BASIC OPERATION OF SERVICE MENU

1. Operate the SERVICE MENU with the REMOTE CONTROL UNIT.

2. In general, basic setting (adjustments) items or verifications are performed in the SERVICE MENU.

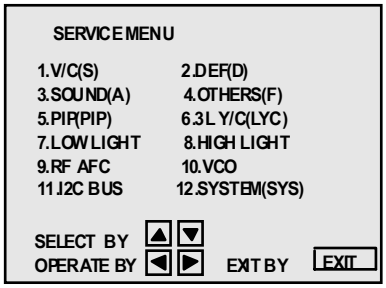
(1) V/C (S) ····· This set the setting values (adjustment values) of the VIDEO/CHROMA circuits.
(2) DEF (D) ····· This set the setting values (adjustment values) of the DEFLECTION circuit.
(3) SOUND (A) ····· This set the setting values (adjustment values) of the AUDIO circuit.
(4) OTHERS (F) ····· This is used when the OTHERS MODE is verified. **[Do not adjust]**
(5) PIP (PIP) ····· This set the setting values(adjustment values) of the PICTURE-IN-PICTURE circuit. (PIP is means as Picture In Picture) **[Do not have Function]**
(6) 3L Y/C (LCY) ····· This is used when the 3L Y/C MODE is verified.
(7) LOW LIGHT ····· This sets the setting values (adjustment values) of the WHITE BALANCE circuit.
(8) HIGH LIGHT ····· This sets the setting values (adjustment values) of the WHITE BALANCE circuit
(9) RF AFC ····· This is used when the RF AFC MODE is verified. **[Do not adjust]**
(10)VCO ····· This is used when the IF VCO is adjusted.
(11)I²C BUS ····· This is used when ON/OFF of the I²C BUS CTRL is set. **[Fixed ON]**
(12)SYSTEM (SYS) ····· This is used when the SYSTEM is verified. **[Do not adjust]**

3. Basic Operations of the SERVICE MENU

(1) How to enter the SERVICE MENU.

Press the **SLEEP TIMER** key and set the **SLEEP TIMER** for 「0 MIN」.

Then press the **DISPLAY** key and **VIDEO STATUS** key of the remote control unit at the same time to enter the SERVICE MENU screen.



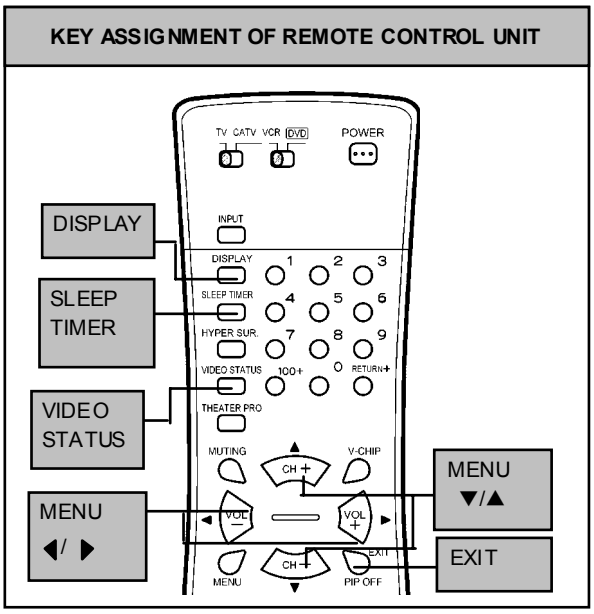
(2) SERVICE MENU screen selection

In SERVICE MENU, press the MENU▼/▲(CH-/+) key to select any of the SUB MENU items.
(The letters of the selected items are displayed in yellow.)

