

## General Information

JA Chassis

## Specifications

Dimensions (W x H x D) .....	73.3cm x 58.3cm x 49.2cm
Mass .....	39.7 kg
TV RF System .....	CCIR (I)
Colour System .....	PAL / NTSC (only in EXT mode)
Stereo System .....	NICAM
Teletext System .....	FASTEXT (United Kingdom system) / WST (Standard System)
Receiving Channels and Frequency UHF .....	E21 - E69 ....470MHz - 862MHz
Intermediate Frequency .....	VIF Carrier 39.5MHz
Colour Sub Carrier Frequency .....	SIF Carrier 33.5MHz (6.0MHz)
.....	PAL 4.43MHz
.....	NTSC 3.58MHz / 4.43MHz
Aerial Input Terminal .....	75Ω Unbalanced, Coaxial
Power Input .....	230V (220~240V) AC, 50Hz
Power Consumption .....	116W (Avg.) / 172W (Max.)
Picture Tube .....	29" (Visible size: 68cm) Diagonally measured
Viewable Picture Size (W) x (H) .....	56.0cm x 42.2cm
High Voltage .....	31.0kV +1V -1.5V (at zero beam current)
Speaker .....	(10cm +2cm) x2, Round Type
Audio Output .....	10W + 10W
External INPUT/OUTPUT	
EXT - 1/EXT -2 .....	21-pin Euroconnector (Scart socket)
EXT - 3 (INPUT) .....	Video: 1 Vp-p 75( (RCA pin jack)
.....	Audio (L/R) :500mVrms (-4dBs), High Impedance (RCA pin jack)
Audio Output (variable) .....	Centre Front L/R, Surround Rear L/R
.....	0~1,000mVrms, Low Impedance
Headphone Jack .....	Stereo mini jack (ø 3.5mm)
Remote Control Unit .....	RM-C770 [Battery size ; AAA (R03) x 2]

## Recommended Safety Parts

Item	Part No.	Description
1	A68ESF002X11	Picture Tube (ITC) V01 (Inc. DY, Wed & PC)
2	CELD020-004J7	Degaussing Coil L01
5	AEEMP003-185	Power Cord
7	CM12263-A01-H	Rear Cover
9	CM22875-003-E	Rating Label
11	CETH008-00AJ1	HVT (Service) T1551
100	CM12661-00A-H	Front Cabi. Assy Inc. No. 101 - 108
R1585	QRV141F-2201AY	MF R 2.2k Ohms 1/4W
R1586	QRV141F-1582AY	MF R 15.8k Ohms 1/4W
R1991	QRZ0057-825	C R 8.2M Ohms 1W
C1521	QFZ0117-4501L	MPP CAP. 4500p F 1.5KVH ± 2.5%
C1522	QFZ0117-9501L	MPP CAP. 9500p F 1.5KVH ± 2.5%
C1524	QFZ0119-5145S	MPP CAP. 0.51 μ F 200V ± 3%
C1528	QFZ0119-6845S	MPP CAP. 0.68 μ F 200V ± 2.5%
C1905, C1906, C1907	QCZ9034-472A	C CAP. 4700p F 400V
C1992	QCZ9041-471A	C CAP. 470p FAC 400V
C1993	QCZ9041-332A	C CAP. 3300p FAC 400V
T1551	CETH008-00AJ1	HVT (Service)
T1901	CETS024-001J7	SW Transf
L1551	CELC901-076J6	Heater Choke
D1901	D3SBA60	Diode Bridge
Q1521	BU2508AX	Power Transistor H. Out
IC1902	TLP621 (D4) - LF2	Photo Coupler
FR1406	QRH127J-1R5M	F R 1.5 Ohms 1/2W
FR1551	QRH127J-100M	F R 10 Ohms 1/2W
FR1552	QRH027K-R82M	F R 0.82 Ohms 2W
FR1553	QRH127J-5R6M	F R 5.6 Ohms 1/2W
FR1554	QRZ0054-4R7M	F R 4.7 Ohms 1/4W
FR1555	QRH027J-1R8M	F R 1.8 Ohms 2W
FR1556	QRX029J-1R0	MF R 1 Ohms 2W
FR1958	QRH027J-1R5M	F R 1.5 Ohms 2W
SK3001	CE42535-001J1	CRT Socket
C8901	QFZ9040-474N	MF CAP. 0.47μF AC 275V
C8904	QFZ9040-473N	MF CAP. 0.047μF AC 275V
F8901	QMF51D2-3R15J1	Fuse T 3.15AH
LF8901	CE42144-001J2	Line Filter
S8901	QSP4K21-C01	Push Switch Main Power
TH8901	CEKP010-001J2	W-PTC
R0403, R0509	QRZ0054-470M	F R 47 Ohms 1/4W
R0504	QRZ0054-330M	F R 33 Ohms 1/4W

## Service Adjustments

### Replacement of Memory ICs

**1. Memory IC**  
This TV uses a non-volatile memory IC (EEP-ROM IC). In the memory IC are memorised data for correctly operating the video and deflection circuits. When replacing it, be sure to use a memory IC containing the initial values, (not a blank one).

### 2. Procedure for Replacing Memory ICs

- 1) Power off**  
Switch the power off and unplug the power cord from the outlet.
- 2) Replacing the memory IC**  
Replace with new memory IC containing the initial values.
- 3) Power on**  
Plug the power cord into the outlet and switch the power on.

### 4) Check and Set System Constant Set

- 1: Press the Display key and the Cinema/Game key of the Remote Control Unit simultaneously.
- 2: The Service Menu screen shown in fig. 1 will be displayed.
- 3: While the Service Menu is displayed, press the Display key and Cinema/Game key simultaneously and the System Constant Set screen shown in fig. 2 will be displayed.
- 4: Check the setting value of the System Constant Set shown in table 1. If the value is different, select the setting item with the Function Up/Down key, and set the correct value with the Function +/- key.
- 5: Press the Video/Sound key and memorise the setting value.
- 6: Press the Display key twice and return to the normal screen.

### SERVICE MENU

SERVICE MENU	
1. IF	2. V/C
3. AUDIO	4. DEF
5. VSM PRTESET	
1-5: SELECT <input type="checkbox"/> : EXIT	

Fig. 1

### SYSTEM CONSTANT SET

SYSTEM CONSTANT SET	
MODEL = JA-29 (V*,****)	
1. COUNTRY	: UK
2. INCH	: 25/28/29
- = <input type="checkbox"/> : STORE <input type="checkbox"/> : EXIT	

Fig. 2

### 5) Setting of Receive Channels

Set the receive channel (Channel Pre-set). (For Auto Programme). For setting refer to the Operating Instructions.

### 6) User Setting

Check the user setting value of Table 2, if setting value is different set the correct value. For setting refer to the Operating Instructions.

### 7) Setting the Service Menu

Verify the setting items of the Service Menu of Table 3 and reset where necessary. For setting refer to the Service Adjustments.

