EM2E Chassis SM 3122 785 10310

The intention of this presentation is to help you to find fast the required service inform-ation in the Service Mambiah, is needed at repair.

It cannot highlight all the details which are essential at repair, but will inform and clarify some important points.

The author: Ensio Kunnasluoto, © Philips Service Sweden, August 2000

Service information

Chassis Alignments Page 19 Select with mouse Service Alignment Mode Page 19 Select with mouse Service Default Mode Select with mouse Page 19 **Customer Service Mode** Select with mouse Page 19 Reading Error Codes Page 24 Select with mouse Service positions Select with mouse Page 17 (Photo) ComPair Page 23 Select with mouse SearchMan Page 23 Select with mouse Service Manual Photo Select with mouse Service labels Select with mouse **Photos** End

The end of presentation Thank you for your kind attention!

EM2E Chassis Alignments SM 3122 785 10310 § 8.1 General alignment conditions page 71 **Alignments LSP panel** 8.2 page 71 8.2.1 Focusing (use crosshatch) page 71 8.2.2 Vg2 adjustment (use black picture) page 71 8.3 Vertical amplitude (use crosshatch) page 71 Adjust picture height with pot. R3603. Vertical shift (use crosshatch) 8.4 page 71 Return Adjust with pot. R3609.

EM2E Chassis service modes SM 3122 785 10310

5.2 Service Modes

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5.2.2 Service Alignment Mode (SAM)Page 19

Can be activated by RC by dialling '062596' + 'OSD', by ComPair / DST or short-circuiting item 4005 on SSB.

* Following slides will show the **Service Alignment Mode** (SAM) menu structure of the EM2E chassis.

* The first slide will show the DST opening menu.



Menu

PC simulated menus from 32PW8506 wide-screen TV set. This is the start menu window we will see in SAM.

Date: May 11 2000 Id: EM2E_11.4_02391

Operation Hours: 00000.0 Errors: No Errors

Defect. Module: Unknown

③ Service

Reset Error Buffer Functional Test Alignments Dealer Options

Menu

PC simulated menus from 32PW8506 wide-screen TV set. This is the start menu window we will see in SAM.

Date: May 11 2000 Id: EM2E_11.4_02391

Operation Hours: 00000.0 Errors: No Errors

Defect. Module: Unknown

③ Service

Reset Error Buffer Functional Test Alignments Dealer Options

This type of information will be shown if there is any error codes detected. *Select and press 'Reset Error Buffer'*.



The *Alignments* selection Menu.

Alignments

General Normal Geometry Super Wide Geometry Options Option Numbers Store

The Alignments selection Menu.

Menu

Alignments

General Normal Geometry Super Wide Geometry Options Option Numbers Store

Menu

The General Adjustment Menu.

Δ

|--|

Drive Luminance Delays EHT compensation Soft clipper Luma gain IF AFC 00 Tuner AGC 19 Blend intensity 4 Adjust Peak White Limiter Vg2 Test Pattern Off

The Normal Geometry Adjustment Menu.

8.5.3 Normal Geometry (Menu) Page 73

- * N.B. The 'INTERNAL TEST PATTERN' cannot be used for alignment. <u>If used</u>, it will result <u>a miss-aligned picture</u>. Use external test pattern for good alignment!
- Use only the 'INTERNAL TEST PATTERN' for the 'Vertical slope' adjustment!
- * These alignments are feasible for all 4:3 and 16:9 sets.
- N.B. All changed values must be stored by 'STORE' in the menu. The set must be restarted by the mains switch to activate the new values!

The Normal Geometry Adjustment Menu.

Menu

Normal Geometry

Test Pattern		Off	
V. Slope	42		
H. shift	36		
H. amplitude		27	
East/West Parabola			15
Upper East/West corner			33
Lower East/West corner			28
East/West Trapezium			32
Horizontal parallelogram			8
Horizontal bow		8	

The Super Wide Geometry Adjustment Menu.

