# JVC AV-32WP2 EK

# **General Information**

# **Also Covers MB Chassis**

### **Recommended Safety Parts** Part No. **Description** Item W76ESF031X44 ITC TUBE(C) DEGAUSSING COIL T2551 13 14 CETH021-00AJ1 HVT (SERVICE) ANODE CABLE ASSY CE41950-001J1 AFFMP003-185A POWER CORD CM46618-A01-E POWER CORD CLAMP 24 26 R2991 CM12737-003-F REAR COVER LC20091-001A-U RATING LABEL 1W QRZ0057-825 8.2M OHM MM CAP. 0.47uF 400V C CAP. 470pF 400V C2991 QCZ9041-471A C2992 T2551 QCZ9041-332A C CAP. 330pF H V T (SERVICE) CFTH021-00A.I1 CETS089-001J4 SWITCH. TRANSF. FR2551 QRH017J-1R0M 1 OHM 1W 1 OHM 1W 4.7 OHM 1/4W FR2552 FR2553 QRH017J-1R0M QRZ0054-4R7M TLP721F (D4-GR) I. C (PH. COUPLER) R3109 ORH017.I-561M C.R.T. SOCKET MF CAP. 0.47pF FUSE 3.15A LINE FILTER CE42670-001 C8901 QFZ9040-474N QMF51D2-3R15J1 LF8901 CELF012-001J7 LF8902 CELF012-001J7 LINE FILTER PUSH SWITCH MAIN POWER S8901 QSP4K21-C01 R0603 QRZ0054-470M 47 OHM 1/4W INST. BOOK C040353-001-E 10 C040352-001-E

# **Setting Values of Constant Set**

Setting item 1. COUNTRY

**Setting content** 

→ EN → EP → EK

Setting value

Setting item 2. INCH

Setting content

**→** 28 **→** 32 **→** 24

Setting value

Setting item 3. MODEL

**Setting content** 

→ WP2 — **WZ**2

Setting value

# SERVICE MENU SETTING ITEMS

Setting item	Setting value	Setting item	Setting value
1. IF 2. V/C	1. VCO 2. DELAY POINT 3. L. V. LEVEL 4. ATT  1. RGB BLK 2. R DRIVE 3. G DRIVE 4. B DRIVE 5. R LEVEL 6. G LEVEL 7. B LEVEL 8. BRIGHT 9. CONT. 10. COLOUR(PAL/SECAM/NTSC) 11. HUE 12. PEAK DRIVE 13. GAMMA 14. VCOF 15. RELC	5. VSM PRESET COOL NORMAL WARM	1. V-SHIFT 2. V-SLOPE 3. V-SIZE 4. H-CENT 5. H-SIZE 6. EW-PIN 7. EW-COR 8. TRAPEZ 9. V-S.CR 10. EHT-COMP 11. CLAMP  1. BRIGHT 2. CONT. 3. COLOUR 4. SHARP 5. HUE 6. R DRIVE 7. G DRIVE 8. B DRIVE 9. BASS
3. AUDIO / OSD (Do not adjust)	1. CONC LIMIT 2. A2 ID THR 3. JVC LOGO H 4. TEXT MONO H 5. TEXT MIX H	6. VPS (Do not adjust) 7. PIP  8. AUTO PROGRAM (Do not adjust)	10. TREBLE  VPS  1. MAIN BRIGHT 2. MAIN B-Y 3. MAIN B-Y 4. SUB BRIGHT 5. SUB R-Y 6. SUB B-Y 7. V-CENTER 8. H-CENTER  ON / OFF

# **E2prom Replacement**

# REPLACEMENT OF MEMORY IC's

# 1. Memory IC

This TV uses memory ICs (EEP-ROM IC). In the memory ICs, there is memorized data for correctly operating the video and deflection circuits. When replacing memory IC's, be sure to use IC's written with the initial values of data.

# 2. Procedure for replacing memory IC's

# Procedure

# 1) Power off

Switch the power oft and unplug the power code from the outlet.

# 2) Replacing the memory IC

Be sure to use memory IC's written with the initial data values.

# 3) Power on

Plug the power code into the outlet and switch the power on.

# 4) Check and set SYSTEM CONSTANT SET

- 1) Press the INFORMATION key and the MUTE 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 INFORMATION key and MUTE 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 -/+ kev.
- 5) Press the MENU key to memorize the setting
- 6) Press the INFORMATION key twice, and return to the normal screen.

# 5) Setting of receive channels.

Set the receive channels. For setting, refer to the OPERATING INSTRUCTIONS.

# 6) User Setting

Check the user setting values, and if setting value is different, set the correct value. For setting, refer to the OPERATING INSTRUC-TIONS

# 7) Setting of SERVICE MENU

Verify the setting items of the SERVICE MENU, and reset where necessary. For setting, refer to the SERVICE ADJUSTMENTS.

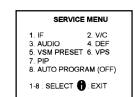


Fig. 1

Fig. 2

SOFT VER.=(V*.****) COUNTRY EK INCH 32 MODEL WP2 -+ (K) STORE EXIT JVC MB WIDE VOO	SYSTEM CONSTANT SET
	COUNTRY :EK INCH :32 MODEL :WP2 -+(ak):STORE :EXIT

. . . Remote

e Control Keys				
Names of key	key			
INFORMATION	0			
MUTE	×			
MENU	OK			
FUNCTION UP/DOWN	<b>€</b>			
FUNCTION -/+	<b>30</b>			

# **USER SETTING VALUES**

Setting item		Setting value	Setting	Setting item Set	
SUB POWER ON			MODE	CINEMA/SPORT	
CHANNEL		1 POSITION	PROLOGIC	LEVEL	CENTER
CHANNEL P	RESET	See;OPERATING INSTRUCTUONS.	3D PHONIC	TV/SPEAKER	L/R/C
VOLUME		Appropriate sound volume		VOLUME	MAX
TV / EXT		TV		MODE	NORMAL
DISPLAY		CHANNEL DISPLAY	DOLBY PRO	TV SPEAKER	L/R/C
ZOOM MODE		REGULAR	LOGIC	TEST TONE	OFF
POWER BAS	S	OFF		VOLUME	MAX
PIP		OFF	INSTALL	LANGUAGE	ENGLISH
	LFR	OFF	EXT SOURCE	EXT SETTING	ID:NO INPUT S-IN:NO INPUT
	VNR	OFF	EXT SOURCE	DUBBING	EXT-1→EXT-2
	4:3 AUTO ASPECT	PANORAMIC		SLEEP TIMER	OFF
PICTURE FEATURE	COLOR SYSTEM	TV:depend on PR EXT:AUTO	FEATURES	BLUE BACK	ON
	PIP POSITION	Right below		CHILD LOCK	ID NO.0000 all channel off
	MULTI PICTURE	12 PICTURES		TINT	COOL
	PICTURE TILT	CENTER	PICTURE SETTING	SETTING	RESET
	BASS,TRE BALA	CENTER		ECO	OFF
	SPEAKER	ON			
SOUND	HEAD PHONE VOLUME	20			
SETTING	HEAD PHONE OUTPUT	MAIN			
	HEAD PHONE TV SPEAKER	OFF			
DIGITAL SRF	ROUND	OFF			

# **Service Adjustments**

# BEFORE STARTING SERVICE ADJUSTMENT

- with the REMOTE CONTROL UNIT and the other is the conventional method using
- equipment for warming up for at least 30 minutes before starting adjustment.
- 4. Make sure that connection is correctly made to AC power source.
- use the most appropriate signal for adjust-
- transformers and condensers) not shown in the adjustment items of this service adjust-
- Unless otherwise specified in the adjustment items, preset the following functions with the REMOTE CONTROL UNIT

# 1) PICTURE MODE (VSM)

2) SLEEP TIMER

3) DIGITAL SURROUND

5) ECO OFF

**REGULAR** 

- 1. There are 2 ways of adjusting this TV: One is adjustment parts and components.
- 2. 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.
- 3. Turn on the power of the TV and measuring
- 5. If the receive or input signal is not specified,
- 6. Never touch parts (such as variable resistors,
- 7. Preparation for adjustment (presetting):

4) BALANCE CENTRE

6) ZOOM

PANORAMIC (50 / 60Hz) REGULAR (50 / 60Hz) (50 / 60Hz) 14:9 ZOOM 16:9 ZOOM (50 / 60Hz) 16:9 ZOOM SUB TITLE (50 / 60Hz) **FULL** (50 / 60Hz)

**MEASUREMENT EQUIPMENT AND FIX-**

3. Signal generator (Pattern generator) [PAL /

1. DC voltmeter (or digital voltmeter)

2. Oscilloscope

SECAM / NTSC]

4. Remote control unit **ADJUSTMENT ITEMS** 

• B1 power supply check

VSM PRESET adjust setting

REMOTE CONTROL UNIT.

2. SERVICE MENU ITEMS

settings (adjustments):

VIDEO / CHROMA circuit.

multiplicity SOUND circuit.