NAMES OF REMOTE CONTROL KEY	
Names of key	key
DISPLAY	<input type="checkbox"/>
VIDEO/SOUND	<input type="checkbox"/>
FUNCTION	<input type="checkbox"/>
UP / DOWN	<input type="checkbox"/>
FUNCTION - / +	<input type="checkbox"/>

Fig. 3

Setting Item	Setting Content	Setting Value
Country	▶ UK → IR → OTHERS	UK
Inch	▶ 25 / 28 / 29 → 21	25/ 28/ 29

Table 1

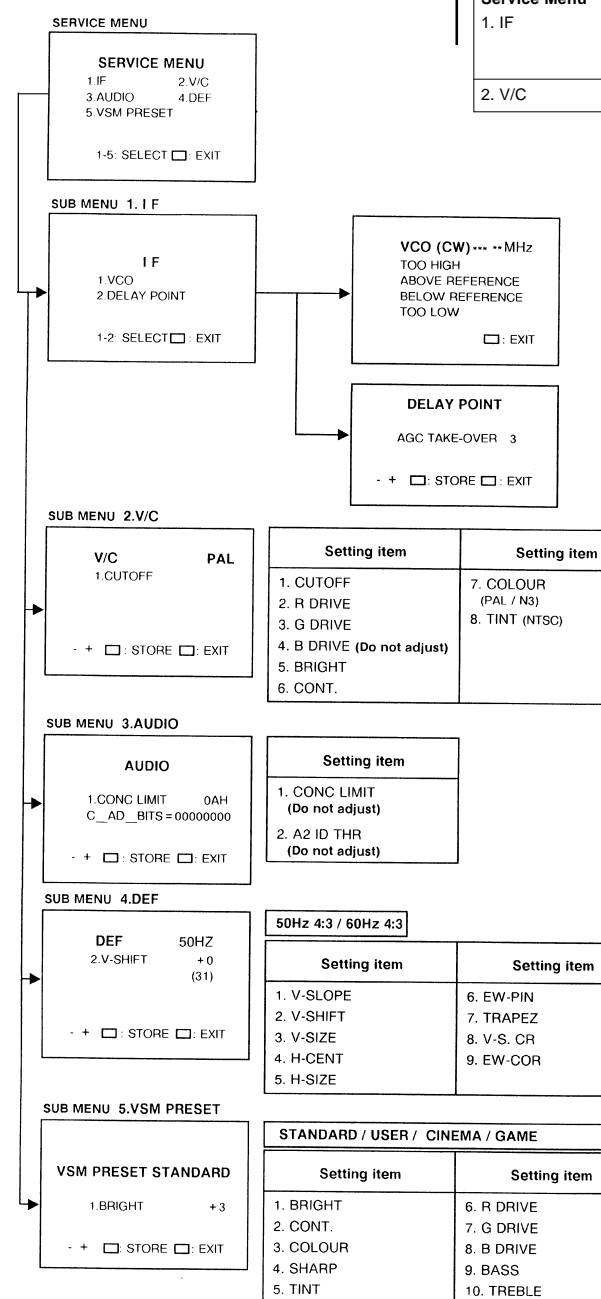


Fig. 4 SUB MENU SCREEN

User Setting Values Setting Item	Setting Value
SUB POWER	ON
CHANNEL	1 POSITION
CHANNEL PRESET	Setting completed in 2.(5) setting of receive channel
VOLUME	Appropriate sound volume
TV/TEXT	TV
DISPLAY	POSITION DISPLAY
P/N	TV: PAL
CINEMA/GAME	USER
SLEEP TIMER	0
SPATIAL EFFECT	OFF
16:9/4:3	4:3
ECO	OFF
BALANCE	CENTRE
LANGUAGE	ENGLISH

Table 2

### Service Menu Setting Items

Service Menu	Setting Items
1. IF	1. VCO 2. DELAY POINT
2. V/C	1. CUT OFF 2. R DRIVE 3. G DRIVE 4. B DRIVE (Do not adjust) 5. BRIGHT 6. CONT. 7. COLOUR (PAL / N3) 8. TINT (NTSC)

3. AUDIO	1. CONC LIMIT (Do not adjust) 2. A2 ID THR (Do not adjust)
4. DEF.	1. V-SLOPE 2. V-SHIFT 3. V-SIZE 4. H-CENT 5. H-SIZE 6. EW-PIN 7. TRAPEZ 8. V-S.CR 9. EW-COR
VSM PRESET	1. BRIGHT 2. CONT. 3. COLOUR 4. SHARP 5. TINT 6. R DRIVE 7. G. DRIVE 8. B DRIVE 9. BASS 10. TREBLE

Table 3

### Basic Operation of Service Menu

#### 1. Tool of Service Menu Operation

Operate the Service Menu with the Remote Control Unit.

#### 2. Service Menu Items

With the SERVICE MENU, various settings (adjustments) can be made, and they are broadly classified in the following 5 items of Settings (adjustments):

- 1] IF: for entering/ adjusting the setting values (adjustment values) of the IF circuit.
- 2] V/C: for entering/ adjusting the setting values (adjustment values) of the VIDEO/CHROMA circuit.
- 3] Audio: for entering/adjusting the setting values (adjustment values) of the multiplicity SOUND circuit.
- 4] DEF: for entering/adjusting the setting values (adjustment values) of the DEFLECTION circuit.
- 5] VSM Pre-set: for setting the values of STANDARD, USER, CINEMA and GAME. (VSM: Video Status Memory).

#### 3. Basic Operation of Service Menu

##### 1) How to enter Service Menu

Press the Display key and the Cinema/Game key of the remote control unit simultaneously. The SERVICE MENU screen of Fig. 1 will be displayed.

##### 2) Selection of Sub Menu Screen

1] Press one of the keys 1 - 5 of the remote control unit and select the Sub Menu Screen (see fig. 2) from the Service Menu.

Service Menu --> Sub Menu  
**1: IF**  
**2: V/C**  
**3: Audio**  
**4: DEF.**  
**5: VSM Pre-set**

##### 3) Method of Setting

- 1) Method of setting 1. IF  
[1: VCO]  
1] 1 key....select 1: IF  
2] 1 key....select 1: VCO  
3] The VCO (CW) screen will be displayed in yellow when the AFC voltage is at a certain level and in blue when it is at other levels.
- 4] Display key....as you press this twice you will return to the Service Menu.

##### [2: Delay Point]

- 1] 1 key....select IF.
- 2] 2 key....select 2: Delay Point.

## Service Adjustments Cont'd.

- Function +/- key...Set (adjust) the setting values for the setting items.
- Video/Sound key...Memorise the set value. (Before storing the setting values in memory, do not press the CH, TV/EXT, Display, Power On/Off keys - if you do the values will not be stored in memory).
- Display key...When this is pressed twice you will return to the Service menu.

Method of Setting  
**2: V/C, 3: Audio, 4: DEF., and 5: VSM Pre-set**

- 2-5 keys: select one from...  
**2: V/C, 3: Audio, 4: DEF., and 5: VSM Pre-set.**
- Function Up/down key...Select setting items.
- Function +/- key...Set (adjust) the setting values of the setting items. (When 1: Cut-off of 2: V/C is selected, press its "-" or "+" function key and the whole screen will change to a faint horizontal line appearing in its centre. Press the same "-" or "+" key again and the screen will return to the original 1: Cut-off screen).
- Video/Sound key...Memorise the setting value. (Before storing the setting values in memory, do not press the CH, TV/EXT, Display, Power On/Off keys - if you do the values will not be stored in memory).
- Display key...Return to the **SERVICE MENU.**

- 4) Release of Service Menu**  
 1) After completing the setting, return to the Service Menu, then again press the Display key.

the correct picture.

