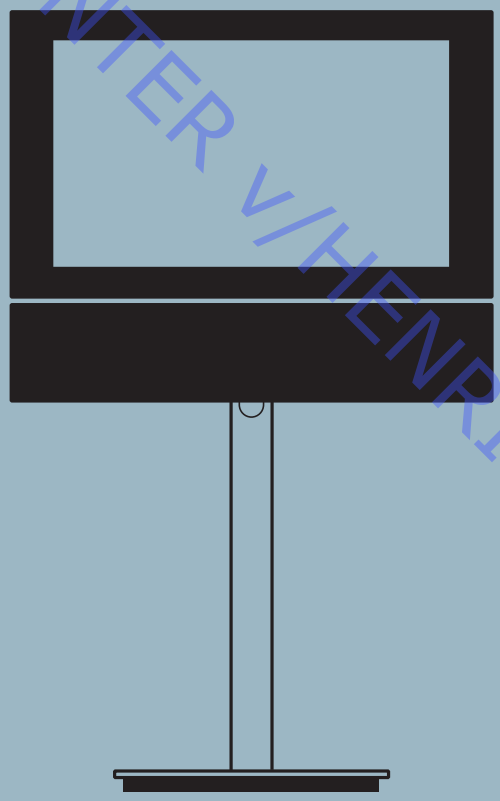
BeoCenter 6 – 26

Type 9280 - 9286

Service Manual
English

German, French, Italian, Spanish, Danish and Dutch versions are available in the Retail System

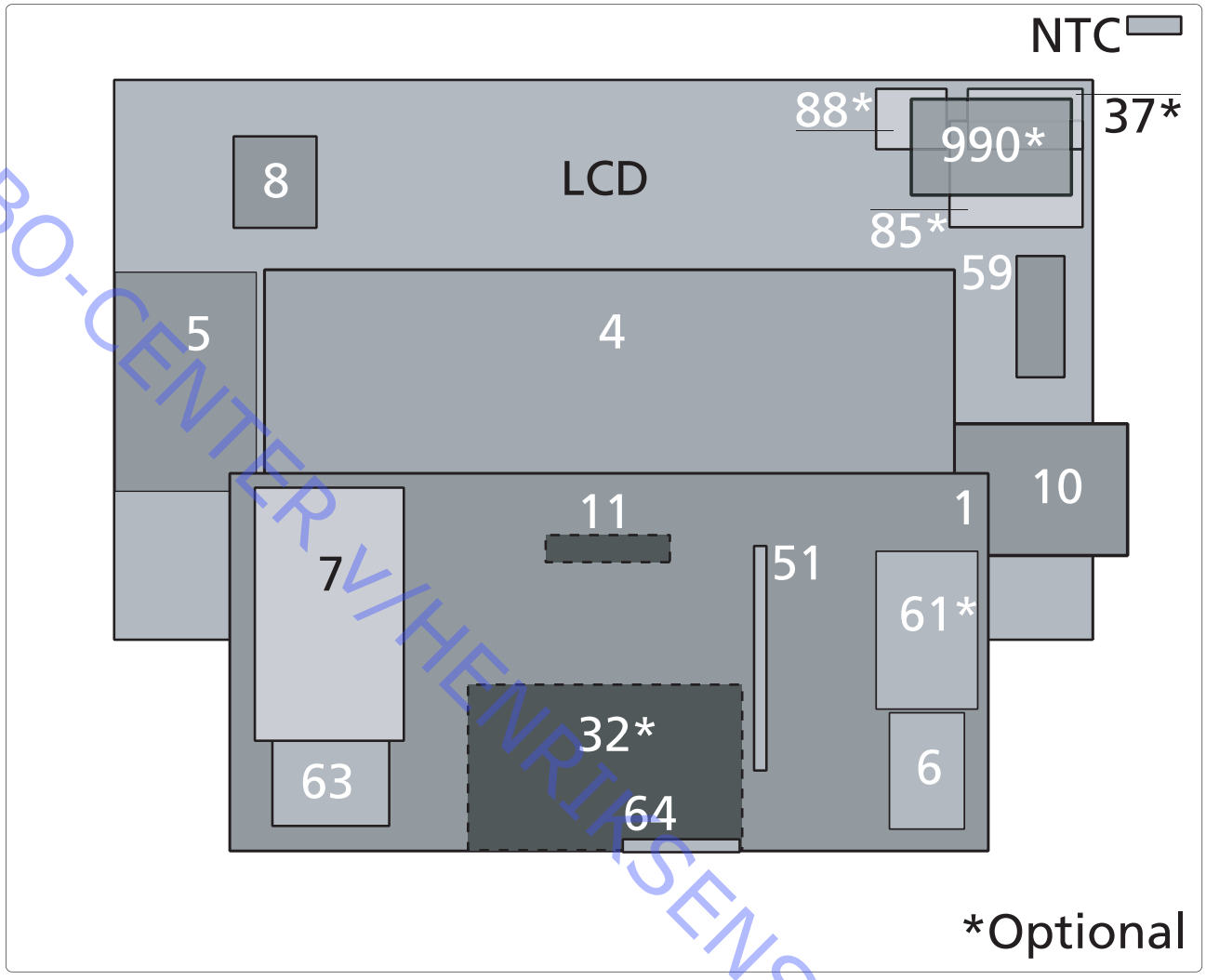


This Service Manual must be returned with the defective parts/back-up suitcase !

BANG & OLUFSEN

CONTENTS

Survey of modules



999 Module, Main chassis	Incl. PCB1, PCB4, PCB5, PCB6, PCB7, PCB51, PCB63, PCB64
990 Module, DVB-S	PCB21, PCB22
PCB7	PC Sound
PCB8	Decoupling
PCB10	Sound Output
PCB11	IR/Autocontrast
PCB32	DSM
PCB37	DAB
PCB51	Masterlink
PCB59	Camcorder
PCB61	BtB
PCB63	System modulator
PCB64	Powerlink
PCB85	FM
PCB88	Interface
LCD + PCB8	LCD

How to service

Strategy

The television is to be serviced in the customer's home.

The static-protective field service kit must always be used when the product is disassembled or modules are being handled.

The repair involves replacement of the chassis, module(s) or LCD panel, which are supplied in the back-up suitcase.
The replaced modules must be returned for repair at Bang & Olufsen, Module Repair Department.
Fault description and error codes must be returned with the replaced parts.
Use the Module Repair form or the form in the Retail Order System, Exchange Module.

Service Tool

ServiceTool is required in several service situations, e.g. update of software.
When it is necessary to replace module 999 main chassis, use ServiceTool to read out settings in the microprocessor. These must be transferred to the new microprocessor to maintain customer settings, production settings and pin code data.
In cases where it is not possible to read out the info in the microprocessor, a new pre-programmed microprocessor can be ordered in Bang & Olufsen Retail system.
Refer to ServiceTool for full description of features and operation.

Please note:
When the main chassis is replaced, check software versions and update if necessarry, by means of ServiceTool.

Preparations before service

Fault description and error codes must be returned with the replaced parts.
Use the Module Repair form or the form in the Retail Order System, Exchange Module.

Fault explanation and demonstration

Before troubleshooting is initiated, let the customer demonstrate the fault, if possible.

Error code

The error code contains data that may be used for repairing the module(s) and must be returned with the module(s).

Handling the error code.

1. Take a note of the error code, for example on the Module repair form.
2. Use the error code when trouble shooting.
3. Return the error code, either on the Module Repair form or in the Retail system.
4. Before returning the television to the customer, clear the error code.

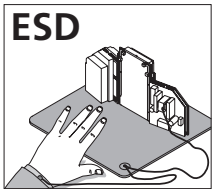
Recommended tools for service

B&O ServiceTool
Service stand
Integrated Living – Test DVD
Ruler for geometry check/adjustment
White gloves
Soft lint-free cloth
ML-tester
B&O programmer – ML kit must be installed

Handling and cleaning

Static electricity

Static electricity may damage the television.



Static-protective field service kit.
A static-protective field service kit must always be used when the product is disassembled or modules are being handled.
Follow the instructions in the guide and use the ESD-mat for both old and new modules.

Please note:
When mains voltage on the product is required, remove the connection between the product and the ESD-mat.

The chassis or modules must always be connected to the static-protective field service kit or placed in an ESD-proof bag.

Symbol of safety components

When replacing components with this symbol, the same type has to be used, also the same values for ohm and watt.
The new component is to be mounted in the same way as the replaced one.

Lithium battery

WARNING
Short-circuit and overcharging of some types of lithium batteries may result in a violent explosion.

Transport and handling

The product must not be placed on the contrast screen.
It is recommended to use the product cover when transporting the television.
The product cover can be ordered.

Mounting or dismounting the Service stand

Place the television on the rear cover and mount the Service stand.
See illustrations page 5.5.

Cleaning

Please refer to the chapter “Final check after repair” or the User’s guides.

PIN-code

The TV has a 4 digit PIN-code, of the user´s own choice, which must be entered if the TV has been disconnected from the mains for 15-30 min.
If the PIN-code is activated, and the TV has been without mains for 15-30 min., the user will be asked to enter the 4 digit PIN-code when the TV is switched on.

Before the TV is handed in to service it is a good idea to ask the customer to deactivate the PIN-code.

The PIN-code is activated when the TV is shipped from Bang & Olufsen.

Refer to the user guide for further information.

PIN-code active prior to service

If the PIN-code is not deactivated prior to service you must use the Service code to unlock the product.

Service code

The service code
- unlocks the product, but does not affect the pin-code setting
- gives you 12 hours service time

Entering the Service code

1. When the product asks for PIN-CODE press and hold ◀◀ for 3 seconds.
2. The Master code menu appears.
3. Enter the Service code: 1 1 1 1 1.

Important notice concerning Service time

The service time is active as long as the product is connected to the mains, including Standby.

To obtain maximum service time:
Only connect the product to the mains while you are performing actual service on the product.

When the service time is expired, the product can only be unlocked by entering the PIN-code or the Master code.

Registration of the modules

The modules will be registered to the product in the following situations:
- the product has been connected to the mains for more than 12 hours, including Standby time.
- the PIN-code is activated or deactivated.

PIN-code deactivated by customer prior to service

With the PIN-code deactivated prior to service you must be aware of the modules will be registered to the product in the following situations :
- the product has been connected to the mains for more than 12 hours, including Standby time.
- the PIN-code is activated or deactivated.

The registration of modules in the product can only be changed at Bang & Olufsen.

Activate the PIN-code

Select the TV SETUP menu.
Press ◀◀ twice and then **STOP** to bring up the PINCODE SETUP menu.
Enter the 4 digit Pin-code. Re-enter the code to confirm it and press **GO**.
If you want to change or delete the PIN-code, enter the correct PIN-code and press **GO**.
It is now possible to change the PIN-code or delete the PIN-code.

Enter the PIN-code

If the PIN-code is activated and the TV is disconnected from the mains for more than15-30 minutes, a PINCODE menu appears as soon as the TV is switched on.
Enter the PIN-code, and the TV starts again.

If the PIN-code has been forgotten

If the PIN-code has been forgotten the only way to unlock the TV again is by entering a 5 digit Master-code.
The Master-code is ordered by sending a request either via the Retail System or on the Master-code formula. If non of these options are available please contact Bang & Olufsen.
When the TV prompts for a PIN-code, press and hold ◀◀ down to bring up the MASTERCODE menu.
Enter the Master-code and press **GO**. This will deactivate the PIN-code and reactivate the TV.

TV locked by PIN-code

The TV is locked by PIN-code when:

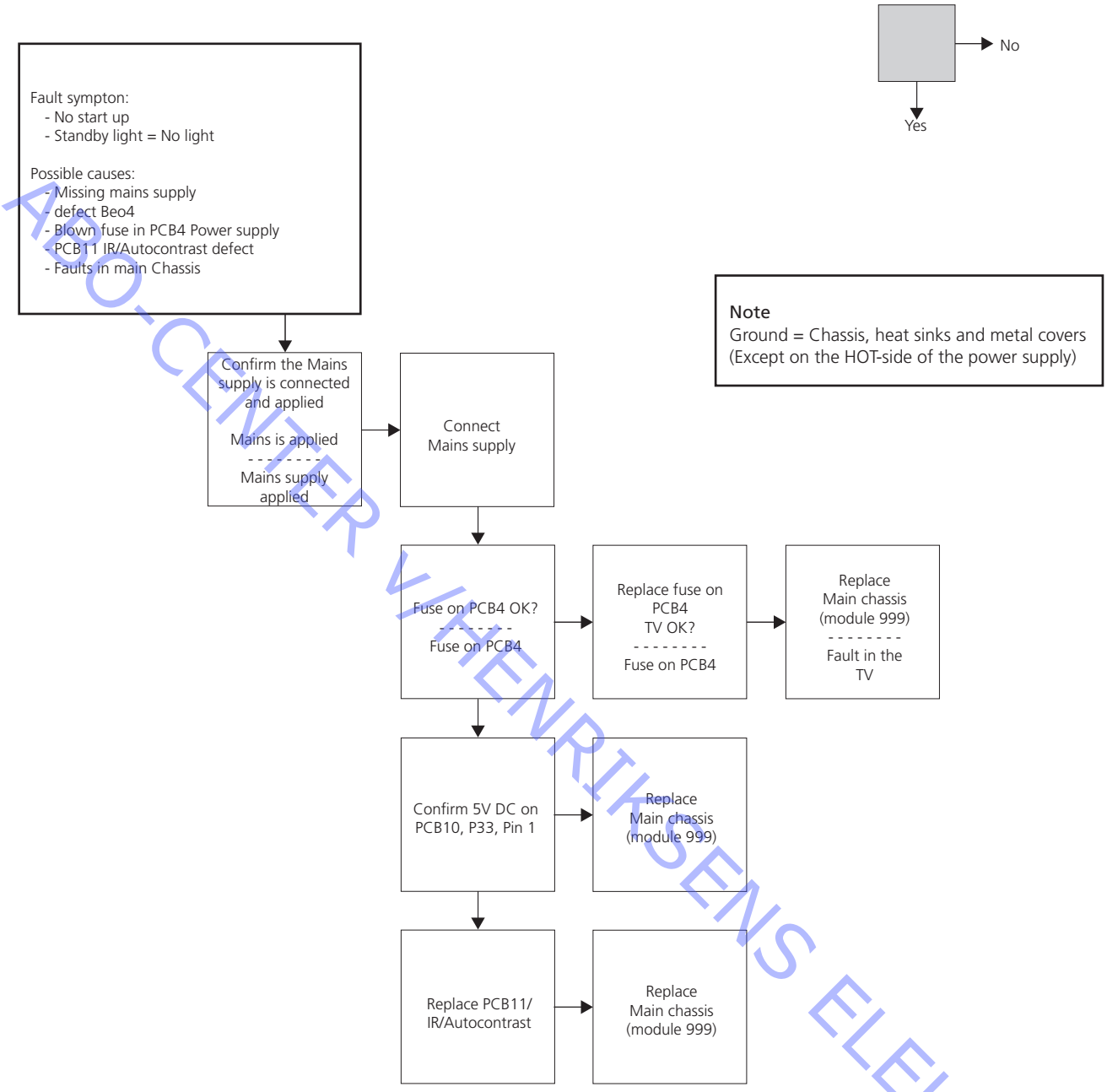
- The PIN-code is activated and the mains is disconnected for more than 15- 30 minutes.

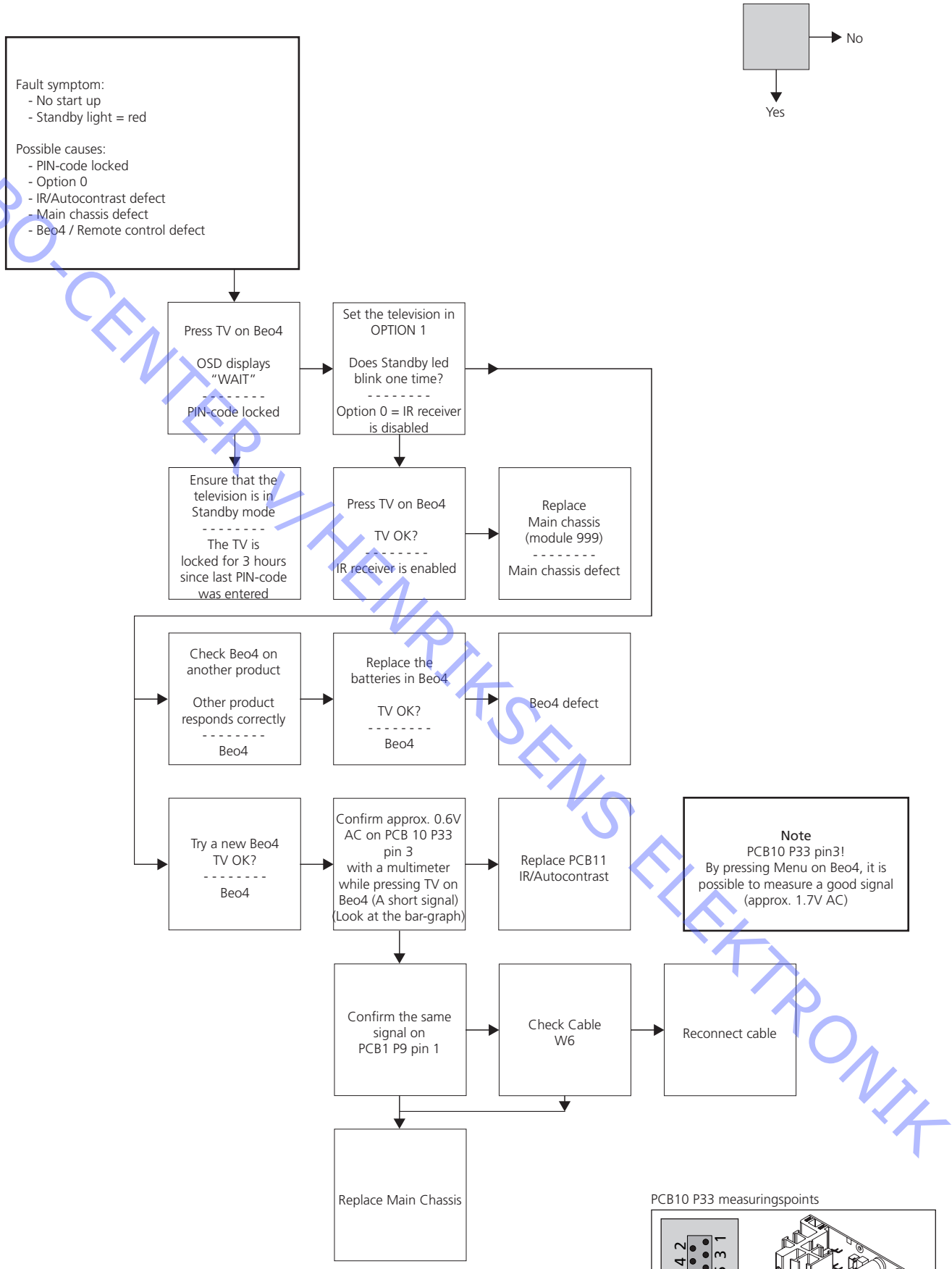
The TV is unlocked when the PIN-code is entered.

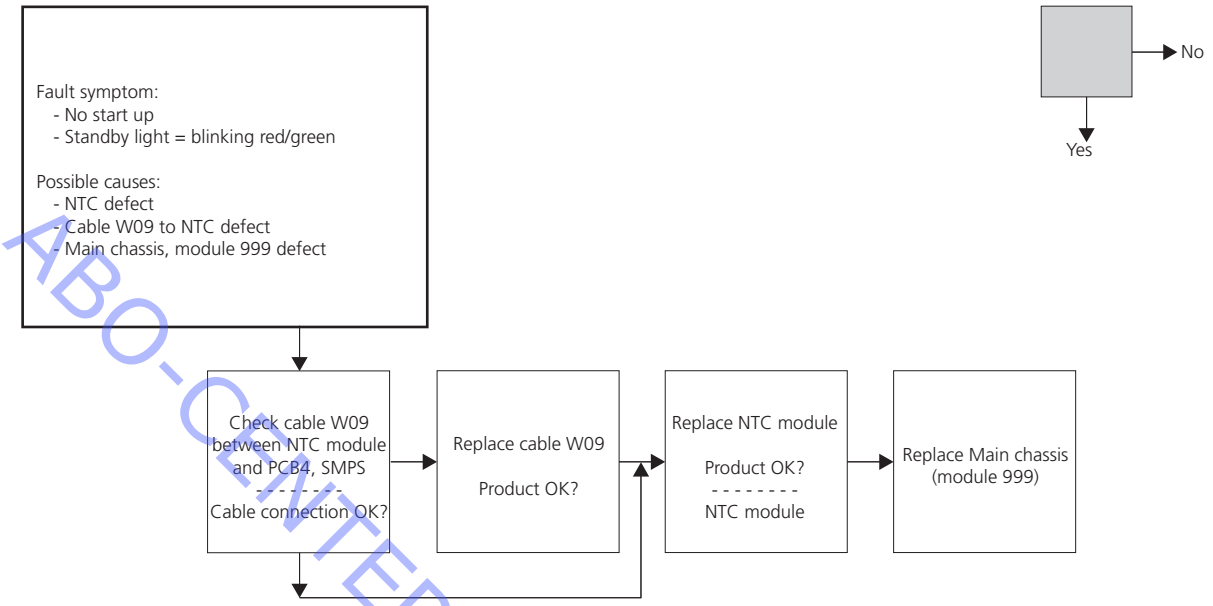
The PIN-code counter is set to 5 attempts within 3 hours.
When a wrong PIN-code has been entered 5 times within 3 hours, the television cannot receive any commands for a period of 3 hours.
After this period the PIN-code counter is reset.
The TV must be in standby mode to activate the timer.