2) 2. V/C

3) 3. AUDIO

4) 4. DEF

VIDEO / CHROMA circuit adjustment

• AUDIO circuit adjustment (Do not adjust)

**BASIC OPERATION OF SERVICE MENU** 

Operate the SERVICE MENU with the

With the SERVICE MENU, various settings

(adjustments) can be made, and they are

broadly classified in the following items of

This mode adjusts the setting values of the IF

This mode adjusts the setting values of the

This mode adjusts the setting values of the

This mode adjusts the setting values of the

DEFLECTION circuit for each aspect mode

1. TOOL OF SERVICE MENU OPERATION

• DEFLECTION circuit adjustment

 FOCUS adjustment • IF circuit adjustment

# 5) 5. VSM PRESET

This mode adjusts the initial setting values of COOL, NORMAL and WARM. (VSM: Video Status Memory)

# 6) 6. VPS

This mode shows the monitor of the VPS and PDC. (Do not adjust). (VPS: Video Program System, PDC: Program Delivery Code) 7) 7. PIP

This mode adjusts the setting values of the PIP circuit

# 8) 8. AUTO PROGRAM

By turning the power switch on, you can get the state of AUTO PROGRAM. (Do not adjust)...

# 3. BASIC OPERATION OF SERVICE MENU 1) How to enter SERVICE MENU

Press the INFORMATION and the MUTE key of the REMOTE CONTROL UNIT simultaneously. The SERVICE MENU screen of Fig.1 will be displayed.

# **SERVICE MENU** 1. IF 2. V/C 3. AUDIO / OSD 4. DEF 5. VSM PRESET 6. VPS 8. AUTO PROGRAM (OFF) 1-8 : SELECT : EXIT

Fig. 1

# **Service Adjustments** Cont'd

### 2) Selection of SUB MENU SCREEN

1) Press one of the keys 1~7 of the REMOTE CONTROL UNIT, and select the SUB MENU SCREEN (See Fig. 3) from the SERVICE

# **SERVICE MENU -> SUB MENU**

- 2. V/C
- 3. AUDIO / OSD
- 4 DFF
- VSM PRESET
- 6. VPS 7. PIP
- 8. AUTO PROGRAM

# **REMOTE CONTROL KEYS**

Names of key	key
INFORMATION	Û
MUTE	X
MENU	OK
FUNCTION UP/DOWN	(\$\$\$)
FUNCTION -/+	⊕€

Fig. 2

# (3) Method of Setting

- 1) Method of Setting 1.IF [1. V.CO]
- (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) INFORMATION Key. As you press this twice, you will return to the SERVICE MENU.

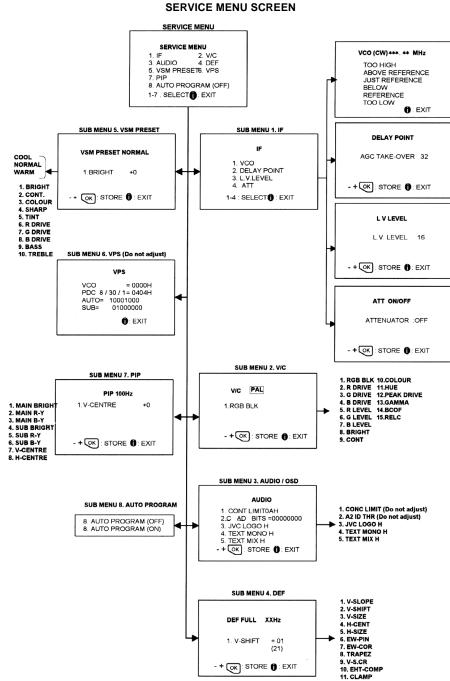
# [2. DELAY POINT]

- (1) 1 Key. Select 1.IF.
- (2) 2 Key. Select 2.DELAY POINT.
- (3) FUNCTION -/+. Set (adjust) the setting values of the setting items.
- (4) MENU Key. Memorize the set value. (Before storing the setting values in memory, do not press the CH. TV. POWER ON/OFF kevs - if you do, the values will not be stored in
- (5) INFORMATION Key. When this is pressed twice, you will return to the SERVICE MENU.

# 2) Method of setting 2.V/C, 3.AUDIO, 4.DEF, 5.VSM PRESET and 7.PIP.

- (1) 2~5, 7 Key. Select one from 2. V/C, 3. AUDIO, 4. DEF and 5.VSM PRESET and 7.PIP. (2) FUNCTION UP/DOWN Key. Select setting
- (3) FUNCTION -/+. Set (adjust) the setting values of the setting items. (When 1.RGB BLK of 2.V/C is selected, press the FUNCTION -/+ key, and the whole will change to a black picture. Press the 2 key, and the screen will return to the original screen.)
- (4) MENU Key. Memorize the setting value. (Before storing the setting values in memory, do not press the CH, TV, POWER ON / OFF key if you do, the values will not be stored in memory.) (5) INFORMATION Key. Return to the SERVICE
- Method of setting 6.VPS and 8.AUTO PROGRAM.

MÉNU screen.



6.VPS. This mode displayed monitor of VPS systems. Do not adjust

8.AUTO PROGRAM. When the MAIN POWER is turned on with the state of AUTO PROGRAM ON, you get a mode that initializes every existing set value including language selection. Because this mode is set at the factory upon completion of the adjustment, you need not to use it for service. Do not adjust in this mode.

# (4) Release of SERVICE MENU

1) After completing the setting, return to the SERVICE MENU, then again press the INFOR-MATION key.

# **POWER SUPPLY CHECK**

# Item

Check of B1 voltage

# Measuring instrument

Signal generator DC voltmeter

# Test point TP-91(B1)

# TP-E (→).

[X connector in POWER DEF PWB] Description

- 1. Receive a whole black signal.
- 2. Connect a DC voltmeter to TP-91(B1) and
- 3. Make sure that the voltage is DC141.5 $\pm$  2.0V.

# **FOCUS ADJUSTMENT**

Adjustment of FOCUS

# Measuring instrument

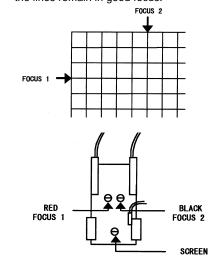
Signal generator

# Adjustment part FOCUS VR [in HVT]

# Description

- 1. By turning the black VR FOCUS 2, adjust the picture so that the 5th vertical line from the left side of the cross-hatch picture becomes thinnest
- 2. By turning the red VR FOCUS 1, adjust the picture so that the 3rd horizontal line from the upper side of the cross-hatch picture be-

- comes uniform at the line centre and its periphery
- 3. Carry out adjustment by repeating the steps 2
- 4. Make sure that when the screen is darkened, the lines remain in good focus.



# IF CIRCUIT ADJUSTMENT

Adjustment of VCO (MAIN)

# Measuring instrument

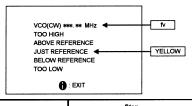
Remote control unit

# Adjustment part

P. CW TRANSF. (T050) P.L-VL CW TRIM C (C052) [In IF PWB]

# Description

- Do not make any adjustment unless the adjustment is out of way and you cannot get correct PICTURE.
- . Select 1.IF from the SERVICE MENU.
- 2. Press 1 key and select 1.VCO.
- 3. Select a receivable broadcast channel with the CHANNEL kev.
- 4. Turn the core of P. CW TRANSF, until the colour of the characters TOO HIGH displayed on the screen changes from blue to.. Yellow. (Step 1)
- 5. Turn the core of P. CW TRANSF, until the colour of the characters TOO LOW changes from blue to Yellow. (Step 2)
- 6. Then slowly turn back the core of P. CW TRANSF. until the colour of the characters JUST REFFERENCE changes from blue to Yellow. (Step 3)
- 7. In the district SECAM L broadcast channel with the CHANNEL key and adjust the P.L-VL CW TRIM. C in same manner as for above step and if necessary, readjust P. CW TRANSE
- 8. Press the INFORMATION key three times to return to normal screen.
- 9. Perform CHANNEL PRESET again, and make sure that each broadcast is being received properly.



Screen display			Step		
Screen display	1	_	→2	$\rightarrow$	3
TOO HIGH	Yellow	<b>→</b>	Blue	<b>→</b>	Blue
ABOVE REFERENCE	Blue	$\rightarrow$	Blue		Blue
JUST REFERENCE	Blue	$\rightarrow$	Blue	$\rightarrow$	Yellow
BELOW REFERENCE	Blue	$\rightarrow$	Blue	$\rightarrow$	Blue
TOO LOW	Blue	$\rightarrow$	<b>Yellow</b>	$\rightarrow$	Blue

### Item

Adjustment of DELAY POINT

# Measuring instrument

Remote control unit

# Adjustment part

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 or + key until video noise disannears
- 5. Press the MENU key and memorize the set
- 6. Turn to other channels and make sure that there are no irregularities.

# Setting item (Adjustment item) DELAY POINT (AGC TAKE-OVÉR)

Variable range: 0~63 Initial setting value: 30

# Setting item (Adjustment item)

Adjustment of L, V LEVEL (EP MODEL ONLY)

# Measuring instrument

Remote control unit Oscilloscope

# Adjustment part

L, V LEVEL

# Description

- 1. Receive a colour bar signal. (SECAM-L. 75% white)
- 2. Connect the oscilloscope to EXT-1 PIN 19.
- 3. Select 1. IF from the service menu.
- 4. Select 3. L.V LEVEL by pressing the 3 key on the remote control.
- 5. Turn to other channels and make that there are no irregularities.

