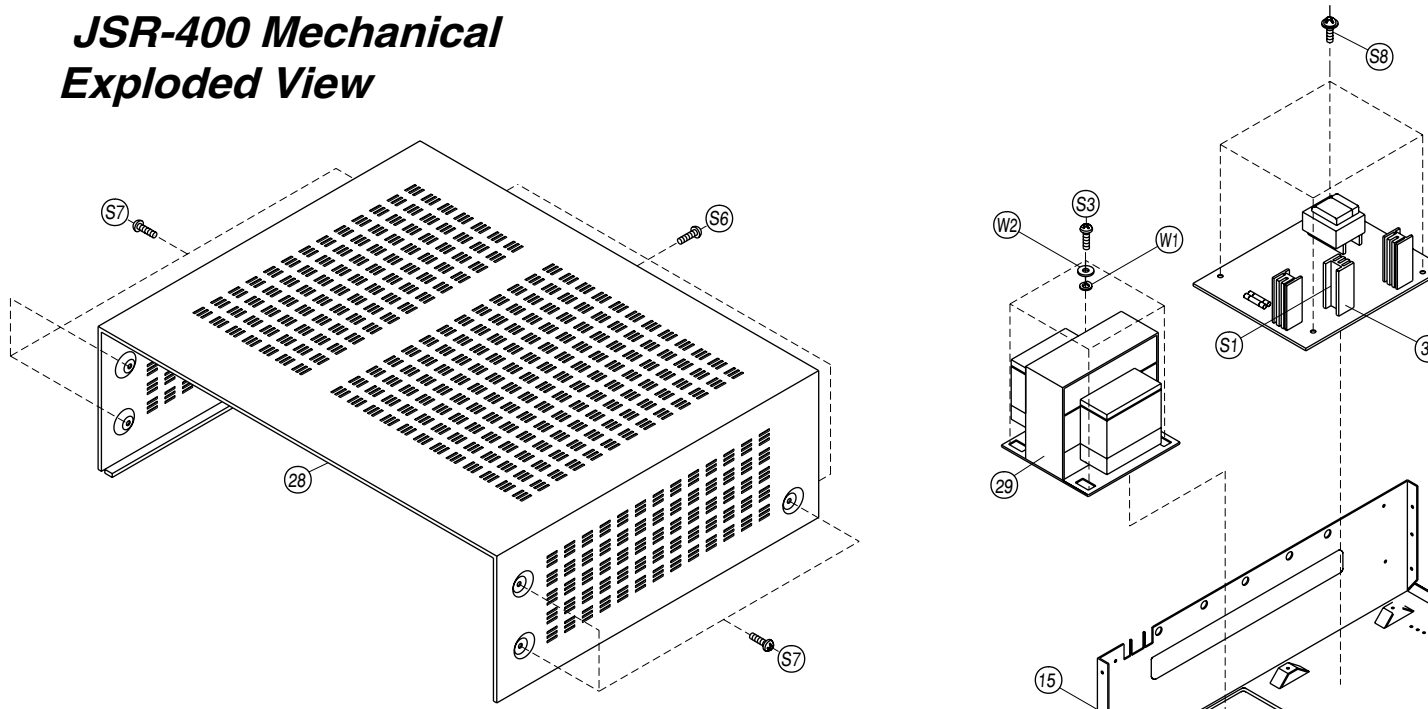


NO	PARTS CODE	PARTS NAME	Q'TY	MATERIAL & SPECIFICATION
JK1	1514-000-030	JACK RCA	1	3P JW-3104D, GOLD, YWR JAEWON
JK2	1515-000-011	JACK PHONE	1	HP 6.5H, 3 ST, HTJ-064-08D, GOLD
JK3	1514-000-020	JACK RCA	1	1P JW-1512, BLACK, WAKA
JK4	1514-000-021	JACK RCA	3	4P JW-4104R, JAEWON
JK5	1531-000-020	TERMINAL SPEAKER	1	2P JW-5502A, JAEWON
JK6	1531-000-021	TERMINAL SPEAKER	1	8P JW-5508A, JAEWON
JK7	1531-000-002	TERMINAL ANTENNA	1	4P JW-5540D, JAEWON

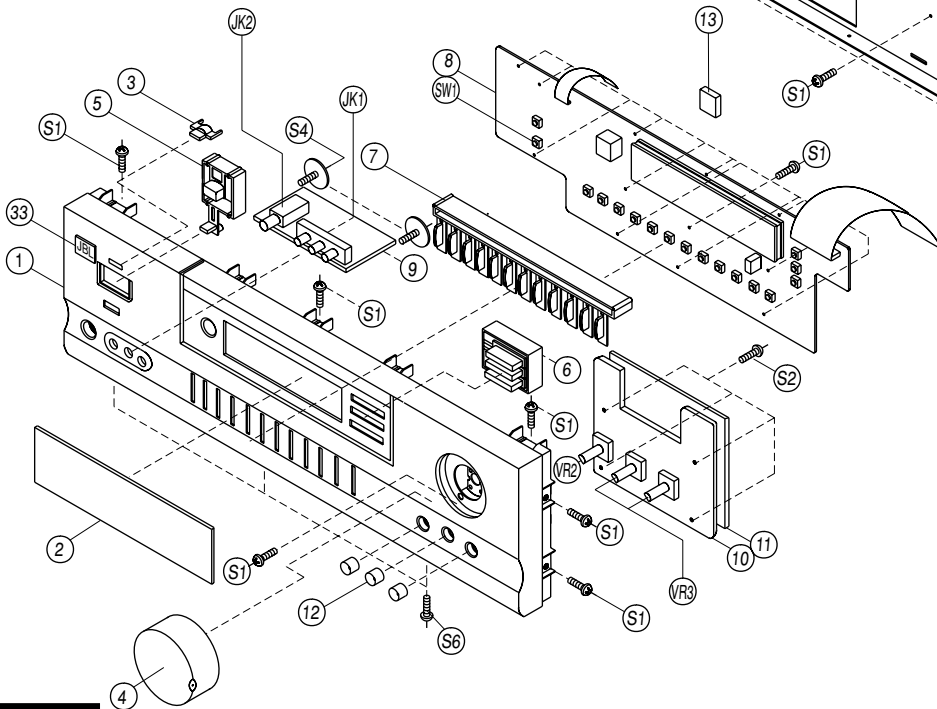
NO	PARTS CODE	PARTS NAME	Q'TY	MATERIAL & SPECIFICATION
1	5111-000-152	PANEL FRONT	1	HIPS
2	5514-000-061	WINDOW FLT	1	PVC T1.0 WINE COLOR
3	5142-000-041	LENS . LED	1	ACRYL
4	5131-001-172	KNOB . VOLUME	1	ABS
5	5131-001-182	BUTTON . POWER	1	ABS
6	5131-001-222	BUTTON . TUNNING	1	ABS
7	5131-001-212	BUTTON . FUNCTION	1	ABS
8		PCB	1	CONTROL (1X2)
9		PCB	1	SUB (JACK)
10		PCB	1	SUB (TONE)
11	5226-000-210	SHIELD CASE	1	SPTE T0.3
12	5131-001-192	KNOB . ROTARY	3	ABS
13	5441-000-120	CUSHION FLT	2	CUSHION H:25
14	5221-000-090	CHASSIS . FRONT	1	SECC T1.0
15	5221-000-080	CHASSIS . MAIN	1	SECC T1.0
16	5179-000-050	FOOT FRONT	4	ABS(H/STAMP:GOLD)+RUBBER
17	5141-000-110	FOOT CUSHION	4	RUBBER
18	5221-000-170	BOTTOM COVER	1	SECC 1.0t
19		PCB	1	SUB(VOLUME)
20		PCB	1	MAIN BOARD
21		PCB	1	TUNER PCB
22	5441-000-131	CUSHION PCB	3	TUNER PCB
23		PCB	1	SUB (REAR)
24	5212-000-041	REAR CABINET	1	SECC 1.0T
25	5179-000-060	BUSHING AC CORD	1	NYLON 66 (NIFCO 2271)
26	2161-000-0032-1	CORD POWER	1	UL , PT2
27	5241-000-090	HEAT SINK . MAIN	1	A6063-T5 AL.
28	5213-000-022	TOP COVER	1	SECC T0.6+PVC T0.2
29	1419-000-030J	POWER TRANS	1	120V 60HZ
	1419-000-030-1	POWER TRANS	1	230V/50HZ, VDE
30		PCB	1	SUB (POWER)
31	5241-000-110	HEAT SINK . PIN	3	A6063-T5 . PIN TYPE
32	6234-001-108	LABEL	1	MADE IN CHAINA
33	5351-000-900	BADGE	1	JBL

NO	PARTS CODE	PARTS NAME	Q'TY	MATERIAL & SPECIFICATION
S1	5636-130-080	SCREW	40	A123008000
S2	5636-140-040	SCREW	10	A183008000
S3	5636-140-080	SCREW	4	A124008000
S4	5636-140-060	SCREW	2	S30C (BTTN, D:12, 3X10)
S5	5636-140-030	SCREW	4	A113016000
S6	5636-140-010	SCREW	23	A123010002
S7	5636-140-130	SCREW	6	A184008002
S8	5636-140-020	SCREW	8	A123006000
W1	5541-001-030	WASHER	4	WASHER SPRING,NO.2,M4.0,MC,TOYO
W2	5541-001-040	WASHER	4	WASHER FLAT P/W 4.4*12*1.0,MC,TOYO
W3	5541-001-010	WASHER	4	WASHER SPRING,NO.2,M3.0,MC,TOYO
W4	5541-001-020	WASHER	4	WASHER FLAT P/W 3.3*8.0*0.5,MC,TOYO
VR1	1723-503-002	VOLUME MOTOR	1	RK16814MG 50KAX4 LG
VR2	1721-104-030	VOLUME ROTARY	1	RK14K1280307 100KMNX2 W/BUSHING LG
VR3	1721-104-040	VOLUME ROTARY	2	RK14K1280307 100KC X2 W/BUSHING LG
SW1	1671-000-013	SWITCH TACT	17	SW TACT KPT1105AM-1 4PIN

JSR-400 Mechanical Exploded View

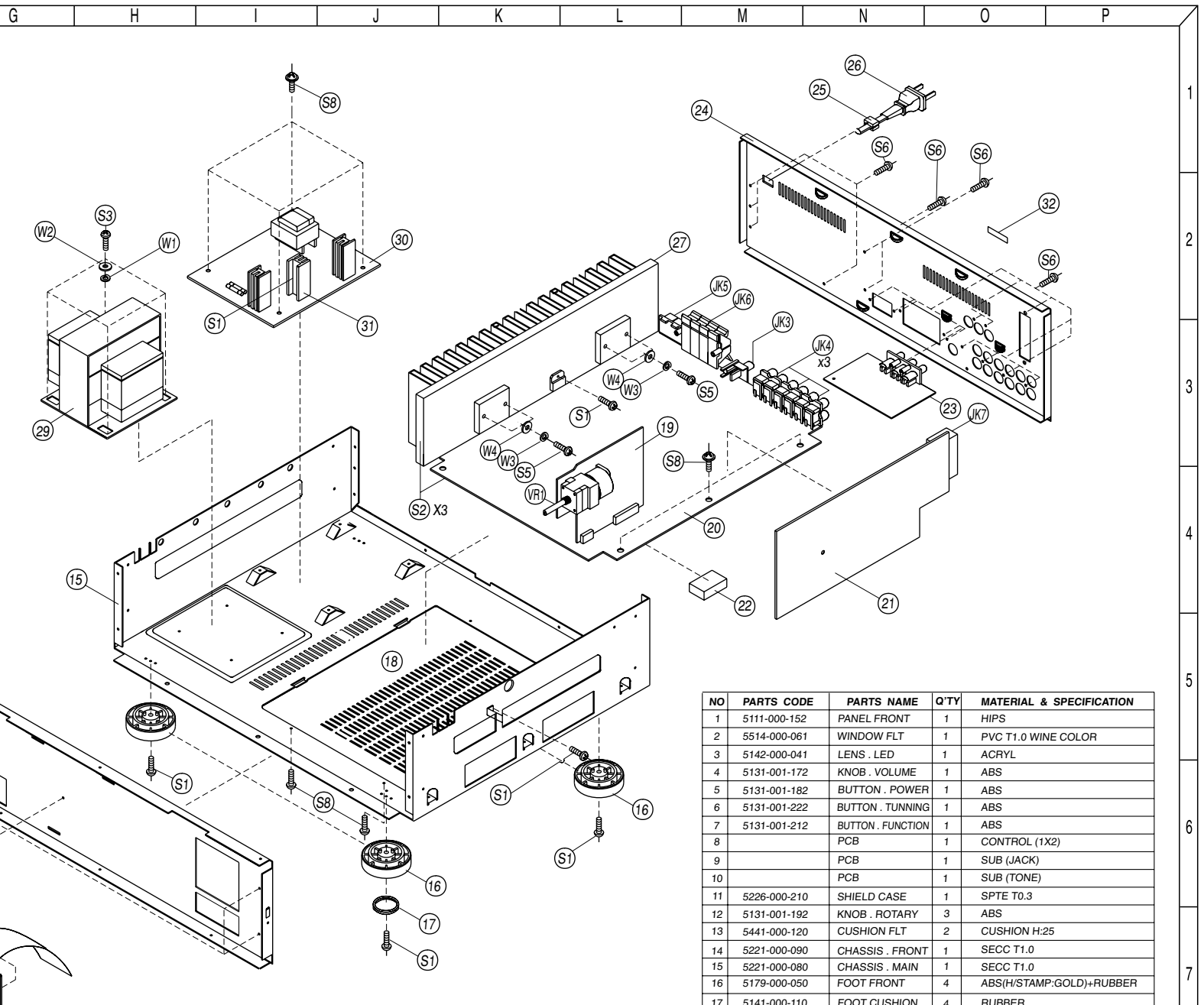


NO	PARTS CODE	PARTS NAME	Q'TY	MATERIAL & SPECIFICATION
JK1	1514-000-030	JACK RCA	1	3P JW-3104D, GOLD, YWR JAEWON
JK2	1515-000-011	JACK PHONE	1	HP 6.5H, 3 ST, HTJ-064-08D, GOLD
JK3	1514-000-020	JACK RCA	1	1P JW-1512, BLACK, WAKA
JK4	1514-000-021	JACK RCA	3	4P JW-4104R, JAEWON
JK5	1531-000-020	TERMINAL SPEAKER	1	2P JW-5502A, JAEWON
JK6	1531-000-021	TERMINAL SPEAKER	1	8P JW-5508A, JAEWON
JK7	1531-000-002	TERMINAL ANTENNA	1	4P JW-5540D, JAEWON



NO	PARTS CODE
S1	5636-130-080
S2	5636-140-040
S3	5636-140-080
S4	5636-140-060
S5	5636-140-030
S6	5636-140-010
S7	5636-140-130
S8	5636-140-020
W1	5541-001-030
W2	5541-001-040
W3	5541-001-010
W4	5541-001-020
VR1	1723-503-002
VR2	1721-104-030
VR3	1721-104-040
SW1	1671-000-013

JSR-400 UNIT EXPLODED VIEW



NO	PARTS CODE	PARTS NAME	Q'TY	MATERIAL & SPECIFICATION
S1	5636-130-080	SCREW	40	A123008000
S2	5636-140-040	SCREW	10	A183008000
S3	5636-140-080	SCREW	4	A124008000
S4	5636-140-060	SCREW	2	S30C (BTTN, D:12, 3X10)
S5	5636-140-030	SCREW	4	A113016000
S6	5636-140-010	SCREW	23	A123010002
S7	5636-140-130	SCREW	6	A184008002
S8	5636-140-020	SCREW	8	A123006000
W1	5541-001-030	WASHER	4	WASHER SPRING;NO.2,M4.0,MC,TOYO
W2	5541-001-040	WASHER	4	WASHER FLAT P/W 4.4*12*1.0,MC,TOYO
W3	5541-001-010	WASHER	4	WASHER SPRING;NO.2,M3.0,MC,TOYO
W4	5541-001-020	WASHER	4	WASHER FLAT P/W 3.3*8.0*0.5,MC,TOYO
VR1	1723-503-002	VOLUME MOTOR	1	RK16814MG 50KAX4 LG
VR2	1721-104-030	VOLUME ROTARY	1	RK14K1280307 100KMNX2 W/BUSHING LG
VR3	1721-104-040	VOLUME ROTARY	2	RK14K1280307 100KC X2 W/BUSHING LG
SW1	1671-000-013	SWITCH TACT	17	SW TACT KPT1105AM-1 4PIN

NO	PARTS CODE	PARTS NAME	Q'TY	MATERIAL & SPECIFICATION
1	5111-000-152	PANEL FRONT	1	HIPS
2	5514-000-061	WINDOW FLT	1	PVC T1.0 WINE COLOR
3	5142-000-041	LENS . LED	1	ACRYL
4	5131-001-172	KNOB . VOLUME	1	ABS
5	5131-001-182	BUTTON . POWER	1	ABS
6	5131-001-222	BUTTON . TUNNING	1	ABS
7	5131-001-212	BUTTON . FUNCTION	1	ABS
8		PCB	1	CONTROL (1X2)
9		PCB	1	SUB (JACK)
10		PCB	1	SUB (TONE)
11	5226-000-210	SHIELD CASE	1	SPTE T0.3
12	5131-001-192	KNOB . ROTARY	3	ABS
13	5441-000-120	CUSHION FLT	2	CUSHION H:25
14	5221-000-090	CHASSIS . FRONT	1	SECC T1.0
15	5221-000-080	CHASSIS . MAIN	1	SECC T1.0
16	5179-000-050	FOOT FRONT	4	ABS(H/STAMP:GOLD)+RUBBER
17	5141-000-110	FOOT CUSHION	4	RUBBER
18	5221-000-170	BOTTOM COVER	1	SECC 1.0t
19		PCB	1	SUB(VOLUME)
20		PCB	1	MAIN BOARD
21		PCB	1	TUNER PCB
22	5441-000-131	CUSHION PCB	3	TUNER PCB
23		PCB	1	SUB (REAR)
24	5212-000-041	REAR CABINET	1	SECC 1.0T
25	5179-000-060	BUSHING AC CORD	1	NYLON 66 (NIFCO 2271)
26	2161-000-0032-1	CORD POWER	1	UL , PT2
27	5241-000-090	HEAT SINK. MAIN	1	A6063-T5 AL.
28	5213-000-022	TOP COVER	1	SECC T0.6+PVC T0.2
29	1419-000-030J	POWER TRANS	1	120V 60HZ
	1419-000-030-1	POWER TRANS	1	230V/50HZ, VDE
30		PCB	1	SUB (POWER)
31	5241-000-110	HEAT SINK. PIN	3	A6063-T5, PIN TYPE
32	6234-001-108	LABEL	1	MADE IN CHAINA
33	5351-000-900	BADGE	1	JBL

JSR-400 ELECTRICAL PARTS LISTS

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
ASS'Y-PCB MAIN JSR-400				R83, 84	1744-183-731	R-CARBON TAP 1/4W 18K 5%	2
				R87	1744-683-731	R-CARBON TAP 1/4W 68K 5%	1
				R91, 92, 93, 170, 171, 400	1744-333-731	R-CARBON TAP 1/4W 33K 5%	6
				R98	1744-560-731	R-CARBON TAP 1/4W 56 5%	1
				R100, 105, 114, 117, 125, 127	1742-153-721	R-CARBON TAP 1/8W 15K 5%	6
				R102	1744-433-731	R-CARBON TAP 1/4W 43K 5%	1
				R103, 104	1744-220-731	R-CARBON TAP 1/4W 22 5%	2
				R107	1744-203-731	R-CARBON TAP 1/4W 20K 5%	1
				R109	1744-105-731	R-CARBON TAP 1/4W 1M 5%	1
				R115, 118	1742-752-721	R-CARBON TAP 1/8W 7.5K 5%	2
				R121	1742-475-721	R-CARBON TAP 1/8W 4.7M 5%	1
				R122	1742-224-721	R-CARBON TAP 1/8W 220K 5%	1
				R123	1742-334-721	R-CARBON TAP 1/8W 330K 5%	1
				R130	1744-562-731	R-CARBON TAP 1/4W 5.6K 5%	1
				R131	1742-223-721	R-CARBON TAP 1/8W 22K 5%	1
				R132, 146, 154	1742-103-721	R-CARBON TAP 1/8W 10K 5%	3
				R145, 149, 150	1742-471-721	R-CARBON TAP 1/8W 470K 5%	3
				R157, 159, 193	1742-472-721	R-CARBON TAP 1/8W 4.7K 5%	3
				R158	1742-123-721	R-CARBON TAP 1/8W 12K 5%	1
				R172, 173	1744-182-731	R-CARBON TAP 1/4W 1.8K 5%	2
				R501	1742-332-721	R-CARBON TAP 1/8W 3.3K 5%	1
				Capacitors			
				C1, 3, 30, 35, 36, 37, 78, 85, 88, 111, 138, 140	1862-470-404	C-ELEC/RA TAP 5*11 16V 47 UF 20%	12
				C2, 4, 5, 6, 9, 10, 11, 12, 13, 14, 15, 16, 22, 29, 51, 60, 74, 91, 92, 93	1832-101-822	C-CERA/AX TAP 50V Y5P 100pF 10%	20
				C18, 20, 77, 114, 802, 902	1832-104-002	C-CERA/AX TAP 50V Y5V 0.1uF 10%	6
				C19, 21, 25, 48, 107, 108, 115, 116, 133, 135, 136, 141, 143, 706, 904, 905	1862-100-504	C-ELEC/RA TAP 5*11 16V 10uF 20%	16
				C26	1862-101-706	C-ELEC/RA TAP 8*12 35V 100uF 20%	1
				C27, 28, 64, 65, 71	1862-101-806	C-ELEC/RA TAP 8*12 50V 100uF 20%	5
				C31, 32, 61, 63	1832-120-712	C-CERA/AX TAP 50V CH 12pF 5%	4
				C33, 42	1832-221-822	C-CERA/AX TAP 50V Y5P 220pF 10%	2
				C34, 109, 113	1862-220-504	C-ELEC/RA TAP 5*11 16V 22uF 20%	3
				C38, 39, 40, 41, 122, 123	1862-4R7-804	C-ELEC/RA TAP 5*11 50V 4.7uF 20%	6
				C43, 45, 50, 52, 54, 59	1862-470-805	C-ELEC/RA TAP 6*11 50V 47uF 20%	6
				C44, 46, 47, 53, 55, 58	1862-100-804	C-ELEC/RA TAP 5*11 50V 10uF 20%	6
				C56, 57, 128	1832-471-822	C-CERA/AX TAP 50V Y5P 470pF 10%	3
Q1, 4, 5, 11, 12, 13	1243-319-001	TR-TAP TO-92 KTC3198 (C1815)-GR	6				
Q2, 6, 7	1243-124-001	TR-TAP TO-92M KRC 103M KEC	3				
Q3, 10	1244-126-001	TR-TAP TO-92 KTA1266(A1015)-Y KEC	2				
Q8, 9	1244-124-001	TR-TAP TO-92M KRA103M KEC	2				
Q15, 16, 21	1244-101-010	TR-TAP TO-92M KRA101M KEC	3				
Q17, 18, 19, 20, 22	1243-130-003	TR-TAP TO-92 KTD1302 KEC	5				
Transistors							
Diodes							
D4, 6, 8, 9, 10, 11, 13, 14, 18, 19	1252-000-001	D-SI TAP IN4148 (ISS131)	10				
Resistors							
R1, 2, 3, 5, 8, 9, 10, 12, 13, 14, 15, 16	1742-331-721	R-CARBON TAP 1/8W 330 5%	12				
R4, 47, 48, 95, 128, 401, 402	1742-104-721	R-CARBON TAP1/8W 100K 5%	7				
R11, 42, 44, 45, 46, 96, 108, 151, 152, 166	1744-470-731	R-CARBON TAP 1/4W 47 5%	10				
R17, 19, 310	1744-222-731	R-CARBON TAP 1/4W 2.2K 5%	3				
R18, 20, 143, 144, 147, 148	1742-102-721	R-CARBON TAP 1/8W 1K 5%	6				
R22, 35, 43, 79, 88, 89, 90, 99, 106, 133, 134, 192, 301, 500, 502	1744-103-731	R-CARBON TAP 1/4W 10K 5%	15				
R23, 24, 25, 26, 52, 113, 116, 153, 156, 160	1742-473-721	R-CARBON TAP 1/8W 47K 5%	10				
R27, 28, 68, 69	1744-272-731	R-CARBON TAP 1/4W 2.7K 5%	4				
R29, 30	1744-473-731	R-CARBON TAP 1/4W 47K 5%	2				
R31, 34, 54, 59, 97	1744-101-731	R-CARBON TAP 1/4W 100 5%	5				
R32, 33, 41, 51, 55, 58, 64, 65	1744-332-731	R-CARBON TAP 1/4W 3.3K 5%	8				
R37, 53, 72, 73, 75, 76, 174, 403	1761-100-731	R-FUSIBLE/AX TAP 1/4W 10 5%	8				
R38, 49, 50	1744-154-731	R-CARBON TAP 1/4W 150K 5%	3				
R39, 40, 56, 57, 62, 63, 77, 80, 110, 111, 112, 139	1744-102-731	R-CARBON TAP 1/4W 1K 5%	12				
R60, 61, 66, 67, 71	1744-563-731	R CARBON TAP 1/4W 56K 5%	5				
R70	1771-152-762	R-METAL/AX FORMING 2W 1.5K 5%	1				
R74, 136	1775-R27-782	R-CEMENT/AX FORMING 5W 0.27 5%	2				
R78	1744-753-731	R-CARBON TAP 1/4W 75K 10%	1				
R81	1771-100-752	R-METAL/AX FORMING 1W 10 5%	1				
R82, 119, 120, 124	1744-223-731	R-CARBON TAP 1/4W 22K 5%	4				