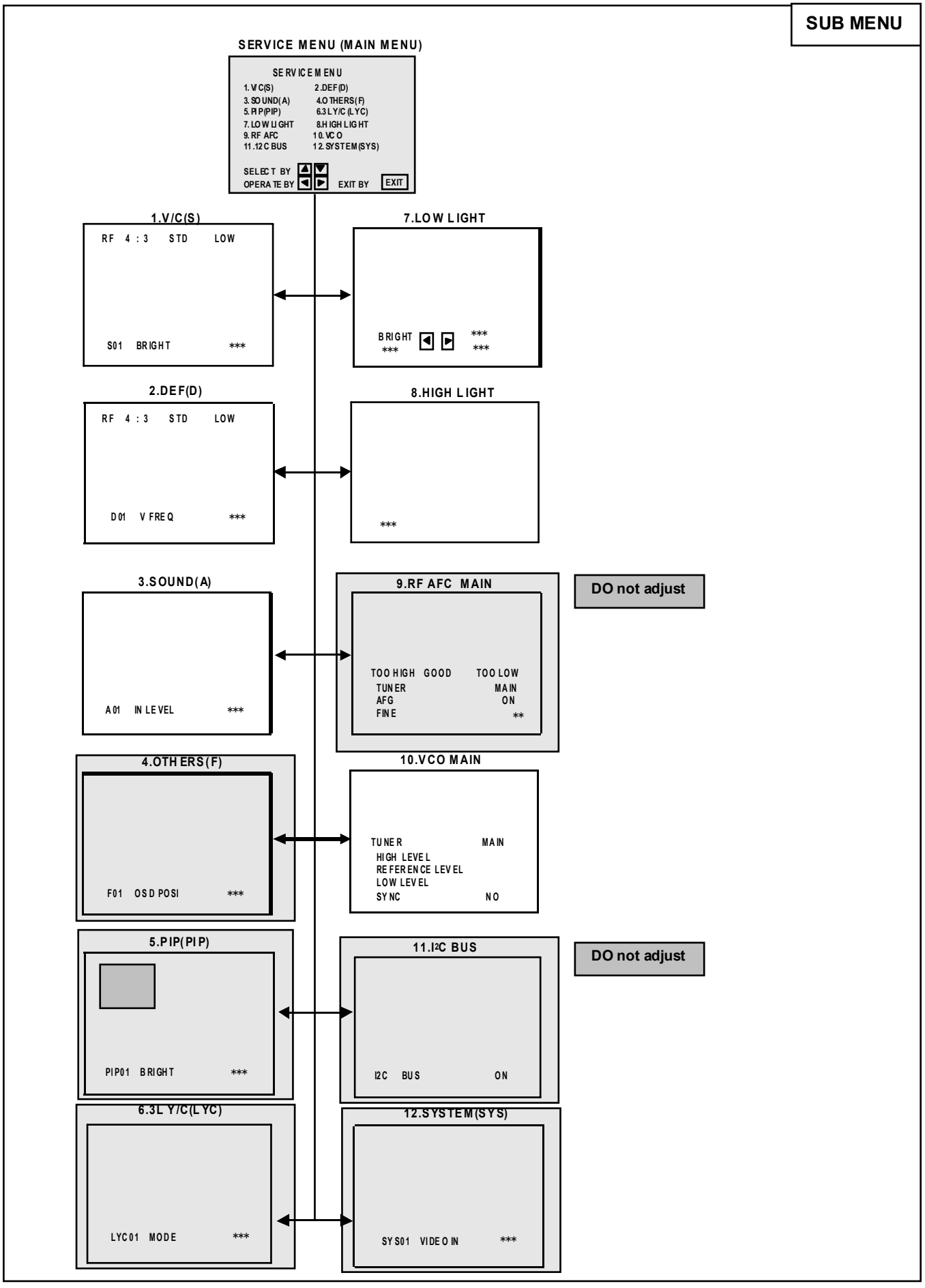
(3) Enter the any setting (adjustment) mode

- **1.V/C (S), 2.DEF (D), 3.SOUND (A), 4.OTHERS (F), 5.PIP (P), 6.3L Y/C (LYC), 7.LOW LIGHT, 8.HIGH LIGHT, 9.RF AFC 10.VCO 11.I²C BUS** and **12.SYSTEM (SYS)** mode

1) If select any of **1.V/C (S) / 2.DEF (D) / 3.SOUND (A) / 4.OTHERS (F) / 5.PIP (PIP) / 6.3L Y/C (LYC) / 7.LOW LIGHT / 8.HIGH LIGHT / 9.RF AFC / 10.VCO / 11.I²C BUS /12.SYSTEM (SYS)** items, and the MENU ◀/▶ (VOL-/+) key is pressed from SERVICE MENU (MAIN MENU), the each screens will be displayed as shown in figure page later.
2) Then the settings or verifications can be performed