Adjustment of VCO (SUB)

# **Measuring Instrument**

Remote Control Unit

# **Adjustment Part**

P. CW TRANSF (T103) P.L-VL CW TRIM C (C122) (in P & P PWB)

# Description

Do not make any adjustment unless the adjustment is out of the way and you cannot get correct PICTURE.

- 1. Select 1. IF from the SERVICE MENU.
- 2. Press 1 key and select 1.VCO.
- 3. Press OK key and select "VCO (CW) = SUB". 4. Select a receivable broadcast channel with
- the CHANNEL key. 5. Turn the core of P. CW TRANSF. until the colour of the characters TOO HIGH displayed on the screen changes from blue to.. Yellow.
- (Step 1) 6. Turn the core of P. CW TRANSF. until the colour of the characters TOO LOW changes from blue to Yellow. (Step 2)
- 7. Then slowly turn back the core of P. CW TRANSF. until the colour of the characters JUST REFFERENCE changes from blue to Yellow. (Step 3)
- 8. In the district SECAM L broadcast channel key and adjust the P.VL CW TRIM. C in the same in same manner as for above step, and if necssary, readjust P. CW TRANSF.
- 9. Press the INFORMATION key three times to return to normal screen.
- 10. Perform CHANNEL PRESET again, and make sure that each broadcast is being received properly.

Setting of VSM PRESET ADJUST

# Measuring instrument Remote control unit

# Adjustment part

- 1. BRIGHT 6. R DRIVE 2. CONT. 7. G DRIVE
- 3. COLOUR 8. B DRIVE
- 4. SHARP 9. BASS 5. HUE 10.TRFBLF

### Description

- 1. Select COOL with the MENU key of the remote control unit.
- 2. Select 5.VSM PRESET from the SERVICE MENU.
- 3. Adjust the FUNCTION UP/DOWN and -/+ key to bring the set values of 1. BRIGHT ~ 10.TREBLE to the values shown in the table.
- 4. Press the MENU key and memorize the set
- 5. Respectively select the VSM PRESET mode for REGULAR and WARM, and make similar adjustment as in 3 above.
- 6. Press the MENU key and memorize the set
- Refer to OPERATING INSTRUCTIONS for the

PICTURE MODE	-		
VSM preset mode Setting item	COOL	REGULAR	WARM
1. BRIGHT SETTING VALUE	+0	+0	+0
2. CONT. SETTING VALUE	+13	+10	+2
3. COLOUR SETTING VALUE	+2	+0	-2
4. SHARP SETTING VALUE	+0	+0	-2
5. HUE SETTING VALUE	+0	+0	+0
6. R DRIVE SETTING VALUE	-5	+0	+14
7. G DRIVE SETTING VALUE	-11	+0	+5
8. B DRIVE SETTING VALUE	+0	+0	-6
9. BASS SETTING VALUE	+0	+0	0
10.TREBLE SETTING VALUE	+0	+0	0

# 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 Item (Adjustment Item )	Initial setting value
1.RGB BLK	
2.R.DRIVE	+12
3.G.DRIVE	+2
4.B.DRIVE	+0
5.R.LEVEL	+0
6.G.LEVEL	+0
7.B.LEVEL	+0
8.BRIGHT	-10
9.CONTRAST	-5

Colour system	Initial set	ting value
Setting item	PAL/ SECAM	NTSC 3.58 NTSC 4.43
10.COLOUR	-4/0	0
11.HUE		0
12.PEAK DRIVE	+5	
13.GAMMA	-21	
14.VCOF	+0	
15.RELC	+0	

# **Adjustments Cont'd**

### Item

Adjustment of WHITE BALANCE (MAIN)

### Measuring instrument

Signal generator Remote control unit

# Adjustment part

- 1. Ř.DRIVE
- 3. G.DRIVE
- 5. R.LEVEL
- 6. G.LEVEL
- 7. B.LEVEL

# Description

- Set the PICTURE MODE to COOL.
- 1. Receive a black and white signal(colour off).
- 2. Select 2. V/C from the SERVICE MENU. 3. Modify 2. R DRIVE, 3 G DRIVE data to adjust
- the white balance (high light)
- 4. Modify 5. R LEVEL, 6 G LEVEL and 7. B LEVEL data to adjust the white balance of low light. Components.
- 5. Press the MENU key and memorise the set value.

Adjustment of BRIGHTNESS AND WHITE **BÁLANCE IN PIP** 

# **Measuring instrument**

Signal generator Remote control unit

# Adjustment Part 1. MAIN BRIGHT

- 2. MAIN R-Y
- 3. MAIN B-Y 4. SUB BRIGHT
- 5. SUB R-Y
- 6. SUB B-Y
- 1. Receive a black and white signal(colour off).
- 2. Select 7. PIP from the SERVICE MENU.
- 3. Select 1 MAIN BRIGHT. So small picture appears in the big picture.
- 4. Adjust brightness of small picture to equal brightness of big picture by 1 MAIN BRIGHT.
- 5. Select 2. MAIN R-Y and 3. MAIN B-Y. And adjust low-light of small picture to equal lowlight of big picture
- 6. Enter 4.SUB BRIGHT. It changes to the 2 screen mode. Adjust brightness of right picture to equal brightness of left picture.
- 7. Select 5.SUB R-Y and 6.SUB B-Y. And adjust low-light of right picture to equal low-light of
- 8. 7. V-CENTRE should be "-1" at 50Hz "+1" at 60Hz
- 9. 8. H-CENTRE should be 0.
- 10.Press the MENU key and memorize the set value.

# Item

Adjustment of SUB BRIGHT

# Measuring instrument

Remote control unit

# Adjustment part

8. BRIGHT

# Description

- 1. Receive any broadcast.
- 2. Select 2.V/C from the SERVICE MENU.
- 3. Select 8.BRIGHT with the FUNCTION UP/ DOWN key.
- 4. Set the initial setting value with the FUNC-TION -/+ kev.
- 5. If the brightness is not the best with the initial setting value, make fine adjustment until you get the best brightness.

6. Press the MENU key and memorize the set

Adjustment of SUB CONT.

# Measuring instrument

Remote control unit

# Adjustment part 9. CONT.

# Description

- 1. Receive any broadcast.
- 2. Select 2.V/C from the SERVICE MENU.
- 3. Select 9.CONT with the FUNCTION UP/ DOWN key.
- 4. Set the initial setting value with the FUNC-TION - or + key.
- 5. If the contrast is not the best with the initial setting value, make fine adjustment until you get the best contrast.
- . Press the MENU key and memorize the set

### ltem

Adjustment of SUB COLOUR I

# Measuring instrument

Remote control unit Adjustment part

# Adjustment part

10. COLOUR (PAL~NTSC)

# Description

[Method of adjustment without using measuring instrument]

# Adjustment part

PAL COLOUR

# Description

- (PAL COLOUR)
- 1. Receive PAL broadcast.
- 2. Select 2.V/C from the SERVICE MENU.
- 3. Select 10.COLOUR with the FUNCTION UP/
- . Set the initial setting value for PAL COLOUR with the FUNCTION - or + kev.
- 5. If the colour is not the best with the initial set value, make fine adjustment until you get the
- 6. Press the MENU key and memorize the set

# Adjustment part

NTSC COLOUR

# Description

- (NTSC 3.58 COLOUR)
- 1. Input a NTSC 3.58MHz COMPOSITE VIDEO signal from the EXT terminal.
- 2. Make similar fine adjustment of NTSC 3.58 COLOUR in the same manner as for above. (NTSC 4.43 COLOUR)
- . When NTSC 3.58 is set, NTSC 4.43 will be automatically set at the respective values.

Adjustment of SUB COLOUR II

# Measuring instrument

Signal generator Oscilloscope Remote control unit

# **Test Point** TP-47B

TP-E( [CRT SOCKET PWB]

# Adjustment part

10.COLOUR (PAL~NTSC)

# Description

[Method of adjustment using measuring instrumentl

# Adjustment part

PAL COLOUR

# Description

(PAL COLOUR)

- 1. Receive a PAL full field colour bar signal (75% white).
- 2. Select 2.V/C from the SERVICE MENU.
- 3. Select 5.COLOUR with the FUNCTION UP/ DOWN kev.
- 4. Set the initial setting value of PAL COLOUR with the FUNCTION - or + key. 5. Connect the oscilloscope between TP-47B
- and TP-E( ). 6. Adjust PAL COLOUR and bring the value of (A) in the illustration to 8V (voltage difference
- between white (w) and blue (B)). 7. Press the MENU key and memorize the setting value.

