

DVD Player

DVP3000K, DVP3005K, DVP3005, DVP3010

Service

DVP3000K/69/93

Service

DVP3005K/03/13/69/75/93

DVP3005/00/02/04/05/78

Service

DVP3010/00/02/04/05



Service Manual

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Version 1.0

**CLASS 1
LASER PRODUCT**



3139 785 30950

PHILIPS

Technical Specifications

TV standard (PAL/50Hz) (NTSC/60Hz)

Number of lines	625	525
Playback	Multi standard	(PAL/NTSC)

Video performance

Video DAC	12 bit, 108mH
PbPr:	0.7Vpp ---- 75ohm
Video output	1Vpp ----- 75ohm

Video format

Digital Compression	MPEG 2 for DVD,SVD MPEG 1 for VCD	
DVD	50Hz	60Hz
Horiz. resolution	720 pixels	720 pixels
Vertical resolution	576lines	480 lines
VCD	50Hz	60Hz
Horiz. resolution	352 pixels	352 pixels
Vertical resolution	288lines	240 lines

Audio format

Digital	MPEG/AC-3/ PCM	Compressed Digital 16, 20, 24bits fs, 44.1, 48, 96kHz
	MP3(ISO 9660)	96,112,128,256kbps & variable bit rate fs,32, 44.1,48 kHz

Analogue Sound Stereo

Dolby surround-compatible downmix from Dolby Digital multi-channel sound

Audio performance

DA converter	24bits, 192KHz
DVD	fs 96kHz 4Hz----44kHz fs 48kHz 4Hz----22kHz
SVCD	fs 48kHz 4Hz----22kHz fs 44.1kHz 4Hz----20kHz
CD/VCD	fs 44.1kHz 4Hz----20kHz
Signal-Noise (1kHz)	>95dB
Dynamic Range (1kHz)	>85dB
Cross talk (1kHz)	>90dB
Distortion/Noise (1kHz)	>80dB
MPEG MP3	MPEG Audio L3
Audio L+R output:	1.0~2.0 Vpp into 10K ohm

Connections

YpbPr	Cinch 3x
Video output	Cinch(yellow)
Audio L+R output	Cinch (white/red)
Digital output	1 coaxial IEC60958 for CDDA/LPCM IEC61937 for MPEG1/2, Dolby Digital

Cabinet

Dimensions (w X h X d)	360 X 43 X 265mm
Weight	Approximately 2.0 kg

Power consumption

Power supply	230V for 00/02/03/04/05/13/69/75/93 120~230V for /78
Power consumption in standby mode	< 0.8W
Power consumption	<10W

Specifications subjects to change without prior notice.

Safety instructions, Warnings, Notes

Safety instructions

1. General safety

Safety regulations require that during a repair:

- . Connect the unit to the mains via an isolation transformer.
- . Replace safety components indicated by the symbol , only by components identical to the original ones. Any other component substitution (other than original type) may increase risk of fire or electrical shock hazard.

Safety regulations require that after a repair, you must return the unit in its original condition. Pay, in particular, attention to the following points:

- . Route the wires/cables correctly, and fix them with the mounted cable clamps.
- . Check the insulation of the mains lead for external damage.
- . Check the electrical DC resistance between the mains plug and the secondary side:
 - 1) Unplug the mains cord, and connect a wire between the two pins of the mains plug.
 - 2) Set the mains switch the "on" position (keep the mains cord unplug).
 - 3) Measure the resistance value between the mains plug and the front panel, controls, and chassis bottom.
 - 4) Repair or correct unit when the resistance measurement is less than 1MΩ.
 - 5) Verify this, before you return the unit to the customer/user (ref. UL-standard no. 1492).
 - 6) Switch the unit "off", and remove the wire between the two pins of the mains plug.

2. Laser safety

This unit employs a laser. Only qualified service personnel may remove the cover, or attempt to service this device (due to possible eye injury).

Laser device unit

Type	: Semiconductor laser GaAlAs
Wavelength	: 650nm (DVD)
	: 780nm (VCD/CD)
Output power	: 7mW (DVD)
	: 10mW (DVD /CD)

Beam divergence: 60 degree

Note: Use of controls or adjustments or performance of procedure other than those specified herein, may result in hazardous radiation exposure. Avoid direct exposure to beam.

Warnings

1. General

. All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically. Make sure that, during repair, you are at the same potential as the mass of the set by a wristband with resistance. Keep components and tools at this same potential. Available ESD protection equipment:

- 1) Complete kit ESD3 (small tablemat, wristband, connection box, extension cable and earth cable) 4822 310 10671.
- 2) Wristband tester 4822 344 13999.

. Be careful during measurements in the live voltage section. The primary side of the power supply, including the heat sink, carries live mains voltage when you connect the player to the mains (even when the player is "off"!). It is possible to touch copper tracks and/or components in this unshielded primary area, when you service the player. Service personnel must take precautions to prevent touching this area or components in this area. A "lighting stroke" and a stripe-marked printing on the printed wiring board, indicate the primary side of the power supply.

. Never replace modules, or components, while the unit is "on".

2. Laser

. The use of optical instruments with this product, will increase eye hazard.

. Only qualified service personnel may remove the cover or attempt to service this device, due to possible eye injury.

. Repair handling should take place as much as possible with a disc loaded inside the player.

. Text below is placed inside the unit, on the laser cover shield:

CAUTION: VISIBLE AND INVISIBLE LASER RADIATION
WHEN OPEN, AVOID EXPOSURE TO BEAM.

Notes: Manufactured under licence from Dolby Laboratories. The double-D symbol is trademarks of Dolby Laboratories, Inc. All rights reserved.

Warnings, Notes

Lead-Free requirement for service

IDENTIFICATION:

Regardless of special logo (not always indicated)



One must treat all sets from **1.1.2005** onwards, according next rules.