Ref #	Part #	Description	Qty
C66, 67, 82, 83, 94, 95, 125, 900, 908	1876-473-811	C-POLYESTER 100V 0.047uF 10%	9
C68	1862-330-804	C-ELEC/RA TAP 6*11 50V 33 UF 20%	1
C69, 709, 710	1862-010-804	C-ELEC/RA TAP 5*11 50V 1.0uF 20%	3
C70	1862-471-306	C-ELEC/RA TAP 8*12 10V 470uF 20%	1
C79, 87	1832-561-822	C-CERA/AX TAP 50V Y5P 560pF 10%	2
C80	1832-222-983	C-CERA/AX TAP 16V Y5R 0.0022uF 20%	1
C81, 84, 96, 97, 134, 100, 102, 103, 105, 106, 117,	1876-104-811	C-POLYESTER 100V 0.1uF 10%	11
C86, 126	1832-562-983	C-CERA/AX TAP 16V Y5R 0.0056uF 20%	2
C89, 90	1832-330-772	C-CERA/AX TAP 50V SL 33pF 5%	2
C98, 99	1876-223-811	C-POLYESTER 100V 0.022uF 10%	2
C101, 104	1832-681-822	C-CERA/AX TAP 50V Y5P 680pF 10%	2
C110	1862-101-504	C-ELEC/RA TAP 5*11 16V 100uF 20%	1
C112	1876-332-811	C-POLYESTER/RA TAP 100V 0.0033uF 10%	1
C118, 119, 120, 121	1875-224-811	C-POLYESTER/RA STD 100V 0.22uF 10%	4
C124	1862-R68-804	C-ELEC/RA TAP 5*11 50V 0.68uF 20%	1
C129	1832-182-983	C-CERA/AX TAP 16V Y5R 0.0018uF 20%	1
C130	1862-221-305	C-ELEC/RA TAP 6*11 10V 220uF 20%	1
C142, 144	1862-R47-804	C-ELEC/RA TAP 5*11 50V 0.47uF 20%	2
C800, 801	1861-682-820	C-ELEC/RA 30*60 50V 6800uF 20%	2
C910, 911, 912, 913, 914, 915	1832-104-822	C-CERA/AX TAP 50V Y5V 0.1uF 80%, -20%	6
C916	1832-472-983	C-CERA/AX TAP 16V Y5R 0.0047uF 10%	1

Integrated Circuits

IC1	1212-782-025	LC7821 FUNCTION SELECTOR	1
IC2, 3	1211-419-001	IC-SIP STK4192II HIGH POWER AMP SANYO	2
IC4, 13	1212-455-001	IC-DIP NJM4558DD OP AMP JRC	2
IC5	1212-496-001	QUAD BILATERAL SWITCH	1
IC10	1212-110-001	IC-DIP NJW1102L D/S DECODER JRC	1
IC11	1212-970-001	IC-DIP NJU9702D D/S DELAY JRC	1

Diodes

D7, 21	1252-000-005J	D-RECT TAP 100V 1A IN4002 M.D	2
D20	1253-000-010	D-BRIDGE 400V 6A KBU602	1

Miscellaneous

X1	1341-000-051	FIL-RESONATOR ZTA2.0MHZ CQ	1
L1, 2, 3, 4	1451-000-030	COIL-AF CHOKE 2UEW 0.9F ID 10 0.7uH	4
JACK3	1514-000-020	JACK-RCA 1P JW-1512 BLK WAKA	1
JACK13, 14, 15	1514-000-021	JACK-RCA 4P JW-4104R JAEWON	3

Ref #	Part #	Description	Qty
SP3	1531-000-020	TERMINAL-PUSH 2P JW-5502A JAEWON	1
SP 4	1531-000-021	TERMINAL-PUSH 8P JW-5508A JAEWON	1
FU1	1541-5R0-001-1	FUSE 5 x 20mm 250V 5A UL	1
PO1	1782-000-001	R-POSISTOR P42T8D100B04	1
RY7	2022-000-001	RELAY DC24V 2CIP DG2SU DAI ICHI	1
WA1, 4	2111-023-005	CON-WAFER 5267-0 5A 5P P=2.5 MOLEX	2
WA2	2111-023-003	CON-WAFER 5267-03A 3P P=2.5 MOLEX	1
WA3	2111-021-014J	CONNECTOR-WAFER 2253-14P-T PLUG ILSAN	1
WA8	2111-026-003	CONNECTOR-WAFER 3P P=3.96 35313-0310 MOLEX	1
WA10	2111-023-009	CON-WAFER 5267-09A 9P P=2.5 MOLEX	1
WA11	2111-021-008	CONNECTOR-WAFER 2253-08P-T PLUG ILSAN	1
WA12	2111-021-012	CONNECTOR-WAFER 2253-12P-T PLUG ILSAN	1
CN2	2113-004-026	CONNECTOR-FFC:26P 008370-261-000-800 ELCO KOR	1
T1	2141-010-100	CONNECTOR-ASS'Y 1PM AWG22M 250MM UL1672	1
	5241-000-090	HEAT-SINK AL RV-50 YONGBI	1
	5541-001-010	WASHER SPRING ;NO 2 M3.0MC TOYO	4
	5541-001-020	WASHER PLAT P/W 3.3*8.0*0.5 MC TOYO	4
	5636-130-080	SCREW-TAP BH 3*8.0 FZY A123008000 TOYO	1
	5636-140-030	SCREW A113016000 TOYO	4
	5636-140-040	SCREW A183008000 TOYO	3
PCB ASSY	A0112-002-151-3	MAIN PCB FULLY LOADED	1

ASS'Y PCB CONTROL JSR-400

Transistors

Q1	1243-319-001	TR-TAP TO-92 KTC3198(C1815)-GR	1
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Diodes

D8, 10, 102, 105-110	1252-000-001	D-SI TAP IN4148(1S131)	9
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Resistors

R1	1742-102-721	R-CARBON TAP 1/8W 1K 5%	1
R2, 3, 4, 5, 22	1742-473-721	R-CARBON TAP 1/8W 47K 5%	5
R6, 9	1742-105-721	R-CARBON TAP 1/8W 1M 5%	2
R7	1744-4R7-731	R-CARBON TAP 1/4W 4.7 5%	1
R10	1744-100-731	R-CARBON TAP 1/4W 10 5%	1
R14, 15, 16	1742-103-721	R-CARBON TAP 1/8W 10K 5%	3

Ref #	Part #	Description	Qty	Ref #	Part #	Description	Qty
R18, 19, 20, 24, 25	1742-104-721	R-CARBON TAP 1/8W 100K 5%	5	R102	1742-122-721	R-CARBON TAP 1/8W 1.2K 5%	1
R21	1744-221-731	R-CARBON TAP 1/4W 220 5%	1	R103, 308	1742-222-721	R-CARBON TAP 1/8W 2.2K 5%	2
R23	1742-221-721	R-CARBON TAP 1/8W 220 5%	1	R104, 205, 206, 333, 564	1742-331-721	R-CARBON TAP 1/8W 330 5%	5
Capacitor				R105	1742-121-721	R-CARBON TAP 1/8W 120 5%	1
C1	1862-R47-804	C-ELEC/RA TAP 5*11 50V 0.47uF 20%	1	R106	1742-391-721	R-CARBON TAP 1/8W 390 5%	1
C2	1862-470-404	C-ELEC/RA TAP 5*11 16V 47uF 20%	1	R107	1742-392-721	R-CARBON TAP 1/8W 3.9K 5%	1
C4, 5	1862-R22-804	C-ELEC/RA TAP 5*11 50V 0.22uF 20%	2	R201, 304, 305, 444, 411	1742-103-721	R-CARBON TAP 1/8W 10K 5%	5
C6, 7, 8	1832-331-822	C-CERA/AX TAP 50V Y5P 330pF 20%	3	R202, 307, 401, 311, 317	1742-102-721	R-CARBON TAP 1/8W 1K 5%	5
C10	1832-223-001	C-CERA 25V Y5V 0.022uF +80%, -20%	1	R203, 316, 407, 408	1742-332-721	R-CARBON TAP 1/8W 3.3K 5%	4
C11	1881-000-010	C-GOLD 5.5V 0.047F SCDA5R5473V SAMSUNG	1	R204, 207, 562	1742-221-721	R-CARBON TAP 1/8W 220 5%	3
C12, 22, 24, 25 Rfre	1832-104-002	C-CERA/AX :TAP 50V Y5V 0.1uF +80%, -20%	5	R301, 302	1742-473-721	R-CARBON TAP 1/8W 47K 5%	2
Integrated Circuits				R306	1742-153-721	R-CARBON TAP 1/8W 15K 5%	1
IC1	1212-827-002	IC-DIP CXP82712-120S CPU SONY	1	R312	1742-683-721	R-CARBON TAP 1/8W 68K 5%	1
Miscellaneous				R313	1742-560-721	R-CARBON TAP 1/8W 56 5%	1
RMC1	1264-000-021	SENSOR-REMOTE CRVIM352-B 38KHZ SAM YOUNG	1	R314	1742-223-721	R-CARBON TAP 1/8W 22K 5%	1
LED 1	1271-000-019	LED RED 3 SLR34VT3 ROH	1	R315, 403, 404	1742-562-721	R-CARBON TAP 1/8W 5.6K 5%	3
FLT 1	1277-000-010	FLT CM1558D RV-50 NORITAKE	1	R405, 406	1742-182-721	R-CARBON TAP 1/8W 1.8K 5%	2
X1	1341-000-080	FIL-RESONATOR ZTT10MHZ CQ	1	R413, 416	1742-104-721	R-CARBON TAP 1/8W 100K 5%	2
SW19 29-39 40-44	1671-000-013	SW-TACT KPT1105AM-1 4PIN	17	R414, 415	1742-124-721	R-CARBON TAP 1/8W 120K 5%	2
CN102	2113-004-026	CONNECTOR-FFC 26P 008370-261-000-800 ELCO KOR	1	R417	1744-221-731	R-CARBON TAP 1/4W 220 5%	1
CN101	2141-050-070	CNT-ASS'Y 5P 400MM WOOCHANG BEOMHWAN	1	R438	1742-393-721	R-CARBON TAP 1/8W 39K 5%	1
FLT	5441-000-120	CUSHION-FLT EVA BLK 5*25*120 RV-50	1	R441	1744-220-731	R-CARBON TAP 1/4W 22 5%	1
PCB ASSY	A0112-001-191	CONTROL PCB FULLY LOADED	1	R556, 557, 558	1742-471-721	R-CARBON TAP 1/8W 470 5%	3
ASS'Y-PCB TUNER JSR-400				R565	1744-470-731	R-CARBON TAP 1/4W 47 5%	1
Transistors				Capacitor			
Q101, 102	1243-319-008	TR-TAP TO-92 KTC3192-0 KEC	2	C21, 23, 404	1862-3R3-804	C-ELEC/RA TAP 5*11 50V 3.3uF 20%	3
Q103, 302, 403	1244-101-010	TR-TAP TO-92M KRA101M KEC	3	C39	1832-103-483	C-CERA/AX TAP 16V Y5S 0.01uF 20%	1
Q201	1243-320-001	TR-TAP TO-92 KTC3200-GR KEC	1	C103, 317, 419, 421, 428	1862-470-404	C-ELEC/RA TAP 5*11 16V 47uF 20%	5
Q202	1248-246-001	FET-TAP TO-92 2SK246-Y TOSHIBA	1	C104, 302, 303, 307, 308, 312, 316, 416, 422, 434, 436, 437, 318, 450	1832-223-001	C-CERA/AX TAP 25V Y5V 0.022uF +80%, -20%	14
Q401, 402	1243-319-001	TR-TAP TO-92 KTC3198(C1815)-GR	2	C201	1876-102-811	C-POLYESTER 100V 0.001uF 10%	1
Diodes				C202	1862-010-804	C-ELEC/RA TAP 5*11 50V 1.0uF 20%	1
D302, 303, 402	1252-000-001	D-SI TAP IN4148(1SS131)	3	C203, 204	1832-220-772	C-CERA/AX TAP 50V SL 22pF 5%	2
ZD401	1254-5R6-009	D-ZENER TAP 0.5W 5.6V MTZJ5.6B ROHM	1	C306, 313, 401, 412	1862-100-504	C-ELEC/RA TAP 5*11 16V 10uF 20%	4
Resistors				C314	1862-4R7-804	C-ELEC/RA TAP 5*11 50V 4.7uF 20%	1
R14, 100, 412, 318	1744-101-731	R-CARBON TAP 1/4W 100 5%	4	C322	1875-154-811	C-POLYESTER STD 100V 0.15uF 10%	1
R101, 418, 419	1742-101-721	R-CARBON TAP 1/8W 100 5%	3	C323, 324	1832-473-001	C-CERA/AX TAP 25V Y5V 0.047uF 80%, -20%	2
				C402, 441	1862-R47-804	C-ELEC/RA TAP 5*11 50v 0.47uF 20%	2
				C405, 417, 418, 430, 431	1862-2R2-804	C-ELEC/RA TAP 5*11 50V 2.2uF 20%	5

Ref #	Part #	Description	Qty
C413, 414	1832-681-822	C-CERA/AX TAP 50V Y5P 680pF 10% 2	
C403	1876-473-811	C-POLYESTER/RA TAP 100V 0.047uF 10%	1
C438	1872-471-731	C-STYROL/TAP 50V 470pF 5%	1
C452	1832-104-822	C-CERA/AX TAP 50V 0.1uF 10%	1

Integrated Circuits

IC 2	1212-700-001	IC-DIP LM7001 PLL SANYO	1
IC 3	1212-126-001	IC-DIP LA1265 AM/FM IF SANYO	1
IC 4	1212-341-001	IC-DIP LA3410 FM MPX SANYO	1

Miscellaneous

VC1, 2	1252-000-040	D-VVC AM SVC321 SPA-D2 SANYO	2
PACK1	1291-000-011	TUNER PACK FM 87.5-108MHZ KST-F701VA-3 KWANGSUNG	1
F101, 102	1321-000-0051	FILTER-CERAMIC SFE10.7MA5-A(RED) CQ	2
F202	1321-000-0200	FILTER-CERAMIC :A450BL TOKO	1
F401	1341-000-0151	FIL-RESONATOR ZTB456F11CQ	1
F3	1341-000-060	FIL-RESONATOR LZU450C4N CQ	1
X2	1352-000-015J	X-TAL HC-49/U 7.2MHZ 20PPM CQ	1
T4	1422-000-050	IFT-INSERT 7.5MM FD BLUE KWANGSUNG	1
T2	1422-000-060	IFT-INSERT 7.5MM AA WHT KWANGSUNG	1
T1	1432-000-040	COIL-INSERT 7.5MM AM ANT BLK KWANGSUNG	1
T6	1432-000-050	COIL-INSERT 7.5MM AO RED KWANGSUNG	1
L202	1444-3R3-002	INDUCTOR-AX TAP 3.3uH TLAP02KR3R3K	1
ANT1	1531-000-003	TERMINAL-PUSH 4P JW-5504DB FCC JAEWON	1
VR 301 302	1731-103-011	"VR-SEMI 6f EVNDJAA0.3B14, 10K MASTSUSHITA"	2
VR 401	1731-224-002	VR-SEMI 6f EVNDJAA03BE5 220K Ohm MASTSUSHITA	1
CT1, 2	1815-020-001J	C-TRIM 6f NPO 20pF CV05-C200-1 CHUNNIL	2
WA2	2111-023-002	CON-WAFER 5267-02A 2P P=2.5 MOLEX	1
WA5	2111-020-012	CONNECTOR-WAFER 2253-12S-T SOCKET ILSAN	1
	9961-000-001	PUSH TERMINAL EARTH PIN	1
ESD 1 2	D6854DMSA001	DIODE SCHOTTKY	2
PCB ASSY	A0112-002-181-3	TUNER PCB FULLY LOADED	1

ASS'Y-PCB HEADPHONE JSR-400

Resistors

R52, 53	1771-681-752	R-METAL/AX FORMING 1W 680 5% 2	
R82	1742-750-721	R-CARBON TAP 1/8W 75 5%	1

Ref #	Part #	Description	Qty
R83, 84	1742-331-721	R-CARBON TAP 1/8W 330 5%	2
Capacitor			
C77, 81, 84	1832-104-002	C-CERA 50V Y5V 0.1uF +80%, -20%	3
C80	1862-330-504	C-ELEC 5*11 16V 33uF 20%	1
C82, 83	1832-101-822	C-CERA 50V Y5P 100pF 10%	2

Miscellaneous

JA1	1514-000-080	JACK-RCA 3P JW-3104D GOLD Y/W/R JAEWON	1
JACK3	1515-000-011	JACK-H/P 6.3 ST HTJ-064-08D GOLD	1
CN5	2141-030-050	CNT-ASS'Y 3P 650MM WOOCHANG BEOHWHAN	1
CN10	2141-050-040	CNT-ASS'Y 5P 650MM W00CHANG BEOHWHAN	1
PCB ASSY	A0112-001-1620	HEADPHONE PCB FULLY LOADED	1

ASS'Y PCB POWER SUPPLY JSR-400

Transistor

Q7	1243-319-001	TR-TAP TO-92 KTC3198 (C1815)-GR	1
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Diodes

D11	1252-000-001	D-SI TAP IN4148 (ISS131)	1
DZ2	1254-012-033	D-ZENER TAP 0.5W 12V MTZJ12B ROHM	1
DZ3	1254-5R1-021	D-ZENER TAP 0.5W 5.1V MTZJ5.1B ROHM	1

Resistors

R38, 39, 46, 47, 81	1771-100-752	R-METAL/AX FORMING 1W 10 5%	5
R40, 44, 45	1744-102-731	R-CARBON TAP 1/4W 1K 5%	3
R41	1749-335-741	R-CARBON TAP 1/2W 3.3M 5%	1
R42	1744-331-731	R-CARBON TAP 1/4W 330 5%	1
R43	1744-104-731	R-CARBON TAP 1/4W 100K 5%	1
R80	1744-221-731	R-CARBON TAP 1/4W 220 5%	1

Capacitor

C25, 26, 41, 42, 79	1862-220-504	C-ELEC/RA TAP 5*11 16V 22uF 20%	5
C27, 28, 29	1862-470-705	C-ELEC/RA TAP 6*11 35V 47uF 20%	3
C31	1862-221-606	C-ELEC 8*11.5 25V 220uF 20%	1
C34	1832-104-822	C-CERA/AX TAP 50V 0.1uF 10%	1
C35	1825-000-010	C-DISC/AC AC250V 0.0047uF 20% SEMKO UL/CSA	1
C36	1861-471-608	C-ELEC/RA 10*16 25V 470uF 20%	1
C39, 40	1861-222-610	C-ELEC/RA 16*25 25V 2200uF 20%	2
C78	1862-100-804	C-ELEC/RA TAP 5*11 50V 10uF 20%	1
C88	1825-104-000	C-AC 335M4104(0.1uF 275V) SEMKO UL/CSA PILKOR	1

Ref #	Part #	Description	Qty
Integrated Circuits			
IC5, 9	1217-780-001	IC-TO220i +6V 1A 7806 REGULATOR	2
IC6	1217-781-001	IC-TO220i +15V 1A 7815 REGULATOR	1
IC7	1217-791-001	IC-TO220i -15V 1A 7915 REGULATOR	1
Diodes			
D2-10, 17-20	1252-000-005J	D-RECT TAP 100V 1A IN4002	13
DZ1	1254-027-001	D-ZENER TAP 1W UZP-27B	1
Miscellaneous			
TRAN1	1411-000-020J	TRANS-SUB EI -35X14 120/60 UL	1
FU1, 2	1541-1R6-013-1	FUSE 5 x 20mm T/L 250V 1.6A UL	2
FU3	1541-315-020-1	FUSE 5 x 20mm T/L 250V 315mA UL	1
FU4	1541-5R0-001-1	FUSE 5 x 20mm NM 250V 5A UL	1
FU1, 2, 3, 4	1551-000-010	HOLDER-FUSE 5	8
RY1	2022-000-010	RELAY DC12V ICIP DGIU DA11CH1	1
WA1	2111-023-005	CON-WAFER 5267-05A 5P P=2.5 MOLEX	1
WA2	2111-026-004	CONNECTOR-WAFER 4P P=3.96 35313-0410 MOLEX	1
WA3	2111-026-002	CONNECTOR-WAFER 2P P=7.92 35328-0210 MOLEX	1
WA4	2111-026-002J	CONNECTOR-WAFER 2P P=7.92 JE202A-1T JAE EUN	1
WA5	2111-026-003	CONNECTOR-WAFER 3P P=3.96 35313-0310 MOLEX	1
CN11	2141-090-030	CNT-ASS'Y 9P 450MM P=2.5 WOOCHANG BEOMHWAN	1
	5241-000-110	HEAT-SINK AL6063S-T5 W/PIN L:40MM RV-50 YONGBI	3
	5636-130-080	SCREW-TAP BH 3*8.0 FZY A123008000 TOYO	3
PCB ASSY	A0112-001-1616	POWER SUPPLY PCB FULLY LOADED	1

ASS'Y PCB TONE JSR-400

Resistors

R60, 63	1742-223-721	R-CARBON TAP 1/8W 22K	5%	2
R61, 62, 66, 67, 71, 75	1742-104-721	R-CARBON TAP 1/8W 100K	5%	6
R65, 68	1742-392-721	R-CARBON TAP 1/8W 3.9K	5%	2
R70, 73	1742-222-721	R-CARBON TAP 1/8W 2.2K	5%	2
R72, 74	1742-102-721	R-CARBON TAP 1/8W 1K	5%	2
R77, 79	1742-821-721	R-CARBON TAP 1/8W 820	5%	2

Capacitor

C47, 52	1876-153-811	C-POLYESTER 100V 0.015uF	10%	2
C48, 53	1876-823-811	C-POLYESTER 100V 0.082uF	10%	2
C49, 60	1832-680-772	C-CERA/AX TAP 50V SL 68pF	5%	2
C50, 55	1832-101-822	C-CERA/AX TAP 50V Y5P 100pF	10%	2
C51, 56, 59, 62	1862-4R7-804	C-ELEC 5*11 50V 4.7uF	20%	4

Ref #	Part #	Description	Qty	
C54, 57	1862-220-504	C-ELEC 5*11 16V 22uF	20%	2
C58, 61	1876-332-811	C-POLYESTER 100V 0.0033uF	10%	2
C63, 64	1876-183-811	C-POLYESTER 100V 0.018uF	10%	2

Integrated Circuits

IC8	1212-455-001	IC-DIP NJM4558DD OP AMP JRC	1
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Miscellaneous

CN6	2141-050-050	CNT-ASS'Y 5P SHIELD 200MM WOOCHANG BEOMHWAN	1
CN7	2141-030-040	CNT-ASS'Y 3P 200MM WOOCHANG BEOMHWAN	1
VR4	1721-104-030	VR-ROTARY 14MM, RK14K1280307 100K , W/BUSH LG	1
VR2, 3	1721-104-040	VR-ROTARY 14MM RK14K1280307100K ALPS	2
	5222-002-010	CASE-SHIELD SPT 0.3t RV-50	1
PCB ASSY	A0112-001-1618	TONE PCB FULLY LOADED	1

ASS'Y PCB VOLUME JSR-400

Resistors

R2	1744-4R7-731	R-CARBON TAP 1/4W 4.7	5%	1
R3	1742-103-721	R-CARBON TAP 1/8W 10K	5%	1
R4	1744-562-731	R-CARBON TAP 1/4W 5.6K	5%	1
R6, 7, 16, 17	1742-473-721	R-CARBON TAP 1/8W 47K	5%	4
R8, 9, 14, 15	1742-104-721	R-CARBON TAP 1/8W 100K	5%	4
R10, 11	1742-822-721	R-CARBON TAP 1/8W 8.2K	5%	2
R12, 13	1742-102-721	R-CARBON TAP 1/8W 1K	5%	2
R18, 19	1742-471-721	R-CARBON TAP 1/8W 470	5%	2
R51	1745-560-731	R-CARBON TAP 1/2W 56	5%	1
R54-59	1744-470-731	R-CARBON TAP 1/4W 47	5%	6

Capacitors

C1, 2	1862-101-304	C-ELEC/RA TAP 5*11 10V 100uF	20%	2
C3, 4, 11, 12, 43-46	1862-470-404	C-ELEC/RA TAP 5*11 16V 47uF	20%	8
C5-8, 13-16	1862-4R7-804	C-ELEC/RA TAP 5*11 50V 4.7uF	20%	8
C9, 10	1832-101-822	C-CERA/AX TAP 50V Y5P 100pF	5%	2

Miscellaneous

PCB ASSY	A0112-001-1617	VOLUME PCB FULLY LOADED	1
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ASS'Y-PCB VIDEO JSR-400

Transistors

Q2, 3	1243-319-001	TR-TAP TO-92 KTC3198 (C1815)-GR	2
Q4, 5	1244-126-001	TR-TAP TO-92 KTA1266(A1015)-Y KEC	2
Q6	1248-000-030	FET-TAP TO-92M 2SK117-GR KEC	1

Resistors

Ref #	Part #	Description	Qty
R1, 20	1742-104-721	R-CARBON TAP 1/8W 100K 5%	2
R21-23	1742-750-721	R-CARBON TAP 1/8W 75 5%	3
R25	1742-105-721	R-CARBON TAP 1/8W 1M 5%	1
R26, 27, 34, 36	1742-122-721	R-CARBON TAP 1/8W 1.2K 5%	4
R28, 37	1742-181-721	R-CARBON TAP 1/8W 180 5%	2
R29, 33	1742-151-721	R-CARBON TAP 1/8W 150 5%	2
R30, 35	1742-123-721	R-CARBON TAP 1/8W 12K 5%	2
R31, 32	1742-822-721	R-CARBON TAP 1/8W 8.2K 5%	2

Capacitor

C17	1862-330-504	C-ELEC/RA TAP 5*11 16V 33uF 20%	1
C18, 19	1862-471-306	C-ELEC/RA TAP 8*12 10V 470uF 20%	2
C22	1862-101-304	C-ELEC/RA TAP 5*11 10V 100uF 20%	1
C23, 24	1832-010-912	C-CERA/AX TAP 50V CH 1pF 20%	2
C86, 89	1832-104-002	C-CERA 50V Y5V 0.1uF +80%, -20%	2

Integrated Circuits

IC1, 2	1212-455-001	IC-DIP NJM4558DD OP AMP JRC	2
IC3	1211-729-001	IC-SIP TA7291S MOTOR DRIVE TOSHIBA	1
IC4	1212-496-001	IC-DIP QUAD BILATERAL SWITCH	1

Miscellaneous

VR 1	1723-503-002	VR-MOTOR RK16814MG 50K ALPS	1
JA2	1514-000-031	JACK-RCA 3P JW-3104D Y/Y/Y JAEWON	1
CN3	2111-020-008	CONNECTOR-WAFER 2253-08S-T SOCKET ILSAN	1
CN4	2111-020-014J	CONNECTOR-WAFER 2253-14S-T SOCKET ILSAN	1
CN9	2141-050-060	CNT-ASS'Y 5P 150MM WOOCHANG BEOMHWAN	1
WA 6	2111-023-005	CON-WAFER 5267-05A 5P P=2.5 MOLEX	1
WA7	2111-023-003	CON-WAFER 5267-03A 3P P=2.5 MOLEX	1
PCB ASSY	A0112-001-1619	VIDEO PCB FULLY LOADED	1

SIMPLE TROUBLESHOOTING

Symptom

Cause and Remedy

If there is no sound from any of the speakers, check the following:

- Make sure the receiver is plugged into an active AC wall outlet.
- Push “Speakers” button on the receiver.
- Make sure there is a source – for example, a VCR or television – hooked up to the VCR or tape/aux input jacks on the receiver.
- Make sure that the program material is playing.
- Recheck the hookup connections.