- Select 1: IF from the Service Menu.
- Press 1 key and select 1: VCO.
- Select a receivable broadcast channel with the Channel key.
- Turn the core of T010 Transf. until the colour of the characters TOO HIGH displayed on the screen changes from blue to yellow.
- Then slowly turn the core of T010 Transf. to the left until the colour of the characters BELOW REFERENCE changes from blue to yellow.
- Perform Channel Pre-set again and make sure that each broadcast is being received properly.

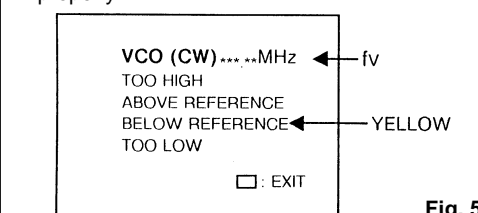


Fig. 5

Screen display	Step		
	1	2	3
TOO HIGH	Yellow	→ Blue	→ Blue
ABOVE REFERENCE	Blue	→ Yellow	→ Blue
BELOW REFERENCE	Blue	→ Blue	→ Yellow
TOO LOW	Blue	→	Blue

Fig. 6

### Adjustment of Delay Point (AGC)

**Measuring Instrument:** Remote control unit  
**Adjustment Point:** Delay Point (AGC Take-over)

- Description:**  
 1) Receive a black and white signal (colour off).  
 2) Select 1: IF from the Service Menu.  
 3) Select 2: Delay Point by pressing the 2 key on the remote control.  
 4) Adjust the Function +/- key until video noise disappears.  
 5) Press the Video/Sound key and memorise the setting value.  
 6) Turn to other channels and make sure there are no irregularities.

Setting (Adjustment) item	Variable Range	Initial Setting Value
Delay Point (AGC Take Over)	0 - 63	4

Table 4

### Setting of VSM Pre-set

**Measuring Instrument:** Remote control unit

**Adjustment Part:**

- Bright
- Cont.
- Colour
- Sharp
- Tint
- R Drive
- G Drive
- B Drive
- Bass
- Treble

**Description:**

- Select 5: VSM Pre-set from the Service Menu.
- Select Standard with the Cinema/Game key.
- Adjust the Function Up/Down and Function +/- key to bring the set values of 1: Bright - 10: Treble to the values shown in the table above.
- Press the Video/Sound key and memorise the set value.
- Respectively select the VSM Pre-set mode for User, Cinema and Game, and make similar adjustment as in 3: above.

Setting Values of VSM Preset

Setting Item	VSM Preset Mode Setting Value			
	Standard	User	Cinema	Game
1. Bright	0	0	0	+2
2. Cont.	+10	+10	+2	+2
3. Colour	0	0	-2	0
4. Sharp	0	0	-2	-2
5. Tint	0	0	0	0
6. R. Drive	0	0	0	0
7. G. Drive	0	0	-2	0
8. B. Drive	0	0	-6	0
9. Bass	0	0	+6	+4
10. Treble	0	0	+2	0

Table 5

### Video/Chroma Circuit Adjustment

The setting (adjustment) using the remote control unit is made on the basis of the initial setting values. The setting values which adjust the screen to the optimum condition can be different from the initial setting values.

Setting (adjustment) item	Variable Range	Initial Setting Value
1. CUT OFF	On/Off	Off
2. R. DRIVE	-31 ~ +32	+12
3. G. DRIVE	-31 ~ +32	+2
4. B. DRIVE		
(Do not adjust)	-31 ~ +32	0
		Fixed
5. BRIGHT	-31 ~ +32	+6
6. CONT.	-41 ~ +22	-5

Table 6

Setting (adjustment) item	Colour System	Variable Range	PAL	NTSC 3.58	NTSC 4.43
7. COLOUR	TV	-31 ~ +32	+3	---	---
Initial setting value	Comp. Video		---	+12	(+12)
8. TINT	Comp. Video	-31 ~ +32	---	-2	(-2)

Table 7

### White Balance Adjustment (Low Light)

**Measuring Instrument:** Signal Generator, Remote Control Unit

**Adjustment Part:**

- R. CUT OFF VR (R108),
- G. CUT OFF VR (R107),
- B. CUT OFF VR (R109),
- SCREEN VR

**Description:**

- Receive a black and white signal (colour off).
- Select 2: V/C from the Service menu.
- Select 1: Cut Off with the Function Up/Down key.
- Show one horizontal line with the Function +/- key. With the Screen VR adjust so that the

- horizontal line will not be too bright.
- Turn the Cut Off VR respectively for R, G and B fully to the left (to the left direction when seen from the rear).
- Gradually turn the screen VR from the left end to the right to bring one of the red, green or blue colours faintly visible.
- By adjusting the Cut Off VR, bring out the other two colours and make one horizontal line visible in white.
- Turn the Screen VR and bring one horizontal line faintly visible.
- With the +/- key turn off 1: Cut Off Screen.

### White Balance Adjustment (Low Light)

**Measuring Instrument:** Signal Generator, Remote Control Unit

**Adjustment Part:**

- R. DRIVE,
- G. DRIVE,
- B. DRIVE (do not adjust)

**Description:**

- Receive a black and white signal (colour off).
- Select 2: V/C from the Service menu.
- Select 2: R. Drive and 3: G. Drive with the Function Up/Down key.
- Change the screen colour to white with the Function +/- key.
- Press the Video/Sound key and memorise the respectively set values.

### Sub Bright Adjustment

**Measuring Instrument:** Remote Control Unit

**Adjustment Part:** 5. BRIGHT

**Description:**

- Receive any broadcast.
- Select 2: V/C from the Service Menu.
- Select 5: Bright with the Function Up/Down key.
- Set the initial setting value with the Function +/-key.
- If the brightness is not the best with the initial set value, make fine adjustment until you get the best brightness.
- Press the Video/Sound key and memorise the set value.

### Sub Cont. Adjustment

**Measuring Instrument:** Remote Control Unit

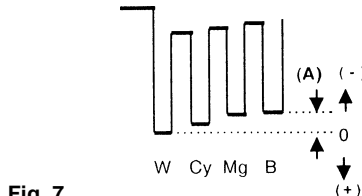


Fig. 7

### (NTSC 3.58 COLOUR)

- Input NTSC 3.58 MHz Composite Video signal (full field colour bar 75% white) from the EXT terminal.
- Set the initial setting value of NTSC 3.58 Colour with the Function +/- key.
- Adjust NTSC 3.58 Colour and bring the value of (A) of fig. 7 to 0V (voltage difference between white and blue).
- Press the Video/Sound key and memorise the set values.

### (NTSC 4.43 COLOUR)

When NTSC 3.58 is set, NTSC 4.43 will be automatically set at the same value as NTSC 3.58.

### Sub Tint I Adjustment

**Measuring Instrument:** Remote Control Unit

### Adjustment Part: 8: Tint

**Description:**

[Method of adjustment without using measuring equipment]

### (NTSC 3.58 Tint)

- Input Composite Video signal of NTSC 3.58 MHz from the EXT terminal.
- Select 2: V/C from the Service Menu.
- Select 8: Tint with the Function Up/Down key.
- Set the initial setting value of NTSC 3.58 Tint with the Function +/- key.
- If you cannot get the best Tint with the initial setting value, make fine adjustment until you get the best Tint.
- Press the Video/Sound key and memorise the setting value.