***Important note:** In fact also products a little older can also be treated in this way as long as you avoid mixing solder-alloys (lead-ed/ lead-free). So best to always use SAC305 and the higher temperatures belong to this.*

Due to lead-free technology some rules have to be respected by the workshop during a repair:

- Use only lead-free solder alloy Philips SAC305 with order code 0622 149 00106. If lead-free solder-paste is required, please contact the manufacturer of your solder-equipment. In general use of solder-paste within workshops should be avoided because paste is not easy to store and to handle.
 - Use only adequate solder tools applicable for lead-free solder alloy. The solder tool must be able
 - o To reach at least a solder-temperature of 400°C,
 - o To stabilize the adjusted temperature at the solder-tip
 - o To exchange solder-tips for different applications.
 - Adjust your solder tool so that a temperature around 360°C – 380°C is reached and stabilized at the solder joint. Heating-time of the solder-joint should not exceed ~ 4 sec. Avoid temperatures above 400°C otherwise wear-out of tips will rise drastically and flux-fluid will be destroyed. To avoid wear-out of tips switch off un-used equipment, or reduce heat.
 - Mix of lead-free solder alloy / parts with lead-ed solder alloy / parts is possible but PHILIPS recommends strongly to avoid mixed solder alloy types (lead-ed and lead-free). If one cannot avoid, clean carefully the solder-joint from old solder alloy and re-solder with new solder alloy (SAC305).
- Use only original spare-parts listed in the Service-Manuals. Not listed standard-material (commodities) has to be purchased at external companies.
 - Special information for BGA-ICs:
 - always use the 12nc-recognizable soldering temperature profile of the specific BGA (for de-soldering always use highest lead-free temperature profile, in case of doubt)
 - lead free BGA-ICs will be delivered in so-called 'dry-packaging' (sealed pack including a silica gel pack) to protect the IC against moisture. After opening, dependent of MSL-level seen on indicator-label in the bag, the BGA-IC possibly still has to be baked dry. This will be communicated via AYS-website. Do not re-use BGAs at all.
 - For sets produced before 1.1.2005, containing lead-ed soldering-tin and components, all needed spare-parts will be available till the end of the service-period. For repair of such sets nothing changes.
 - On our website: www.atyourservice.ce.Philips.com

You find more information to:

BGA-de-/soldering (+ baking instructions)
Heating-profiles of BGAs and other ICs used in Philips-sets

You will find this and more technical information within the "magazine", chapter "workshop news".

For additional questions please contact your local repair-helpdesk.

Mechanical and Dismantling Instructions

Dismantling Instruction

The following guidelines show how to dismantle the player.

Step1: Remove 5 screws around the Top Cover. And remove it (Figure 1)

Step2: If it is necessary to dismantle Loader or Front Panel, It should be remove the front door assembly first. (Figure 2)

If the trace can't open in normal way, you can make it by

pushing the guider manually using the slot below the bottom chassis with a tool. (Figure 3)

Note: Make sure to operate gently otherwise the guider would be damaged.



Figure 1



Figure 2



Figure 3

Step3: Dismantling Loader, First, disconnect the 3 connectors aiming in the figure, and then remove the 2 screws at both sides of the loader, (Figure 4)

Step4: Dismantling Front Panel: disconnect the 2 connectors aiming in the figure then Release the snaps on the both sides of Front Panel and gently pull the Panel out from the set. (Figure5& 6)

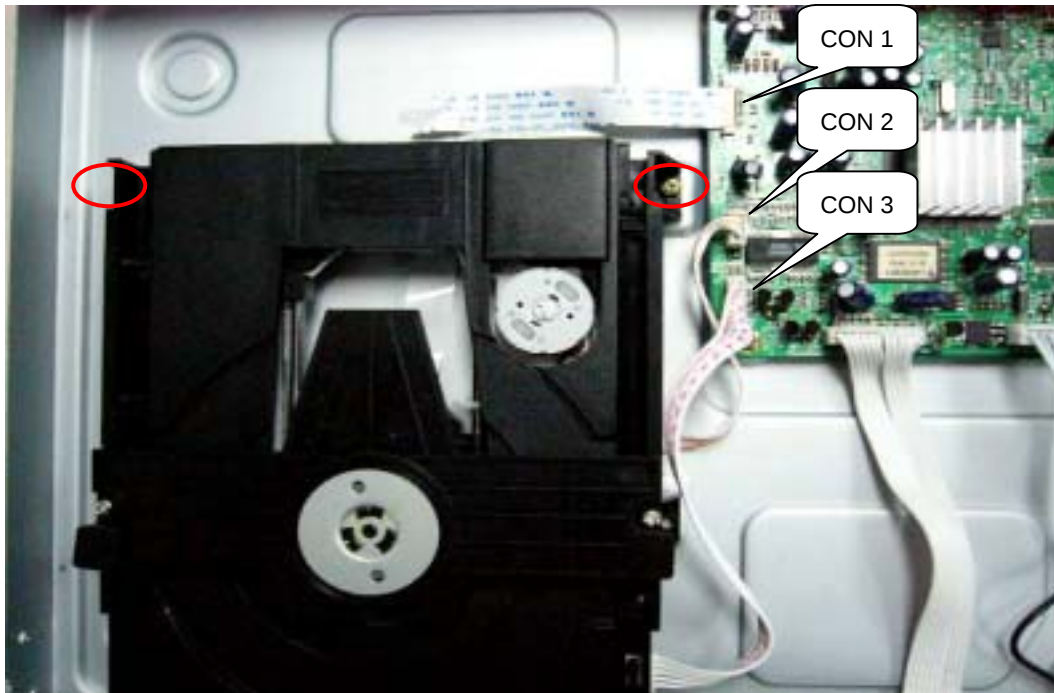


Figure4

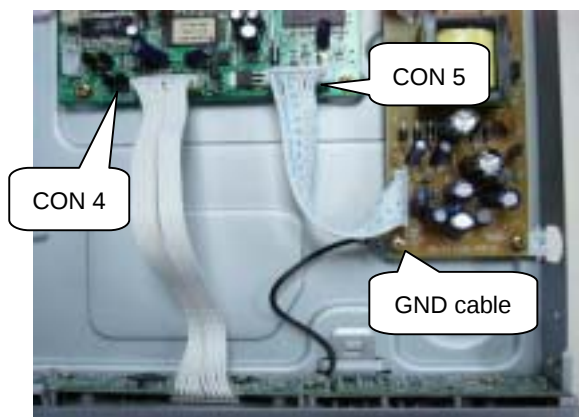


Figure 5

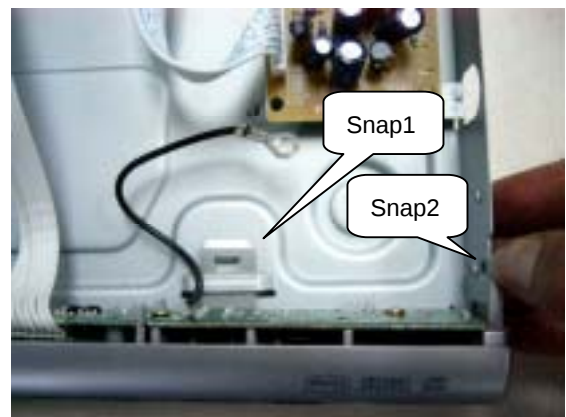


Figure 6

Step6: Dismantling Main Board, first disconnect the connector, and then remove the relative screws, (Figure 7)

Step7: Remove the 3 screws on power board to dismantle the power board. (Figure8)