If most of the sound comes from the center-channel speaker, with little or no information from the surround channels, note the following:

- Although most of today’s televisions are equipped with stereo audio output jacks, some stereo televisions have poor audio sections and are unable to provide a Dolby Pro Logic encoded signal. In the unlikely event that you experience this problem, connecting the audio outputs from your Hi-Fi VCR, laser disc player, DVD player or satellite receiver directly to one of the inputs on the receiver will provide a proper audio signal and allow you to enjoy true Dolby Pro Logic surround sound.

If there is no sound from the surround speakers or it is very low, check the following:

- Check all connections between amplifier and each of the speakers.
- Raise the surround volume from the remote control.
- Make sure the TV show or movie you are watching is recorded in Dolby Surround.
- Make sure Dolby Pro Logic is engaged.

If there is no sound from the center speaker, check the Following:

- Make sure that the processor is in the Pro Logic, or 3 Stereo mode. If it is in Phantom or Stereo mode, the center speaker will not play.
- Check the connections between the receiver and the center speaker.

If you are having trouble picking up radio stations, check the following:

- Make sure the antenna is hooked up properly.
- Depending on your distance from the station’s transmitter, you may need to install an FM antenna on the roof or in the attic.

MORE COMPLEX TROUBLESHOOTING

Symptom	Cause and Remedy
Receiver inoperative	<ul style="list-style-type: none"> A) Faulty AC power cord. (FL indicator does not light) Replace. B) Defective power switch. Replace. C) Broken wire in the power transformer. Replace the power transformer. D) Blown fuse. Replace the fuse.
Fuse blows when power is turned on.	<ul style="list-style-type: none"> A) Defective power transformer. Replace. B) Short on the primary or secondary of the transformer circuitry. Repair the short. C) Damaged rectifier (D20) or damaged "transistor (Q3, Q11, Q12)." Replace the defective component(s). D) Short circuit in the amplifier circuit. Replace the shorted component(s) in the amplifier circuit.
FL indicator lights but no sound	<ul style="list-style-type: none"> A) Defect in IC3 on the Main Board. from both channels. Replace the defective component(s).
One channel does not work when volume is at maximum with a test Signal applied to the center terminal of volume control VR1 of The dead channel.	<ul style="list-style-type: none"> A) "Defect in IC2,IC3 on the Main Board" signal applied to the center volume is at maximum with a test channel. Locate and correct the defect. B) Break in copper foil of printed circuit board. Repair the trace. C) Short in speaker output terminal. Repair or replace.
Speaker works normally but Headphones inoperative.	<ul style="list-style-type: none"> A) Headphone plug does not mate with jack. Replace the jack. B) "Defective resistor R52, R53." Replace.
FM inoperative	<ul style="list-style-type: none"> A) Defective front-end. (PACK1) Replace. B) Defective FM switch. Replace the switch. C) "Defective transistors Q1,Q2,Q3,Q201," "Q202 or IC2, IC3, IC4" Replace the defective transistor(s) or IC(s). D) Defective coil T4. Replace the coil(s). E) Defective lead-in. Repair or replace the lead-in. F) "Ceramic filters F101, F102 defective." Replace the defective ceramic filter(s). G) Defective controller circuit component. Replace.
Poor multiplex separation	<ul style="list-style-type: none"> A) Improper adjustment. Readjust VR401. B) IC4 defective. Replace. C) Variable resistor VR401 defective. Replace the variable resistor.
STEREO indicator does not light.	<ul style="list-style-type: none"> A) Defective indicator in FL. Replace. B) Defective IC4. Replace the defective component.

Symptom	Cause and Remedy
FM volume not sufficient.	A) If volume from both L and R channels is not loud enough: Front end section defective. "Faulty IC3, Coil T4" Defective C412 on Tuner Board. If sound of one channel is not loud enough: "Defective Q401, Q402"
AM inoperative	A) Damaged IC3 of tuner board. Replace. B) "Defective T1, T2, T6 or F202 of " Tuner Board. Replace the defective component(s). C) "Resistors R301, R302 defective." Replace the defective component(s). D) "Capacitors C438, C322, C412 defective." Replace the defective capacitor(s). E) Defective AM switch. Replace. F) "Defective varicap diodes VC1, VC2." Replace varicap diode(s). G) Damaged AM loop antenna. Repair or replace. H) Defective controller circuit component. Replace.
Bass control has no effect.	A) Variable resistor BASS defective. Replace. B) "Defective R60, R63, C47, C48, C52, C53" Replace the defective component(s).
Treble control has no effect.	A) Variable resistor TREBLE defective. Replace B) "Defective R70, R73, R77, R79, " "C58, C61, C63, C64." Replace the defective component(s).
Auto tune inoperative. (UP/DOWN)	A) Poor contact on Up/Down key. Repair or replace. B) Defective IC on Front Board. Replace. C) Defective tuner circuit components. Replace. D) "In case of FM only, improper adjustment" of FM front-end. Readjust.
Manual tune inoperative. (UP/DOWN)	A) Poor contact in Up/Down key. (AM or FM) Replace. B) Defective IC1 on Front Board. Replace.
Memory setting (Keys 1-10) inoperative.	A) Poor contact on memory keys 1-10. Replace B) Poor contact on memory set key. Replace. C) Defective IC1 on Front Board. Replace the defective component.
FL inoperative.	A) FL defective. Replace. B) Defective IC1 on Front Board. Replace.
Noisy volume control.	A) Defective volume control. Replace. B) "Defective capacitors C1, C2." Replace the defective capacitor(s).
Remote Control Unit inoperative.	A) Weak battery. Replace. B) Defective. Replace. C) Defective IC1 on Front Board. Replace.

TUNER ALIGNMENT

Test Equipment Required

- 1) AM/FM Signal Generator
- 2) Digital Multimeter

FM Tuner Section

Connect the FM signal generator (FM SG) to the FM antenna a 300 terminal through a 300 dummy antenna. Set the receiver to the FM band.

- 1) Tune the FM SG to the receiver.
- 2) Connect the FM Multiplex stereo signal generator to the FM SG external modulation terminal.
- 3) Set the modulation to main 1 kHz/L+R/67.5 kHz deviation, pilot 19 kHz/6 kHz deviation.

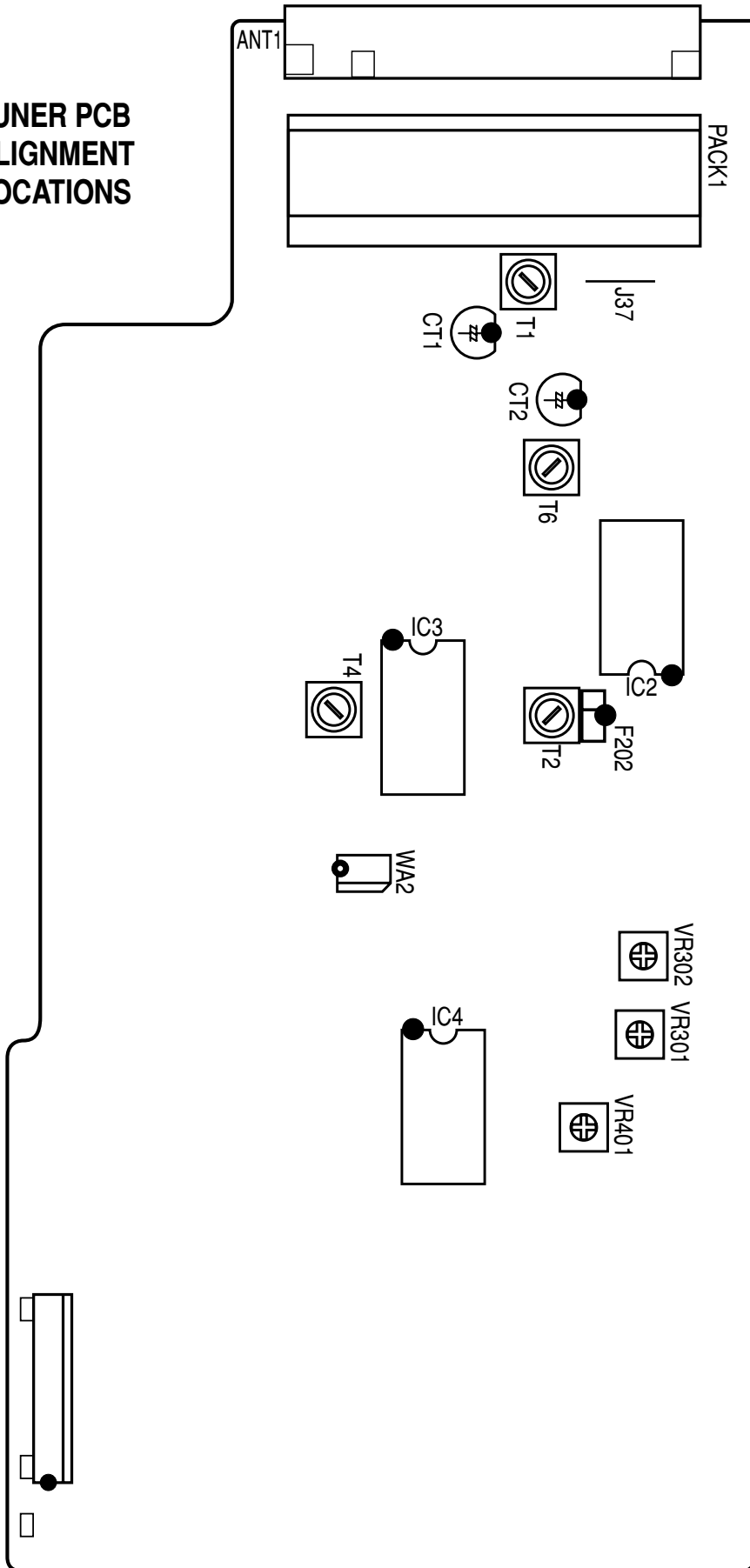
STEP	FM SG 1 kHz 75 kHz deviation		Tuner Frequency Display	Adjustment Point	Adjustment Procedure
	Frequency	Level			
1	No Signal		87.5 MHz		Confirm that DC 1.8 \pm 0.5V between VT Terminal and Ground
2	No Signal		108 MHz		Confirm that DC 8.0V \pm 0.5V between VT Terminal and Ground
3	98 MHz	66 dBu	98 MHz	FM DET COIL - T4 -	Connect the Digital Volt Meter to WA2 Adjust T4 so that adjustment value is less than \pm 30mV
4	98 MHz	22 dBu	98 MHz	S.F.R. 10K VR302	Adjust until you turn on the "TUNED" segment in V.F.D.
5	98 MHz	66 dBu	98 MHz	S.F.R. 220K VR401	Adjust so that the left (or right) channel output becomes minimum when only the right (or left) channel of the stereo modulator is modulated.

AM Tuner Section

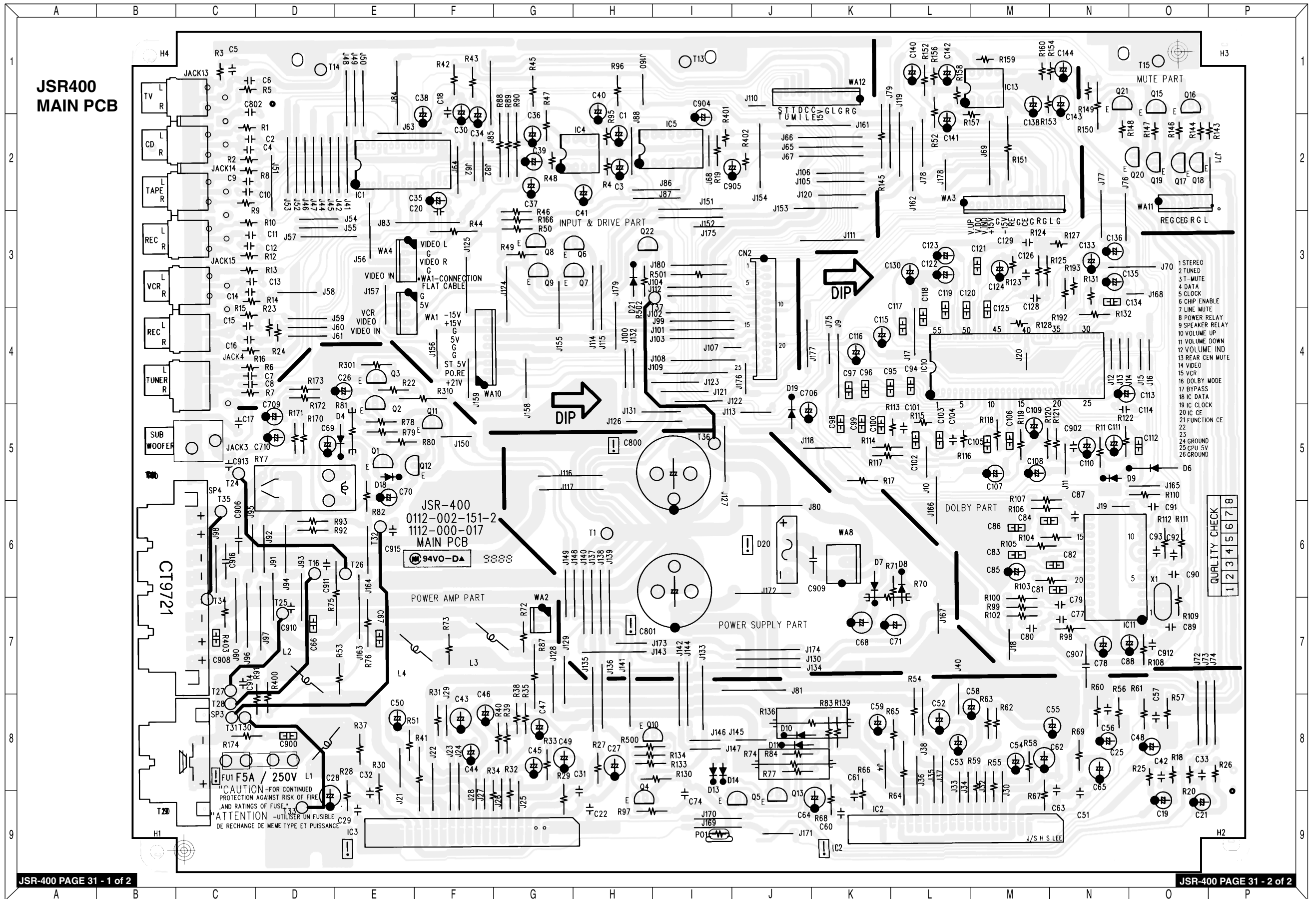
- 1) Connect the furnished AM Loop antenna between terminals AM ANTENNA and GND.
- 2) Connect the AM signal generator (AM SG) to the AM antenna terminal.
- 3) Tune the AM SG to the receiver.

STEP	AM SG 400Hz 30% Mod.		Tuner Frequency Display	Adjustment Point	Adjustment Procedure
	Frequency	Level			
1	No Signal		520 kHz	AM OSC COIL T6	Adjust until DC 1.2V \pm 0.03V between VT jumper and ground is attained (J37)
2	No Signal		1720 kHz	CERAMIC TRIMMER CT2	Adjust until DC 9.0V \pm 0.5V between VT jumper and ground is attained (J37)
3	Repeat the step 1 and 2 until both specification are correct.				
4	600 kHz	22 dBu	600 kHz	AM ANT COIL T1	Adjust until you turn on the "TUNED" segment in V.F.D.
5	1500 kHz	66 dBu	1500 kHz	CERAMIC TRIMMER CT1	Adjust until maximum sensitivity is attained
6	Repeat the steps 4 and 5 until maximum sensitivity is attained.				
7	1000 kHz	100dBu v/m	1000 kHz	AM IFT COIL T2	Adjust until maximum sensitivity is attained
8	1000 kHz	83dBu v/m	1000 kHz	S.F.R. 10K VR301	Adjust until turn on "TUNED" segment in VFD

