

5. Model Specification(EU)

Item	Specification		Remark	
Market	EU			
Broadcasting system	PAL BG/DK, PAL I/II, SECAM L/L'			
Available Channel	BAND	PAL		
	VHF/UHF	C1_C69		
	CATV	S1_S47		
Receiving system	Upper Heterodyne			
SCART Input(2EA)	PAL, SECAM, NTSC		Full Scart 1EA, Harf 1EA	
Video Input (1EA)	PAL, SECAM, NTSC		Side AV	
S-Video Input (1EA)	PAL, SECAM, NTSC		Side AV	S-Video Priority
Component Input (1EA)	Y/Cb/Cr, Y/ Pb/Pr			
RGB Input (1EA)	RGB-PC			
HDMI Input (2EA)	HDMI-DTV			
Audio Input (4EA)	PC Audio, AV (3A), Component (1EA)		L/R Input(PC 1EA,SCART 2EA, SIDE AV 1EA, Component 1EA)	
Variable Audio out(1EA)				

6. Component Video Input (Y, P_B, P_R)

Resolution	H-freq(kHz)	V-freq(kHz)	Pixel clock(MHz)	Proposed
720*480	15.73	59.94	13.500	SDTV, DVD 480I(525I)
720*480	15.75	60.00	13.514	SDTV, DVD 480I(525I)
720*576	15.625	50.00	13.500	SDTV, DVD 576I(625I) 50Hz
720*480	31.47	59.94	27.000	SDTV 480P
720*480	31.50	60.00	27.027	SDTV 480P
720*576	31.25	50.00	27.000	SDTV 576P 50Hz
1280*720	44.96	59.94	74.176	HDTV 720P
1280*720	45.00	60.00	74.250	HDTV 720P
1280*720	37.50	50.00	74.25	HDTV 720P 50Hz
1920*1080	33.72	59.94	74.176	HDTV 1080I
1920*1080	33.75	60.00	74.250	HDTV 1080I
1920*1080	28.125	50.00	74.250	HDTV 1080I 50Hz

7. RGB Input (Analog PC)

Resolution	H-freq(kHz)	V-freq(kHz)	Pixel clock(MHz)	Proposed	Remark
640*350	31.468	70.80	25.17	EGA	
720*400	31.469	70.80	28.321	DOS	
640*480	31.469	59.94	25.17	VESA(VGA)	
800*600	37.879	60.31	40.00	VESA(SVGA)	
1024*768	48.363	60.00	65.00	VESA(XGA)	
1280*768	47.776	59.87	79.50	WXGA	XGA only
1360*768	47.720	59.799	84.75	WXGA	XGA only
1366*768	47.720	59.799	84.75	WXGA	XGA only

8. HDMI input (DTV)

Resolution	H-freq(kHz)	V-freq(kHz)	Pixel clock(MHz)	Proposed
720*480	15.75	60.00	13.514	SDTV, DVD 480I(525I)
720*480	15.73	59.94	13.500	SDTV, DVD 480I(525I)
720*576	15.625	50.00	13.500	SDTV, DVD 576I(625I) 50Hz
720*480	31.47	59.94	27.000	SDTV 480P
720*480	31.50	60.00	27.027	SDTV 480P
720*576	31.25	50.00	27.000	SDTV 576P 50Hz
1280*720	44.96	59.94	74.176	HDTV 720P
1280*720	45.00	60.00	74.250	HDTV 720P
1280*720	37.50	50.00	74.25	HDTV 720P 50Hz
1920*1080	33.72	59.94	74.176	HDTV 1080I
1920*1080	33.75	60.00	74.250	HDTV 1080I
1920*1080	28.125	50.00	74.250	HDTV 1080I 50Hz
1920*1080	67.432	59.94	148.350	HDTV 1080P
1920*1080	67.5	60	148.5	HDTV 1080P
1920*1080	56.250	50	148.5	HDTV 1080P 50Hz

ADJUSTMENT INSTRUCTION

1. Application Range

This spec sheet is applied all of the 26/32/37/42" LCD TV(LP78A) by manufacturing LG TV Plant all over the world.

