

ADJUSTING PROCEDURE OF EACH SECTION

The best adjustment is made before shipping. If any position deviation is found or after part replace is performed, adjust as follows.

1. Preparation for Adjustments

(1) Use the exclusive-use AC adapter or stable DC power supply.

AC adapter: UADP-0241CEPZ

DC power supply: 13 ± 0.5V 5.4A

[1] Adjustment Procedure

1-1. Adjusting the checker

Turning on the power (initialization) → Setting the model and size in inches → Transferring the model-specified data to the E²PROM (I²C) → Calling the adjustment process mode → Starting the adjustment (+B adjustment)

1-2. Adjusting the finish process

Reassembling the set → Turning on the power → Calling the adjustment process mode (using the remote controller) → Adjusting the counter bias, TV contrast and white balance

[2] Calling the MAIN adjustment process mode

There are the following two ways to choose from.

- Set the Pin (81) (KEY4) or Pin (82) (KEY5) of IC2001 (microprocessor) to "L", turn on the power.
- For servicing, hold down the TV/VIDEO and MENU keys at once, and turn on the POWER switch. (Make sure the process mode "K" appears at the top left of the screen.) Then press the CH DOWN and VOL DOWN keys at once. (Make sure the adjustment process mode screen shows up.) To quit this mode, turn off the power. (Or turn off the POWER switch or use the remote controller's OFF key.)

[3] Using the keys for the adjustment process

Selecting a reception channel

- Using the CH UP/DOWN key, turn up and down reception (broadcasting) channels.

Just click on the key, and channels are selected on by one.

Hold down the key, and the next receivable channel is searched up and down.

- Adjustment items

Adjust each of the items by using the MENU SELECT, CURSOR UP/DOWN and VOL UP/DOWN keys (on the set or on the remote controller).

- Select an adjustment item using the CURSOR UP/DOWN key.

- An adjustment item is toggled on and off by activating the MENU SELECT key (next item).

Let's suppose that the item at the bottom of a page is now selected. When the MENU SELECT key is activated here, the item at the top of the next page will be selected.

[4] Initialization

4-1. Set pins (81) and (82) of IC2001 (microprocessor) to GND. Turn on the power.

4-2. Select a model number (E1H).

4-3. Select the inch size (20).

[5] Adjustment

5-1. +B adjustment (R3760 Variable resistor)

- 1) Receive the colour bar signal.
- 2) Adjust the voltage at pin (2) of P3702 to 5.00 ± 0.02 V.

Note: The 5.0 V level is used as reference for all the line voltages. Make this adjustment as precisely as possible.

5-2. Counter bias adjustment: COM BIAS on page 2

Adjust the "COM BIAS" setting until the contrast gets optimum (the black portion blackest). The adjustment guideline is around 96.

5-3. TAMP adjustment

- 1) Feed the colour bar pattern signal.
- 2) See if the "Y" reading on adjustment process page 2 is within the range shown below. If not, adjust the "NTSC TAMP" setting to bring the "Y" reading within the specified range.

Model	LC20E1H/M
Adjustment value	BB~CA

- 3) If the "NTSC TAMP" setting has been readjusted, write down its new setting in the "PAL TAMP", "SECAM TAMP", "PAL-M TAMP" and "PAL-N TAMP" items manually.

(Page 2 of adjustment process OSD)

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
0		2																										
1		▶	C	O	M		B	I	A	S																9	6	
2			N	T	S	C		T	A	M	P															2	4	
3			P	A	L		T	A	M	P																2	4	
4			S	E	C	A	M		T	A	M	P														2	4	
5			P	A	L	-	M		T	A	M	P														2	4	
6			P	A	L	-	N		T	A	M	P														2	4	
7			R	C	U	T	O	F	F																	-	5	
8			G	C	U	T	O	F	F																		0	
9			B	C	U	T	O	F	F																		+	3
10			G	3			B	3			R	3				0	0			0	0					0	0	
11			G	1			B	4				Y				0	0			0	0					C	6	
12			T	A	M	P		H																			C	A
13			T	A	M	P		L																			B	B

Y Data
(White 75%)

5-4. White balance adjustment

- 1) Feed the monoscope pattern signal.
- 2) Adjust the "RCUTOFF" and "BCUTOFF" settings on adjustment process page 2 to achieve the color at the same level as with the standard set.

Note: Keep the "RCUTOFF" and "BCUTOFF" settings as an odd number, whenever possible, in the range below.

••• -9, -7, ••• -1, +1, ••• +7, +9 •••

If set to an even number, horizontal streaks may occur with a specific-gradation monochrome signal.

5-5. Screen position adjustment (Only for LC-20E1H)

- 1) Set the value of "PAL SFIF" setting in page 13 of adjustment process as "13" from "17".

(Page 13 of adjustment process OSD)

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
0	1	3																										
1			P	A	L		T	V		C	O	L	O	R									3	0	0	0		
2			P	A	L		A	V		C	O	L	O	R									3	0	0	0		
3			P	A	L		T	V		T	I	N	T											+	7	0		
4			P	A	L		T	V		T	I	N	T											+	7	0		
5			P	A	L	-	B	R	I	G	H	T	N	E	S	S										+	8	
6			P	A	L	-	P	E	A	K	I	N	G		F	I	L	T	E	R							0	
7			P	A	L		T	V		H	-	P	E	A	K	I	N	G									3	
8			P	A	L		A	V		H	-	P	E	A	K	I	N	G									3	
9			P	A	L		T	V		A	V	O		S	T	A	R	T						1	5	2		
10		▶	P	A	L		S	F	I	F																1	3	◀
11			P	A	L		S	C	I	N	C	1												1	5	9	3	
12			P	A	L		T	V		L	D	L	Y													-	2	
13			P	A	L		T	V		L	D	L	Y													-	2	

Set the "PAL SFIF"
setting to "13"

[6] Lamp error detection

6-1. Functional description

This LCD colour television has a function (lamp error detection) to be turned OFF automatically for safety when the lamp or lamp circuit is abnormal.