**TUNER PCB
ALIGNMENT
LOCATIONS**

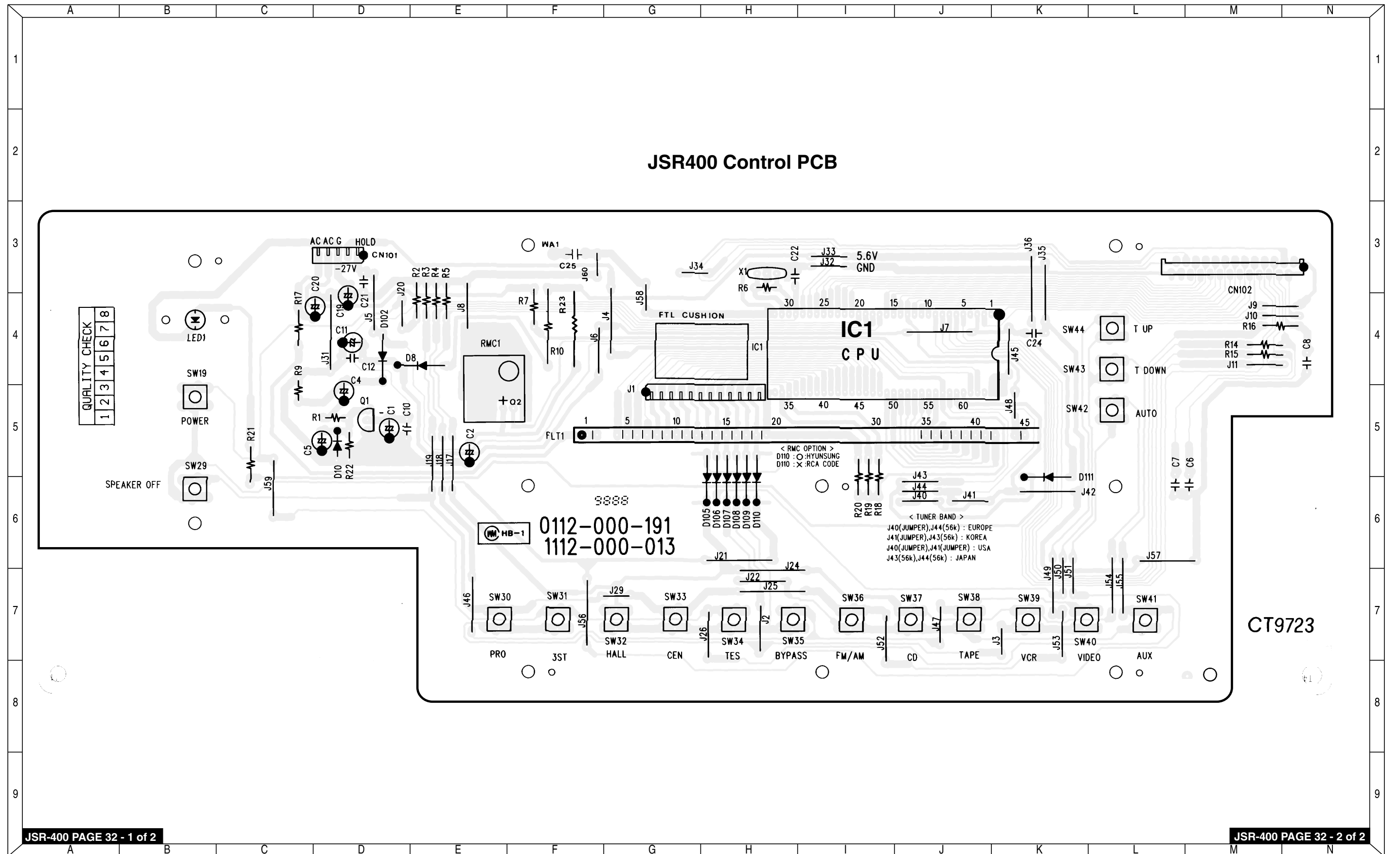


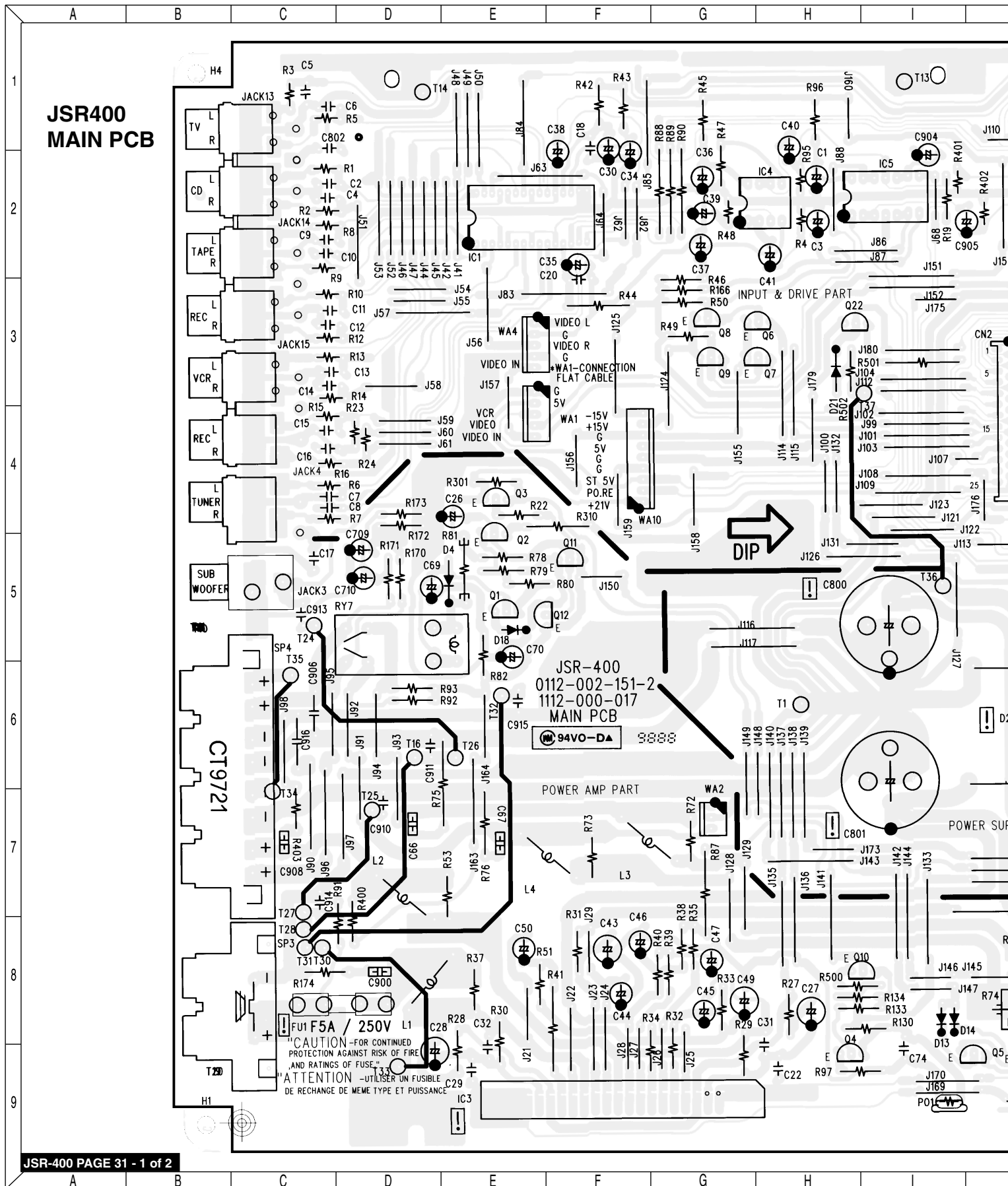
JSR-400 MAIN PCB



JSR-400 CONTROL PCB

JSR400 Control PCB



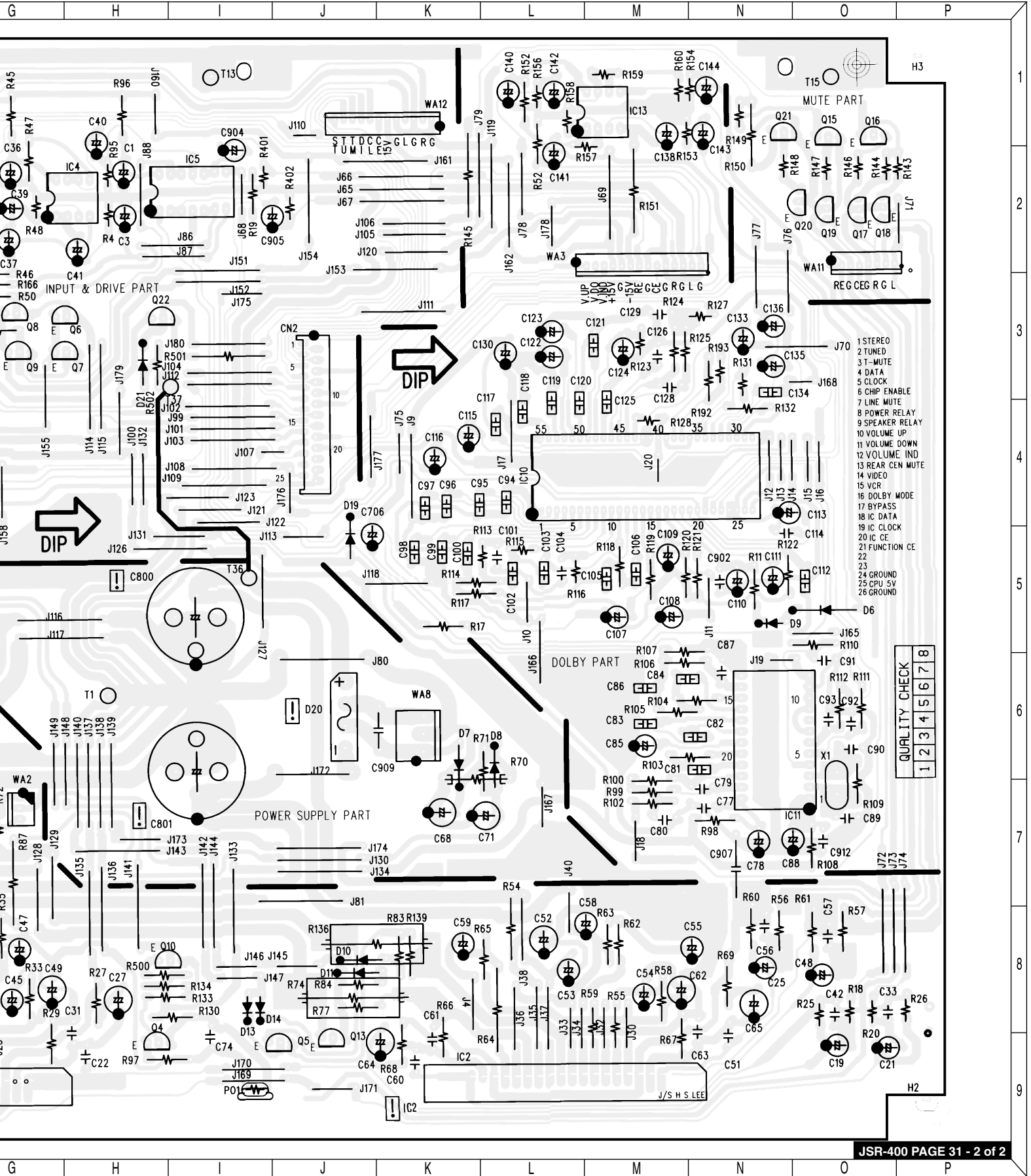


JSR400
MAIN PCB

JSR-400
0112-002-151-2
1112-000-017
MAIN PCB
94VO-D

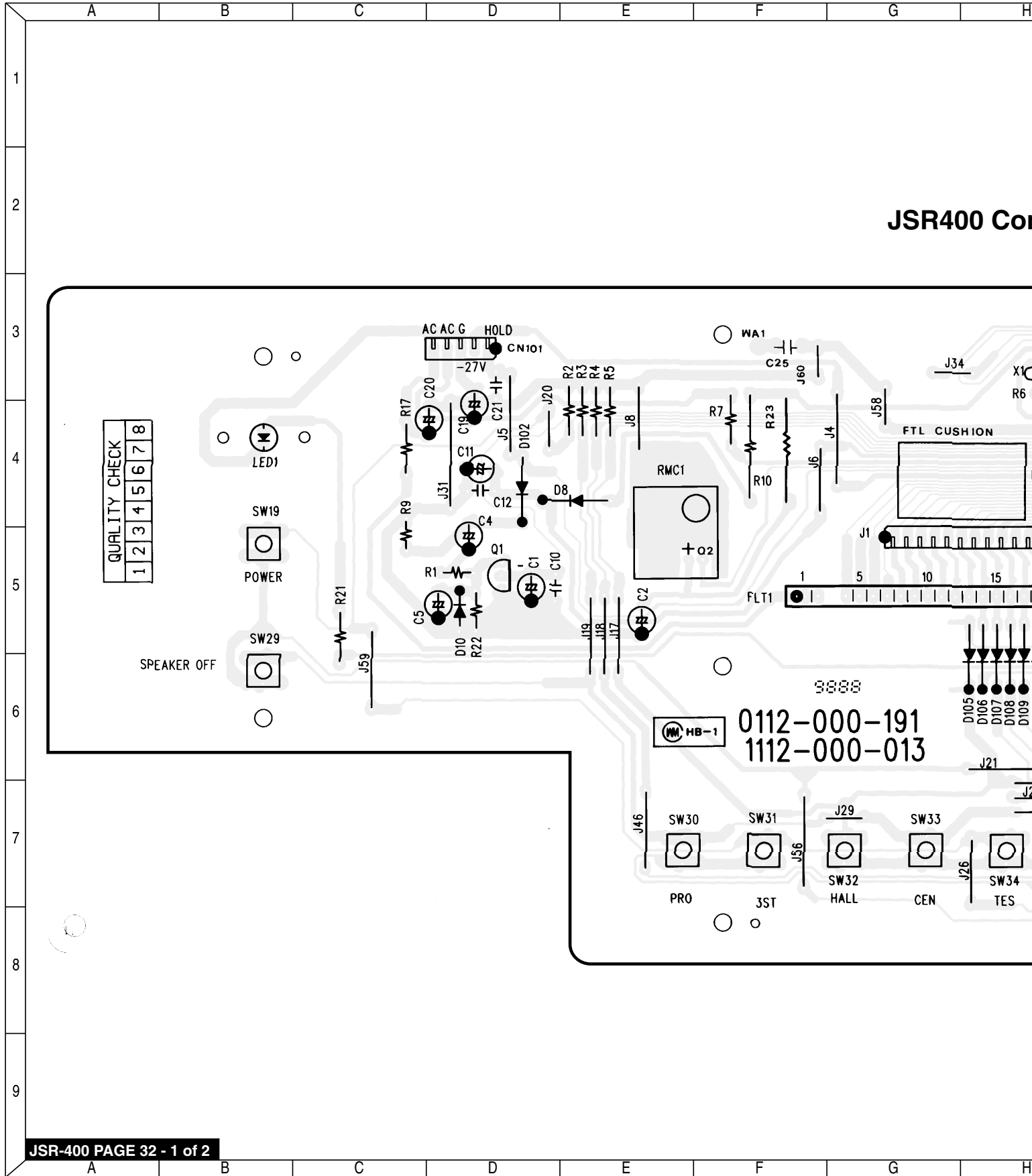
CAUTION - FOR CONTINUED
PROTECTION AGAINST RISK OF FIRE
AND RATINGS OF FUSE.
ATTENTION - UTILISER UN FUSIBLE
DE RECHANGE DE MEME TYPE ET PUISSANCE

JSR-400 MAIN PCB

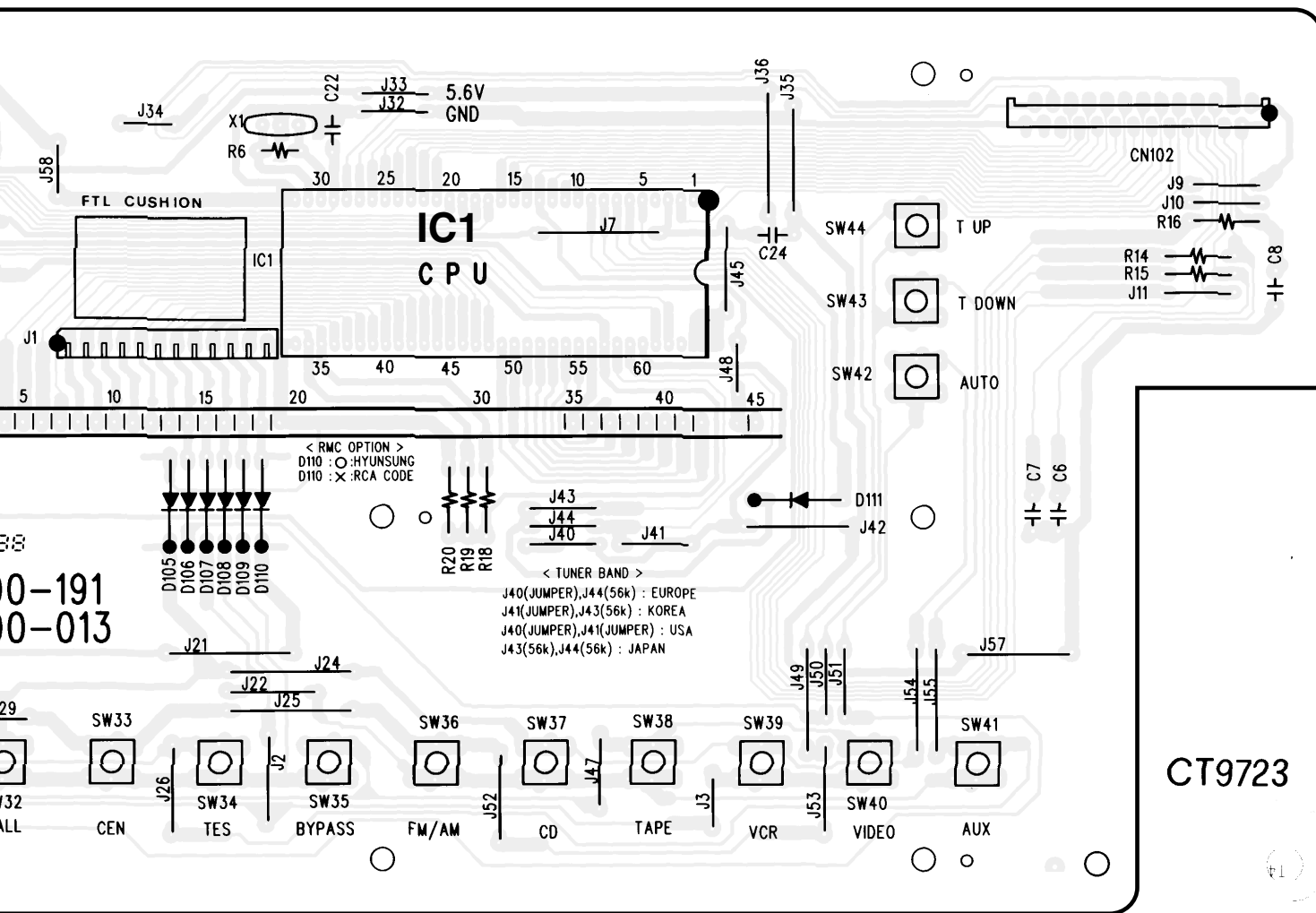


- 1 STEREO
- 2 TUNED
- 3 MUTE
- 4 DATA
- 5 CLOCK
- 6 CHIP ENABLE
- 7 LINE MUTE
- 8 POWER RELAY
- 9 SPEAKER RELAY
- 10 VOLUME UP
- 11 VOLUME DOWN
- 12 VOLUME IND
- 13 REAR CEN MUTE
- 14 VIDEO
- 15 VCR
- 16 DOLBY MODE
- 17 BYPASS
- 18 IC DATA
- 19 IC CLOCK
- 20 IC CE
- 21 FUNCTION CE
- 22
- 23
- 24 GROUND
- 25 CPU 5V
- 26 GROUND

