User manual

Joy

CD Player

REVOX

Dominating Entertainment.
Revox of Switzerland.

Contents

Welcome

Congratulations on purchasing your new Revox cd player and thank you for your trust in our high-quality products.

Before you start using your Joy cd player Player, we recommend that you take a look through this Operating manual, in order that you can take full advantage of the options and the audio qualities of this device.

More than 30 years after the introduction of the Compact Disc, Revox is again offering a CD player that as well as having an elegant appearance, shines in particular through the quality of its internal components. The latest digital analogue converters built using SMD technology to ensure short signal paths and with a sophisticated power supply are used, which is not only reflected in exceptional audio data (see *Technical Data)*, but also in the listening pleasure they invoke from the first bar of the music.

The CD drive floats on a rubber buffer and mechanically, it is completely disconnected from the housing. The cd player will fit into every environment thanks to its wide range of output and control options.

The glass front panel with Touch function makes operating the device a tactile pleasure. Together with its solid aluminium construction, the Joy CD Player stands out as a true investment component for life.

Setup

Please check the unit and accessories after unpacking, to ensure that everything is there and that there are no signs of transit damage. Read the User manual through carefully before starting to use the unit. Keep the manual for later reference.

A unit that shows signs of mechanical damage or which has had liquid in it should not be connected to the mains supply.

Only use the mains cable supplied. The unit's power supply and connections values (mains voltage, frequency) must be checked before connecting it to the mains.

Scope of delivery

- Joy CD Player (1x)
- Power cable (1x)
- Coaxial cable (1x)
- Power cable
- Quick-Reference-Guide
- CD- User Manual cd player *

* Contains the complete S119/S120 German/English User manual in PDF format. A PDF Reader is required.

Safety

Take note of the label on the back of the unit.

In order to avoid the risk of an electric shock, do not open the housing. Maintenance and repairs should only be carried out by qualified experts.

Installation - Safety advice

- Please follow the instructions in the User manual supplied.

- Do not position the unit close to strong heat sources or in direct sunlight.

- Please take note of the following, if the CD player is to be installed in a cabinet or closed shelves. Allow at least 5 cm of free space around the device, so that the air can circulate freely and that there is no build-up of heat. Do not cover openings on the back wall or in the base of the unit.

- It must be ensured that the correction functioning of the unit's ventilation openings is not affected by being covered, e.g. by curtains, newspapers, table cloths, or similar.

- This unit conforms to protection class 2. This means that with this unit, the ground cable is not connected to the housing, in order to effectively eliminate sound-damaging ground-loops. With these network receivers however, Revox uses the ground cable for the reduction of noise fields. For this reason, both the supplied cable and the connection panel are fitted with a ground cable.

- The power plug should be removed from the socket during longer periods of non-use, for instance during an absence.

- Unplug the unit from the mains during storms. Voltage peaks through the mains power supply caused by lightning strikes can damage the unit.

- There must be easy access to the power plug so that the unit can be unplugged at all times.

- Lay the power cable such that it cannot be damaged. The power cable should not have kinks or be laid over sharp edges. It should not be walked on or be exposed to any chemicals. The last point is valid for the whole unit. A power cable with damaged insulation can lead to electric shocks and represents a fire hazard.

- Never pull on the cable when plugging the unit in or out. Always hold the plug.

- Liquids, flammable or other objects should not be inserted in the unit's openings as this can lead to faults, fire or an electrical shock.

- Do not expose the device to splash water or high levels of humidity. Do not stand containers filled with liquid, e.g. flower vases, on the device.

- It is only designed for operation in temperate, non-tropical climates.

- Take note of and follow the safety advice on the following pages.

Safety measures

Read and take note of the following safety advice for your own safety and to avoid unnecessary damage to your equipment. Please keep this safety advice in a safe place for future reference.

Avoid locating the unit in a position which:
-   is exposed to direct sunlight
-   is directly next to a source of heat
-   has poor ventilation
-   has a dusty atmosphere
-   is unstable
-   has high humidity

The guarantee covers the intended usage of the unit.

High build-ups of dust and humidity cause creepage current in the unit that can cause a risk of shocks when touching the unit or lead to a fire.
If you have moved the unit from a cold to a warm environment, leave it switched off for about two hours because of a possible build up of condensation dampness.

You should always switch your CD player off before connecting or disconnecting other devices or speakers.