SUB MENU

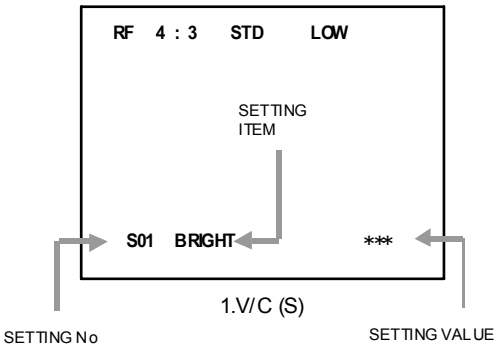

SERVICE MENU (MAIN MENU)
SERVICE MENU
1. V/C(S)
2. DEF(D)
3. SOUND(A)
4. OTHERS(F)
5. PIP(PIP)
6.3 LY/C(LYC)
7. LOW LIGHT
8. HIGH LIGHT
9. RF AFC
10. VCO
11. I2C BUS
12. SYSTEM(SYS)
SELECT BY
OPERATE BY
EXIT BY
EXIT
1.V/C(S)
RF 4 : 3 STD LOW
S01 BRIGHT ***
7.LOW LIGHT
BRIGHT ***
2.DEF(D)
RF 4 : 3 STD LOW
D01 V FREQ ***
8.HIGH LIGHT
***
3.SOUND(A)
A01 IN LEVEL ***
9.RF AFC MAIN
TOO HIGH GOOD TOO LOW
TUNER MAIN
AFG ON
FINE **
DO not adjust
4.OTHERS(F)
F01 OSD POSI ***
10.VCO MAIN
TUNER MAIN
HIGH LEVEL
REFERENCE LEVEL
LOW LEVEL
SYNC NO
5.PIP(PIP)
PIP01 BRIGHT ***
11.I2C BUS
I2C BUS ON
DO not adjust
6.3LY/C(LYC)
LYC01 MODE ***
12.SYSTEM(SYS)
SYS01 VIDEO IN ***

(4) Setting method

1) MENU ▼/▲ (CH-/+) key.
Select the SETTING ITEM.

2) MENU ◀ / ▶ (VOL-/+) key
Setting (adjust) the SETTING VALUE of the SETTING ITEM.
When the key is released the SETTING VALUE will be stored (memorized).

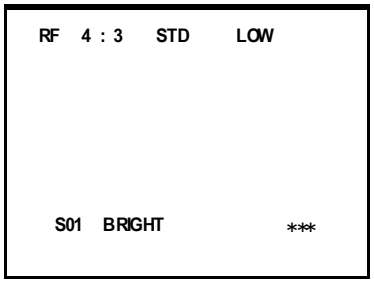
3) EXIT key
Returns to the previous screen.



1.V/C (S)

(5) Releasing SERVICE MENU

1) After returning to the SERVICE MENU upon completion of the setting (adjustment) work, press the EXIT key again.



2.DEF (D)

★ The settings for LOW LIGHT and HIGH LIGHT are described in the WHITE BALANCE page of ADJUSTMENT.

★ The setting for MAIN VCO are described in the VCO page of ADJUSTMENT.

INITIAL SETTING VALUE OF SERVICE MENU

1. Adjustment of the SERVICE MENU is made on the basis of the initial setting values ; however, the new setting values which set the screen in its optimum condition may differ from the initial setting.
2. Do not change the initial Setting Values of the Setting (Adjustment) items not listed In "ADJUSTMENT".

● V / C MODE

-- can not be adjustment

No.	Setting item	Variable range	Initial setting value					
			RF		EXTERNAL (S,CV)		COMPONENT	
			STANDARD	THEATER	STANDARD	THEATER	STANDARD	THEATER
S01	BRIGHT	0～127	64	--	--	--	--	--
S02	PICTURE	0～127	65	--	--	--	--	--
S03	COLOR	0～127	45	--	--	--	47	--
S04	TINT	0～127	60	--	--	--	64	--
S05	DETAIL	0～63	30	--	35	--	40	--
S06	BRIGHT +-	-128～+127	--	0	-2	--	+1	--
S07	PICT+-	-128～+127	--	-15	0	--	0	--
S08	COLOR+-	-128～+127	--	-3	0	--	--	--
S09	TINT+-	-128～+127	--	-6	+2	--	--	--
S10	DETAIL+-	-128～+127	--	+3	--	--	--	--

