

Сервисные регулировки

Значения установок определены в оптимуме заводом изготовителем при выпуске аппарата. Если в процессе эксплуатации требуется изменить значения некоторых параметров, то производить регулировку следует нижеуказанным методом.

1 Процесс входа и выхода из режима регулировки

- 1- Выключите сетевую вилку из розетки электропитания.
- 2- Держа нажатыми кнопки "VOL (—)" и "INPUT", включите сетевую вилку в розетку. На экране должна появиться буква «K»: "K" color guide:
- 3-Затем нажмите одновременно кнопки "VOL (—)" и "P (—)". Множественные строки из оранжевых символов подтверждают вход в режим регулировки. Если у вас не получилось с первого раза войти в режим сервиса (Дисплей отображает стандартную картинку запуска), повторите процедуру.
- 4- для выхода из режима установки отключите сетевой шнур от розетки и снова включите (требуется подождать около 10 сек)

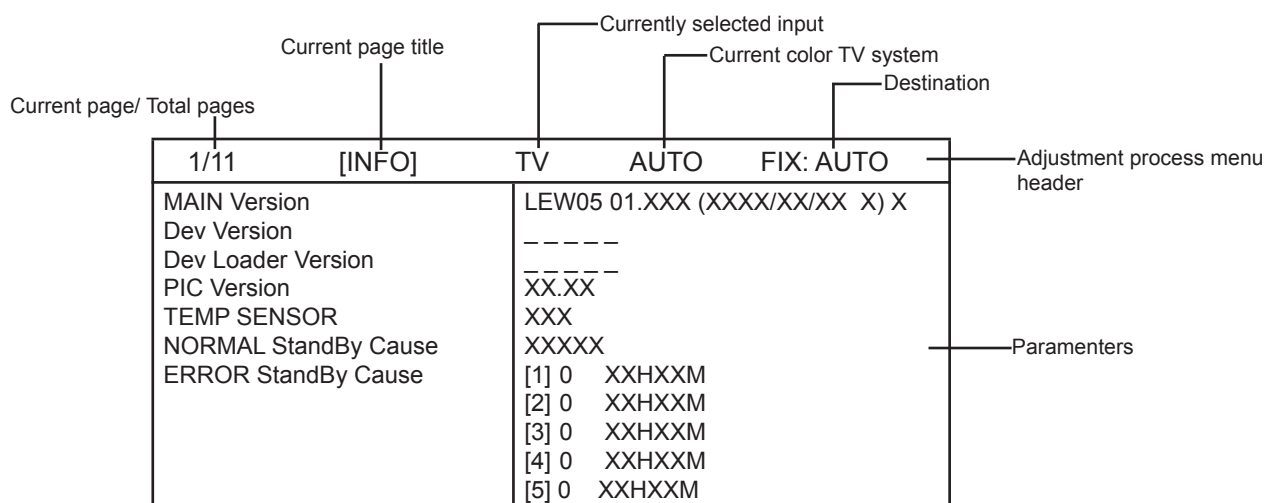
2 Функции кнопок ПДУ .

2.1 Основные операции

Кнопки ПДУ	Кнопки на ТВ	Функция
P (Λ / V)	P (Λ / V)	Перемещение по списку вверх/вниз
VOL (+/-)	VOL (+/-)	Изменение выбранного пункта (+1/-1)
Cursor (UP / DOWN)	————	Переход страницы (вперёд/назад)
Cursor (LEFT / RIGHT)	————	Изменение очередности выбора (+10/-10)
INPUT SOURCE on remote controller	INPUT button	Переключение входов ТВ (TV → EXT1 → EXT2 → EXT3 → EXT4 → EXT5) (Не оперируется)
OK	————	Выполнение функции

Входной режим переключен автоматически, когда соответствующая(релевантная) установка начата насколько необходимый доступный входной сигнал

2.2 Описание дисплея



3. Сервисное регулировочное меню

The character string in brackets [] will appear as a page title in the adjustment process menu header.