Protect your unit from:
-   damp, dripping water and steam
-   impacts and mechanical loads
-   magnetic and electrical fields
-   cold, heat, direct rays of the sun and severe changes of temperature.
-   dust
-   accesses to the inside of the device

Do not stand any articles with open flames, e.g. lit candles on the unit.

Please note
In order to exclude the risk of an electric shock, do not remove the housing. Only have repair work carried out by a Revox specialist dealer.

Supervision
Do not allow children to handle the equipment without supervision. Do not allow children in close proximity to the unit. Do not operate the CD player without supervision. Switch the power switch off or unplug the unit if you are going to be absent for a longer period of time.

Cleaning
The unit should be cleaned using just a damp, soft and clean cloth without any abrasive cleaning agents.

Regulations pertaining to the unit

In EU and EEC countries, Revox offers a guarantee on units bought in the EU, over and above the statutory rights of guarantee claims against the seller. The guarantee covers material and labour during the period of the guarantee, which is defined by the Revox Sales Partners in the individual countries that make up the EU.
In all countries, the guarantee services offered by the Revox Sales Agents are over and above the statutory regulations. They are only valid in the country of purchase. Proof of purchase from an authorised Revox Partner must be produced to make a claim on the guarantee.
The guarantee is made null and void in the case of incorrect intervention measures or non-professionally executed repairs.

Front panel CD player

Touch sensors

All the basic functions of the CD player can be controlled through the 5 Touch sensors on the front of the device. Just a light touch with the fingertip is enough to trigger the desired function (see also Page 9). The status LED dims briefly as a confirmation.

IR Receiver

The IR eye, shown here in red, accepts infrared commands from various Revox remote controls. You will find the corresponding control commands in the databases of the Revox M208 and S208 system remote controls. As an option, the Revox RC M100 Remote control can also be ordered under the Part number: 1.553.095.00

CD insertion

The CD player has a high-quality CD drive with slot-loader function, i.e. it pulls the disk in automatically as soon as more than 2/3 of the disc has been inserted into the feed slot.

### Status LED

The LED informs you about the current status of the CD player:

Blue ●   : Standby
White ○ : Operation
Green ● : Search forward/reverse /
   Shuffle / Repeat
Red ●   : Fault
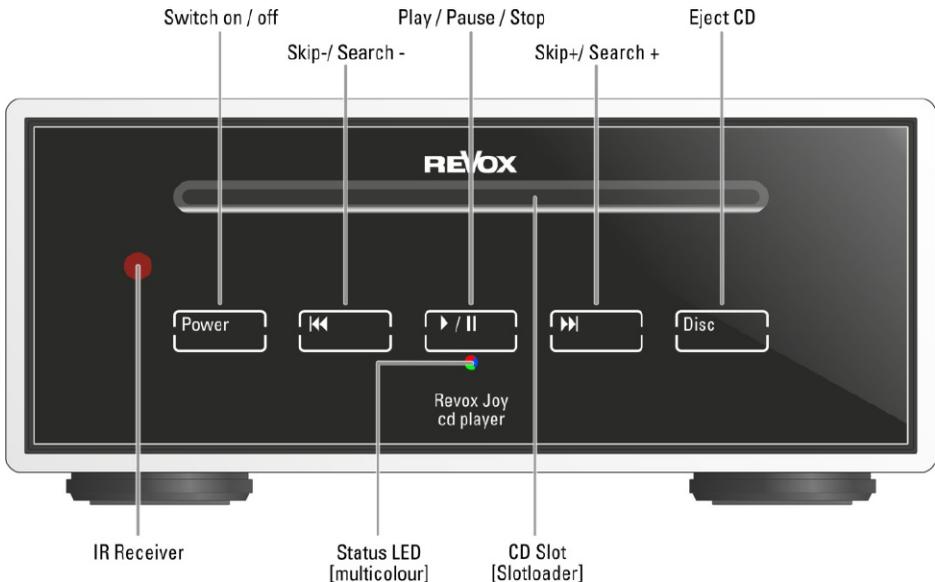
Frontansicht cd player