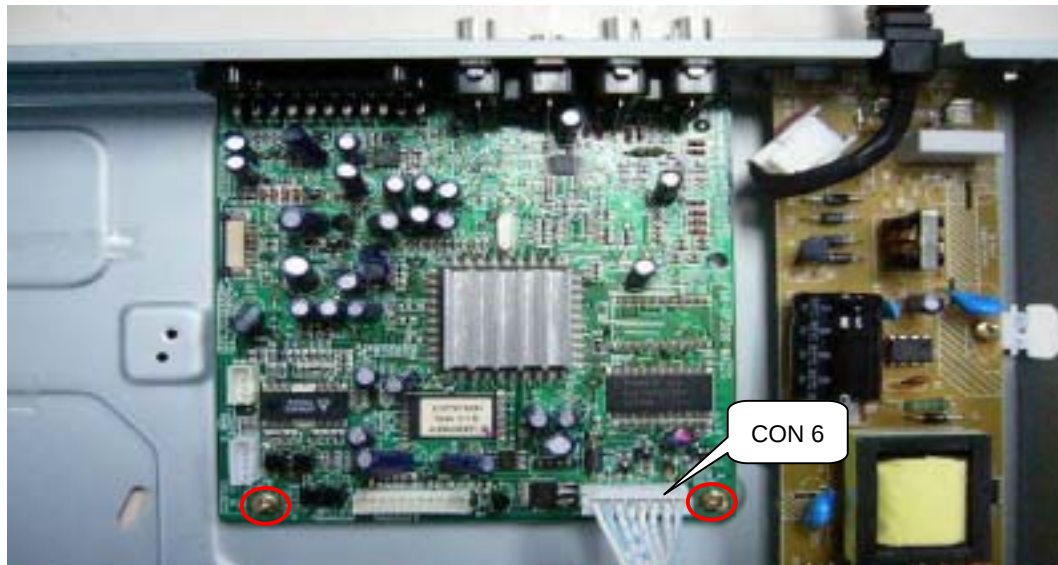


Figure 7

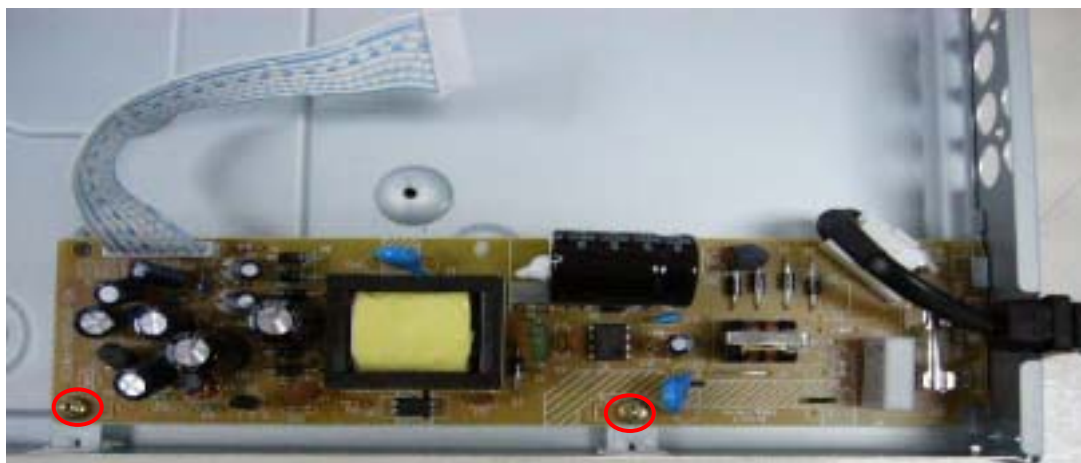


Figure 8

ATTENTION OF REPAIRING

Make sure adding silicon glue to fix the capacitor C4 after repairing, (Avoid the hazard of C4 touching the Top Cover.)



Figure 9

Software upgrade

A. Preparation to upgrade software

- 1) Start the CD Burning software and create a new CD project (Data Disc) with the following setting:

Label: **DVP3XXX** (For all DVP3XXX/xx model)

File Name: **DVP3005_78.BIN** (for DVP3005/78)

DVP305K_78.BIN (for DVP3005K/78)

DVP3010_00.BIN (for DVP3010/00/05)

DVP3010_02.BIN (for DVP3010/02/04)

.....

Other version's File Name is un-know at present, should be noticed later.

Note: It is required capital letter for the Label name & the File Name.

- 2) Burn the data onto a blank CDR

B. Procedure for software upgrade:

- 1) Power up the set and insert the prepared Upgrade CDR.
- 2) The set will starts reading disc & response with the following display TV screen:
Upgrade File DETECTED
Upgrade?
Press Play TO START
- 3) Press <OK> button to confirm, then screen will display :
Files coping...
UPGRADING...
- 3) The upgraded disc will automatically out when files coping complete, then take out the disc.
- 4) About 1 minute later, the trace will automatically close when upgrading complete.

C. Read out the software versions to confirm upgrading

- 1) Power up the set and press <system menu> button on the remote control.

- 2) Press <1><3><7><9> button.

The software version and other information are display on the TV screen as follows:

Version XX.XX.XX.XX (Main version)

SUB-VER XX.XX.XX.XX (software version of application software)