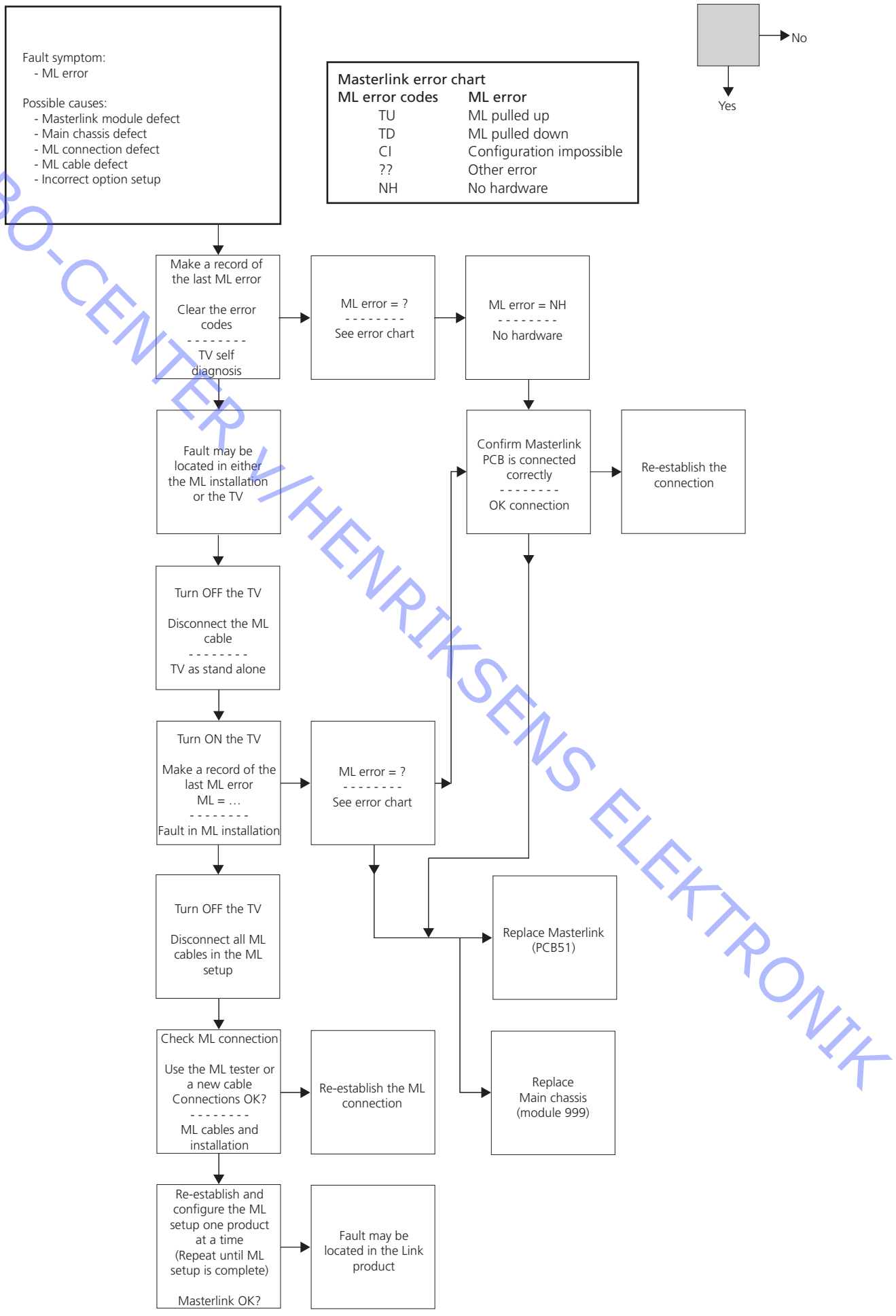
Fault flow chart

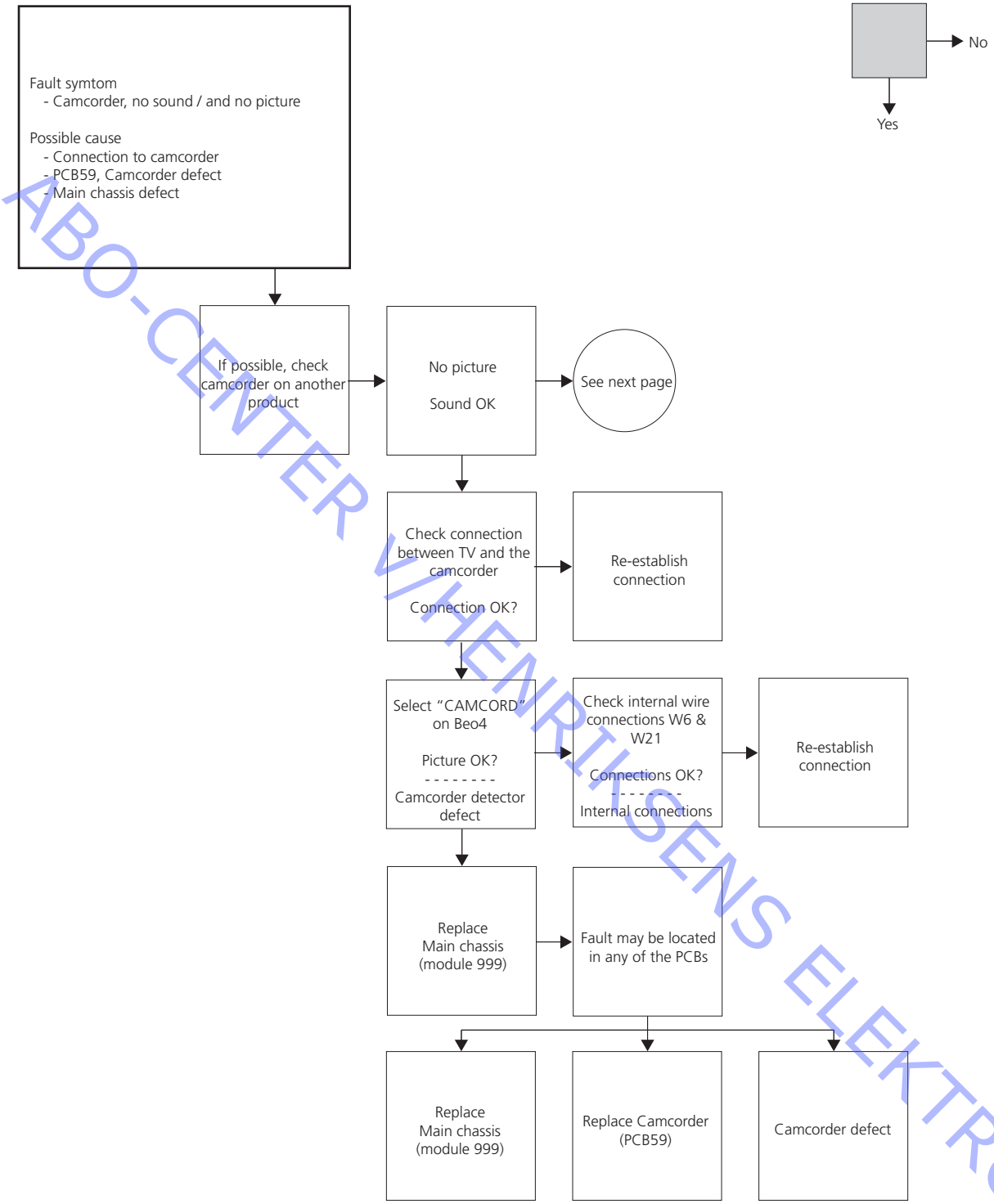
Fault

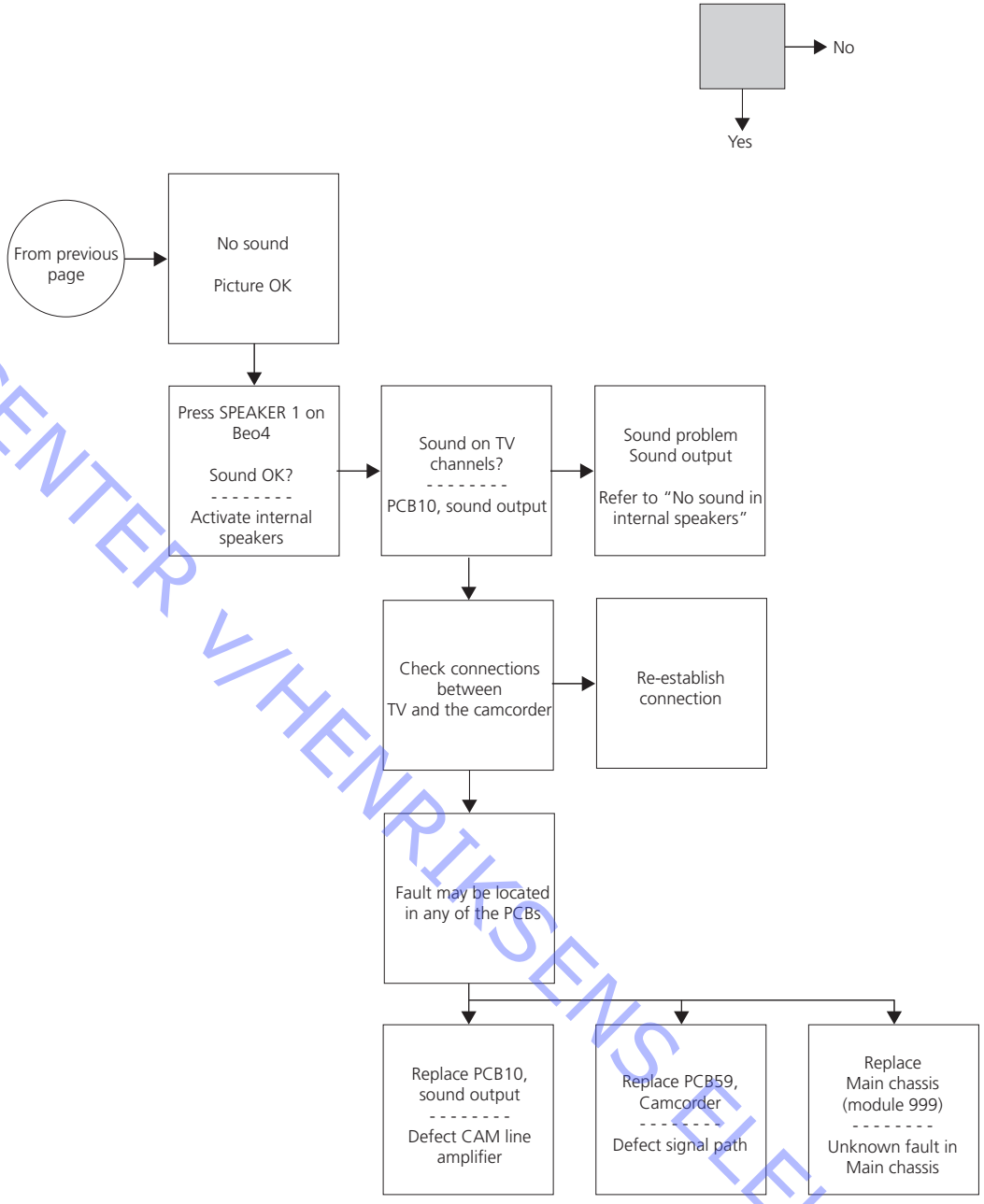


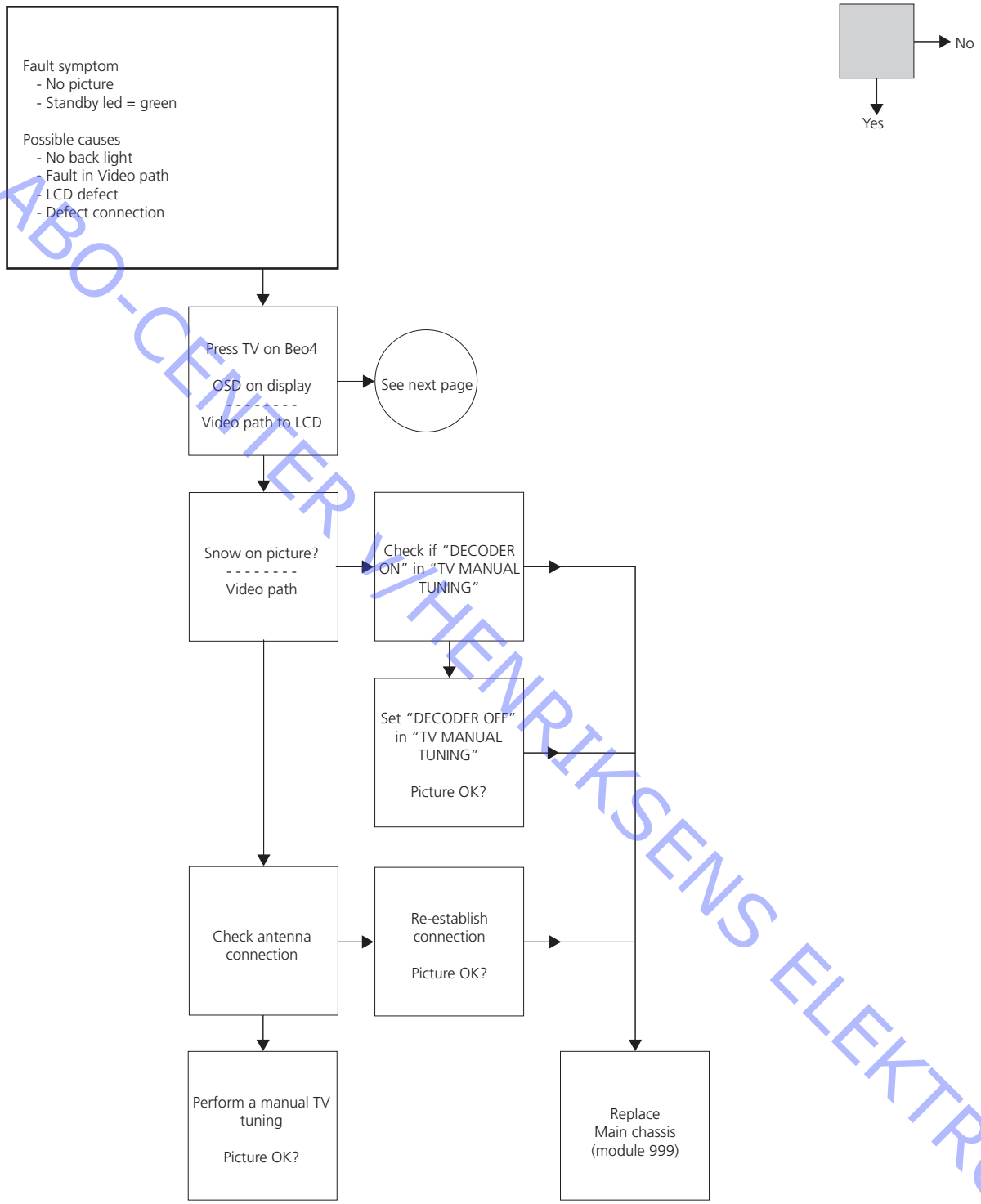


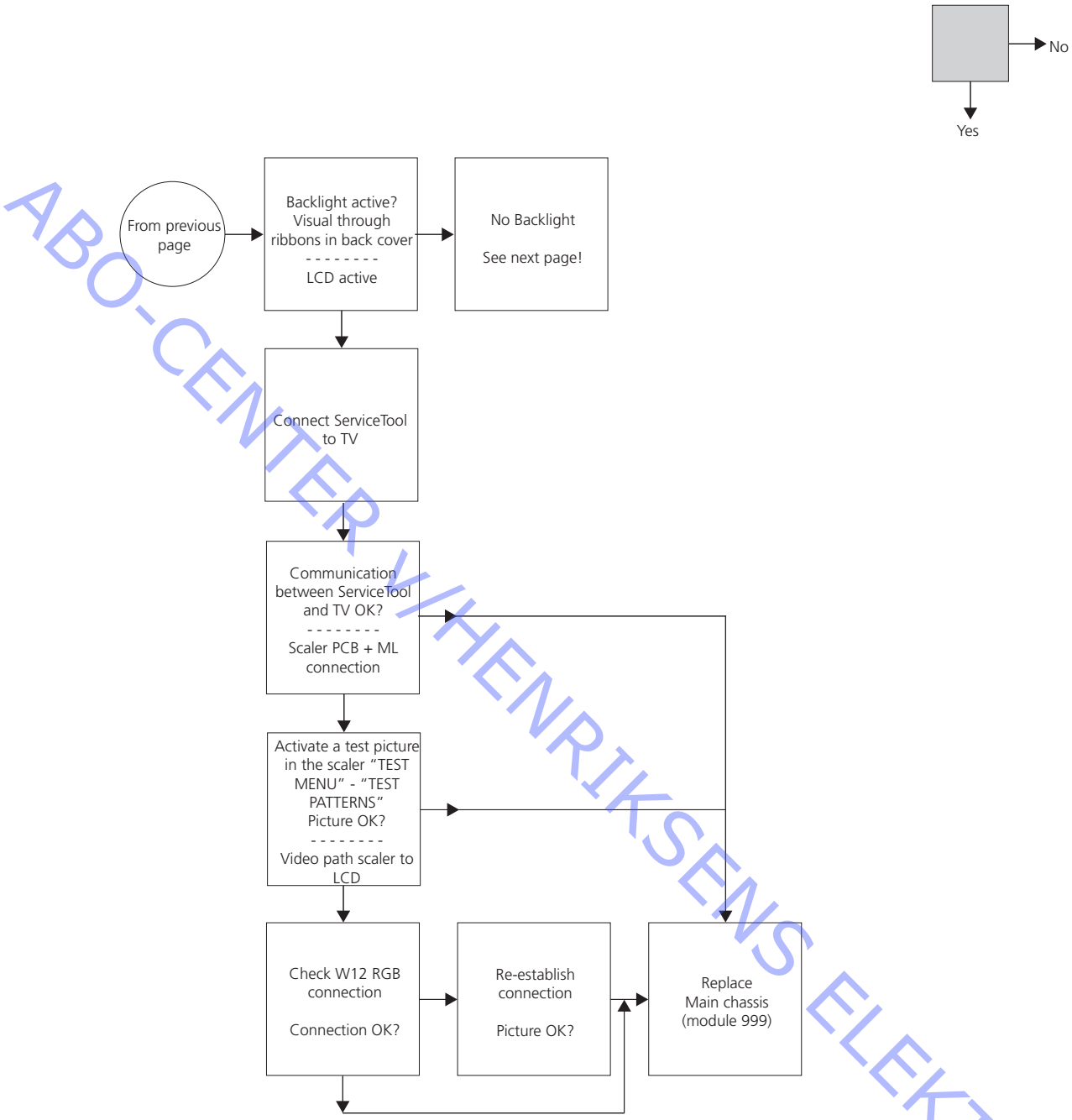


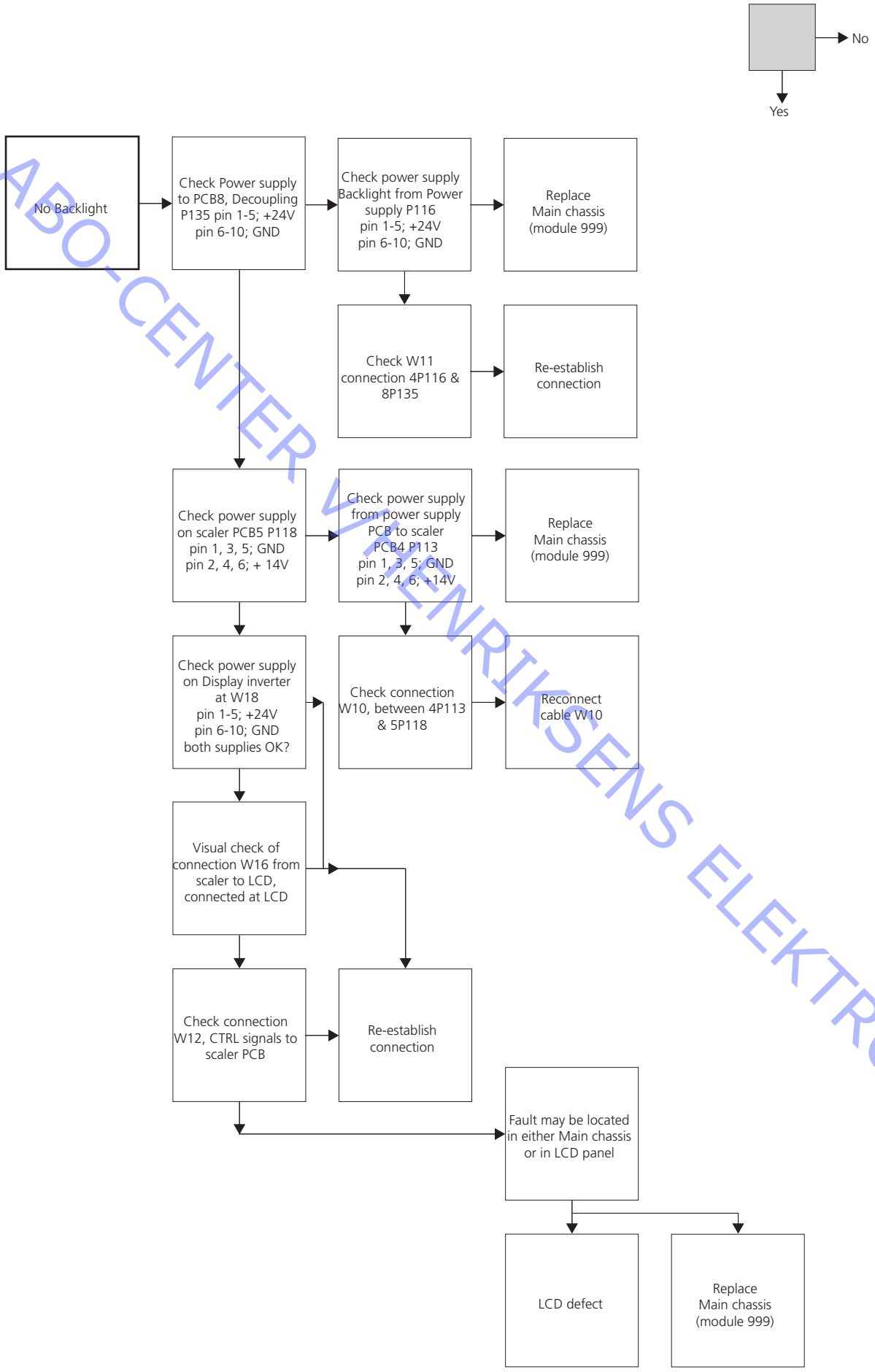


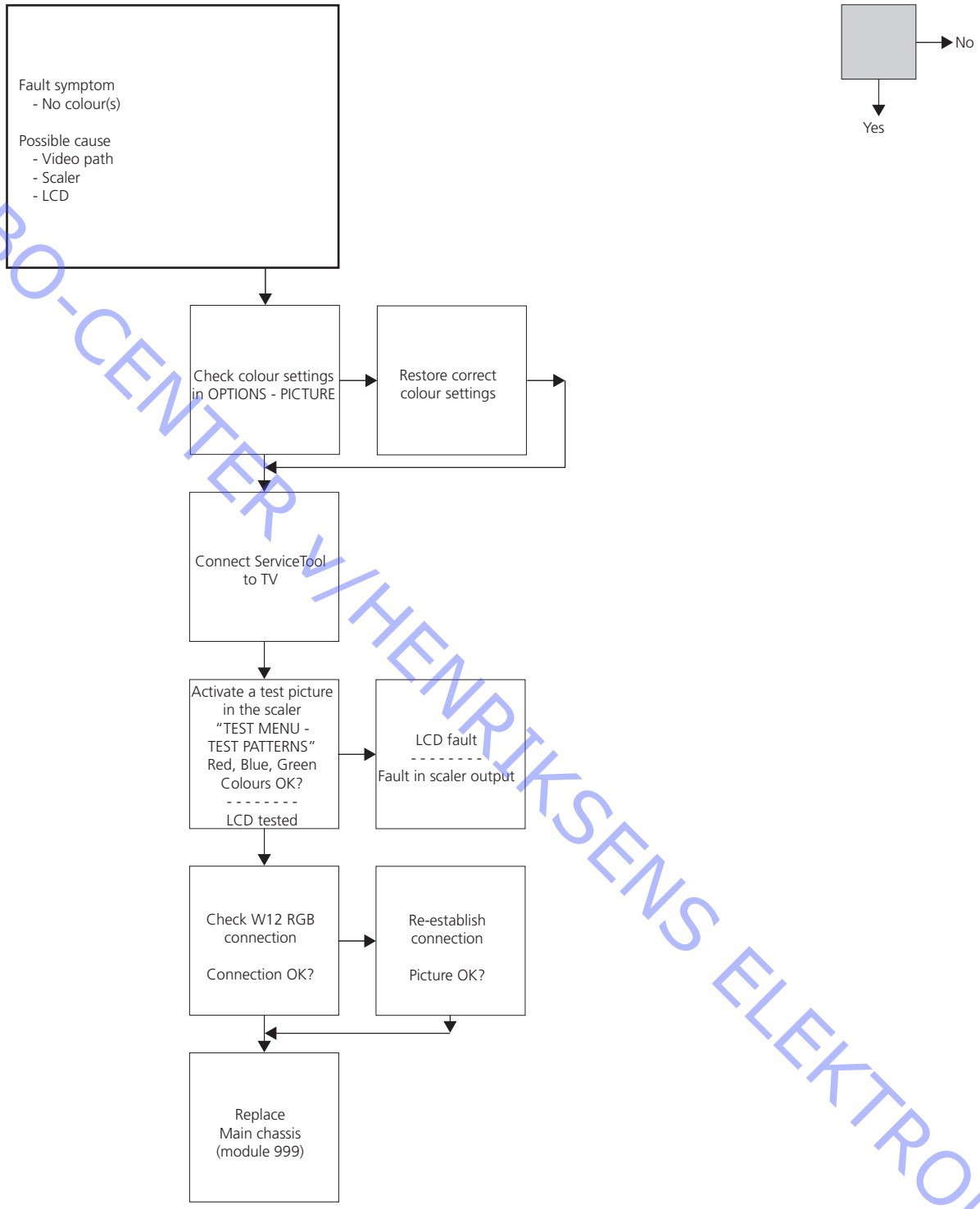


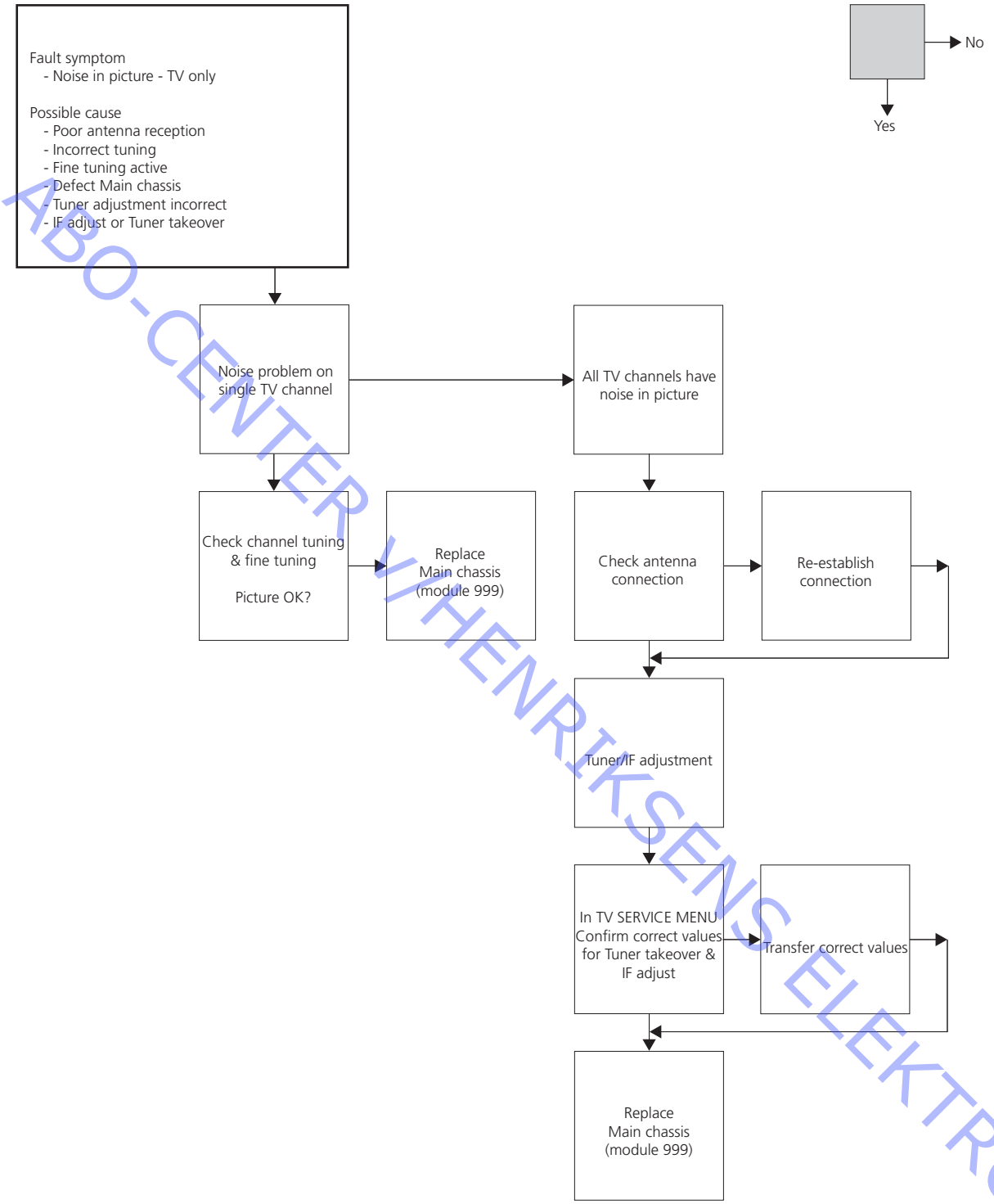


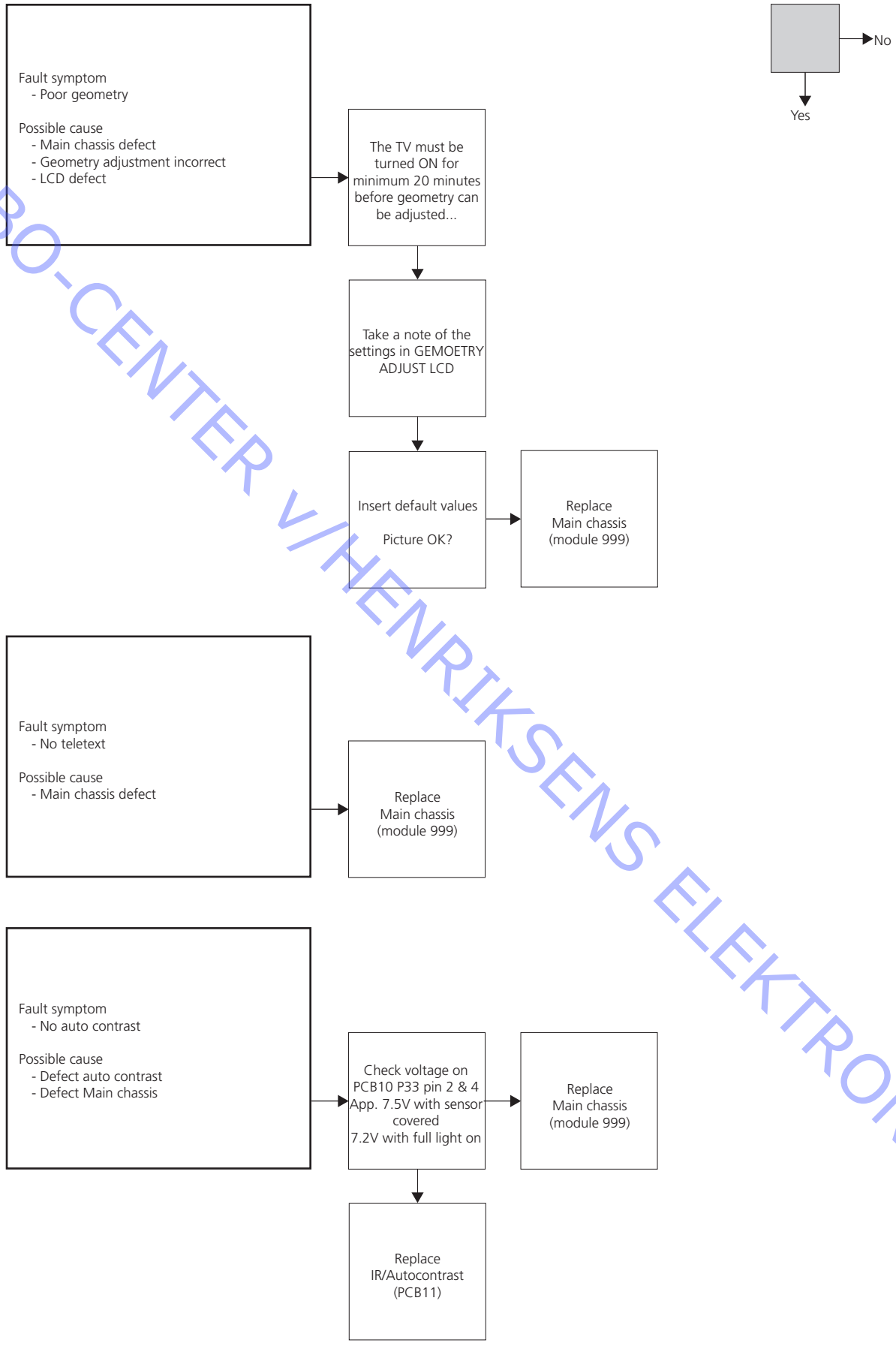


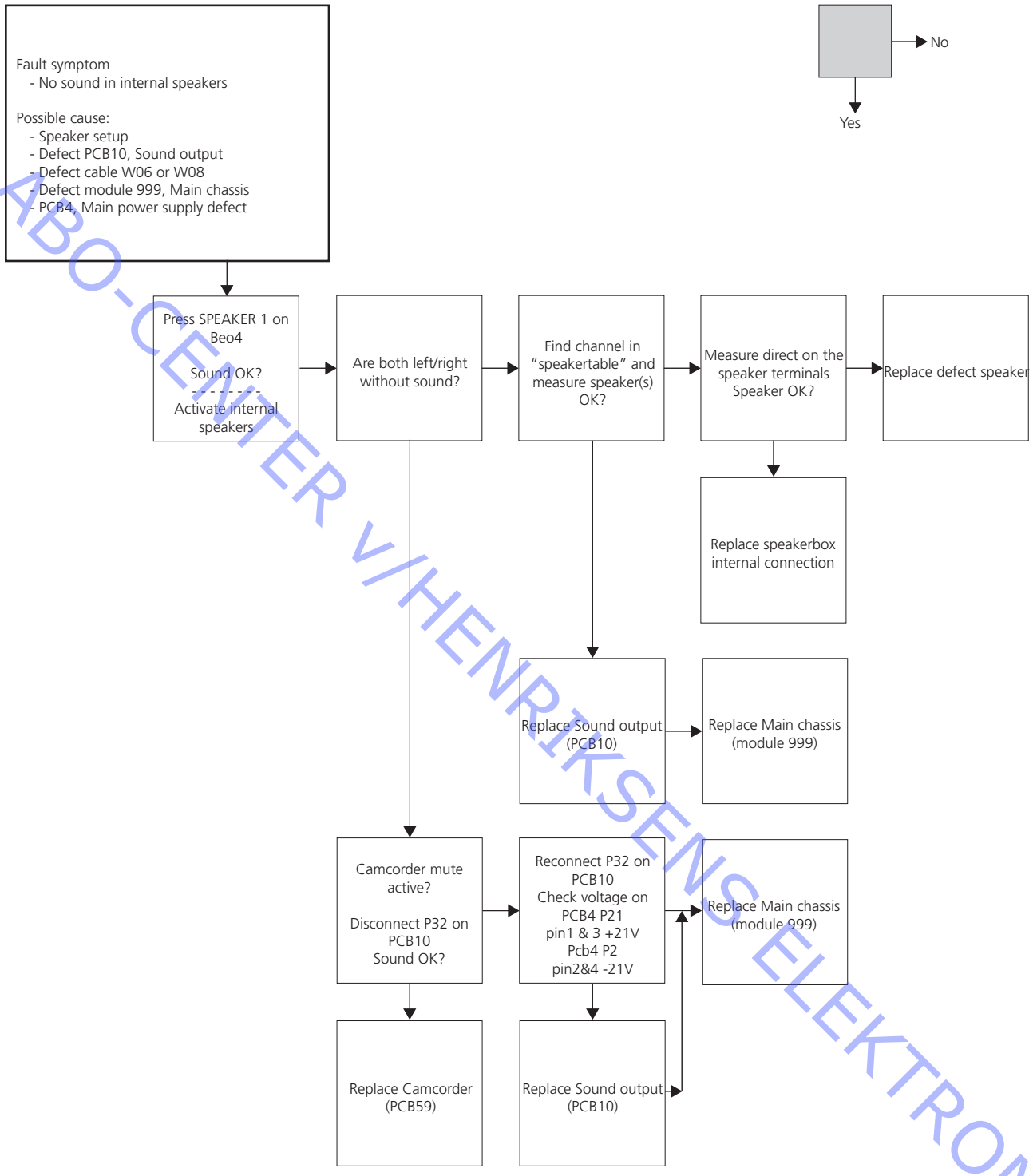


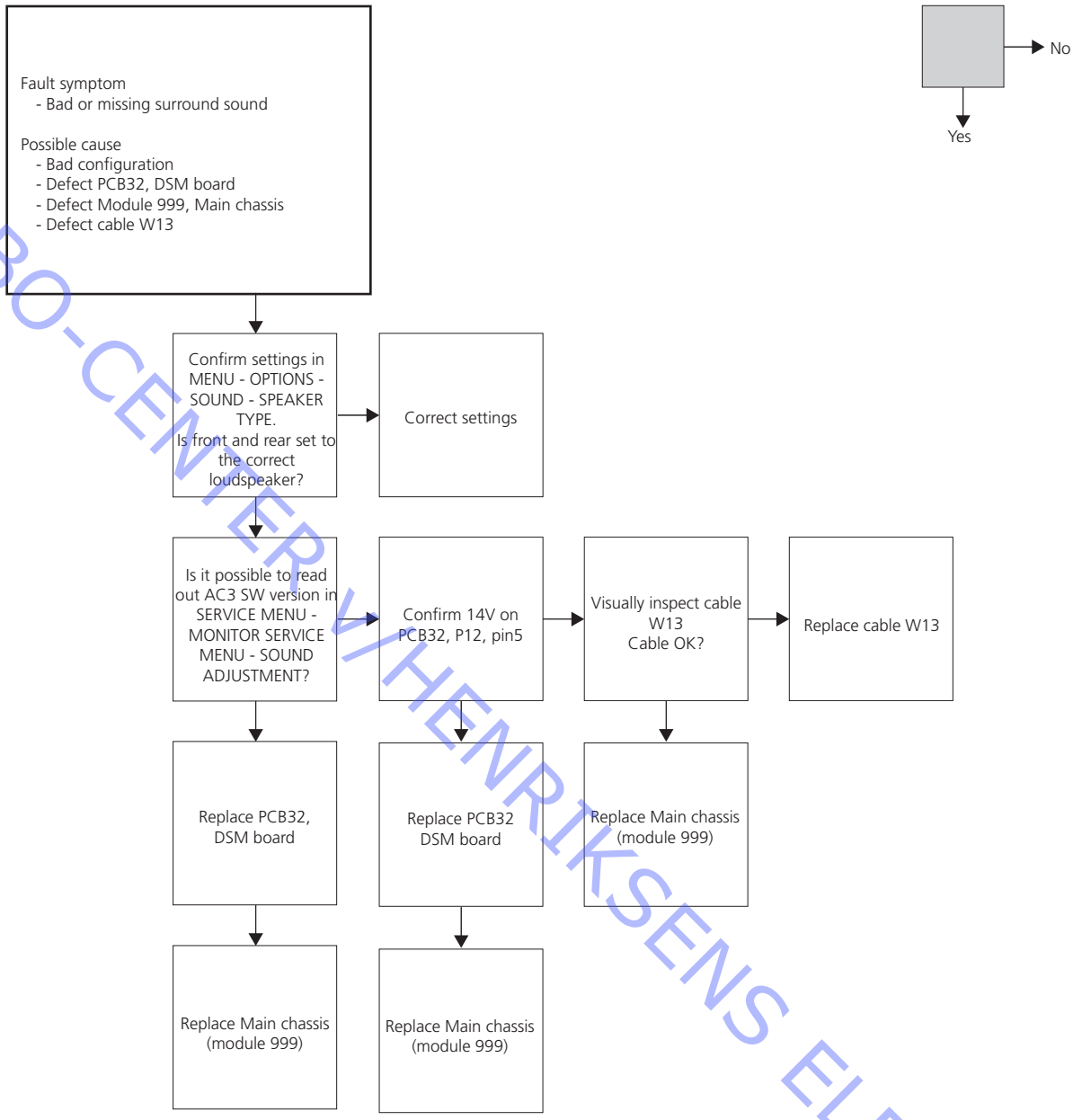


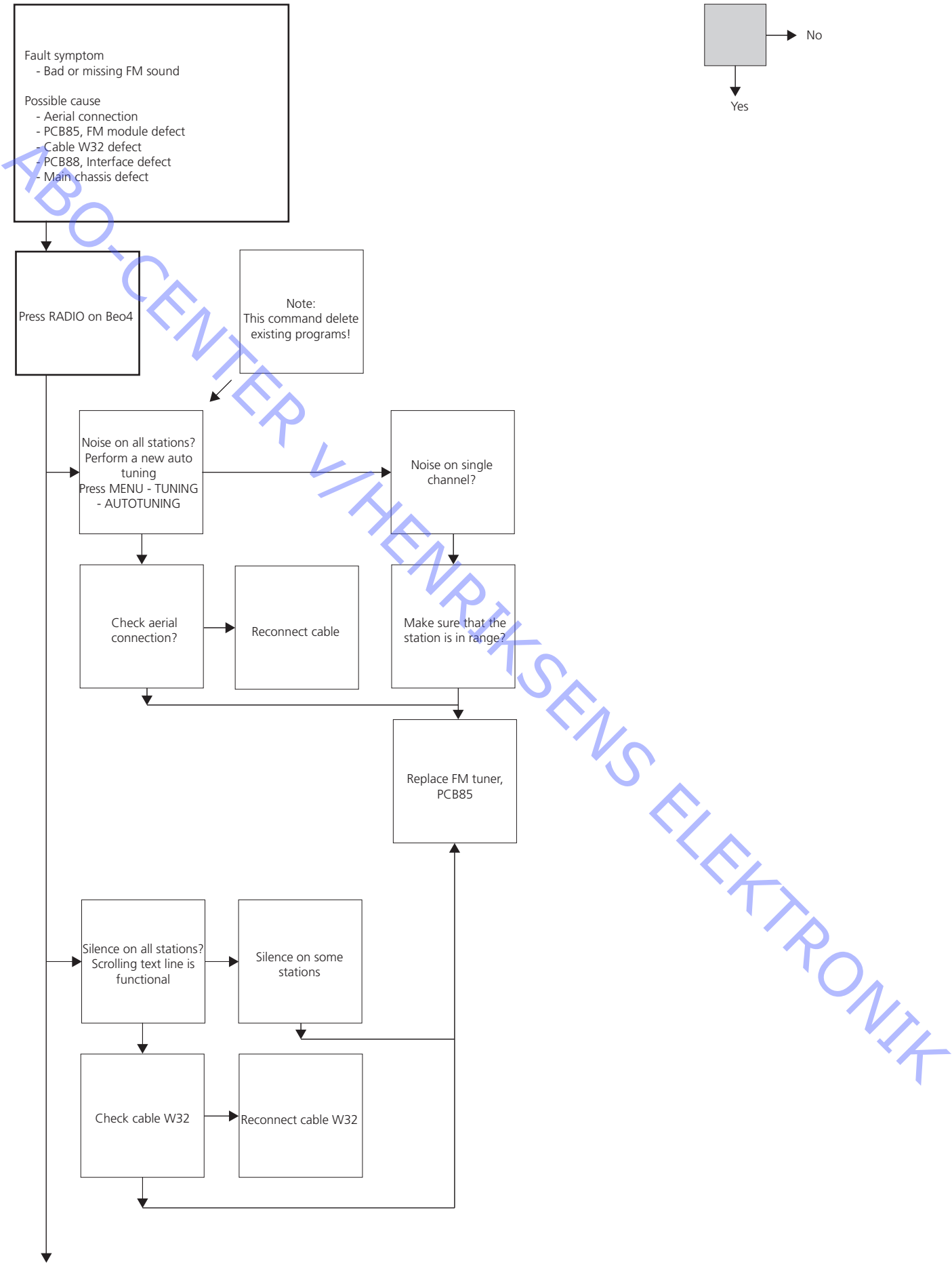


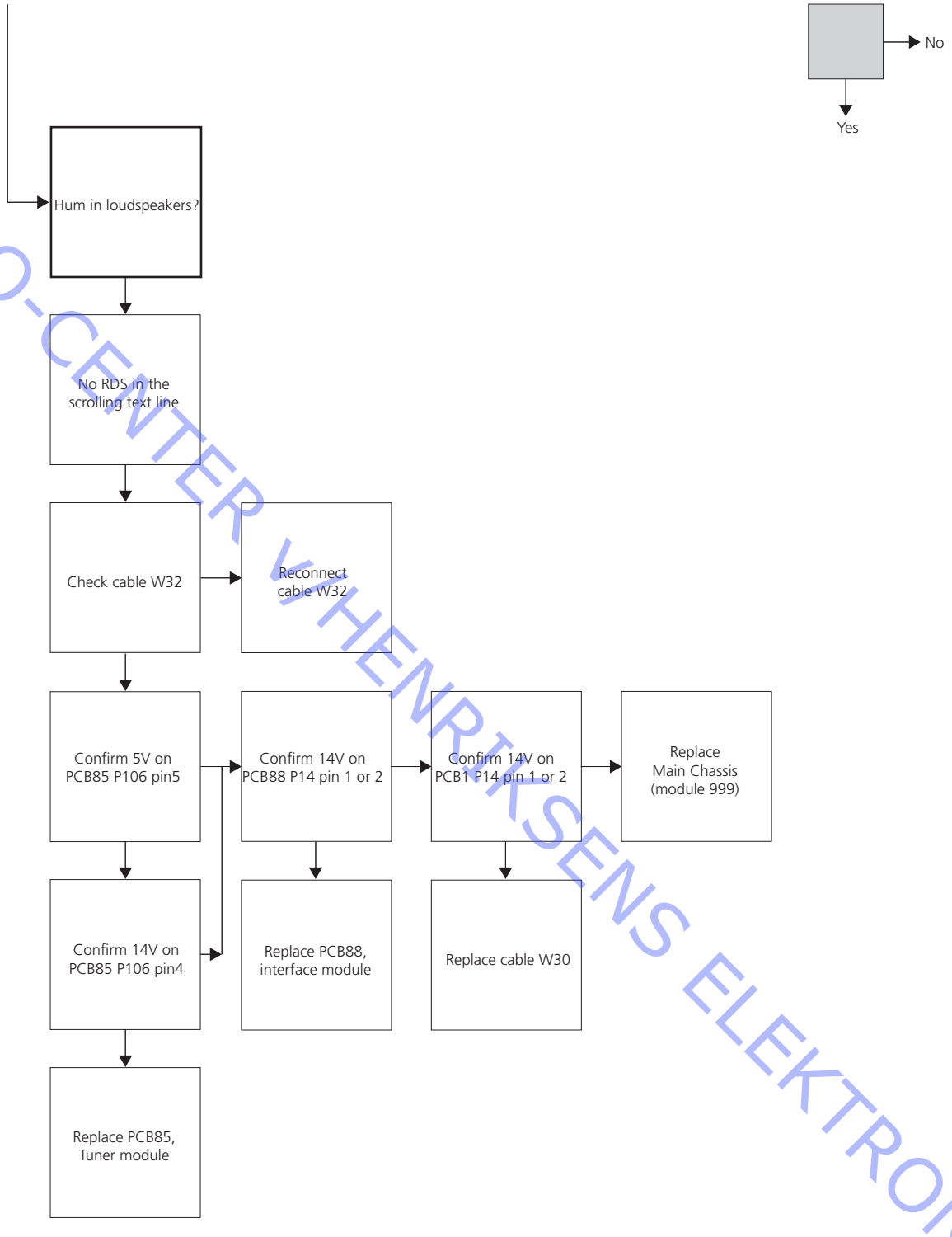


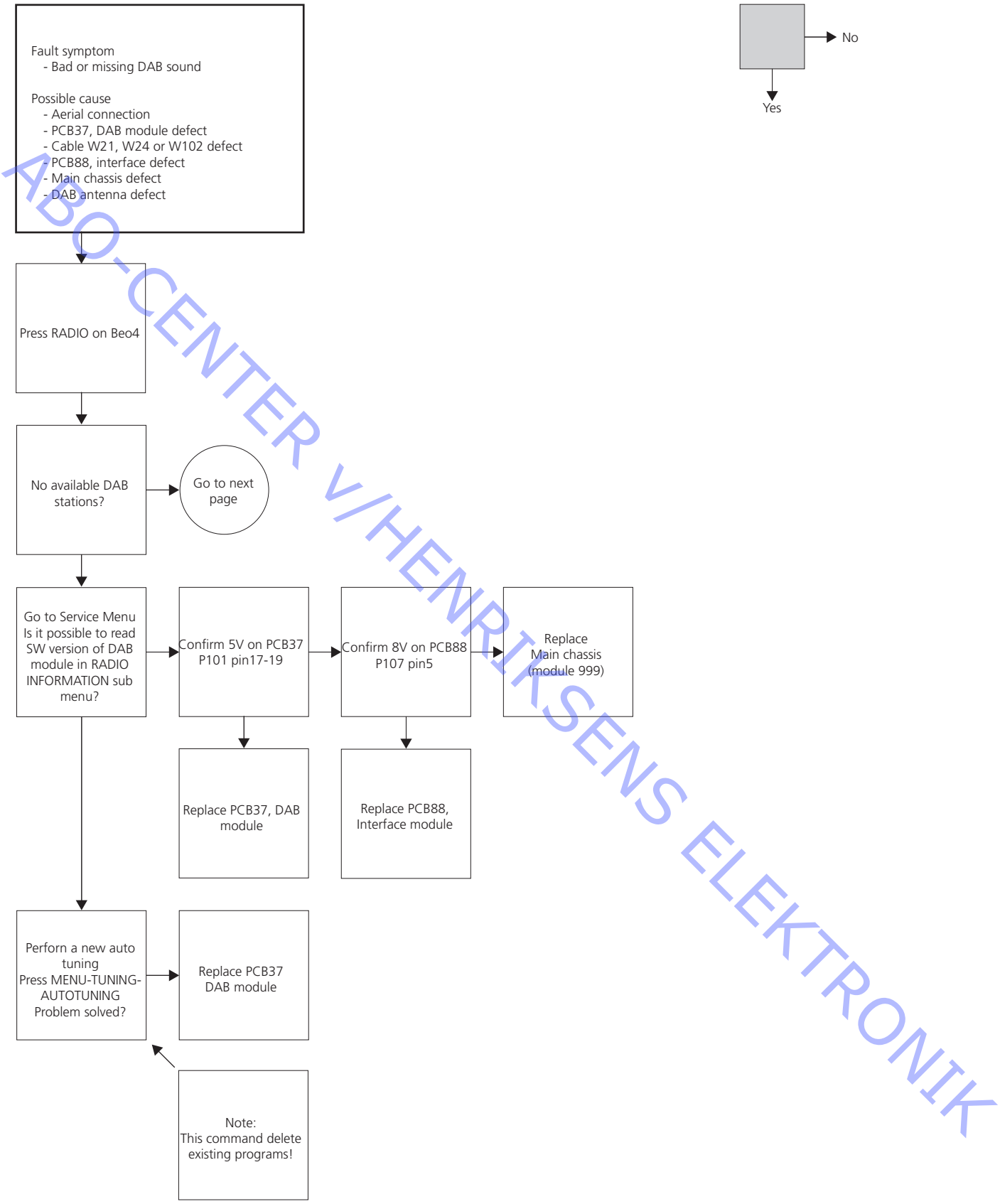


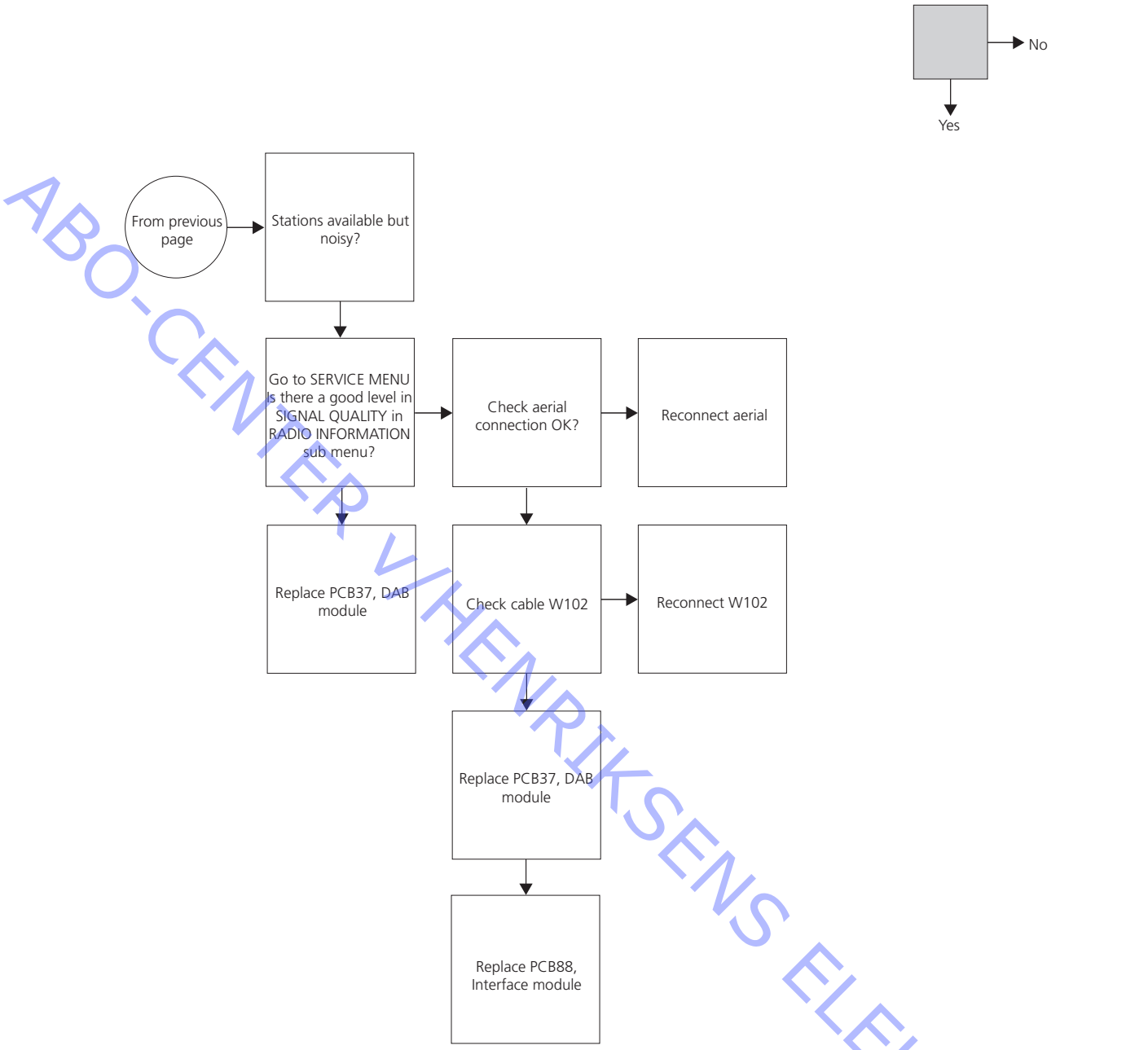


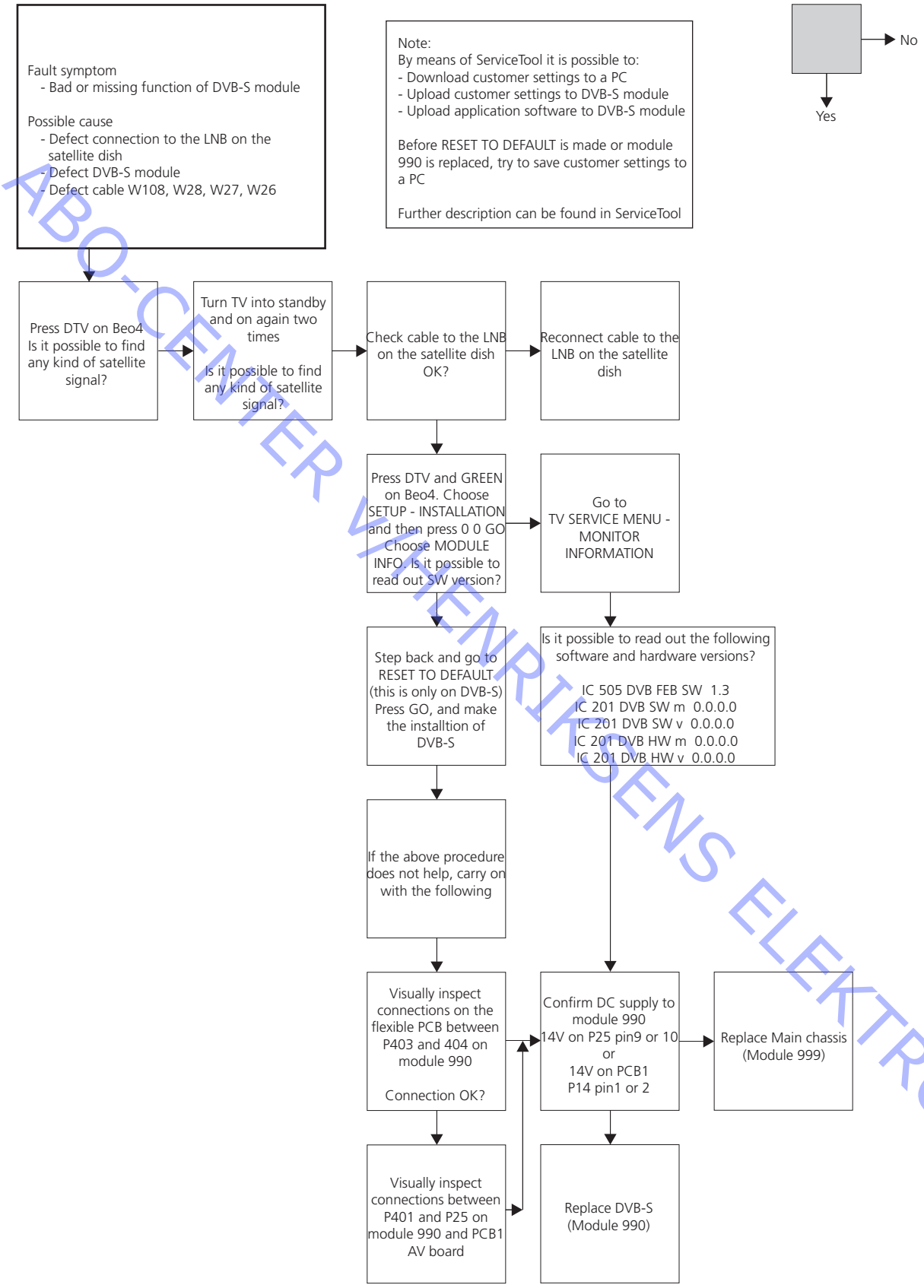


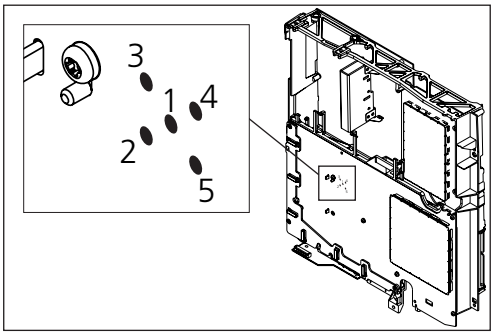












Fault symptom
- No function in stand

Possible cause
- Defect connection to stand
- Defect stand
- Defect main chassis
- Stand not detected

No

Yes

Press MENU on Beo4
- - - - - - - -
Stand menu OK?
- - - - - - - -
Stand is detected

Turn TV OFF an remove mains inlet
Wait min. 2 min.
Connect mains inlet
- - - - - - - -
Reinstall the stand

Turn TV ON
Press MENU on Beo4
- - - - - - - -
Stand menu OK?
- - - - - - - -
Stand is detected

Check connection to stand
Connection OK?
- - - - - - - -
Connection to stand

Reestablish connection
Stand OK?

Read Error code in Service Menu
- - - - - - - -
ST 01, 02, 04, 05?
- - - - - - - -
Calibration error

Read Error code in Service Menu
- - - - - - - -
ST 03?
Fault located in the Main Chassis

Replace Main chassis (Module 999)

Note:
Turn left and turn right is "low" when activated. Otherwise 5V

Measure supply and Turn left/right control voltage
- - - - - - - -
M1P43
Pin5; +14 V
Pin2; Turn left
Pin3; Turn right
Pin1; GND
- - - - - - - -
Error in reading stand position from the stand

Check connection to stand
- - - - - - - -
Connection OK?
- - - - - - - -
Connection to stand

Reestablish connection
- - - - - - - -
Stand OK?

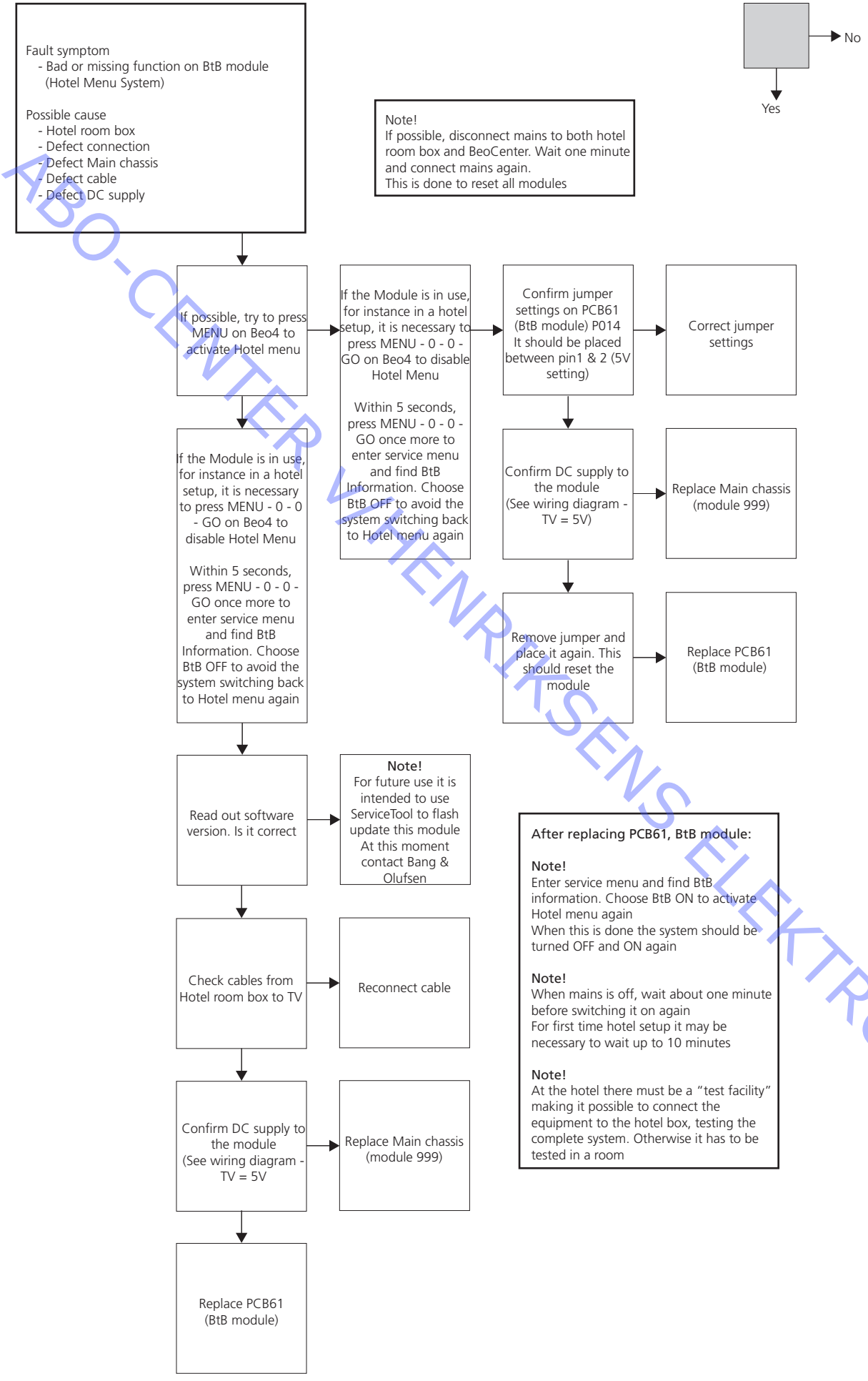
Replace Stand
- - - - - - - -
Stand OK?

Replace Main Chassis (Module 999)

Turn TV OFF and remove mains inlet

Wait min. 2 min

Connect mains inlet
- - - - - - - -
Reinstall the stand



Adjustments and Repair tips

Adjustments

Adjustments described

Stand adjustment (if motorised stand connected).
Tuner take over, IF adjustment & FM sound adjustment.
Geometry check.
Picture check.
Sound adjustment, no adjustment possible.

Purpose of Adjustments

The content in the adjustment instructions are the following:

- Contains text and illustrations if needed.
- The correct sequence for adjusting the product.
- The correct procedure for the adjustment.

Illustrations of:

- Geometry measuring points.

General considerations

- Correct adjustment of all parameters can only be obtained by using special test signals and equipment for light measurement.
- Factory settings will give the best result.
- Customer picture set up, brilliance, contrast and colour are obtained in the TV SETUP – OPTIONS – PICTURE.

Picture adjustments

Brightness, contrast and colour can only be adjusted in the MENU – OPTIONS – PICTURE.
The SERVICE MENU does not give this opportunity.

Measurements

All measurements concerning the geometry are measured with the contrast screen mounted.
Measurements are performed with a ruler, or by counting pixels.
For the best result, measurements are performed in a straight angle to the LCD panel, e.g. you see into the reflection of your own eye.

The television must be turned on for minimum 20 minutes before measurements may be started.
This is due to the back light that first is at 90% level after 20 minutes.

The test signal is applied to the V.TAPE input, SCART connector, unless other is specified.

Preparations before check and adjustment

1. Turn the television on.
2. The television must warn up for minium 20 minutes before adjustment may be performed.
   The back-light reaches 90% efficiency after app. 20 minutes.
3. Select the correct test picture.
4. Set the television in the correct FORMAT.

It is recommended to use the ServiceTool to down load the settings.

Adjustment sequence

1. Tuner take over, IF adjust and FM Sound adjust.
2. Stand, if connected.
3. Geometry check and adjustment if necessary.
4. Picture check and adjustment if necessary.

Access to Service Mode

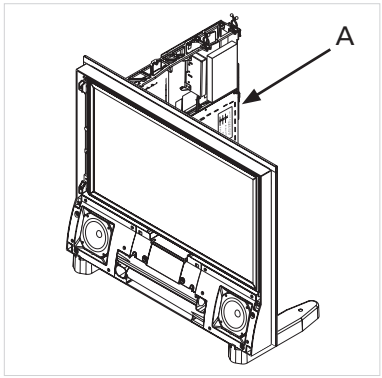
Select a SETUP menu.
Beo4: Press **0 0 GO** within 3 seconds.

Select ordinary menu operation to leave Service Mode.

Operation in Service Mode.

Beo4	Activity
GO	- Selects the sub menu to the menu line where the cursor is placed - Stores the selected values and returns to the SERVICE MENU - Deletes error codes in the MONITOR INFORMATION menu and returns to the SERVICE MENU
▲	Moves the cursor up and returns to the previous menu
▼	Moves the cursor down and selects a sub menu in special occations
◀◀ ▶▶	Selects new values in the menus and selects a sub menu in special occations
EXIT	Removes the menus

Adjust Tuner takeover, IF adjust and FM sound adjust



- The values (A) written on the label placed on PCB1, have to be written into the EEPROM (6IC6).

- Enter SETUP, select SERVICEMODE with **0, 0, GO**. Press the button combination within 3 seconds. Highlight TV-TUNER, select with **GO**. Change the settings by means of ◀◀ and ▶▶ until they match the values on the label. Then press **GO** to store the settings.

Exit Service Mode.

Stand (Only TV with motorised stand)

The scope of this adjustment is to determine the center position.
The adjustment must be performed in the following situations:

- The motorised stand is connected to the television.
- The main chassis has been replaced.
- The Main microcomputer (PCB6) has been replaced.

Adjustment procedure

1. Enter the SERVICE MENU and select STAND.
2. Press **GO**, when CALIBRATION OK is displayed, the center position of the motorised stand is found.

Geometry adjustment

Geometry adjustment is normaly not necessary.
The geometry may be checked.
It is recomended to use a tv test generator, but to verify the different formats the Integrated Living test DVD can be used.
Geometry formats is shown below.

It is possible to adjust the size and position in the SERVICE MENU - MONITOR SERVICE MENU - GEOMETRY ADJUSTMENTS.
Geometry is adjusted in FORMAT 1 and the values for all other picture formats are calculated.

The picture format 4:3 must be enabled in SERVICE MENU - TELETEXT & FORMAT ADJUST.

Geometry Adjustment procedure

1. Check the geometry specifications in FORMAT 1.
   FORMAT 1, 16:9 Panorama
   FORMAT 1, 15:9
   FORMAT 1, 4:3
   FORMAT 2, 16:9 Letterbox
   FORMAT 3, 16:9 - use the 16:9 testpicture.

2. Insert/adjust the default factory values in SERVICE MENU - MONITOR SERVICE MENU- GEOMETRY ADJUST LCD if necessary.

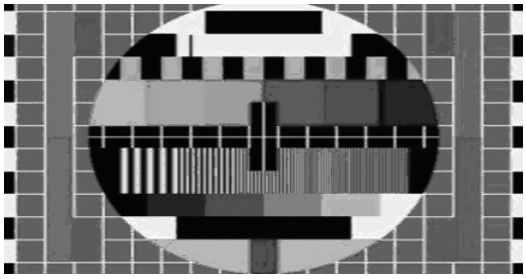
   Geometry default factory values:

HOR SIZE	980
VERT SIZE	548
HOR POSITION	105
VERT POSITION	9

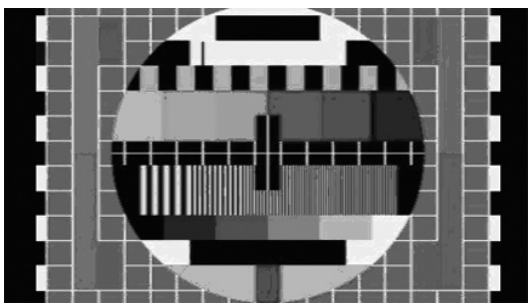
   Remember to disable picture format 4:3.

Geometry specifications

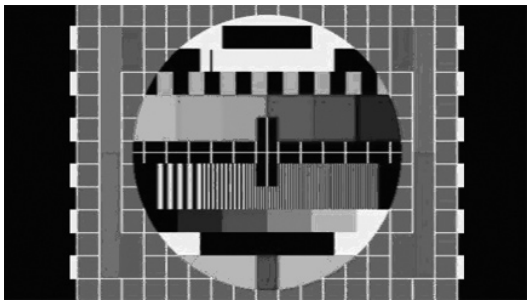
Format 1
16:9 Panorama



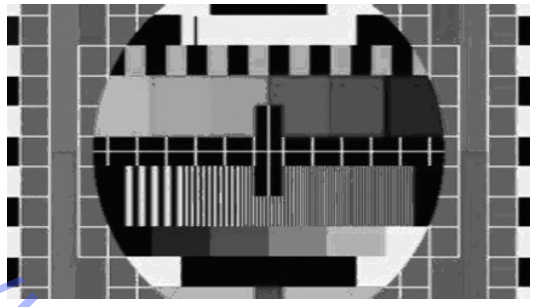
Format 1
15:9



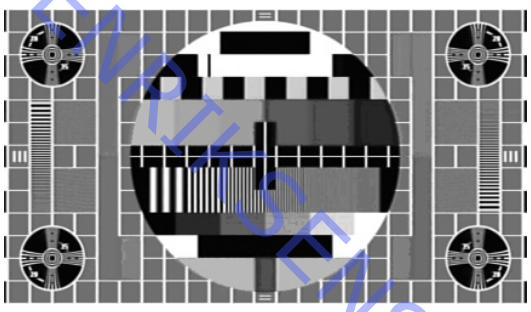
Format 1
4:3



Format 2
16:9 Letterbox



Format 3
Real 16:9



Picture adjustments

Correct adjustment of all parameters can only be obtained by using special test signals and equipment for light measurement.
Adjustment of the specific parameters are not described.

Picture setting (TV – MENU – OPTIONS – PICTURE)

Brightness	Contrast	Colour
Middle position (32)	Middle position (32)	Middle position (32)

Picture adjustments

1. Check the picture quality.
2. If adjustment is necessary, insert default factory values.
3. Confirm the picture quality.

Default factory values

		Default factory	Actual value
HOP Picture menu	HOP settings		
	Brilliance	7	
	Colour	19	
	Contrast	32	
	Red Drive	26	
	Green Drive	26	
	Blue Drive	26	
	Black Offset R	4	
	Black Offset G	4	
	Soft Clip	0	
	PWL	2	
ADC Adjustments	R Offset	210	
	R Coarse	400	
	G Offset	210	
	G Coarse	400	
	B Offset	210	
	B Coarse	400	
Scaler Menu 1	Picture Offsets		
	Brightness	19	
	Colour	21	
	Contrast	20	
	Scaler Contrast	142	
	Sensor Contrast	128	
Scaler Menu 2	Display White Point		
	Display R	128	
	Display G	124	
	Display B	100	
	Display Grey Point		
	Display R	19	
	Display G	14	
	Blue Stretch	2	

ServiceTool

Considerations before connecting ServiceTool to the product

- Disconnect the product from the Mains supply.
- Follow the instructions described in ServiceTool.

Contents in ServiceTool

ServiceTool will contain the complete information concerning:

- How to connect ServiceTool to the product.
- List of functions handled by ServiceTool.
- Instruction for using the functions.

ServiceTool functions

Read out

- Type no., Item no., Serial no, Software versions, Error codes and Service counters. DAB variant.

Adjustment possibilities

- Picture adjustments and Geometry adjustments – Possible to upload settings from a laptop, and to adjust and store new settings.
  Setting of DAB frequency bands.

Saving files

It is possible to save text files with info and values from the SERVICE MENU. The files will be saved in a default folder (Saved/BeoCenter 6_26) in the folder where ServiceTool is installed.

Software programming

- AP software (microprocessor H8).
- IOP software (microprocessor H8).
- M2 application.
- STB-C tables.
- EEPROM backup/restore (customer settings).
- Download customer settings from DVB-S module to a PC.
- Upload customer settings to DVB-S module.
- Upload application software to DVB-S module.

Test pictures

- Possible to activate the internal test generator in BeoCenter 6.

ServiceTool does not contain:

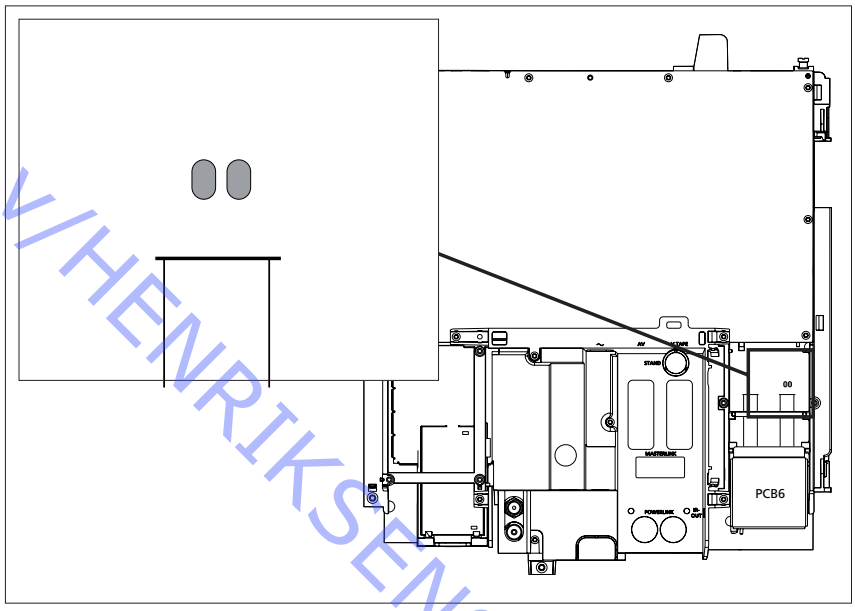
- Description of access and connection to internal connectors inside the product.

Ignore mode

WARNING !
This mode will start the product directly up in Service Mode, and can be used if it will not start normally.
To set the product into Ignore mode, carry on with the following:

- set the product into standby
- set the product in Service position
- short circuit two soldering dots on PCB1 AV as shown below, and at the same time power on the product

This will start the product directly in service mode, regardless of the error. Thereby it may be possible to read out e.g. error codes.



Replacement of Main microcomputer PCB6

- If replacing only the Main microcomputer PCB6, it is necessary to read out existing settings and flash these back into a new PCB6