Connection panel CD Player
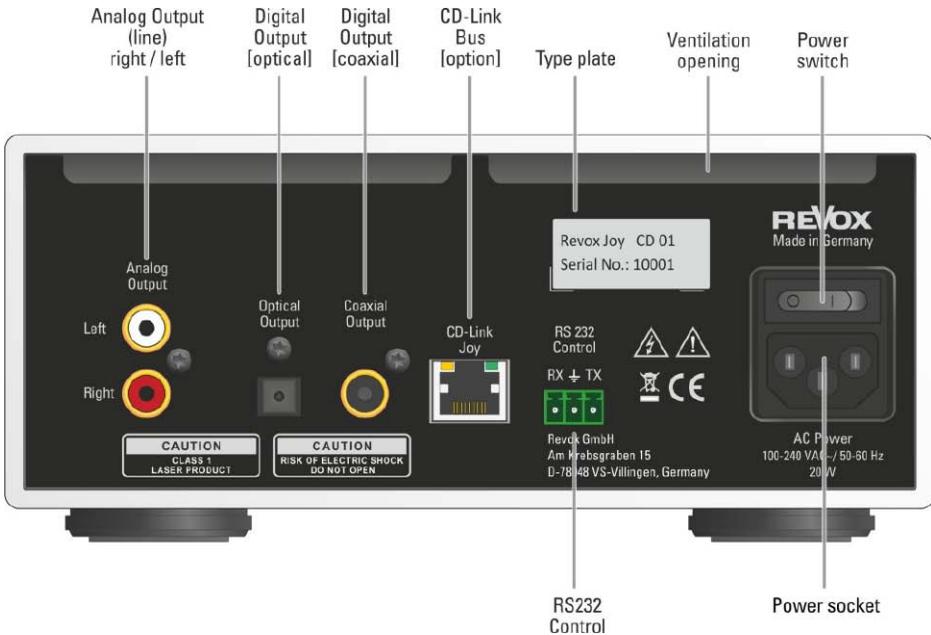
Explanation of the connections

Name	Function
AC Power	Power cable connection 100-240 VAC ~ / 50-60 Hz
Analogue Output*	Fixed analogue audio output, e.g. for Joy Network Receiver
Coaxial Output *	Fixed digital audio output over a coaxial cable . 44.1 kHz
CD-Link	RJ45 link connection for future applications
Power switch	Power switch - no power consumption when in off position Please note: If the power cable is connected, certain internal switching areas are live, even if the switch is in the off position.
Optical*	Fixed digital audio output over an optical cable - TOSLink - 44.1 kHz
RS 232 Control	Control for external control systems - see RS232 protocol

* All three audio outputs are available for use in parallel

Operation

Operation through the front panel

The blue standby LED on the glass front panel lights up after you have made all the necessary connections and switched the CD player on through the switch on the rear of the device. Now, you can switch the device on by lightly tapping on the **Power** button. The LED now shows white and is ready to accept a CD[1] into the CD slot. If there is a CD in the drive already, you can start playback with the ▶ / ‖ buttons.

The following table gives an overview of the individual functions of the sensor buttons on the glass front panel.

Sensor buttons	Function	
Power	Short press: Long press:	switch on/off (**OFF**: min 0.5 sec.) Complete reset - (min. 5 sec.)
◀◀	Short press: Long press:	Skip to previous track Reverse search[2]; LED flashes green
▶ / ‖	Short press: Long press:	Switch Pause-Play Stop (minimum duration: 1 sec)
▶▶	Short press: Long press:	Skip to next track Forward search[2]; LED flashes green
Disc	Long press:	Eject disc (minimum duration: 0.5 sec)
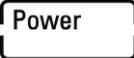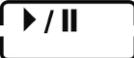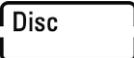
[1] See Page 23 for supported CD formats
[2] Double search speed is activated automatically after 5 seconds

Operation with remote control

The Joy CD Player is equipped for operation through IR signals. Three Revox remote controls are available, RC M100, M208, S208, which include all commands for controlling the CD player. There is an overview of the button layouts of these remote controls starting from Page 11.

If you want to control the CD player using a different programmable remote control, you will find the RC5 codes for the corresponding control functions in the following table. The RC5 codes are shown in hexadecimal notation.

