

DVD Player

DVP3140,DVP3142(K),DVP3144

Service

DVP3140/37

DVP3142/12/51/55

Service

DVP3142K/55/77/78

DVP3142KM/78

DVP3144/12/75

DVP3144K/55

Service



Service Manual

TABLE OF CONTENTS

	Page
. Technical Specifications.....	1-2
. Safety Instruction, Warning & Notes.....	1-3
. Mechanical and Dismantling Instructions.....	2-1
. Region Code, Software Version& Upgrades.....	3-1
. Trouble Shooting Chart.....	4-1
. Wiring Diagram.....	5-1
. Electrical Diagrams and Print-layouts.....	6-1
. Set Mechanical Exploded view.....	7-1
. Revision List.....	8-1

©Copyright 2007 Philips Consumer Electronics B.V. Eindhoven, The Netherlands
All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise without the prior permission of Philips.

Published by KC-0747 Service Audio Printed in The Netherlands Subject to modification

Version 1.3

**CLASS 1
LASER PRODUCT**



3139 785 32452

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, 108MHz
YPbPr:	0.7Vpp ---- 75 ohm
Video output	1Vpp ---- 75 ohm
RGB(SCART)	0.7Vpp ---- 75 ohm

Video format

Digital Compression	MPEG 2 for DVD,SVCD MPEG 1 for VCD DivX®	
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)	>90dB
Dynamic Range (1kHz)	>80dB
Cross talk (1kHz)	>70dB
Distortion/Noise (1kHz)	>65dB
MPEG MP3	MPEG Audio L3

Connections

Scart Output	Euroconnector
YpbPr output	Cinch 3x
Video output	Cinch(yellow)
Audio output (L+R)	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 38 x 209 mm 360 x 37 x 209 mm (Only for DVP3142K/XX)
Weight	

Safety instruction, Warning & Notes

Safety instruction

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 unplugged).
 - 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 1M Ω .
 - 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.

Warning

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.

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 (leaded/ 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
 - To reach at least a solder-temperature of 400°C,
 - To stabilize the adjusted temperature at the solder-tip
 - 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 leaded solder alloy / parts is possible but PHILIPS recommends strongly to avoid mixed solder alloy types (leaded 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 leaded 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:

Software upgrade

Preparation to upgrade software

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

Label: DVP3XXX (No need the label name)

Note: It is required capital letter for the File System name, and it no need have the File name during start the CD burning software for Zoran project.

- 2) Burn the data onto a blank CDR

B. Read out the software versions to confirm upgrading

- 1) Power up the set and open the tray door.
- 2) Press <9><6><6> button to check the software information.

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

BE Version: DVP3XXXXX_XX.XX

FE Version: DCX.XXXXXX.XX.XX

DSP Version: DSP.XX

Region Code: X

A. Procedure for software upgrade:

- 1) Power up the set and insert the prepared Upgrade CDR.
- 2) The set will start reading disc & response with the following display TV screen:

Loading

 Firmware Upgrade Erase and program.