If the lamp or lamp circuit is abnormal, or some other errors happen, and the lamp error detection is executed, the followings occur.

- 1 The main unit of television is turned OFF 5 seconds after it is turned ON. (The power LED on the front side of TV turns from green to red.)
- 2 If the situation 1 happens 5 times sequentially, television can not be turned ON. (The power LED remains red.)

6-2. Countermeasures

6-2-1. Check when turning OFF the lamp error detection

When television is turned OFF by the lamp error detection mentioned above, it enters the adjustment process with the power LED red. Entering the adjustment process turns OFF the error detection and turns ON TV.

This enables the operation check to detect errors in the lamp or lamp circuit.


Check whether "ERROR NO RESET" on line 9, page 1 of the adjustment process is 1 or more. If it is 1 or more, it indicates the lamp error detection was executed.

6-2-2. Resetting of the lamp error count

After confirming that the lamp or lamp circuit is normal, reset the lamp error count. Select "ERROR NO RESET" on line 9, page 1 of the adjustment process and set the number to 0 using the volume button.

Page 1 of the adjustment process

1		
MODEL		E1H
INCH SIZE		20
NTSC PWM FREQ		0C0
PAL PWM FREQ		0BD
NTSC PWM DUTY		0
PAL PWM DUTY		0
TV GAIN		OFF
ERROR NO RESET		5
PUBLIC MODE		ON
E 1 H V E R 1 . 0 0		



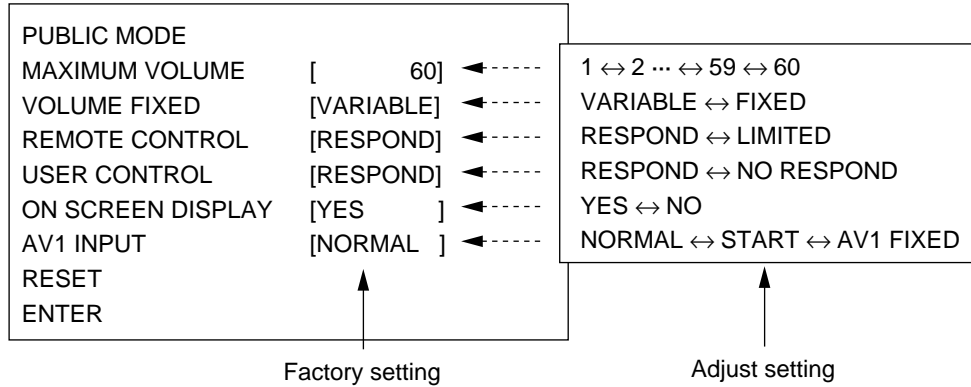
Afterwards, perform the operation check to confirm that the lamp error detection does not function.

[7]. Public mode

- How to enter into PUBLIC MODE

1. Turn off TV by pressing MAIN POWER switch.
2. While pressing at same time VOL(+) key and CH(▲)key, press MAIN POWER switch for more than 2 seconds. TV will turn on, and you will see the screen display a setting of PUBLIC MODE.

• Setting screen of "PUBLIC MODE"



1. You can select each item of functions by pressing cursor UP/DOWN keys or CH▲/▼ Keys on the remote control or CH▲/▼ keys on the LCD TV. The letter of selected item turns to yellow colour when you selected it.
2. The setting position of each item of functions are made by pressing cursor RIGHT/LEFT keys on the remote control or VOL (+)(-)keys on the LCD TV.
3. Select ENTER position after you set all functions, and press cursor RIGHT/LEFT keys on the remote control or VOL(+)(-)keys on the LCD TV for confirmation.
Unless otherwise you make ENTER confirmation, the settings will not be memorized.

6-functions of Public Mode settings expand for public application

1. MAXIMUM VOLUME (1———60)
You can set the maximum volume at your desire level.
2. VOLUME FIXED (VARIABLE / FIXED)
You can fix the sound volume at your desire level.
When you set to "FIXED", the sound volume which you just set is fixed.
3. REMOTE CONTROL (RESPOND / LIMITED)
If you set "LIMITED", remote control keys of POWER, CH▲/▼, VOL(-)/(+) and BRIGHT keys are responded, but other keys are not responded.
This is a position that you can not make MENU adjustments.
4. USER CONTROL (RESPOND / NO RESPOND)
"NO RESPOND" means that the TV does not respond when you press a user control buttons except main power button on the main unit.
5. ON SCREEN DISPLAY (YES / NO)
If you set "NO" position, OSD will not appear.
6. AV1 INPUT (NORMAL / START / AV1 FIXED)
Some application use DVD or VCR connecting to AV1 input of our monitor and you will not want to change it to other mode, such as Component or AV2 input.
You can set the position of input "AV1 FIXED".
For other application that you want to start AV1 every time when you press power button, and you may select other input mode after then, set it at "START" position.
7. RESET
You can cancel all Public Mode settings. (It returns to the factory setting.)
8. ENTER
You make sure after you have specified all functions, then press the enter key. Unless otherwise you press the enter key, all positions that you have selected will not be set.