Button	RC5 Code	IR Function
⏻ OFF	$100C /$140C	Switch CD player off
⏻ ON	$143F	Switch CD player on
⏮ ⏭	$1421/ $1420	Select previous/next track
⏪ ⏩	$1432/ $1434	Rewind / forward wind
⏹	$1436	Stop
▶	$1428	Play
⏸	$1430	Pause
0 9	$1400 - $1409	Direct rack selection 0-99[1]
⤬	$142D	Start/end SHUFFLE
⟳	$142F	Start/end REPEAT

[1] Double-digit entry, e.g. Track 12, is determined/defined by the time lapse between the input of the individual digits. Quick access through 0x for tracks 1 - 9, e.g. 05 for track 5
.

RC M100 (optional)

The function buttons on the optional RC M100 Remote control always reference the previously selected source button. Therefore, the DVD source must be selected for the CD player before operating the function buttons.

Button	IR Function
	Switch CD player off
	Switch CD player on with [DVD]
	Select previous/next track
	Stop
	Reverse / forward search
	Play
	Pause
	Direct track selection 0-99[1]
	Start/end SHUFFLE
	Start/end REPEAT

[1] Double-digit entry, e.g. Track 12, is determined/defined by the time lapse between the input of the individual digits. Quick access through 0x for tracks 1 - 9, e.g. 05 for track 5

M208 (optional)

The optional M208 Remote control from Revox has a pre-defined CD player device in its configuration programme *M208 Project Manager*, which can be used for infrared control of the Joy CD player. The assignment shown below can be modified in *Expert Mode* if required.

Button	IR-Function
Power Off	Switch CD player off
Power On	Switch CD player on with [DVD]
⏮ ⏭	Select previous/next track
⏹	Stop
⏪ ⏩	Reverse / forward search
▶	Play
⏸	Pause
0 9	Direct track selection 0-99[1]
Shuffle	Start/end SHUFFLE
Repeat	Start/end REPEAT

[1] Double-digit entry, e.g. Track 12, is determined/defined by the time lapse between the input of the individual digits. Quick access through 0x for tracks 1 - 9, e.g. 05 for track 5
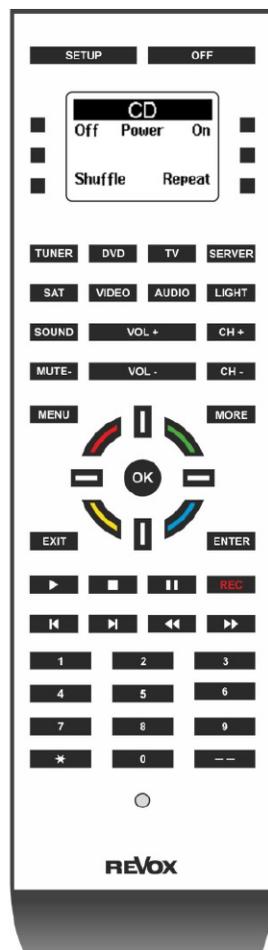
S208 (optional)

The optional S208 Remote control from Revox has a pre-defined CD player device in its configuration programme *M208 EasyCreator*, which can be used for controlling the Joy CD Player through infrared. The assignment shown below can be modified if required.

Button	IR Function
⏻	Switch CD player on
▬▬	Switch CD player on
▬▬	Switch CD player off
⊖ ⊕	Select previous/next track
▬▬	Stop
⏮ ⏭	Reverse / forward search
▶	Play
❚❚	Pause
0 9	Direct track selection 0-99[1]
✕	Start/end SHUFFLE
↻	Start/end REPEAT

[1] Double-digit entry, e.g. Track 12, is determined/defined by the time lapse between the input of the individual digits. Quick access through 0x for tracks 1 - 9, e.g. 05 for track 5

S208 Comfort programming

Revox has created a S208 project for customers who want to operate the CD player in combination with a Joy series receiver (S118, S119, S120, Symphony), which contains a comfort operation option with switch-on and switch-off scenarios. This project is pre-installed on all S208s from June 2014. It can also be called up in the Joy S208 Download area.

The project contains a dummy receiver that takes on the identity of the receiver that is already installed on the remote control.