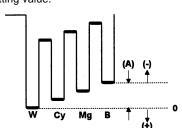
# Adjustment part

NTSC COLOUR

# Description

(NTSC 3.58 COLOUR)

- 1. Input a NTSC 3.58MHz COMPOSITE VIDEO signal (full field colour bar with 75% white) from the EXT terminal.
- 2. Set the initial setting value of NTSC 3.58 COLOUR with the FUNCTION -/+ key.
- 3. Adjust NTSC 3.58 COLOUR and bring the value of (A) of the illustration to +8V (W~B).
- . Press the MENU key and memorize the setting value



# (NTSC 4.43 COLOUR)

1. When NTSC 3.58 is set, NTSC 4.43 will be automatically set at the respective values.

Adjustment of SUBTINT I

# Measuring instrument

Remote control unit

# Adjustment part

11. HUF

# Description

[Method of adjustment without using measuring instrumentl

### Adjustment part NTSC 3.58 TINT

Description

DOWN key.

# INTSC 3.58 TINT

- 1. Input a NTSC 3.58MHz COMPOSITE VIDEO signal (full field colour bar with 75% white) from the EXT terminal.
- 2. Select 2.V/C from the SERVICE MENU. 3. Select 11. HUE with the FUNCTION UP/
- 4. Set the initial setting value of NTSC 3.58 TINT with the FUNCTION -/+ key.

  5. If you cannot get the best tint with the initial setting value, make fine adjustment until you
- get the best tint. 6. Press the MENU key and memorize the set value.

### Adjustment part NTSC 4.43 TINT

Description (NTSC 4.43 TINT)

1. When NTSC 3.58 is set, NTSC 4.43 will be automatically set at the respective values.

Adjustment of SUB TINT II

# Measuring instrument

Signal generator Oscilloscope Remote control unit

# **Test Point**

TP-47B

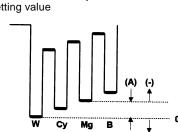
TP-E( ,,,) [CRT SOCKET PWB]

### Adjustment part 11. HUE

Description [Method of adjustment using measuring instrumentl

2. Select 2.V/C from the SERVICE MENU.

- [NTSC 3.58 TINT]
  1. Input a NTSC 3.58MHz COMPOSITE VIDEO signal (full field colour bar with 75% white) from the EXT terminal.
- 3. Select 11. HUE with the FUNCTION UP/ DOWN key. 4. Set the initial setting value of NTSC 3.58 TINT
- with the FUNCTION or + key. 5. Connect the oscilloscope between TP-47B
- and TP-E( ).
  6. Adjust NTSC 3.58 TINT to bring the value of (A) in the illustration to 0V (voltage difference
- between white (W) and magenta (Mg)). 7. Press the MENU key and memorize the setting value



# Adjustment part NTSC 4.43 TINT

# Description

[NTSC 4.43 TINT] 1. When NTSC 3.58 is set, NTSC 4.43 will be automatically set at the respective values.

# **DEFLECTION CIRCUIT ADJUSTMENT**

There are 3 modes of the adjustmen (1) 50Hz mode

- (1) PANORAMIC
- (2) FULL (3) SUBTITLE

# (2) 60Hz mode

(each aspect mode) ..... depending upon the kind of signals (vertical frequency 50Hz / 60Hz).

When the 50Hz PANORAMIC mode has been established, the setting of other modes will be done automatically. However, if the picture quality has not been optimized, adjust each mode again, respectively.

The 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.

the Deflection circuit, but by the 100 Hz PWB. Therefore, the deflection system cannot be adjusted in these modes.

		Initial setting value					
Setting item	Adjustment name	FL	FULL PANORAMIC		SUB	TITLE	
		50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
1.V- SHIFT	Vertical center	3	0	0	0	0	0
2.V- SLOPE	Vertical def. Start position	14	-7	2	-9	0	2
3.V-SIZE	Vertical height	33	2	-1	-1	20	-1
4.H-CENT	Horizontal center	23	-3	0	-1	0	-2
5.H-SIZE	Horizontal width	23	-1	8	-1	-1	0
6.EW-PIN	Side pin correction	42	0	-3	0	3	0
7.EW-COR	Side pin four corner correction	36	0	-10	-8	-7	0
8.TRAPEZ	Trapezoidal distortion correction	3	0	-1	-1	0	1
9.V-S.CR	Vertical height correction	8	0	12	0	5	0
10.EHT-COMP	Size Regulation	30	0	0	0	0	0
11.CLAMP	CLAMP Position	0	0	0	0	0	0

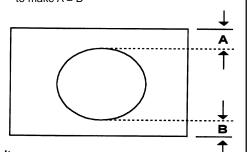
Adjustment of V-SHIFT and V-SLOPE

# **Measuring Instrument**

Signal generator Remote control unit

# Adjustment part 2.V-SHIFT

- Description [FULL mode]
- 1. Receive a circle pattern signal
- 2. Select 2.DEF from the SERVICE MENU. 3. Select 1. V-SHIFT with the FUNCTION UP/ DOWN kev.
- 4. Adjust V-SHIFT to make A = B.
- 5. If it is not good enougyh to adjust the "V=SHIFT", choose "2. V=SLOPE" and adjust to make A = B



# Adjustment of V-SIZE

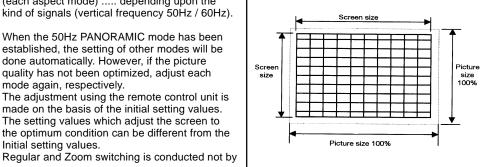
Adjustment part

# 3.V. SIZE

- Description
- 7. Receive a cross-hatch signal. 8. Select 3.V-SIZE and set the initial setting
- screen size of the picture size is in the table. 10.Press the MENU key and memorize the set value 11.Input a NTSC VIDEO signal from the EXT

9. Adjust V-SIZE and make sure that the vertical

the table. 12.Press the MENU key and memorize the set value



### 16:9 ZOOM MODE FULL PANORAMIC SCREEN 92% 87% 70% SCREEN 92% 87% 83%

[SCREEN SIZE]

Adjustment part

Adjustment of H.CENTER

# 4.H-CENT.

value

- Description 13. Receive a circle pattern signal.
- 14. Select 4.H-CENT and set the initial setting
- 15.Adjust H-CENT to make C=D. 16.Press the MENU key and memorize the set
  - C D

Item Adjustment of H.SIZE

# 5.H-SIZE

Adjustment part

- Description
- 17. Receive a cross-hatch signal. 18. Select 5.H-SIZE and set the initial setting
- horizontal screen size of the picture size is in the table. 20. Press the MENU key and memorize the set
- value. 21.Input a NTSC VIDEO signal from the EXT terminal, and make sure that the horizontal screen size of the PANORAMIC mode is in the following table.
- 22.Press the MENU key and memorize the set value.

MODE	FOLL	FANORAMIC	SUB TITLE
H SIZE	92%	95%	92%

16:9 ZOOM

[SCREEN SIZE]

ASPECT

# terminal, and make sure that the vertical screen size of the RANORAMIC mode is in 19.Adjust H-SIZE and make sure that the

# JVC AV-32WP2 EK

# **Adjustments Cont'd**

### Item

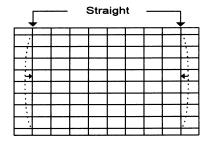
Adjustment of EW-PIN

### Adjustment part

6. ÉW-PIN

### Description

- 23. Select 6.EW-PIN and set the initial setting value
- 24.Adjust EW-PIN and make the 2nd.vertical lines at the left and right edges of the screen straight. Also make sure that the 3rd vertical lines are straight
- 25. Press the MENU key and memorize the set



# Item

Adjustment of EW-COR

# Adjustment part

7.EW-COR

# Description

- No alignment, but adjust this mode if result of no alignment is too bad.
- 26. Select 10. 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 the MENU key and memorize the set value

# Item

Adjustment of TRAPEZ

# **Measuring Instrument**

Signal generator Remote control unit

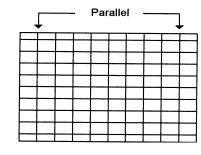
# Adjustment part

1.TRAPEZ

# Description

[50Hz PANORAMIC mode]

- 29. Receive a cross-hatch signal of vertical frequency 50Hz.
- 30. Select 4. DEF from the SERVICE MENU. 31.Select 8.TRAPEZ with the FUNCTION UP/ DOWN key.
- 32.Set the initial setting value of TRAPEZ with the FUNCTION - or + key.
- 33.Adjust TRAPEZ and bring the VERTICAL lines at the right and left edges of the screen parallel
- 34. Press the MENU key and memorize the set



Adjustment of V-S.CR

# Adjustment part

9.V-S.CR

### Description

- No alignment, but adjust this mode if result of no alignment is too bad.
- 35. Select 9.V-S.CR and set the initial setting
- 36.Adjust each item to get exact square of cross-hatch pattern
- 37.Press the MENU key and memorize the set

At first the adjustment in 50Hz-PANORAMIC mode should be done, then the data for the other zoom mode is corrected in the respective value at the same time. And confirm the deflection adjustment initial setting value in 60Hz (NTSC EXT mode) PANORAMIC mode. If the adjustment in 50Hz each zoom mode has been done and stored, the data for the same aspect modes in 60Hz is corrected in the respective value. Only the data for the other aspect mode in 60Hz is corrected for itself.