8032 XX.XX.XX.XX

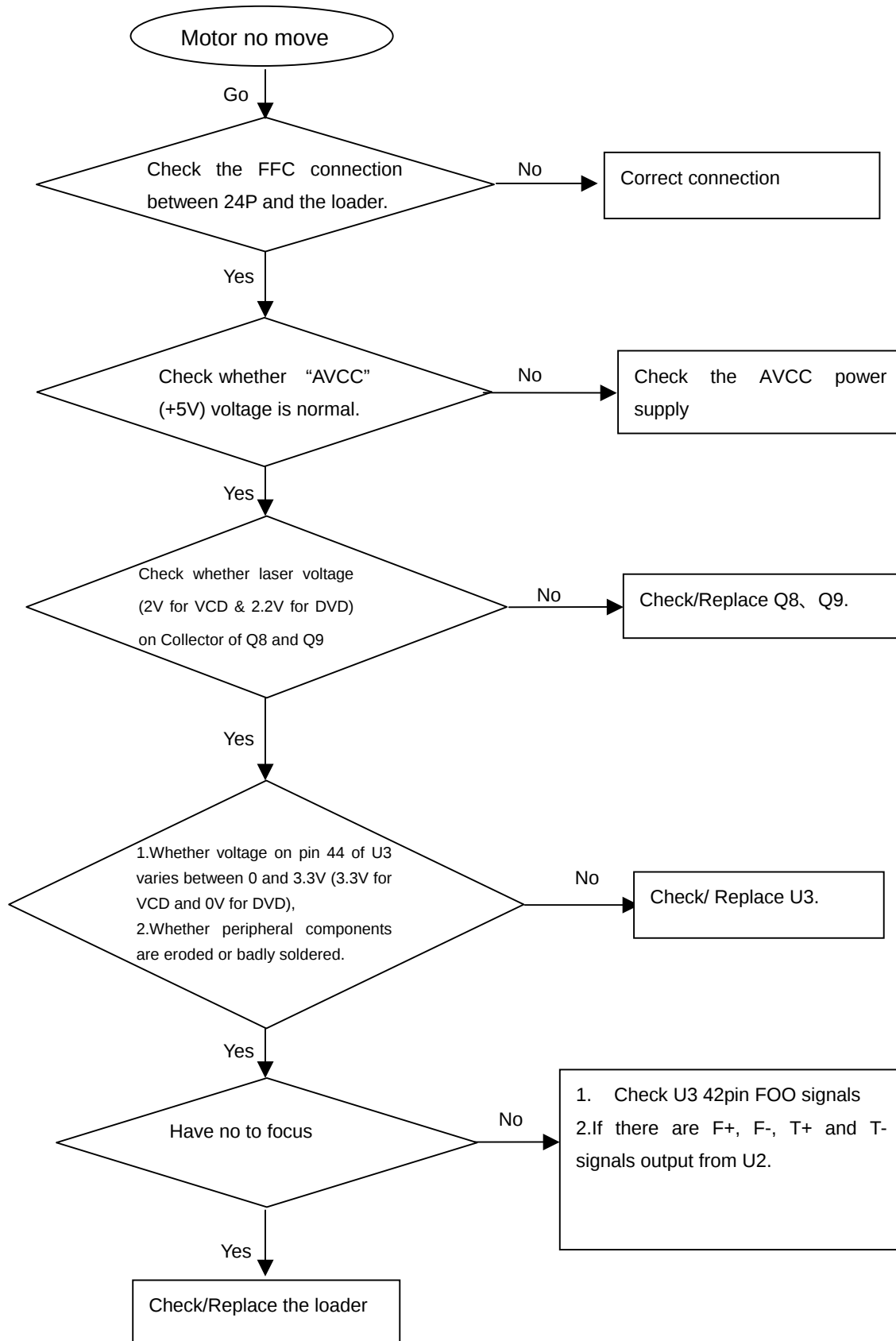
Servo XX.XX.XX.XX (software version of Servo)