The following conditions must be met for the configurations contained in the project to work:

1) Receiver - CD player audio connection: **Coax-1**
2) The receiver should preferably be in Quickstart mode (ON)
3) Always target the CD player with the S208 Remote control (IR commands)

In details, the comfort programming consists of the following components:

- Switch-on macro ***CD** [Switch CD player and receiver on together]
- Mixed device **CD+Joy** [Combination of CD player IR control and bidirectional receiver wireless connection]
- Switch-off macro ***OFF**   [Switch CD player and receiver off together]
- **Joy CD**   [CD player IR control - see Page 13]
- **S37**   [IR control for optional S37 Audio server]
- **Receiver** [Bidirectional wireless control for Joy Receiver]

Comfort control operating steps

1) Parallel switch-on with the Hotkey ***CD** ⇨ 2)
2) Combi-operation of CD player and Joy Receiver with **CD+Joy** (Mixed device)
3) Parallel switch-off using the ⏻ button in the mixed device (CD+Joy)

Button	Function of the CD+Joy mixed device
⏻	Switch CD player and receiver off together
🟩	Switch CD player on
🟥	Switch CD player off
➖ ➕	Select previous/next track
🔉 🔊	Volume: soft-loud *(Receiver)*
🔇	Mute: Mute *(Receiver)*
⏮ ⏭	Reverse / forward search
▶	Play
⏸	Pause
0 9	Direct rack selection 0-99[1]
🔀	Start/end SHUFFLE
🔁	Start/end REPEAT

[1] Double-digit entry, e.g. Track 12

The buttons in the S208 Remote control navigation compass (see picture on the right) only control the receiver. In this way, you can access other receiver sources while playing a CD, without having to exit the mixed device.

Joy CD Player RS232 commands

The CD player can be controlled completely, including status feedback, through the green RS232 screw connector.

Baudrate: 57600
Data bits: 8
Parity: No
Stop bits: 1
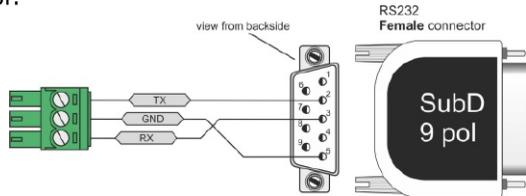
General

All number values are in the HEX format.

Command structure:
Each command contains a start byte 0x02 ($2: shortened way of writing 0x02), a header, a data block (optional) and a stop byte 0x03. Start and stop bytes are entered as HEX values; header and data block as String values.

The header consists of 4 bytes; the data block consists of a maximum of 10 bytes.

$2 "ZC CM RW LL D0 D1 .." $3

$2   : Start
"   : Start of String
ZC   : Target code (Start of Header)
CM   : Command code
RW   : Write: 0; Read: 1
LL   : Number of subsequent data bytes (End of Header)
DX   : Data bytes
..
"   : End of String
$3   : End

As the command records are receiver-specific, the target code (ZC) handles the correct assignment of the received telegrams. Therefore, the same command code (CM) can have different meanings, depending on the receiver.

Three target codes are used:

43 Drive

53 Sensor

56 Version

RW has no meaning with the drive (always 0)
LL just defines the number of data bytes.
(Please note: CD Link commands cannot be transmitted over the RS232 interface)

Example: Start Play in repeat mode

$2 "43 11 00 01 05" $3

$2   : Start
"   : Start of String
43   : Command to drive
11   : AC_Play [Mode] | CD80-LW   command   with   additional
        parameter [Mode]
00   : without meaning
01   : Number of subsequent data bytes
05   : Data byte for additional parameter Mode | 05 = REPEAT DISC
"   : End of String
$3   : End

EEPROM
Address
0: Glass colour [Black: 0; White: 1]
1: Sensor configuration in the EEPROM [No: 0; Yes: 1]
2: CD in the drive [No: 0; Yes: 1]

The default setting is 0.

Non-configured EEPROM cells have the value 0xFF (255 decimal). 0xFF is read as
0.

Basic commands

Name	Command	Info
POWER	EXAMPLE	DATA BYTES
Power_Toggle	$2 "53 A1 00 00" $3	
Power_On	$2 "53 A5 00 01 01" $3	
Power_Off	$2 "53 A5 00 01 00" $3	
Get_Power	$2 "53 A6 01 00" $3	
EEPROM		
Write	Write Adr 1, Val 1 $2 "53 A2 00 02 01 01" $3	Byte 0 = Adr; Byte 1 = Value;
Read	Read Adr 2 $2 "53 A2 01 01 02" $3	Byte 0 = Adr;
GLASS COLOUR		
Write_BlackGlas	$2 "53 A3 00 02 00 21" $3	Byte 0 = Epr Adr; Byte 1 = Sensor Val
Write_WhiteGlas	$2 "53 A3 00 02 00 2C" $3	Byte 0 = Epr Adr; Byte 1 = Sensor Val
EPR_SENSOR_CONFIG		
Reload_Epr	$2 "53 A4 00 01 01" $3	Byte 0 = Reload;

Glass colour:
The value for the glass colour is written to the EEPROM and the sensor. This means that the defined colour can be read out from address 0 of the EEPROM but just changing address 0 is not enough for changing the colour.