1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---

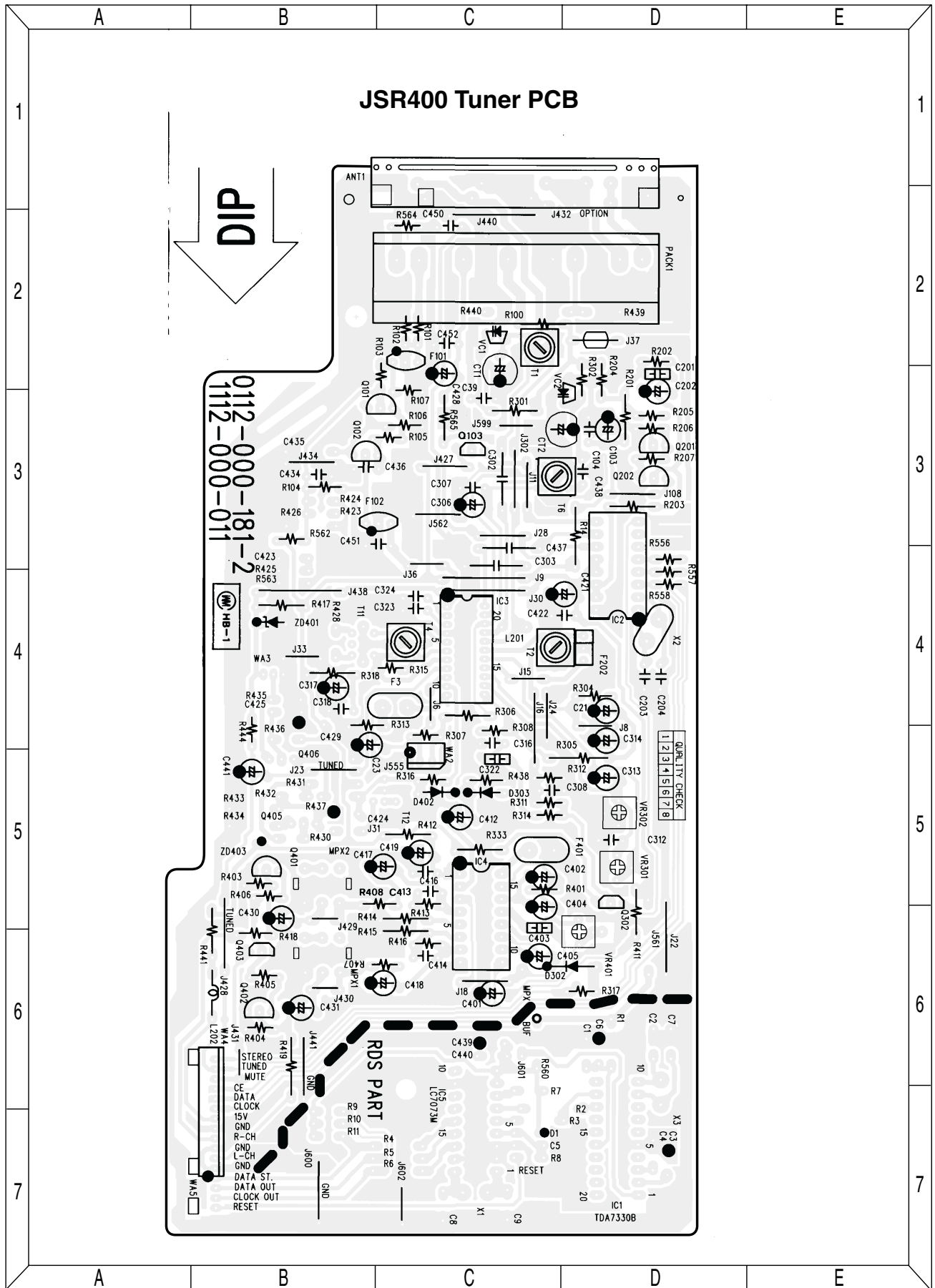


JSR400 Control PCB

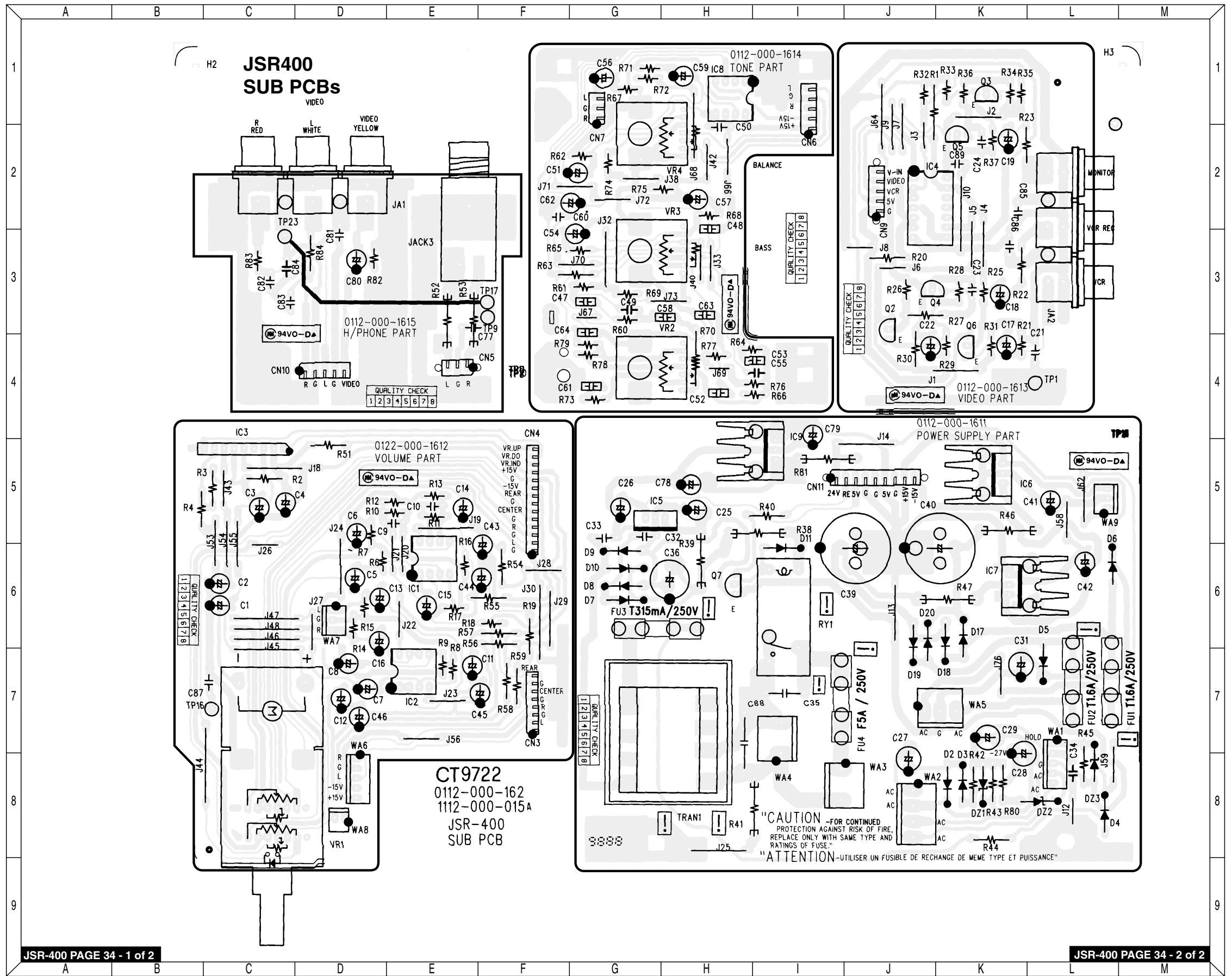


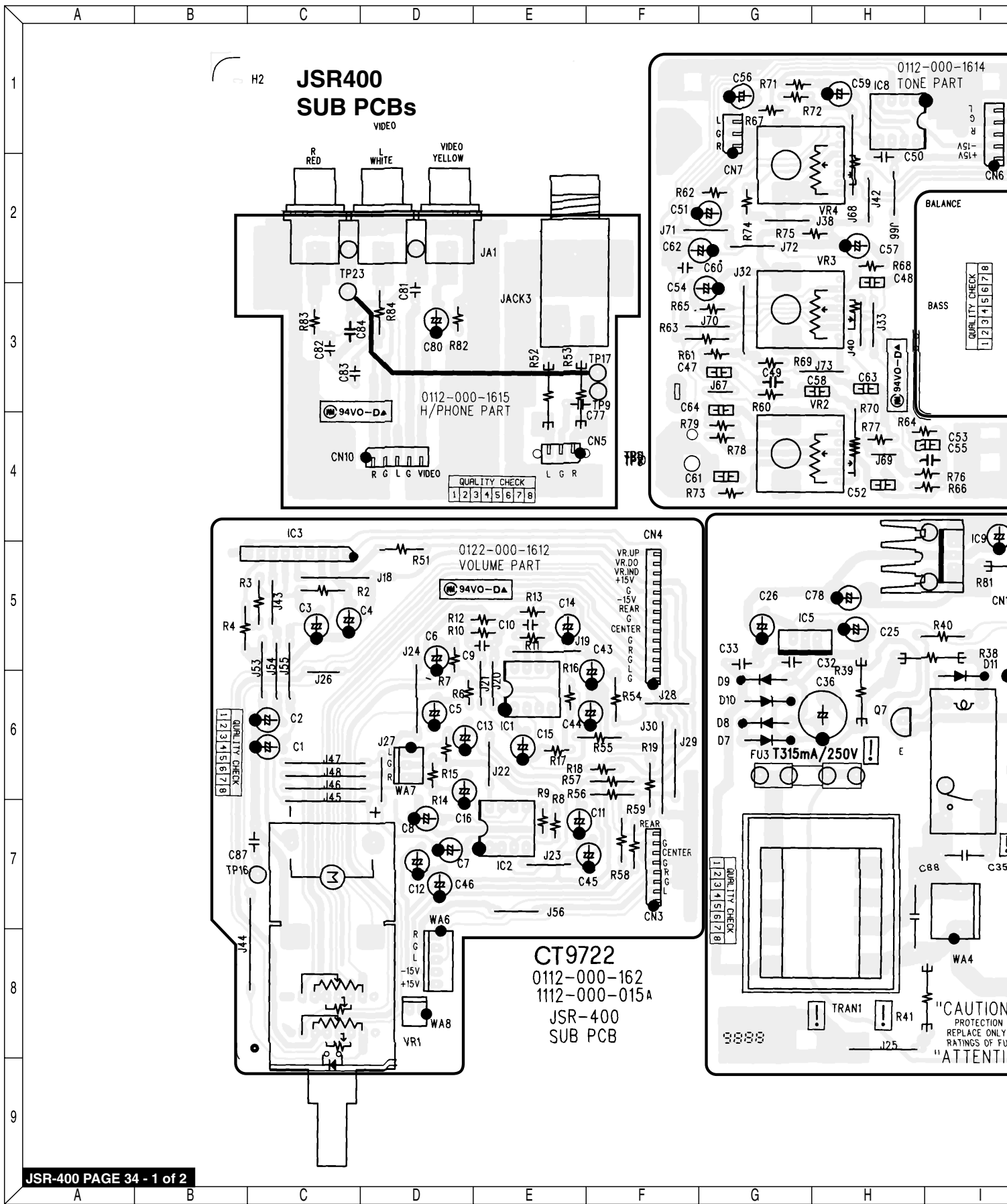
CT9723

JSR-400 TUNER PCB

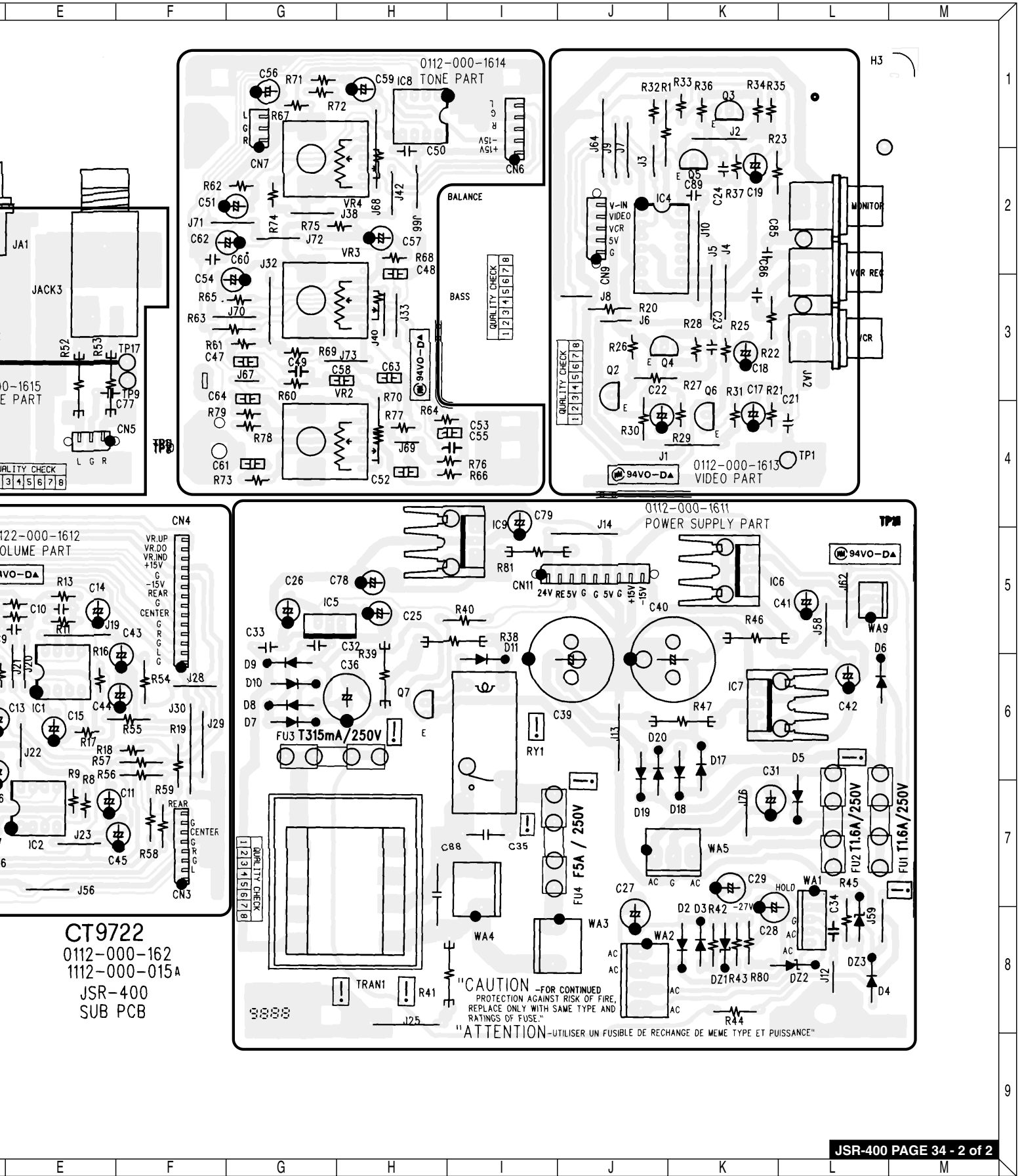


JSR-400 SUB PCBs



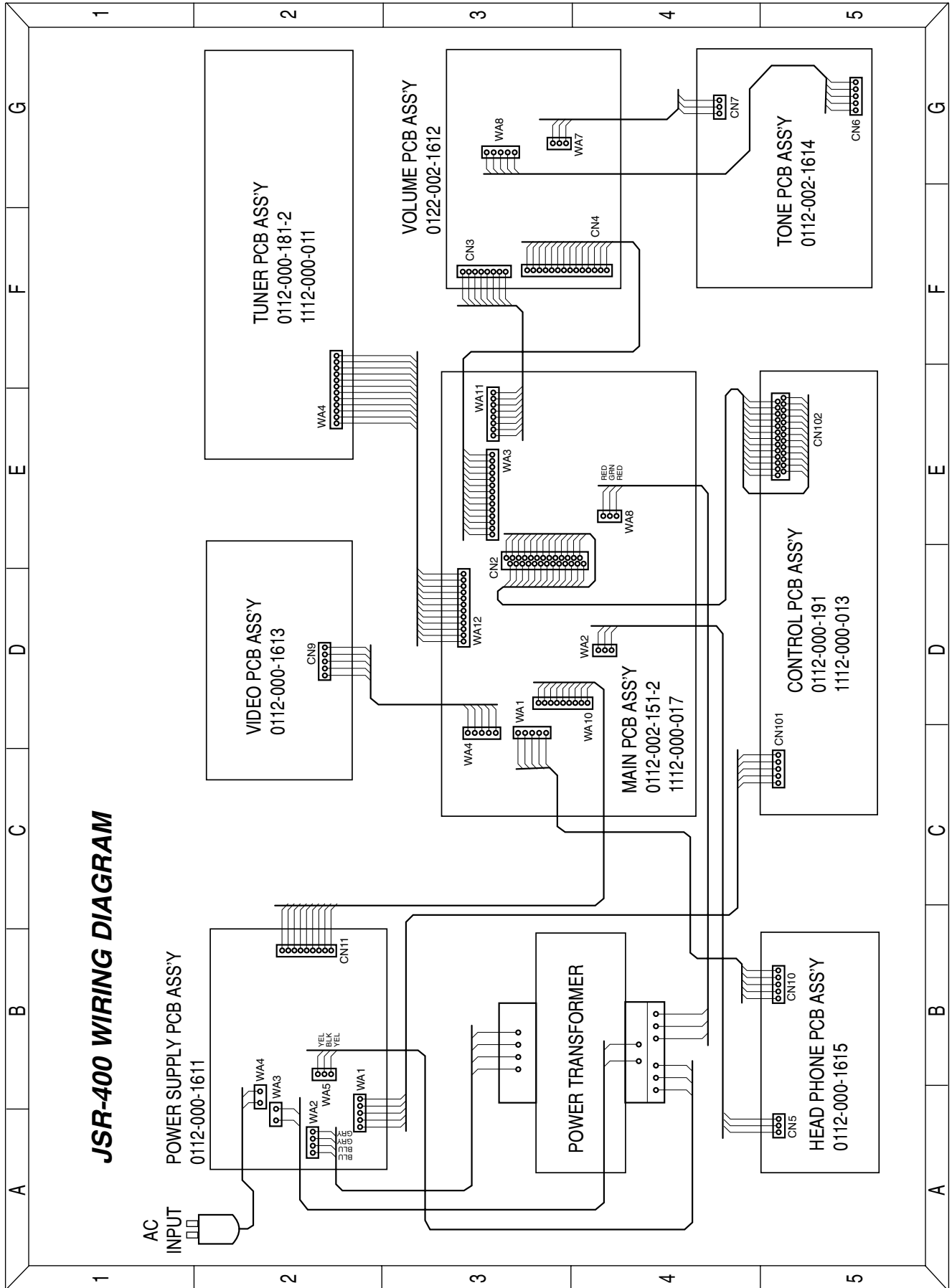


JSR-400 SUB PCBs



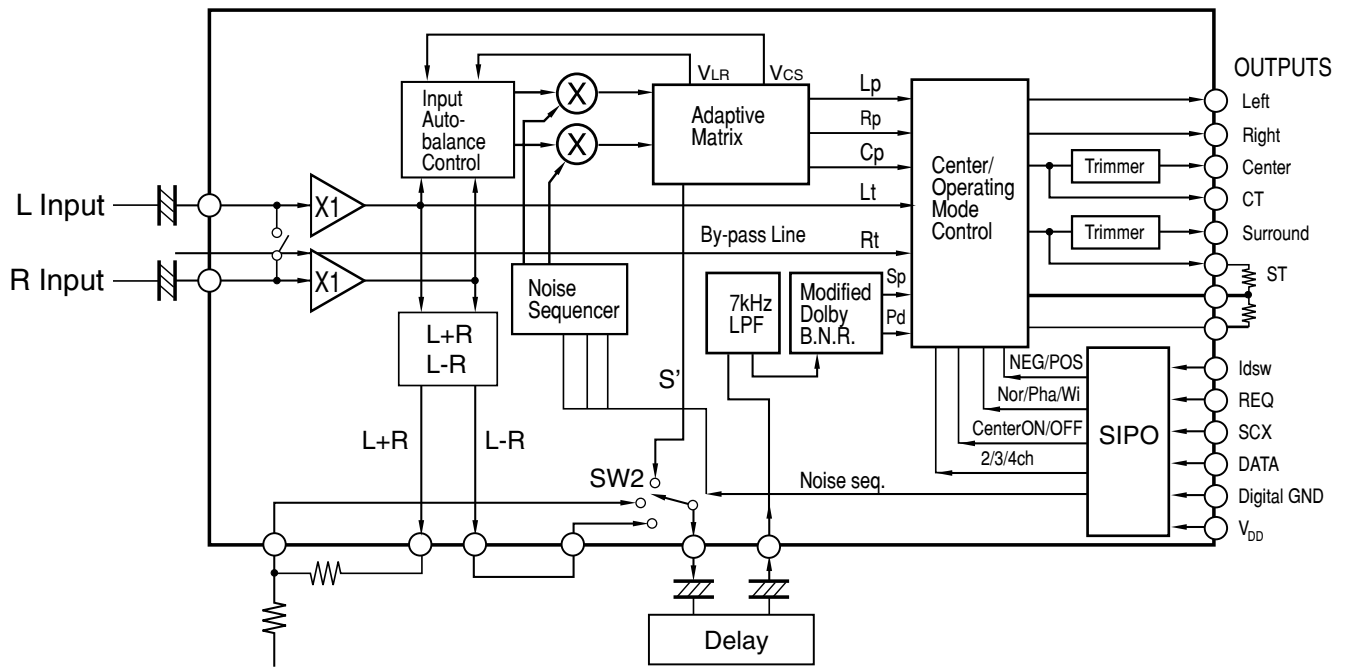
CT9722
 0112-000-162
 1112-000-015A
 JSR-400
 SUB PCB

WIRING DIAGRAM



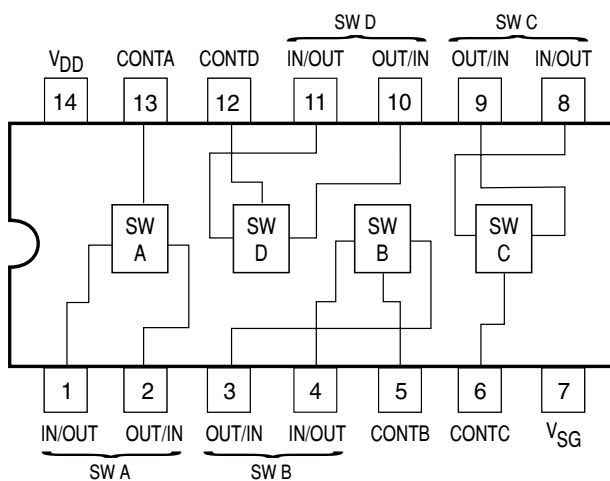
INTEGRATED CIRCUIT DIAGRAMS 1

Main PCB IC10 - (NJW1102)
D/S DECODER



Control PCB IC1 - (CXP82712)

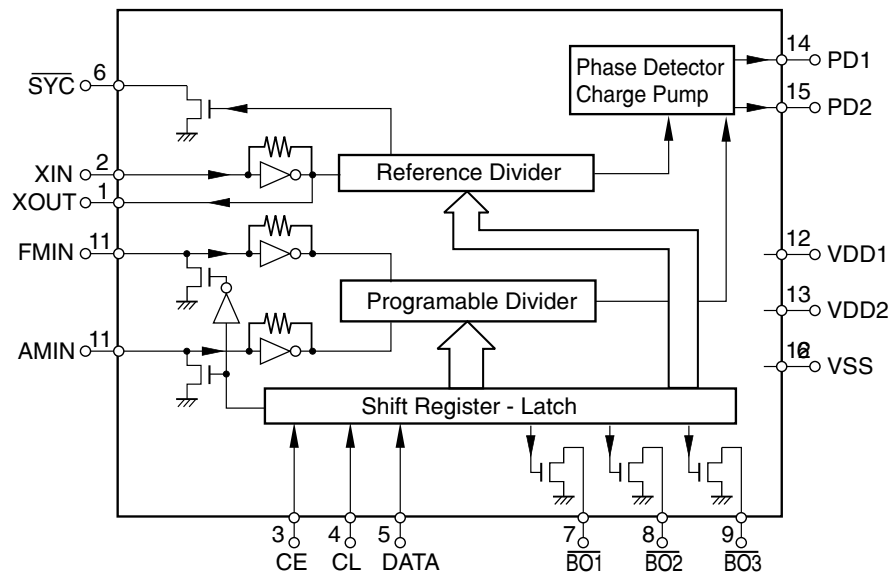
Main PCB - IC5 (LC4966)
Video PCB - IC5 (LC4966)
QUAD BILATERAL SWITCH



STEREO	1	64	+5V
TUNED	2	63	NC
+5V	3	62	REMOCON
NC	4	61	POWER OFF
P/F DI	5	60	OPTION 2
P/F CL	6	59	OPTION 1
PLL CE	7	58	OPTION 0
A-MUTE	8	57	-27V
POWER ON	9	56	GRID 01
SP FRONT	10	55	GRID 02
VOL. UP	11	54	GRID 03
VOL. DN	12	53	GRID 04
PO.IND	13	52	GRID 05
R/C MUTE	14	51	GRID 06
VIDEO	15	50	GRID 07
VCR	16	49	GRID 08
KR 00	17	48	SEG 16
KR 01	18	47	SEG 15
KR 02	19	46	SEG 14
KR 03	20	45	SEG 13
DOLBY	21	44	SEG 12
BY-PASS	22	43	SEG 11
1102 DATA	23	42	SEG 10
1102 SCK	24	41	SEG 09
REQ	25	40	SEG 08 / KS01102
7821 CE	26	39	SEG 07 / KS1
T-MUTE	27	38	SEG 06 / KS2
OPTION	28	37	SEG 05 / KS3
RESET	29	36	SEG 04 / KS4
X-TAL	30	35	SEG 03 / KS5
X-TAL	31	34	SEG 02 / KS6
GND	32	33	SEG 01

INTEGRATED CIRCUIT DIAGRAMS 2

Tuner PCB IC2 - (LM7001)
(PLL Synthesizer and Controller)

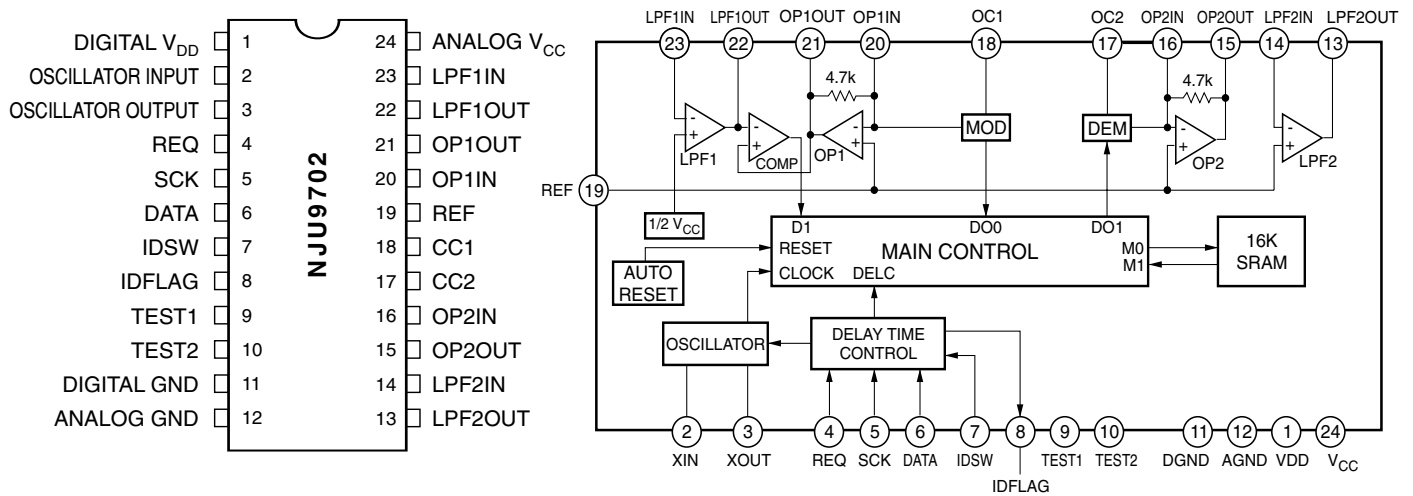


Terminal Description

Pin No.	Terminal	Description
1	XOUT	Connect to the 7.2 Mhz crystal oscillator.
2	XIN	
3	CE	Chip enable terminal. Connect to the PLL terminal of microprocessor.
4	5CL	Serial clock input terminal. Connect to the CLOCK terminal of microprocessor.
5	DATA	Serial data input. Connect to the DATA terminal of micro processor.
6	SYN	Not used
7	AUTO/MONO	AUTO/MONO selection output terminal. "L" when FM.
8	FM	FM band control output terminal. "L" when FM.
9	AM	AM band control output terminal. "L" when AM.
10	AMIN	AM local oscillator input terminal.
11	FMIN	FM local oscillator terminal.
12	V _{DD} 1	Power supply terminal for back-up.
13	V _{DD} 2	Power supply terminal.
14	PD1	Charge pump output of the phase detector which constitutes the PLL. High level is output when the divided local oscillator frequency is higher than the reference frequency. In the opposite case, low level is output. Floating occurs when the frequency matched. The output is applied to the variable capacitor diode in the local oscillator through the low pass filters.
15	PD2	
16	V _{SS}	Ground terminal.

INTEGRATED CIRCUIT DIAGRAMS 3

Main PCB IC11 - (NJU9702) D/S DELAY

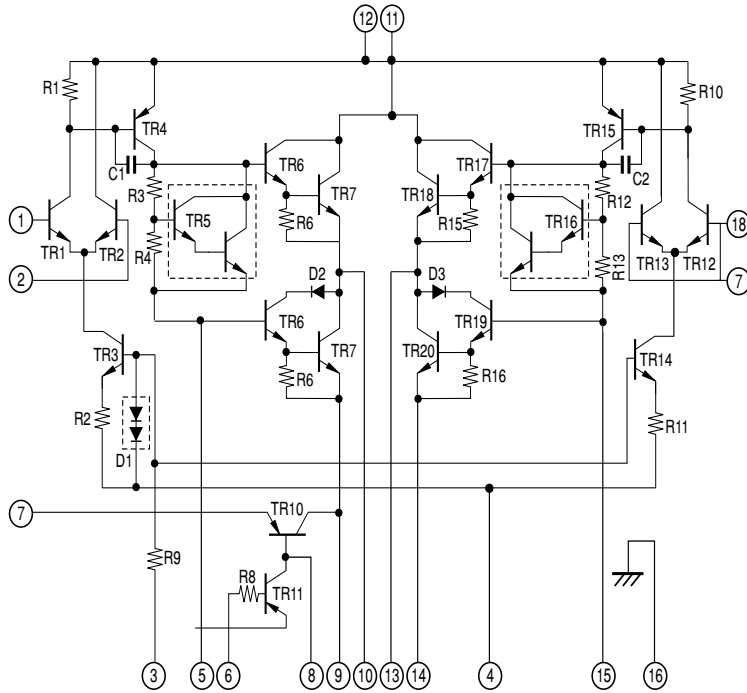


Terminal Description

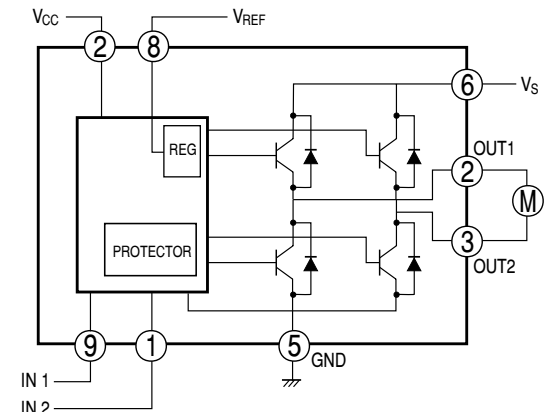
Pin No.	Symbol	Functions		
1	V _{DD}	Voltage Supply for Digital Block V _{DD} =5(V)		
11	DGND	Digital GND DGND=0(V)		
24	V _{CC}	Voltage supply for Analog Block V _{CC} =5(V)		
12	AGND	Analog GND AGND=0(V)		
19	REF	Analog Reference Voltage REF=1/2 V _{CC}		
2	X _{IN}	Oscillator Input Terminal	Connects to 2MHz ceramic Oscillator	
3	X _{OUT}	Oscillator Output Terminal		
4	REQ	Data Request Input Terminal		
5	SCK	Serial Data Shift Clock Input Terminal		
6	DATA	Serial Data Input Terminal.		
7	IDSW	ID Switch (ID Code When Connect to the Common Bus)		
8	IDFLAG	ID Flag (Data Input Confirmation and Serial Data Output)		
18	CC1	Current Control 1 Modulator	ADM Controller	
17	CC2	Current Control 2 Demodulator		
9, 10	TEST1, 2	Test Terminal (Normally Connects to the GND)		
23	LP1IN	Lowpass Filter 1 Input	Input Side	Constitute a Lowpass Filter with external C and R.
22	LPF1OUT	Lowpass Filter 1 Output		
14	LPF2IN	Lowpass Filter 2 Input	Output Side	
13	LPF2OUT	Lowpass Filter 2 Output		
20	OP1IN	OP-AMP 1 Input	Input Side	Constitute an Integrator with external C.
21	OP1OUT	OP-AMP 1 Output		
16	OP2IN	OP-AMP 2 Input	Output Side	
15	OP2OUT	OP-AMP 2 Output		

INTEGRATED CIRCUIT DIAGRAMS 4

Main PCB - IC2, 3 (STK4192)
2 CH HIGH POWER AMP(50W+50W)



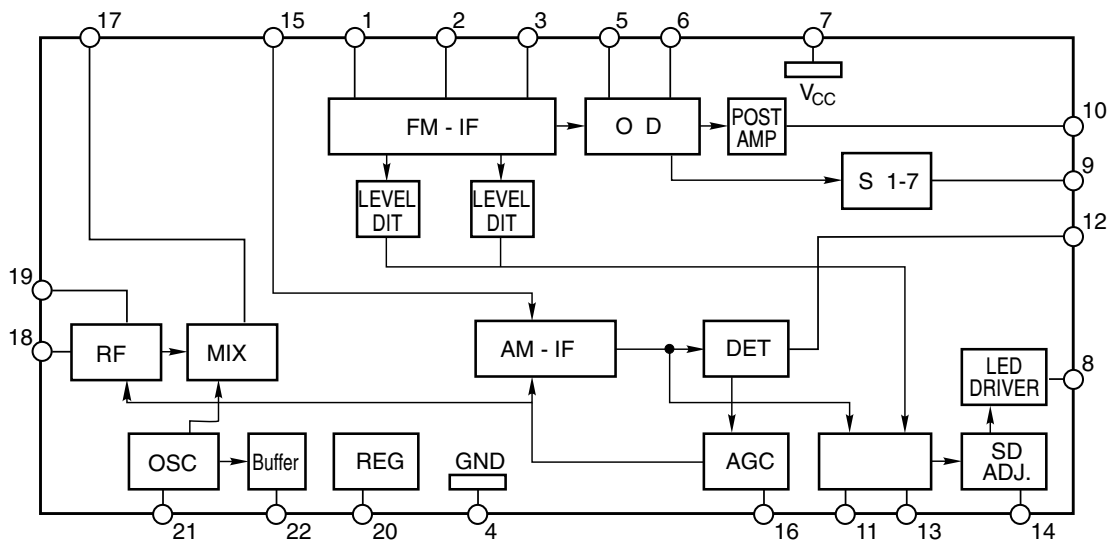
Video PCB IC3 (TA7291S) Motor driver



INPUT		OUTPUT		MODE
IN 1	IN 2	OUT 1	OUT 2	
0	0	∞	∞	STOP
1	0	H	L	CW/CCW
0	1	L	H	CCW/CW
1	1	L	L	BRAKE

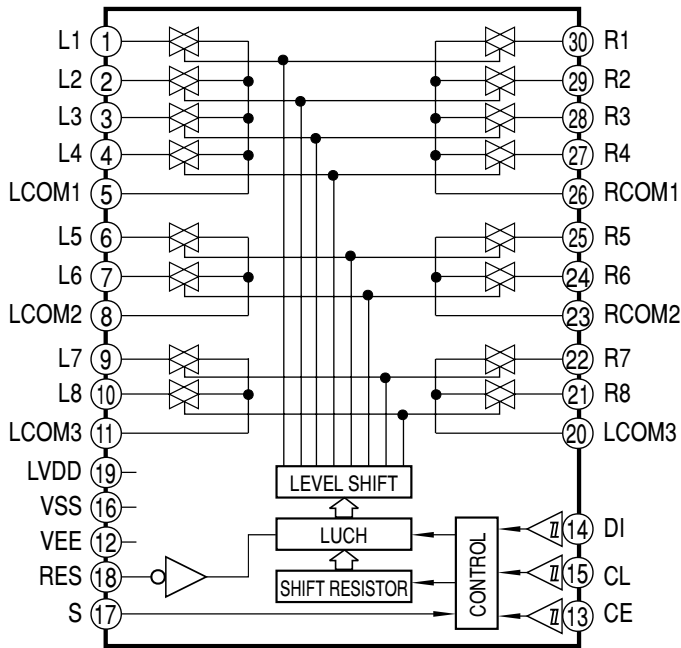
CCW: Counterclockwise direction
CW: Clockwise direction