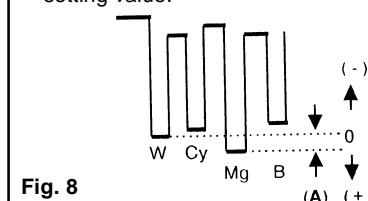


Fig. 8

### (NTSC 4.43 Tint)

When NTSC 3.58 is set NTSC 4.43 will be automatically set at the same value as NTSC 3.58.

### Sub Tint II Adjustment

**Measuring Instrument:** Signal Generator, Oscilloscope, Remote Control Unit

**Test Point:** TP-47B

**Adjustment Part:** 8: Tint

**Description:**

[Method of adjustment using measuring equipment]

### (NTSC 3.58 Tint)

- Input Composite Video signal (full field colour bar 75% white) of NTSC 3.58 MHz from the EXT terminal.
- Select 2: V/C from the Service Menu.
- Select 8: Tint with the Function Up/Down key.
- Set the initial setting value of NTSC 3.58 Tint with the Function +/- key.
- Connect the oscilloscope to TP-47B.
- Adjust NTSC 3.58 Tint to bring the value of (A) of fig. 8 to 0V (voltage difference between white and magenta).
- Press the Video/Sound key and memorise the setting data.

### (NTSC 4.43 Tint)

When NTSC 3.58 is set, NTSC 4.43 will be automatically set at the same value as NTSC 3.58.

Table 8

Setting (Adjustment) Item	Adjustment Name	Variable Range	AV-29SX1EK Initial setting value	
			50 Hz	60 Hz
1. V-Slope	Vertical height (Size of bottom side of screen)	-31 ~ +32	-3	-1
2. V Shift	Vertical centre	-31 ~ +32	+4	0
3. V-Size	Vertical height	-31 ~ +32	+2	-1
4. H-Cent	Horizontal centre	-31 ~ +32	-7	+11
5. H-Size	Horizontal width	-31 ~ +32	+21	-1
6. EW-Pin	Side pin correction	-31 ~ +32	+16	-1
7. Trapez	Trapezoidal distortion correction	-31 ~ +32	-9	-1
8. V-S.CR	Vertical height correction	-31 ~ +32	-13	-1
9. EW-Cor	Side pin four corner correction	-31 ~ +32	-4	-1

### Deflection Circuit Adjustment

There are 2 modes of adjustment: 1 - 50Hz 4:3, 2 - 60Hz 4:3 depending upon the kind of signals (Vertical Frequency 50Hz, 60Hz). When adjusted in the 1 50Hz 4:3 mode, the mode 2 will be linked to the mode 1 and will be automatically adjusted for the same value. When adjusted in mode 2:, only this mode will be adjusted singly.

The setting (adjustment) using the Remote Control Unit is made on the basis of the initial setting values. The setting values which adjust the screen to the optimum condition can be different from the initial set values.

### 1. Vertical Slope Adjustment

**Measuring Instrument:** Signal Generator, Remote Control Unit

**Adjustment Part:**

1: V-Slope

**Description:**

- 50Hz 4:3
- Receive a circle pattern signal of vertical frequency 50Hz.
- Select 4: DEF from the Service Menu.
- Select 1: V. Slope with the Function Up/Down key.
- Set the initial setting value of V. Slope (50 Hz 4:3) with the Function +/- key.
- Adjust V. Slope and make the screen's centre line and the blanking line coincide.

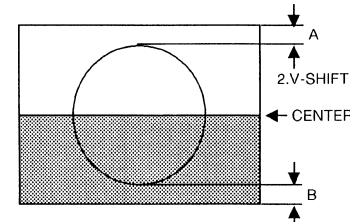


Fig. 9

### 2. Vertical Shift Adjustment

**Adjustment Part:** V-Shift

**Description:**

- Select 2: V-Shift and set the initial setting value.
- Adjust V-Shift to make A = B.
- Press the Video/Sound key and memorise set value.

### 3. Vertical Size Adjustment

**Adjustment Part:** 3: V-Size

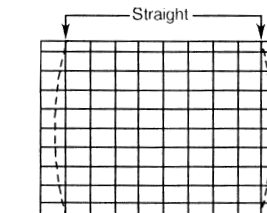


Fig. 10

# Service Adjustments Cont'd.

- Description:**  
 9] Receive a cross hatch signal.  
 10] Adjust 3: V-Size and set the initial setting value.  
 11] Adjust V-Size and make the vertical screen size 92% of the picture size.  
 12] Press Video/Sound key and memorise the set value. (See fig 12.)

## 4. Hori. Centre Adjustment

- Description:**  
 13] Receive a circle pattern signal.  
 14] Select 4: H-Cent and set the initial setting value.  
 15] Adjust H-Cent to make C = D.  
 16] Press Video/Sound key and memorise the set value.

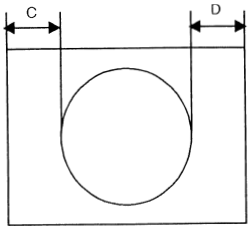


Fig. 11

## 5. Hori. Size Adjustment

- Description:**  
 17] Receive a cross hatch signal.  
 18] Select 5: H-Size and set the initial setting value.  
 19] Adjust H-Size and make the horizontal screen size 92% of the picture size.

## EW-PIN Adjustment

- Description:**  
 20] Select 6: EW-PIN and set the initial setting value.  
 21] Adjust EW-PIN and make the first vertical lines at the left and right edges of the screen straight. Make sure the second vertical lines are also straight.

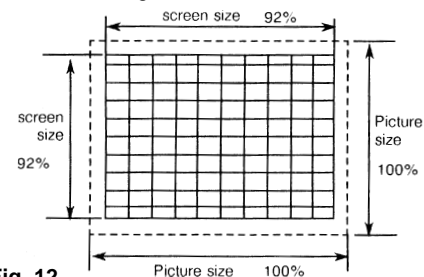


Fig. 12

## 7. Trapez Adjustment

- Description:**  
 22] Select 7: Trapez and set the initial setting value.  
 23] Adjust Trapez and bring the vertical lines at the right and left edges of the screen in parallel.

## 8. V-S CR Adjustment

- Description:**  
 24] Select 8: V-S CR and set the initial setting value.

- 25] Adjust V-S CR and make the gaps between the horizontal lines the same.

## 9. EW-COR Adjustment

- Description:**  
 26] Select 9: EW-COR and set the initial setting value.  
 27] Adjust EW-COR and make the vertical lines at the four corners of the screen straight.  
 28] Press Video/Sound key and memorise the set values.  
 29] Make sure the adjustment is properly done on the screen of 2 60 HZ 4: 3.

## T-B Pin Adjustment

- Description:**  
 Adjustment of the deflection circuit must be complete.  
 1. Receive a cross hatch signal.  
 2. Adjust L001 on T-B pin PWB Assy and straighten the upper and lower lines as illustrated in fig. 13.