Sensor configuration:
The sensor factory settings are located in the Flash and written to the EEPROM the first time the device is booted up. Later changes over RS232 are saved in the EEPROM. If you want to revert to the factory setting, using the command Reload_Epr, the CD player can be forced to write the original Flash values to the EEPROM on the occasion of the next cold start. All manual changes are then overwritten.

Drive commands 1/2

Name	Command	Info
NAVIGATION	EXAMPLE	DATA BYTES
AC_Play	$2 "43 11 00 01 00" $3	Byte 0 = Mode;
AC_Play_Shuffle_All	$2 "43 11 00 01 01" $3	Byte 0 = Mode;
AC_Play_Shuffle_Repeat_All	$2 "43 11 00 01 02" $3	Byte 0 = Mode;
AC_Play_Repeat_All	$2 "43 11 00 01 05" $3	Byte 0 = Mode;
AC_Play_Repeat_Track	$2 "43 11 00 01 07" $3	Byte 0 = Mode;
AC_Play_Track_XY	Play Track 6: $2 "43 12 00 04 00 06 FF 00" $3	Byte 0 = 0; Byte 1 = Tr Num; Byte 2 = 255; Byte 3 = Mode;
AC_Pause	$2 "43 13 00 00" $3	
AC_Stop	$2 "43 14 00 00" $3	
AC_Next_Track	$2 "43 15 00 00" $3	
AC_Previous_Track	$2 "43 16 00 00" $3	
AC_Search_Forward	FFW Speed Low: $2 "43 19 00 01 00" $3	Byte 0 = 00 Speed Low; Byte 0 = 01 Speed High
AC_Search_Backward	FRW Speed High: $2 "43 1A 00 01 01" $3	Byte 0 = 00 Speed Low Byte 0 = 01 Speed High
GET		
AC_Get_State	$2 "43 20 00 00" $3	
AC_Get_Disc_Content	$2 "43 21 00 00" $3	
AC_Get_Play_Mode	$2 "43 22 00 00" $3	
AC_Get_Track_Name_XY	Get Track 12 Name: $2 "43 23 00 03 00 0C FF" $3	Byte 0 = 0; Byte 1 = Tr Num; Byte 2 = 255;
AC_Get_Track_Length_XY	Get Track 18 Length: $2 "43 25 00 03 00 12 FF" $3	Byte 0 = 0; Byte 1 = Tr Num; Byte 2 = 255;

Drive commands 2/2

Name	Command	Info
AC_Get_Tag_XY	Get Track 7, Name & Artist : $2 "43 26 00 04 00 07 FF 03" $3 A maximum of 2 queries can be made at the same time: (03 06 0C 09)	Byte 0 = 0; Byte 1 = Tr Num; Byte 2 = 255; Byte 3 = 01: Tr Name 02: Tr Artist 04: Album Name 08: Album Artist
AC_Get_Current_Track_Number	$2 "43 27 00 00" $3	
AC_Get_Current_Time	$2 "43 28 00 01 00" $3	00 TrackTime; 01 Disc Time;
AC_Get_BLER	$2 "43 2C 00 00" $3	Returns the number of incorrect audio frames
AC_Get_FW_Version	$2 "43 2D 00 00" $3	
AC_Get_Program_Details	$2 "43 2E 00 00" $3	
TRAY		
AC_Tray_Open	$2 "43 31 00 00" $3	
MISC		
AC_Prepare_Power_Down	$2 "43 61 00 00" $3	
AC_Set_Loader_Type	Set Type Sony: $2 "43 65 00 01 40" $3	Byte 0 = 40;
AC_Audio_Mute	$2 "43 43 00 01 01" $3	
AC_Audio_Unmute	$2 "43 43 00 01 00" $3	

Appendix

Warranty

Warranty covers a period of 24 months from the purchasing date. Your specialist dealer is your first contact if you need service help. If he is unable to assist you, send your device, carriage free, without accessories to your national Sales Office.