Tuner PCB IC3 - (LA1265) AM/FM IF

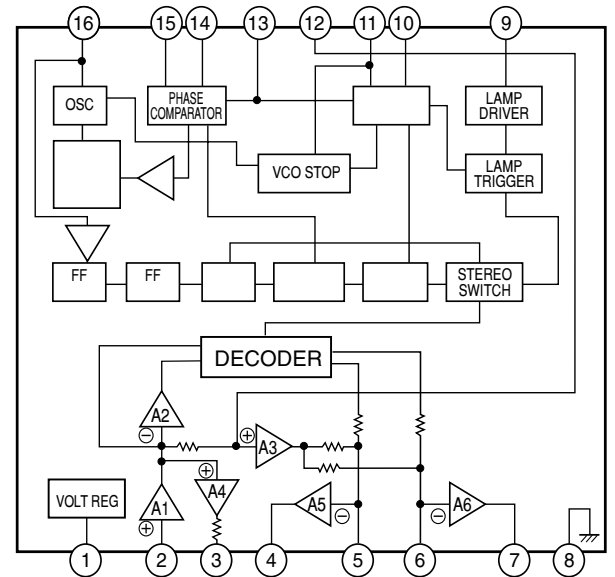


INTEGRATED CIRCUIT DIAGRAMS 5

Main PCB - IC1 (LC7821)
FUNCTION SELECTOR

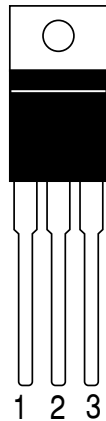


Tuner PCB IC4 - (LA3410) FM IPX



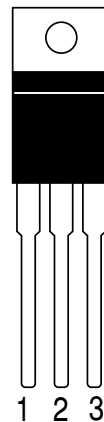
Power Supply PCB
IC5 (7806) TO220i +6V
IC6 (7815) TO220i +15V
1A REGULATORS

- 1. INPUT
- 2. GROUND
- 3. OUTPUT

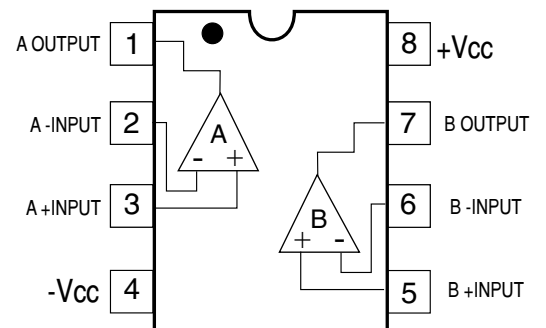


Power Supply PCB
IC7 (7915) TO220i -15V
1A REGULATOR

- 1. GROUND
- 2. INPUT
- 3. OUTPUT

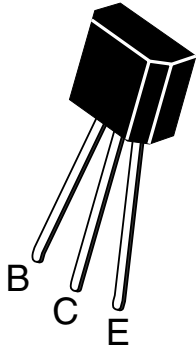


Main PCB IC4, 13
Tone PCB IC8
Video PCB IC1, 2
(NJM4558) OP AMP

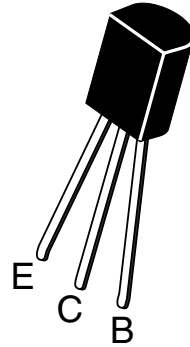


TRANSISTOR DIAGRAMS

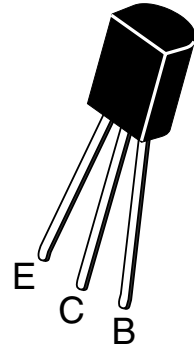
PNP (KRA101M)
(KRA103M)



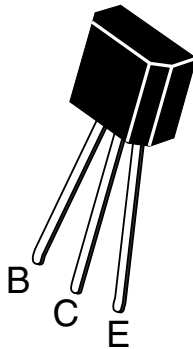
NPN (KTD1302)
(KTC3198-GR)
(KTC3192-0)
(KTC3200-GR)



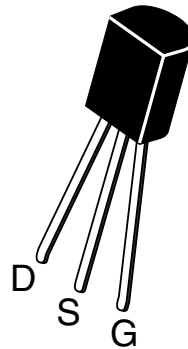
PNP (KTA1266-GR)



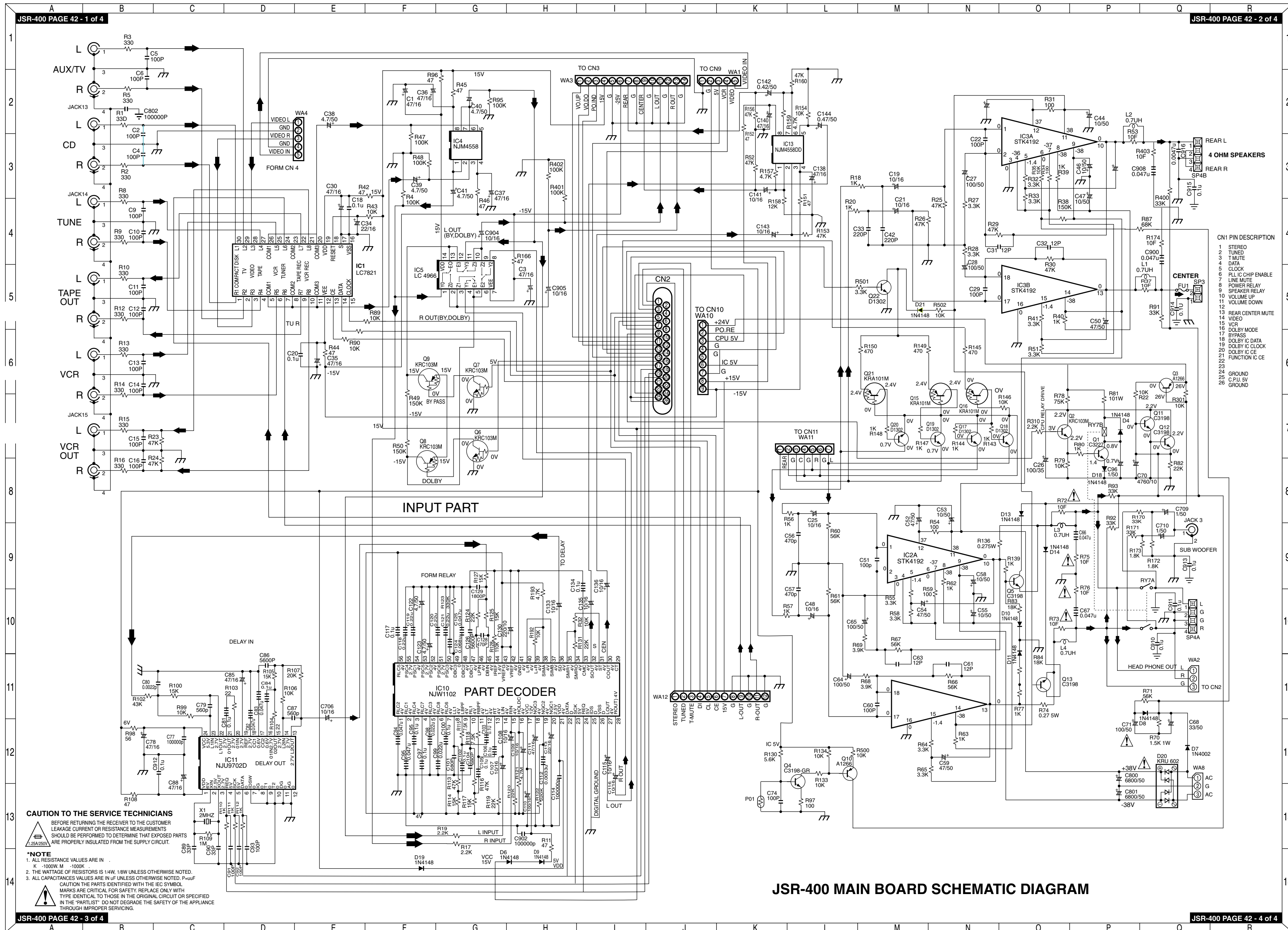
NPN (KRC103M)



N-FET (2SK117-GR)



JSR-400 SCHEMATIC DIAGRAM - MAIN BOARD



JSR-400 PAGE 42 - 1 of 4

JSR-400 PAGE 42 - 2 of 4

CAUTION TO THE SERVICE TECHNICIANS

BEFORE RETURNING THE RECEIVER TO THE CUSTOMER LEAKAGE CURRENT OR RESISTANCE MEASUREMENTS SHOULD BE PERFORMED TO DETERMINE THAT EXPOSED PARTS ARE PROPERLY INSULATED FROM THE SUPPLY CIRCUIT.

*NOTE

1. ALL RESISTANCE VALUES ARE IN . K - 1000Ω M - 100KΩ
2. THE WATTAGE OF RESISTORS IS 1/4W, 1/8W UNLESS OTHERWISE NOTED.
3. ALL CAPACITANCE VALUES ARE IN μF UNLESS OTHERWISE NOTED. P=μF

CAUTION THE PARTS IDENTIFIED WITH THE IEC SYMBOL MARKS ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH TYPE IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT OR SPECIFIED IN THE 'PARTLIST'. DO NOT DEGRADE THE SAFETY OF THE APPLIANCE THROUGH IMPROPER SERVICING.

JSR-400 PAGE 42 - 3 of 4

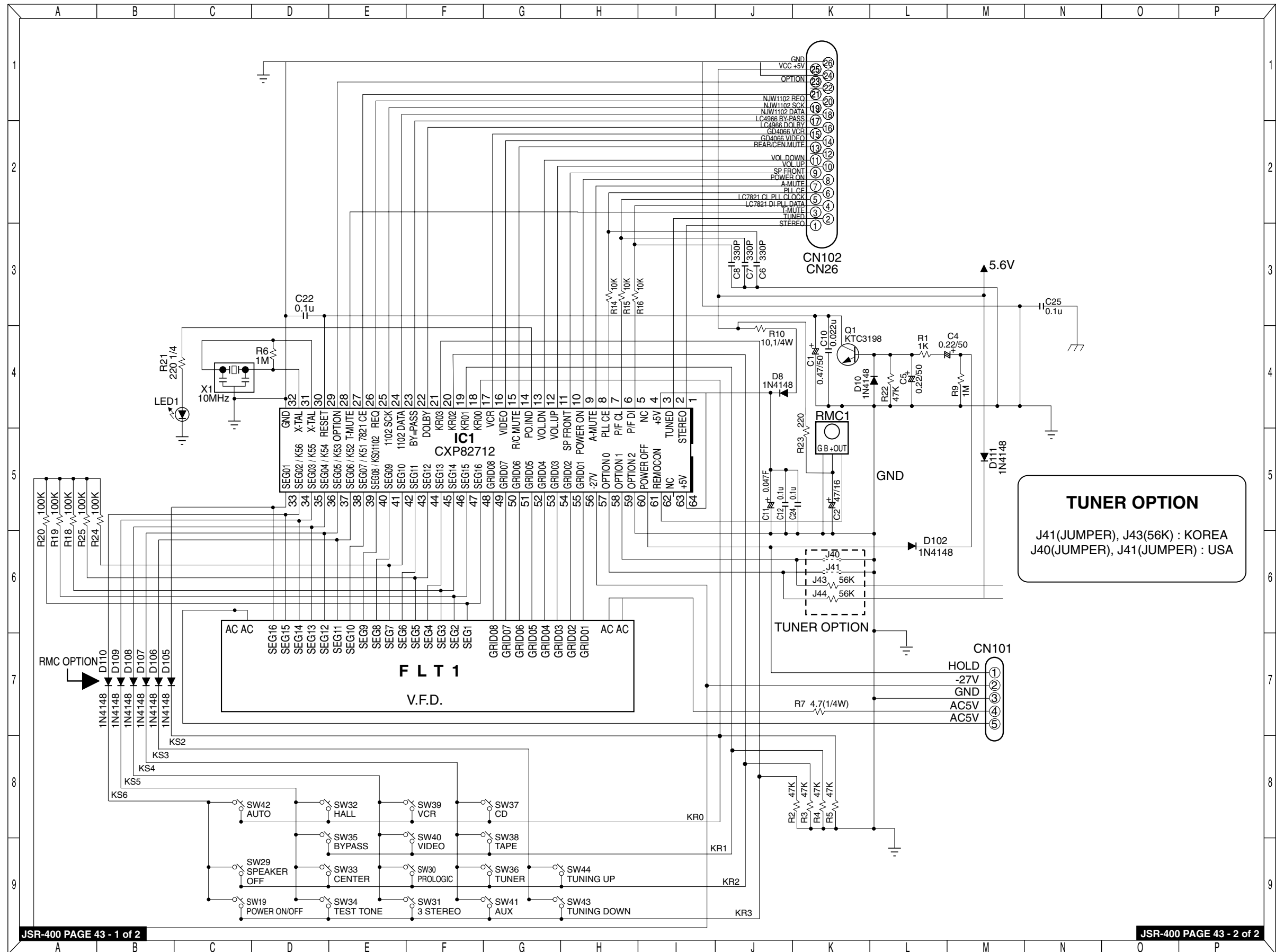
CN1 PIN DESCRIPTION

1	STEREO
2	TUNED
3	T MUTE
4	DATA
5	CLOCK
6	PLL IC CHIP ENABLE
7	LINE MUTE
8	POWER RELAY
9	SPEAKER RELAY
10	VOLUME UP
11	VOLUME DOWN
12	REAR CENTER MUTE
13	VIDEO
14	VCR
15	DOLBY MODE
16	BYPASS
17	DOLBY IC DATA
18	DOLBY IC CLOCK
19	DOLBY IC CE
20	DOLBY IC CE
21	FUNCTION IC CE
22	
23	
24	GROUND
25	C.P.U. 5V
26	GROUND

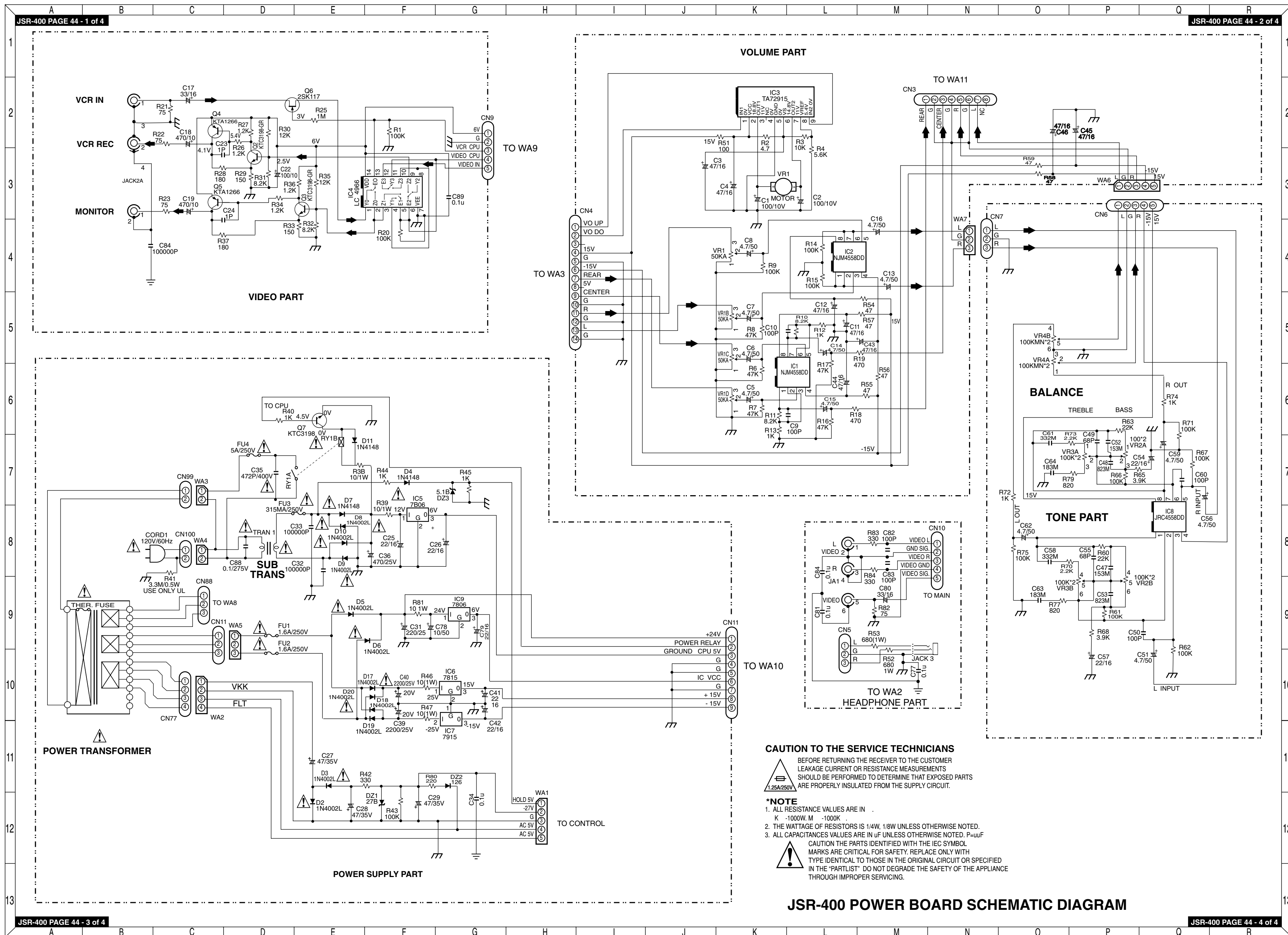
JSR-400 MAIN BOARD SCHEMATIC DIAGRAM

JSR-400 PAGE 42 - 4 of 4

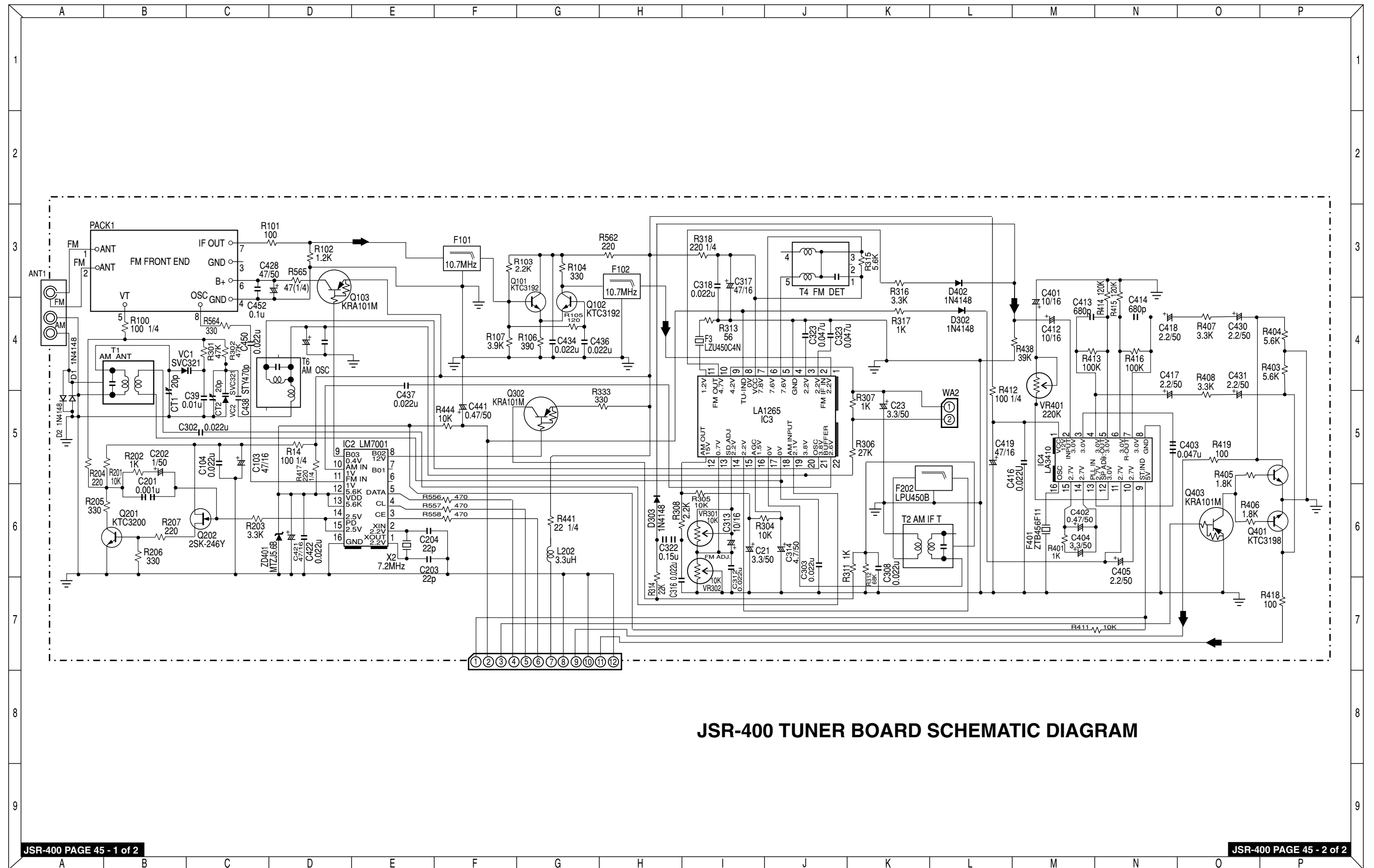
JSR-400 SCHEMATIC DIAGRAM - CONTROL BOARD



