

PHILIPS 22PFS5303, PHILIPS 24PFS5703 LCD TV - HOW TO UPGRADE THE SOFTWARE, ERROR CODES DIAGNOSING, SERVICE MODE, POWER SUPPLY AND AUDIO OUTPUT SCHEMATIC DIAGRAM



22PFS5303-12, 22PFS5403-12, 22PFT5303-05,
22PFT5303-12, 24PFS5303-12, 24PFS5703-12 - Platform: NT72461. Chassis
name: TPN18.1E LA

Always respect voltages. While some may not be dangerous in themselves, they can cause unexpected reactions that are best avoided. Before reaching into a powered TV set, it is best to test the high voltage insulation. It is easy to do, and is a good service precaution.

BOM identification

It should be noted that on the European Service website, "Alternative BOM" is referred to as "Design variant".

The third digit in the serial number (example: AG2B0335000001) indicates the number of the alternative B.O.M. (Bill Of Materials) that has been used for producing the specific TV set. In general, it is possible that the same TV model on the market is produced with e.g. two different types of displays, coming from two different suppliers. This will then result in sets which have the same CTN (Commercial Type Number; e.g. 28PW9515/12) but which have a different B.O.M. number.

By looking at the third digit of the serial number, one can identify which B.O.M. is used for the TV set he is working with. If the third digit of the serial number contains the number "1" (example: AG1B0335000001), then the TV set has been manufactured according to B.O.M. number 1. If the third digit is a "2" (example: AG2B0335000001), then the set has been produced according to B.O.M. no. 2. This is important for ordering the correct spare parts.

For the third digit, the numbers 1...9 and the characters A...Z can be used, so in total: 9 plus 26= 35 different B.O.M.s can be indicated by the third digit of the serial number.

Identification: The bottom line of a type plate gives a 14-digit serial number. Digits 1 and 2 refer to the production centre (e.g. SN is Lysomice, RJ is Kobierzyce), digit 3 refers to the B.O.M. code, digit 4 refers to the Service version change code, digits 5 and 6 refer to the production year, and digits 7 and 8 refer to production week (in

example below it is 2010 week 10 / 2010 week 17). The 6 last digits contain the serial number.



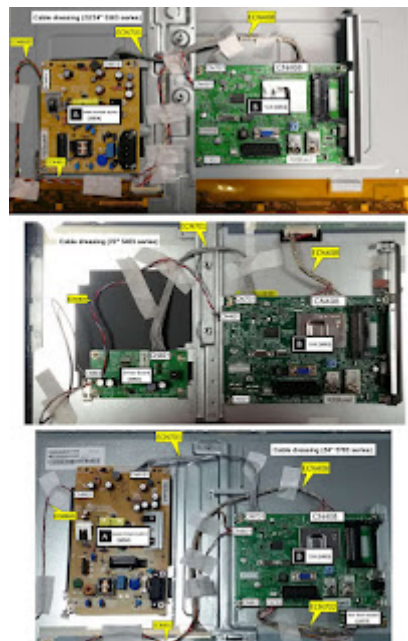
Board Level Repair (BLR) or Component Level Repair (CLR)

If a board is defective, consult your repair procedure to decide if the board has to be exchanged or if it should be repaired on component level.

If your repair procedure says the board should be exchanged completely, do not solder on the defective board.

Otherwise, it cannot be returned to the O.E.M. supplier for back charging.

Cable dressing



Service Alignment Mode (SAM)

To activate SAM, use one of the following methods:

Press the following key sequence on the remote control transmitter: “**062596**”, directly followed by the “**INFO/OK**” button. Do not allow the display to time out between entries while keying the sequence.

Or via ComPair.

After entering SAM, the following items are displayed, with “SAM” in the upper right corner of the screen to indicate that the television is in Service Alignment Mode.

How to Navigate

In the SAM menu, select menu items with the UP/DOWN keys on the remote control transmitter. The selected item will be indicated. When not all menu items fit on the screen, use the **UP/DOWN keys** to display the next/previous menu items.

With the “LEFT/RIGHT” keys, it is possible to:

(De) activate the selected menu item.

(De) activate the selected sub menu.

Change the value of the selected menu item.