- If both EEPROM and AV board (Chassis) are defect (e.g. caused by a lightning stroke), a preprogrammed Main microcomputer can be ordered separately by contacting Bang & Olufsen.

Testing a Main microcomputer PCB6

It is possible to use a PCB6 Main microcomputer from a similar type of product for test purpose, but the serial no. and other important adjusting settings will not match the product correctly. Therefore it is important to replace the original PCB6 after a test.
The software programable microcomputer version (flash of both APPLICATION and EEPROM software) can be recognized by having no IC sockets on the PCB.
Another way to identify if a product has the flash version module, is to check if ServiceTool has APP software flash menus for the specific product.

Heat regulation

In heat regulation, the temperature sensors on the screen and chassis are tested, and the fan are tested to ensure they are working. The sensors and fan are connected using plugs that can fail or that the assembler can forget to attach.

If the test detects that a screen or chassis sensor is disconnected or short-circuited, the status display shows "SENSOR ERROR" for approximately 2 minutes. This happens only once, and lasts until the power is disconnected from the device.

If the test detects that the fan are not running (no tacho pulser), the status display shows "FAN ERROR" for approximately 2 minutes. This happens only once, and lasts until the power is disconnected from the device.

Final check after repair

The final check after repair, describes the activities that are needed to ensure the product will be returned in perfect condition to the customer.

The contents is:
- AC leakage test.
- Check product information.
- Restore the setup and check connections, picture and sound.
- Final cleaning of the product.
- PIN-code setting.

Insulation test

Each set must be insulation tested after having been dismantled. Make the test when the set has been reassembled and is ready to be returned to the customer.
Flashovers must not occur during the testing procedure!
Make the insulation test as follows:
Short-circuit the two pins of the mains plug and connect them to one of the terminals of the insulation tester. Connect the other terminal to ground on the aerial socket.

NOTE!
To avoid damaging the set it is essential that both terminals of the insulation tester have good contact.
Slowly turn the voltage control of the insulation tester until a voltage of 1.5 kV and max. 10mA is obtained. Maintain that voltage for one second, then slowly turn it down again.

Monitor information

The scope of this check is, to ensure the following:
- The product has maintained the correct identity.
- Is set to correct option.
- The error code register is cleared.

Procedure
1. Enter Service menu – monitor service menu – monitor information
2. check the serial number is correct
3. check option setting is correct
4. clear the error code
5. select error code and press **GO**

Customer setup

Remember to inform the customer of any changed that has been made in the user setup, due to procedures in the Service Manual, such as Connections, Sound, Picture, etc.

Restore the product to the customer setup.

TV SETUP - OPTIONS

Connections, such as DVD, STB, VTR
Sound, such as external speakers
Picture
Clock

Check all sources are working correctly

- Check that picture and sound on all sources are working correctly.
- Check the teletext are working correctly.

Clean the product

Never user alcohol or other solvents to clean any part of the television.
Use a soft, lint-free cloth to clean the surfaces of the television.

Contrast screen

To avoid soiling the speaker cover when you clean the television screen or the LCD, we recommend that you remove the speaker cover beforehand.

Use white gloves to avoid smudging the contrast screen.

To clean the contrast screen or the LCD, use a mild window cleaning fluid. To retain the optimum performance of the screen, make sure that no streaks or traces of the cleaning fluid are left on the screen or the LCD.

Cabinet surfaces

Wipe dust off the surfaces using a dry, soft cloth. Remove grease stains or persistent dirt with a soft, lint-free, firmly wrung cloth, dipped in a solution of water containing only a few drops of mild detergent, such as washing-up liquid.

Speaker cover cleaning instructions

Please refer to the user guide.

PIN-code

Please refer to the user guide for further information about the use of PIN-code.

Information to the customer

The PIN-code must be activated by the customer.

Service mode

CUSTOMER SERVICE MENU

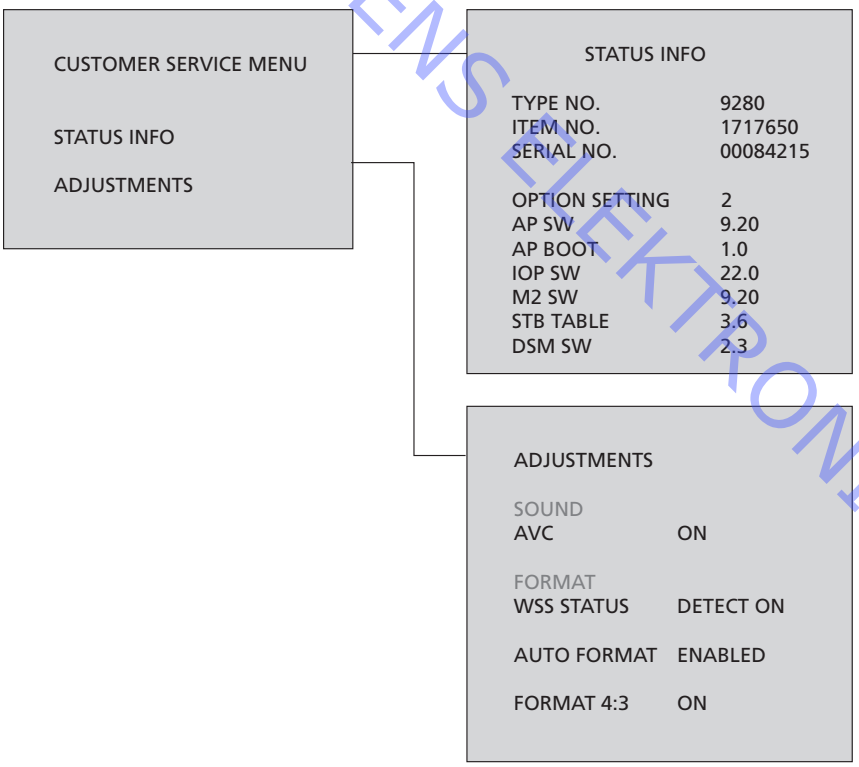
The menu can be accesed by pressing **RED + GO** on "Options" field. Customer service menu is ment for users instead of regular Service menu. Customer service menu includes two submenus.

STATUS INFO SUB MENU

If you select Status info, the following is presented:
Type number indicates country variant and the main group for the type approval.
Item number; the device's componentry and colours are described by means of the number. The parameters for this include sat/stand/front glass/colour/code converter/country variant.
The type number can be derived from an item number.
Serial number (individual number), a unique number for this type of device.
Current option setup.
SW version for application processor (indicated by PROM IC and module numbers).
SW version for AP BOOT. Indicates bootloader software version.
SW version for IOP (indicated by IC and module numbers).
SW version for M2 controller.
SW version for STB controller's table. The table is for the STB that it can control (indicated by the IC and module numbers).
SW version for DSM controller.

ADJUSTMENTS SUB MENU

In Adjustments menu the user/technician can change some sound and format settings: Theese values are the same as in the Service Menu.
AVC – Automatic Volume Control, possible to enable or disable (ON/OFF).
WSS Status.
Auto Format – possible to enable or disable.
Format 4:3 – possible to set on or off.



Service mode in general

The Menu Overview appendix provides an overview of the menus as they appear in the Software. The menu items are generally self-explanatory so you can gain a general overview by studying this page closely. In addition to the menus, there is a little extra functionality that comes under service mode, which is described in the following subsections.

Access to service menu

The service menu must be activated while the setup menu is displayed. From this initial state, the service menu is activated in one of the following ways:

- Beo4: the service menu is activated by pressing **0 0 GO** within 3 s.
- On the device: if the device is switched on, activation of the service switch (ignore mode switch) will cause the service menu to be displayed.

Deactivating service mode

When you exit the service menu (standard menu operation), the device is normal. You cannot exit ignore mode until the device is switched off.

Option programming

Option programming can only be carried out using a Beo4.

Option	Device
0	BC1, BV1, MX4200, MX8000, BV6, BV3, BV7, BC6 The IR receiver of the TV is disconnected.
1	BC1, BV1, MX4200, MX8000, BV6, BV3, BV7, BC6 The TV and the Audio system (BeoLink system) are placed in the same room.
2	BC1, BV1, MX4200, MX8000, BV6, BV3, BV7, BC6 The TV and the Audio system (BeoLink system) are placed in different rooms.
3	-
4	BC1, BV1, MX4200, MX8000, BV6, BV3, BV7, BC6 Two TV's in the same room and the TV's are not linked together.
5	BC1, BV1, MX4200, MX8000, BV6, BV3, BV7, BC6 The TV and the Audio system (BeoLink system) are placed in the same link room.
6	BC1, BV1, MX4200, MX8000, BV6, BV3, BV7, BC6 The TV is the only product in the link room.

Navigation

Beo4	Possible actions
MENU	Select menus
GO	- selects the submenu that a cursor is on - accepts a menu, which results in values entered being saved (in NVMEM) and the menu being exited - activates functions, for example start/stop DVD - deletes incorrect registrations in the monitor information menu and exits the menu
▲	Moves the cursor bar up Returns to the previous menu when the cursor bar is at the top. Modified data is not saved
▼	Moves the cursor bar down Selects a submenu in some cases
◀◀	Modifies data
▶▶	Modifies data
STOP	No interpretation
Digit	Modifies data
EXIT	Removes the menus

Service menu

This menu is used to select the device area in which service is to be carried out/ information is to be sought.
The contents of the menu depend on the sources installed.

Monitor service menu

Here you have access to the monitor's underlying service menus.

Monitor information

If you select monitor information, the following is presented:

- SW version for application processor (indicated by PROM IC and module numbers).
- SW version for IOP (indicated by IC and module numbers).
- SW version for STB controller (indicated by IC and module numbers).
- SW version for STB controller's table. The table is for the STB that it can control (indicated by the IC and module numbers).
- Type number indicates country variant and the main group for the type approval.
- Item number; the device's componentry and colours are described by means of the number. The parameters for this include stand/front glass/colour/code converter/ country variant.
- The type number can be derived from an item number.
- Serial number (individual number), a unique number for this type of device.
- PIN-code status. The status indicates whether the master code was entered correctly (STORED/NOT STORED).
- Current option setup.
- Last 5 TV errors (for example IIC bus errors), indicating the month and date.
- Last ML/SL error.
- In a product without physical ML HW, this status is NH (= No Hardware). See the section on ML error codes.
- Last AVL status/error; this status describes the AVL link's state in products with two AVL links (1 in each scart connector). Therefore there are two values for them. The first value is for AVL in the VTAPE connector and the second value is for AVL in the AV connector. The values can be seen in the section on AVL error codes.

- Notation for indicating the SW version:
  nn ICmmm SW x.yy
  nn is the module number on which the IC is mounted
  mmm is the part list number for IC
  x.yy is the SW version number

The last 5 TV errors are printed as error codes and displayed with the month/date (four digits) from the system clock's time at the time of the error. The last error is printed at the top.

V.TAPE AVL and AV AVL errors are always output with the text LAST in front of the error code.