Please supply a complete description of the fault together with your address.

Environmental protection

Packaging
We recommend keeping the original box and packaging material so that if required, the device can be transported safely.

Disposal
Please note: The EU Directive 2002/96/EC governs the correct return, handling and recycling of used electronic devices. For this reason, electronic used devices must be disposed of separately. This device should not be disposed of with normal domestic waste. You can take your used device free-of-charge to recognised disposal points. You can get further information about the return of such devices from your local authority, also in non-EU countries.

Technical Data

Analog output	Measurement	Measuring conditions
Frequency range	5 Hz – 20 kHz	typ. $\pm$ 0,5dB
THD + Noise	< 0,0019 %	1 kHz
Output impedance	220 Ohm	
Dynamic range	118 dB	Mute / 0 dBFS
DC-Offset	0,0005 Volt	
SN ratio	> 110 dB	1 kHz
Channel separation	> 97 dB	1 kHz
Digital output Coaxial		
Frequency range	5 Hz – 20kHz	
THD + Noise	0,0018 %	1 kHz
Data format	44,1 kHz / 16 bit	
Specific feature	Potential-free through output transformer	
Digital output Optical		
Frequency range	5 Hz – 20kHz	
THD + Noise	0,0018 %	1 kHz
Data format	44,1 kHz / 16 bit	
Common		
Supported format	CD-DA in according with RED-Book Standard [2] – see page 23	
Dimensions with feet [1]	87 x 200 x 183 mm 3,42 x 7,87 x 7,20 inch	H x W x D[1] (without sockets)
Weight	3,05 kg / 6,72 lb	Without packaging
Temperature range	+10°...40°C	DIN 40040
Power consumption [2]	0,36 W white 0,41 W black 5,5 W 7,5 W $\pm$ 1,5 W	Standby Operation w/o CD / STOP-Mode Operation with CD / PLAY-Mode
Mains voltage	100-240 VAC ~ / 50-60 Hz	

[1] Please allow for another 50 - 60 mm for cable and plug
[2] Single CDs with an 8 cm diameter are NOT supported

Supported disc types

Pressed audio compact discs

The Joy CD player is designed to play compact discs (CD-DA in accordance with RED Book standard with and w/o copy protection*), with the identifiers shown below. You should never attempt to play other disc types, e.g. BluRay, DVD, SACD in this device.
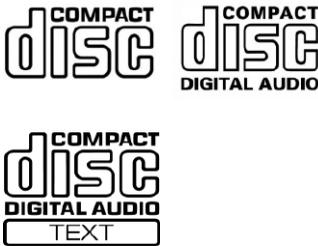
*Copy Protection
CDs with the following copy protection mechanism can be used: MIDBAR, KEY2AUDIO, MEDIACLOQ, STARFORCE, SAFEAUDIO.

Digital CD-R-, CD-RW audio discs

As well as pressed, purchased CDs, self-burned CD with the following identifiers can be played, with reservations.

The following points should be noted/are recommended with these CDs:

- The data structure must correspond to a CD-DA in accordance with the RED Book standard.
- Formats such as mp3, AAC, etc. are not supported.
- Only CD-R or CD-RW discs from reputable manufacturers should be used.
- You should ensure that only a CD-R or CD-RW disc is used that has at least one of the following statements on the disc or on the disc case:
  – FOR CONSUMER
  – FOR CONSUMER USE
  – FOR MUSIC USE ONLY
- Only use a finalised (closed) CD-R or CD-RW disc.
- Do not use single CDs with an 8 cm diameter.

Note:
It is possible that this device is not capable of playing CD-RW discs or discs where the recording was incorrectly carried out.

Kontakt/ Contact

Deutschland / Germany
Revox GmbH
Am Krebsgraben 15, D 78048 VS-Villingen
tel +49 7721 8704 0, fax +49 7721 8704 29
info@revox.de
www.revox.de

Schweiz / Switzerland
Revox (Schweiz) AG
Wehntalerstrasse 190, CH 8105 Regensdorf
tel +41 44 871 66 11, fax +41 44 871 66 19
info@revox.ch
www.revox.ch

Österreich / Austria
Revox Austria GmbH
Josef-Pirchl-Strasse 38, AT 6370 Kitzbühel
tel +43 535 666 299, fax +43 535 666 299 4
info@revox.at
www.revox.at

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