Start

Cancel

 Select

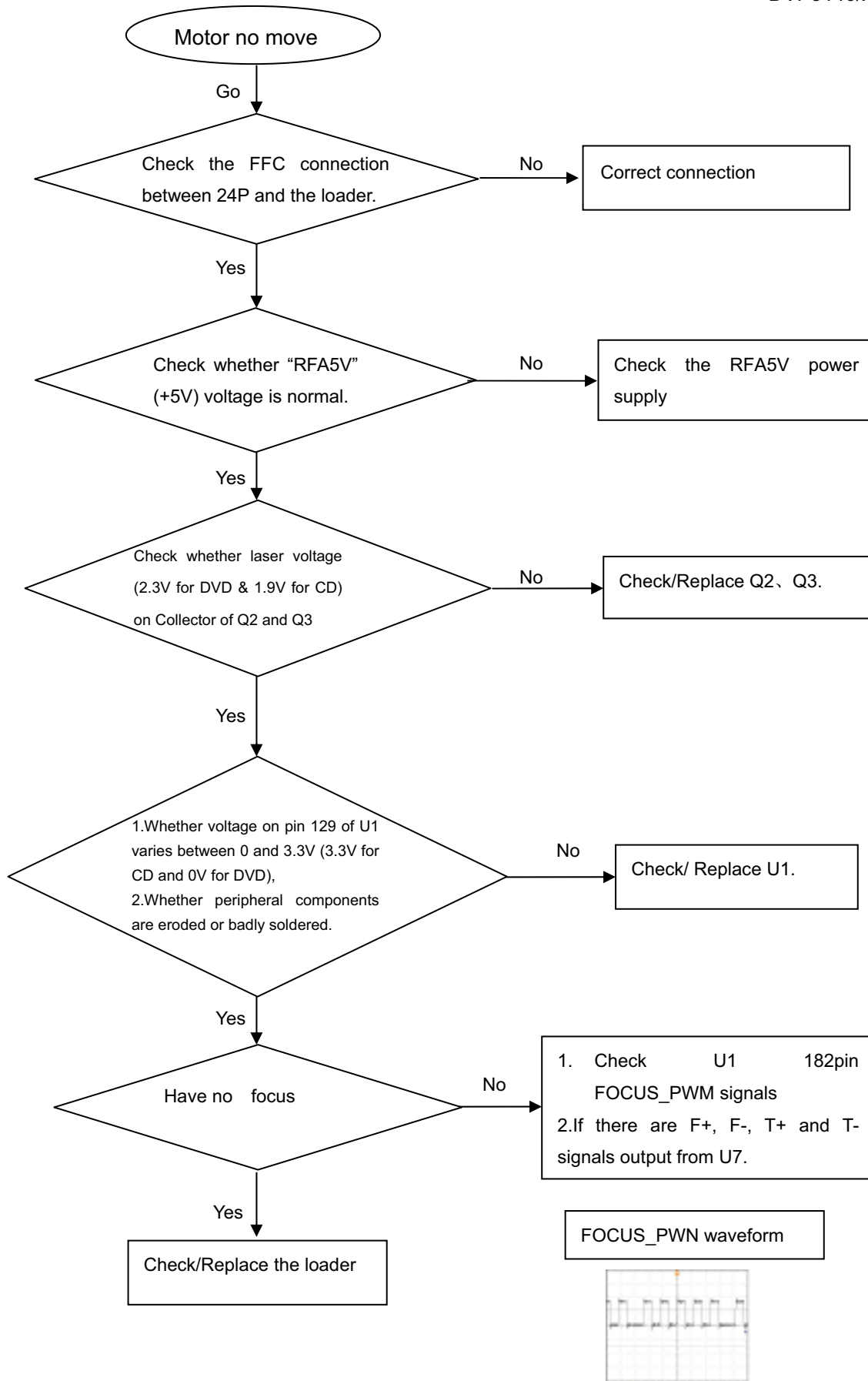
Start

 to start upgrade.
- 3) Press <OK> button to confirm, then screen will display :
 Firmware Upgrade Programming, Please Wait...
 Do not Switch the Player Off !
- 4) The upgraded disc will automatically out when files coping complete, then take out the disc.
- 5) About 1 minute later, the trace will automatically close when upgrading complete.

Caution: The set must not be power off during upgrading, Otherwise the Main board will be damaged entirely.