Error codes are described in a later section.
Error codes for ML/SL are shown in a later section.
Error registrations are deleted when the menu is exited with **GO**.
Error registrations are not deleted when the menu is exited with ▲ **STEP UP.**

IC information

The menu shows the revision numbers for the ICs fitted. Direct numbers from the ICs' registers are shown, and this information must therefore be compared with the data sheets. Information is shown on megatext, MSP, HIP, HOP and image improvement IC. The numbers shown are a direct printout from the ICs' registers, and further identification of the IC must therefore be seen in the appropriate data sheet. Output notation:

MSP	aabbccdd
HIP	ee
PICTP	ff
HOP	times

All numbers are in hexadecimal notation.

aa:	MSP hardware version code [00-FF]
bb:	MSP major revision code [00-FF]
cc :	MSP product code [00-0A]
dd:	MSP ROM version code [00-FF]
ee:	TV input processor IC version indication [00-0F] (4 identification bits directly from the IC's status registers)
ff:	Image improvement IC [00-07] (3 identification bits directly from the IC's status registers)
times:	TV display processor [00-0F] (4 identification bits directly from the IC's status registers)
hh:	Megatext version code (firmware version)

Service counters

The following service counters are presented in the menu:

Service counter	Unit	Comments
Audio mode time	0-99999 days	Monitor switched on without high voltage
Boot counter	0-99999 times	Number of times the device has received mains voltage
Audio/video mode time	0-99999 days	Monitor switched on without high voltage
On/off	0-99999*10 times	Number of times the device is switched on (both audio and audio/ video mode)
Radio	0-99999 days	Time the radio has been switched on
Radio on	0-99999*10 times	Number of times the radio has been switched on

Picture adjustments

It is possible to adjust the picture parameters as listed in sub menus below:
HOP PICTURE MENU
ADC ADJUSTMENTS
SCALER MENU 1
SCALER MENU 2
SCALER TEST MENU
FEATURE BOX MENU

Each parameter value is saved automatically after adjustment.

HOP PICTURE SUB MENU

In this menu, the following settings can be made:

BRILLIANCE	from 0-63
COLOUR	from 0-63
CONTRAST	from 0-63
RED-DRIVE	from 0-63
GREEN-DRIVE	from 0-63
BLUE-DRIVE	from 0-63
BLACK OFFSET R	from 0-15
BLACK OFFSET G	from 0-15
SOFT CLIP	from 0-3
PWL	from 0-15

ADC ADJUSTMENT SUB MENU

In this menu, the following settings can be made:

R OFFSET	from 0-511
R COARSE	from 0-63
G OFFSET	from 0-511
G COARSE	from 0-63
B OFFSET	from 0-511
B COARSE	from 0-63

SCALER SUB MENU 1

When you edit data, the lower half of the menu and the Current Value parameters disappear. This is in order to allow more of the screen to be shown, providing a better basis for adjustment.

You can adjust the five parameters at the top, categorised as "Picture Offsets" and you can set the BACKLIGHT STARTUP.
BACKLIGHT STARTUP can be switched off in this menu in order to carry out panel luminance characteristics measurements without the corrections performed by the Backlight Startup Sequence.
The values under "Current Values" show the user's settings. They cannot be changed.

BRIGHTNESS	from 0-255
COLOUR	from 0-255
CONTRAST	from 0-255
SCALER CONTRAST	from 0-255
SENSOR CONTRAST	from 0-255

BACKLIGHT STARTUP [ON, OFF]

CURRENT VALUES:
BRIGHTNESS
COLOUR
CONTRAST
SCALER CONTRAST
TINT

SCALER SUB MENU 2

RED, GREEN and BLUE LOOKUP TABLE cannot be selected, instead LCD PANEL is used.

On LCD PANEL field panel type can be selected. Each panel type has specific LUT (Lookup Table). The lookup table contains colour saturation values for various intensities of red, green and blue in the picture.
Possibilities are: 32-L01, 32-L03, 32-L14, 40-L01, 23-L01, 23-L02, 26-L01.

DISPLAY WHITE POINT:

DISPLAY R	from 0-255
DISPLAY G	from 0-255
DISPLAY B	from 0-255

LOOKUP TABLE SELECTION:

LUT RED	[0, 1, 2]
LUT GREEN	[0, 1, 2]
LUT BLUE	[0, 1, 2]

DISPLAY R	[0,1]
DISPLAY G	[0,1]

Blue stretch 2

LCD panel	26-L01	In BeoCenter 6-26, 26-L01 have to be choosen

ADAPTIVE BACKLIGHT	ON/OFF	Is default ON

SCALER TEST SUB MENU

This menu contains no parameters, but provides feedback about whether the LCD display is overheated, and whether DVI has been detected.
The Test Patterns item also opens a submenu where you can show test pictures for investigating possible dead points on the screen.
In the Test Patterns menu, the interactions are as follows:
The up/down arrow switches between the two colour screens – when they are on, and also when you scroll between them in the Test Patterns menu.
Use **GO** or **WIND** or **REWIND** to activate and deactivate the colour screens.

SCALER STATUS:

DISP OVERHEATED	[LOW, HIGH]
DVI DETECTED	[NO, YES]

TEST PATTERNS

WHITE
GREY 25%
GREY 50%
GREY 75%
BLACK
RED
GREEN
BLUE
YELLOW
MAGENTA
CYAN

GEOMETRY ADJUSTMENTS LCD

There are only four parameters for adjusting the size and position on the screen.

HOR SIZE	from 0-2000
VERT SIZE	from 0,2,4..2000
HOR POSITION	from 0-2000
VERT POSITION	from 0-2000

Note that V.Size is special in that it can only accept even values.

SOUND ADJUSTMENTS MENU

AVC (= Automatic Volume Control) can be switched off in this menu in order to carry out sound measurements without the corrections performed by the AVC function.
It is possible to set the maximum volume.

FACTORY SETTINGS:

AVC	[ON-OFF]

MAX VOLUME LIMIT:
MAX VALUE: between 65 and 90

AC3 SW: shows the version of the software

TELETEXT ADJUSTMENTS Sub Menu

Some TV broadcasters transmit a picture format identification, enabling the TV to switch to the proper format automatically when WSS DETECT is ON if there is WSS codes in the signal.
BROADCAST ONLY: Only switching on signal from the TV tuner.
DETECT ON: Switching on signals from all sources TV tuner, DVD playback, and AV sockets.
DETECT OFF: Used under certain conditions, e.g. a poor signal-to-noise ratio, the detection may fail, which may entail faulty swithing.

The following adjustments can be made:

WSS STATUS	DETECT ON / OFF / BROADCAST ONLY
TEXT LANGUAGE:	
B&O LANGUAGE 0	0-6
AUTO FORMAT	ENABLED / DISABLED
4:3	ON/OFF

Selecting "B&O LANGUAGE" makes it possible to choose among 7 different teletext character sets.

0 English, German, Swedish, Italian, French, Portuguese, Slovak
1 Polish, German, Swedish, Italian, French, Croatian, Slovak, Rumanian
2 English, German, Swedish, Italian, French, Portuguese, Turkish
3 English, Russian, Estonian, Czech, German, Lithuanian, Ukrainian
4 English, German, Swedish, Italian, French, Portuguese, Turkish, Greek
5 English, Arabic, French
6 English, Hebrew, Arabic

If language 3 to 6 are choosen it is not possible to receive teletext level 2.5 d/r/c/s characters. If language 3 to 6 are choosen it is not possible to make animation in the programme list in teletext mode.
If auto format is enabled the picture is automatically adjusted to the best picture format - automatic picture format optimization (Black Bar Detection). If the function is disabled the format optimization must be done manually with Beo4.

When the 4:3 function is set to ON it is possible to use the 4:3 format in ´Format1´.

M2 INFORMATION Sub Menu

This menu contains information about software versions for the teletext processor.
STB TIMER 1 and 2 : It is possible to adjust the delay to an Set Top Box connected. This is because certain Set Top Boxes has a long start-up time. As this may affect a timer recording it is possible to alter the start-up time between 0 and 255 seconds.
HW STATUS: For factory use.

RESET TO DEFAULT

WARNING
The reset to default command is activated directly when the menu is highlighted. If the menu item "RESET TO DEFAULT" is selected, the text "PLEASE WAIT" is displayed until the above functionality has been carried out. While the text "PLEASE WAIT" is displayed, you must NOT carry out source selection and you must not press **EXIT** or **STANDBY**.

Following parameters are affected, when the device is resat:
- Option is programmed to 2 if FM module is present, else option 1
- AV1 and AV2 are configured as "NONE"
- PL speakers are configured as "NONE"
- Volume preset is configured to default
- Max volume is configured to default
- Bass, treble and balance are configured to default
- Loudness is set to "NO"
- AVC is enabled
- Brightness, contrast and color adjustments are configured to default
- Movie mode is enabled
- Comb filter is enabled
- Stored TV and Radio programs are deleted
- Modulator frequency is configured to default
- Stored program groups are deleted
- Stand is configured to default position
- WUT data is deleted
- The clock is configured to synchronise to program 1
- Autoformat is enabled
- WSS is enabled
- Default format for 4:3 signals is set to 16:9 pan
- Format 5 (4:3) is set to ENABLED
- Production counters stops
- Power down functionality is enabled
- Menu language is configured to English
- Internal Radio is ENABLED if FM module is present
- First install menu will be shown next time the device is powered up

TV SERVICE MENU

In this menu, it is possible to change the MF variant (i.e. activate/deactivate different tuner systems) and change band limits and constants.
AFC can be set on/off in order to allow IF ADJUST adjustment. AFC off is remembered only until power down.
When the system is selected, the band limits and constants are NOT changed.
Frequencies are in MHz.
TUNER TAKEOVER adjusts the tuner's agc. The value range is 0-63. When replacing

main chassis there is a label with a value, that must be entered here.
IF ADJUST adjusts Pll tuning. The value range is 0-127.
AFC STATUS shows the current afc status. 4 values can be displayed.
O/H = outside high
I/H = inside high
I/L = inside low
O/L = outside low
The afc status value is updated when the menu is opened and subsequently approximately 4 times per second.
FM SOUND ADJUST is used to adjust sound FM s/n on the TV tuner. The value range is 0-63.
MODULATOR SYSTEM is used to change which modulator system is used for link rooms. B/G or I are possible systems.

RADIO SERVICE MENU

The FM radio and DAB radio SW versions are displayed. Testmode can be activated and deactivated. With testmode ON, the following takes place:

- Testmode ON stops the Update routine.
- Testmode ON sets the fm wide filter.
- Testmode ON sets the search level to First Stop. This means that, in test mode, it will find more weak stations than otherwise.
- Testmode ON removes 20 dB attenuation of strong stations.

If DAB module is present, two extra fields are accessible:
Frequency table (possible to choose between "DAB EU", "DAB CA" and "DAB KOREA").
Bands (possible to choose between "BAND 3", "L BAND" and "BAND 3&L").
If DAB module is not present, the fields are grayed out.

If DAB module is present and DAB station is playing, six extra fields are visible:
Frequency – frequency of current DAB channel
Viterbi – Value => 0 = a good signal is available
Channel – channel name (for ex. 13F)
Signal quality – Value => 0 = a good signal is available
Sound - mono or stereo
Bitrate – bitrate in KB/S

STAND ADJUSTMENT

If the Main microcomputer (PCB6) needs to be changed or the chassis replaced on the product, the stand's centre position must be set up. This is done in this menu by activating the menu item. When you press ▼, the calibration function is activated.
When you press ▲, you return to the previous menu without the function being activated.

BUSINESS TO BUSINESS extra service menu

When a BtB module is detected, an extra field will appear in the first service menu: BUSINESS TO BUSINESS.

If BtB ENABLED is set to YES and you press **GO** on Beo4, the TV will switch off automatically, because it enters BtB (Hotel) mode, where the STBC controls the TV.

STBC POWER ON shows which power the STBC is running on: 5 Volt standby or 14V.

BtB IN FLASH shows whether or not the STBC module is in flash mode. This is for future use.

Ignore Mode

In the case of a fatal component failure, the unit cannot be powered on. To service a unit despite such a failure, the unit must be put into a state where the failure is ignored. This state is called ignore mode, and is further described in "Adjustment and Repair tips".

Error Codes

The TV is able to detect certain types of error and display them on the screen. The five latest TV errors are shown as error codes and displayed with the month/date (four digits) as provided by the system clock. The most recent error is displayed at the top. As the TV has no hardware clock the displayed month/date will not be correct, but can be used to see if more errors have occurred at the same date.

The following TV error types can be displayed:

. . . .	No error registered
DF	Data failure
POR1	Power on reset failure 1
POR2	Power on reset failure 2
PDD	Power down detected failure
DPF	DiSEqC power fail.
XX-YZ	(XX = IIC address Y = IIC bus 1 or bus 2 Z = any IIC bus segment A/B/C/D)

ML error codes are for detection of errors in the Master Link system.

. . . .	No error registered
CI	Address configuration impossible
TD	ML data pulled down
TU	ML data pulled up
??	Other undefinable error possibilities
NH	No Hardware. There is no Master Link PCB in the TV

AVL error codes from the V.TAPE and AV sockets

. . . .	No error registered
TI	Transmission impossible
TD	Data link tied down

Motorized stand error codes

ST-01	Calibration error too few positions
ST-02	Calibration error too many positions
ST-03	Calibration error EEPROM
ST-04	Calibration error transducer
ST-05	Calibration error position

After repair of an error that has triggered the display of an error code, the error code has to be deleted. This is done by pressing **GO** in the MONITOR INFORMATION menu

IIC bus error

An IIC bus error means that the communication on the bus fails when the microcomputer tries to communicate with the address in question.

Error code	PCB	Function	On modes	IIC Bus
8A	1	Colour decoder & IF (HIP)	AV	2
40	1	Video processor (HOP)	V	2
84	32	DSM	AV	1
6E	21	DVBS portexpander	AV	1
80	64	Power Link	AV	2
80	1	Sound IC Tuner (NEU)	V	2
84	1	Sound IC Tuner (EUM)	V	2
88	1	Sound IC Tuner (MUL)	V	2
A2	1	Real-time clock	SAV	1
C0	1	TV tuner	V	2
88	64	PL Sound IC	AV	2
CA	1	Modulator IC	V	2
68	1	Code converter (M2)	V	1
22	85	FM RDS IC	AV	1
C6	85	FM Tuner IC	AV	1
C4	85	FM PLL IC	AV	1
8C	85	FM Stereo Decoder	AV	1
A0	85	FM EEPROM	AV	1
EA	37	DAB IC	AV	2
40	88	Switch IC FM / DAB	AV	1

In most cases this means that the addressed IC is defective but the defect could also be in one of the components surrounding the IC or in other components on the bus. Adresses in connection with IIC bus errors:

On modes:

S - Standby mode
A - Audio mode
V - Video mode

DF Data failure

If an error occurs in the Main microcomputer (PCB6) that prevents output of geometry data to the TV set, the microcomputer will replace the missing data with default data stored in the EPROM (6IC3) module 999.

POR1 Power on reset failure 1

Reset or update failure of module 999 during start up.

POR2 Power on reset failure 2

Reset or update failure of module 999 during start up.

PDD Power down detected failure

Power down failure detected on module 999.

CI Address configuration impossible

Error during address configuration. No address has been allocated because an excessive number of units has been connected to the Master Link.
- Disconnect all units from the link and reconnect them again one at a time.

TD ML data pulled down

The link is pulled down (Low). This error can occur in the form of a physical short circuit in the link. In the link drivers, or in the ML master/source circuit module 51 in the TV.

TU ML data pulled up

The link is pulled up (High). This error can occur in the form of a physical short circuit in the link. In the link drivers, or in the ML master/source circuit module 51 in the TV.

TI Transmission impossible

It is not possible to send data to pin 8 on the V.TAPE or AV socket, probably because of noise.

TD Data link tied down

The data link connection to pin 8 on the V.TAPE or AV socket is short circuited to ground.

ST-01 Calibration error too few positions

Not enough positions are read during Stand calibration. The Stand may be blocked.

ST-02 Calibration error too many positions

Too many positions are read during Stand calibration.

ST-03 Calibration error EEPROM

Failure when the Stand offset should be stored in the EEPROM.

ST-04 Calibration error transducer

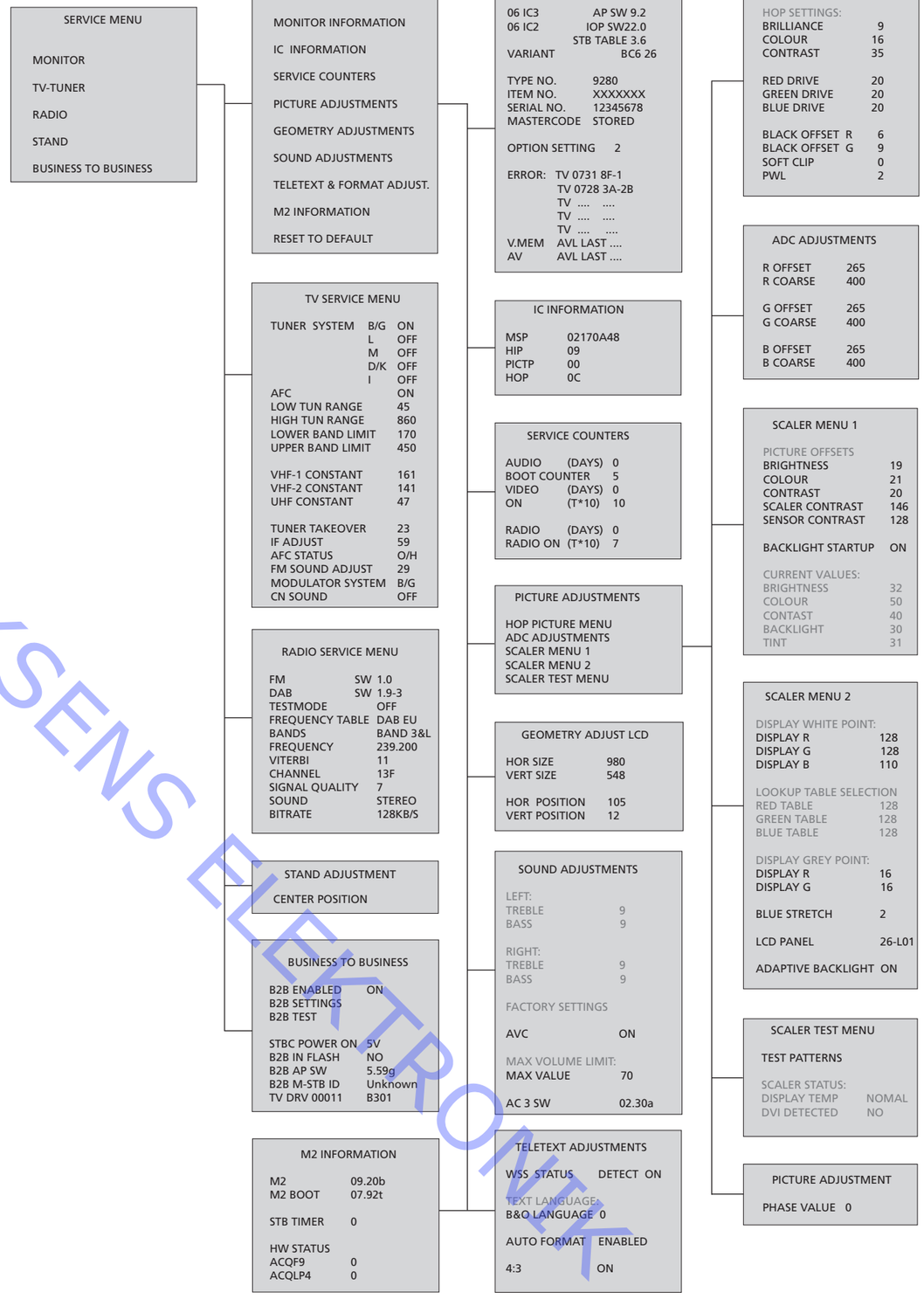
An invalid position is read from the transducer.

ST-05 Calibration error position

Several readings from the transducer with the Stand in the same position.

4.15 Service Menu 4.15

Service Menu



Replacement of modules

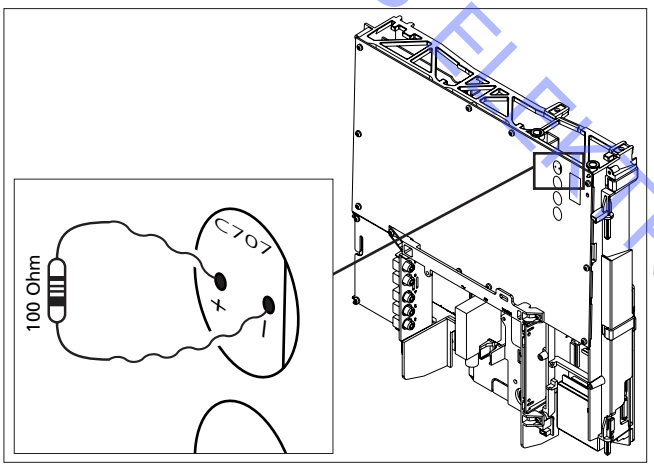
Modules that can be replaced

Warning – Discharge the power supply before dismantling

The power supply must be discharged before dismantling and/or replacement of LCD, any modules or PCB's.

There is a major risk of damaging the LCD when the connection between the LCD and the Main chassis is disconnected and the power supply has not been discharged.

Short-circuit C707 on PCB4, SMPS as shown. If not, you will damage the LCD panel!



Purpose of replacement of modules

Short instructions for replacement of the available modules, with reference to additional illustrations:

- The correct sequence for replacing modules.
- Text and illustrations.
- Reference to adjustment.

Modules that do not require any special procedure may be shown as only illustrations.

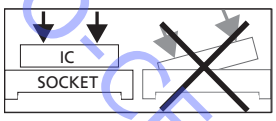
Replacement of 999 Module, Main chassis

Power supply must be discharged!
For detailed dismantling instructions, please refer to illustrations on page 5.9.

Notice

All modules must be placed on the ESD-mat or in an ESD-proof bag.

Replace 999 Module



1. Set the product in service position.
2. Discharge the power supply.
3. Connect ESD-mat.
4. Disconnect cables and modules from the Main chassis.
5. Remove the Main chassis and place it on the ESD-mat.
6. Insert the new Main chassis in the product.
7. Transfer customer settings, production settings and PIN-code data to the new chassis, by means of ServiceTool.
8. Remount modules and reconnect cables to the Main chassis.
9. Reconnect remaining cables.

   The product is now ready for adjustment.

10. Disconnect ESD-mat.
11. Connect mains.
12. Turn on the product.

Enter TV Service menu

13. Transfer the values for Tuner Taker Over, IF adjust and FM Sound adjust.

Enter Monitor Service menu

Check picture and geometry

14. Check picture quality.
    If picture quality is not OK, set ADC Adjustments, Scaler menu 1 & Scaler menu 2 data to default.

    If picture quality still is not OK, perform the complete Picture adjustment.
    Check picture quality again.

    If picture quality is not OK, contact Bang & Olufsen.

15. Geometry check.
    If the geometry is not OK, set Geometry adjustment data to default.

16. Finish service.
    See chapter "Final check after repair".

Replacement of PCB8, Decoupling

Power supply must be discharged!
For detailed dismantling instructions, please refer to illustrations on page 5.17.

Notice

All modules must be placed on the ESD-mat or in an ESD-proof bag.

Replace PCB8, Decoupling

1. Set the product in Service position.
2. Discharge power supply.
3. Connect ESD-mat.
4. Disconnect cables connected to PCB8.
5. Remove the PCB8, and place it on the ESD-mat.
6. Insert the new PCB8 in the product.
7. Reconnect cables to PCB8.

   The product is now ready for adjustment.

8. Disconnect ESD-mat.
9. Connect mains.
10. Turn on the product.

Enter Monitor Service menu

Check picture and geometry

11. Check picture quality.
    If picture quality is not OK, set ADC Adjustments, Scaler menu 1 & Scaler menu 2 data to default.

    If picture quality still is not OK, perform the complete Picture adjustment.
    Check picture quality again.

    If picture quality is not OK, contact Bang & Olufsen.

12. Geometry check.
    If the geometry is not OK, set Geometry adjustment data to default.

    Confirm geometry is OK.
    If geometry not OK, refer to "Adjustment".

13. Finish service.
    See chapter "Final check after repair".

Replacement of LCD

Power supply must be discharged!
For detailed dismantling instructions, please refer to illustrations on page 5.13.

Notice

All modules must be placed on the ESD-mat or in an ESD-proof bag.

Replace LCD display

1. Set the product in service position.
2. Discharge power supply.
3. Connect ESD-mat.
4. Disconnect cables connected to the LCD display.
5. Remove the LCD display, and place it on the ESD-mat.
6. Insert the new LCD display in the television.
7. Reconnect cables to the Main chassis.

   The product is now ready for adjustment.

8. Disconnect ESD-mat.
9. Connect mains.
10. Turn on the product.

Enter Monitor Service menu

Check picture and geometry

11. Check picture quality.
    If picture quality is not OK, set ADC Adjustments, Scaler menu 1 & Scaler menu 2 data to default.

    If picture quality still is not OK, perform the complete Picture adjustment.
    Check picture quality again.

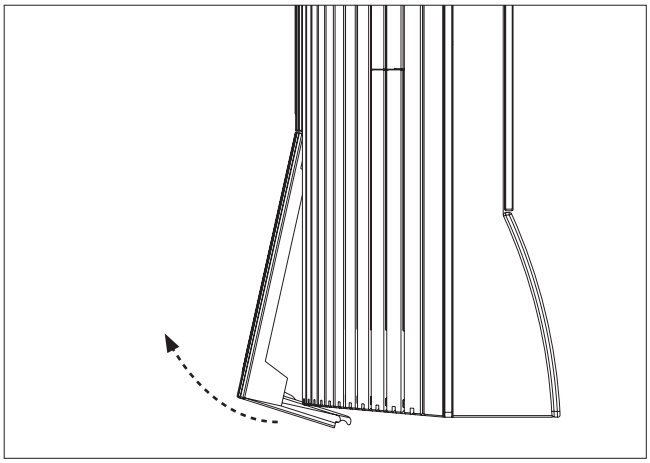
    If picture quality is not OK, contact Bang & Olufsen.

12. Geometry check.
    If the geometry is not OK, set Geometry adjustment data to default.

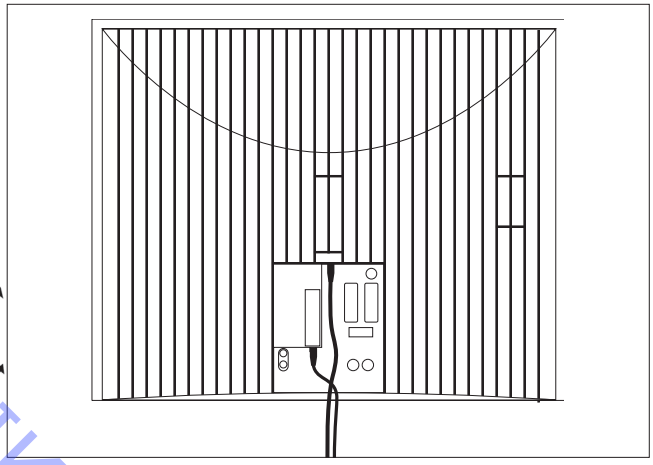
    Confirm geometry is OK.
    If geometry not OK, refer to “Adjustment”.

13. Finish service.
    See chapter “Final check after repair”.

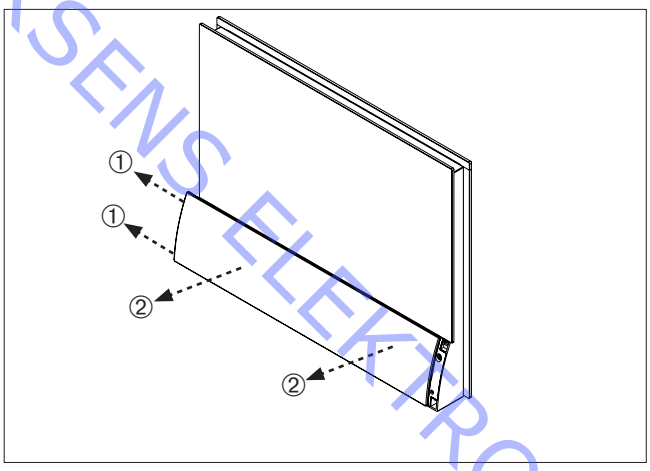
- Remove socket cover



- Remove all cables

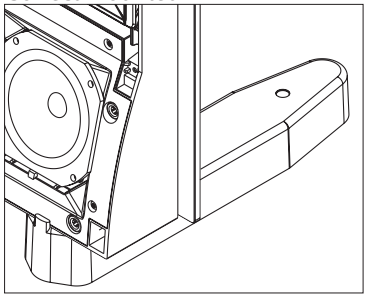


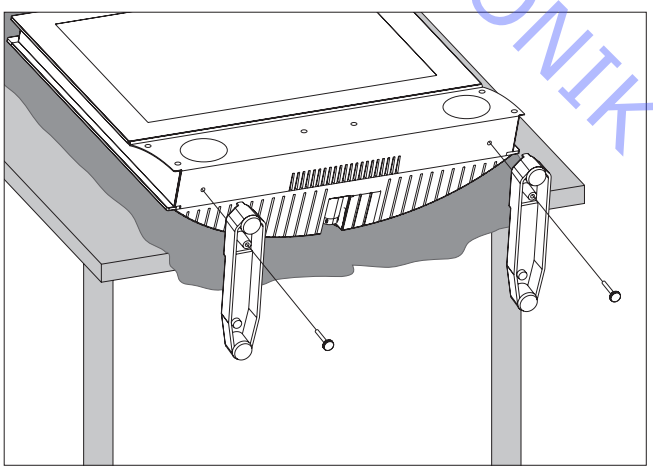
- Remove speaker cover



- Mount servicestands as shown

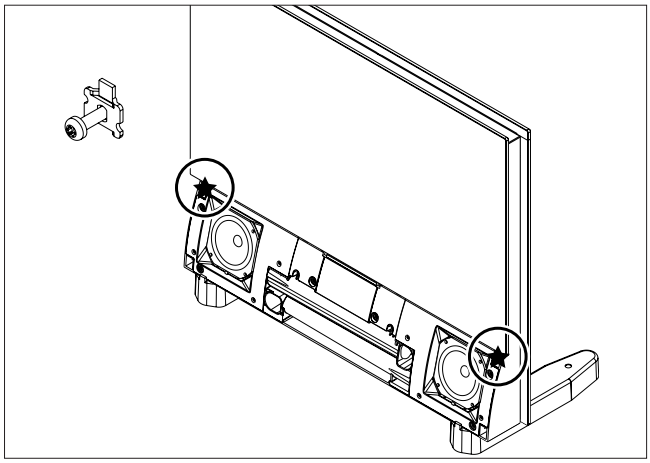
Correct mounted!



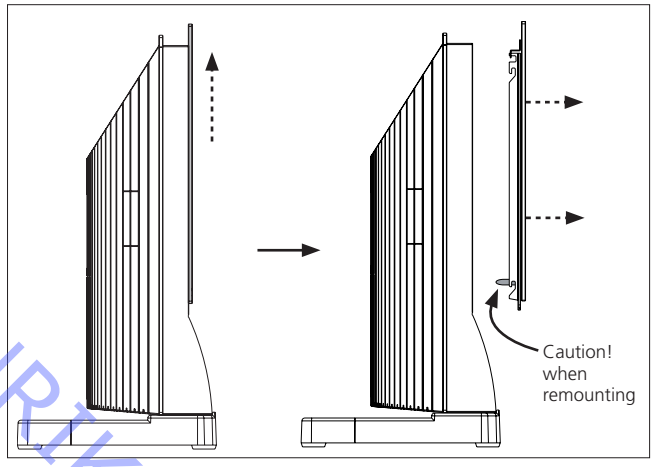


☞ 5.5 Mount servicestands

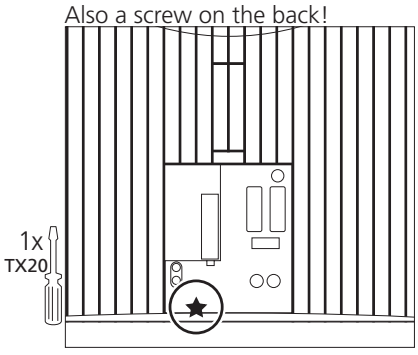
- Remove fastning element

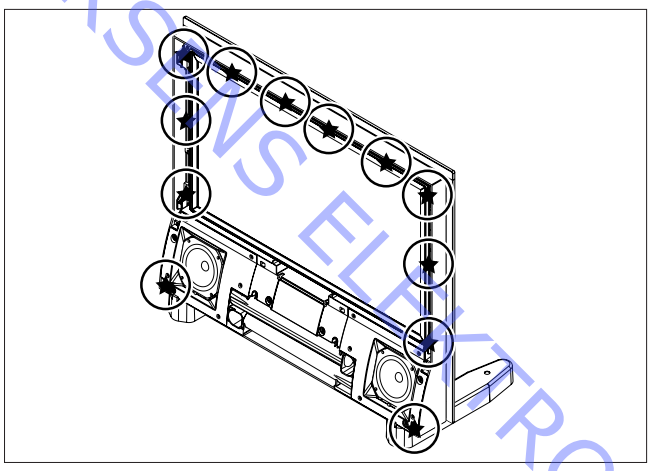


- Remove contrast screen

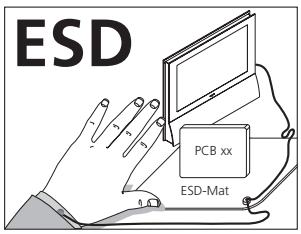


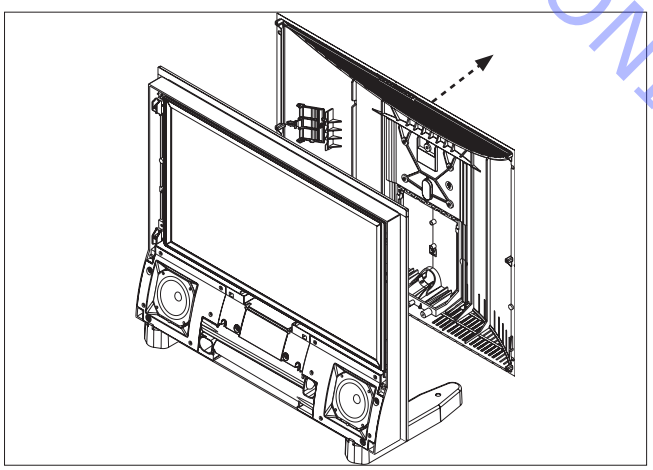
- Remove screws



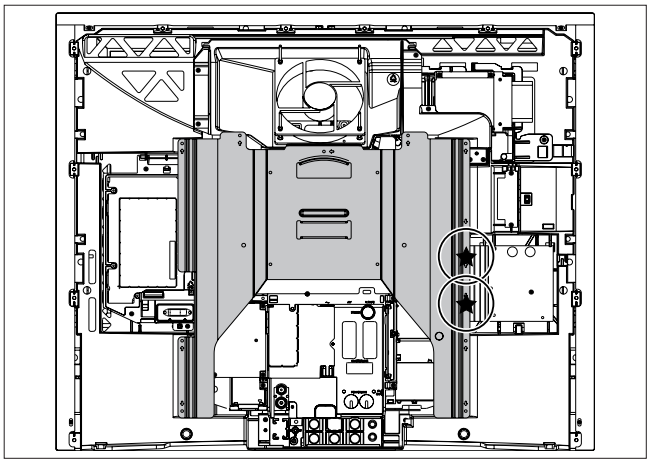


- Pull off rear cover

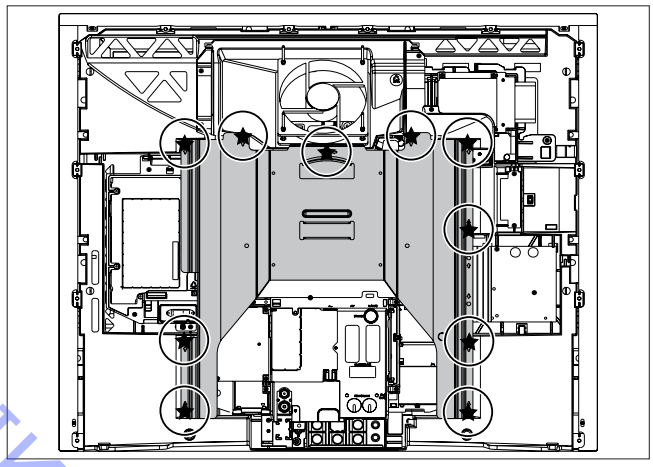




☞ 5.5 Mount servicestands
☞ 5.6 BeoCenter 6-26 in service position
- Remove screws on right side