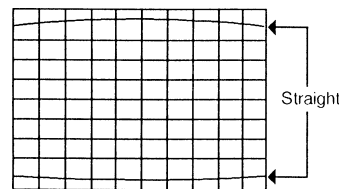
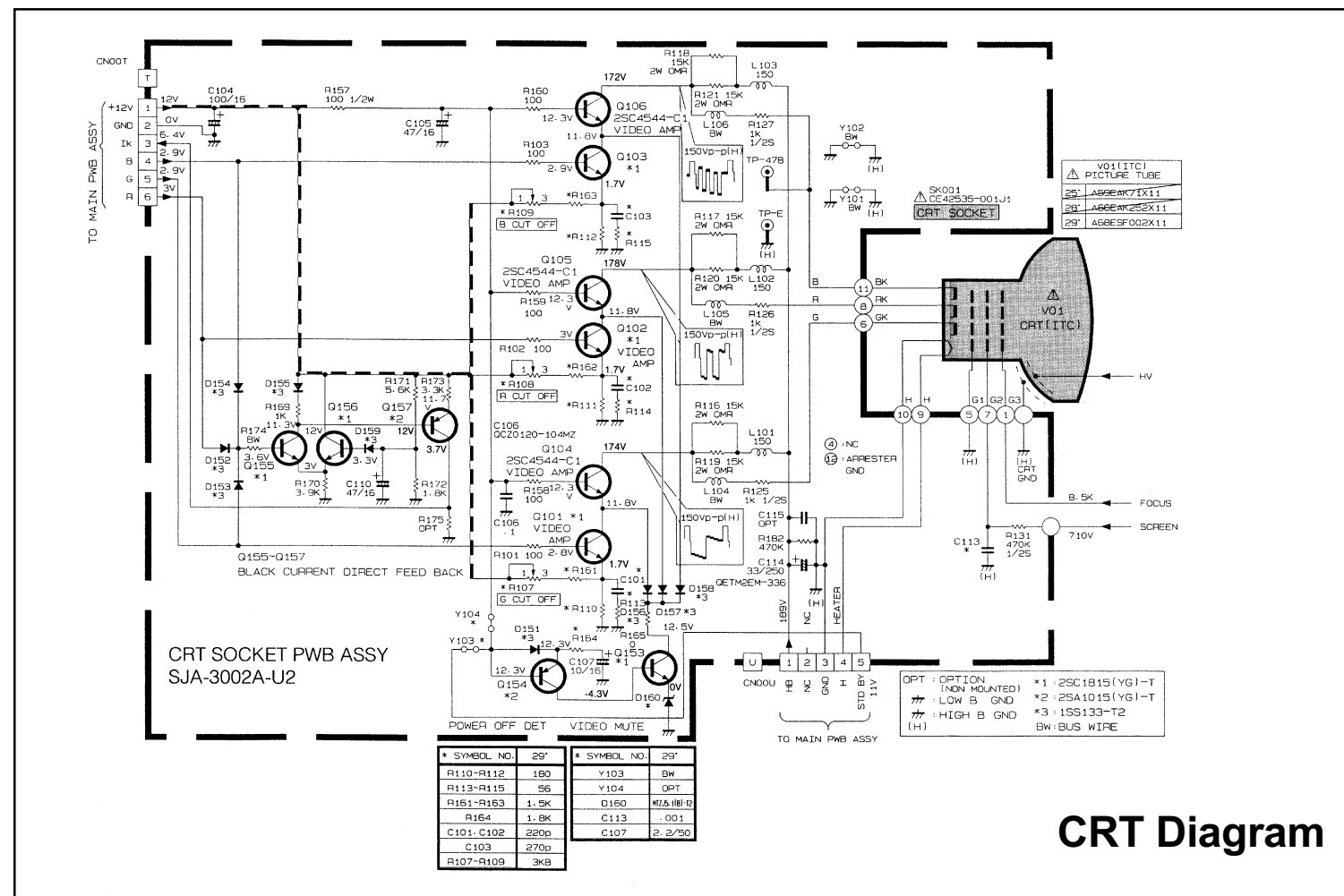


Fig. 13

**Audio Circuit**  
 Do not touch 3: Audio (1: CONC Limit, 2: A2 ID THR) of the Service Menu as it requires no adjustment.

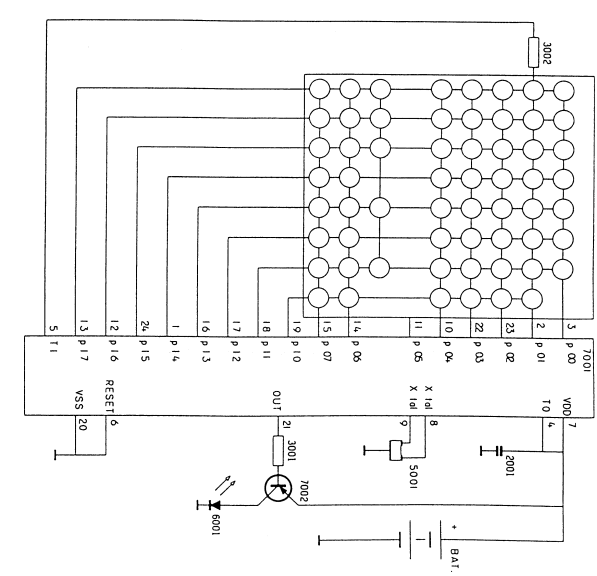
Setting (adjustment) item	Variable range	Initial setting value
1. Conc. Limit (Do not adjust)	00H - FFH	0AH
2. A2 ID IHR (Do not adjust)	00H - FFH	12H