No.	Setting item	Variable range	Initial setting value							
			RF/EXT (S,CV)				COMPONENT			
			STANDARD		THEATER		STANDARD		THEATER	
			LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH
S11	R CUT OFF	0～255	50	--	--	--	--	--	--	--
S12	G CUT OFF	0～255	50	--	--	--	--	--	--	--
S13	B CUT OFF	0～255	50	--	--	--	--	--	--	--
S14	R DRIVE	0～127	64	--	--	--	--	--	--	--
S15	B DRIVE	0～127	64	--	--	--	--	--	--	--
S16	R CUT+-	-128～+127	--	0	0	0	-10	--	--	--
S17	G CUT+-	-128～+127	--	0	0	0	0	--	--	--
S18	B CUT+-	-128～+127	--	0	0	0	-10	--	--	--
S19	R DRV+-	-128～+127	--	+5	+13	+7	0	--	--	--
S20	B DRV+-	-128～+127	--	+6	-25	-9	0	--	--	--
S21	NTSC MAT	0～3	3	3	1	1	2	2	1	1
S22	BLACK ST	0～3	2	--	1	--	--	--	--	--
S23	DCREST	0～1	1	--	1	--	--	--	--	--
S24	DCRSW	0～1	1	--	1	--	--	--	--	--

No.	Setting item	Variable range	Initial setting value		
			RF	EXTERNAL (S,CV)	COMPONENT
S25	ASY SHRP	0～7	4	4	4
S26	BPF FO	0～1	0	0	--
S27	KILR OFF	0～1	0	0	--
S28	KILR SEN	0～1	1	1	--

No.	Setting item	Variable range	Initial setting value	No.	Setting item	Variable range	Initial setting value
S29	RGB MUTE	0～1	**0**	S39	Y MUTE	0～1	**0**
S30	BLUE B	0～1	**0**	S40	SVM GAIN	0～3	**0**
S31	VIDEO SW	0～3	**3**	S41	SVM PH	0～3	**0**
S32	CMP ABCL	0～15	**0**	S42	WPL	0～1	**0**
S33	RGB ABCL	0～1	**0**	S43	COL GMM	0～1	**0**
S34	OSD CONT	0～63	**6**	S44	V1 GAIN	0～1	**4**
S35	SUB CONT	0～15	**8**	S45	AGC ADJ	0～127	**80**
S36	ABL GAIN	0～3	**0**	S46	VMOFF DE	-128～+127	**0**
S37	ABL PNT	0～3	**3**	S47	APC CLK	0～1	**1**
S38	Y GAMMA	0～3	**1**				

● **DEF MODE**

-- can not be adjustment

No.	Setting item	Variable range	Initial setting value	No.	Setting item	Variable range	Initial setting value
D01	V FREQ	0～3	**0**	D18	WVMT BTM	0～3	**0**
D02	AFC GAIN	0～3	**0**	D19	EWCR TOP	0～31	**16**
D03	H POSI	0～31	**15**	D20	EWCR T+-	-128～+127	**--**
D04	H POSI+-	-128～+127	**--**	D21	EWCR BTM	0～31	**16**
D05	V PHASE	0～7	**0**	D22	EWCR B+-	-128～+127	**--**
D06	V PH+-	-128～+127	**--**	D23	EW PARA	0～63	**26**
D07	V SIZE	0～+127	**65**	D24	EW PRA+-	-128～+127	**--**
D08	V SIZE+-	-128～+127	**--**	D25	V EHT	0～7	**0**
D09	V CENTER	0～63	**32**	D26	V EHT+-	-128～+127	**--**
D10	V CENT+-	-128～+127	**--**	D27	H EHT	0～7	**0**
D11	V S CORR	0～15	**0**	D28	H EHT+-	-128～+127	**--**
D12	V S CO+-	-128～+127	**--**	D29	TRAPEZ	0～63	**34**
D13	V LIN	0～15	**8**	D30	TRAPEZ+-	-128～+127	**--**
D14	V LIN+-	-128～+127	**--**	D31	V AGC	0～1	**0**
D15	H SIZE	0～63	**32**	D32	BLANK SW	0～1	**0**
D16	H SIZE+-	-128～+127	**--**	D33	VRMP BI	0～1	**0**
D17	WVMT TOP	0～3	**0**				

● **SOUND MODE**

No.	Setting item	Variable range	Initial setting value
A01	IN LEVEL	0～15	**012**
A02	LOW SEP	0～63	**039**
A03	HI SEP	0～63	**016**
A04	SAPC	0～1	**000**
A05	BBE BASS	-128～+127	**000**
A06	BBE TRE	-128～+127	**000**