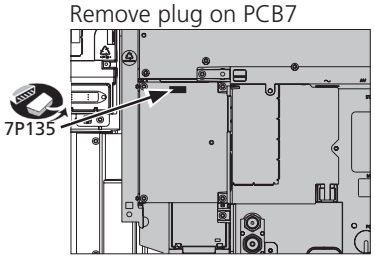


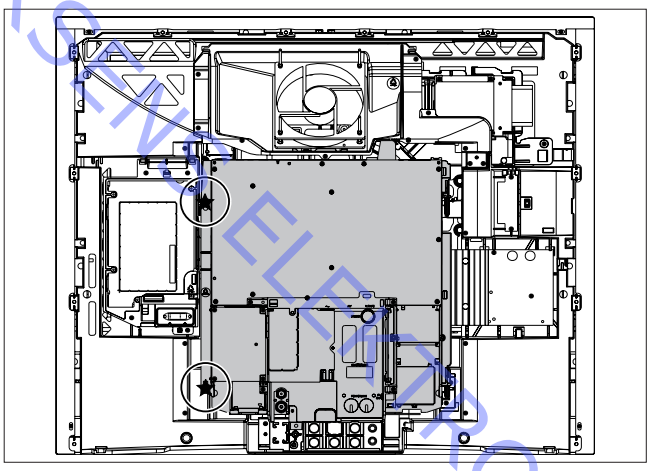
- Remove screws and remove bracket



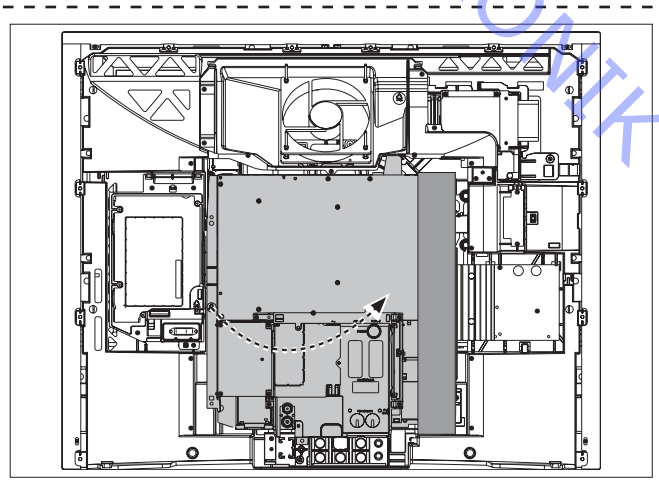
- Remove screws on chassis

Remove plug on PCB7



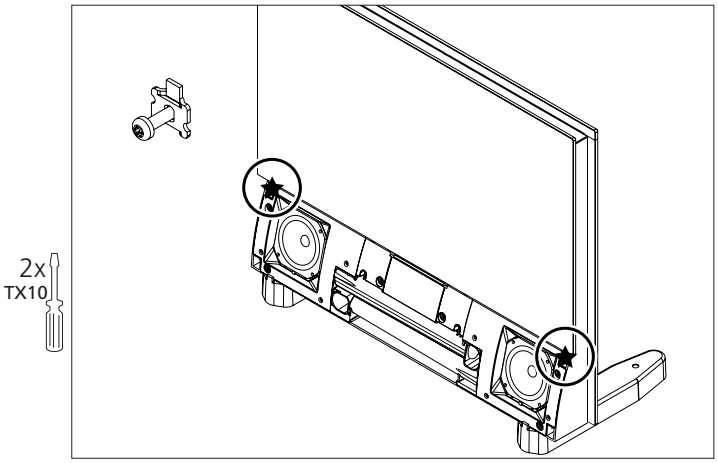


Open chassis 90°

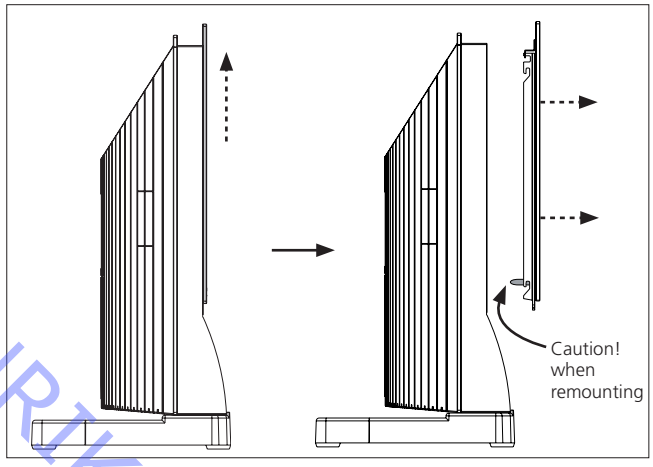


☞ 5.5 Mount servicestands

- Remove screws



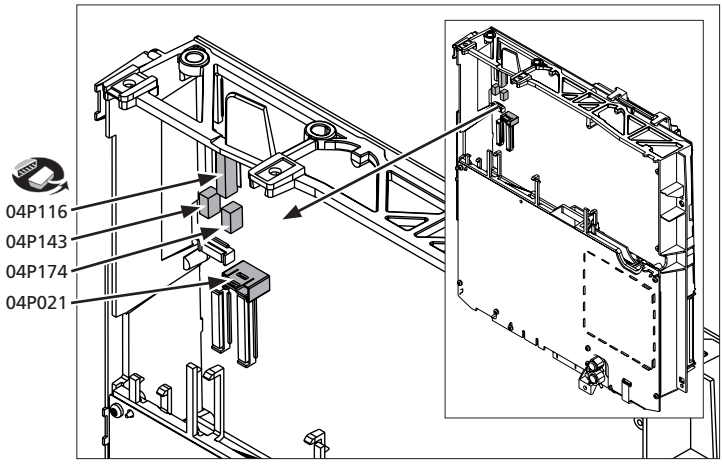
- Lift and pull off contrast screen



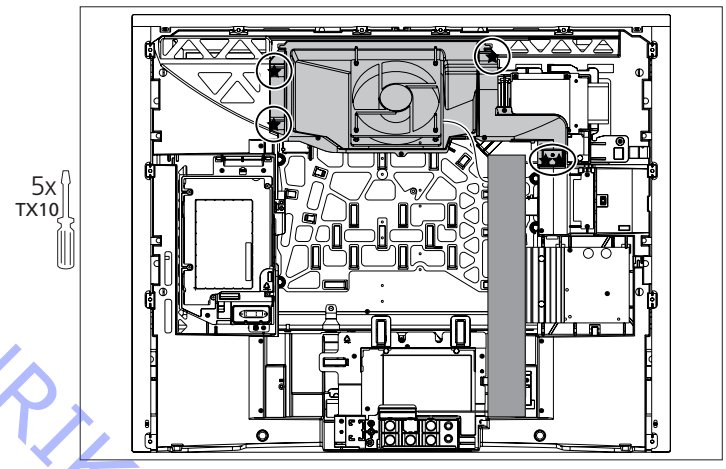
Connect ServiceTool to the product and if possible download customer setttings to a PC.

☞ 5.5 Mount servicestands
☞ 5.6 BeoCenter 6-26 in service position
☞ 5.7 Main chassis in service position
☞ 5.21 Remove DVB-S, if mounted

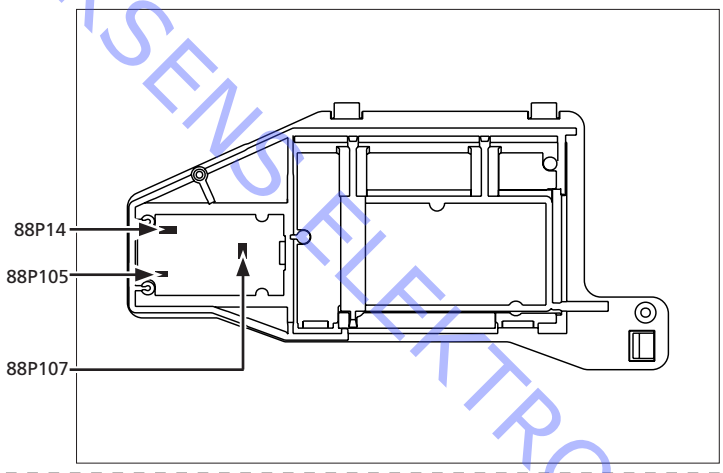
Remove cables from PCB4



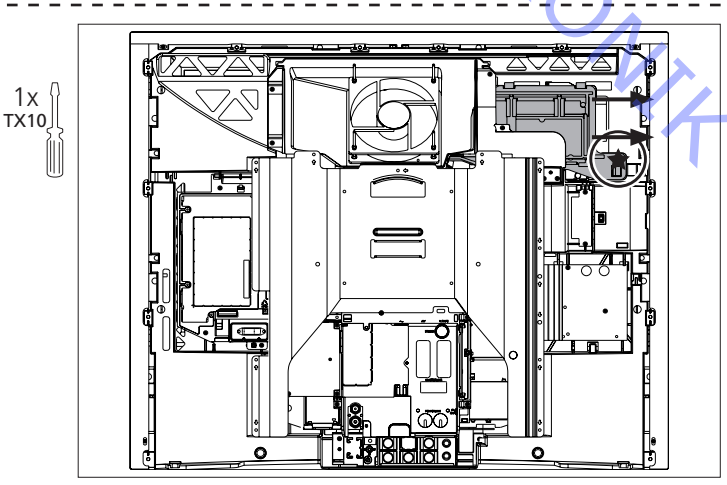
- Remove FAN



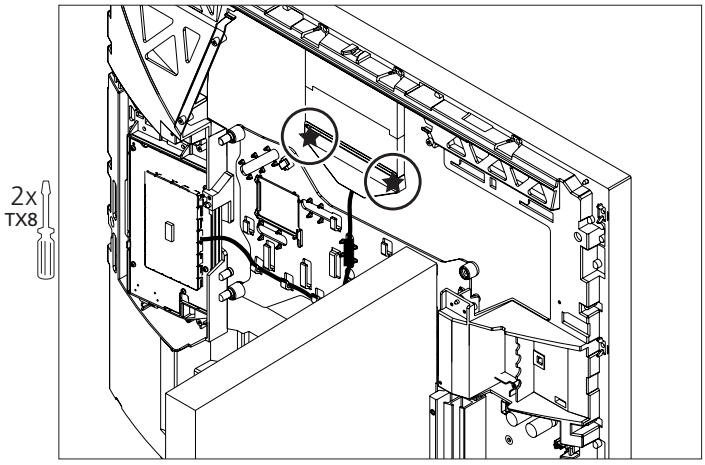
- Remove cables from PCB88 (if mounted)



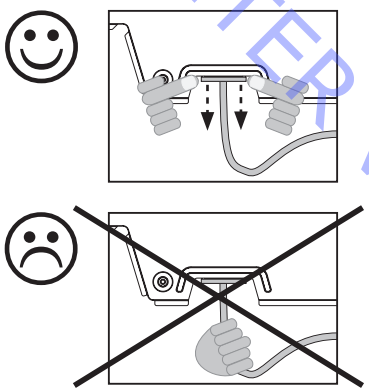
- Move FM module to the right (if mounted)

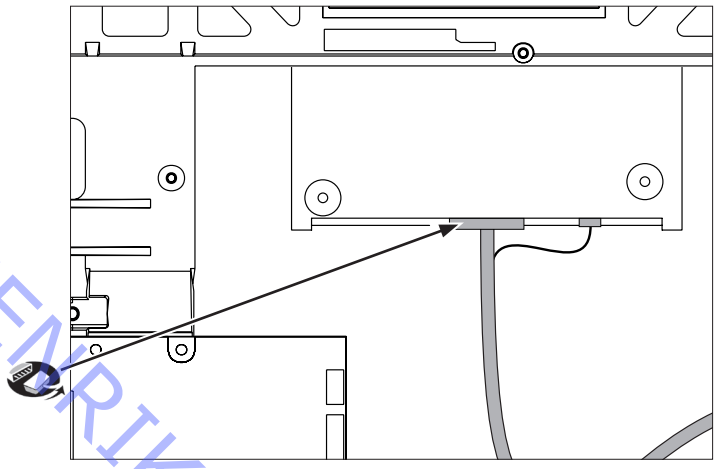


- Remove LCD shield

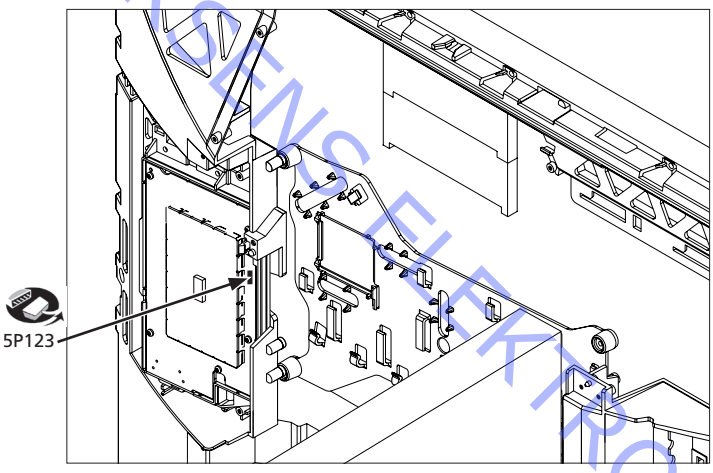


- Remove LCD plugs

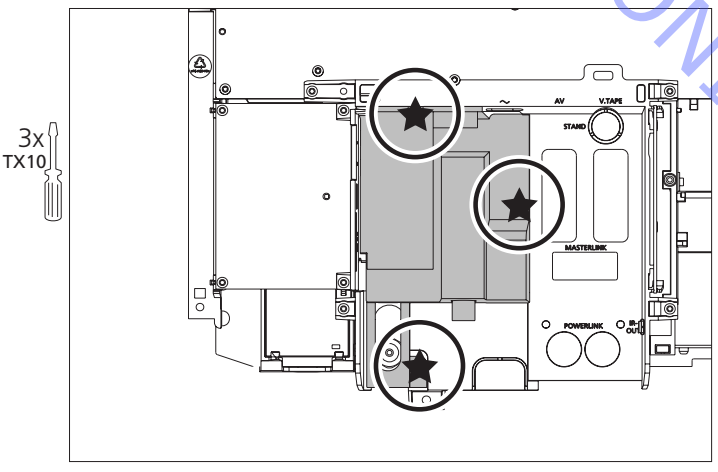




- Remove plug from scaler

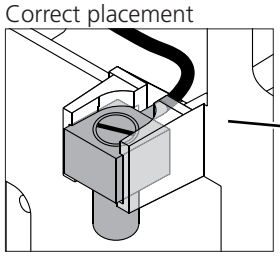


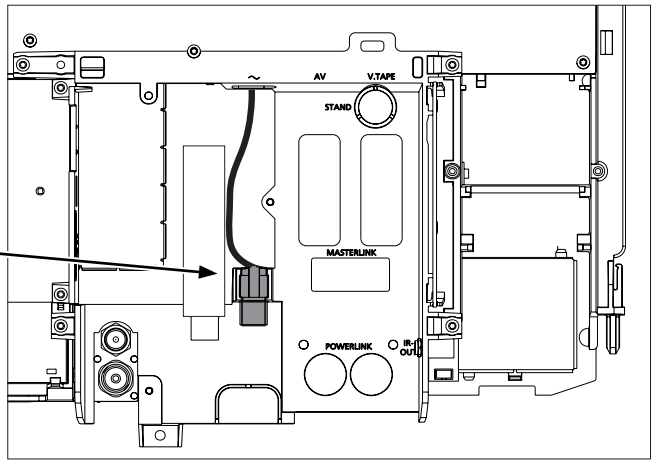
- Remove cover



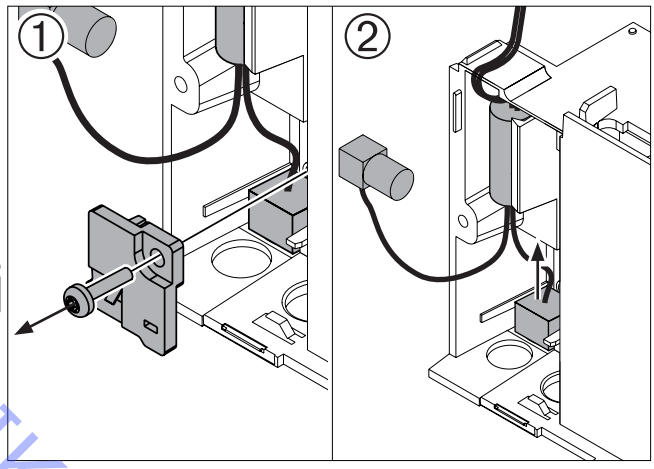
- Remove FM aerial (if mounted)

Correct placement



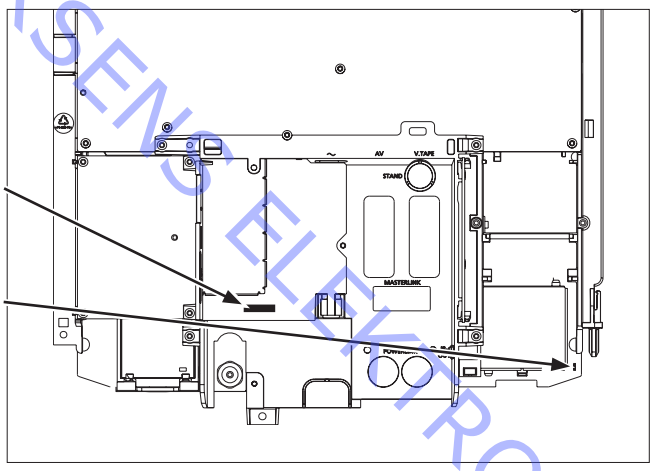


-Remove aerial cables for DAB (if mounted)

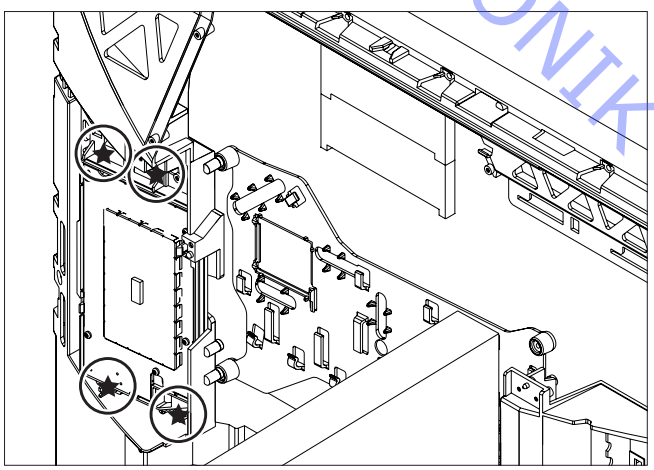


1x
TX10

- Remove plugs shown
(1P44 - only if DSM module is mounted)

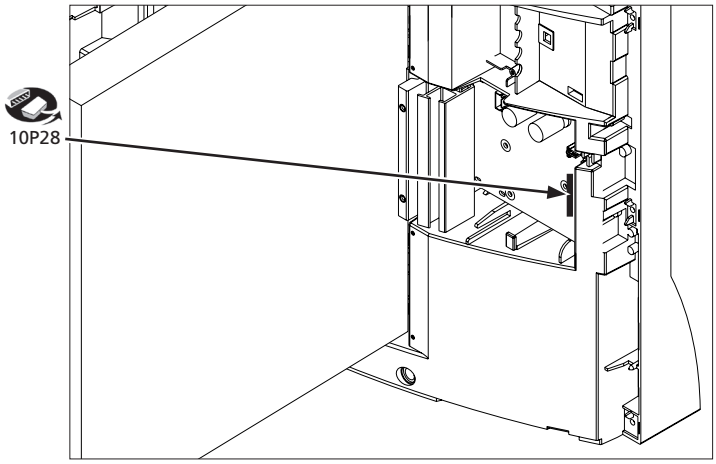


- Remove screws on scaler module



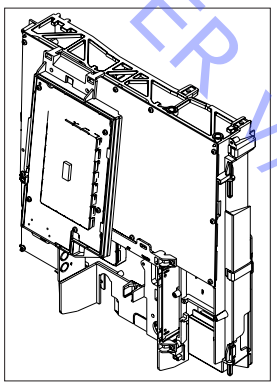
4x
TX10

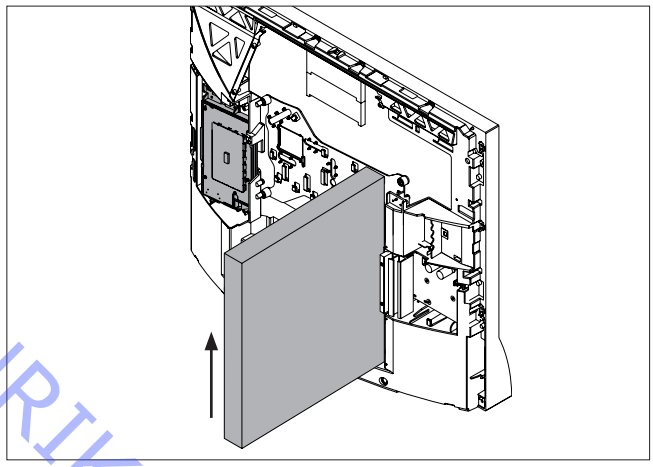
- Remove plug from PCB10



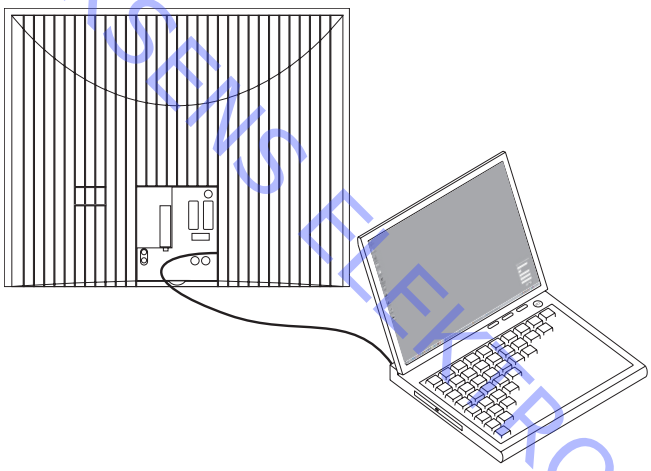
- Lift up chassis and remove it together with scaler module

Lock scaler on chassis





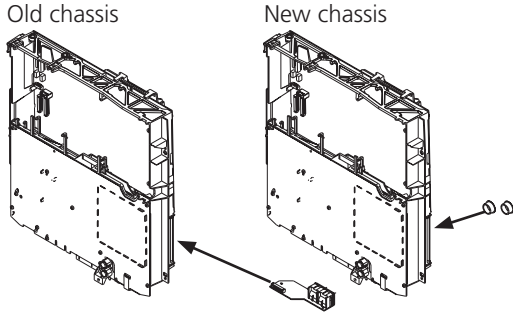
- Transfer customer settings, production settings and PIN-code data to the new chassis, by means of ServiceTool.



- Important information!

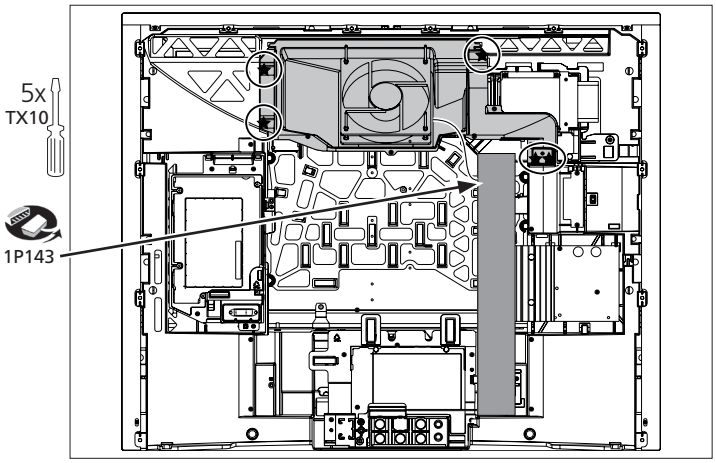
! If DSM module is mounted, transfer the Powerlink module from the new chassis to the old chassis, and mount 2 new covers for the powerlink holes !

Old chassis New chassis

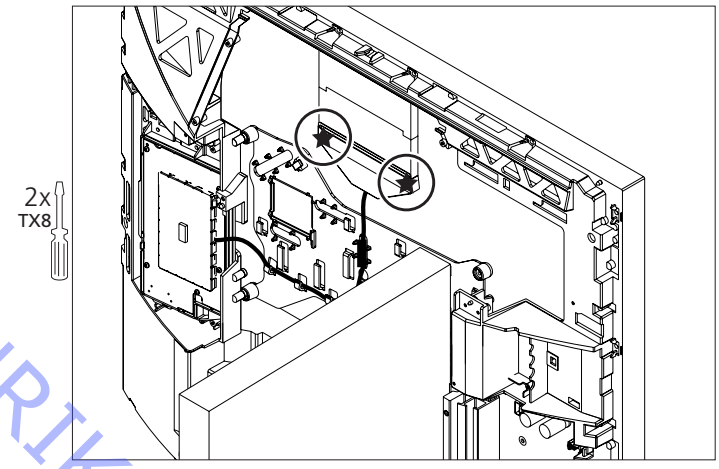


☞ 5.5 Mount servicestands
☞ 5.6 BeoCenter 6-26 in service position
☞ 5.7 Main chassis in service position

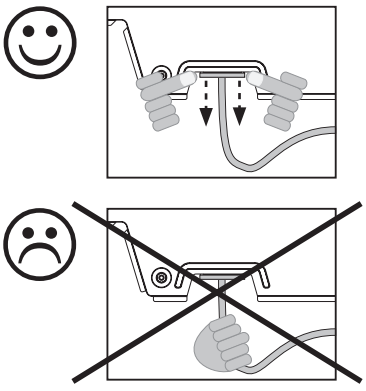
Remove FAN

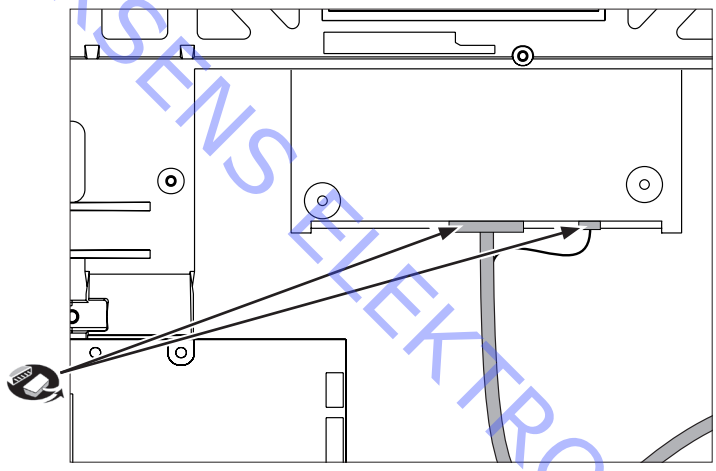


- Remove LCD shield

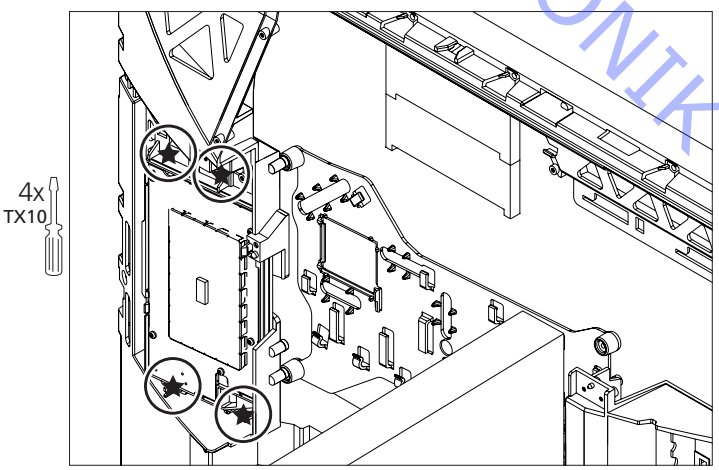


- Remove LCD plugs

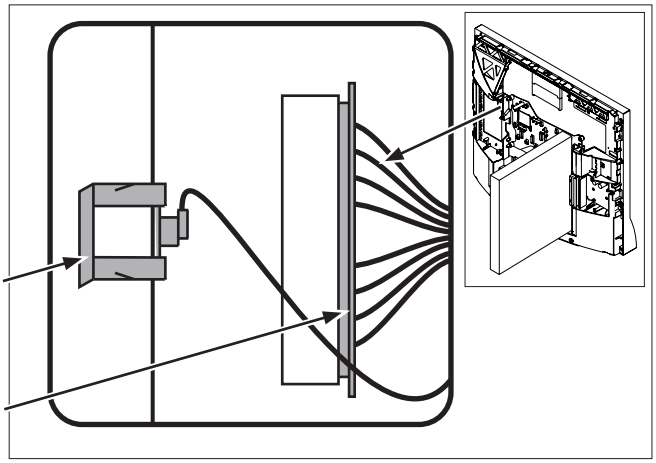




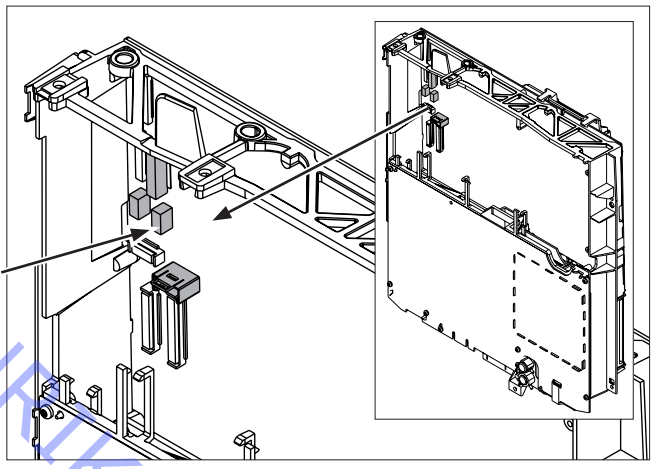
- Remove screws on scaler module and pull out scaler



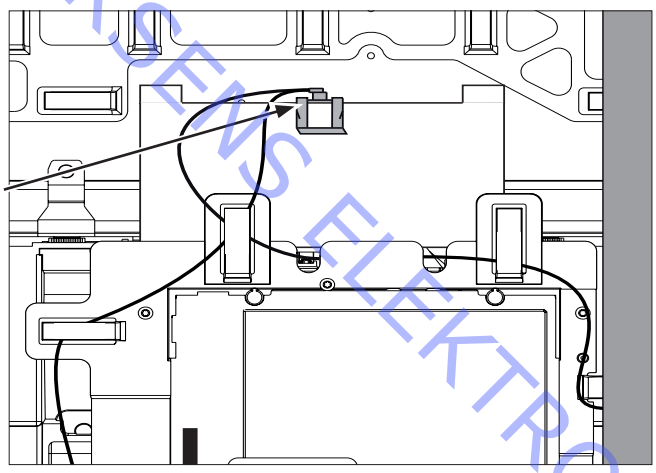
- Remove cables from LCD (behind scaler)



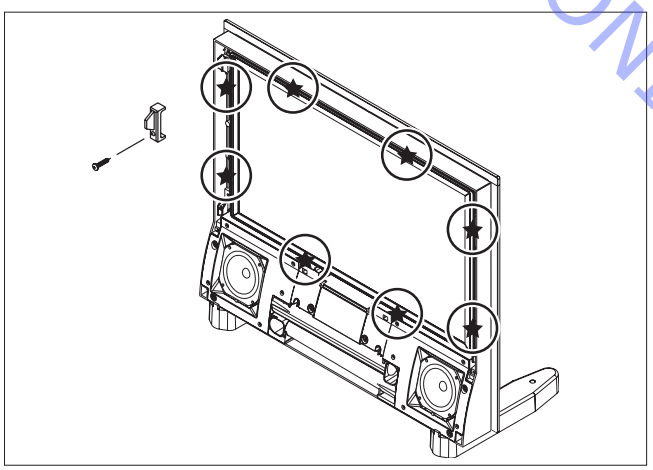
- Remove plug for NTC



- Remove GND

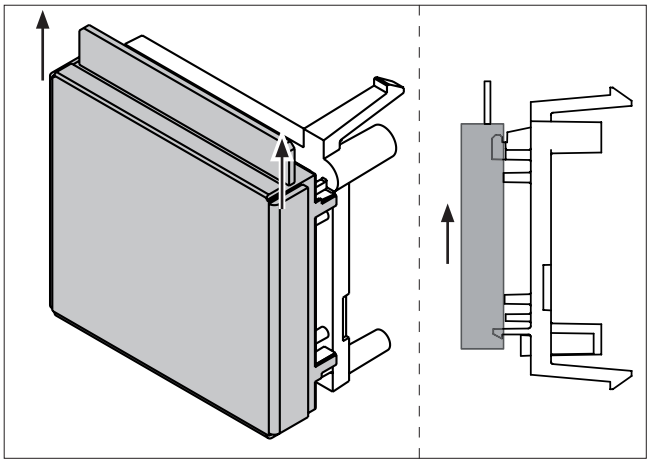


- Remove screws and washers
- Gently pull out LCD panel

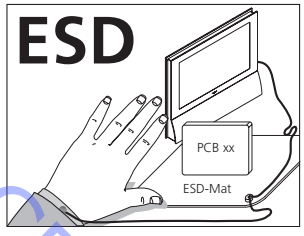


☞ 5.5 Mount servicestands
☞ 5.6 BeoCenter 6-26 in service position

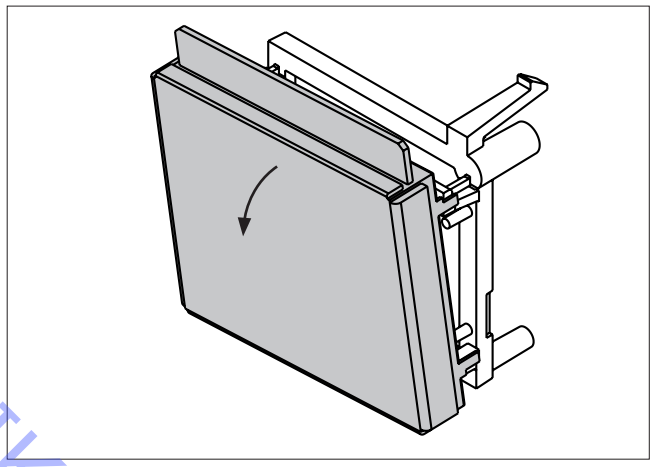
- Lift PCB upwards to release lock



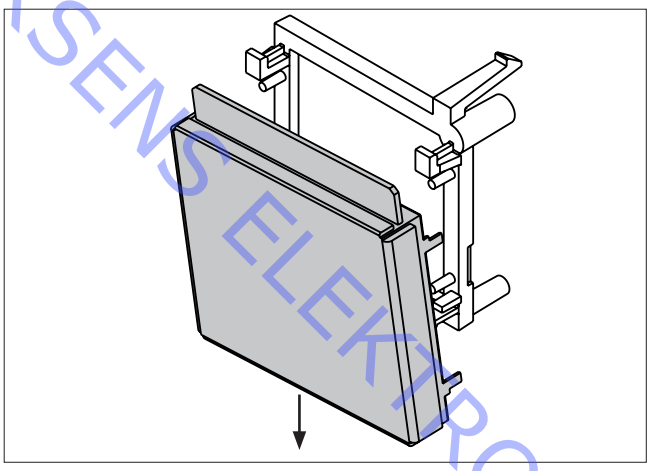
Connect ESD to PCB6!



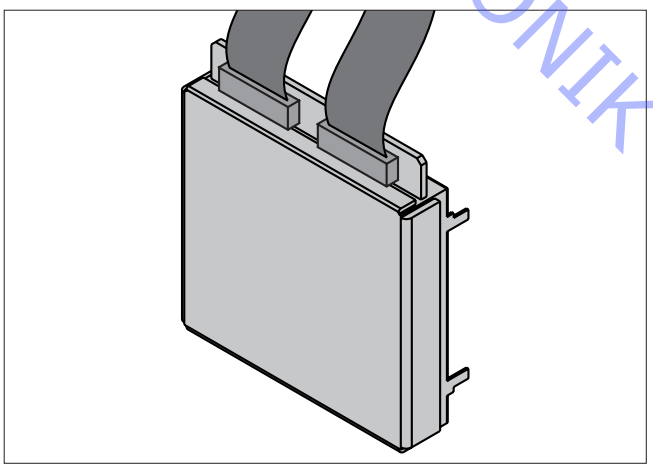
- Tilt as shown



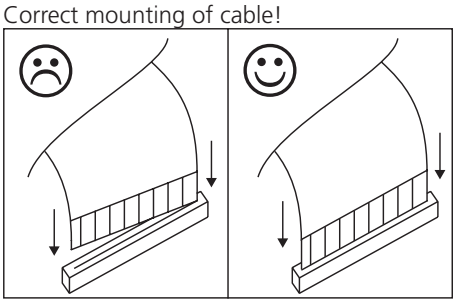
- Pull PCB downwards



- Remove cables from PCB6

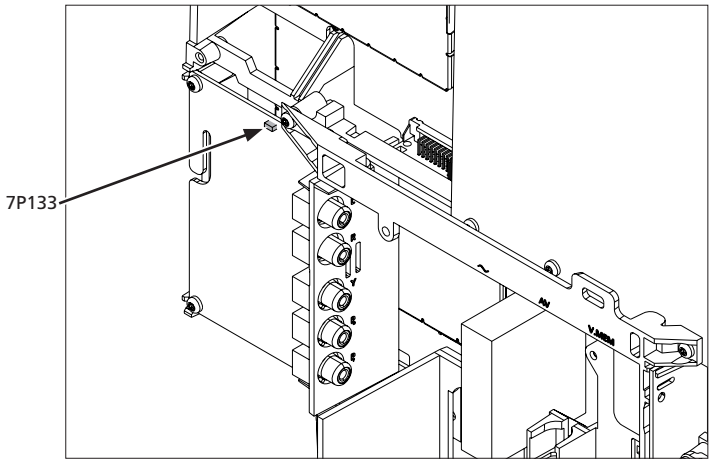


Correct mounting of cable!