Menu

Super Wide Geometry

Test Pattern H. amplitude East/West Parabola Off 27

15

The **Drive** selection Menu.

Menu

î Drive	
---------	--

Test Pattern	Off
Red	29
Green	28
Blue	36
Cathode	15
Red BL offset	9
Green BL offset	8
Tint	Normal

Menu

The **Options** Selection Menu.

Options

Dual screen/PIP Teletext/EPG Communication Picture Tube Video repro Source Selection Audio Repro Miscellaneous

The Option Numbers Adjustment Menu.

Menu

Option Numbers

04865 04356 04928 00017 12343 00001 00000 00064

The Dealer Options Adjustment Menu.

Menu

DEALER OPTIONS

Picture Personal Teletext

Store

Dealer

The Dealer Options Adjustment Menu.

Menu



Menu

The *Dealer Options* Adjustment Menu.

© PERSONAL OPTIONS

Blue Mute Virgin Mode Auto Store Mode Demo Menu Enable Auto TV Yes No PDC-VPS-TXT Yes

Dealer

Yes

Menu

The *Dealer Options* Adjustment Menu.

PERSONAL OPTIONS

Blue Mute Virgin Mode Auto Store Mode Demo Menu Enable Auto TV Yes

Yes No None Yes

Dealer

Menu

The Dealer Options Adjustment Menu.



Menu

The Dealer Options Adjustment Menu.



Menu

The Dealer Options Adjustment Menu.



From the General Adjustment Menu.

Menu



Lum. Delay Pal	7
Lum. Delay Secam	11
Lum. Delay Bypass	10

From the Option Adjustment Menu.



TXT NexTView present NexTView type Yes

Yes No flashram Menu

Menu

From the **Option** Selection Menu.



Aux type Text dual screen None Yes

From the Option Adjustment Menu.

Menu

Communication Easylink Plus Yes

Menu

From the Option Adjustment Menu.

Picture Tube	

From the **Option** Adjustment Menu.

Menu

Picture Tube **CRT** Type 4:3 Dynamic focus No Dooming prevent Off

Menu

From the Option Adjustment Menu.

Û	Picture Tube		
	CRT Type Picture Rotation Dynamic focus Dooming prevent	16:9 Yes No SF 16 : 9	

From the **Option** Adjustment Menu.

Menu

Picture Tube **CRT** Type 16:9 **Picture Rotation** Yes Dynamic focus No Dooming prevent RF 16:9

Menu

From the Option Adjustment Menu.

Ĵ	Picture Tube		
	CRT Type Picture Rotation Dynamic focus Dooming prevent	16:9 Yes No 4 : 3	

Menu

From the **Option** selection Menu.

O Video repro options

Featurebox type	Prozonic
Lightsensor	No
PALplus	No
Combfilter	No
Picture improvement	No
Picnic AGC	Yes
Signalling bits	Yes

From the **Option** selection Menu.

Menu

video repro options

Featurebox type	Falconic
Field memories	2
Lightsensor	No
PALplus	No
Combfilter	No
Picture improvement	No
Picnic AGC	Yes
Signalling bits	Yes
From the **Option** selection Menu.

Ĵ	Video repro options			
	Featurebox type			Eco
	Lightsensor		No	
	PALplus	No		
	Combfilter		No	
	Picture improvement			No
	Picnic AGC		Yes	
	Signalling hits		Yes	
			100	

Menu

From the **Option** selection Menu.

Ĵ	Video repro options		
	Featurebox type		Eco-DNR
	Lightsensor		No
	PALplus	NO	
	Combfilter		No
	Picture improvement		No
	Picnic AGC		Yes
	Signalling bits		Yes

Menu

From the **Option** Selection Menu.

	Course Coloction		
ĵ,	Source Selection		
	External 3	No	
	External 4	No	

Menu

From the Option Selection Menu.



Dolby Acoustic system MSP type AVL enable None F17 MSP3451A1 On

Menu

From the Option Selection Menu.