Page	Line	Item	Description	Remarks (Adjustment detail, etc.)
1/11		[INFO]		
	1	Main Version	1.xxx (xx/xx/xxxx) x	Main microprocessor version (VCTP)
	2	Dev Version	-----	NOT USED
	3	Dev Loader Version	-----	NOT USED
	4	PIC Version	xx.xx	PIC version
	5	TEMP SENSOR	xxx	Temp inside cabinet (near panel)
	6	NORMAL STANDBY CAUSE	[X]0	Last status which cause standby
	7	ERROR STANDBY CAUSE	xxHxxM (X5)	Error standby cause Total operating time before error
2/11		[INIT]		
	1	FACTORY INIT	(EURO/UK/ITALY/France/RUSSIA)ENTER	Initialisation to factory settings
	2	PUBLIC MODE	OFF/ON	PUBLIC MODE flag setting
	3	Center Acutime	xxh xxM	Main operating hours
	4	RESET	OFF/ON	Main operating hours reset
	5	Backlight Acutime	xxH xxM	Backlight operating hours
	6	RESET	OFF/ON	Backlight operating hours reset
	7	Picture Read Pos X	0	x-axis setting of picture data
	8	Picture Read Pos Y	0	y-axis setting of picture data
	9	Picture Read Signal Type	PAL/COMP/HDMI/RGB	Signal type of picture data
	10	Picture Read	ON/OFF	Start/stop of picture data
3/11		[PAL. SECAM. N358]		
	1	RF-AGC ADJ	ENTER	RF AGC auto adjustment
	2	PAL+TUNER ADJ	ENTER	PALTUNER auto adjustment
	3	PAL ADJ	ENTER	PAL auto adjustment
	4	TUNER ADJ	ENTER	TUNER auto adjustment SD
	5	CONTRAST SD	32	contrast adjustment SECAM
	6	SECAM CB OFFSET	1	contrast adjustment SECAM
	7	SECAM CR OFFSET	1	contrast adjustment TUNER
	8	TUNER A DAC	32	DAC adjustment
	9	RF AGC	20	RF AGC adjustment
4/11		[COMP 15K]		
	1	COMP 15K ADJ	ENTER	COMP 15K auto adjustment
	2	COMP 15K CONTRAST	32	Contrast adjustment
5/11		[HDTV]		
	1	HDTV CONTRAST	32	Contrast adjustment
6/11		[TUNER]		
	1	TUNER TEST	ENTER	Tuning test (tuning into 224.25 MHz) (Not Operative)
7/11		[M GAMMA INFO]		
	1	M GAMMA IN 1	160	W/B adjustment, gradation 1 input setting
	2	M GAMMA IN 2	320	W/B adjustment, gradation 2 input setting
	3	M GAMMA IN 3	480	W/B adjustment, gradation 3 input setting
	4	M GAMMA IN 4	640	W/B adjustment, gradation 4 input setting
	5	M GAMMA IN 5	800	W/B adjustment, gradation 5 input setting
	6	M GAMMA IN 6	960	W/B adjustment, gradation 6 input setting
	7	M GAMMA IN WRITE	OFF/ON	EEP writing of adjustment values
	8	M GAMMA IN RESET	OFF/ON	Initialisation of adjustment values
8/11		[M GAMMA 1-3]		
	1	M GAMMA R 1	0	W/B adjustment, gradation 1R adjustment value
	2	M GAMMA G 1	0	W/B adjustment, gradation 1G adjustment value
	3	M GAMMA B 1	0	W/B adjustment, gradation 1B adjustment value
	4	M GAMMA R 2	0	W/B adjustment, gradation 2R adjustment value
	5	M GAMMA G 2	0	W/B adjustment, gradation 2G adjustment value
	6	M GAMMA B 2	0	W/B adjustment, gradation 2B adjustment value
	7	M GAMMA R 3	0	W/B adjustment, gradation 3R adjustment value
	8	M GAMMA G 3	0	W/B adjustment, gradation 3G adjustment value
	9	M GAMMA B 3	0	W/B adjustment, gradation 3B adjustment value
	10	M GAMMA WRITE	OFF/ON	EEP writing of adjustment values
9/11		[M GAMMA 4-6]		
	1	M GAMMA R 4	0	W/B adjustment, gradation 4R adjustment value
	2	M GAMMA G 4	0	W/B adjustment, gradation 4G adjustment value
	3	M GAMMA B 4	0	W/B adjustment, gradation 4B adjustment value
	4	M GAMMA R 5	0	W/B adjustment, gradation 5R adjustment value
	5	M GAMMA G 5	0	W/B adjustment, gradation 5G adjustment value
	6	M GAMMA B 5	0	W/B adjustment, gradation 5B adjustment value
	7	M GAMMA R 6	0	W/B adjustment, gradation 6R adjustment value
	8	M GAMMA G 6	0	W/B adjustment, gradation 6G adjustment value
	9	M GAMMA B 6	0	W/B adjustment, gradation 6B adjustment value
	10	M GAMMA WRITE	OFF/ON	EEP writing of adjustment values

Page	Line	Item	Description	Remarks (Adjustment detail, etc.)
10/11		[ETC]		
	1	EEP CLEAR	OFF/ON	Restore NVM data to default values
	2	EEP CLEAR B	OFF/ON	Restore NVM data to default values except adjustment data
	3	STAND BY CAUSE RESET	OFF/ON	Clearing of standby cause error list
	4	AUTO INSTALLATION SW	0/1	0: unfinished 1: finish (The setting takes effect the next time the power is turned on.)
	5	OPTION	0	
	6	COUNTRY	AUTO	AUTO: defects the actual region.
	7	L ERR RESET	0	Lamp error counter
	8	L ERR STOP	0/1	Stops Lamp Error feature (Not operative)
	9	I2C-OFF	ENTER	BUS STOP
11/11		LCD		
	1	OSC FREQ 50	62	
	2	OSC FREQ 60	62	
	3	PWM FREQ 50	0	
	4	PWM FREQ 60	0	
	5	PWM FREQ	409	
	6	PWM DUTY	227	
	7	PWM CTRL	0	