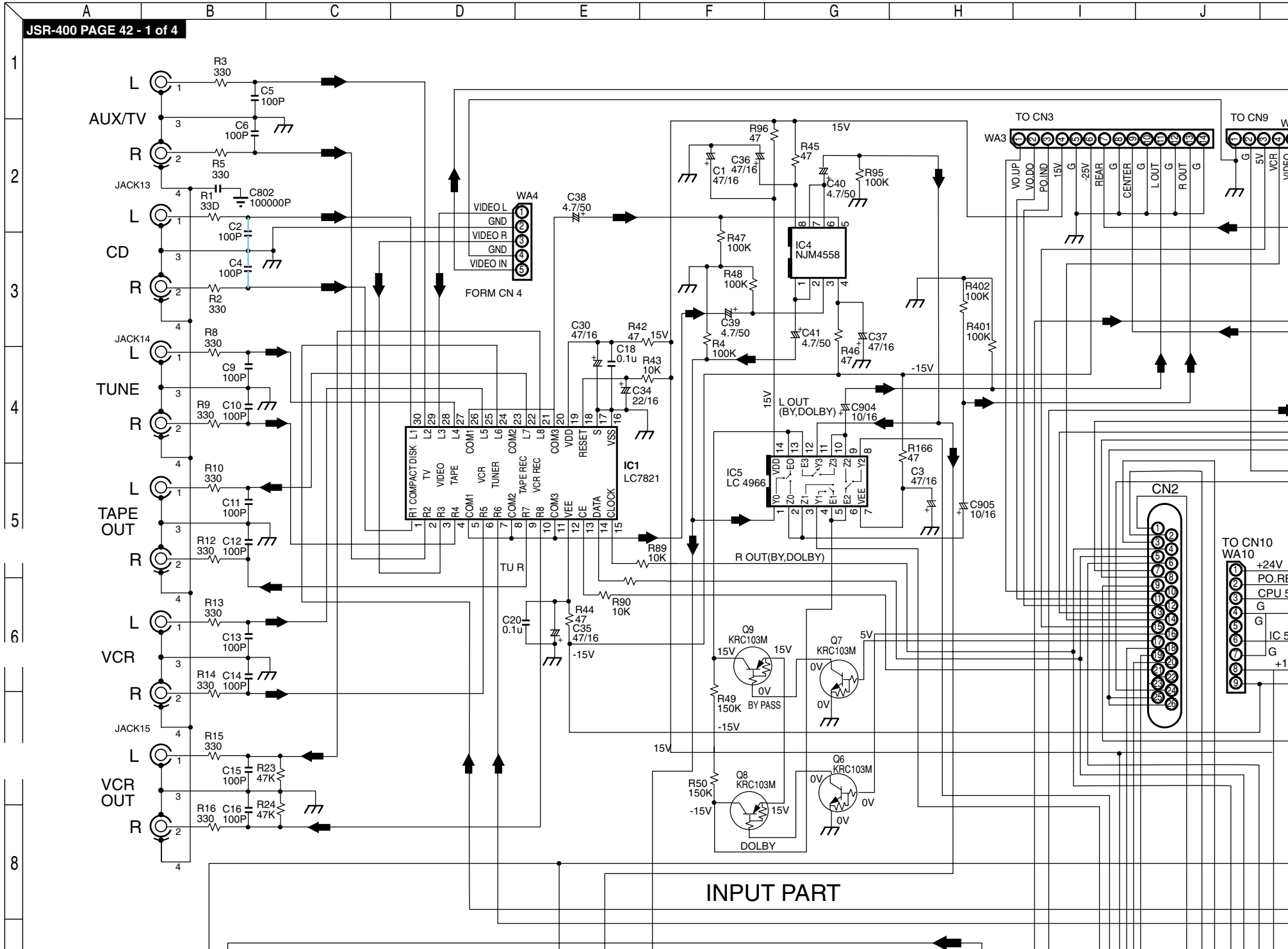
JSR-400 SCHEMATIC DIAGRAM - POWER SUPPLY/VIDEO/TONE/HEADPHONE/VOLUME PCB'S



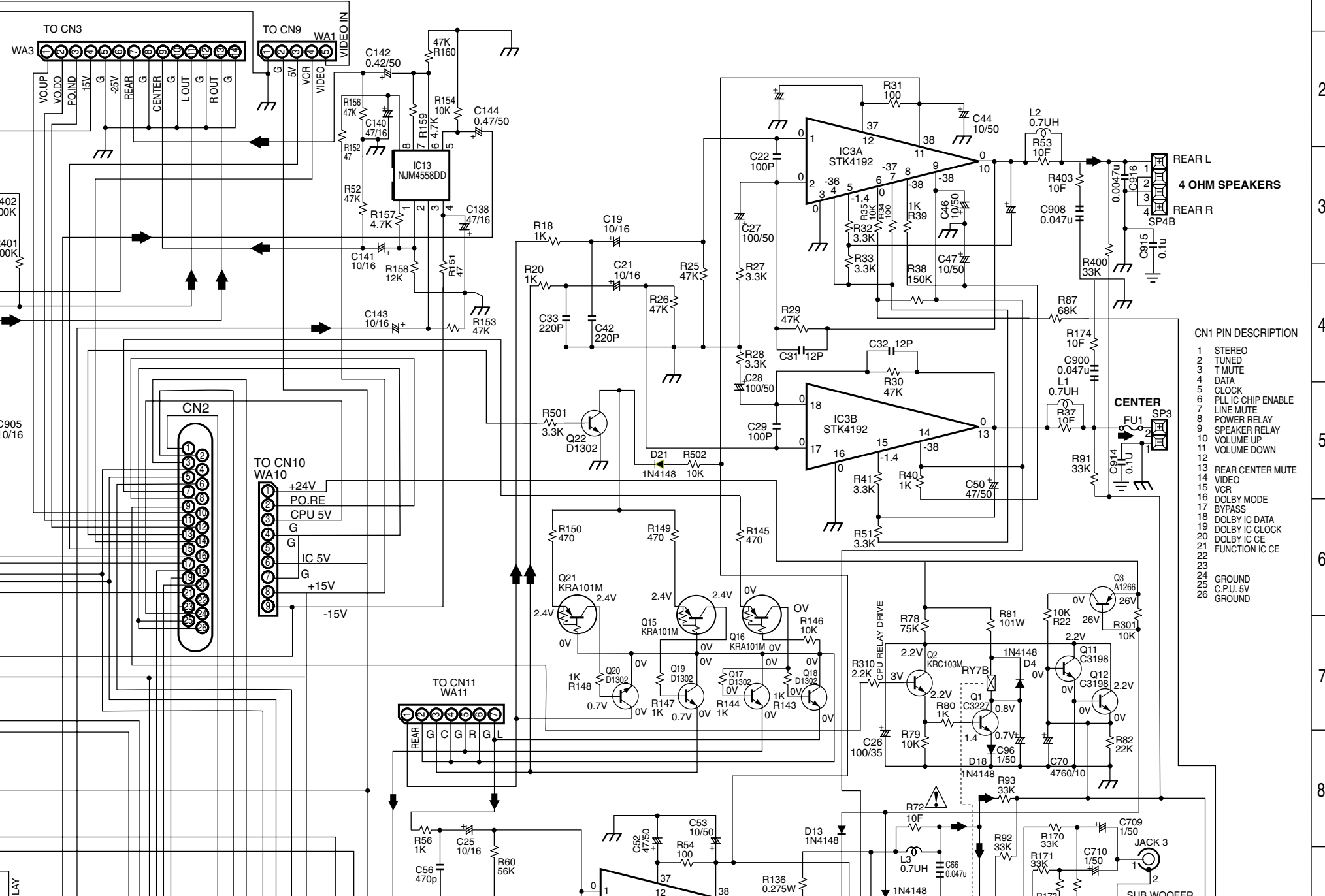
JSR-400 SCHEMATIC DIAGRAM - TUNER BOARD



JSR-400 TUNER BOARD SCHEMATIC DIAGRAM

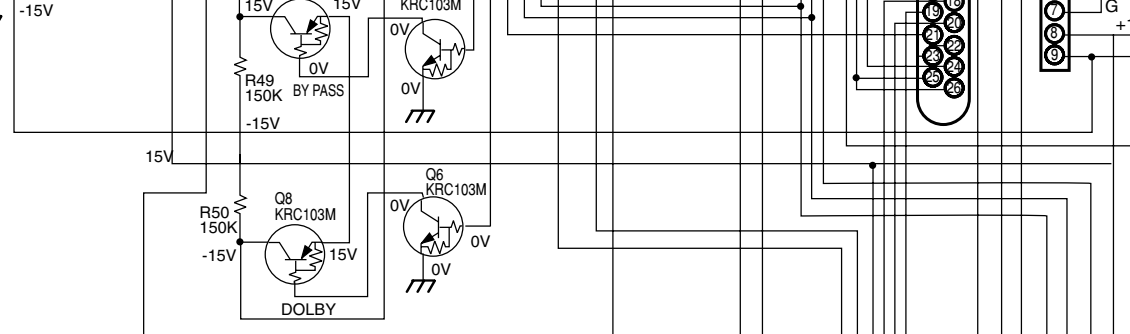
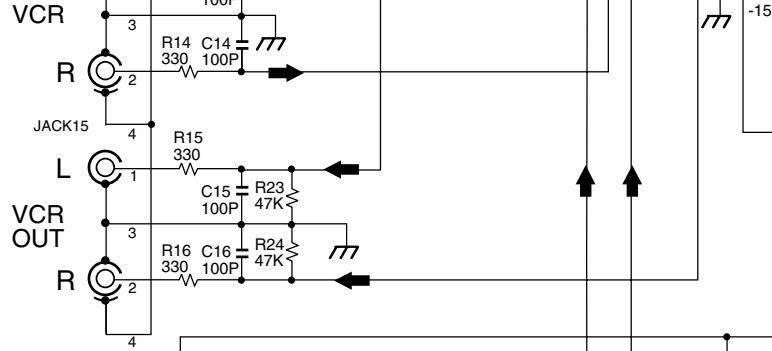


SCHEMATIC DIAGRAM - MAIN BOARD

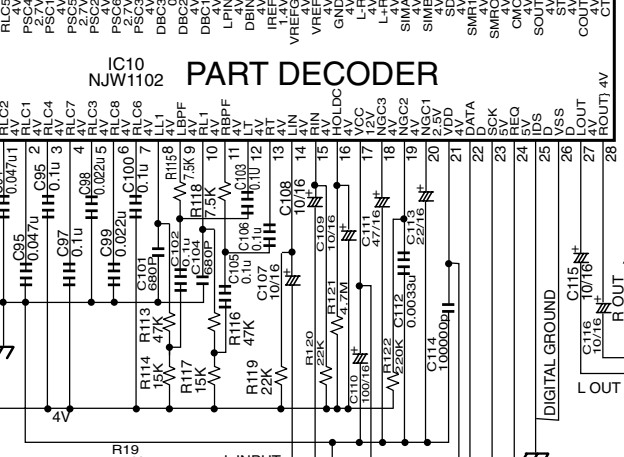
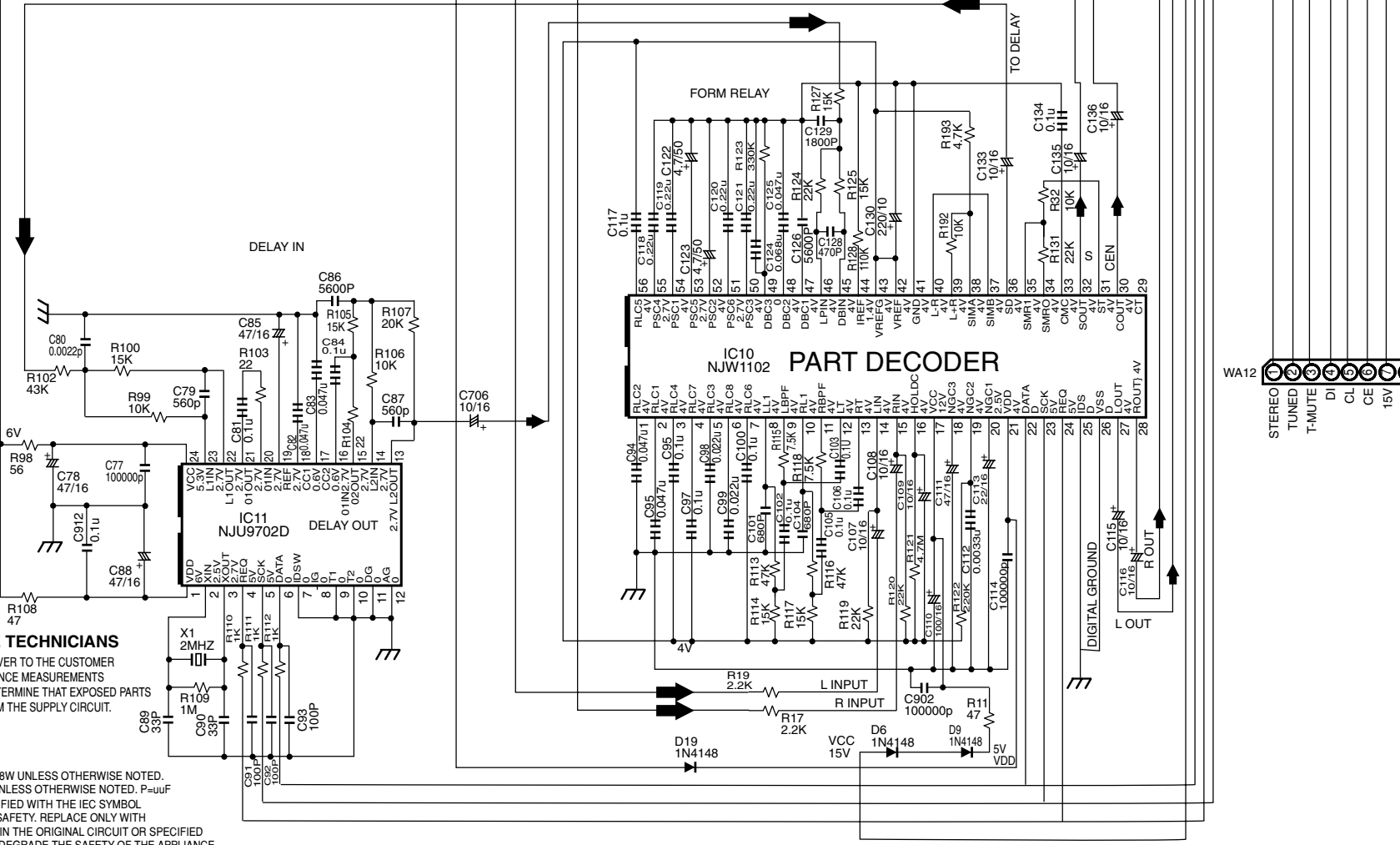


CN1 PIN DESCRIPTION

- 1 STEREO
- 2 TUNED
- 3 T MUTE
- 4 DATA
- 5 CLOCK
- 6 PLL IC CHIP ENABLE
- 7 LINE MUTE
- 8 POWER RELAY
- 9 SPEAKER RELAY
- 10 VOLUME UP
- 11 VOLUME DOWN
- 12
- 13 REAR CENTER MUTE
- 14 VIDEO
- 15 VCR
- 16 DOLBY MODE
- 17 BYPASS
- 18 DOLBY IC DATA
- 19 DOLBY IC CLOCK
- 20 DOLBY IC CE
- 21 FUNCTION IC CE
- 22
- 23
- 24 GROUND
- 25 C.P.U. 5V
- 26 GROUND



INPUT PART



CAUTION TO THE SERVICE TECHNICIANS

BEFORE RETURNING THE RECEIVER TO THE CUSTOMER
LEAKAGE CURRENT OR RESISTANCE MEASUREMENTS
SHOULD BE PERFORMED TO DETERMINE THAT EXPOSED PARTS
ARE PROPERLY INSULATED FROM THE SUPPLY CIRCUIT.

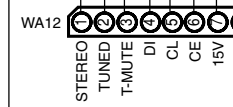
***NOTE**

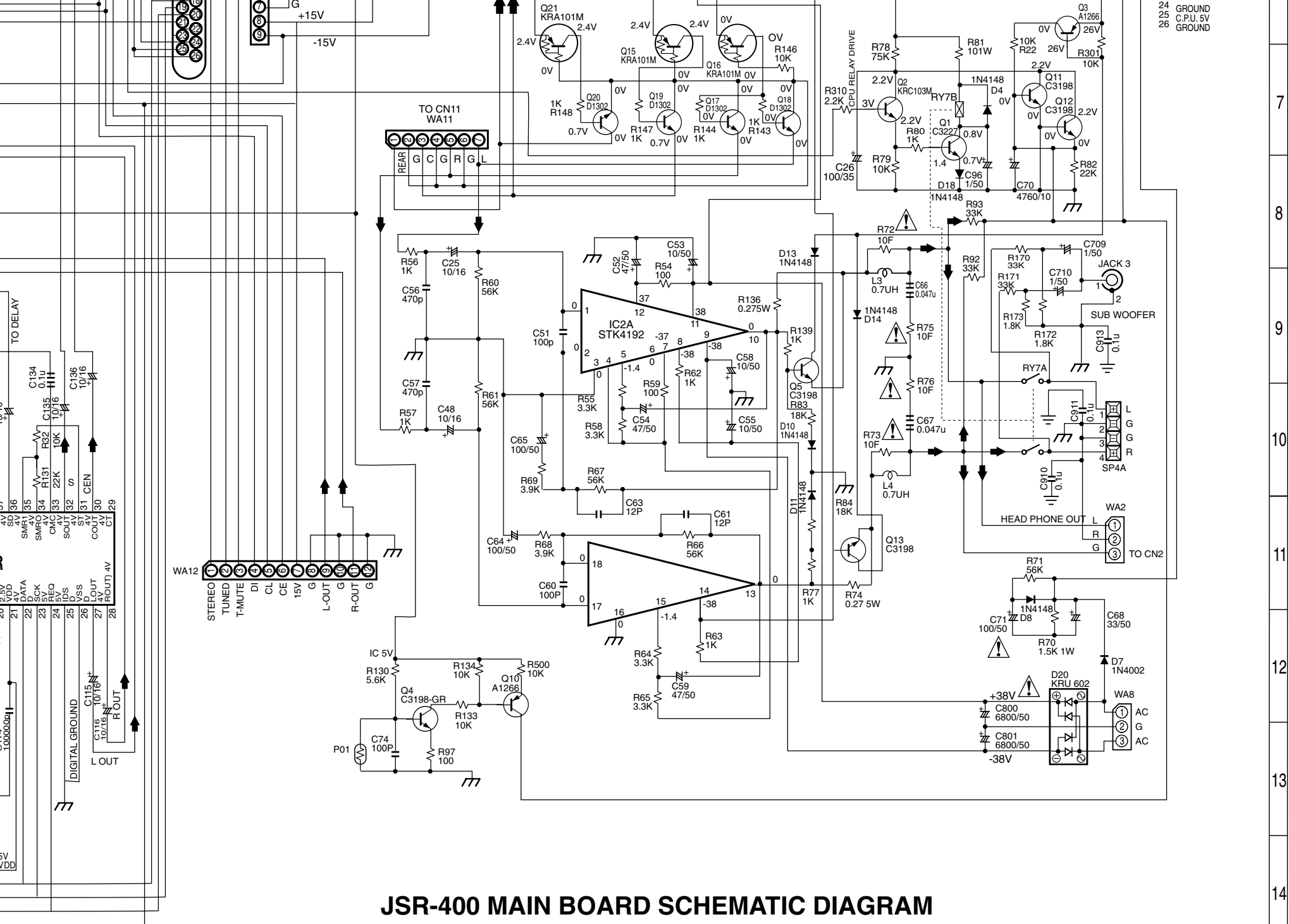
1. ALL RESISTANCE VALUES ARE IN
K -1000W, M -1000K .
2. THE WATTAGE OF RESISTORS IS 1/4W, 1/8W UNLESS OTHERWISE NOTED.
3. ALL CAPACITANCES VALUES ARE IN uF UNLESS OTHERWISE NOTED. P=uuF

**CAUTION THE PARTS IDENTIFIED WITH THE IEC SYMBOL
MARKS ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH
TYPE IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT OR SPECIFIED
IN THE "PARTLIST" DO NOT DEGRADE THE SAFETY OF THE APPLIANCE
THROUGH IMPROPER SERVICING.**

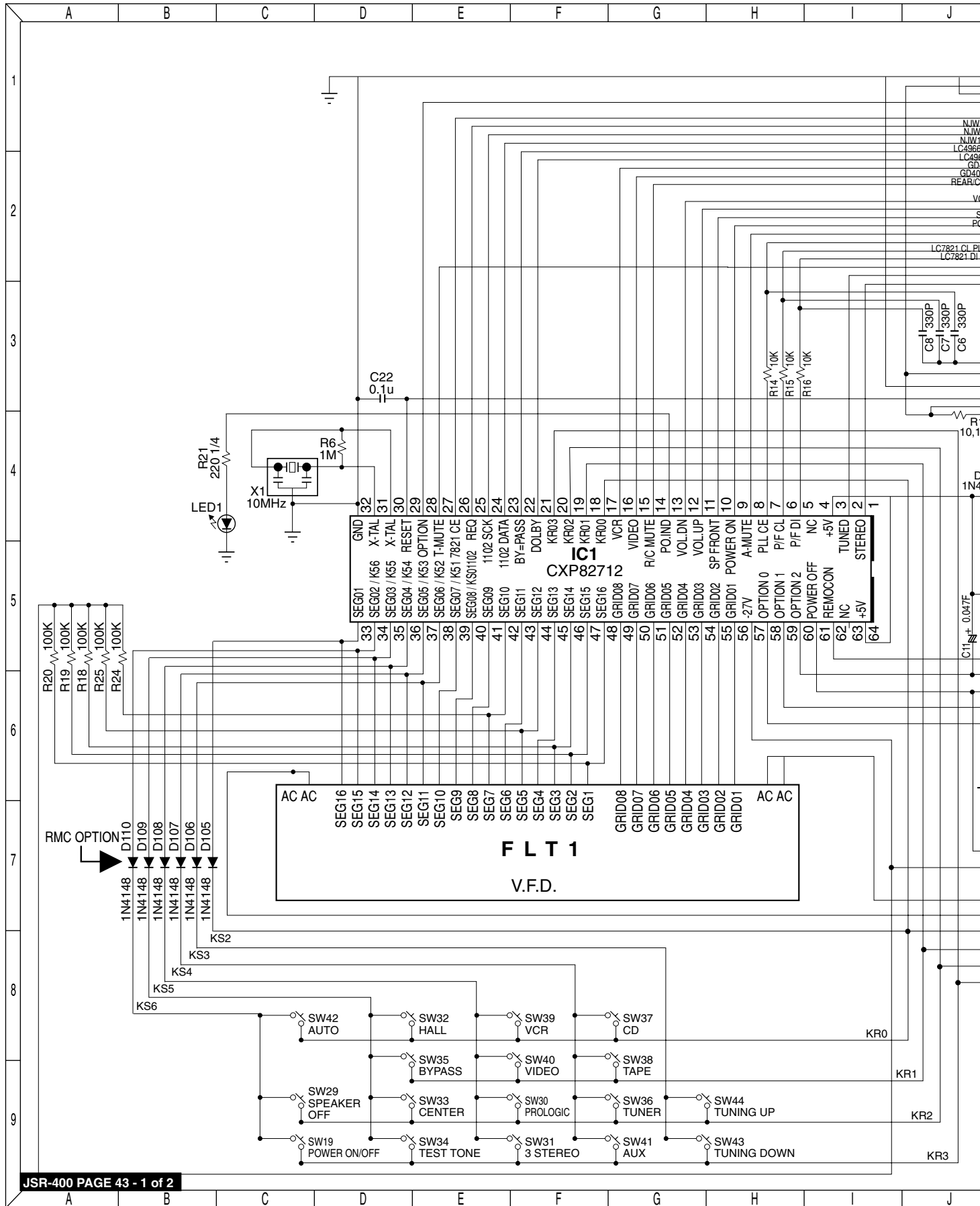
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A B C D E F G H I J