Setting item can not display

● **OTHERS MODE (Do Not adjust)**

No.	Setting item	Variable range	Initial setting value	No.	Setting item	Variable range	Initial setting value
F01	OSD POSI	0～255	**33**	F15	VCSN 1	0～63	**0**
F02	OSD PREQ	0～255	**85**	F16	VCSN 2	0～255	**10**
F03	CCD POSI	0～63	**94**	F17	VCSN 3	0～63	**20**
F04	CCD FREQ	0～255	**85**	F18	VCSN STP	0～63	**02**
F05	OSD CONT	0～63	**11**	F19	VN DAT A	-128～+127	**+8**
F06	PUR WBCK	0～2	**0**	F20	VM DAT B	-128～+127	**-4**
F07	PUR CONT	0～255	**62**	F21	VM DAT C	-128～+127	**-10**
F08	SN TYPE	0～255	**0**	F22	VM DAT D	-128～+127	**-16**
F09	YCSN TM	0～255	**5**	F23	VM DAT E	0～255	**0**
F10	YCSN E	0～63	**5**	F24	VMOFF TY	0～63	**0**
F11	YCSN F	0～255	**16**	F25	YC VMOFF	0～255	**255**
F12	YCSN G	0～255	**32**	F26	EZSF TM	0～255	**40**
F13	VNR CHK	0～63	**3**	F27	XDSID TM	0～255	**15**
F14	VCSN TM	0～255	**5**	F28	FM TRAP	0～1	**0**

● **3L Y / C MODE (Do not adjust)**

No.	Setting item	Variable range	Initial setting value
LYC01	MODE	0～7	**4**
LYC02	VENH	0～7	**1**
LYC03	PDSOFF	0～1	**0**
LYC04	CB	0～1	**0**
LYC05	VNLR	0～15	**2**
LYC06	GSEL0	0～1	**0**
LYC07	GSEL1	0～1	**1**
LYC08	COR	0～3	**0**
LYC09	TRAP	0～1	**1**
LYC10	CHTRAP	0～1	**0**
LYC11	CBPF	0～1	**0**
LYC12	ENHOFF	0～1	**0**

● **SYSTEM MODE (Do not adjust)**

No.	Setting item	Variable range	Initial setting value	No.	Setting item	Variable range	Initial setting value
SYS01	VIDEO IN	0～4	**3**	SYS13	HYP SURR	0～1	**1**
SYS02	PIP	0～1	**0**	SYS14	16:9 MD	0～1	**0**
SYS03	3D Y/C	0～1	**0**	SYS15	HYP SCAN	0～1	**1**
SYS04	Y CV	0～1	**0**	SYS16	EZ SURF	0～1	**0**
SYS05	CCD PCHK	0～1	**1**	SYS17	ID DISP	0～1	**1**
SYS06	PURITY	0～1	**0**	SYS18	COMPULINK	0～1	**0**
SYS07	VM	0～1	**0**	SYS19	CCD	0～1	**1**
SYS08	NOISE CR	0～1	**0**	SYS20	VCHIP	0～1	**1**
SYS09	CLR TEMP	0～1	**1**	SYS21	VCHIP CA	0～1	**1**
SYS10	THEATER	0～1	**1**	SYS22	JVC LOGO	0～1	**1**
SYS11	THEATER PRO	0～1	**1**	SYS23	CMP IN	0～1	**1**
SYS12	BBE	0～1	**0**	SYS24	CXA1875	0～1	**0**