Table 9

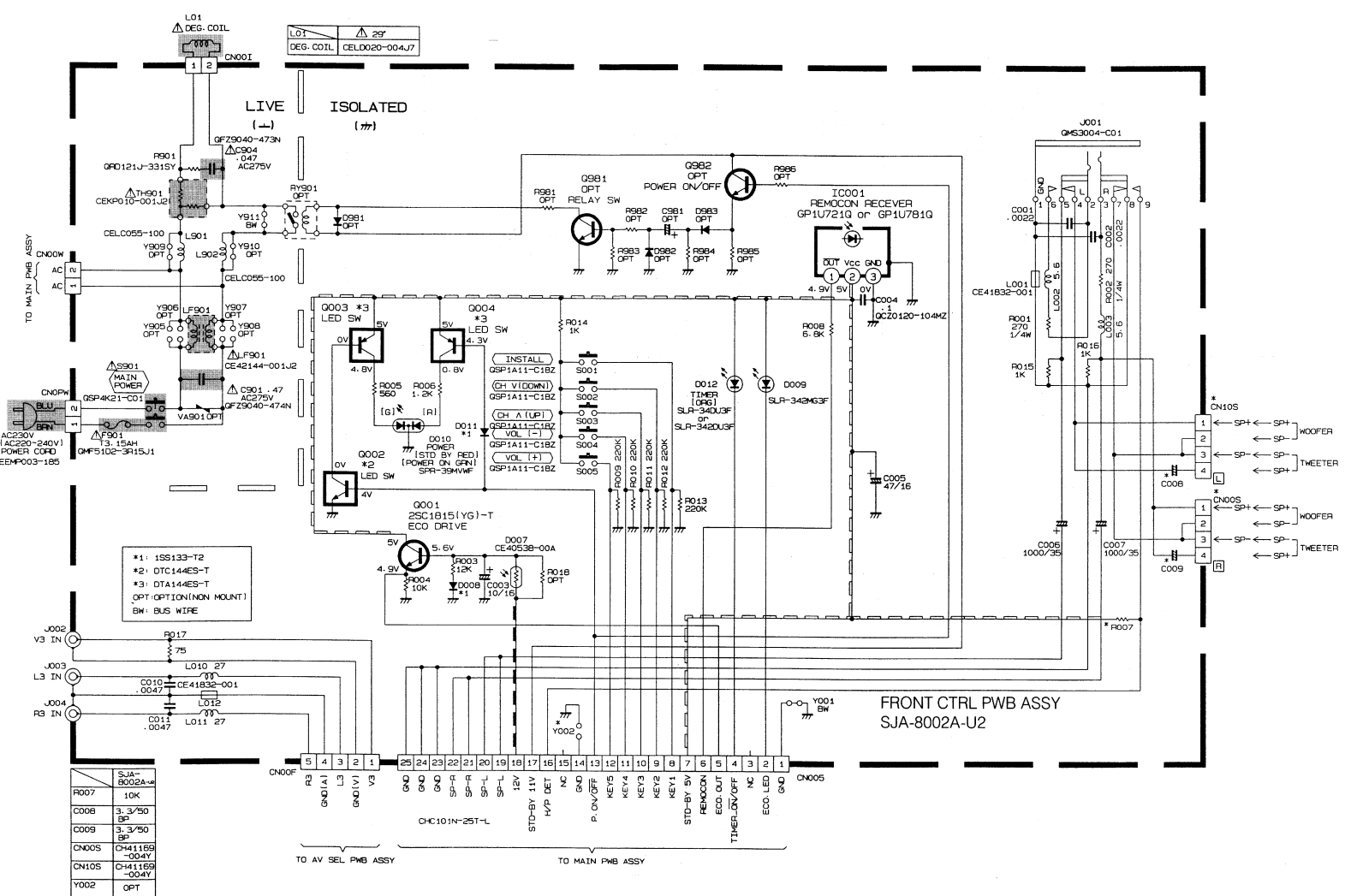


### CRT Diagram

# Remote Control Diagram

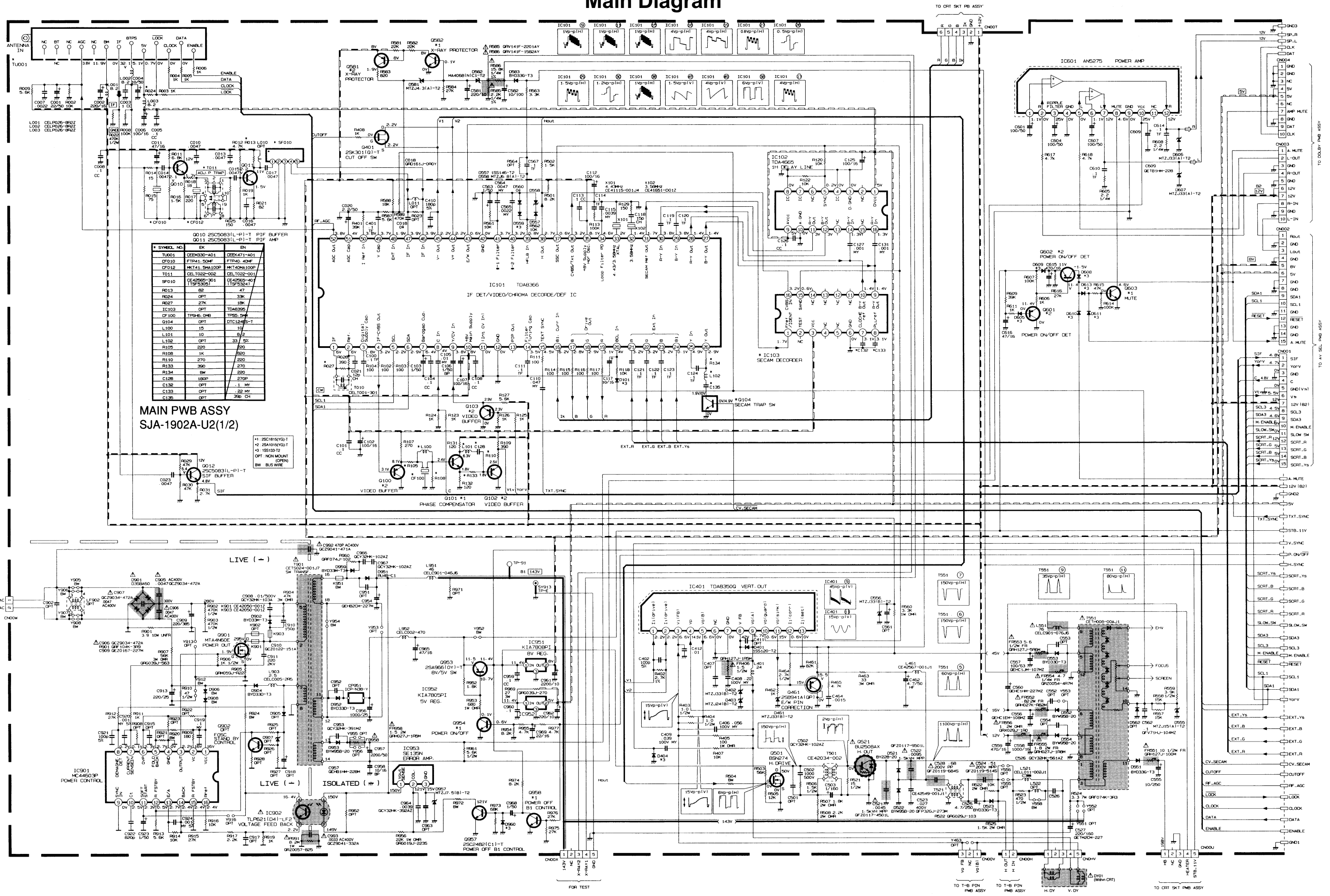


# Control Front Diagram