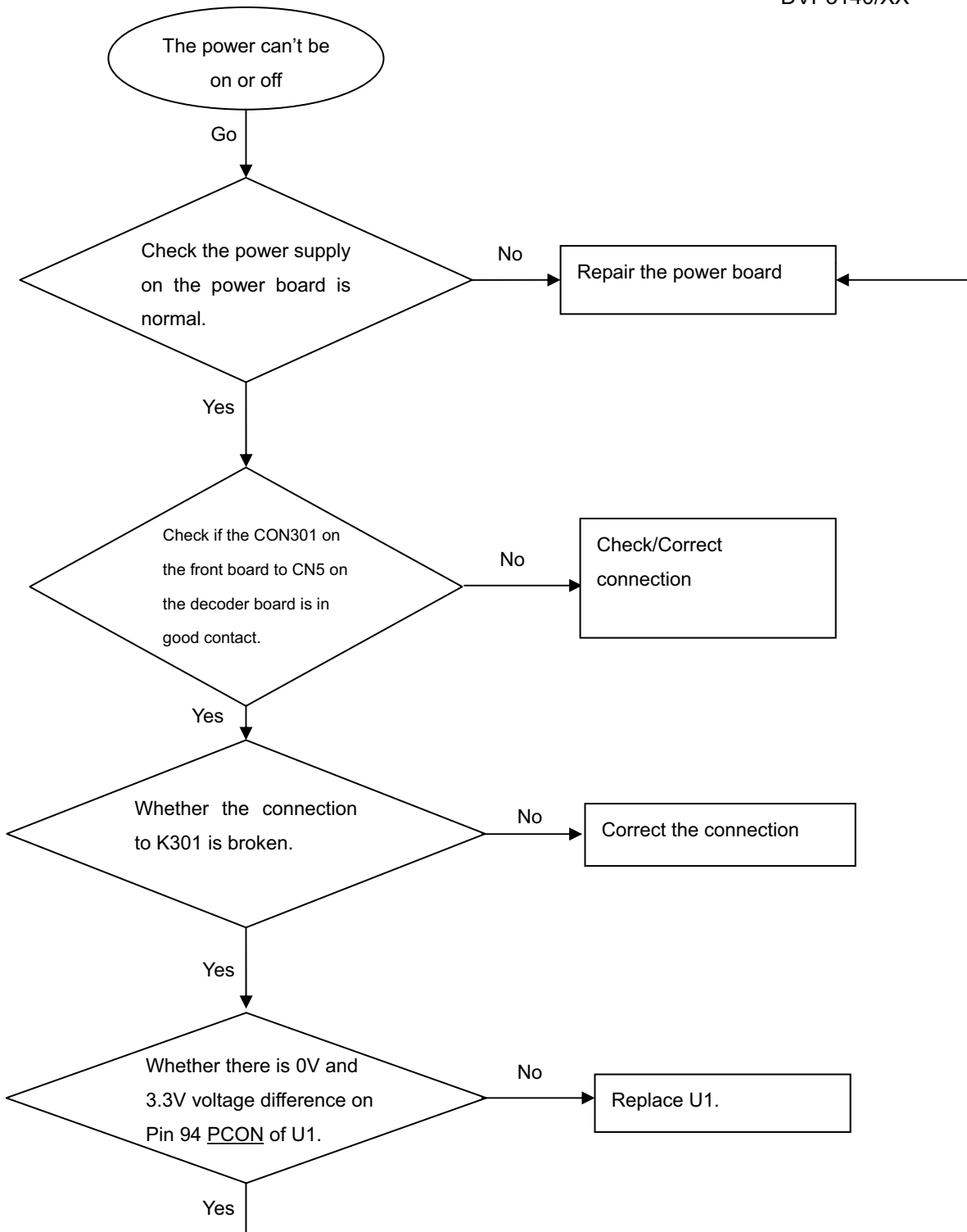
Spindle motor does not move

Remark: Trouble shooting chart for DVP3140/XX



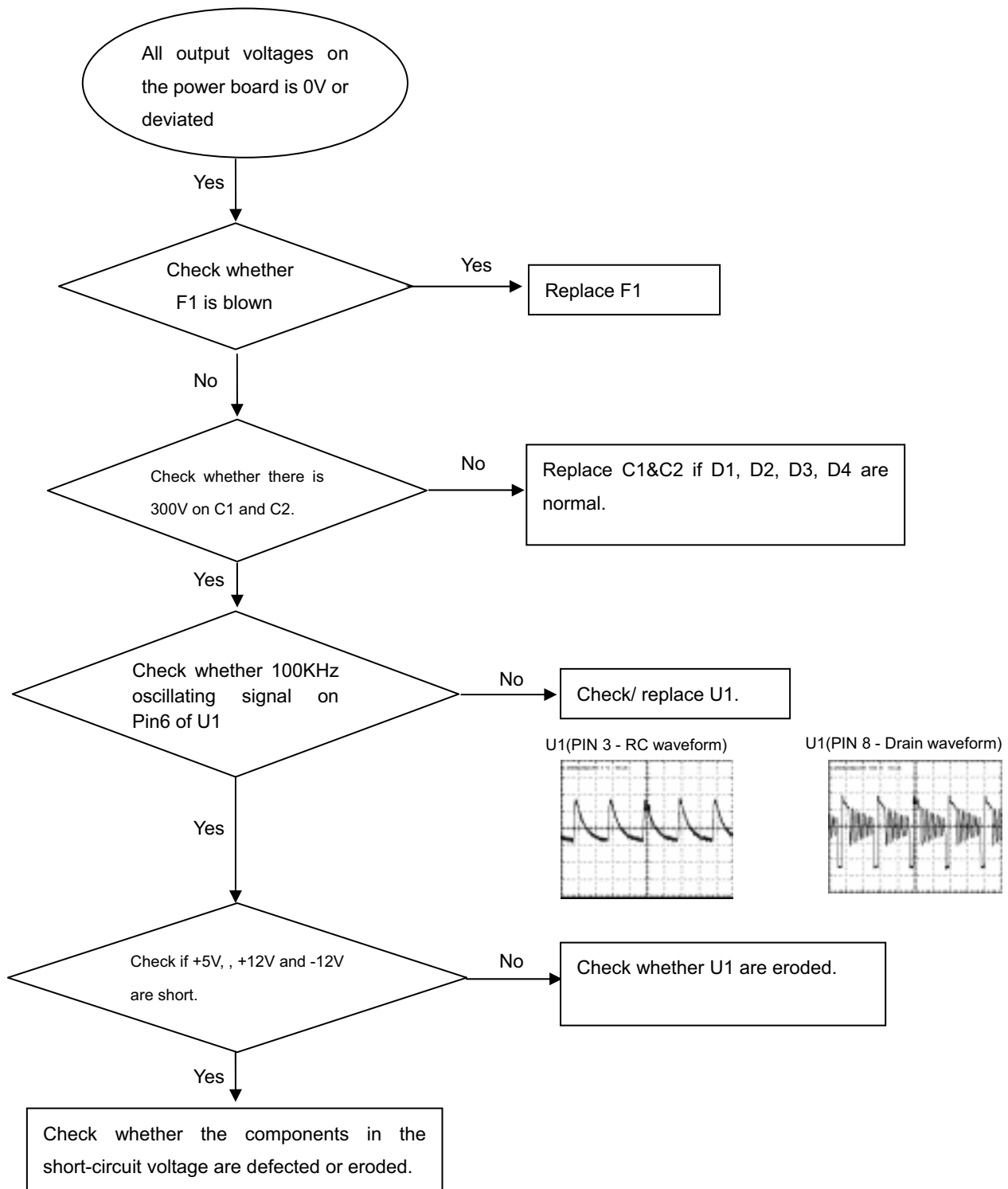