● **PIP MODE (Do not adjust)**

No.	Setting item	Variable range	Initial setting value	No.	Setting item	Variable range	Initial setting value
PIP01	BRIGHT	0～15	**0**	PIP27	UVPOLAR	0～1	**0**
PIP02	PICTURE	0～255	**30**	PIP28	MAT	0～1	**1**
PIP03	TINTI	0～63	**42**	PIP29	YCOR	0～1	**1**
PIP04	COLOR	0～15	**6**	PIP30	XFREQF	0～1	**1**
PIP05	R CUTOFF	0～15	**0**	PIP31	WTCHDG	0～1	**1**
PIP06	G CUTOFF	0～15	**0**	PIP32	COLON	0～1	**0**
PIP07	B CUTOFF	0～15	**0**	PIP33	ACQNEW	0～1	**0**
PIP08	R DRIVE	0～255	**63**	PIP34	DSTDET	0～1	**1**
PIP09	G DRIVE	0～255	**65**	PIP35	CRIBEOK	0～1	**0**
PIP10	B DRIVE	0～255	**65**	PIP36	FCBEOK	0～1	**0**
PIP11	L POSI	0～255	**22**	PIP37	NOCRID	0～1	**0**
PIP12	R POSI	0～255	**15**	PIP38	NONSED	0～1	**0**
PIP13	UPR POSI	0～127	**12**	PIP39	PIP ADJ	0～15	**4**
PIP14	LWR POSI	0～127	**11**	PIP40	BRI EXT	-128～+127	**0**
PIP15	PICT LCK	0～1	**1**	PIP41	PCT EXT	-128～+127	**0**
PIP16	SELDEL	0～15	**0**	PIP42	TNT EXT	-128～+127	**0**
PIP17	AGCFIX	0～1	**1**	PIP43	COR EXT	-128～+127	**0**
PIP18	AGCADST	0～1	**0**	PIP44	R-D EXT	-128～+127	**0**
PIP19	AGC	0～15	**7**	PIP45	G-D EXT	-128～+127	**0**
PIP20	BLKINVB	0～1	**0**	PIP46	B-D EXT	-128～+127	**0**
PIP21	BLKINVR	0～1	**0**	PIP47	BRT COMP	-128～+127	**0**
PIP22	VSPDEL	0～31	**0**	PIP48	PCT COMP	-128～+127	**0**
PIP23	VSPISQ	0～1	**1**	PIP49	TNT COMP	0～40	**40**
PIP24	RGBIN	0～1	**0**	PIP50	COR COMP	0～15	**5**
PIP25	FRSEL	0～1	**1**	PIP51	R-D COMP	-128～+127	**0**
PIP26	OUTFOR	0～1	**0**	PIP52	G-D COMP	-128～+127	**0**
				PIP53	B-D COMP	-128～+127	**0**

NOTE The AV-20D303/S model do not have PIP function, But, if memory data is out of variable range, occasionally some problems happen. Then we need to input these data.

● **LOW LIGHT MODE**

No.	Setting item	Variable range	Initial setting value
1	RED	0～255	**50**
2	GREEN	0～255	**50**
3	BLUE	0～255	**50**

● **HIGH LIGHT MODE**

No.	Setting item	Variable range	Initial setting value
1	RED	0～255	**64**
2	BLUE	0～255	**64**

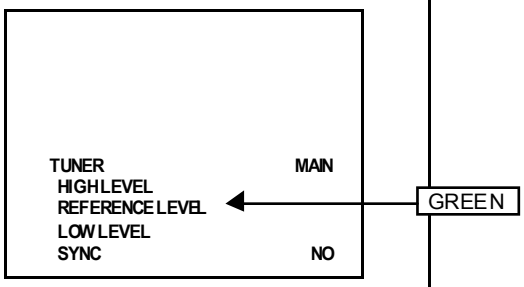
■ ADJUSTMENTS

B1 POWER SUPPLY

Item	Measuring instrument	Test point	Adjustment part	Description
Check of B1 POWER SUPPLY	DC Voltmeter	【B1】 Connector TP-91 TP-E(⏚)		1. Receive the black-and-white signal. (color off) 2. Connect the DC voltmeter to【B1】connector【1】pin (TP-91) and TP-E(⏚) (B1 connector【3】pin). 3. Confirm that the voltage is DC134V±2V.

ADJUSTMENT OF VCO

Item	Measuring instrument	Test point	Adjustment part	Description
MAIN VCO adjustment	Signal generator		10.VCO MAIN CW TRANSF.(T111) [MAIN PWB]	● It must not adjust without signal. 1. Select a receivable broadcast . 2. Push the MENU ▼/▲(CH-/+) key, and select the 10.VCO mode from the SERVICE MENU. 3. Push the MENU ◀/▶ (VOL-/+) key, and select MAIN. 4. Confirm that the color change from 「HIGH LEVEL」 to 「LOW LEVEL」 by CW TRANSF T111 at MAIN PWB, and check the 「SYNC : YES」. 5. Adjust until 「REFFERENCE LEVEL」 mark turns green. And then confirm that the 「SYNC : YES」 again.



ADJUSTMENT OF RF AGC

Item	Measuring instrument	Test point	Adjustment part	Description
RF. AGC adjustment			S45 AGC ADJ	1. Receive a black and white signal (colour off). 2. Select **S45 AGC ADJ** of the V/C MODE. 3. Press the MUTING key and turn off color. 4. With the MENU ◀(VOL-) key to get the noise in the screen picture (zero side of setting value). 5. Press the MENU ▶ (VOL+) key several times and step when noise disappears from the screen (at that time, not to increase the value too much). 6. Change to other channels and make sure that there Is no irregularity. 7. Press the MUTING key and get color out.

No	Setting item	Variable range	Initial setting value
S45	AGC ADJ	0～127	80