# **AUDIO CIRCUIT ADJUSTMENT**

Do not touch 3.AUDIO (1, CONC UMIT, 2, A2 ID THR) of the SERVICE MENU as it requires

# 3. AUDIO / OSD

Fixed value: 19H

Setting item: 1. CONC LIMIT (Do not adjust) Variable range: 00H~FFH Fixed value: 0AH

Setting item: 2.A2 ID THR (Do not adjust) Variable range: 00H~FFH

# **OSD** horizontal position

JVC LOGO H

# **Adjustment Part**

3. JVC LOGO H

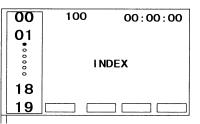
- 1. Select 3. AUDIO / OSD from SERVICE MENU.
- 2. Select 3. JVC LOGO H with the FUNCTION -/
- 3. Confirm that JVC LOGO H=00H
- 4. Press the MENU Key, and memorize the set values.

TEXT MONO H

# **Adjustment Part**

4.TEXT MONO H

- 1. Select 3.AUDIO / OSD from SERVICE MENU
- 2. Select 4.TEXT MONO H with the FUNCTION
- 3. Push text key to get a picture of "TEXT-MONO H".
- . Push "SUBPAGE" key. It gets a picture as
- 5. Adjust the value of the distance "d" as shown left with the FUNCTION UP/DOWN key. Push "SUBPAGE" key to check adjustment every
- 6. Press the MENU Key, and memorize the set

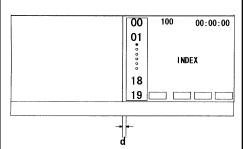


# Item

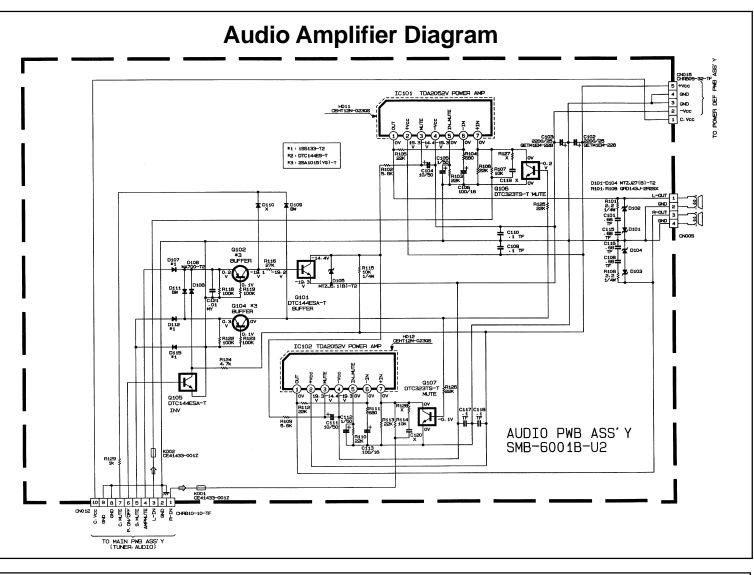
TEXT MIX H

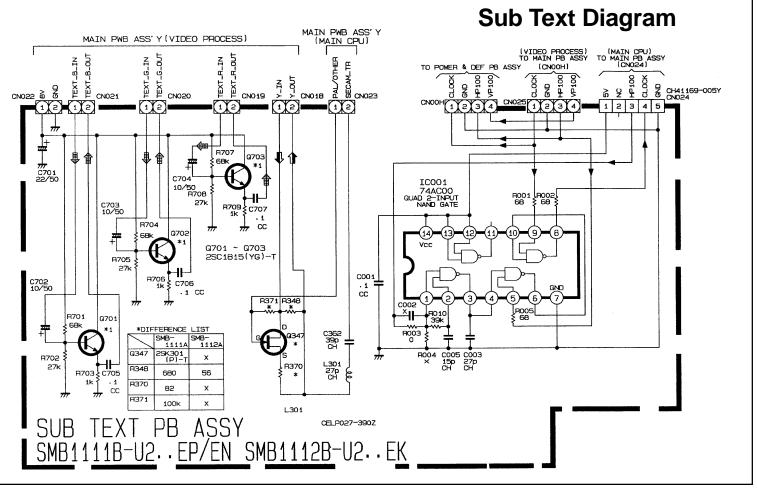
### **Adjustment Part** 5. TEXT MIX H

- Description 1. Select 3.AUDIO/OSD from SERVICE MENU.
- 2. Select 5.TEXT MIX H with the FUNCTION -/+
- 3. Push text key to get a picture of 'TEXT& PICTURE'.
- 4. Push 'SUBPAGE" key. It gets a picture as shown left.
- 5. Adjust the value of the distance d" as shown left with the FUNCTION UP/DOWN key. Push "SUBPAGE" key to check adjustment every
- 6. Press the MENU Key, and memorize the set values.