The power can not be on or off

Remark: Trouble shooting chart for DVP3140/XX



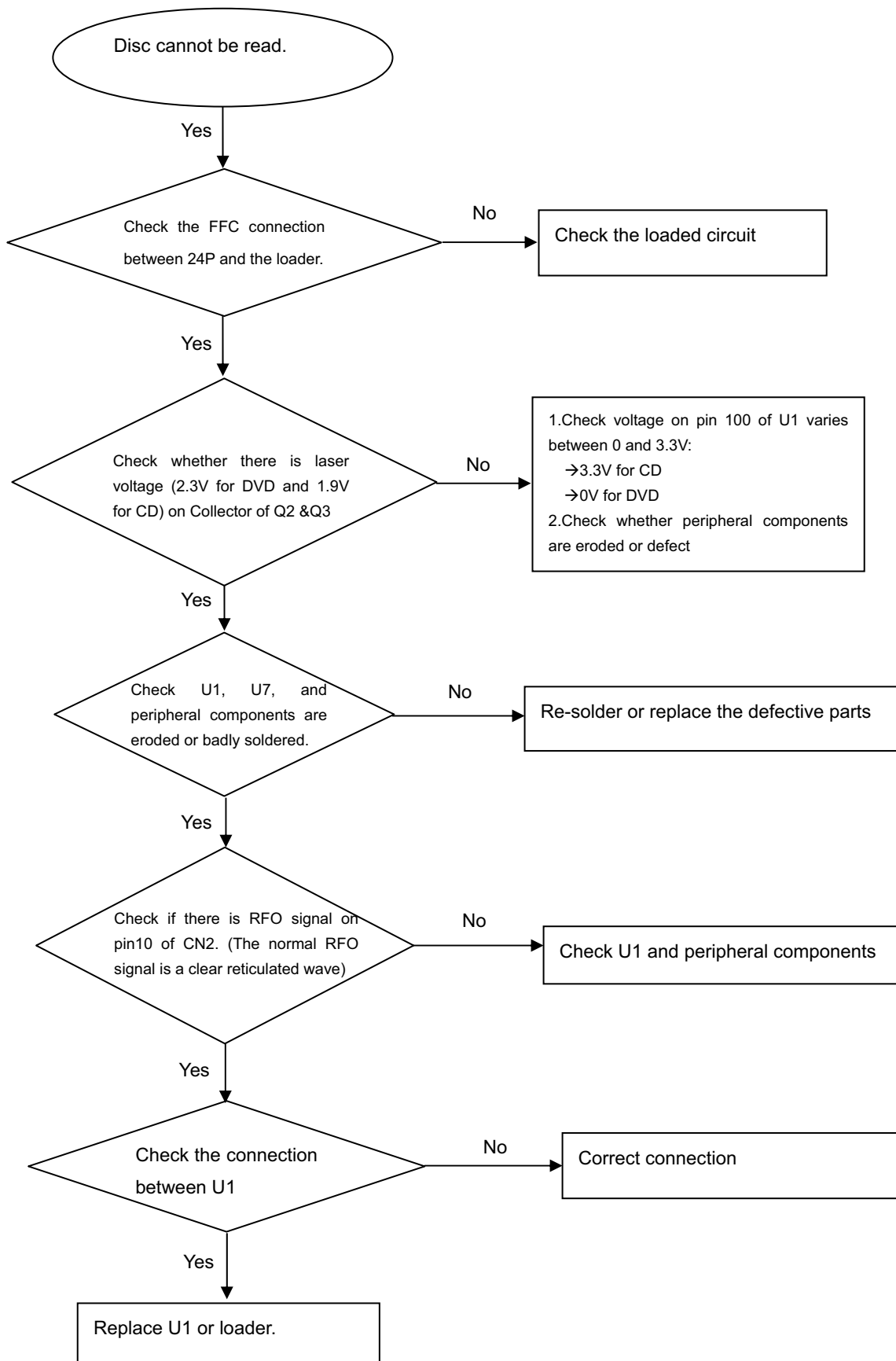
All output voltages on the power board is 0V or deviated.