2. Specification

- 1) Because this is not a hot chassis, it is not necessary to use an isolation transformer. However, the use of isolation transformer will help protect test instrument.
- 2) Adjustment must be done in the correct order.
- 3) The adjustment must be performed in the circumstance of $25\pm 5^{\circ}\text{C}$ of temperature and $65\pm 10\%$ of relative humidity if there is no specific designation.
- 4) The input voltage of the receiver must keep 100~220V, 50/60Hz.
- 5) Before adjustment, execute Heat-Run for 30 minutes at RF no signal.

3. Adjustment items

3.1. PCB assembly adjustment items

- 1) Download the VCTP main software (IC500,VCT_Pro)
- 2) Channel memory (IC501,EEPROM)
- 3) Color carrier Adjustment

3.2. SET assembly adjustment items

- 1) DDC Data input.
- 2) Adjustment of White Balance.
- 3) Factoring Option Data input.

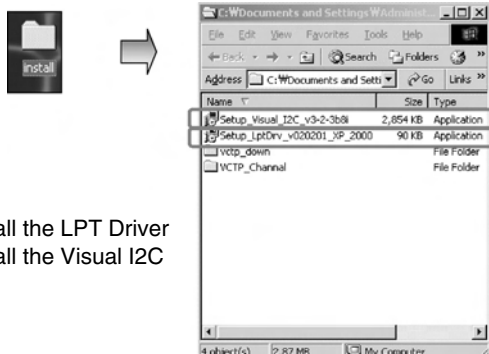
4. PCB assembly adjustment method (Using VCTP Download program)

4.1. Download program installation

- (1) Extract a Zip file



- (2) Visual I2C & LPT Driver Installation



Install the LPT Driver
Install the Visual I2C

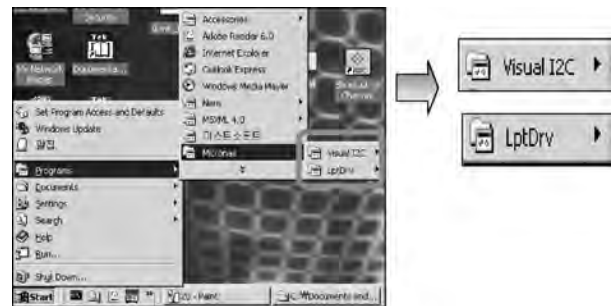
LPT Port Driver (LptDrv) Setups : Program Files > Micronas > Visual I2C > Port_Driver

*Use for Windows 95/98 : Setup_LptDrv_v0104_9x.exe

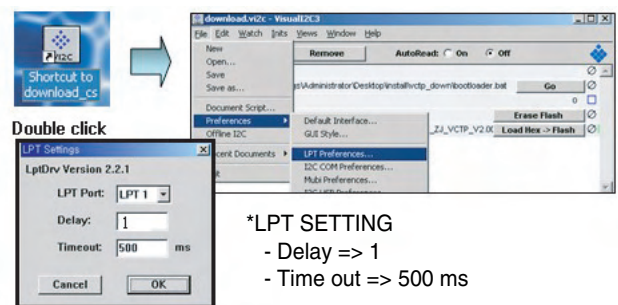
*Use for Windows 2000/XP : Setup_LptDrv_v0202_XP_2000.exe

*Use for Windows NT : Setup_LptDrv_v0104_NT.exe

- (3) Verification (Start > Programs > Micronas > Visual I2C or LptDrv)



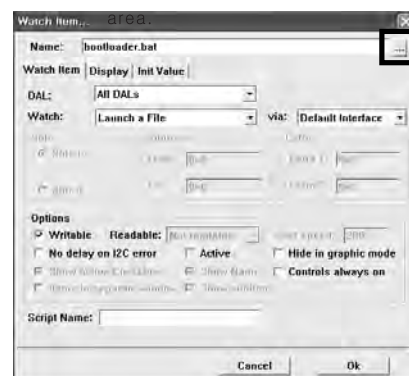
- (4) LPT delay setting(File > Preference > LPT preferences)



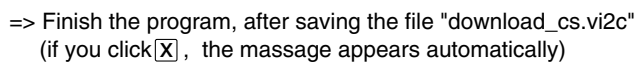
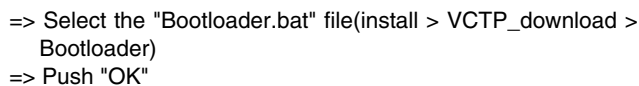
- (5) Exchange the bootloader.bat file.