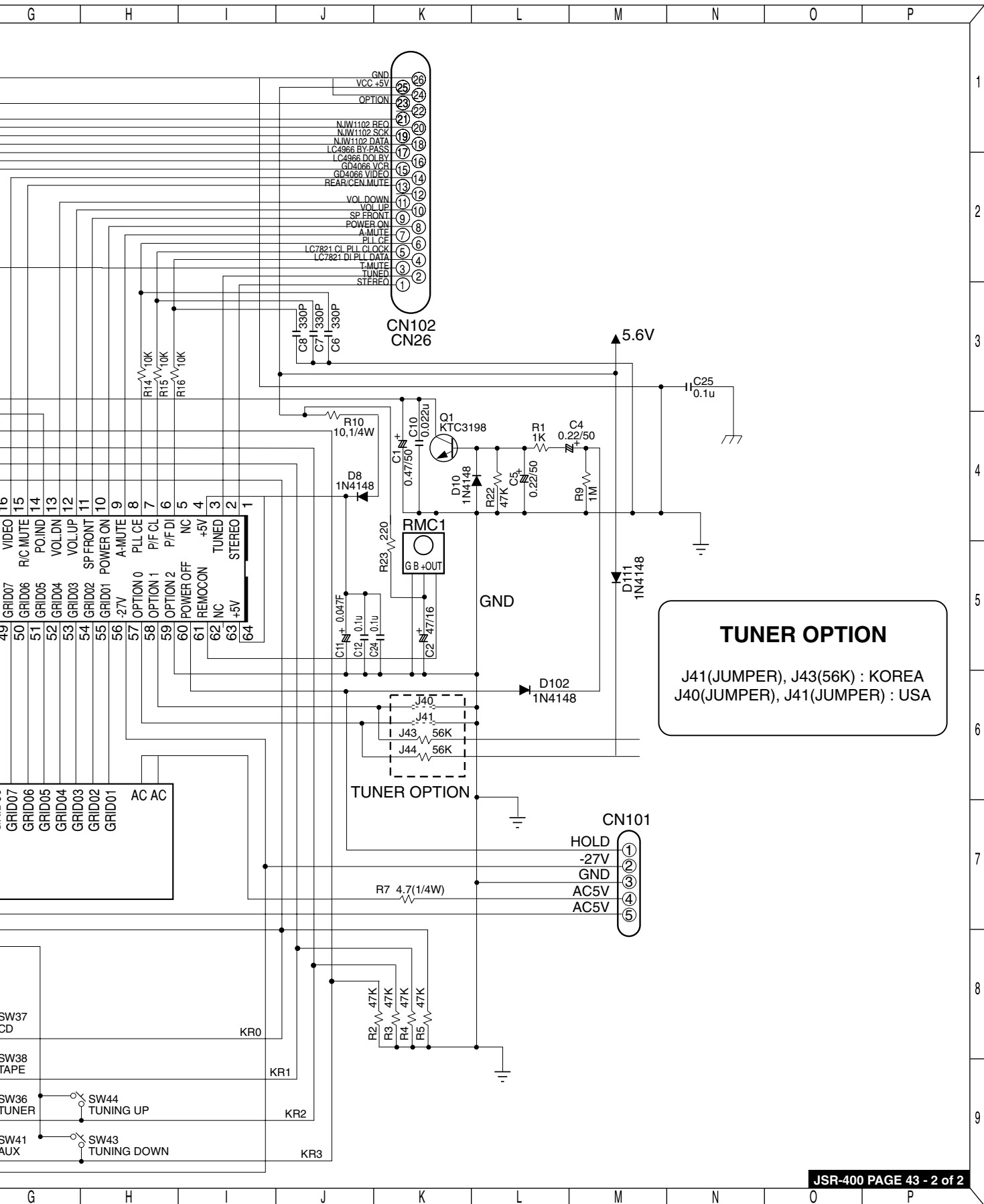




JSR-400 MAIN BOARD SCHEMATIC DIAGRAM



SCHEMATIC DIAGRAM - CONTROL BOARD

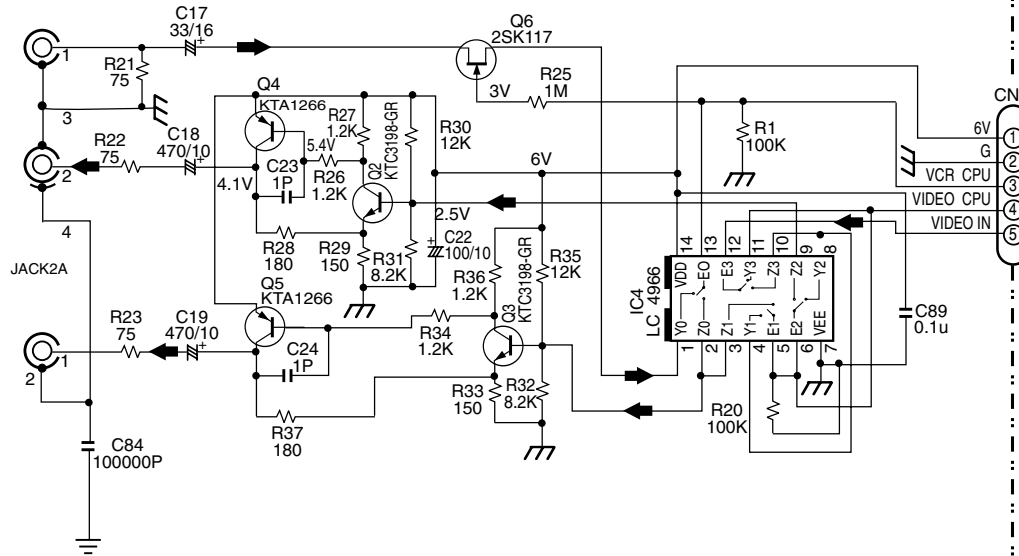


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VCR IN

VCR REC

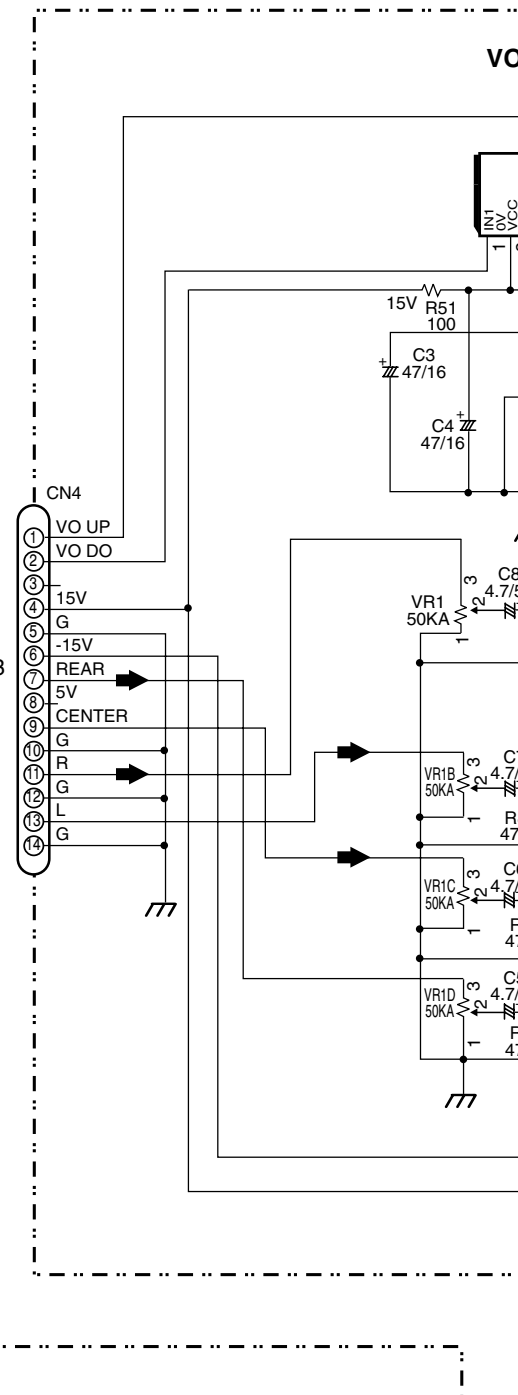
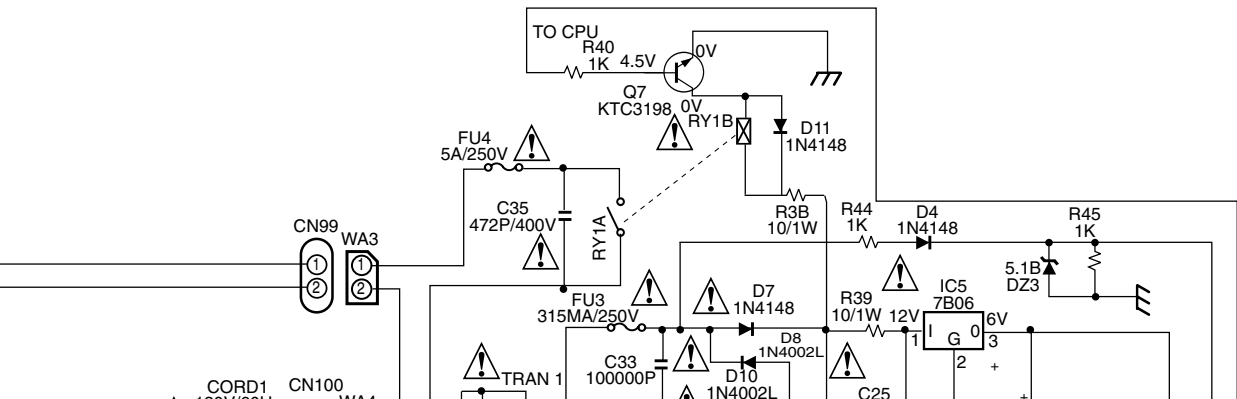
MONITOR



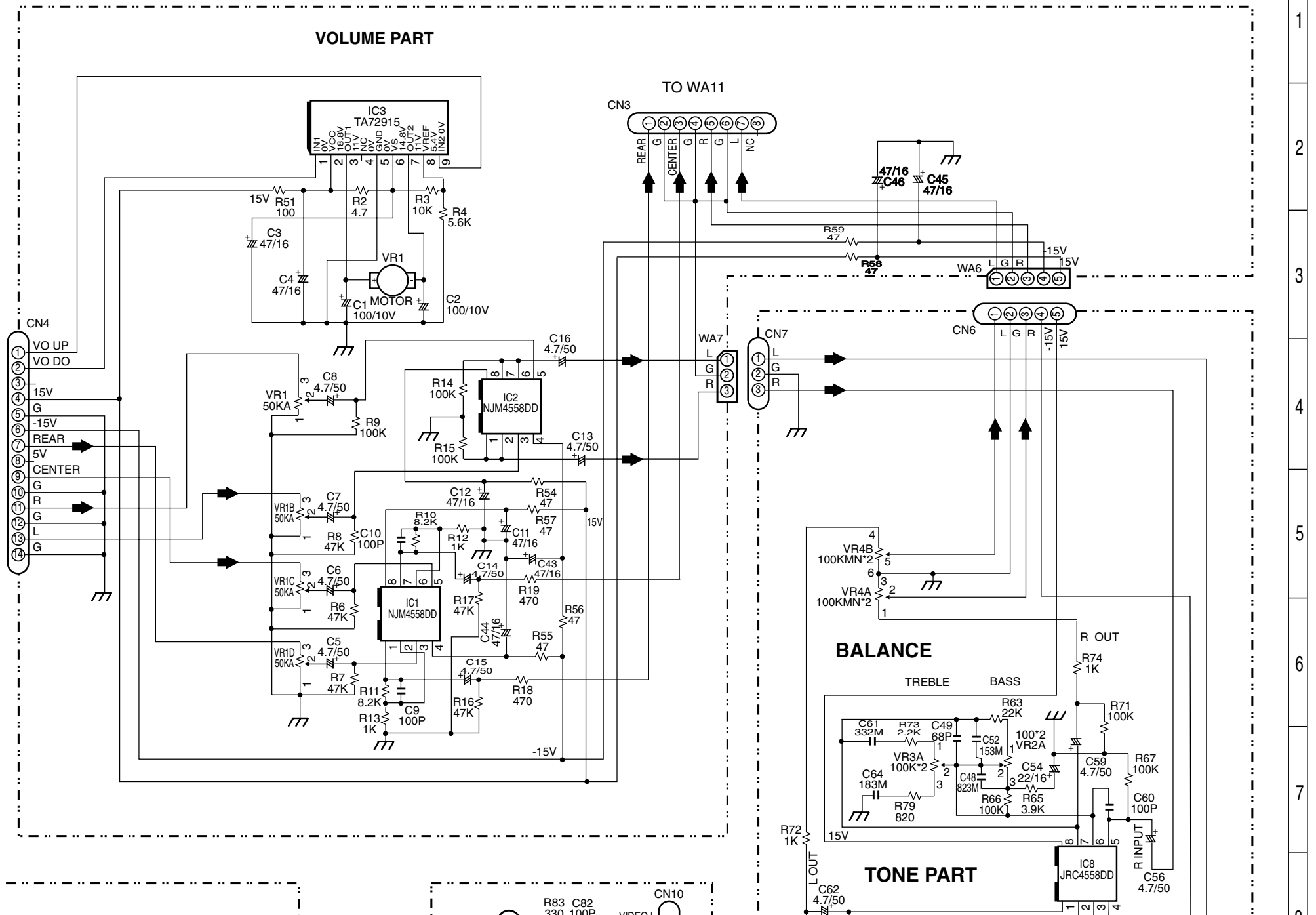
VIDEO PART

TO WA9

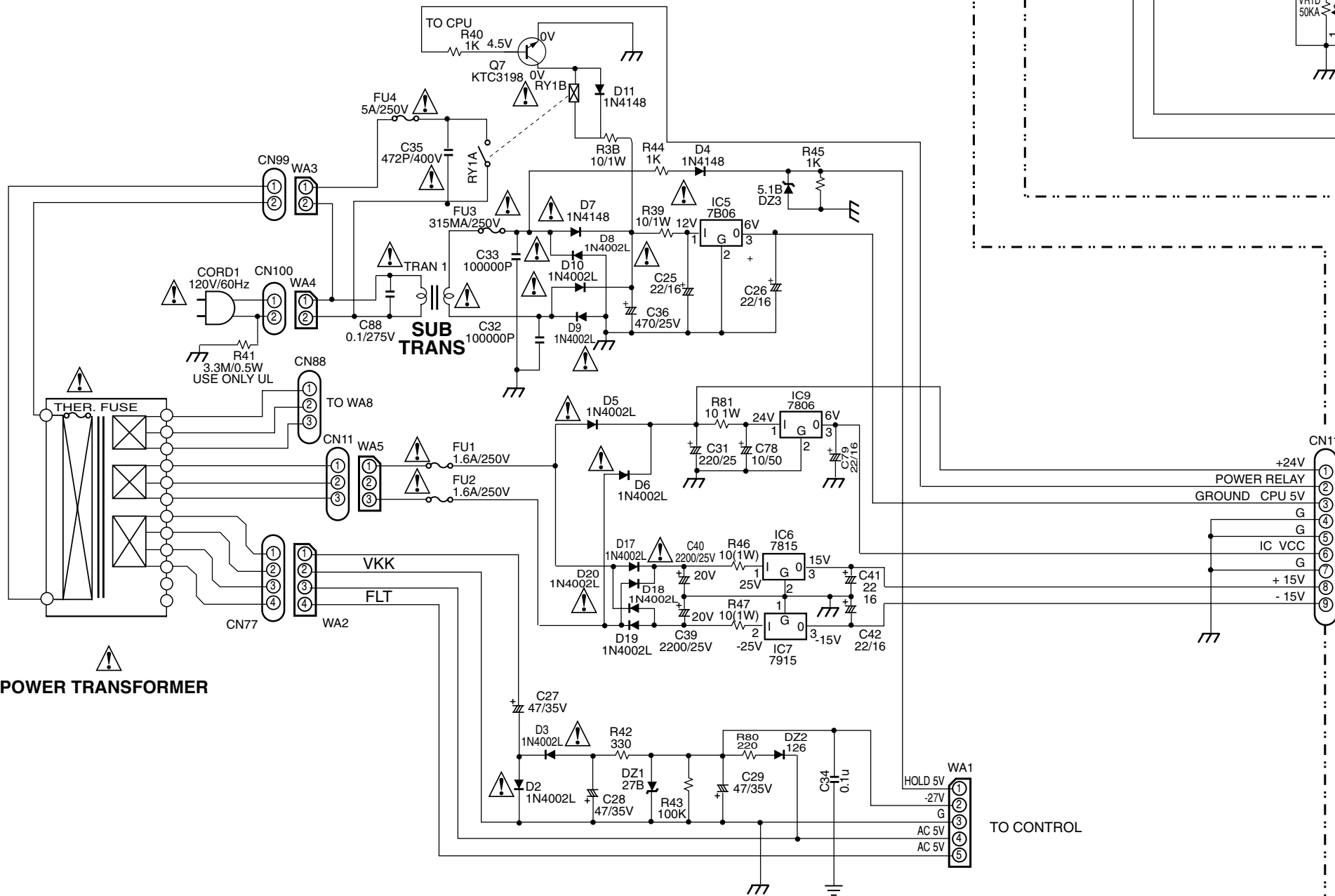
TO WA3



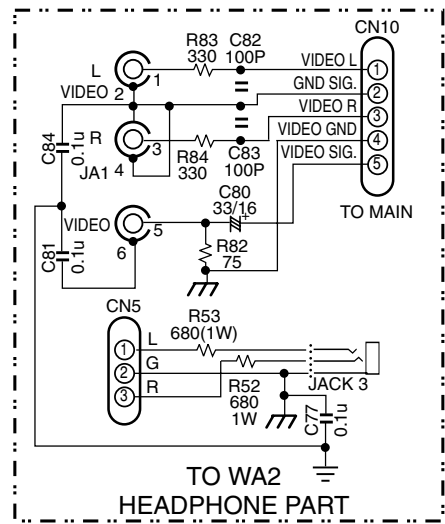
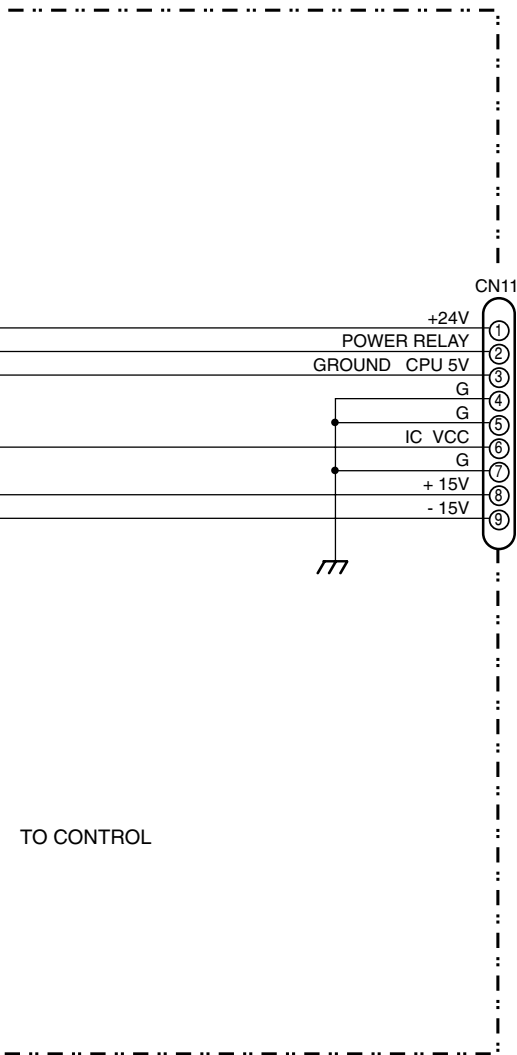
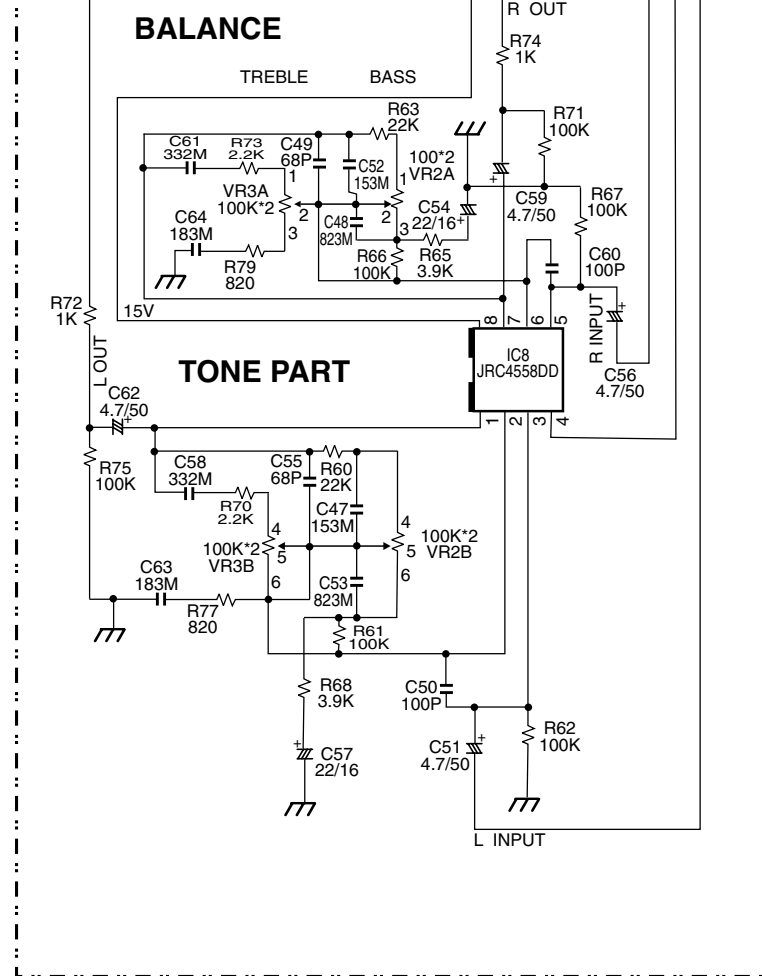
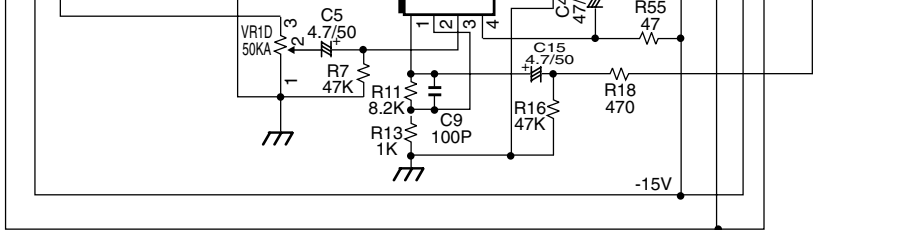
VOLUME PART




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A B C D E F G H I J



CAUTION TO THE SERVICE TECHNICIANS

 BEFORE RETURNING THE RECEIVER TO THE CUSTOMER LEAKAGE CURRENT OR RESISTANCE MEASUREMENTS SHOULD BE PERFORMED TO DETERMINE THAT EXPOSED PARTS ARE PROPERLY INSULATED FROM THE SUPPLY CIRCUIT.

***NOTE**

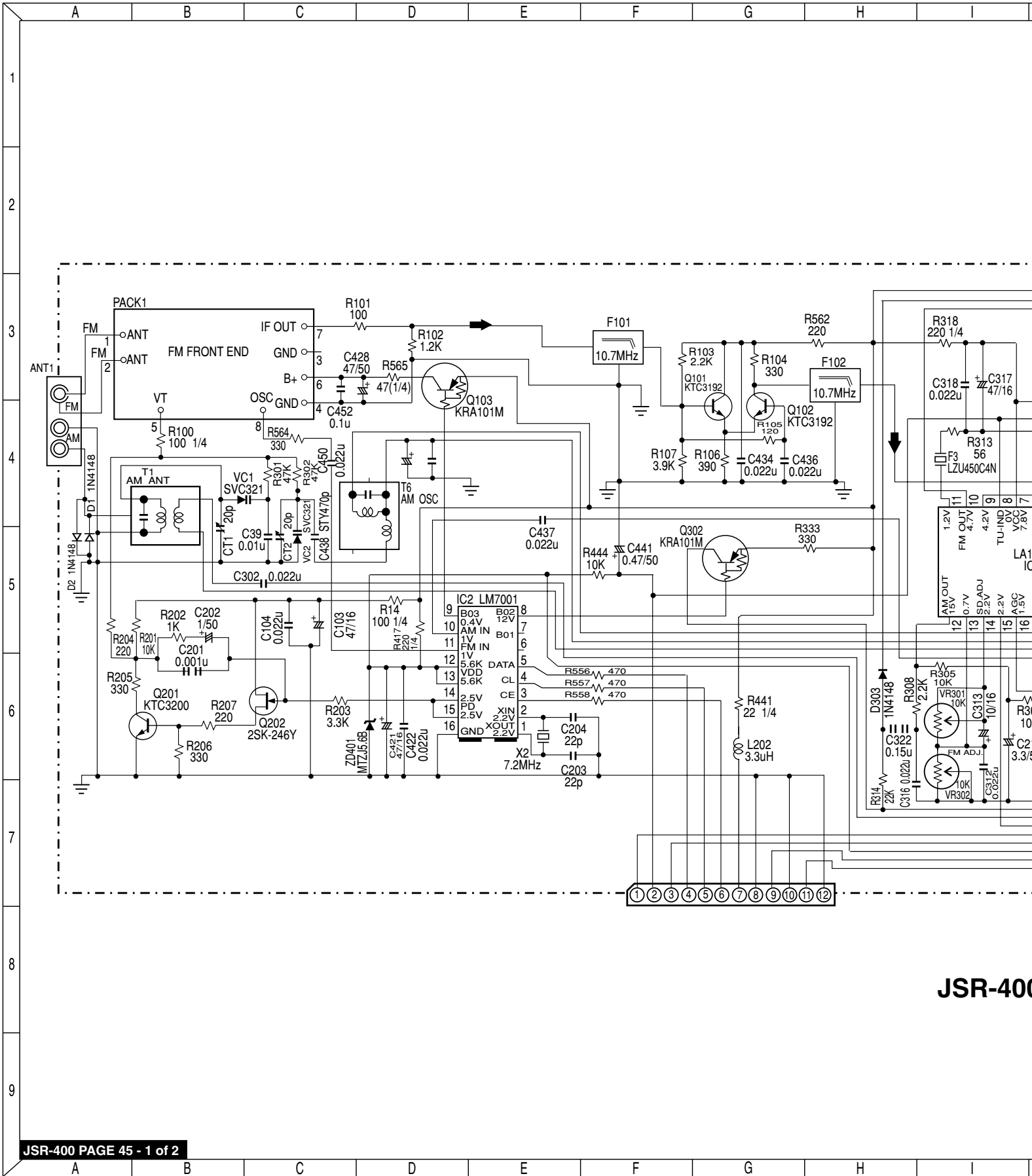
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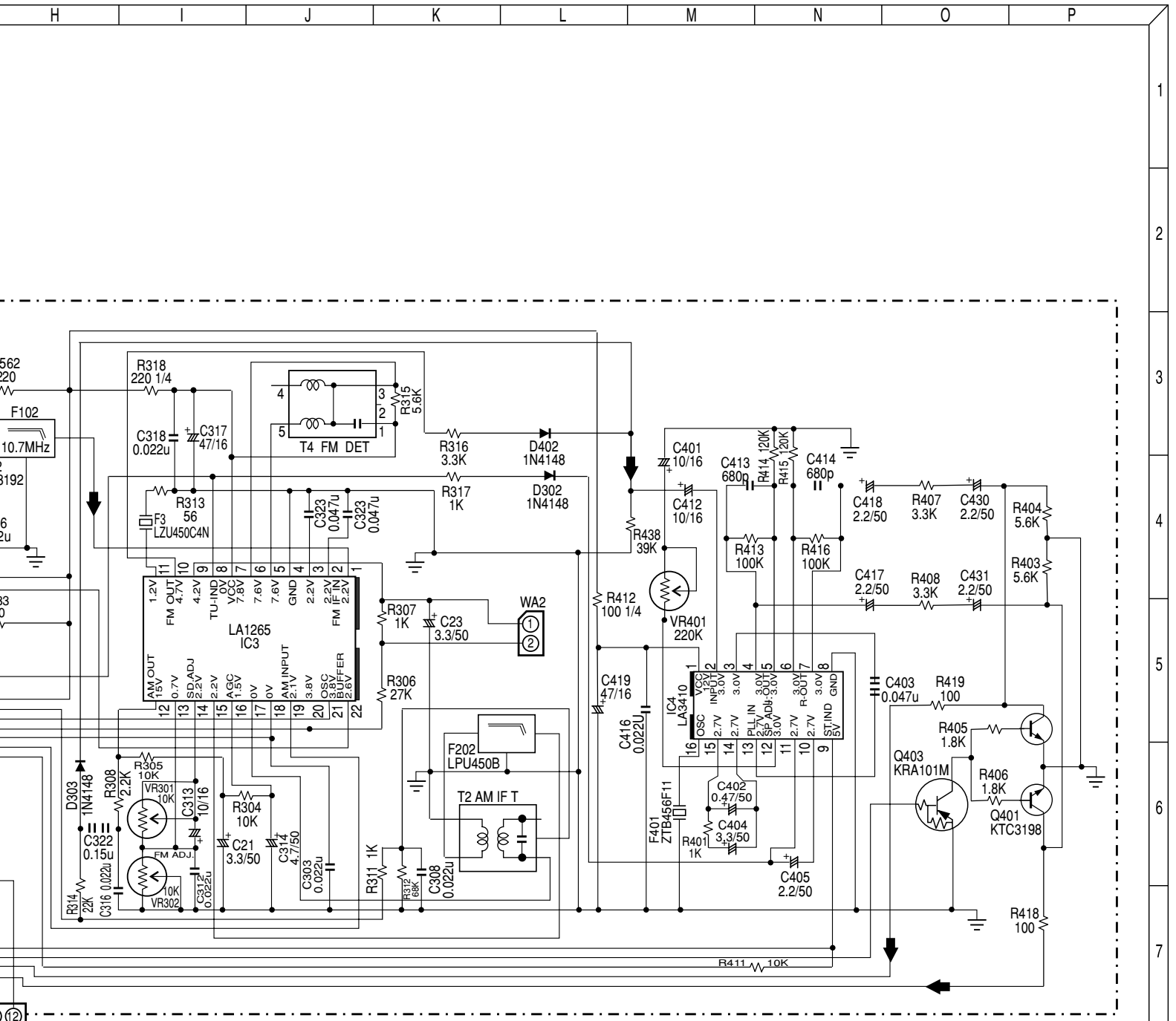
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JSR-400 POWER BOARD SCHEMATIC DIAGRAM

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EMATIC DIAGRAM - TUNER BOARD



JSR-400 TUNER BOARD SCHEMATIC DIAGRAM