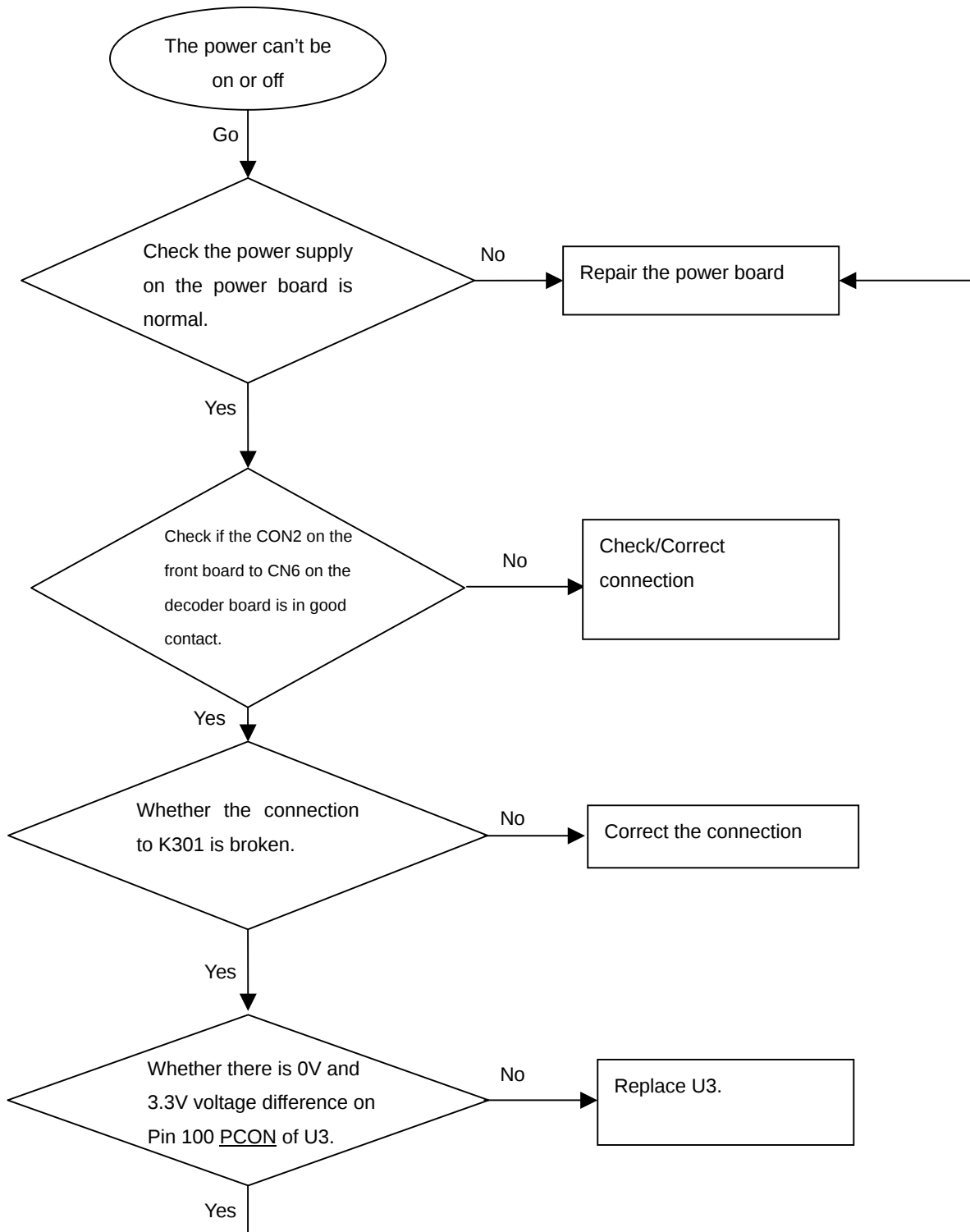
RISC XX.XX.XX.XX

DSP XX.XX.XX.XX

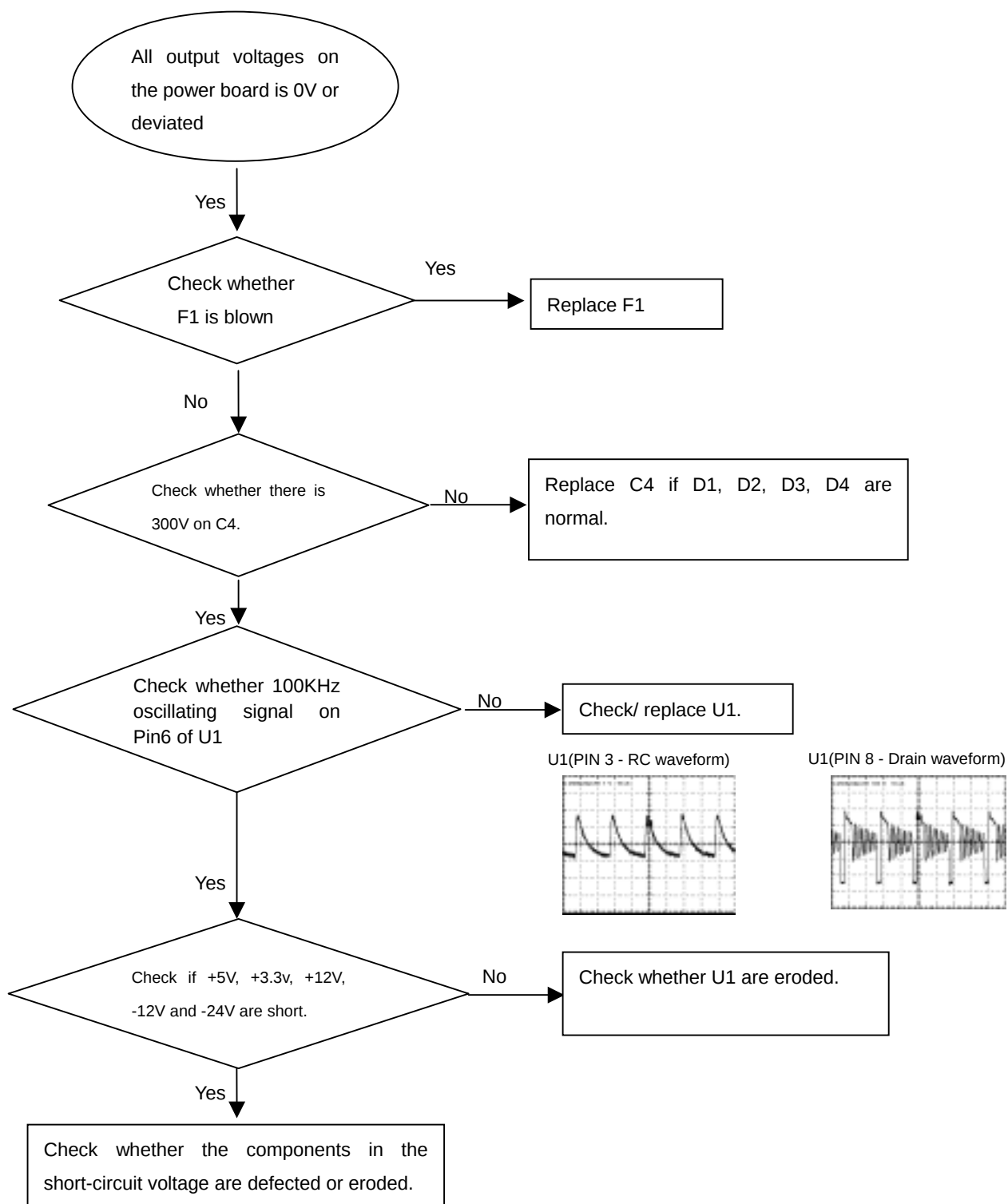
Region Code X