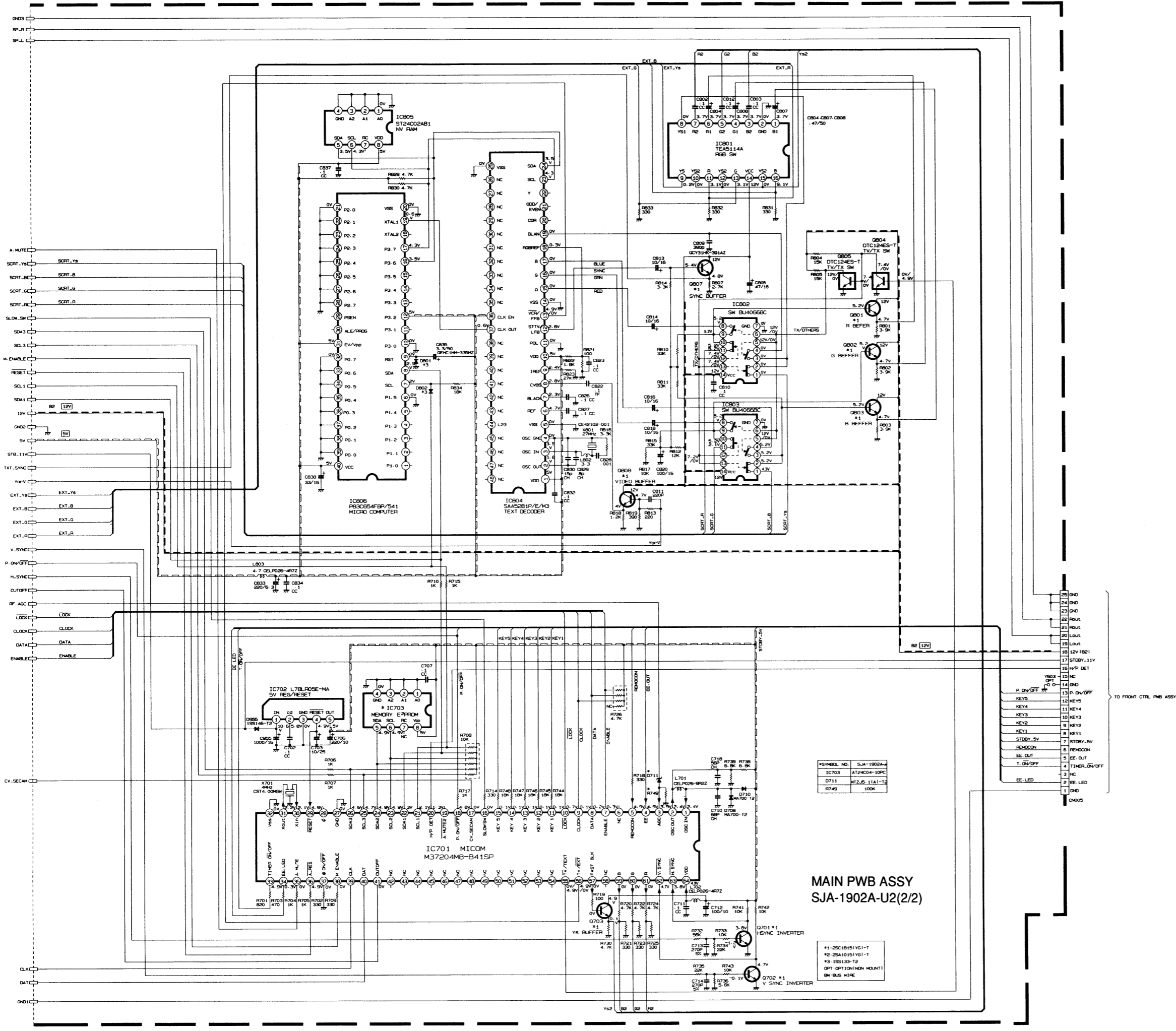




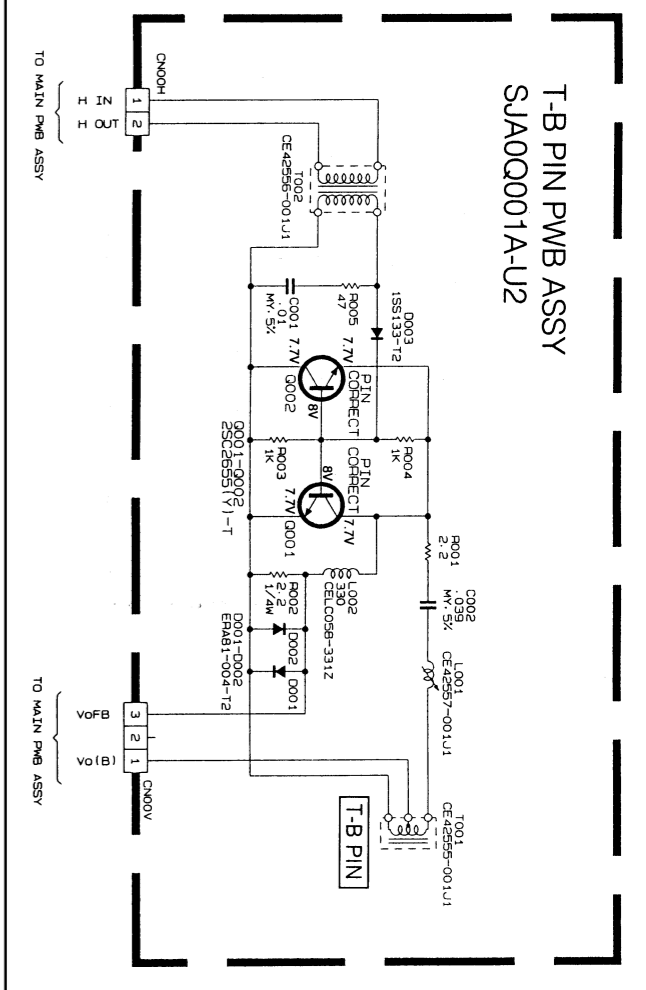
5 Main Diagram



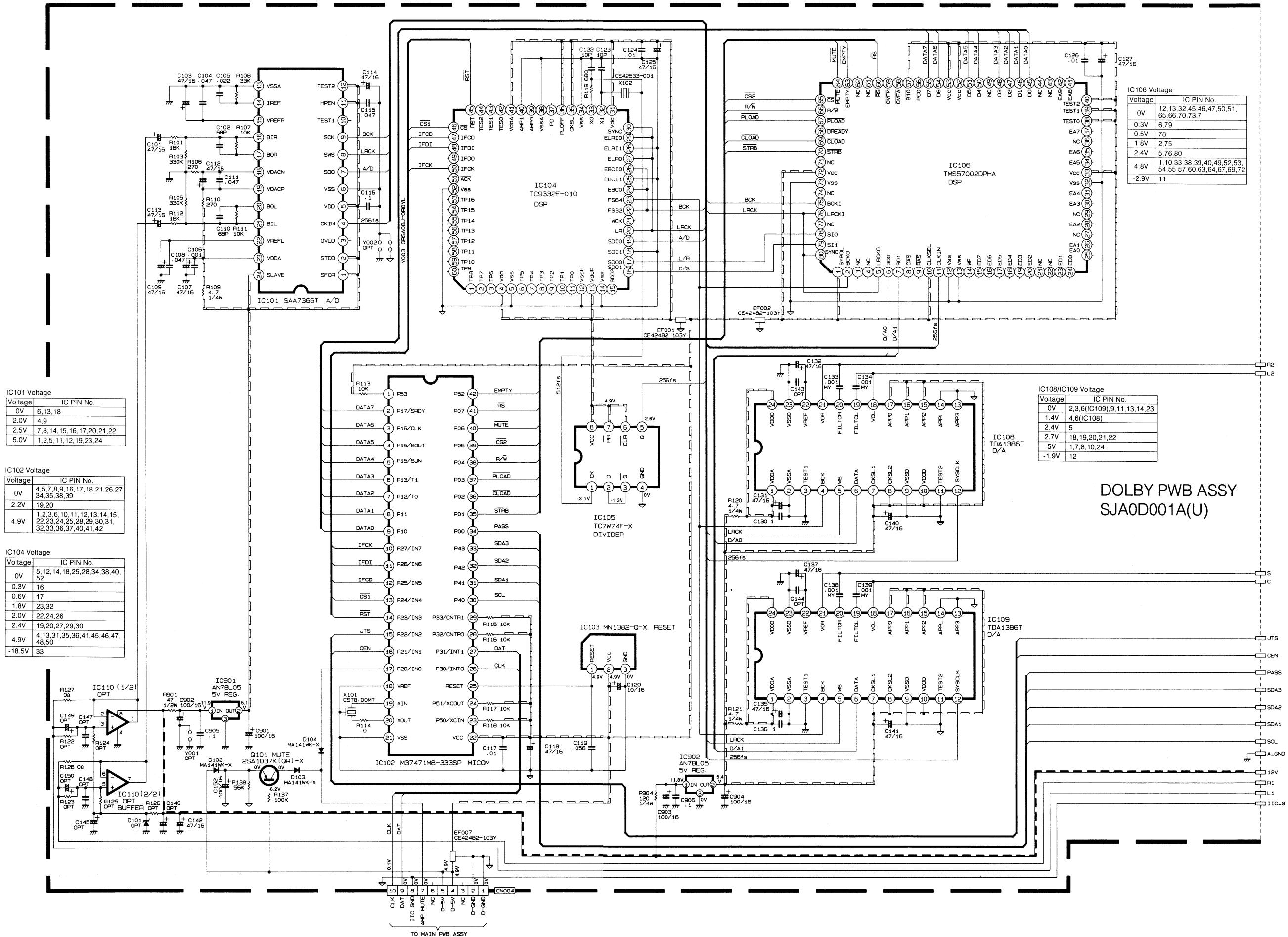
Main Diagram Cont'd.