Remark: Trouble shooting chart for DVP3140/XX



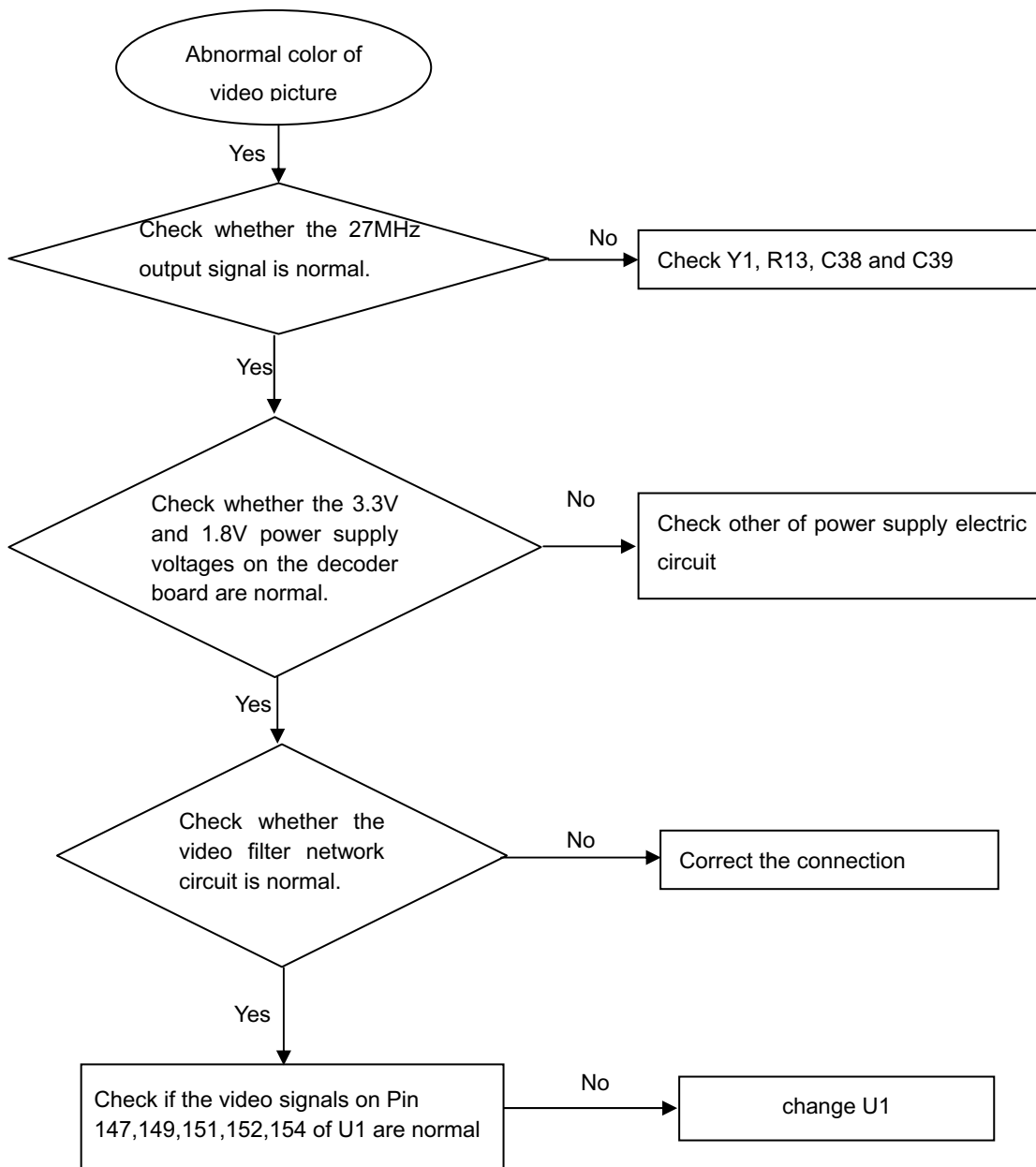
Disc cannot be read.