When you press the MENU button once while in top level SAM, the set will switch to the normal user menu (with the SAM mode still active in the background).

How to Store SAM Settings

To store the settings changed in SAM mode (except the RGB Align settings), leave the top level SAM menu by using the POWER button on the remote control transmitter or the television set. The mentioned exceptions must be stored separately via the STORE button.

How to Exit SAM

Use one of the following methods:

Switch the set to STANDBY by pressing the mains button on the remote control transmitter or the television set.

Via a standard RC-transmitter, key in “00” sequence.

Note: When the TV is switched “off” by a power interrupt while in SAM, the TV will show up in “normal operation mode” as soon as the power is supplied again. The error buffer will not be cleared.

How to Activate the Factory mode

To activate the Factory mode, use the following method:

Press the following key sequence on the remote control transmitter: from the “**menu/home**” press “**1999**”, directly followed by the “**Back/Return**” button. *Do not allow the display to time out between entries while keying the sequence.*

After entering the Factory mode, we can see many items displayed, use the **UP/DOWN** keys to display the next/previous menu items.

How to Exit the Factory mode

Use one of the following methods:

Select EXIT_FACTORY from the menu and press the “OK” button.

Note: When the TV is switched “off” by a power interrupt, or normal switch to “stand-by” while in the factory mode, the TV will show up in “normal operation mode” as soon as the power is supplied again. The error buffer will not be cleared.

Software Upgrading, Error code and Panel Code

The following update is for .pkg file.

1. Rename the file to “upgrade_loader.pkg”.
2. Prepare a USB memory (File format: FLAT, Size: 1G~8G).
3. Copy the software to USB flash disk (root directory).
4. Switch off the TV and Insert the USB memory stick that contains the software update files in one of the TV’s USB 2.0 port.
5. Switch on the TV. The TV will detect the USB memory stick automatically.
6. When the TV software is updated, the TV will turn on again automatically. Remove your USB flash drive.
7. We can enter in CSM to check the current software version.

The following update is for .upg file.

Rename the file to “Autorun.upg”.

2. Prepare a USB memory (File format: FLAT, Size: 1G~8G).
 3. Copy the software to USB flash disk (root directory).
- Note the version of this F/W before you change the software file name.

F/W Upgrade

1. Plug the USB memory on the TV’s USB 2.0 port.
2. AC on (Power plug).
3. TV will show message as below image, Press [Start] to detect the software automatically
4. Press [Start] to start software upgrade
5. Upgrade in progress.
6. After software upgrade complete, select [Restart] to reboot TV.

Check the SW version

1. After burning software, TV will restart.
2. Press “**123654**”, enter Customer Service Mode to check if the software version is correct.

Caution: Please make sure that software upgrade is finished before unplug the USB and AC power.

Error Code

Error codes are required to indicate failures in the TV set. In principle a unique error code is available for every:

- Activated (SW) protection.
- Failing I2C device.

- General I2C error.

The last five errors, stored in the NVM, are shown in the Service menu's. This is called the error buffer.

The error code buffer contains all errors detected since the last time the buffer was erased. The buffer is written from left to right. When an error occurs that is not yet in the error code buffer, it is displayed at the left side and all other errors shift one position to the right.

An error will be added to the buffer if this error differs from any error in the buffer. The last found error is displayed on the left.

An error with a designated error code never leads to a deadlock situation. It must always be diagnosable (e.g. error buffer via OSD or blinking LED).

In case a failure identified by an error code automatically results in other error codes (cause and effect), only the error code of the MAIN failure is displayed.

How to Read the Error Buffer

You can read the error buffer in below ways:

- On screen via the SAM/CSM (if you have a picture).

Example:

- **ERROR: 000 000 000 000 000:** No errors detected
- **ERROR: 013 000 000 000 000:** Error code 13 is the last and only detected error
- **ERROR: 034 013 000 000 000:** Error code 13 was detected first and error code 34 is the last detected (newest) error
- Via the blinking LED procedure (when you have no picture).