Dolby Rear speakers Acoustic system MSP type AVL enable

Pro Logic Virtual F17 MSP3451A1 On

Menu

From the **Option** Selection Menu.



Dolby Acoustic system MSP type AVL enable None F18 MSP3451A1 On

Menu

From the **Option** Selection Menu.



Dolby Acoustic system MSP type AVL enable None F17 MSP3451A1/3411A2 On

Menu

From the Option Selection Menu.

Image: Audio Repro Dolby None Acoustic system F19 DAS MSP type MSP3451A1 AVL enable On

Menu

From the Option Selection Menu.



Dolby Acoustic system MSP type AVL enable None F19 Monitor MSP3451A1 On

From the **Option** Adjustment Menu.

Menu

û Miscellaneous

Heatsink Present Tuner type Yes UV316

Menu

From the Option Adjustment Menu.



5.2 Service Modes

S

Menu

5.2.1 Service Default Mode (SDM) Page 19

Can be activated by RC by dialling '062596' + 'MENU', by ComPair / DST or short-circuiting item 4006 on SSB.

- N.B. In this mode all TV settings are fixed (default) as follows!
 - * Tuned frequency 475.25 MHz
 - * TV-systems for BGLM sets are set to BG
 - * Picture settings (contrast, brightness, colour & hue are set to 50% value.
 - * All sound settings to 50% value except volume to 25%
 - * All service unfriendly modes are disabled (like sleep timer, child lock, blue mute, AVL and SDLP).

5.2 Service Modes

§

Next

5.2.3 Customer Service Mode (CSM)Page 19

To activate it, press simultaneously the 'MUTE' key on RC and the 'MENU' key on the TV set minimum of 4 seconds.

This menu is meant to show the actual TV settings and other functional information for a customer if requested by service when 'a fault or a malfunction' has occurred.

This CSM menu is *read only menu*, so *NO* modification to any settings can be done by this menu.

5.2 Service Modes

5.2.3 Customer Service Mode (CSM)Page 19

Next

CUSTOMER SERVICE MENU 1

- 1 SW Version EM2E_11.5_02431
- 2 Code 1 (error code) No Errors
- 3 Code 2 (error code)

§

- 4 LS Volume 7
- 5 LS Brightness 28
- 6 LS Contrast 48
- 7LS Colour318 I S Headphone12
- 8 LS Headphone
- 9 Sharpness 3 10 Dolby 0
- 10Dolby
- 11 Surround mode

11a **Tuner Frequency**

203 MHz



5.2 Service Modes

5.4 ComPair

Page 24

Next

5.4.1 ComPair (Computer Aided Repair) is a service tool for PHILIPS Consumer Electronics products.
ComPair is the most advanced service tool offered at the present time to assist in fault-finding in complex electronic products.
(DST, RC7150 was the prior service tool)

5.2 Service Modes



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Page 24

ComPair demo

Return

5.4.3 Stepwise start-up / Shutdown (power supply)
This function is only possible with *ComPair*.
Stepwise start-up explanation. See the text!
Stepwise shutdown explanation. See the text!
N.B.
5.7.2 For more repair tips see page 28!

5.2 Service Modes

S

5.4.2 SearchMan (Electronic Service Manual) Page 23

If you have installed *ComPair* and *SearchMan* in your computer (PC) you will have immediate access to diagrams and PCB lay-outs. Ordering codes of components will be found without any loss of time. The *SearchMan* program (engine) is supplied on one CD-ROM disc and up-date Service Manuals are available on two other CD-ROM disc. Five different product groups are supported by this system.