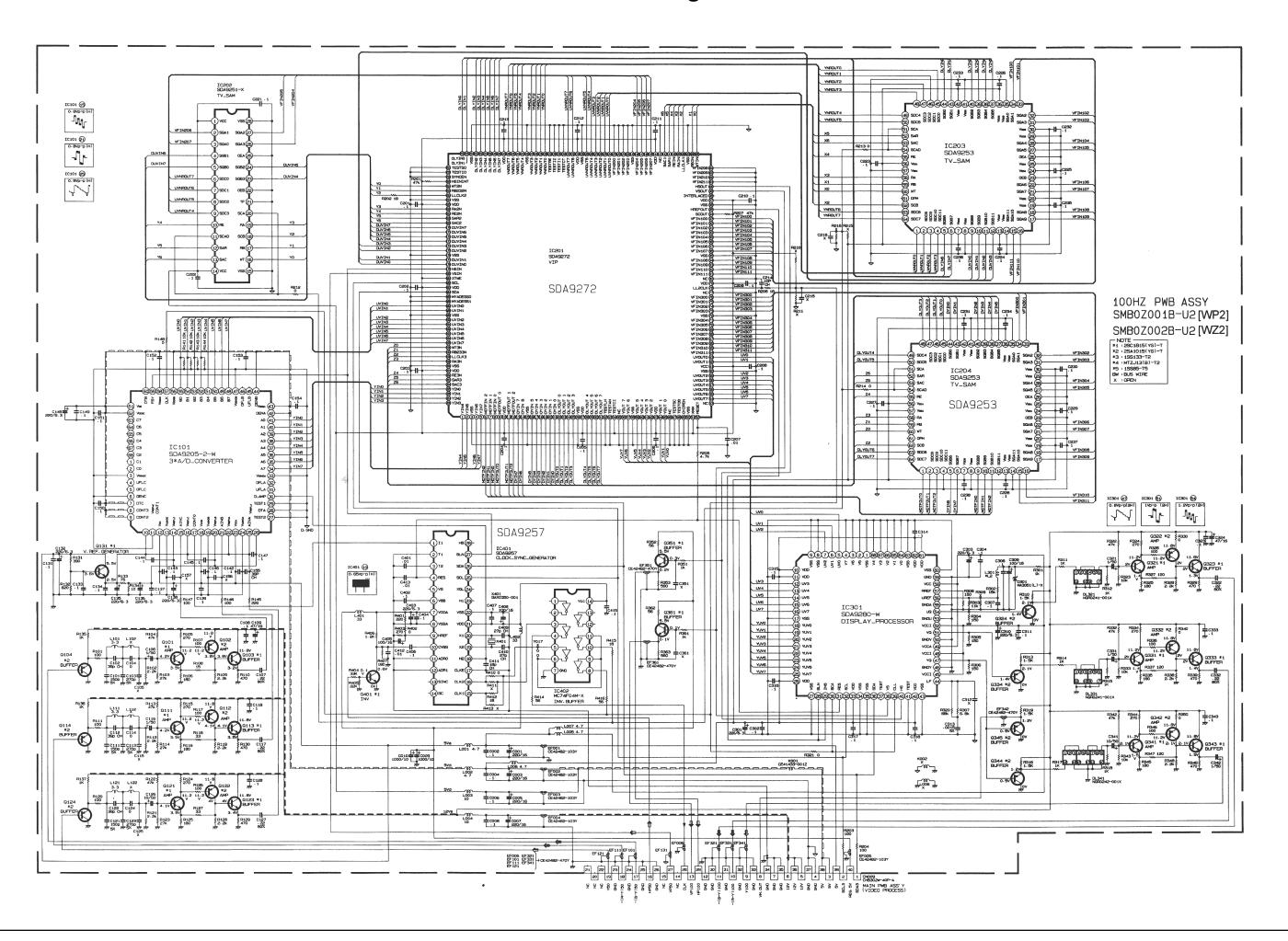


MODEL WP MODELS 9~14mm

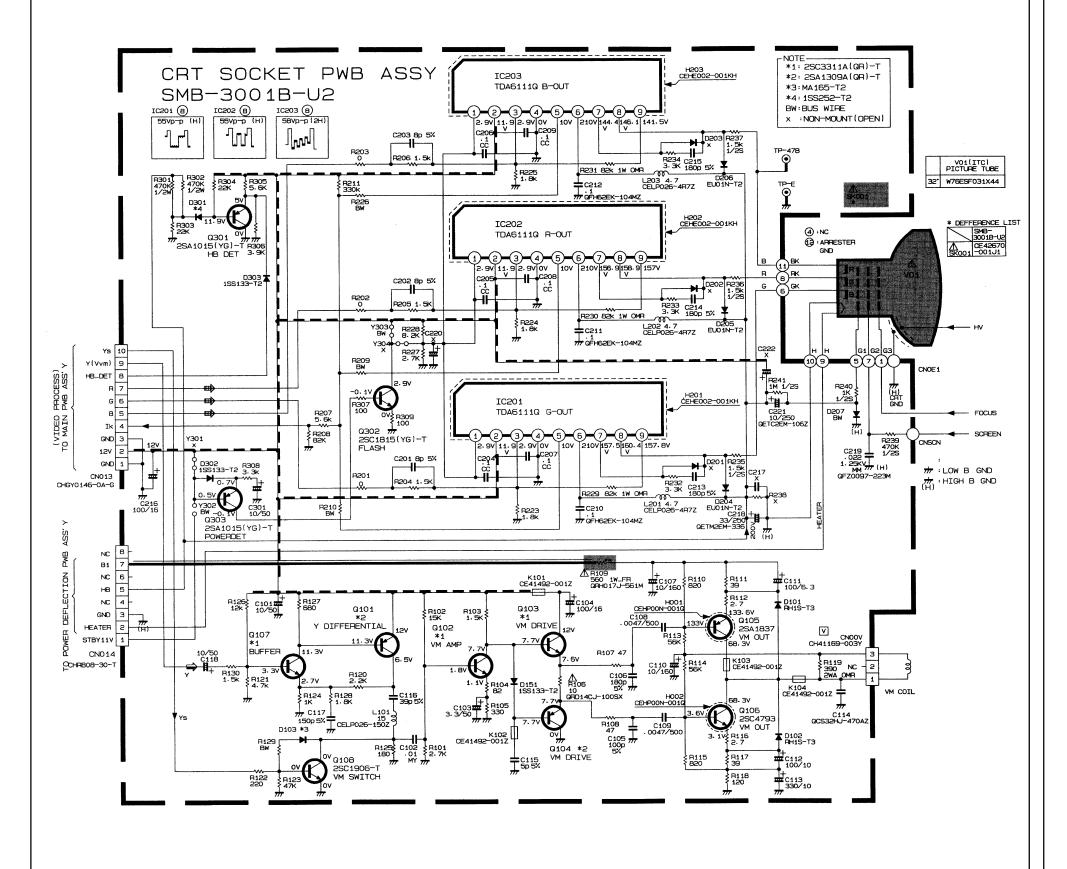




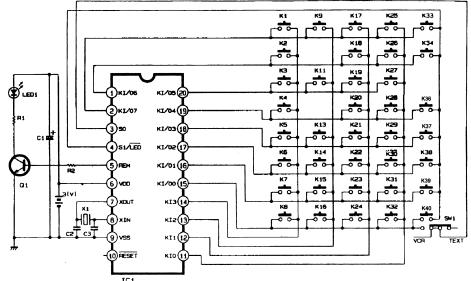
# 100Hz PCB Diagram



# CRT PCB Diagram



# **Remote Control Diagram**



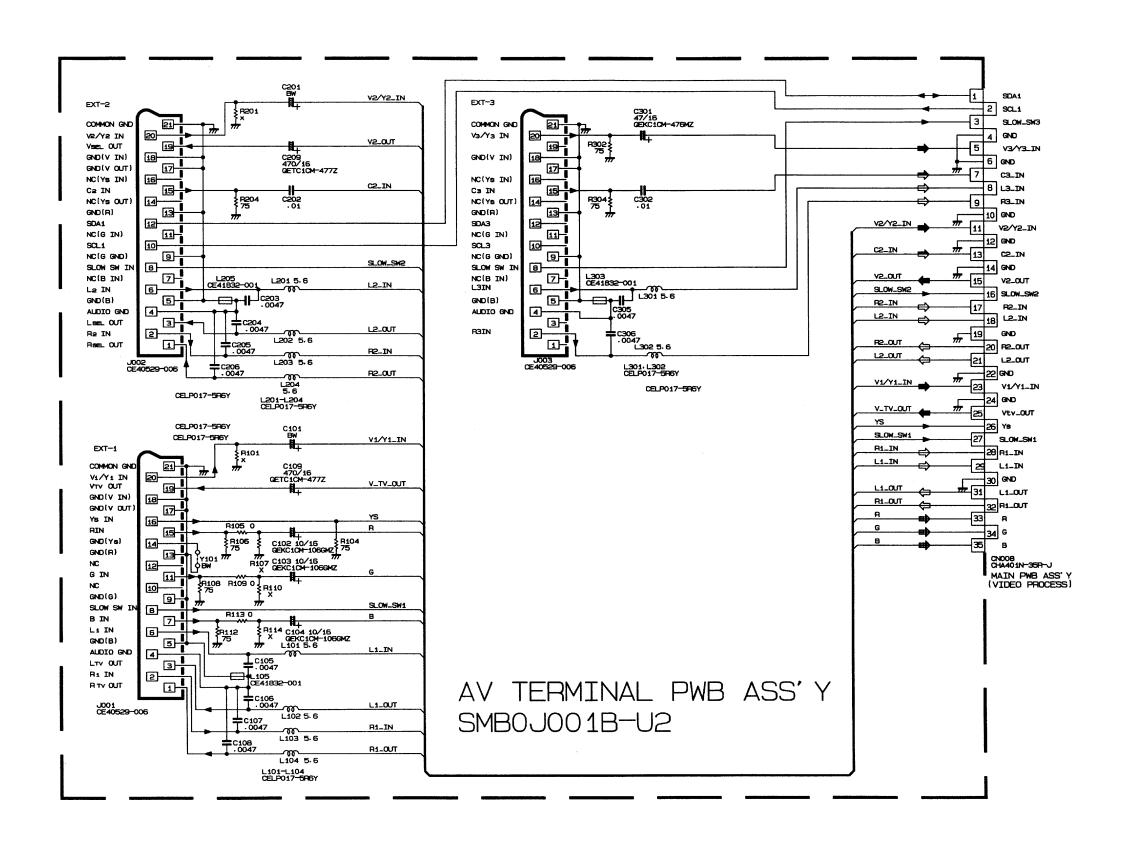
RM-C791-1E

REMOTE CONTROL UNIT

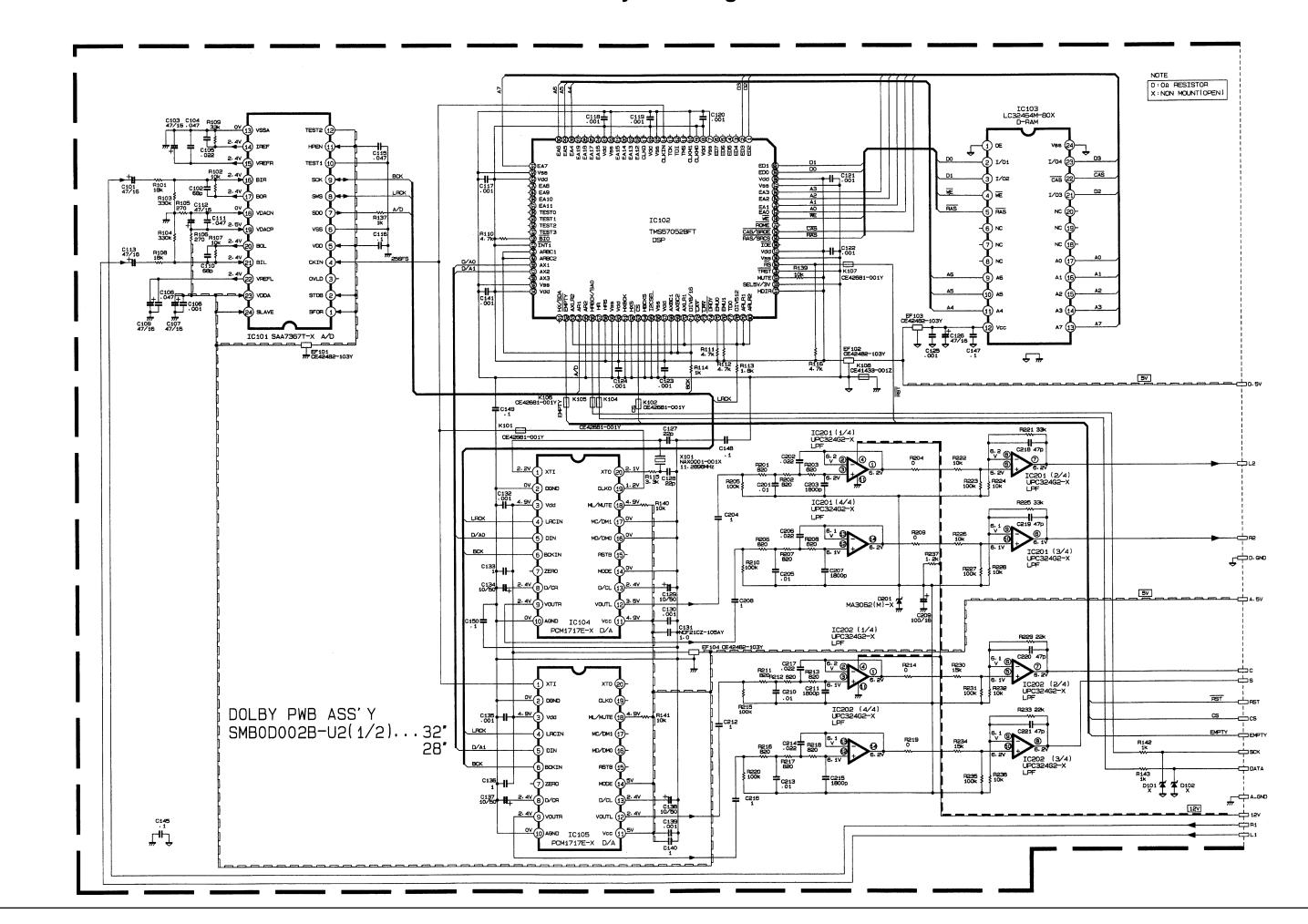
■KEY FUNCTION

No.	Key Name	No.	Key Name		No.	Key	Name	No.	Key I	Vame
1	1	14	3D €	)	22	MODE	(TEXT)	29	CANCEL	(TEXT)
2	2	15	P.BASS		22		◀ (VCR)	29	STOP	(VCR)
3	3	16	PIP		23	SIZE	(TEXT)	30	INDEX	(TEXT)
4	4	17	0		23	FF N	(VCR)	30	0/1	(VCR)
5	5	18	REVEAL	(TEXT)	24	SUB PAG	SE(TEXT)	31	<b>A</b>	
6	6	l '°	PLAY ▶	(VCR)	24	PV	(VCR)	32	4	
7	7	19	TV		25	N		33	▼	
8	8	20	MENU/O	K	26	STORE	(TEXT)	34	<b>•</b>	
9	9	21	HOLD	(TEXT)	20		(VCR)	36	FREEZE	
11	0	-	РΛ	(VCR)	27	()/I		37	MULTI	
13	ZOOM				28	( )		38	SWAP	
								39	SUB-P V	
								40	SUB-P A	