Error codes overview: In this chassis only “layer 2” error codes are available and point to problems on the SSB. They are triggered by LED blinking when CSM is activated. Only the following layer 2 errors are defined:

Description	LAYER1 error	LAYER2 error	Hardware	Module	Error		PC-MEMs	LED in error LED-03, Blinking LED	Device	Reference board?
					Proc.	Error				
PC-BUSSES										
PC-0 (SSB bus)	2	13	SOC	PCMB	E			SLRB	S5B	S5B
PC-MCU (SSB bus)	2	14	SOC	PCMCU	E			SLRB	S5B	S5B
PC-2 (IFB bus)	2	15	SOC	PCMB	E			SLRB	S5B	S5B
PC-1 (SFR bus)	2	16	SOC	PCMB	E			SLRB	S5B	S5B
SOC (reset) foot (PMP status)	2	18	BI-By µP		P	D4	DL	MT5503		S5B
Supply related										
I2C	3	10	BI-By µP	803	P			SL		Supply
Single supply (PDC)	3	17	SOC	803	E			ED		Supply
SSB										
DC switch	2	38	SOC	PCMCU	E	EC	EB	PCMBAC		S5B
Channel (dc)	2	27	SOC	PCMB	E	DMAC	EB	SSB-SS704x		S5B
Busbar (PCMB2)	2	39	SOC	PCMB	E	B4	ED	SL-8777		S5B
Lib control	2	31	SOC	PCMB	E	16	EB	UNB1-25		S5B
Microf. (Address Audio)	2	32	SOC	PCMB	E		EB			S5B
DTV Tuner	2	34	SOC	PCMB	E	C6	EB	SSB-SS757 (P47 module) Only Release (OC module)		S5B
Tuner DVB-S2	2	36	SOC	PCMB	E	C8	EB	STV-8111		S5B
Class-D	2	37	SOC	PCMB	E	38	EB	SAB-5731 PMP		S5B
PPGA-PQ	2	35	SOC	PCMCU	E	9A7	EB	Demajo		S5B
3rd Audio amplifier	2	39	SOC	PCMBP	E	7	EB	7		S5B
T1 sensor (SSBbus)	2	42	SOC	PCMB	E	98	EB	LM75		Thermal
Light sensor	6	43	SOC	PCMB	E	T2	EB	TSL2571		SCT
SOC (reset) foot (SA status)	2	19	BI-By µP		P	D4	DL	MT5503		S5B
MT5503	2	81	SOC	PCMB	E	3H	EB	MT5503		S5B
MT5503	2	82	SOC	PCMB	E	A4	EB	MT5503		S5B
Spash error	2	85	SOC	-	E	-	EB	MT5503, MT5503		S5B

How to Clear the Error Buffer

The error code buffer is cleared in the following cases:

- By using the CLEAR command in the SAM menu

- By using the CLEAR command in the Factory mode:
- By using the following key sequence on the remote control transmitter: **“062599”** directly followed by the **OK** button.
- If the contents of the error buffer have not changed for 50 hours, the error buffer resets automatically.

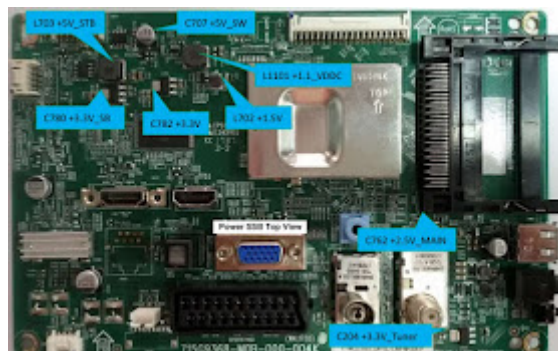
Note: If you exit SAM by disconnecting the mains from the television set, the error buffer is not reset.

Panel Code

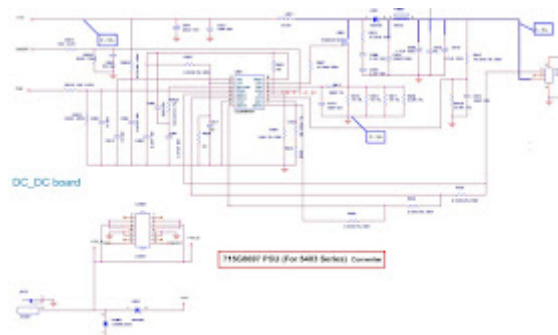
Press the following key sequence on a standard RC transmitter: **“062598”** directly followed by MENU and **“xxx”**, where **“xxx”** is a 3 digit decimal value of the panel type: see column **“Display Code”** in below tab. After resetting the Display Code, restart the set immediately.