- Double click the Red



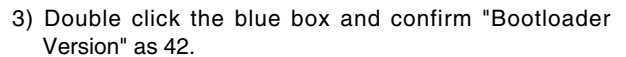
- Double click the Red area.



(1) Download method 1 (PCB Ass'y)

- 1) Connect the download jig to D-sub jack
- 2) Execute 'Download.vi2c' program in PC, then a main window will be opened

Double click



- 4) Click the "Erase Flash" button

- 5) Double click the download file low, then "edit" window will be opened

- 6) Click the choice button in the “edit window”, then “file choice window” will be opened.

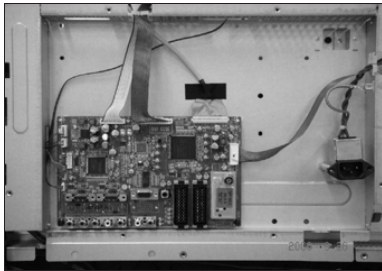
- 7) Choose the Hex file in folder and execute downloading with click " open" button.

- 8) Click OK button at the "edit window".
- 9) Under Downloading process

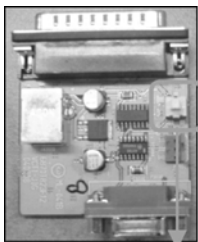


- 10) If download is failed, for example "No acknowledge from slave". Execute download again from(1).

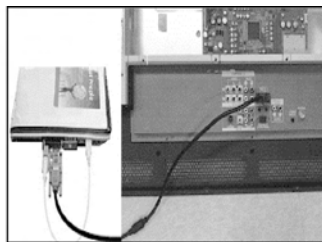
(2) Download method 2 (AV Plate Ass'y)



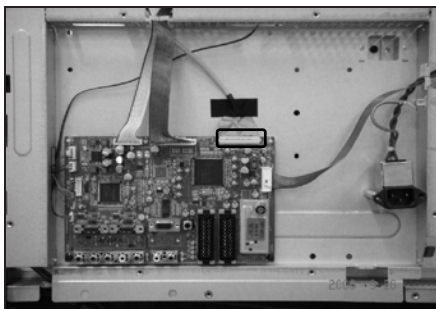
- 1) Push S/W 'ON" (connect SCL to GND using switch at Jig) and connect the download jig to D-sub jack.



Push S/W



- 2) Supply the power (Stand-by 5V) and wait for 3 seconds.



- 3) Push the S/W off (Disconnect SCL to GND using switch at jig).



Push S/W

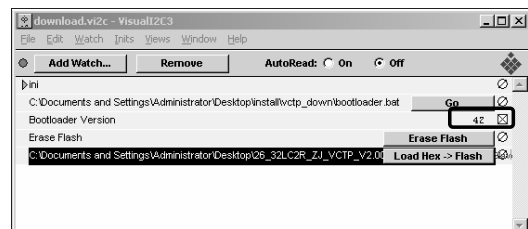
- 4) Execute 'Download.vi2c' program in PC, then a main widow will be opened.



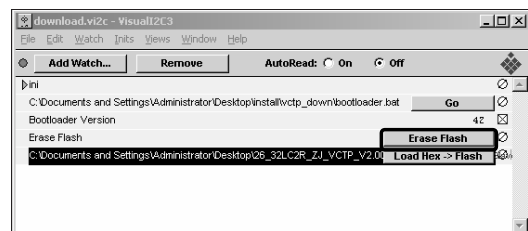
Double click



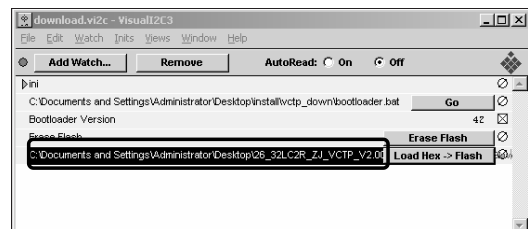
- 5) Double click the blue box and confirm "Bootloader Version" as 42.



- 6) Click the "Erase Flash" button.



- 7) Double click the download file low then, "edit" window will be opened.



- 8) Chlick the choice button I n the "edit window", then "file choice window' will be opened.