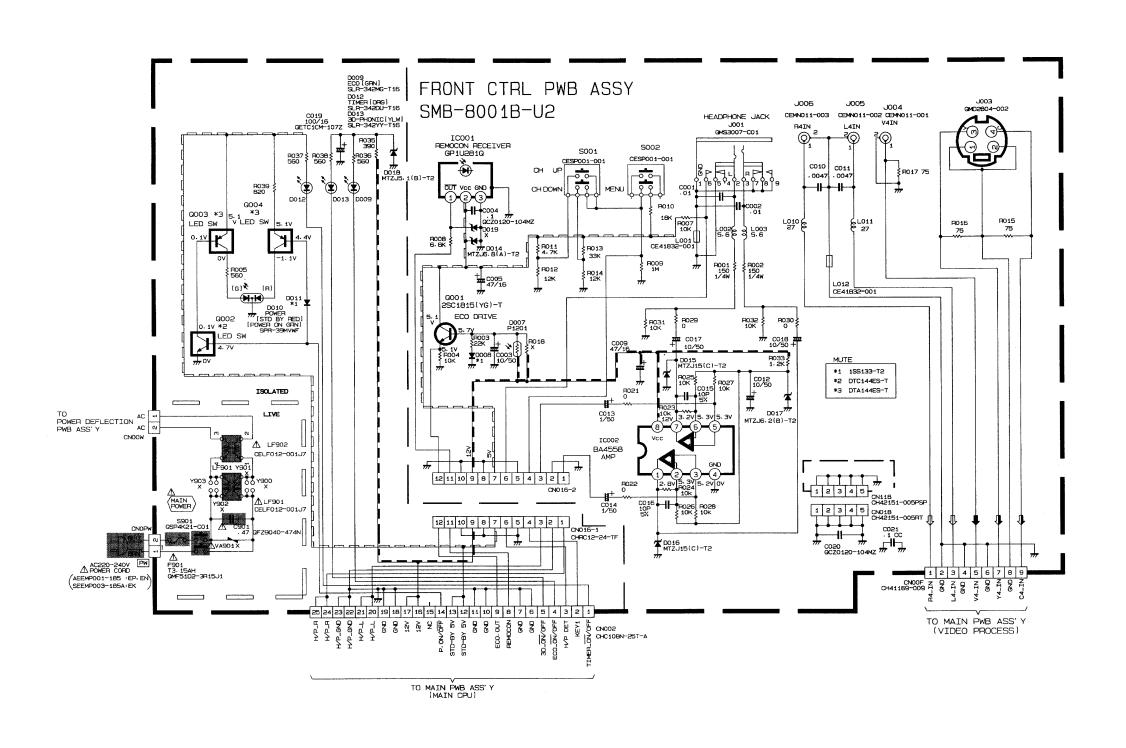
# **AV Terminal PCB Diagram**



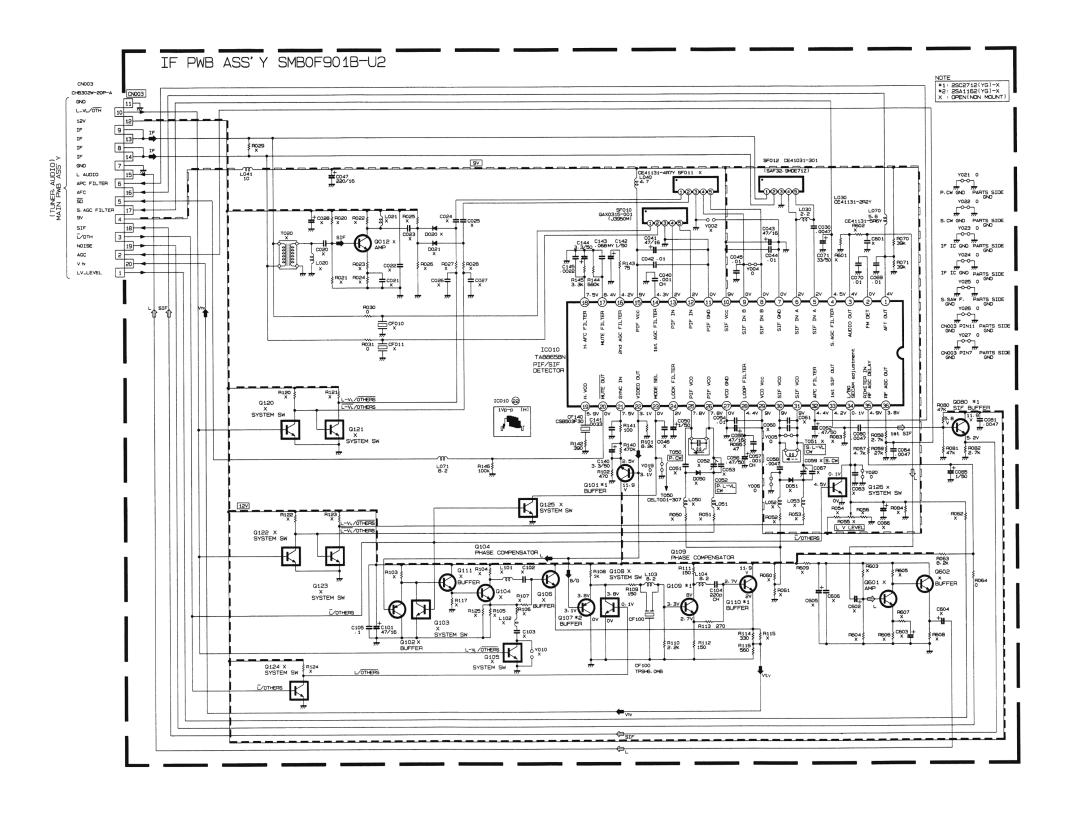
# **Dolby PCB Diagram**



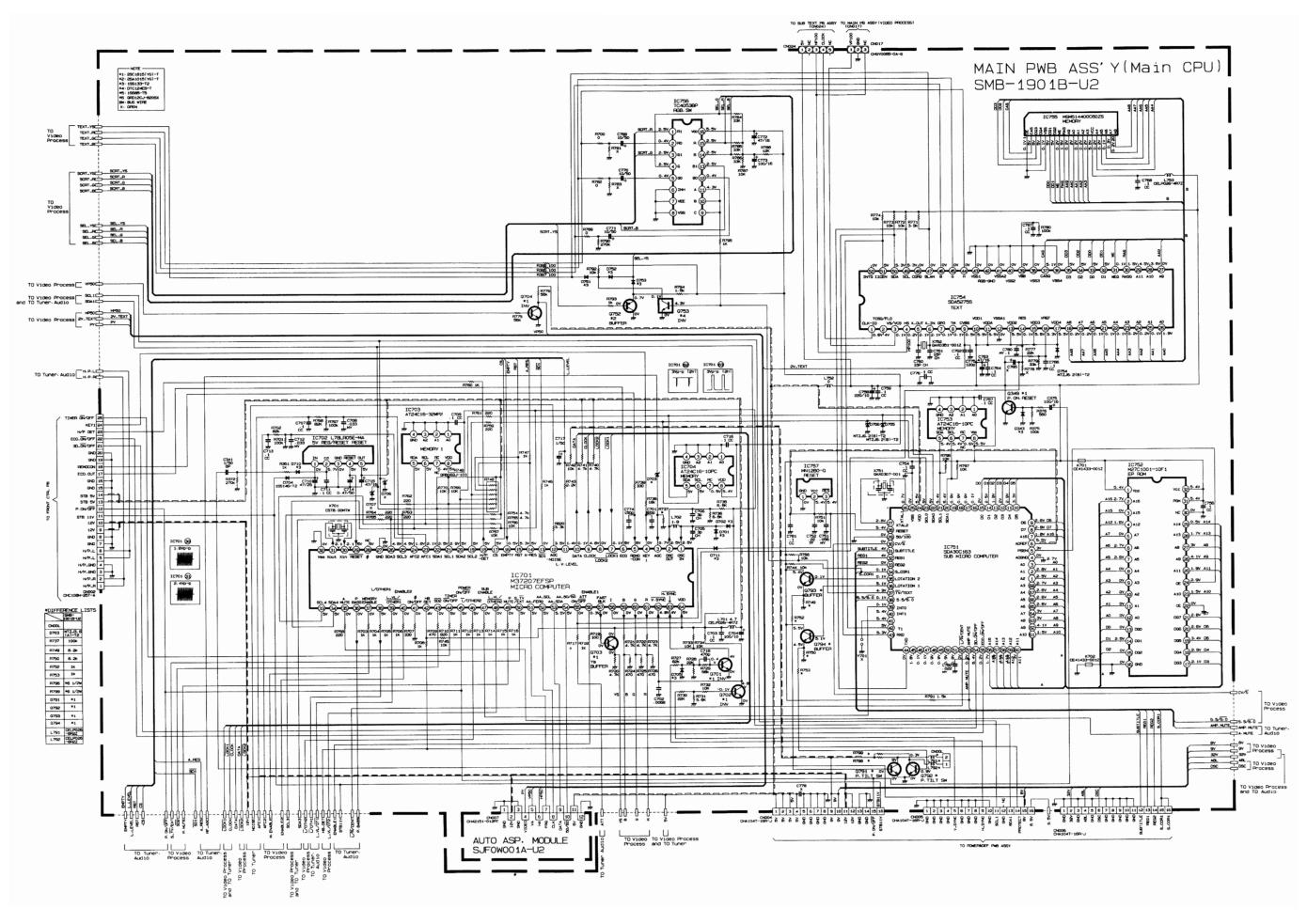
# **Front Control Diagram**



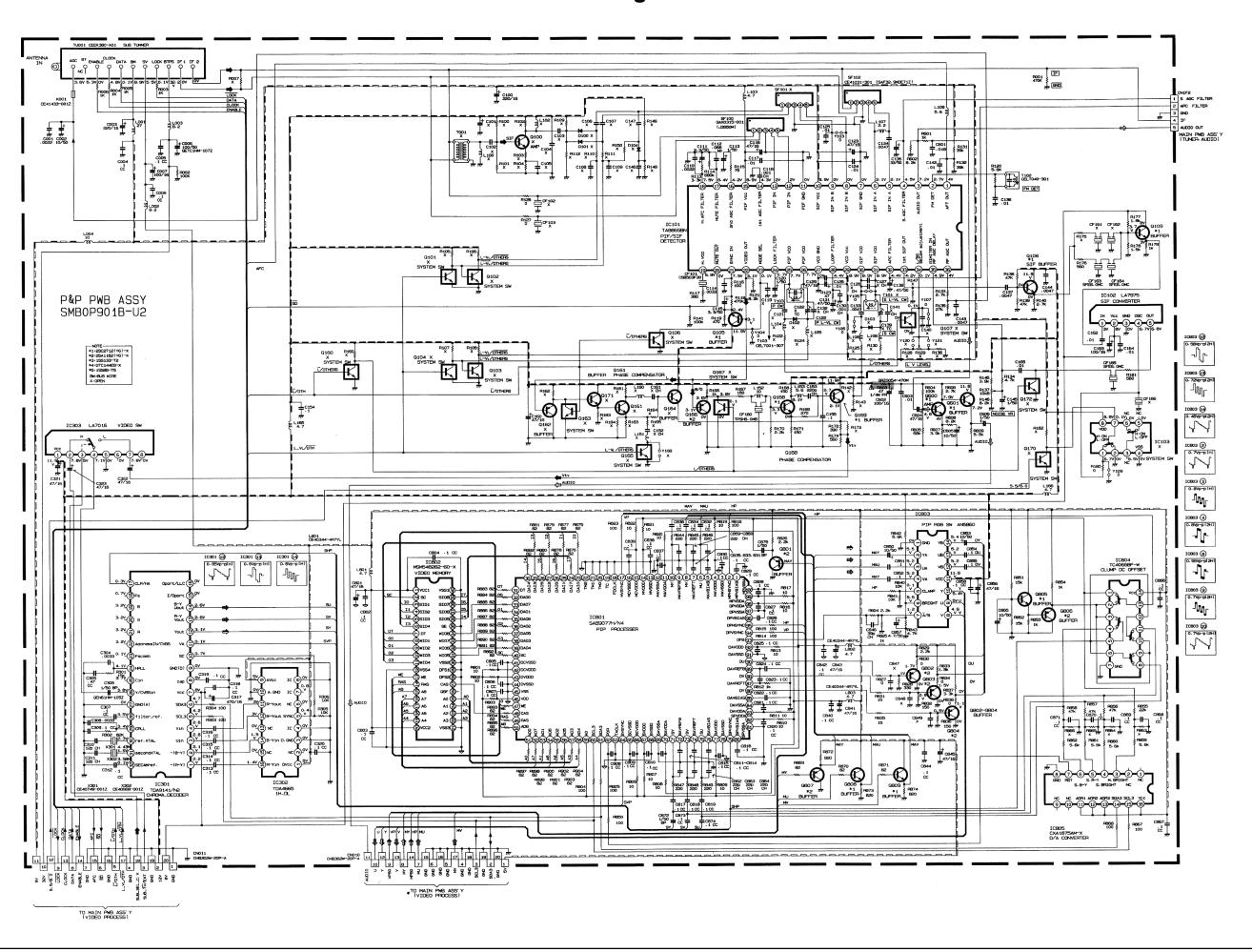
# **IF Module Diagram**



# Main CPU Diagram



# **PIP PCB Diagram**



# **Power Deflection Diagram** 11 IC401 (4) 0.5Vp-p(2V) 11 1C401 ② 30Vp-p (2V) MC973 777 220/10 0EHC1AN-227142 D955 (2017) (2 Z 5 8 2 1 2 2 3 4 1 7 1 5 . BY 0 . 7 1 1 1 0966 V 89 V P524 C532 470 5600 C531 100% TLP621(8) PANORAMA SW \*1:2SC1815(YG)-T \*2:2SA1015(YG)-T \*3:1SS133-T2 BW:BUS WIRE X:NON MOUNT (OPTION) 2501 (G) 4Vp-p (2H) C408 220p/500V SMB-2001B-U2 2 ii 2 f 2 g ii 5 CH014

# **Video Processing Diagram** 1C303 (1) 1C303 (1) 3Vp-p (H) MAIN PWB ASS'Y VIDEO PROCESS SMB-1901B-U2 5.5/6.0 +5.5/6.0 7. 