T-B Pin Diagram



Dolby Diagram



IC101 Voltage

Voltage	IC PIN No.
0V	6,13,18
2.0V	4,9
2.5V	7,8,14,15,16,17,20,21,22
5.0V	1,2,5,11,12,19,23,24

IC102 Voltage

Voltage	IC PIN No.
0V	4,5,7,8,9,16,17,18,21,26,27,34,35,38,39
2.2V	19,20
4.9V	1,2,3,6,10,11,12,13,14,15,22,23,24,25,28,29,30,31,32,33,36,37,40,41,42

IC104 Voltage

Voltage	IC PIN No.
0V	5,12,14,18,25,28,34,38,40,52
0.3V	16
0.6V	17
1.8V	23,32
2.0V	22,24,26
2.4V	19,20,27,29,30
4.9V	4,13,31,35,36,41,45,46,47,48,50
-18.5V	33

IC106 Voltage

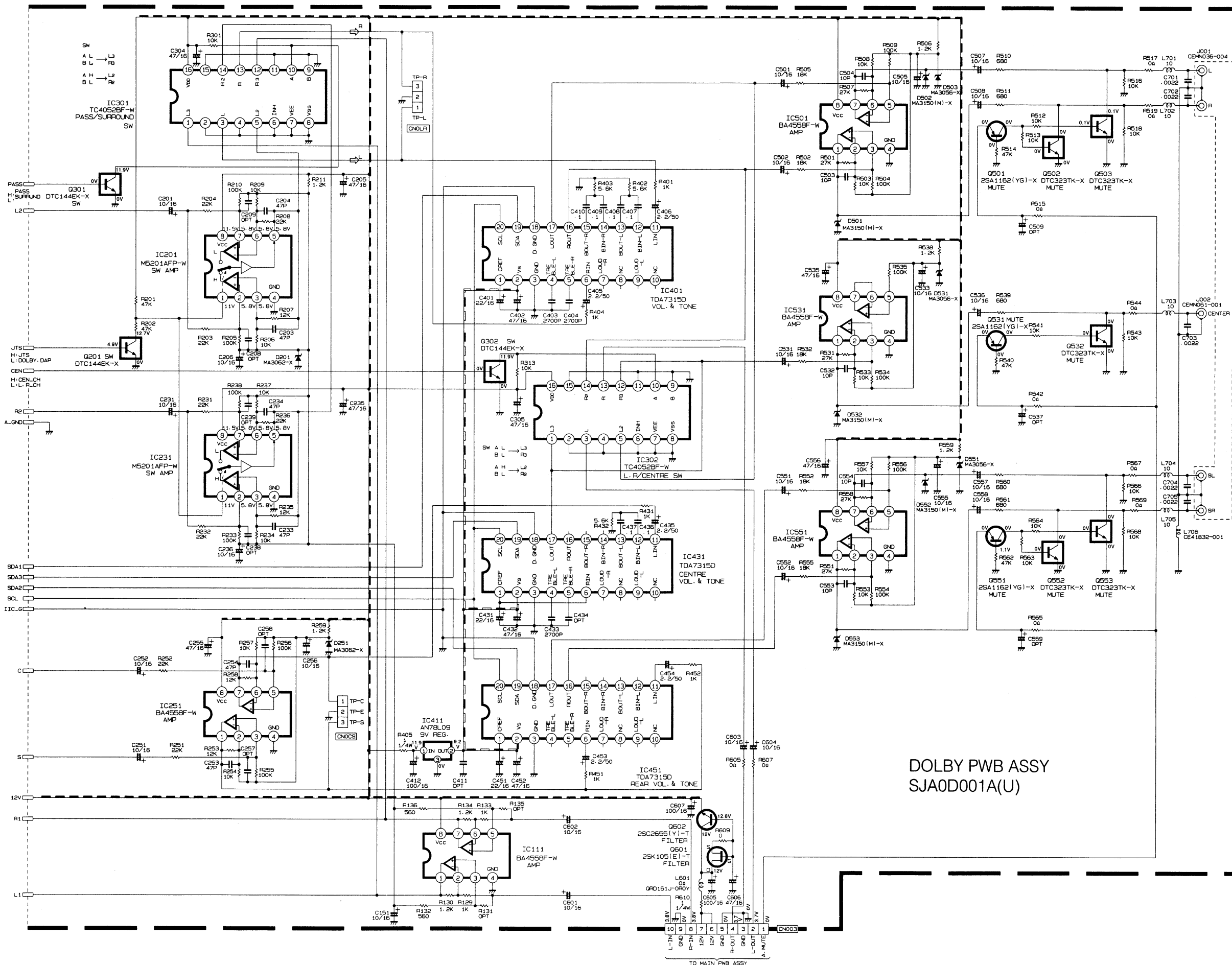
Voltage	IC PIN No.
0V	12,13,32,45,46,47,50,51,65,66,70,73,7
0.3V	6,7,9
0.5V	7,8
1.8V	2,7,5
2.4V	5,7,6,8,0
4.8V	1,10,33,38,39,40,49,52,53,54,55,57,60,63,64,67,69,72
-2.9V	11

IC108/IC109 Voltage

Voltage	IC PIN No.
0V	2,3,6,(IC109),9,11,13,14,23
1.4V	4,6,(IC108)
2.4V	5
2.7V	18,19,20,21,22
5V	1,7,8,10,24
-1.9V	12

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Dolby Diagram Cont'd



IC301 Voltage

Voltage	IC PIN No.
0V	2,4,6,9,11,15,78
6V	1,3,5,12,13,14
11.9V	10,16

IC431/IC401 Voltage

Voltage	IC PIN No.
0V	3,18
4.6V	1,4,5,6,11,12,13, [14,15,16(IC401 ONLY)],17
4.9V	19,20
9.2V	2

IC302 Voltage

Voltage	IC PIN No.
0V	2,4,6,7,8,9,11,15
4.6V	1,3,5,12,13,14
11.9V	10,16

IC251 Voltage

Voltage	IC PIN No.
0V	4
6.2V	1,2,3,5,6,7
11.9V	8

IC451 Voltage

Voltage	IC PIN No.
0V	3,18
4.6V	1,6,11,16,17
4.9V	19,20
9.2V	2

IC111/IC501/IC531/IC551 Voltage

Voltage	IC PIN No.
0V	4
6.2V	1,2,3,5,6,7
11.9V	8

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