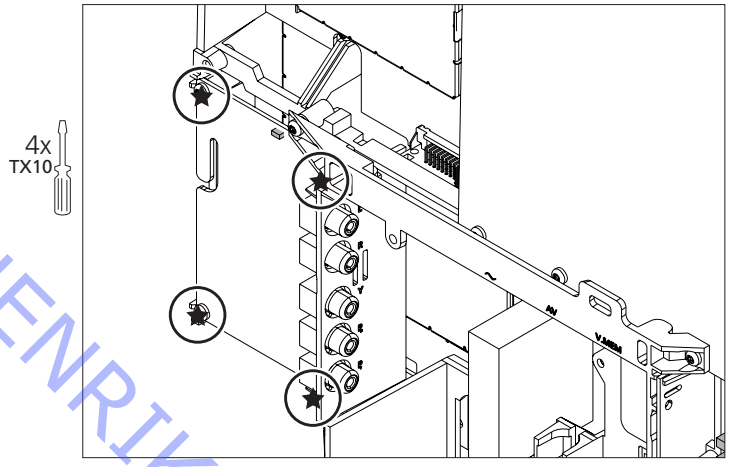


☞ 5.5 Mount service stands
☞ 5.6 BeoCenter 6-26 in service position

- Remove cable

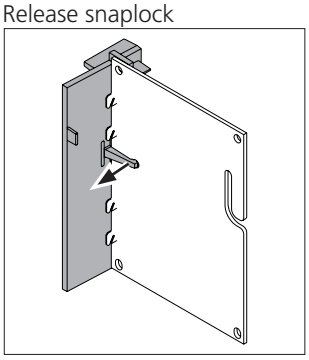


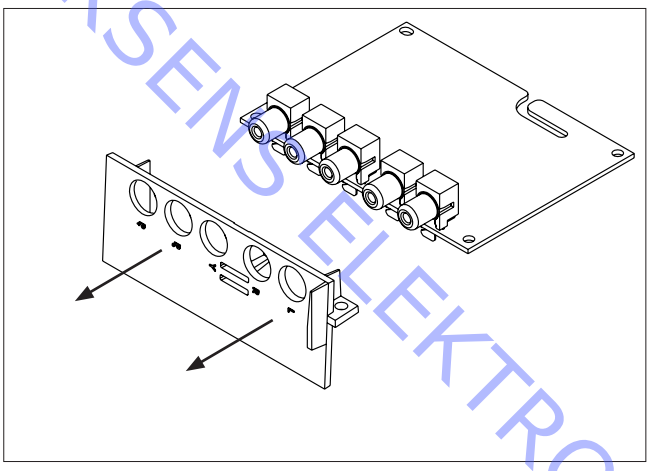
- Remove screws



- Remove cover

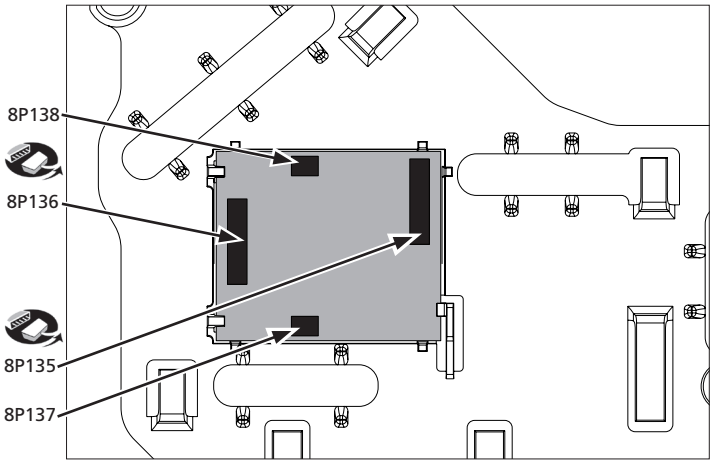
Release snaplock



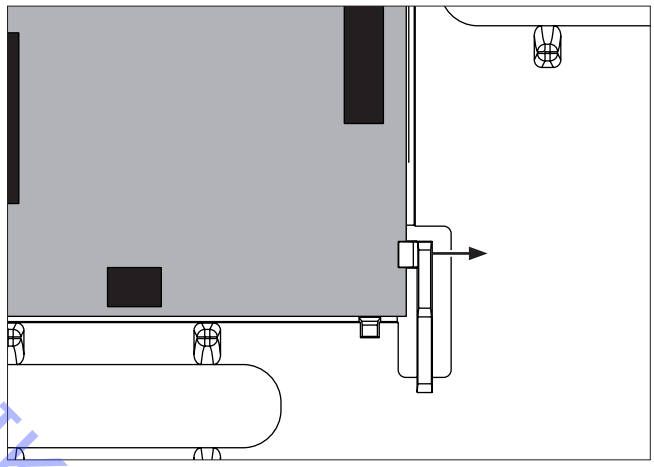


☞ 5.5 Mount service stands
☞ 5.6 BeoCenter 6-26 in service position
☞ 5.7 Main chassis in service position

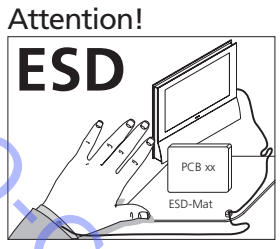
- Remove cables

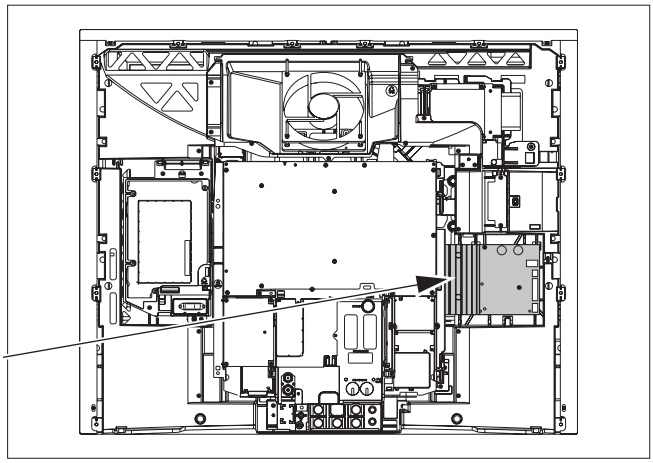


- Release snaplock and pull out PCB8

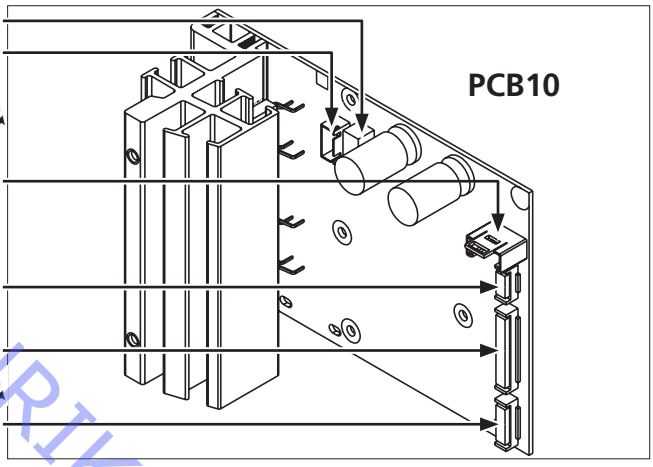


☞ 5.5 Mount servicestands
☞ 5.6 BeoCenter 6-26 in service position
☞ 5.7 Main chassis in service position - illu 1-2
- Placement

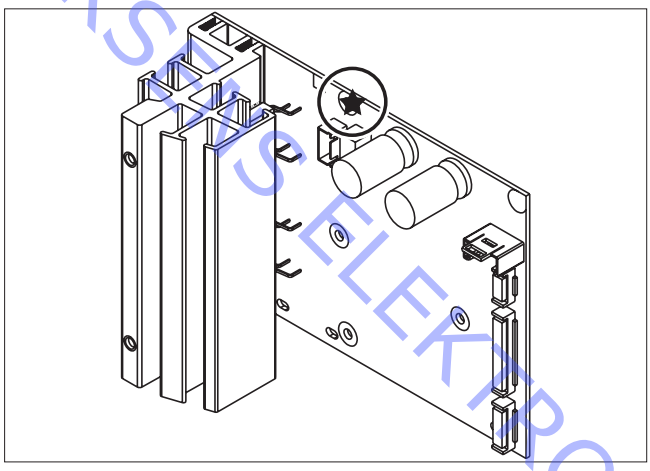




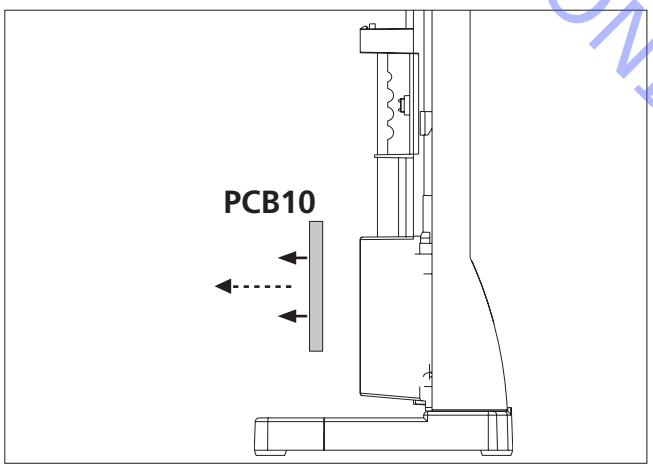
- Remove plugs as illustrated



- Remove screw

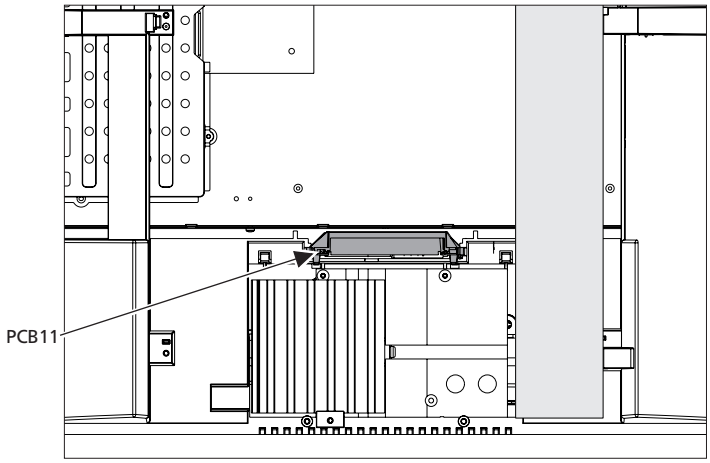


- Pull out PCB10

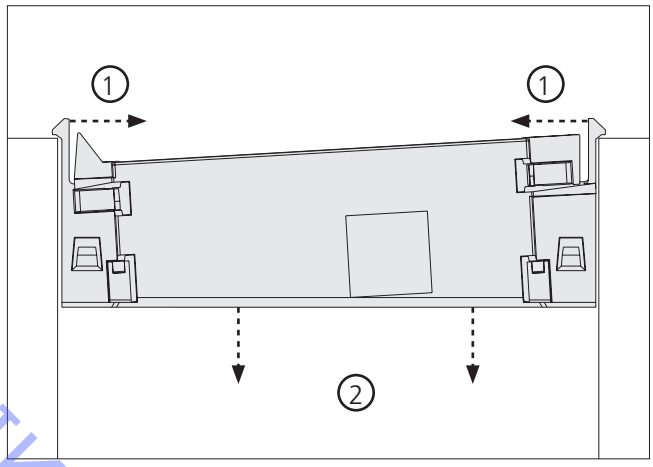


☞ 5.5 Mount service stands
☞ 5.6 BeoCenter 6-26 in service position
☞ 5.7 Main chassis in service position

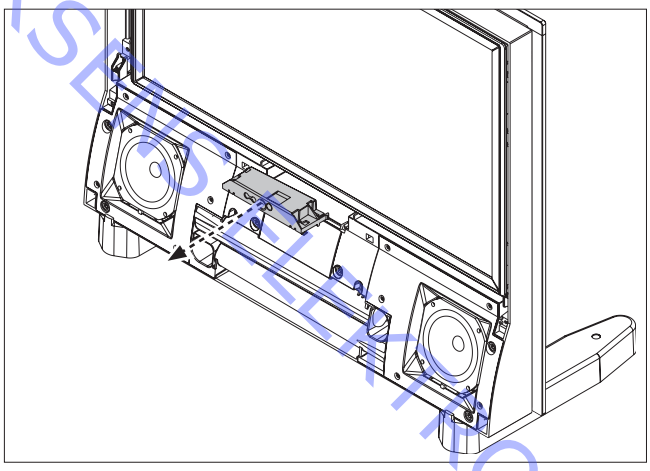
- Placement of IR/Autocontrast module, PCB11



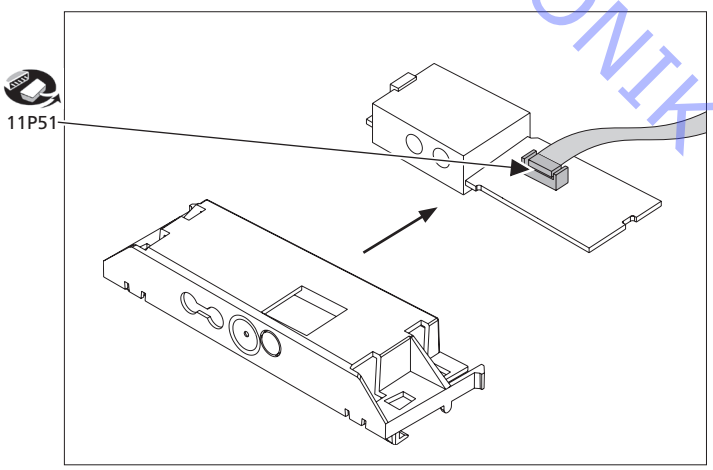
- Pull out IR/Autocontrast module as shown



- Pull out as shown

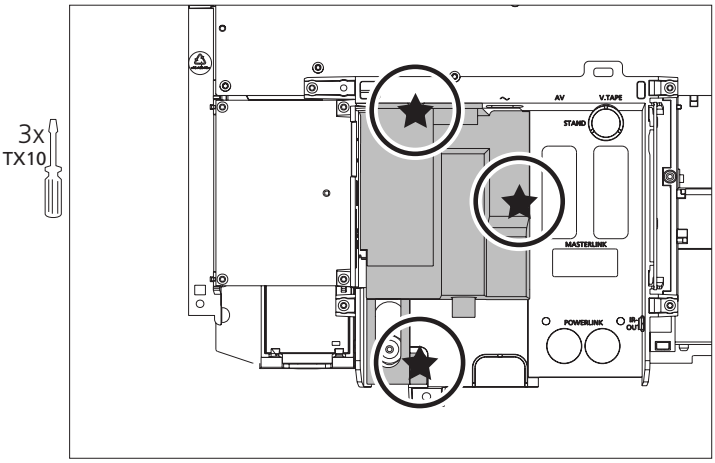


- Pull out PCB11 from housing and remove cable

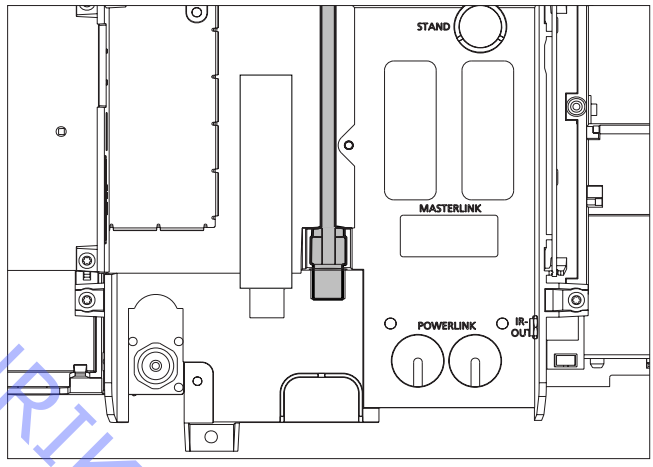


☞ 5.5 Mount service stands
☞ 5.6 BeoCenter 6-26 in service position
☞ 5.7 Main chassis in service position

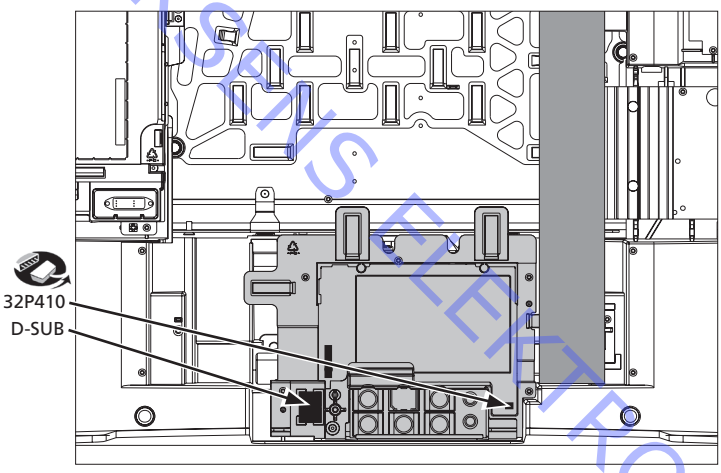
- Remove cover



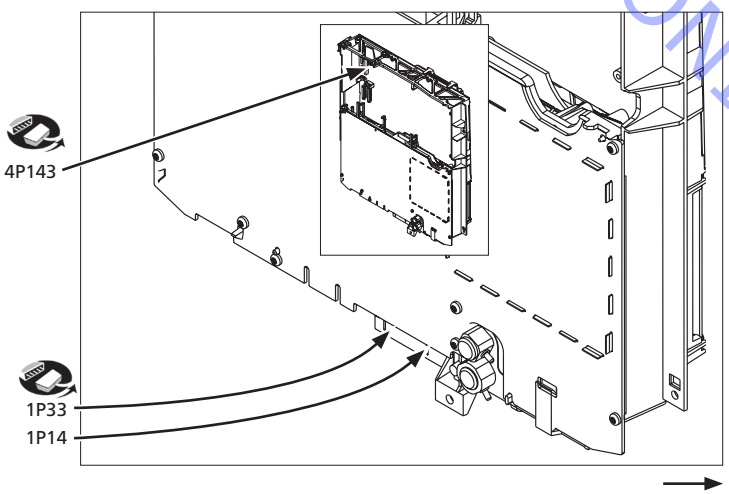
- Remove aerial cable



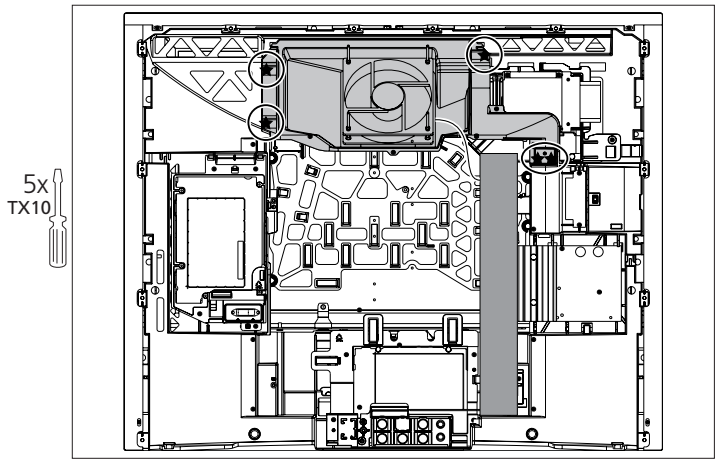
- Remove plugs shown



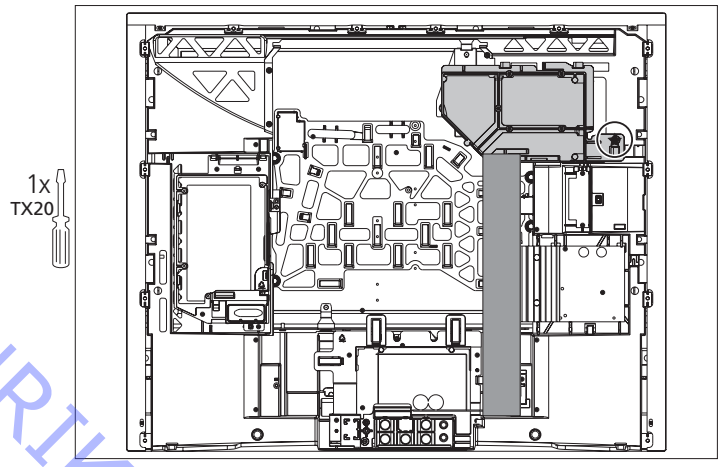
- Remove plugs shown



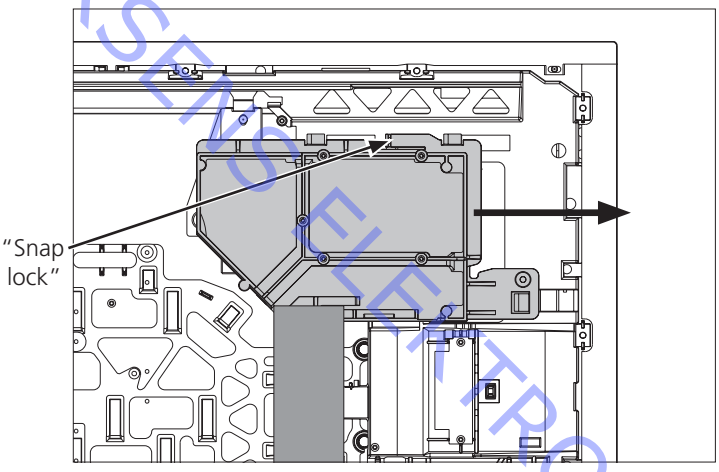
- Remove fan



- Remove screw

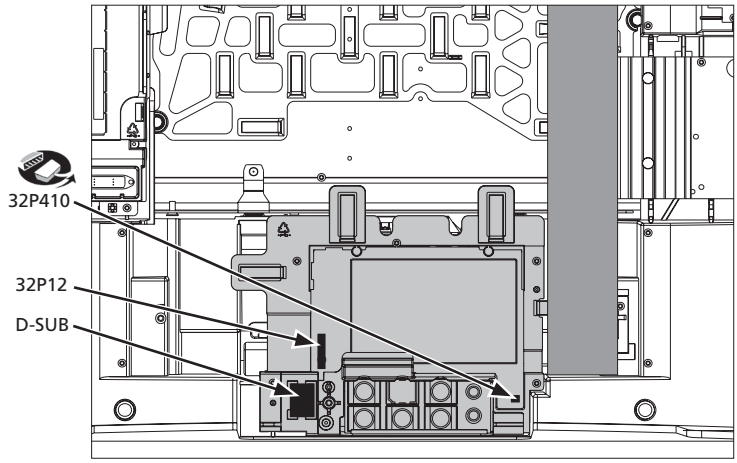


- Release snap lock and slide out

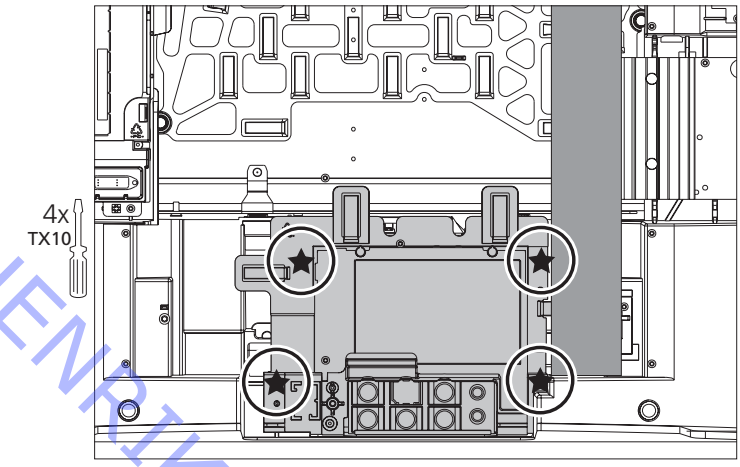


☞ 5.5 Mount service stands
☞ 5.6 BeoCenter 6-26 in service position
☞ 5.7 Main chassis in service position

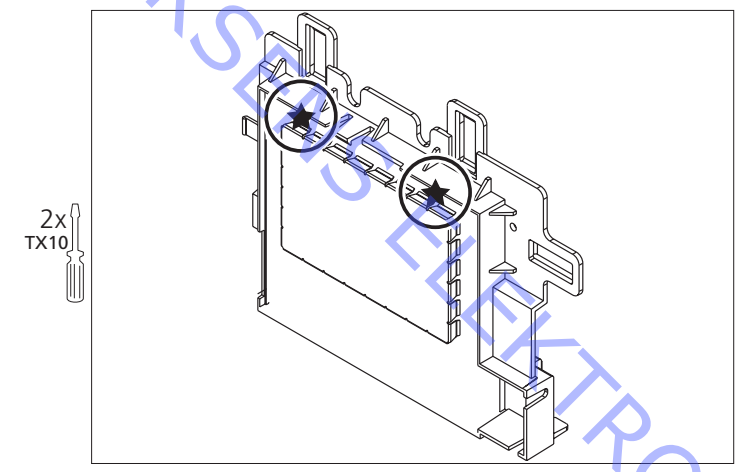
- Remove plugs



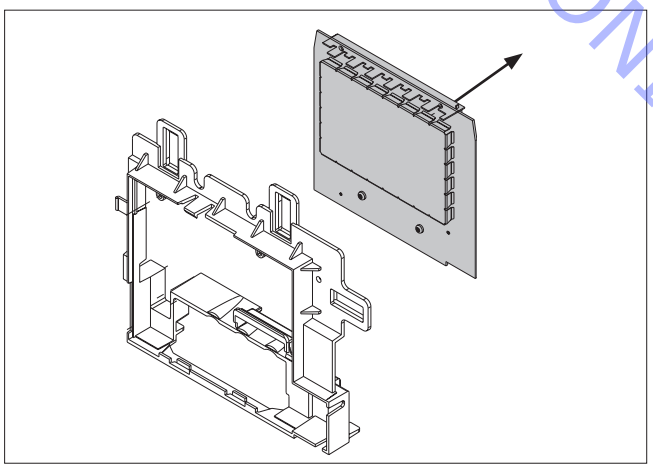
- Remove screws



- Remove screws on backside

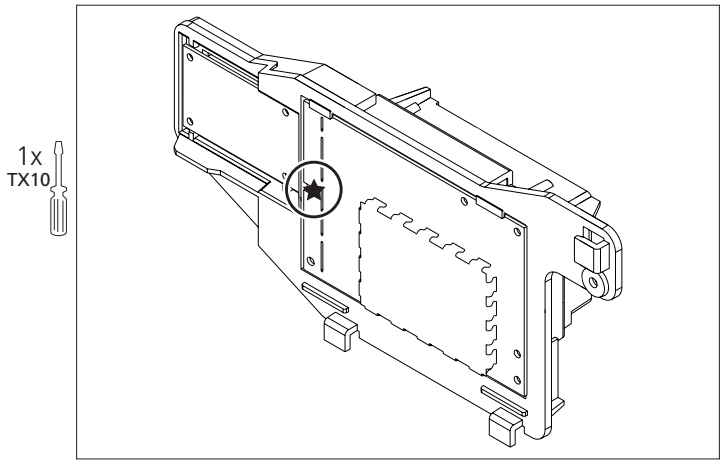


- Remove DSM module from bracket

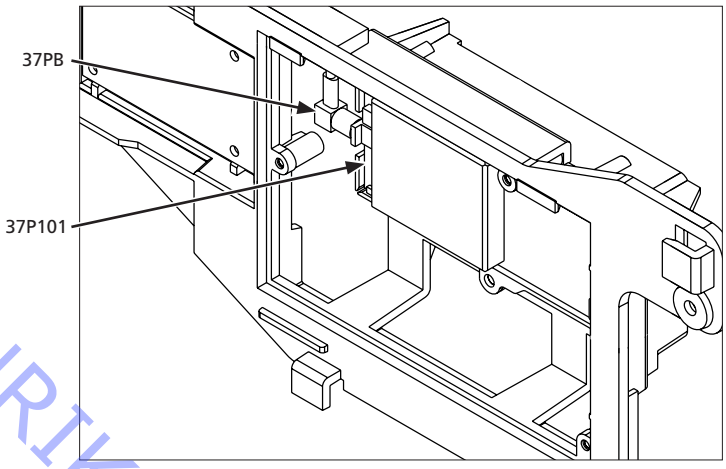


☞ 5.5 Mount service stands
☞ 5.6 BeoCenter 6-26 in service position
☞ 5.7 Main chassis in service position
☞ 5.28 Remove FM tuner module - illu 1 - 2

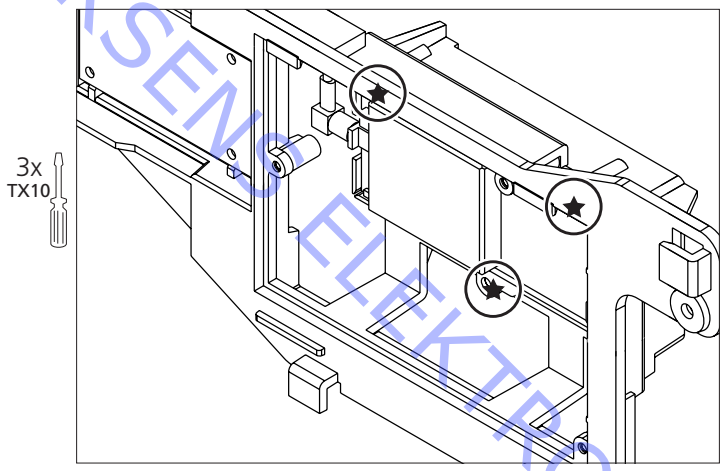
- Remove screw and pull off FM tuner PCB



- Remove cables

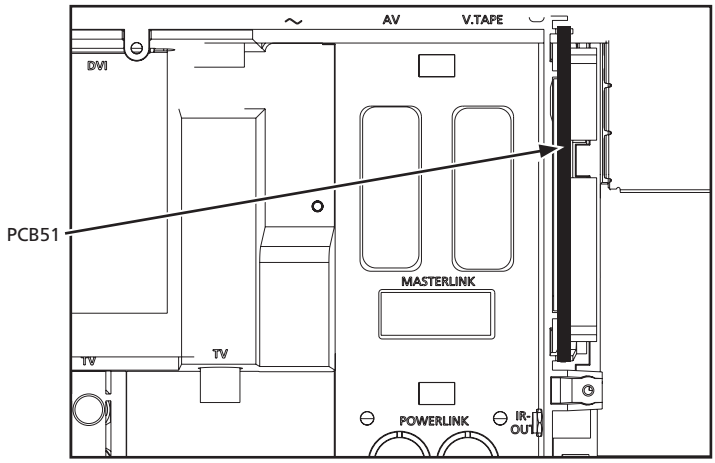


- Remove screws

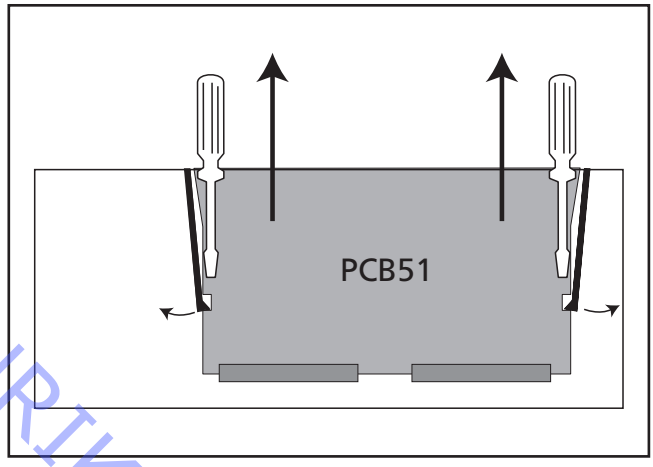


☞ 5.5 Mount service stands
☞ 5.6 BeoCenter 6-26 in service position

- Placement of PCB51

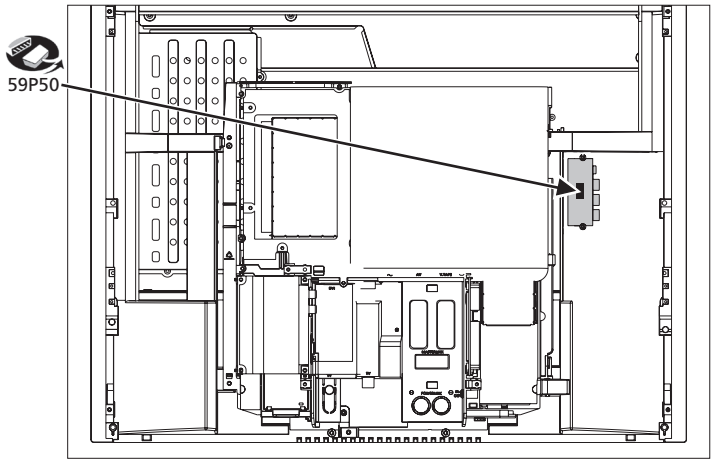


- Remove as shown

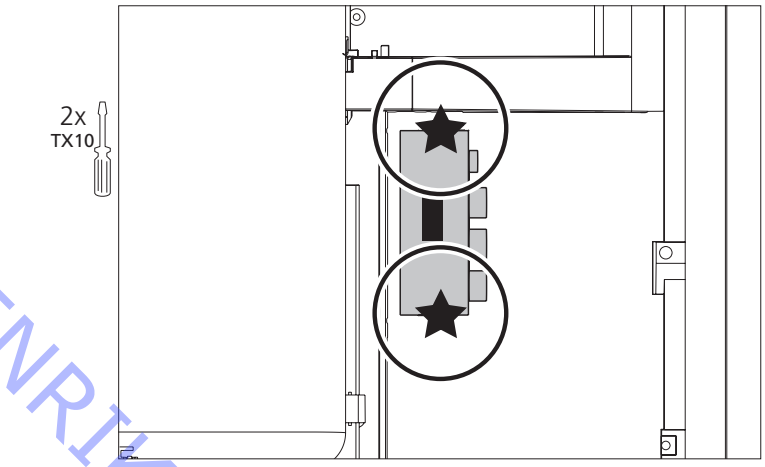


☞ 5.5 Mount service stands
☞ 5.6 BeoCenter 6-26 in service position

- Remove cable

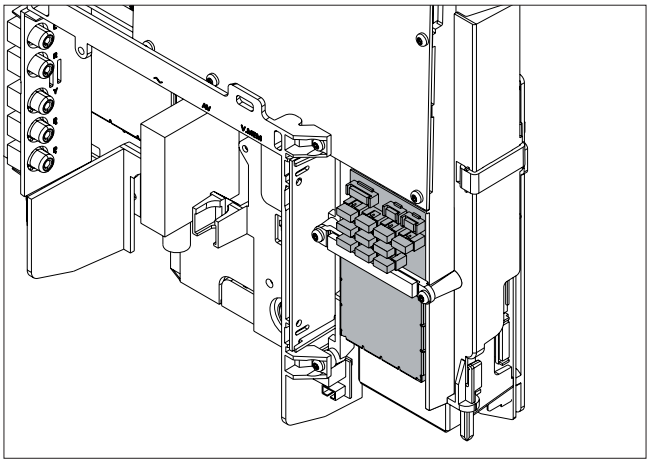


- Remove screws

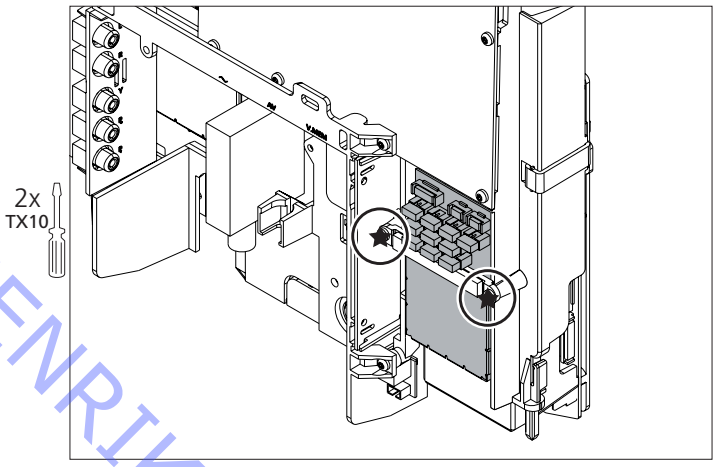


☞ 5.5 Mount service stands
☞ 5.6 BeoCenter 6-26 in service position

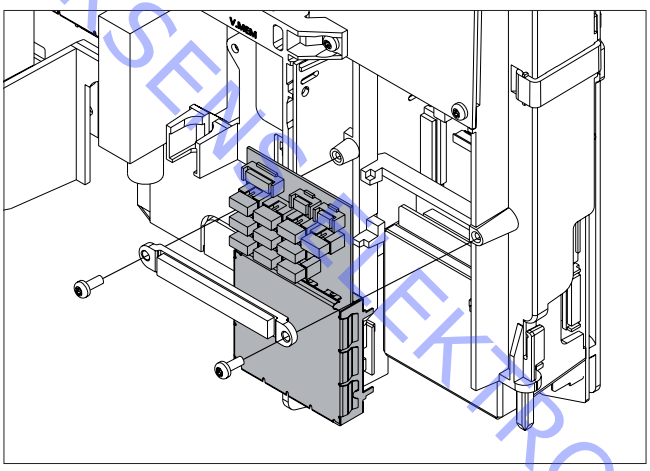
- Take note of cable placement
- Remove cables from PCB61