Remark: Trouble shooting chart for DVP3140/XX



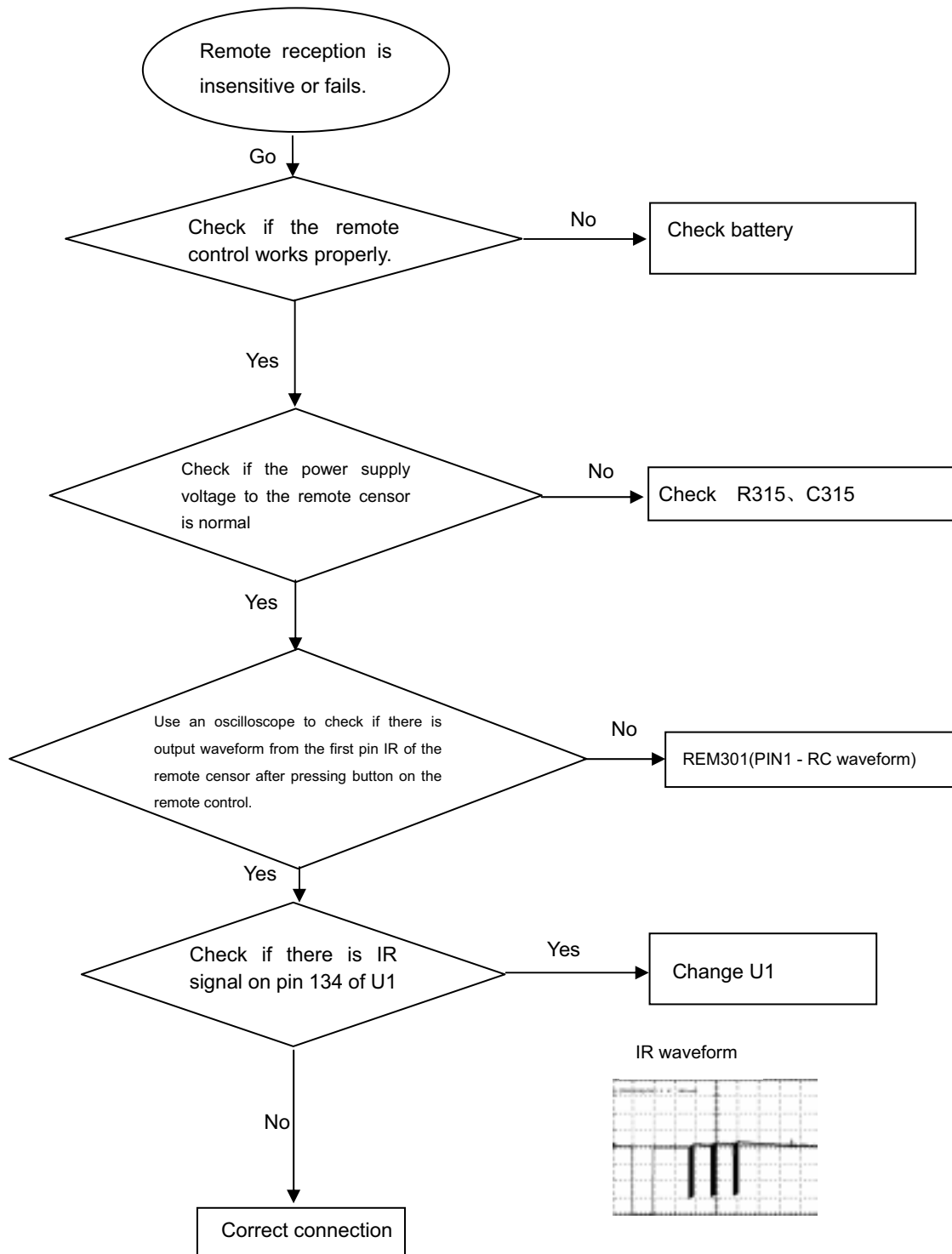
Abnormal color of video picture