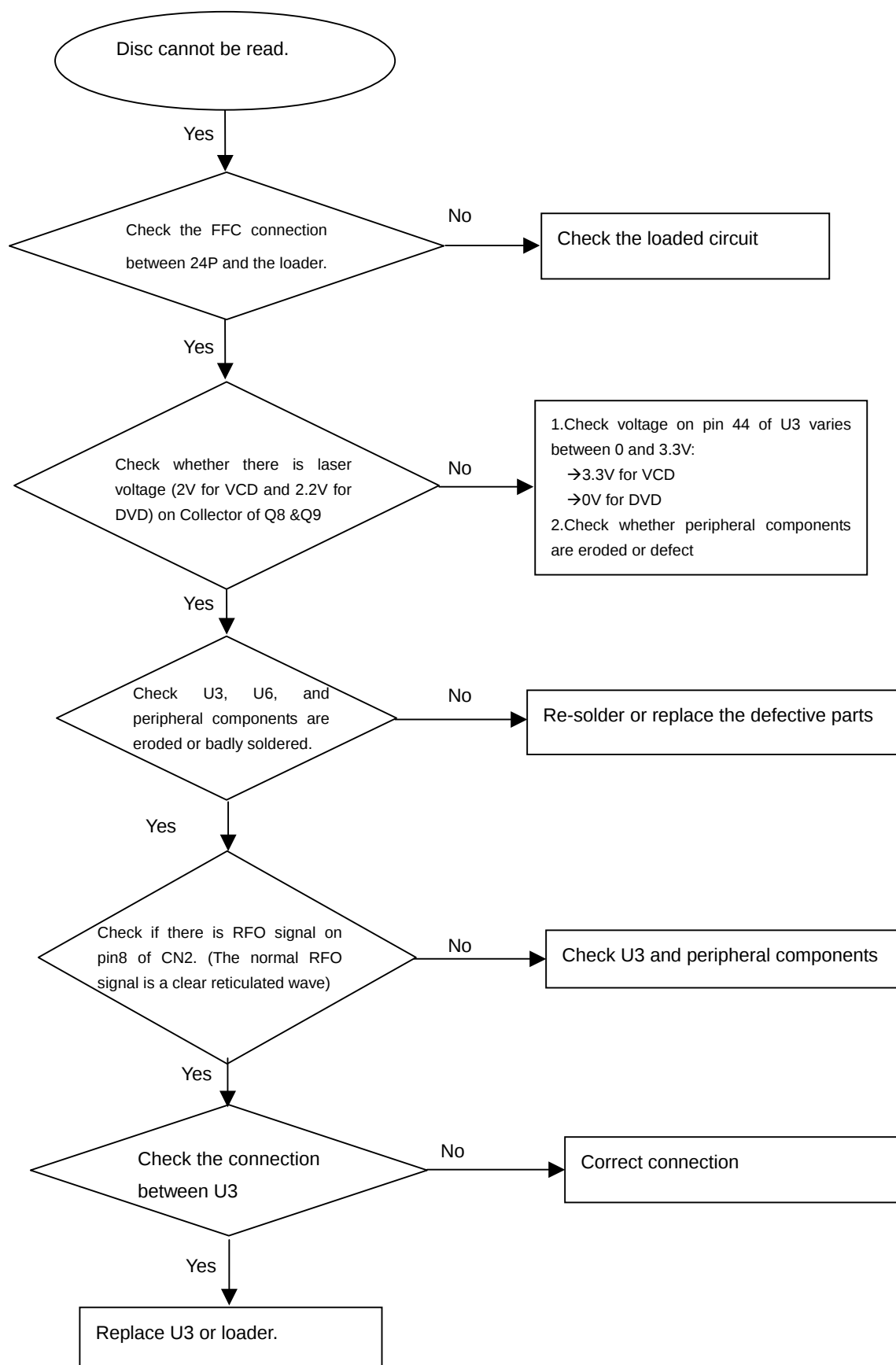
Caution: The set must not be power off during upgrading, in that case the decoder board will be damaged entirely.