4 Special Features

- ERROR STAND-BY CAUSE (Page 1/11)

When the unit enters standby due to operational error, total time before the error and the cause of error is recorded on EEPROM, if possible. The values can be used to locate the fault for repair.

- EEP CLEAR (Page 10/11)

Restore NVM data to default values.

- EEP CLEAR B (Page 10/11)

Restore NVM data to default values except adjustment data.

5 Video Signal Adjustment Procedure

The adjustment process mode menu is listed in Section 3.

5.1. Signal check


Signal generator level adjustment check (Adjustment to the specified level).

- Composite signal PAL : 0.7Vp-p \pm 0.02Vp-p (Pedestal to white level)
- 15K Component signal : Y level 0.7Vp-p \pm 0.02Vp-p (Pedestal to white level)
- (50Hz) (576i/50Hz) PB, PR level 0.7Vp-p \pm 0.02Vp-p

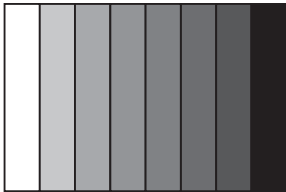

5.2. Entering the adjustment process mode

Enter the adjustment process mode according to Section 1.

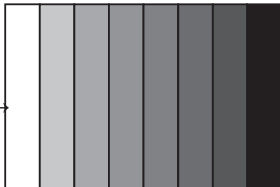
5.3. RF AGC Adjustment

	Adjustment point	Adjustment conditions	Adjustment procedure
1	Setting	[Signal] PAL Field Color Bar RF signal UV [Terminal] TUNER	» Feed the PAL color bar signal (E-12ch) to TUNER. Signal level: 52 \pm 1 dB μ V (75 \square LOAD) <div style="text-align: center;"> [E-12CH]  \square 100% white </div>
2	Auto adjustment performance	Adjustment process page 3	Bring the cursor on [RF AGC ADJ] and press [OK]. [RF AGC ADJ OK] appears when finished.

5.4. PAL Signal & Tuner Adjustment

	Adjustment point	Adjustment conditions	Adjustment procedure
1	Setting	[Signal] PAL Full Field Color Bar Composite or RF signal [Terminal] EXT3 VIDEO IN TUNER	» Feed the PAL full field color bar signal (75% color saturation) to EXT3 VIDEO IN. » Feed the RF signal (PAL color bar) to TUNER. » Make sure the PAL color bar pattern (E-12) has the sync level of 7:3 with the picture level. <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;"> <p>[VIDEO IN SIGNAL]</p>  <p>□ 100% white</p> </div> <div style="text-align: center;"> <p>[E-12CH]</p>  <p>□ 100% white</p> </div> </div>
2	Auto adjustment performance	Adjustment process page 3	Bring the cursor on [EPAL + TUNER ADJ] and press [OK]. [EPAL + TUNER ADJ OK] appears when finished.

5.5. ADC Adjustment (Component 15K)

	Adjustment point	Adjustment conditions	Adjustment procedure
1	Adjustment	[Signal] (576i/50) COMP15K, 50Hz 100% Full Field Color Bar [Terminal] EXT4 [COMPONENT]	» Feed the COMPONENT 15K 100% full field color bar signal (100% color saturation) to EXT4 COMPONENT IN. <div style="text-align: center;">  </div>
2	Auto adjustment performance	Adjustment process page 4	Bring the cursor on [ECOMP15K ADJ] and press [OK]. [ECOMP15K ADJ OK] appears when finished.

6 White Balance Adjustment

Adjustment procedure Page 7/11 shows the value of adjustment gradation (IN value) and Adjustmnet procedure Page 8/11 & 9/11 show adj. offset value (initial value : 0). White balance adjustment is executed adjusting the adj. offset value, indicated on Page 8/11 & 9/11.

Condition of the inspection: • Backlight: MAX (+8) [DYNAMIC]
• Colorimeter at screen centre

Adjustment reference device: Minolta CA-210

Adjustment spec. ± 0.004 , Inspection spec. : ± 0.006 (GAMMA 1)

Adjustment spec. ± 0.002 , Inspection spec. : ± 0.004 (GAMMA 2...6)

Adjustment: Check that the values on page 7/11 of process adjustment are set as below. If not, change them accordingly.