Remark: Trouble shooting chart for DVP3140/XX



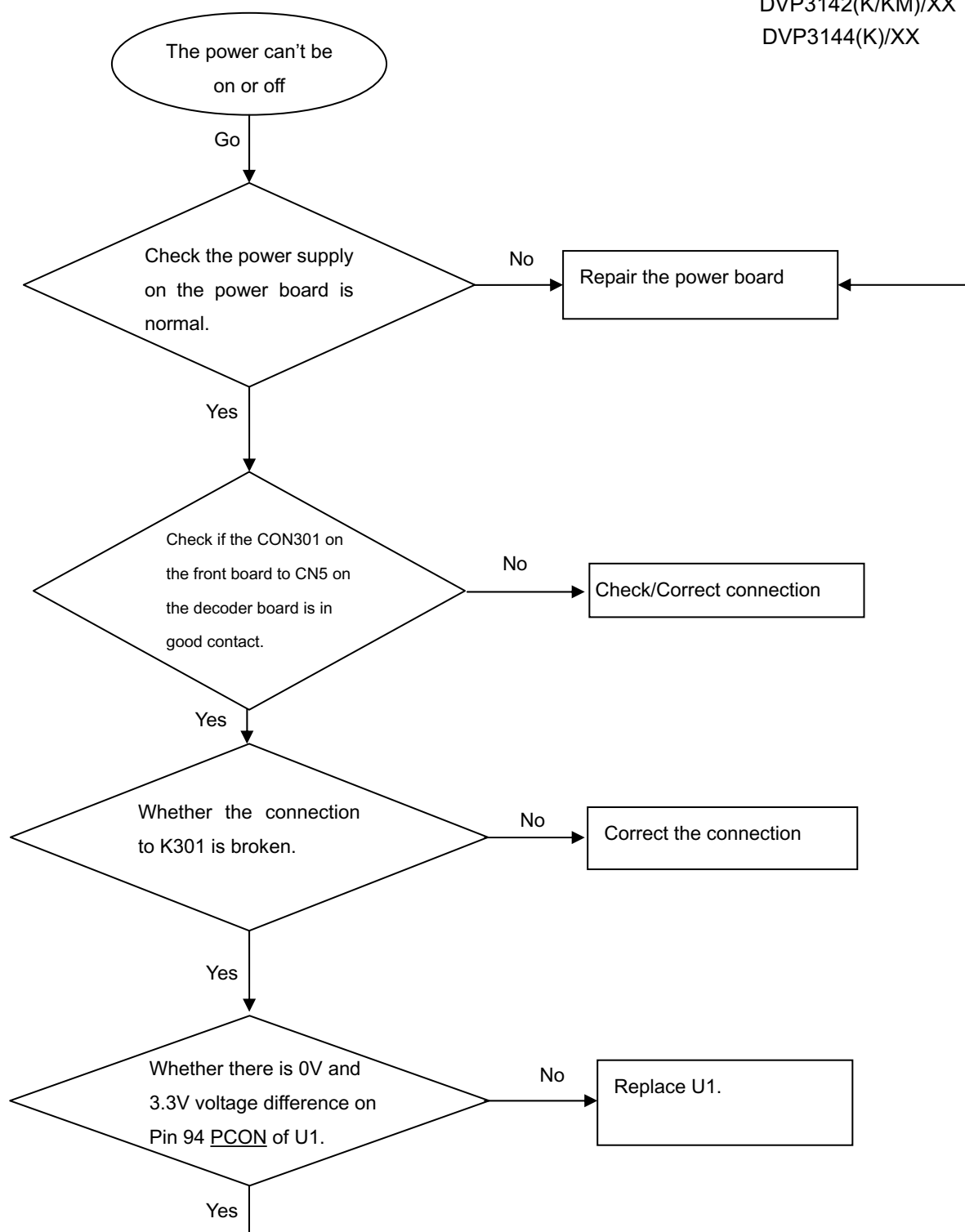
Remote reception is insensitive or fails.