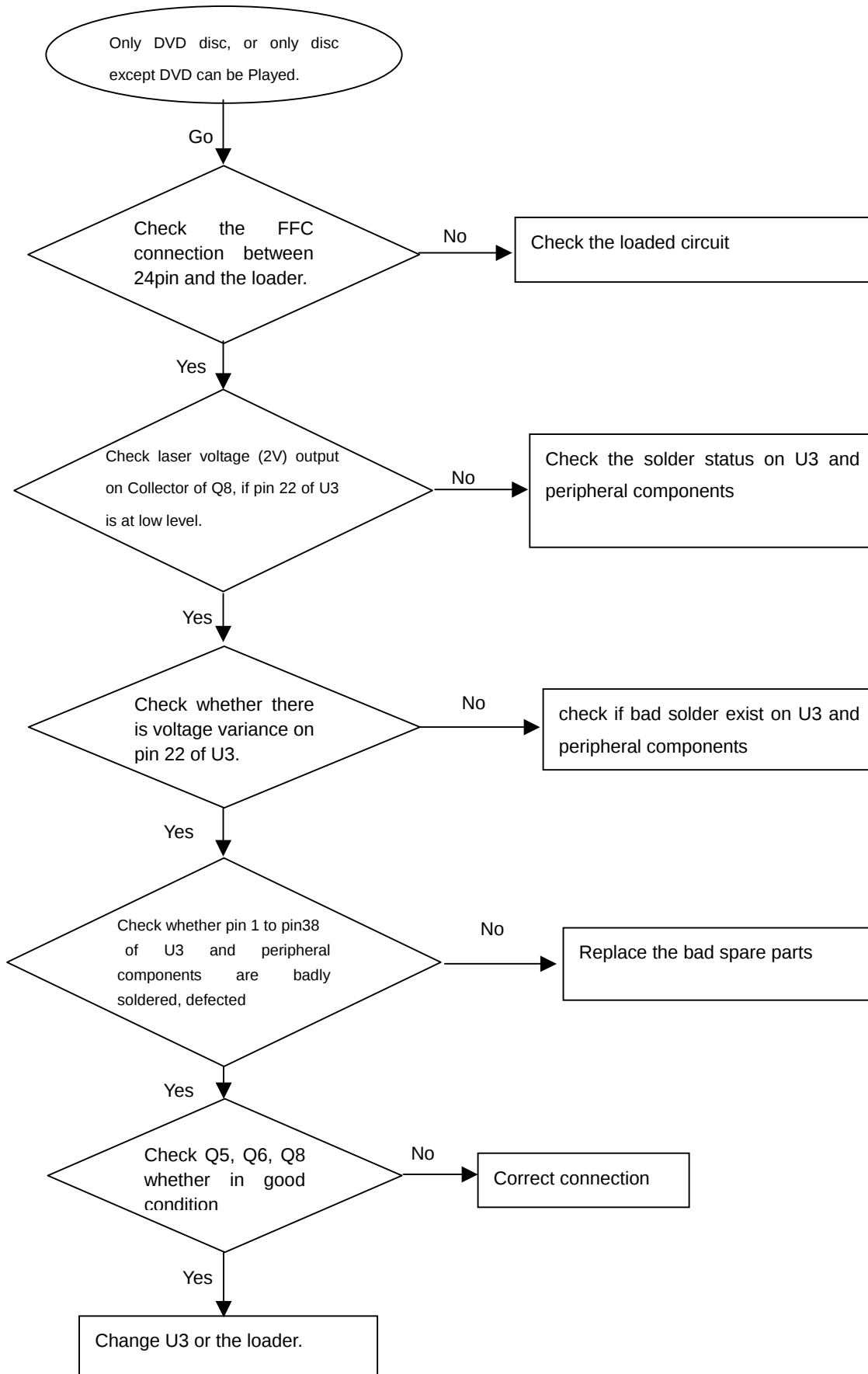
Spindle motor does not move

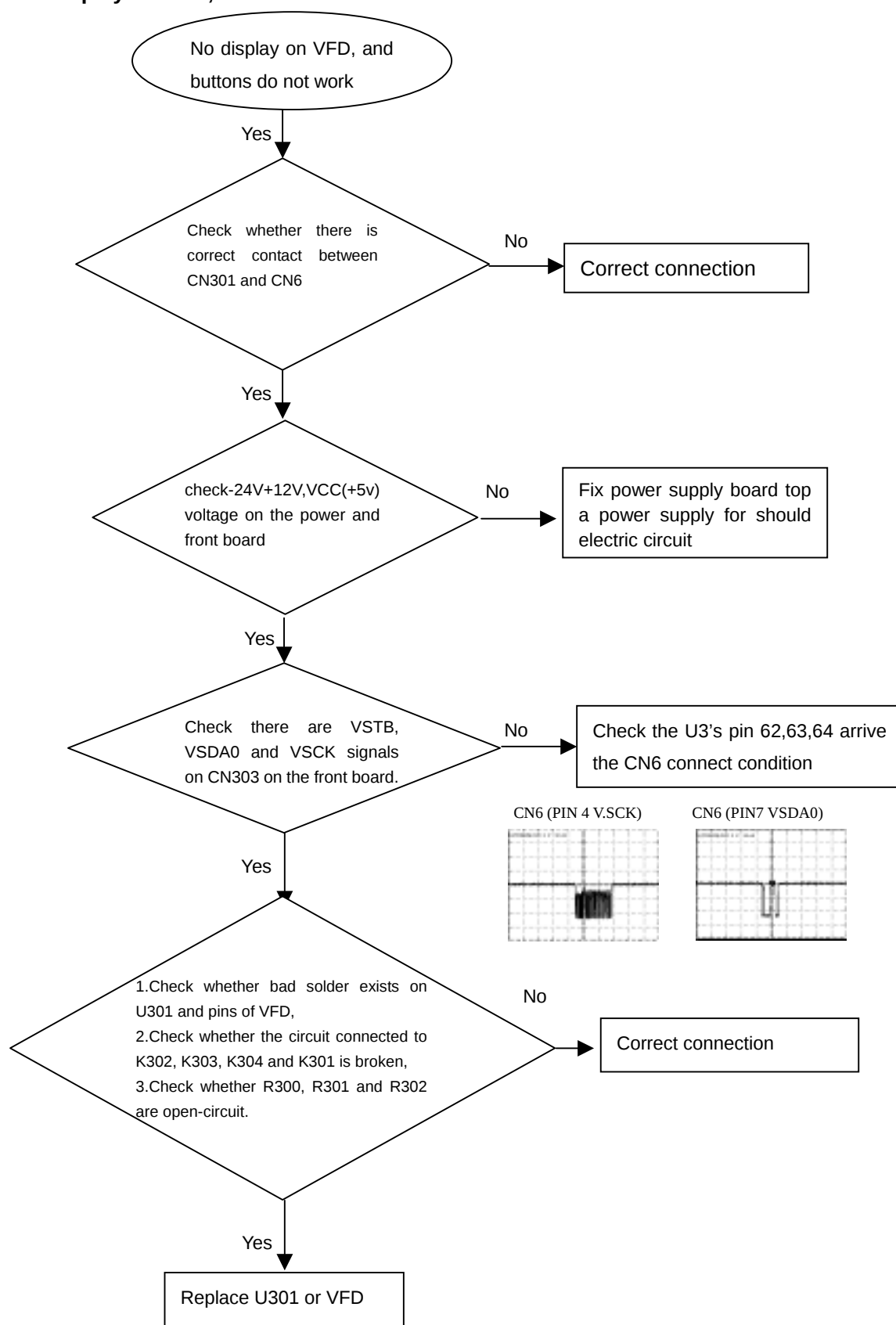
The power can not be on or off

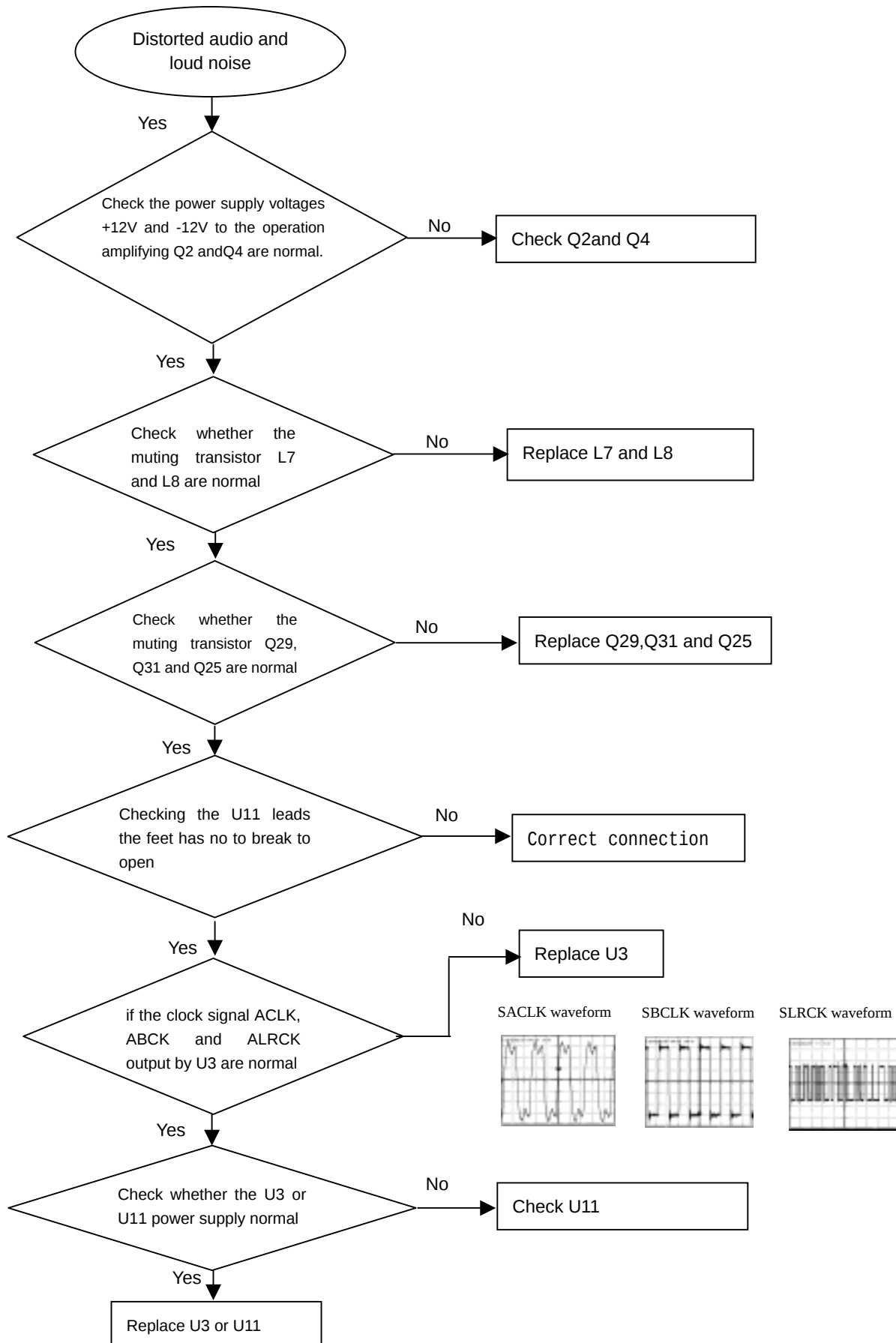
All output voltages on the power board is 0V or deviated.