M GAMMA IN 1	160	M GAMMA IN 2	320
M GAMMA IN 3	480	M GAMMA IN 4	640
M GAMMA IN 5	800	M GAMMA IN 6	960

1- Display the current adjustment status at point 6. (Page 9/11 of process adjustment)

The pattern for checking the adjustment status is toggled by pressing the “6” button on the remote control.(Normal OSD display -> “6” -> pattern for check (OSD disappears) -> “6” -> normal OSD display -> ...)

2- Read the value of the luminance meter.

3- Change M GAMMA R6/M GAMMA B6 (adjustment offset value) on page 9/11 of process adjustment so that the values of the luminance meter approach **x = 0.2757** and **y = 0.2825**.

(Basically, G is not changed. If adjustment fails only with R and B, then G should be reduced. In this case, the weaker of R and B must be fixed.)

4- If G is changed in step “3”, change the values of M GAMMA G1 - M GAMMA G5 on pages 8/11 and 9/11 of process adjustment as follows. When not changed, go to step “5”.

Offset value of M GAMMA G1 = (Offset value of M GAMMA G6)*(160/960)

Offset value of M GAMMA G2 = (Offset value of M GAMMA G6)*(320/960)

Offset value of M GAMMA G3 = (Offset value of M GAMMA G6)*(480/960)

Offset value of M GAMMA G4 = (Offset value of M GAMMA G6)*(640/960)

Offset value of M GAMMA G5 = (Offset value of M GAMMA G6)*(800/960)

5-Display the adjustment status of the current point 5. (Each time the “5” button on the remote control is pressed, the adjustment status check pattern is toggled.)

(Normal OSD display -> “5” -> Pattern display (OSD disappears) -> “5” -> Normal OSD display ->...)

Change M GAMMA R5/M GAMMA B5 (adjustment offset value) on page 9/11 of process adjustment so that the values of the luminance meter approach **x = 0.272** and **y = 0.277**.

6- Repeat step “5” for GAMMA points 4, 3, 2, and 1.

7 QS Temperature NVM Data Confirmation

If during servicing of the LCD TV set, by software upgrading or by clearing NVM, it's necessary check QS Temperature data following the method described below:

Enter in Service Mode (Factory A).

Enter in Factory B page 1/25, by pressing “i+” key in normal R/C.

Go to page 24/25 by pressing twice “Cursor UP” key.

Verify and in case necessary modify according the attached list, “QS_D1” to “QS_D7” values, depending of the screen size.

	26 inch	32 inch	37 inch
QS_D1	58	74	51
QS_D2	76	89	72
QS_D3	92	101	90
QS_D4	105	112	106
QS_D5	118	123	121
QS_D6	254	133	254
QS_D7	255	255	255

NOTE:

-Use “P UP” or “P DOWN” for moving “up” or “down” inside the Service page.

-Use “VOL +” or “VOL -” for modifying data in “+1” or “-1” unit inside the Service page.

-Use “CURSOR RIGHT” or “CURSOR LEFT” for modifying data in “+10” or “-10” units inside the Service page.

8 Initialization to factory settings

Caution: When the factory settings have been made, all user setting data, including the channel settings, are initialized. (The adjustments done in the adjustment process mode are not initialized.) Keep this in mind when initializing these settings.

	Adjustment item	Adjustment conditions	Adjustment procedure
1	Factory settings	See to below caution	<p>» Enter the adjustment process mode. » Bring the cursor on to [INDUSTRY INIT] on page 2/11. » Use the [Volume + -] key to select a region from [EURO/UK/ITALY/France/RUSSIA] and press [ENTER]. "EXECUTING" appears and initialization starts. After a while, "OK" appears and the setting is complete.</p> <p>Note: Never turn the power off during initialization.</p>
			<p>The following settings will be back to their factory ones.</p> <ol style="list-style-type: none"> 1. User settings 2. Channel data (e.g. broadcast frequencies) 3. Password data

After adjustments, exit the adjustment process mode.
 To exit the adjustment process mode, unplug the AC power cord from the outlet to forcibly turn off the power.
 When the power is turned off with the remote control, unplug the AC power cord and plug it back in (wait approximately 10 seconds before plugging in the AC power cord).

9 Lamp error detection

9.1. 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 following 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.)

9.2 Countermeasures

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 "L ERROR RESET" on point 7, page 10/11 of the adjustment process is 1 or more. If it is 1 or more, it indicates the lamp error detection was executed. After confirming that the lamp or lamp circuit is normal, reset the lamp error counter pushing "OK" in the R/C. After resetting counter the label "OK" appears on Screen.

9.3. Reset standby cause error list

After confirming that the lamp error counter has been erased, select "STAND BY CAUSE RESET" on point 3, page 10/11 of the adjustment process and select ON using the right cursor. For execute press "OK" in the R/C and the label "OK" appears on Screen.