Remark: Trouble shooting chart for DVP3140/XX



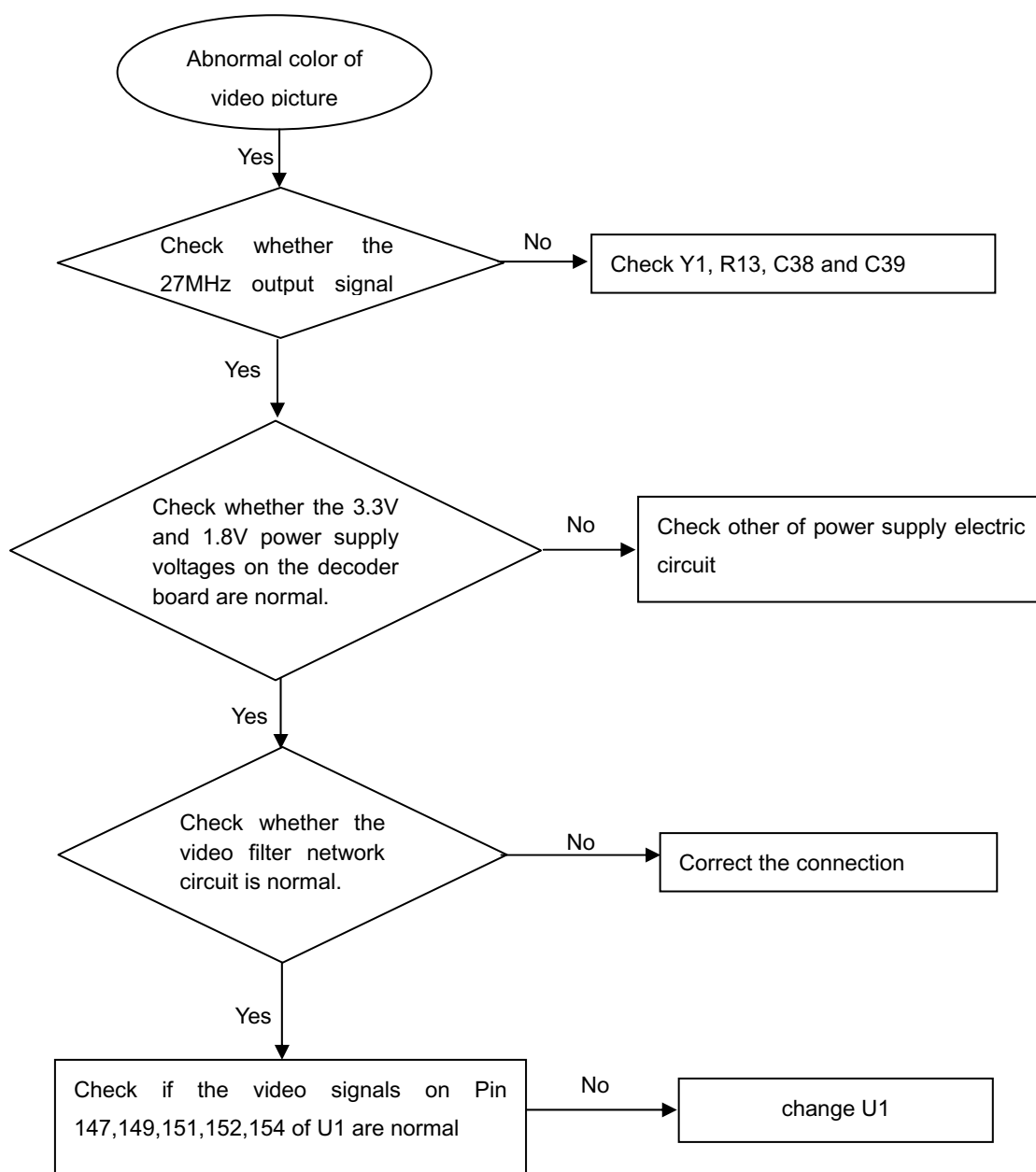
The power can not be on or off

Remark: Trouble shooting chart for
DVP3142(K/KM)/XX
DVP3144(K)/XX



Abnormal color of video picture

Remark: Trouble shooting chart for
DVP3142(K/KM)/XX
DVP3144(K)/XX



Main Board Electric Diagram for DVP3140/XX: Audio Input_Out