SearchMan info

Return

5.5.3 **Error Code Table**

Description Diagr. Error Device Def. Item **Defect module** ST24E32 NVM IC7011 B5 Control H fail protection HFB Horizontal feedback 2 3 SAA4978 PICNIC IC7709 Feature Box B3 Supply 5 V $5\sqrt{2}$ +5 V Supply 4 5 Supply 8 V 8V6 +8 V Supply Slow I²C blocked 6 Slow I²C-bus blocked 7 HOP video contr./geom. IC7301 Video Controler TDA9330 **B4** HIP I/O video process IC7323 Chroma IF IO 8 TDA9320 **B**2 9 X-ray protection 11 HOP protection 12 **Tuner protection** TUNER_PROT UV1316 U1200 13 Tuner A7 +8 V (Tuner) Supply 14 MSP3451/3415 IC7651 Audio Module **B6 T** sound proc. Dolby 15 Flash protection Featurebox protection FBX PROT 16

Next

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5.2 Service Modes

S

5.5 Error Codes with DST

Always start faultfinding with DST like this;

- **1.** Press the 'Diagnose' button on the DST!
- 2. Press the digit keys '99'!
- 3. Press the 'OK' key!

Now the DST transmits a code to erase all error codes in the set. Switch off the set with the mains switch and start it again with the mains switch. Wait until the standby LED starts blinking!

Page 24

Next







5.2 Service Modes S Return 5.5 Error Codes Page 24 5.5.1 Reading error codes with DST from the buffer Now, we have found the first zero and can start looking for the fault from the rightmost error code position, which is in this case position 3, error 5 = +8V Supply ! Error position; 1 2 3 4 5 Error Codes: 12 9 0 $\mathbf{0}$ If you use DST for fault finding read all error codes from the left to the right until the first zero is found!

Service Manual



Return



The picture tube sticker

The option codes of the set

If you change the picture tube of the set, you have to move this sticker to the new picture tube or write a new sticker with option codes. <u>It is necessary</u> <u>that this information follows the</u> <u>TV set untill it will be rejected to</u> <u>recycling</u>.

Optioncode :

0486504356049280001712343000010000000064

max. EHT : 29 kV max. Beam Curr. : 1.8 mA

ιE

32PW8506/12 AG000034 002149 220 - 240V ~50Hz 105W VHF+S+H+UHF

MADE IN BELGIUM





The Normal Geometry Adjustment Menu.



The Normal Geometry Adjustment Menu.



The Normal Geometry Adjustment Menu.


The Normal Geometry Adjustment Menu.

Return

Horizontal bow

The Normal Geometry Adjustment Menu.

Menu

Horizontal bow 8

The Normal Geometry Adjustment Menu.



The Normal Geometry Adjustment Menu.



The Normal Geometry Adjustment Menu.



The Normal Geometry Adjustment Menu.



The Normal Geometry Adjustment Menu.

Menu

2001-03-12/16 Agadir, Marocko H. shift 32 تصويرالوثائق

The Normal Geometry Adjustment Menu.

Menu

2001-03-12/16 Agadir, Marocko shift تصويرالوثائق

The Normal Geometry Adjustment Menu.



The Normal Geometry Adjustment Menu.



The Normal Geometry Adjustment Menu.



The Normal Geometry Adjustment Menu.





The Normal Geometry Adjustment Menu.



The Normal Geometry Adjustment Menu.



The Normal Geometry Adjustment Menu.



The Normal Geometry Adjustment Menu.

Menu

V. Slope 45

The Normal Geometry Adjustment Menu.

Menu

V. Slope 42

The Normal Geometry Adjustment Menu.



The Normal Geometry Adjustment Menu.

Menu

V. Slope 42

The Normal Geometry Adjustment Menu.



The Normal Geometry Adjustment Menu.



The Normal Geometry Adjustment Menu.

Menu

East/West Parabola 45

The Normal Geometry Adjustment Menu.

Menu

East/West Parabola 43

The Normal Geometry Adjustment Menu.



The Normal Geometry Adjustment Menu.



The Normal Geometry Adjustment Menu.



The Normal Geometry Adjustment Menu.



The Normal Geometry Adjustment Menu.



The Normal Geometry Adjustment Menu.



The Normal Geometry Adjustment Menu.



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