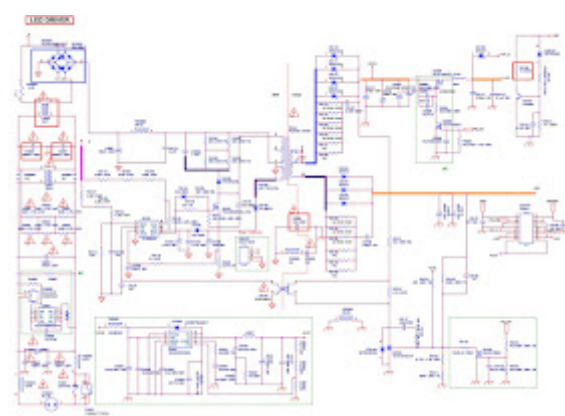
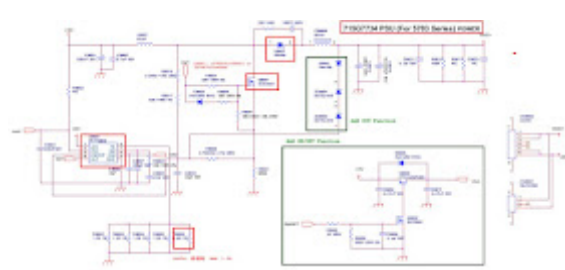
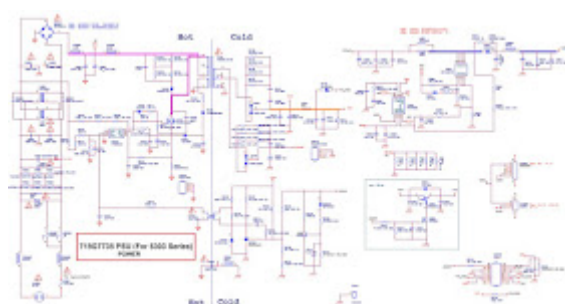
CTN_ALT BOM#	Panel Type	Display Code
22PF55303/12	TPM215WF1-WU3101.K 485BE	034
22PF55403/12	TPM215WF1-WU3101.K 485BE	034
22PFT5303/05	TPM215WF1-WU3101.K 485BE	034
22PFT5303/12	TPM215WF1-WU3101.K 485BE	034
24PF55303/12	TPM238WF1-LF1L0.Q S1F	035
24PF55703/12	TPM236WF1-HUJ02.N SC4M	036
24PFT5303/05	TPM238WF1-LF1L0.Q S1F	035
24PFT5303/12	TPM238WF1-LF1L0.Q S1F	035

Power layout SSB

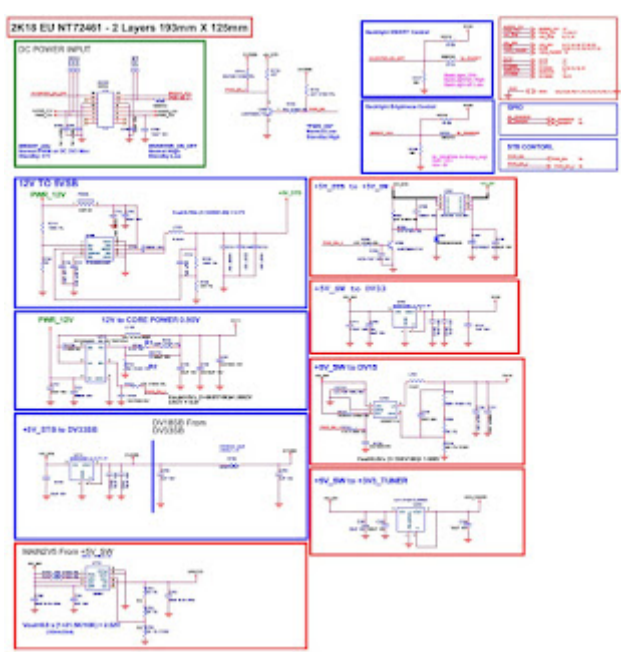


Power supply schematic





715G9368 SSB System POWER



Audio output schematic