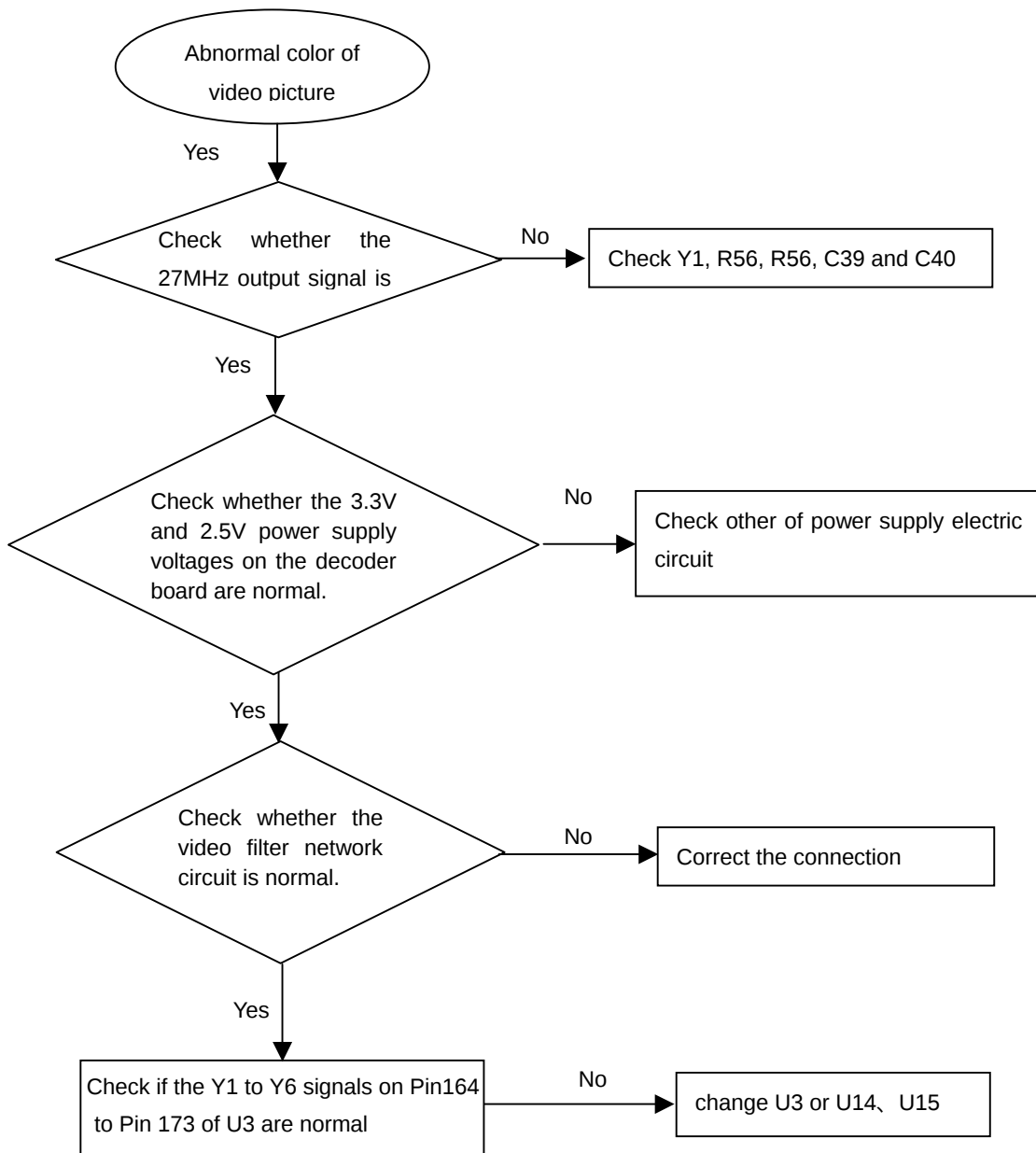


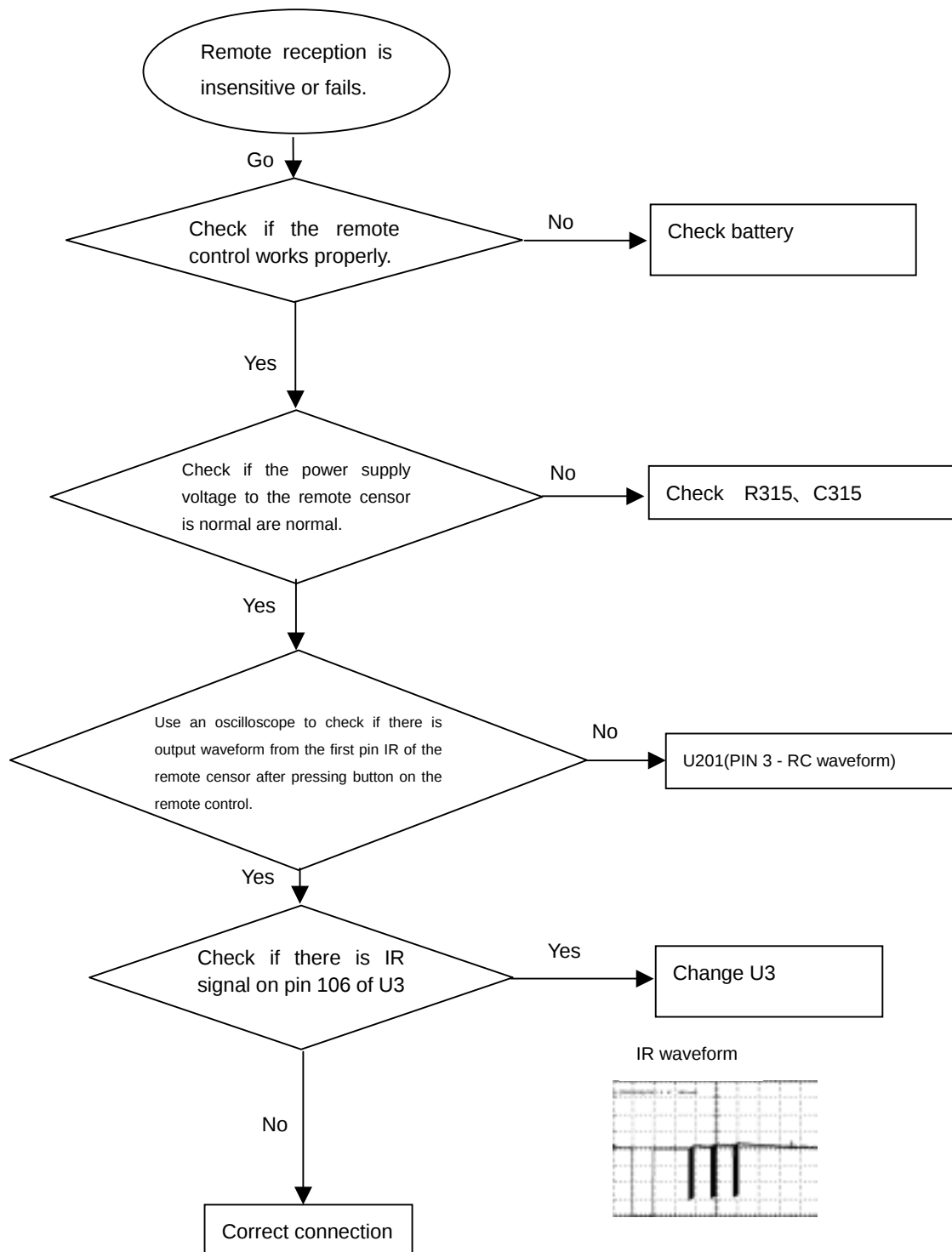
Disc cannot be read.

Only DVD disc or only disc except DVD can be played

No display on VFD, and buttons do not work

Distorted audio and loud noise

Abnormal color of video picture

Remote reception is insensitive or fails.

No video picture, no sound.