- Remove screws

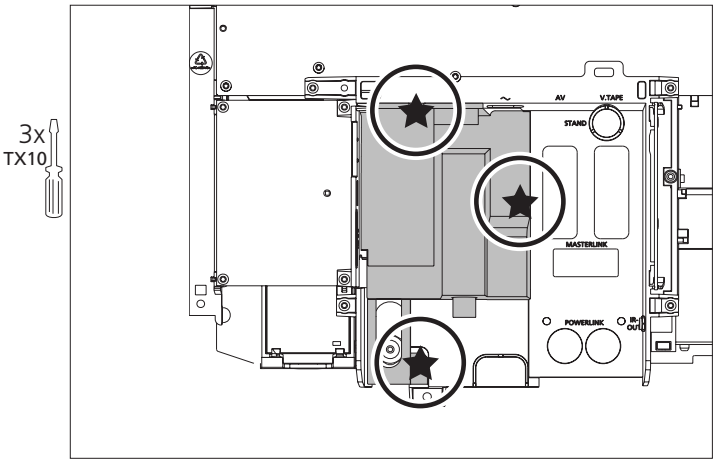


- Pull out PCB61

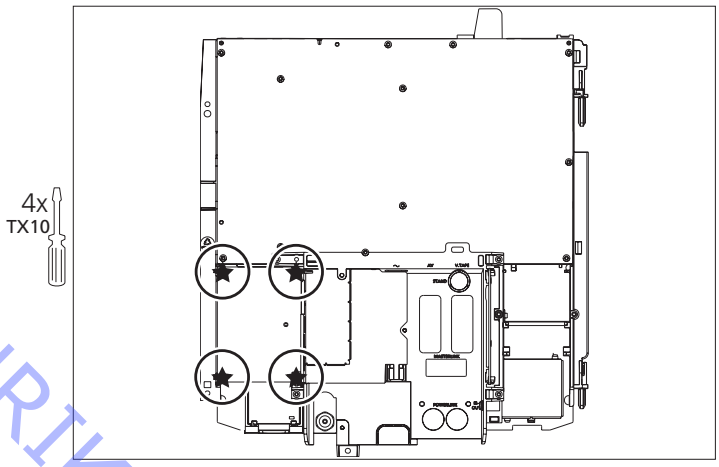


☞ 5.5 Mount service stands
☞ 5.6 BeoCenter 6-26 in service position
☞ 5.7 Main chassis in service position

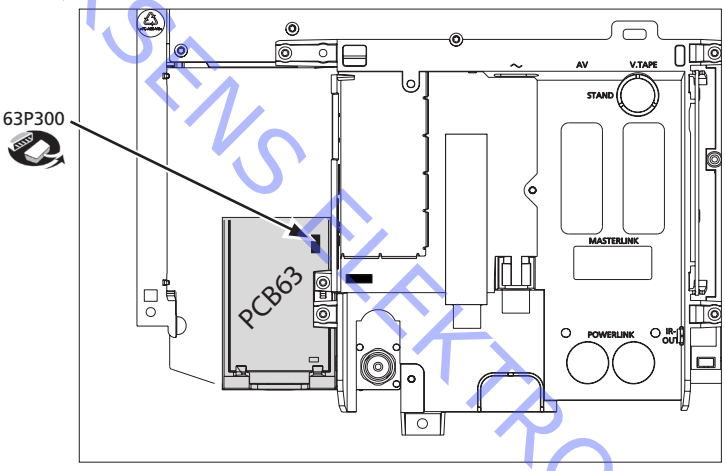
- Remove cover



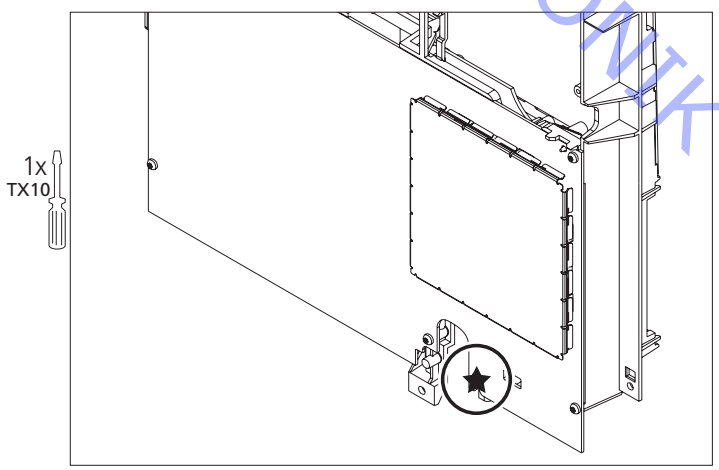
- Remove PC sound module



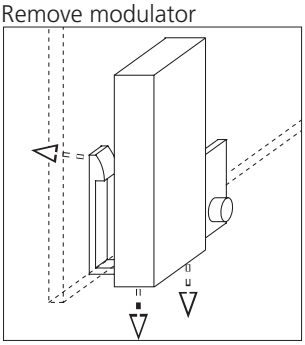
- Remove plug



- Remove screw on backside of chassis

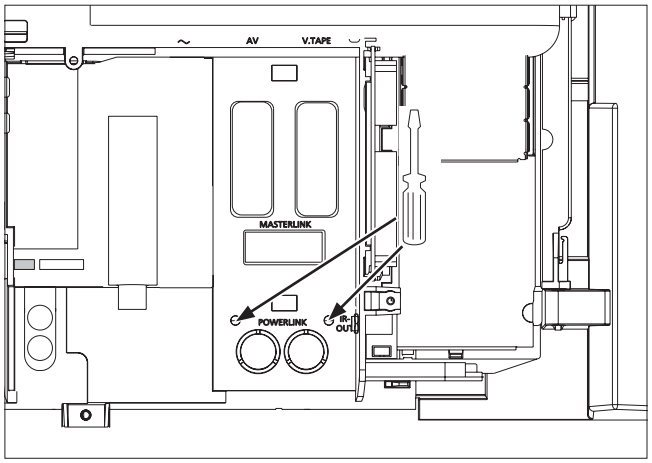


Remove modulator



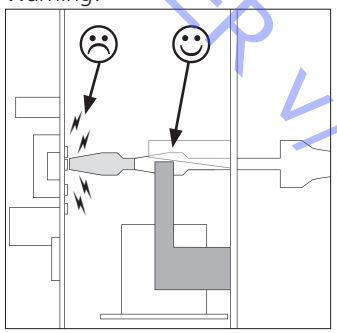
☞ 5.5 Mount service stands
☞ 5.6 BeoCenter 6-26 in service position

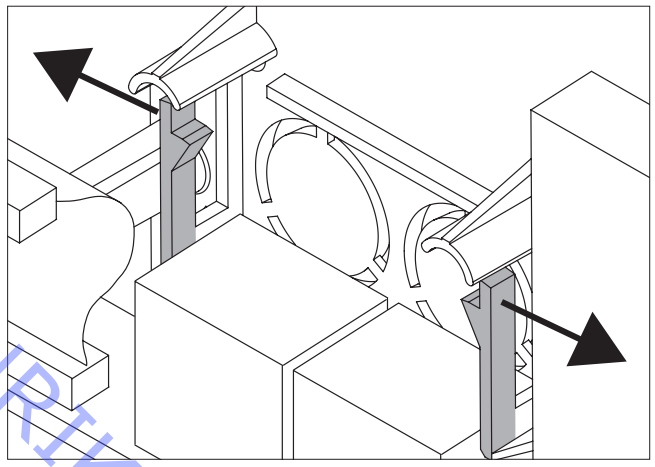
- Loosen locks



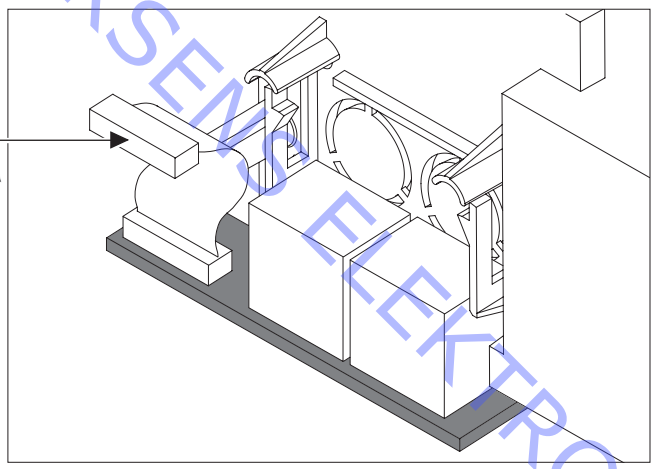
- Loosen locks

Warning!

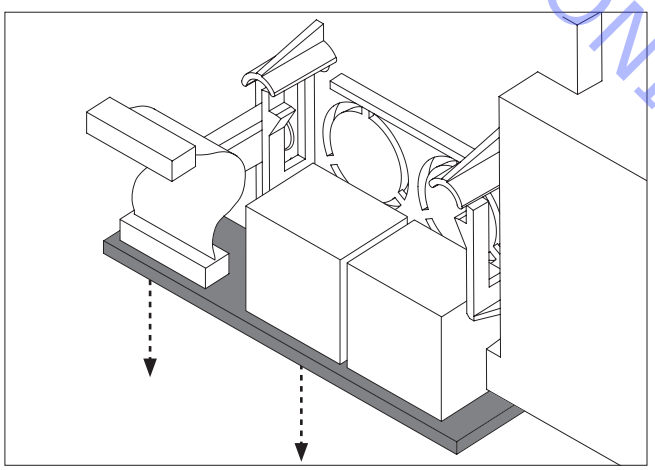




- Remove cable

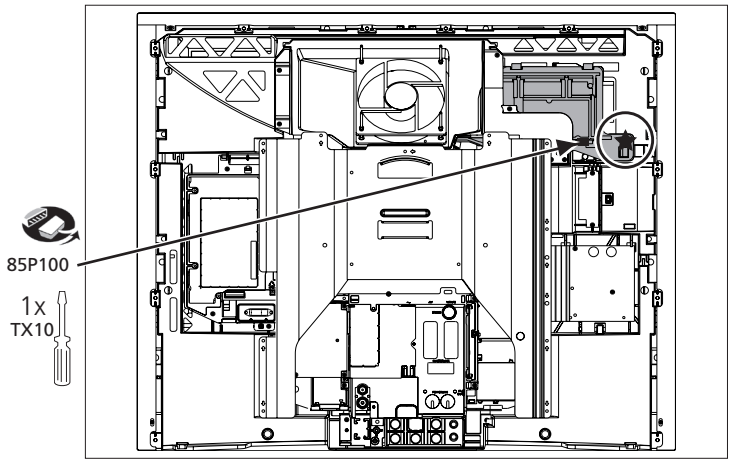


- Gently pull down PCB64

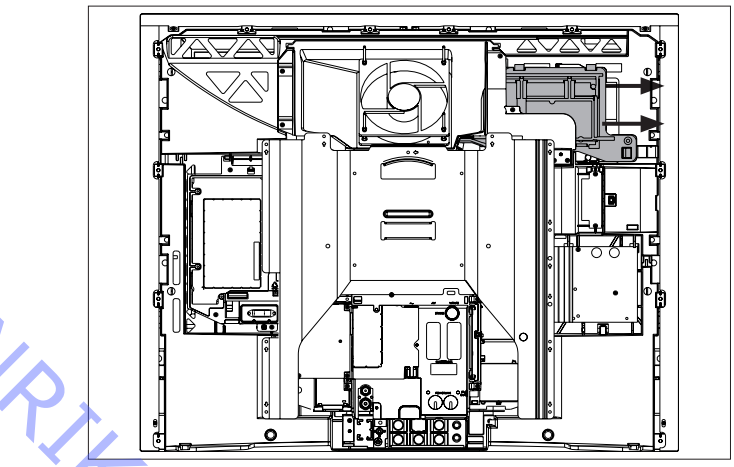


☞ 5.5 Mount service stands
☞ 5.6 BeoCenter 6-26 in service position

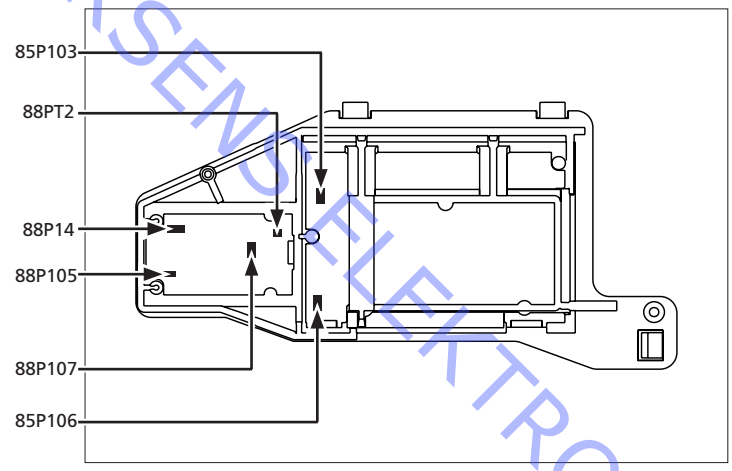
- Remove aerial plug and screw



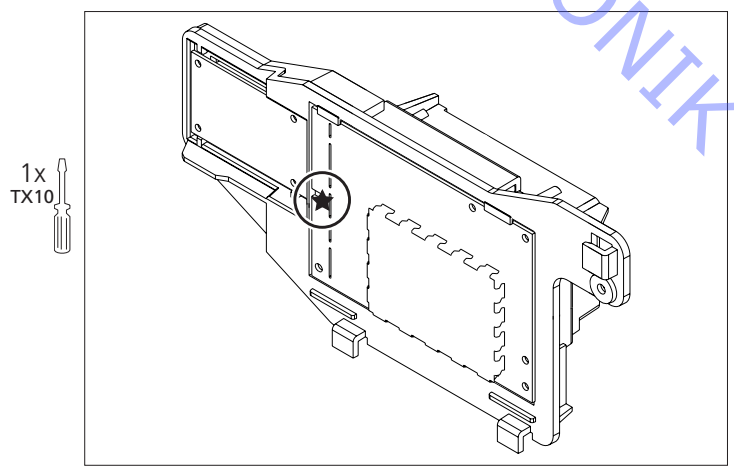
- Slide module to the right



- Remove cables

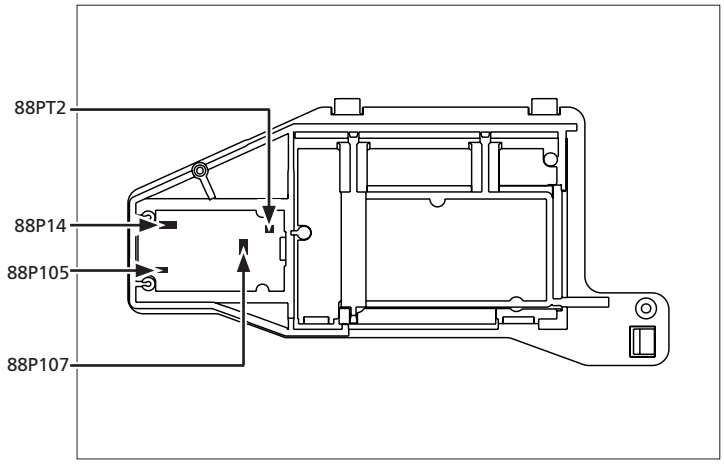


- Remove screw and pull off FM tuner module

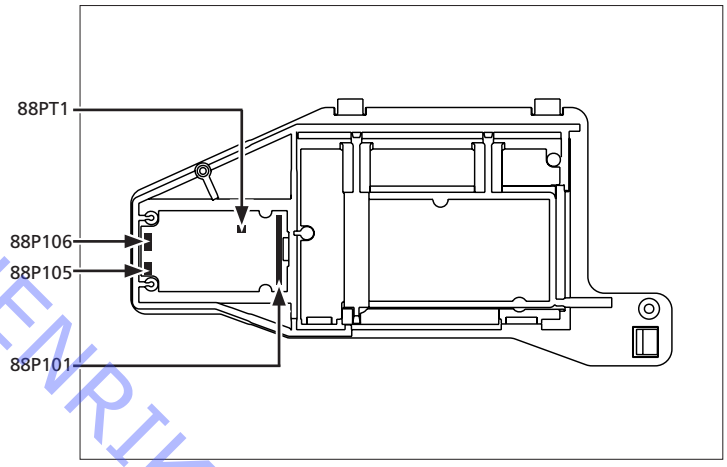


☞ 5.5 Mount service stands
☞ 5.6 BeoCenter 6-26 in service position
☞ 5.7 Main chassis in service position
☞ 5.28 Remove FM tuner module - illu 1 - 2

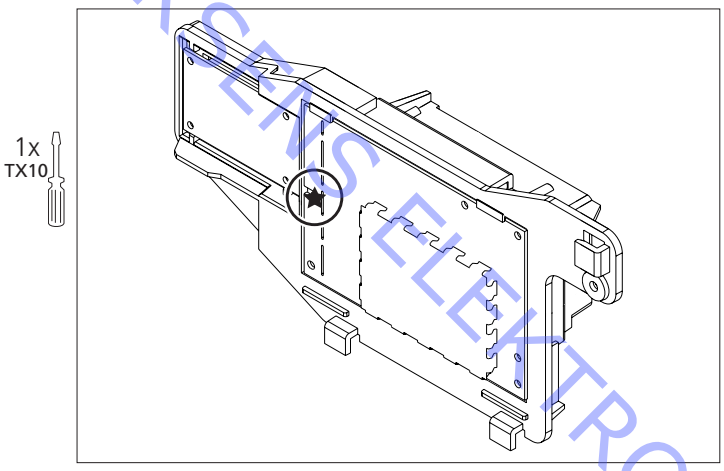
- Remove cables



- Remove cables



- Remove screws



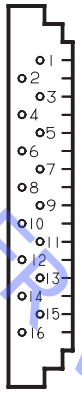
SPECIFICATION GUIDELINES FOR SERVICE USE	BeoCenter 6 – 26
CTV system	*See type survey
Colour variants	Profile and speaker cover: silver, dark grey, black, red, blue
LCD	26" 16:9 TFT LCD
Resolution	1366 x 768 pixels
Display colours	16.7 mio. (true)
Luminance of white (center of screen)	Typical 500 cd/m2
Contrast ratio (center of screen)	Typical 1200:1
Response time	Typical 6 msec.
Viewing angle	Typical 88 degrees (both vertical and horizontal)
Contrast screen	Anti-reflex coated and high glare LCD panel
Picture Formats	Format 1: 16:9 Panorama 15:9 B&O optimum + soft scroll 4:3
	Format 2: 16:9 Letterbox + Soft Scroll
	Format 3: 16:9 for unik 16:9
	Automatic format optimization via "Black Bar Detection"
	16:9 detection on both scart connectors
Vision Clear	Automatic Picture Control
	Luminance Transient Improvement
	Digital Noise Reduction
	Green Enhancement
	Adaptive Noise Reduction
	Colour Transient Improvement
	Adaptive Luminance Peaking
	Blue Strech
	Adaptive Black
Options	0, 1, 2, 4, 5 , 6
Operation	Beo4 remote control (included)
Menu languages	English, Danish, Dutch, Spanish, Swedish, German, French, Italian
PIN-code protection	With pin-code or disabled
Tuning	Autotune, program move and automatic naming
Tuner range	45 - 860 MHz: VHF, S-band, Hyper-band, UHF
No. of TV programmes	99, auto naming
	8 Program Groups
Teletext	Teletext level 2½, approx. 2000 pages
	17 teletext character sets in 7 groups
	Wide Screen Signalling (WSS)
	VPT (Video Programming by Teletext)
	9 memory pages per program
	17 teletext languages in 7 groups
Stereo decoders	A2 + NICAM
Speakers	1 x 4" woofer per channel and 1 x ¾" tweeter per channel
Impedance	Woofer 8 Ω and tweeter 8 Ω
Power amplifiers	2 units
Frequency range	65 - 20000 Hz
Max. sound pressure level	95 dB
Cabinet principle/Net. Volume	Bass Reflex / 2 litres per side
Bass equalizer	ABL
	Protection of loudspeaker units against mechanical damage and automatic dynamic reduction of bass signal
Magnetic shielded	No
Stand turning function	±37 degrees, remote operated
System modulator	System B or G according to setup
	471.71 - 855.25 MHz (in 1 MHz step), Dual side band

Dolby® Digital Decoder	Optional	
Decoding capabilities	Dolby® Digital 5.1 channel decoding	
	Dolby® Pro-Logic decoding of two channel Dolby® Digital	
	Dolby® Pro-Logic decoding of two channel PCM	
	Dolby® Pro-Logic decoding of two analogue channels (Lt/Rt)	
	Automatic format detection (Dolby® Digital, DTS and PCM)	
Calibration	3 channel tone control & loudness (L/C/R)	
	Bass management, Delay management	
Sound modes (Speaker 1 - 5)	Sound mode 1 :	Stereo center speakers (Subwoofer muted)
	Sound mode 2 :	Stereo in L/R speakers, Subwoofer is active
	Sound mode 3 :	Dolby® 3 stereo
	Sound mode 4 :	Dual stereo, stereo in L/R front & rear speakers, Subwoofer is active
	Sound mode 5 :	Dolby® digital, Dolby® Pro-logic, DTS
Sound modes Speaker 1:	Stereo Internal speakers	
Connections		
External BeoLab loudspeakers	2 x Power Link	
	5 x Power Link (If Optional DSM module is installed)	
	2 x SPDIF (If Optional DSM module is installed)	
DVB-S	(Optional)	
Media	Satellite	
Frequency range	950 MHz to 2150 MHz	
IF Bandwidth	45 MHz	
ODU control	DiSEqC 1.0 or DC & Tone control	
	14/18Volt and 22KHz ±4KHz/ 0.6Vpp ±0.2V	
Decoder		
Video	MPEG2, MP, ML	
Audio	MPEG1, 2-channel audio decoder, layer 1 & 2	
	MPEG2, 2-channel audio decoder, layer 2	
	AC3 to SPDIF loop	
SPDIF sample rates	48kHz or 44.1kHz	
Number of slots	2 PCMCIA (Common Interface only)	
Support for	Viaccess, Conax, MediaGuard (Aston), CryptoWorks	
Set-top Box Controller	Built-in (controls one STB)	
	Controlling boxes with Beo4: Supported boxes: See list at Bang & Olufsen Retail System (via internet)	
RADIO		
FM		
Receiving band	87.5 - 108.0 MHz (Variant EU/US)	
RDS	Name, RadioText, Clock are supported	
Signal/Noise ratio (1KHz)	Mono > 68 dB, typ. 70 dB – Stereo > 62 dB, typ. 65 dB	
Frequency response	Mono and stereo 30- 15 kHz, ±2 dB	
Antenna impedance	75 Ω	
DAB (optional)		
Receiving band	174 – 240 MHz (Band III)	
	1452 – 1492 MHz (Band L)	
	Decoding up to 256 kbit/s	
Signal/Noise ratio (1KHz)	100 dB	
Frequency response	15-20000 Hz ±1 dB	
Aerial Impedance	Typ. 75 Ω	
Number of stations that can be stored (both FM and DAB)	99	
Timer functionality	Timer Recording in Recorder- Primary (AV1)	
	TEXT Timer Record Programming (VPT)	
	Timer Play Programming (incl. all stand-by)	
	Timer Play Execution	
	Wake up timer (WUT)	
	Show Clock	

Dimensions W x H x D/Weight	71 x 58 x 18 cm + stand /23 kg
Mains Voltage	
EU	220 - 240 V +10 / -15% 50 - 60 Hz
Power consumption	Typical: 116 watt/Stand-by: 1 watt

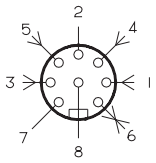
CONNECTIONS

MASTER LINK



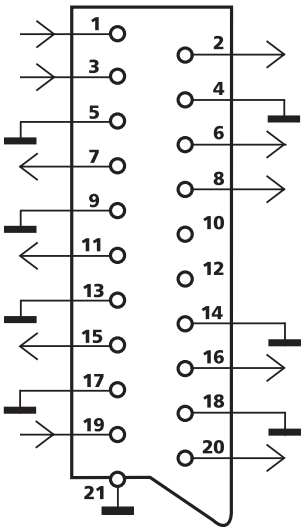
Pin 1	Data- -0.4V ±0.1V
Pin 2	Data+ +0.4V ±0.1V
Pin 3	ML sense
Pin 4-8	N.C.
Pin 9	ATI transmit
Pin 10	ATI receive
Pin 11	-supply voltage -7V to -15V (in St By -3V to -15V)
Pin 12	+supply voltage +7V to +15V (in St By +3V to +15V)
Pin 13	Audio -L 1V Bal, Rin 2.2MΩ, Rout 75Ω
Pin 14	Audio +L 1V Bal, Rin 2.2MΩ, Rout 75Ω
Pin 15	Audio -R 1V Bal, Rin 2.2MΩ, Rout 75Ω
Pin 16	Audio +R 1V Bal, Rin 2.2MΩ, Rout 75Ω

POWER LINK

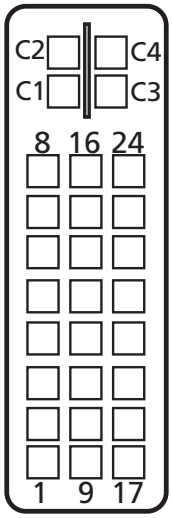


Pin 1	PL ON => 2.5V, OFF =< 0.5V
Pin 2	Signal GND
Pin 3	Audio L out 0V - 6.5V RMS
Pin 4	PL speaker ON => 2.5V, OFF =< 0.5V
Pin 5	Audio R out 0V - 6.5V RMS
Pin 6	Data: High >3.5V, Low <0.8V
Pin 7	Data GND
Pin 8	Not used

V.TAPE & AV

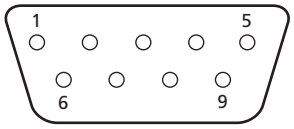


Pin 1	Audio R out 1V RMS 150 Ω
Pin 2	Audio R in 1V RMS 40 kΩ
Pin 3	Audio L out 1V RMS 150 Ω
Pin 4	Audio GND
Pin 5	Blue GND
Pin 6	Audio L in 1V RMS 40 kΩ
Pin 7	Blue in 0.7 Vpp 75 Ω
Pin 8	Play voltage: Logic 0 = 0V to 2V
	Logic 1 = 9.5V to 12V (4:3 info)
	5V to 7V = 16:9 info
	V.TAPE Data in/out
	AVL Data out 2 Way on V.TAPE and 1way on AV
Pin 9	Green GND
Pin 10	Not used
Pin 11	Green in 0.7 Vpp 75 Ω
Pin 12	Not used
Pin 13	Red GND
Pin 14	Blanking GND
Pin 15	Red in 0.7 Vpp 75 Ω – is also used for C in
Pin 16	Blanking in Logic 0 = 0V to 0.4V
	Logic 1 = 1V to 3V
	R in 75 Ω
Pin 17	Video out GND
Pin 18	Video in GND
Pin 19	Composite video out 1 Vpp 75 Ω
Pin 20	Composite video in 1 Vpp 75 Ω – is also used for Y in
Pin 21	Shield

VIDEO	Composite video in 1Vpp 75 Ω (RCA)	
Audio In	Audio L & R in 0.2V - 2 V RMS >10 kΩ	
	Phono (RCA)	
PHONES	Mini jack Ø 3.5 mm 8 - 32 Ω	
Set-top box (PUC) output	Mini jack Ø 3.5 mm (supports one STB)	
TV Input	1 x aerial 75 Ω	
FM input	1 x 75 Ω aerial male	
DAB input (optional)	1 x F-connector	
DVB-S Input (Optional)	1 x F-connector	
LINK TV OUT	75 Ω aerial male. Output to RF Link amplifier	
Motorised stand operation	5 pole DIN connector	
	Pin 1	GND
	Pin 2	Turn Left 0V when activated, otherwise 5V
	Pin 3	Turn Right 0V when activated, otherwise 5V
	Pin 4	Stand Position feedback 0 - 5V pulses
	Pin 5	14V supply
DVI-I	Pin 1	Data 2 -
(For connection of e.g. a PC	Pin 2	Data 2 +
DVI and VGA	Pin 3	Data 2/4 shield
	Pin 4	Data 4 -
	Pin 5	Data 4 +
	Pin 6	DDC Clock
	Pin 7	DDC Data
	Pin 8	Analog vert. sync
	Pin 9	Data 1 -
	Pin 10	Data 1 +
	Pin 11	Data 1/3 shield
	Pin 12	Data 3 -
	Pin 13	Data 3 +
	Pin 14	+ 5V
	Pin 15	GND
	Pin 16	Hot plug detect
	Pin 17	Data 0 -
	Pin 18	Data 0 +
	Pin 19	Data 0/5 shield
	Pin 20	Data 5 -
	Pin 21	Data 5 +
	Pin 22	Clock shield
	Pin 23	Clock +
	Pin 24	Clock -
	C1	Analog red
	C2	Analog green
	C3	Analog blue
	C4	Analog hor. sync.
	C5	Analog GND

Component Video (YPbPr)	
Y	1 x phono (green)
Pb	1 x phono (blue)
Pr	1 x phono (red)

9 pole D-Sub male at TV rear part



(Only if optional DVB-S module is installed)

Pin 1	NC
Pin 2	RXD
Pin 3	TXD
Pin 4	DTR (NC)
Pin 5	GND
Pin 6	DSR (NC)
Pin 7	RTS
Pin 8	CTS
Pin 9	RI (NC)

Subject to change without notice

Type survey

Type	BeoCenter 6-26”	Market	Basic Video variant	Active Video system
NEU	9280	Austria, Belgium, Croatia, Denmark, Faroe Islands, Finland, Germany, Greece, Greenland, Holland, Iceland, India, Indonesia, Israel, Italy, Kuwait, Liechtenstein, Luxembourg, Malaysia, Nigeria, Norway, Oman, Pakistan, Portugal, Singapore, Slovenia, Spain, Sweden, Thailand, Turkey, United Arab Emirates	B/G	B/G
FGB	9281	Bahrain, Egypt, France, Lebanon, Qatar, Saudi Arabia, Switzerland	B/G/L/L'/I/D/K	B/G/L/L'/I
GB	9282	Botswana, Ireland, South Africa, United Kingdom	B/G/L/L'/I/D/K	I
HK	9286	Hong Kong	B/G/L/D/K/M/I	D/K/M/I
AUS	9283	Australia, New Zealand	B/G	B/G
EEU	9284	Azerbaijan, Bulgaria, Czech Repub., Hungary, Kazakhstan, Latvia, Lithuania, Morocco, Poland, Romania, Russia, Serbia, Slovak Rep., Ukraine, Uzbekistan	B/G/L/L'/I/D/K	B/G/D/K
CH	9285	China	B/G/L/D/K/M/I	D/K/M/I

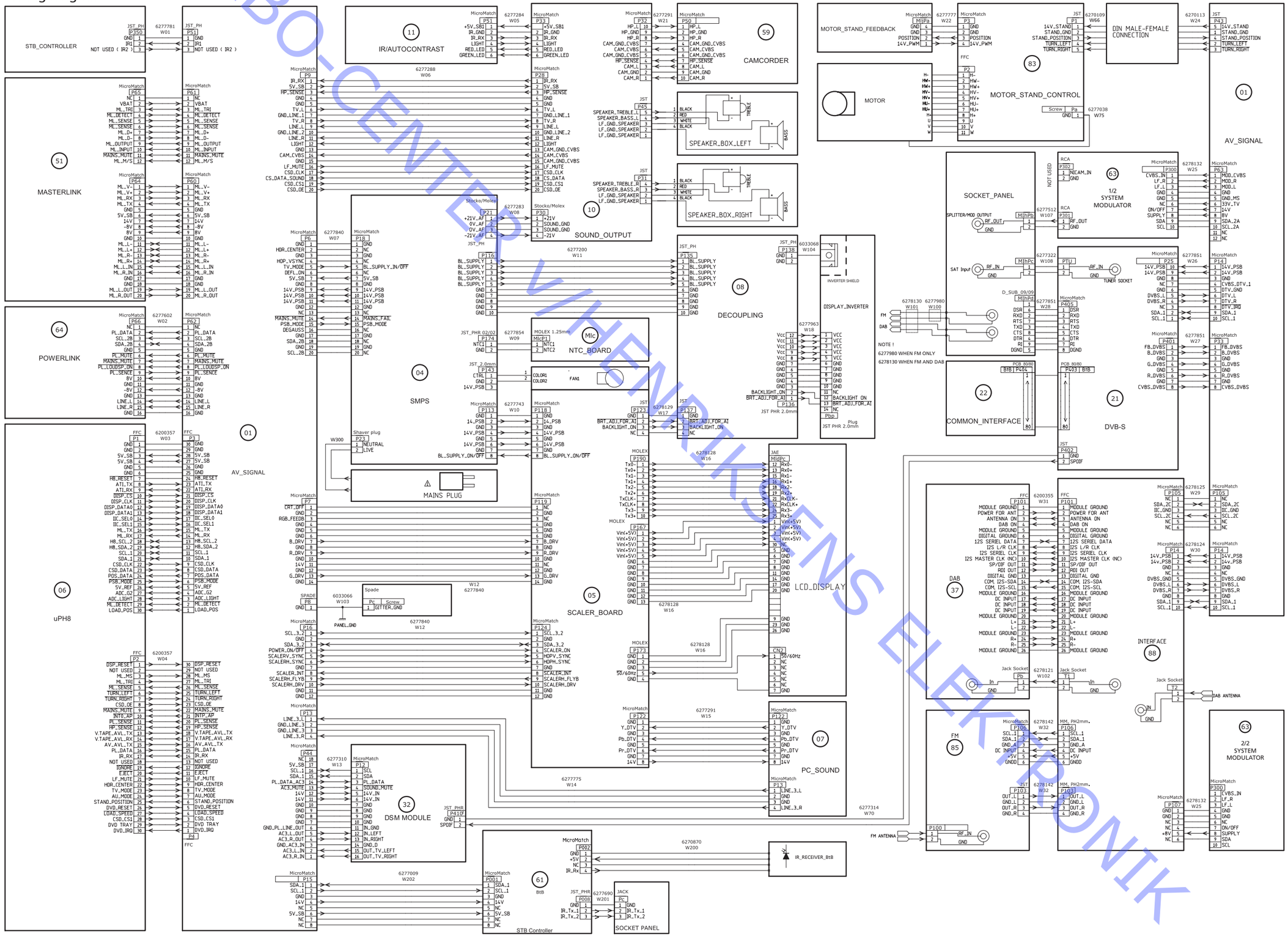
Modification to other TV systems either by means of chassis exchange, or change the setting in the TV Service menu.