9V 0346 2. 6V BUFFER 0.9Vp-p1 1234 2.8Vp-p(2V) TO MAIN FB ASSY TO SUB TEXT FB ASSY (DNOS) 0.7Vp-p (H 2001 1 20 | 1 | 0002 (C346) | 1 | 0002 ( 0x009 17 6. вvp-р(н) 10303 (3) 10303 (3) 10303 (3) 10303 (4) (6.5 Mp-p. (H)) (6.5 Mp-p. (H)) (7.5 M C301 + C302 220/16 77 CC ONOR OHAMO18-35P-J AV TERMINAL PWB ASS'Y 1: 2Vp-p(2H) P217 2.2k R218 R216 R2 33k 33k C205 777 777 3.3/50 0.7vp-p IH R219 R220 390 0.8Vp-p(2H) [2°5∧b-b[S+1] T-0553 T-0554 T-0554 T-0554 T-0555 T-0353 0352 0362 0349 33 MTZJS. 2(8)-72 10301 @ DTC144ES-T OV OV R251 R253 C213 33k 33k 1/50 ## ## C214 3.3/50 3.250 m 3.250 m 3.250 m 3.250 m 4.250 m 4.250 m 4.250 m 5.250 m 6.250 m 6.2 2.9V 0302 \*1 100 2.3V 0402 R315 1.5k 0301 \*2 1.5k #2 BUFFER

# **Tuner Audio Diagram**