Video Input formats

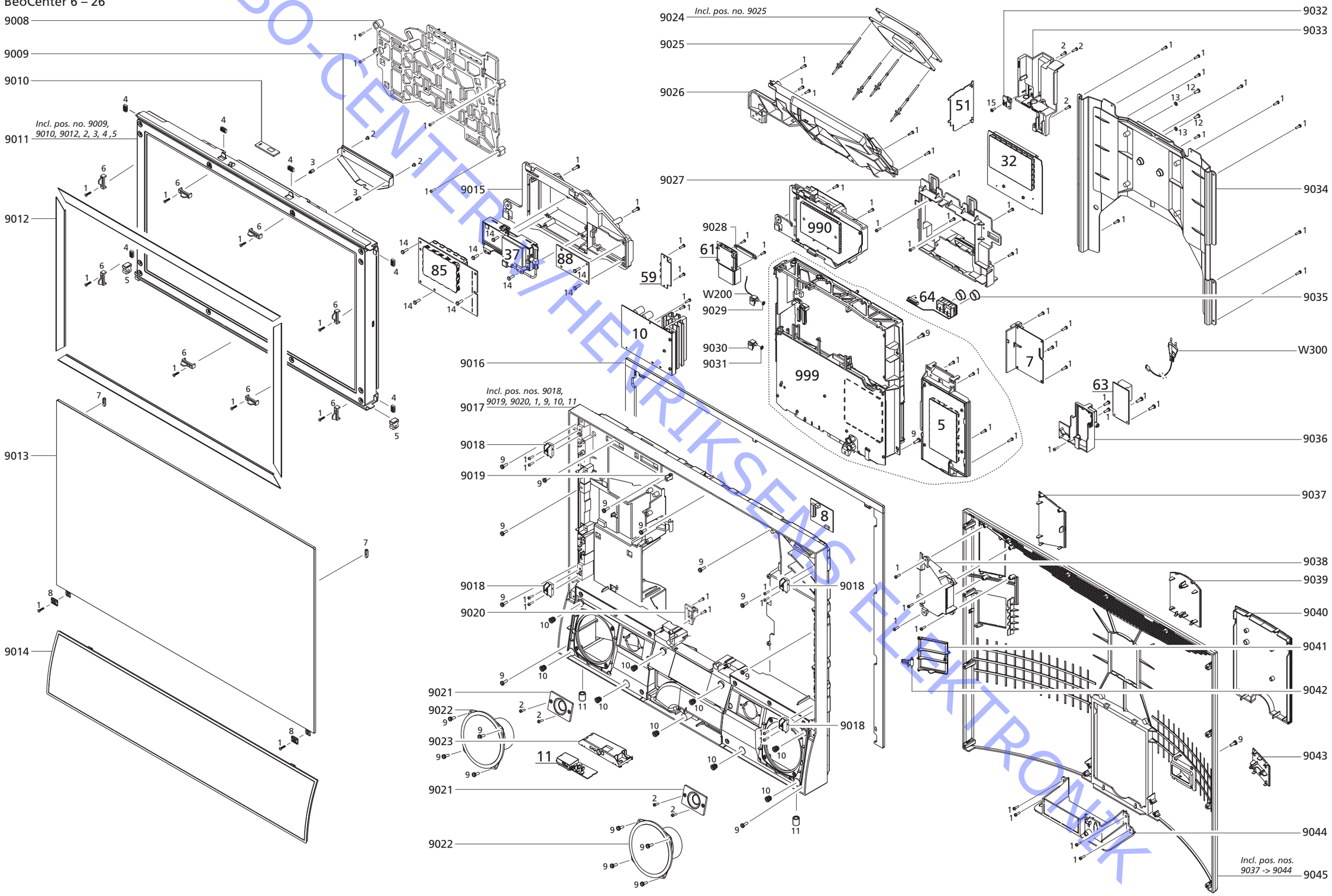
Name of Video Input Format (UseCase)	Type of signal	Vert. Freq.	No. of lines + scan "active" ("total")	Aspect Ratio[1]	Source Resolution[2] (full frame)	Pixel Clock[3]	Display Format Mode
CVBS-576i-4:3	Composite Video	50 Hz	576i (625i)	4:3	720 x 576	13.5 MHz (luminance)	TV
CVBS-576i-16:9				16:9			
CVBS-288p-4:3			288p (312/313p)	4:3	720 x 288		
CVBS-288p-16:9				16:9			
CVBS-480i-4:3		59.94 Hz	480i (525i)	4:3	720 x 480		
CVBS-480i-16:9				16:9			
CVBS-240p-4:3			240p (262/263p)	4:3	720 x 240		
CVBS-240p-16:9				16:9			
YC-576i-4:3	YC	50 Hz	576i (625i)	4:3	720 x 576		
YC-576i-16:9				16:9			
YC-288p-4:3			288p (312/313p)	4:3	720 x 288		
YC-288p-16:9				16:9			
YC-480i-4:3		59.94 Hz	480i (525i)	4:3	720 x 480		
YC-480i-16:9				16:9			
YC-240p-4:3			240p (262/263p)	4:3	720 x 240		
YC-240p-16:9				16:9			
RGBY-576i-4:3	RGB-Y	50 Hz	576i (625i)	4:3	720 x 576	13.5 MHz	
RGBY-576i-16:9				16:9			
RGBY-288p-4:3			288p (312/313p)	4:3	720 x 288		
RGBY-288p-16:9				16:9			
RGBY-480i-4:3		59,94 Hz	480i (525i)	4:3	720 x 480		
RGBY-480i-16:9				16:9			
RGBY-240p-4:3			240p (262/263p)	4:3	720 x 240		
RGBY-240p-16:9				16:9			
YPbPr-576p-4:3	YPbPr	50 Hz	576p (625p)	4:3	720 x 576	27 MHz	
YPbPr-576p-16:9				16:9			
YPbPr-720@50p			720p (750p)		1280 x 720	74.25 MHz	
YPbPr-1080@50i			1080i (1125i)		1920 x 1080		
YPbPr-480p-4:3		59.94 Hz	480p (525p)	4:3	720 x 480	27 MHz	
YPbPr-480p-16:9				16:9			
YPbPr-720@60p		60 Hz	720p (750p)		1280 x 720	74.25 MHz	
YPbPr-1080@60i			1080i (1125i)		1920 x 1080		
RGBHV-480p-4:3	VGA	60 Hz	480p	4:3	640 x 480	25.2 MHz	PC
RGBHV-480p-16:9				16:9	848 x 480	31.49 MHz	
RGBHV-576p-16:9			576p		1024 x 576	46.99 MHz	
RGBHV-600p-4:3			600p	4:3	800 x 600	40 MHz	
RGBHV-768-4:3			768p		1024 x 768	65 MHz	
RGBHV-768-16:9				16:9	1360 x 768	84.7 MHz	
RGBHV-720@60p (HDTV)			720p		1280 x 720	74.25 MHz	
RGBHV-720@60p (GTF)			720p (GTF)			74.48 MHz	
DVI-576p-4:3	TMDS DVI	50 Hz	576p	4:3	720 x 576	27 MHz	TV
DVI-576p-16:9				16:9			
DVI-720@50p			720p		1280 x 720	74.25 MHz	
DVI-1080@50i			1080i		1920 x 1080		
DVI-480p-4:3		59.94 / 60 Hz	480p	4:3	720 x 480	27 MHz	
DVI-480p-16:9				16:9			
DVI-720@60p			720p		1280 x 720	74.25 MHz	
DVI-1080@60i			1080i		1920 x 1080		
DVI-480p-4:3-sqr.pix.		60 Hz	480p	4:3	640 x 480	25.2 MHz	PC
DVI-480p-16:9-sqr.pix.				16:9	848 x 480	31.49 MHz	
DVI-576p-16:9			576p		1024 x 576	46.99 MHz	
DVI-600p-4:3			600p	4:3	800 x 600	40 MHz	
DVI-720@60p (GTF)			720p	16:9	1280 x 720	74.48 MHz	
DVI-768-4:3			768p	4:3	1024 x 768	65 MHz	
DVI-768-16:9				16:9	1360 x 768	84.7 (82.0) MHz	

GTF Generalized Timing Formula

Wiring diagram



Available parts
BeoCenter 6 – 26



BeoCenter 6 – 26

9008	3151338	Cable rack
9009	3162229	Shield
9010	8001992	NTC PCB
9011	8200184	LCD panel incl. pos. nos. 9009, 9010, 9012, 2, 3, 4, 5
9012	3340305	Gasket f/LCD, set
9013	3451485	Contrast screen
9014	3344010	Speaker cover, silver
	3344013	Speaker cover, dark grey
	3344014	Speaker cover, black
	3344012	Speaker cover, red
	3344011	Speaker cover, blue
9015	3151918	Holder f/DAB
9016	3320827	Profile, silver
	3320886	Profile, dark grey
	3320892	Profile, black
	3320890	Profile, red
	3320891	Profile, blue
9017	3321025	Main frame, incl. pos. nos. 9018, 9019, 9020, 1, 9, 10, 11, W103 and spring f/grill
	2816190	Spring f/grill
9018	3151766	Bracket
9019	2810336	Lock
9020	3151218	Chassis bracket
9021	8480388	Tweeter
9022	8480338	Bass
9023	3151783	Holder f/PCB11
9024	8400018	Fan incl. pos. no. 9025
9025	3907001	Rubber bushing
9026	3151232	Holder
9027	3151229	Holder
9028	3151670	Holder f/BtB
9029	2380143	Nut
9030	8008922	Mini jack
9031	2380145	Nut
9032	3160367	Ground connection
9033	3160338	Cover f/socket panel
9034	2576027	Bracket
9035	3341105	Blind plug
9036	3151878	Holder f/PCB63
9037	3160333	Cover f/DVB-S
9038	3151026	Plate f/DVB-S
9039	3160332	Cover f/stand
9040	3160330	Cover f/connector panel
9041	3160334	Cover f/camcorder
9042	2810020	Hinge
9043	3160331	Cover f/DVI
9044	3151822	Cover f/DSM
9045	3431498	Back cover incl. pos. nos. 9037 -> 9044, 1

W200	6270870	Lead f/IR Receiver
W300⚠	6100325	Mains lead w/filter EU
	6100404	Mains lead GB
	6100248	Mains lead AUS
	6100037	Mains lead CHK

7Module	8003172	PCB7, PC Sound
8Module	8003171	PCB8, Decoupling
10Module	8001991	PCB10, Sound Output
11Module	8003041	PCB11, IR/Autocontrast
32Module	8000910	PCB32, DSM
37Module	8002046	PCB37, DAB
51Module	8000882	PCB51, Masterlink
59Module	8001996	PCB59, Camcorder
61Module	8003120	PCB61, BtB
63Module	8003035	PCB63, System modulator
64Module	8000921	PCB64, Powerlink
85Module	8003085	PCB85, FM
88Module	8003086	PCB88, Interface
990Module	8053041	DVB-S chassis

999Module		Main chassis consist of PCB1, PCB4, PCB5, PCB6, PCB7, PCB51, PCB63, PCB64
	8053160	Main chassis, system B/G
	8053161	Main chassis, system B/G/M/I/D/K/L
	8053162	Main chassis, system B/G/L/L'/I/D/K

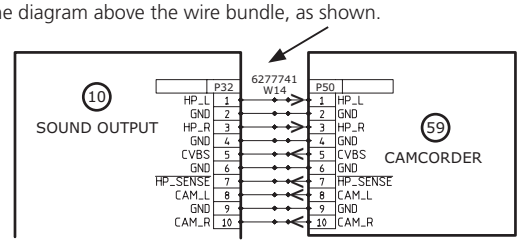
⚠ *symbol of safety component*

Survey of screws and washers

1	2013137	Screw 3 x 10mm
2	2038117	Screw 3 x 4mm
3	2930092	Adaptor
4	3907004	Rubber bushing
5	3907005	Damper
6	3031074	Bracket
7	2930022	Bushing
8	3031064	Washer
9	2019021	Screw 4 x 12mm
10	2930178	Bushing
11	2934162	Insert
12	2034004	Screw 4 x 10mm
13	2625003	Washer
14	2052011	Screw 3 x 10mm
15	2013190	Screw 3 x 8mm

Wire bundles

See wiring diagram page 7.1.
The part no. is printed on the diagram above the wire bundle, as shown.



Back-up suitcase

3395308	Back-up suitcase, system B/G
3395309	Back-up suitcase, system B/G/M/I/D/K/L
3395310	Back-up suitcase, system B/G/L/L'/I/D/K

Parts not shown

8330352	IR blaster f/extended sources
8039004	Galvanic isolator
8053404	ML-tester
8053368	B&O programmer
3665155	Integrated Living - Test DVD
3375079	Product cover
3375038	Service stand

ServiceTool

3375055	P.I.T. box
	ServiceTool - download from Retail System/BeoWise
3375397	Cable kit for ServiceTool, complete
3375151	USB - RS232 bridge

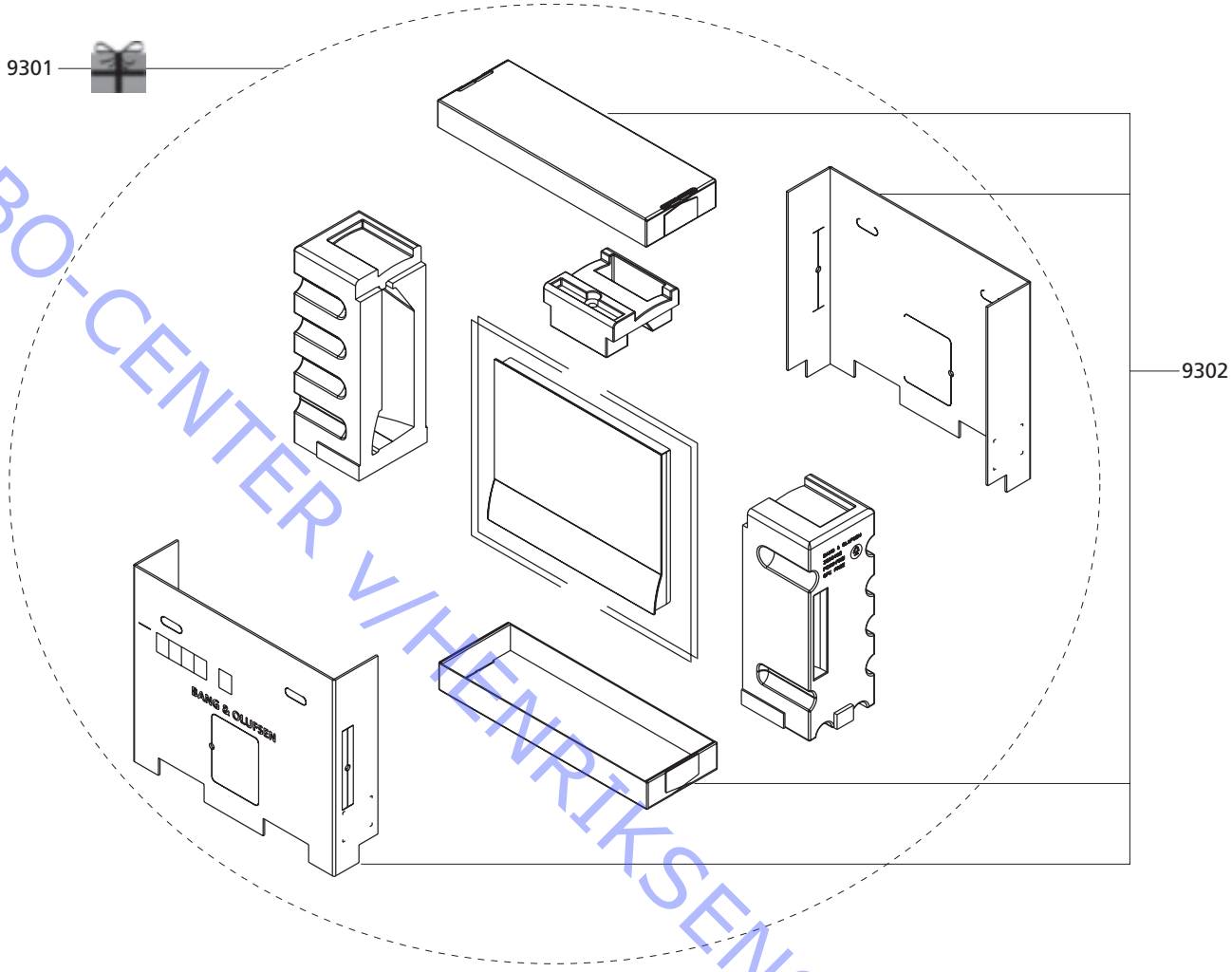
Accessories

1220800	DAB kit
8720044	DAB antenna

Available documentation

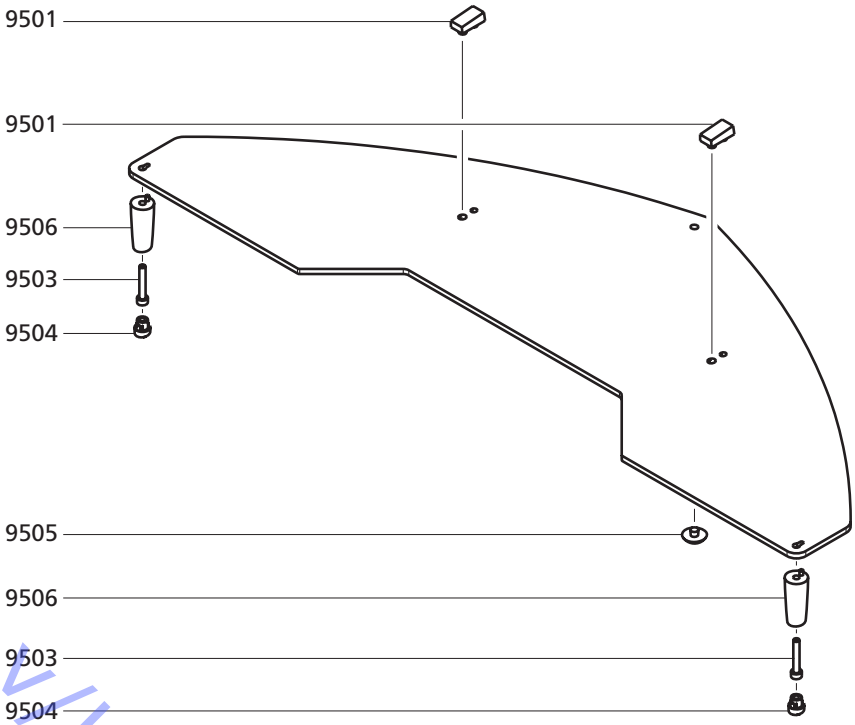
See Retail Ordering System

Packing



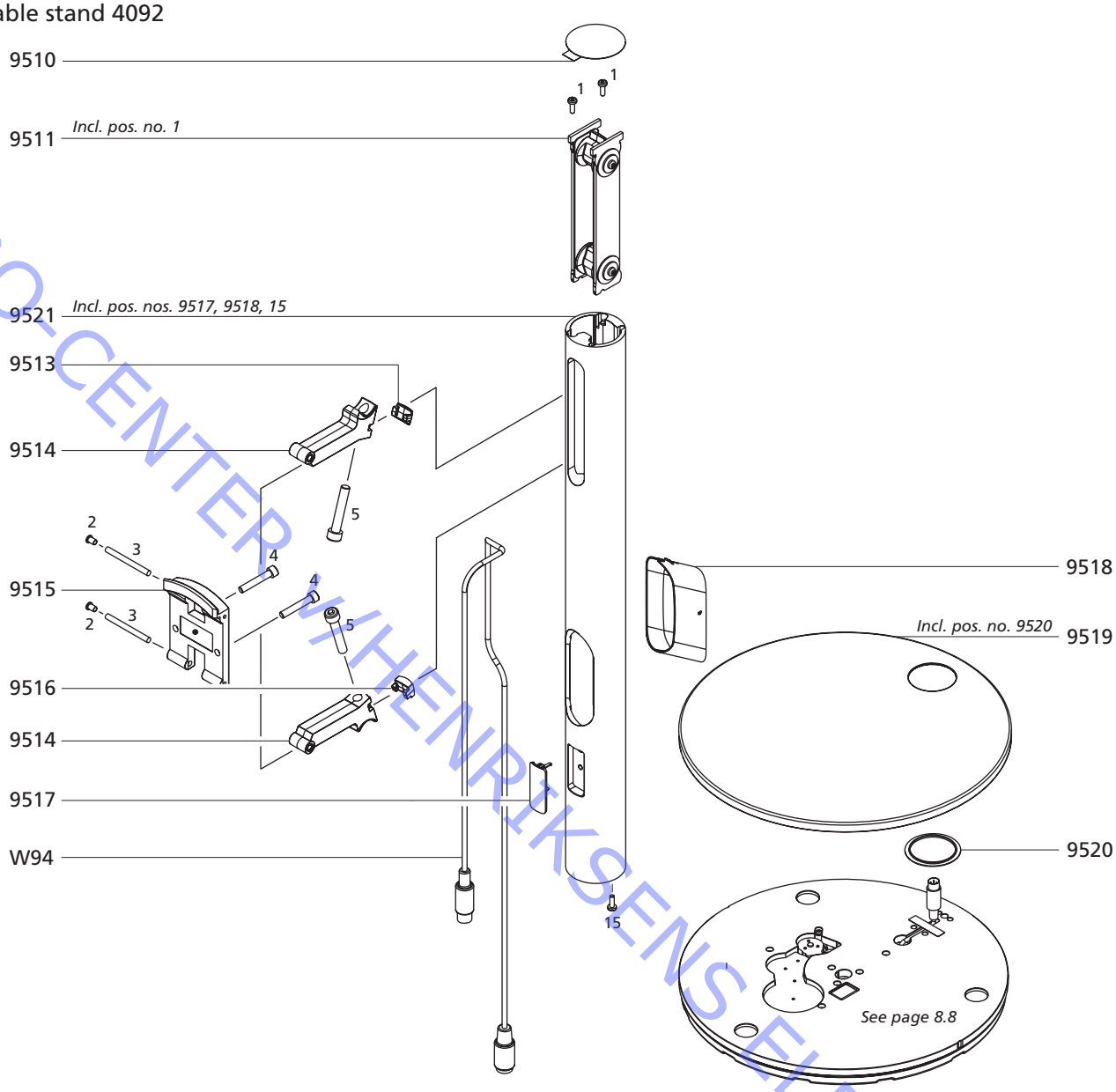
9301	3393000	Packing, complete
9302	3393003	Outer carton, complete

Base 4090



9501	2576361	Spacer
9503	2058069	Screw 4 x 25mm
9504	3103414	Cover f/screw
9505	3103418	Foot
9506	3103101	Alu. foot
	3390664	Cable cover
	3504730	Guide
	3392400	Packing, complete

Table stand 4092



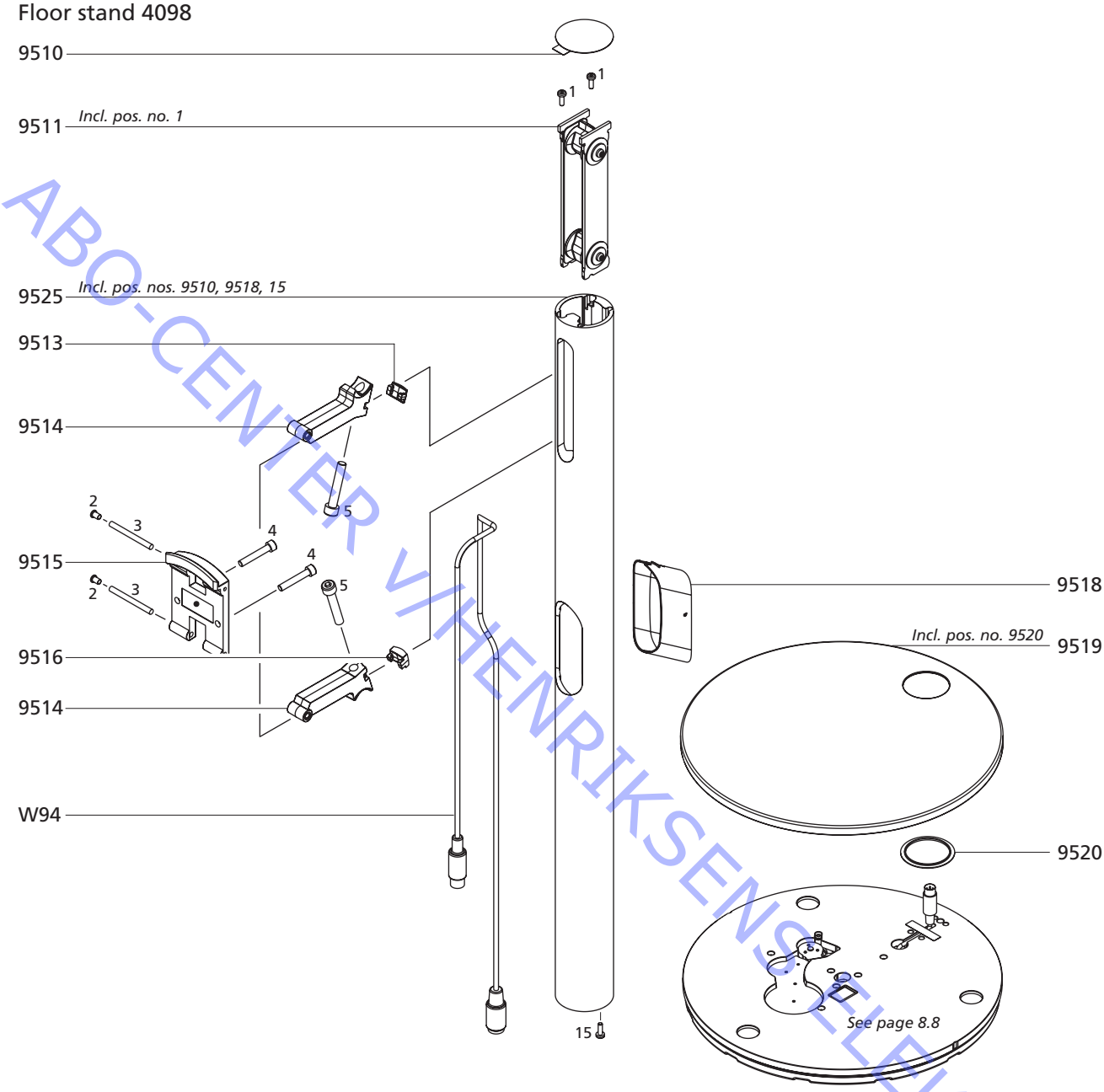
9510	3459468	Plate	9517	2950111	Cover
9511	3130349	Tilt mechanism, incl. pos. no 1	9518	2950050	Conduit
			9519	3459470	Cover plate incl. pos. no. 9520
9513	3010058	Stopper, black			
9514	3151416	Arm	9520	2576017	Scratch shield
9515	3151142	Bracket	9521	2950116	Aluminium tube, incl. pos. nos. 9517, 9518,
9516	3010057	Stopper, white			

W94	6270113	Extension cable 5pole DIN male-female			

1	2015001	Screw 4 x 12mm	4	2058077	Screw 5 x 20 mm
2	3341008	Plug	5	2058076	Screw 8 x 45mm
3	2830030	Needle	15	2015001	Screw 4 x 12mm

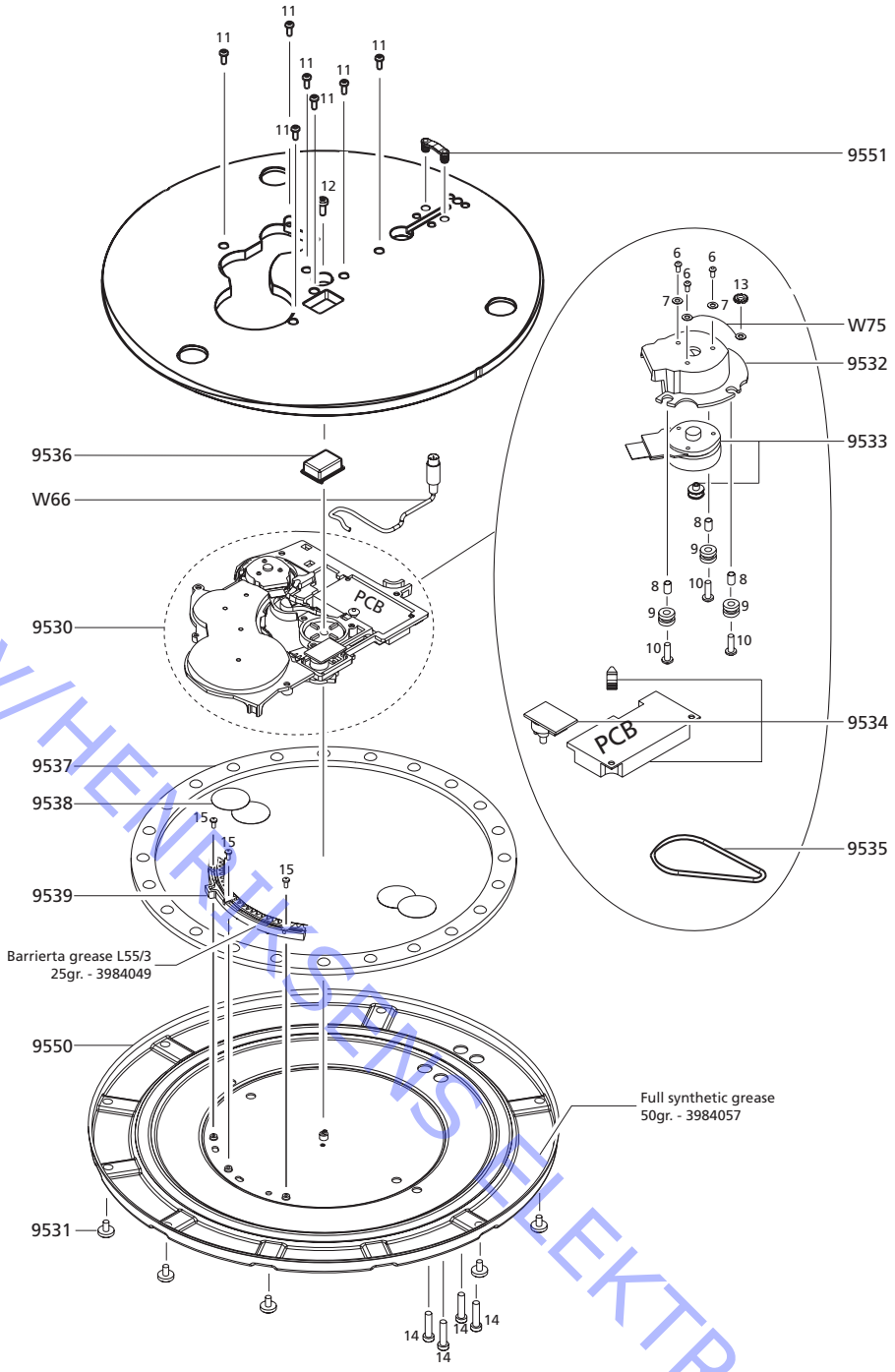
	3390011	Set of accessories
	3504771	Guide
	3396253	Foam - order 2 pcs.
	3392050	Outer carton
	2777038	Handle
	2777037	Handle, plate

Floor stand 4098



9510	3459468	Plate	9518	2950050	Conduit
9511	3130349	Tilt mechanism, incl. pos. no. 1	9519	3459470	Cover plate incl. pos. no. 9520
9513	3010058	Stopper, black	9520	2576017	Scratch shield
9514	3151416	Arm	9525	2950135	Aluminium tube, incl. pos. nos. 9510, 9518, 15
9515	3151142	Bracket			
9516	3010057	Stopper, white			
W94	6270113	Extension cable 5pole DIN male-female			
1	2015001	Screw 4 x 12mm	4	2058077	Screw 5 x 20mm
2	3341008	Plug	5	2058076	Screw 8 x 45mm
3	2830030	Needle	15	2015001	Screw 4 x 12mm
	3390012	Set of accessories			
	3504771	Guide			
	3396254	Foam - order 2 pcs.			
	3392052	Outer carton			
	2777038	Handle			
	2777037	Handle, plate			

Turnable unit



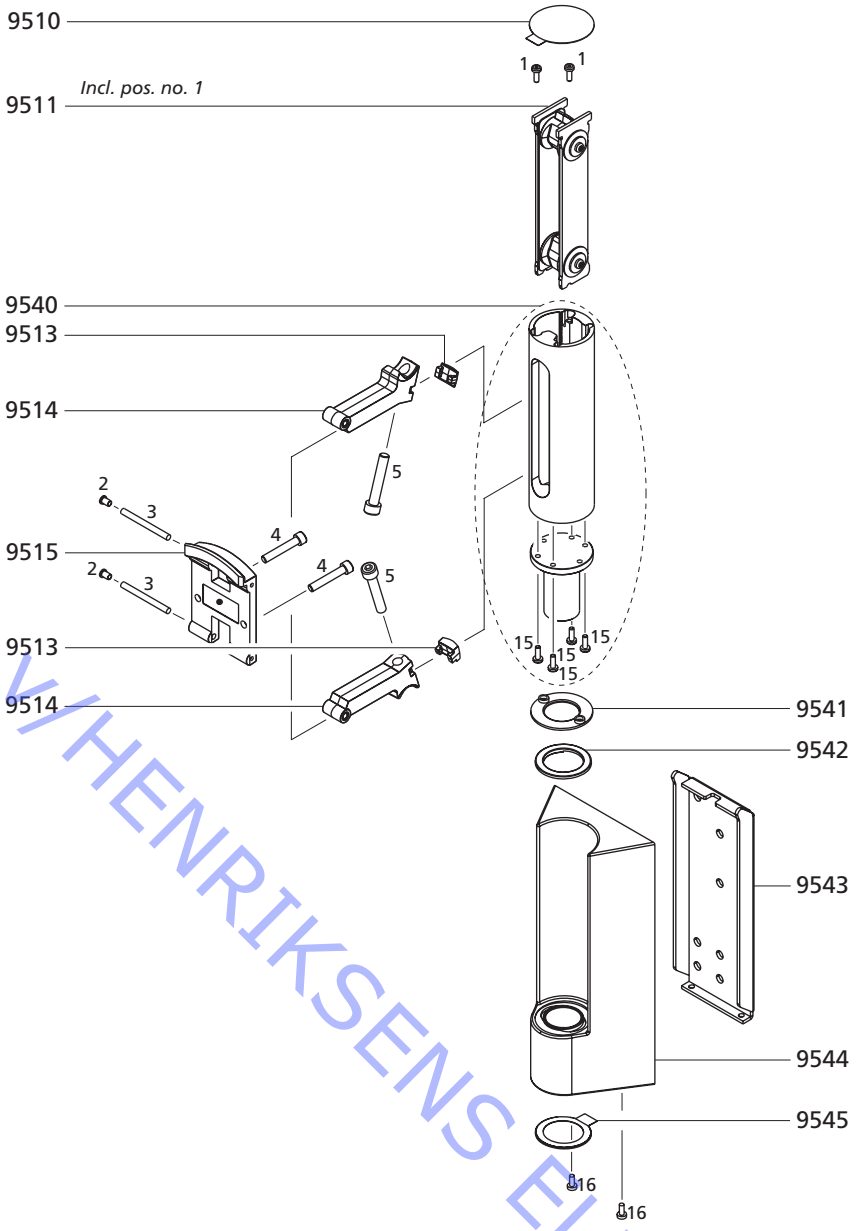
9530	2755011	Gear, complete	9536	3114496	House
9531	3390662	Bag w/6 x foot	9537	2900016	Bearing
9532	3114003	Cover f/motor	9538	3947709	Wafer
9533	8400004	Motor	9539	2700256	Sprocket
9534	8052028	PCB f/motor	9550	3454208	Bottom
9535	2732156	Belt	9551	3153045	Bracket f/wire

W66	6270109	Wire DIN 5 pole
W75	6277038	Ground wire

6	2033001	Screw 7 x 3.5mm	11	2019020	Screw 4 x 10mm
7	2622110	Washer	12	2058074	Screw 5 x 12mm
8	2930074	Bushing	13	2625003	Washer
9	2938306	Rubber bushing	14	2058079	Screw 6 x 25mm
10	2013156	Screw 2.5 x 8mm	15	2038137	Screw 3 x 6mm

	3984049	Barrierta grease L55/3 - 25gr.
	3984057	Full synthetic grease - 50gr.

Wall Bracket 4093



9510	3459468	Plate
9511	3130349	Tilt mechanism, incl. pos. no. 1
9513	3010058	Stopper, black
9514	3151416	Arm
9515	3151142	Bracket
9540	2950119	Alu. tube
9541	2620004	Friction disc, upper
9542	2620003	Friction disc, lower
9543	3031021	Mounting bracket
9544	3151819	Wall bracket
9545	3452035	Plate

1	2015001	Screw 4 x 12mm	5	2058076	Screw 8 x 45mm
2	3341008	Plug	15	2015001	Screw 4 x 12mm
3	2830030	Needle	16	2043016	Screw 4 x 10mm
4	3390012	Screw f/TV			

	3390010	Bag w/2 x screews f/TV, cable cover, hexagon spanner
	3504775	Guide
	3396256	Foam packing - order 2 pcs.
	3392054	Outer carton

Bang & Olufsen
DK-7600 Struer
Denmark

Phone +45 96 84 11 22*
Fax +45 97 85 39 11

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