

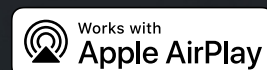
40 ST USER GUIDE

CYRUS



BluOS™

ROOM READY



BUILDING A BETTER MUSIC EXPERIENCE



CONTENTS

IMPORTANT! READ BEFORE OPERATING THIS EQUIPMENT! ...1	REMOTE CONTROL OPERATION8
Power supply.....2	Remote control introduction.....8
Servicing.....2	Remote control backlight.....8
Product service centres.....2	Fitting batteries to the remote control.....8
FCC Notice.....3	Sending commands to Cyrus components.....8
WELCOME TO THE WORLD OF CYRUS.....4	Switching on Cyrus source components.....8
Preparations for Installation.....4	Cyrus remote commands.....8
INSTALLATION.....5	MENU MAPS.....9
Key to the rear panel drawing.....5	DAC FILTERS.....10
Important – read before making any connections.....6	DIGITAL FILTER TERMS.....10
Connecting analogue audio.....6	FIRMWARE UPDATES.....10
Connecting digital audio.....6	TROUBLESHOOTING GUIDE.....11
Connecting digital audio sources.....6	Error indication.....11
Network connection.....6	SPECIFICATIONS.....12
Factory reset.....6	Power Supply.....12
External power supply - 40 PSU.....6	Power Consumption.....12
Connecting to the AC mains supply.....6	BluOS.....12
OPERATION.....7	Analogue output.....12
Key to the front panel drawing.....7	Enclosure.....12
Touch pad controls.....7	ACKNOWLEDGEMENTS.....12
Power.....7	WARRANTY.....12
Mains power.....7	WEEE.....12
Standby.....7	
Auto-standby.....7	
Playing network audio using the BluOS app.....7	
Playing USB audio from a memory stick or HDD.....7	
Playing audio from a digital source.....7	
Volume level.....7	
Volume.....7	
Metadata.....7	

IMPORTANT! Read before operating this equipment!

CAUTION: The exclamation mark is to draw your attention to important instructions and safety procedures in this manual.



ATTENTION: The lightning flash warns you of the risk of electrical shock presented by components inside this product. Unauthorised personnel must not open this unit.



WARNING: To reduce the risk of electrical shock do not remove any unit covers or panels. There are no user serviceable parts in this product.

WARNING: To reduce the risk of electric shock, do not expose this equipment to rain or moisture.

HEED WARNINGS: All warnings on the product and in the operating instructions should be adhered to.

READ ALL THE INSTRUCTIONS: All the safety and operating instructions should be read before the product is operated.

RETAIN INSTRUCTIONS: The safety and operating instructions should be retained for future reference.

FOLLOW INSTRUCTIONS: All operating and use instructions should be followed.

CLEANING: Unplug this product from the mains before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.

WATER AND MOISTURE: Do not use this product near water - for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement; or near a swimming pool and the like. The product must not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the product.

HEAT: The product should be situated away from heat sources such as radiators, stoves, or any other products (including amplifiers) that produce heat.

VENTILATION: Slots and openings in the cabinet are provided for ventilation, to ensure reliable operation of the product and to protect it from overheating and these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug or similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

OBJECT OR LIQUID ENTRY: Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock.

ACCESSORIES: Do not place this product on an unstable cart, stand, tripod, bracket, or table. The product may fall, causing serious injury to a child or adult, and serious damage to the product. Use only with a cart, stand, tripod, bracket or table recommended by the manufacturer, or sold with the product. Any mounting of the product should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

ATTACHMENTS: Do not use attachments not recommended by the product manufacturer as they may cause hazards.

MOVING THE PRODUCT: A product and cart combination should be moved with care. Sudden stops, excessive force, and uneven surfaces may cause the product and cart to overturn.



POWER SOURCES: This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your product dealer or local power company. For products intended to operate from battery power, or other sources, refer to the operating instructions.

OVERLOADING: Never overload wall outlets, extension cords, or integral convenience receptacles. This can result in an increased risk of fire or electric shock.

POWER CORD PROTECTION: Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the product.

NAKED FLAMES: No naked flame sources, such as candles, must be placed on this product.

LIGHTNING: For added protection for this product during a lightning storm, or when it is left unattended or unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.

BATTERIES: Warning: Batteries shall not be exposed to excessive heat such as sunshine, fire or the like.

CAUTION! POLARISED CONNECTOR (CANADA and USA):

To prevent electrical shock, match wide blade of plug to wide slot, fully insert. Do not alter or remove this plug if it does not fit your mains power socket. Have a suitable socket installed by a competent electrician.

ACCESS TO THE MAINS PLUG: The means to disconnect this product from the mains supply is the mains plug. Ensure that the mains plug is accessible at all times.

Power supply

Connect the moulded IEC connector of the supplied AC cord into the power inlet on the rear of the unit.

The mains supply requirement of your amplifier is marked on a label on the rear panel. Before connecting, check that this voltage is the same as your mains supply.

100-230V Products: Voltage Range 90V-240V

There are no user replaceable fuses in this unit.

Servicing

Do not attempt to service this product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

CONDITIONS REQUIRING SERVICE: Unplug this product from the wall outlet and refer servicing to qualified service personnel when:

- When the power supply cord or plug is damaged.
- If liquid has been spilled, or objects have fallen into the product.
- If the product has been exposed to rain or water.
- If the product has been dropped or damaged in any way.
- If the product does not operate normally by following the operating instructions. (Adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage requiring extensive work by a qualified technician to restore the product to its normal operation).
- When the product exhibits a distinct change in performance.

REPLACEMENT PARTS: When replacement parts are required, be sure the service technician has used replacements specified by the manufacturer or have the same characteristics as the original part. Unauthorised substitutions may result in fire, electric shock, or other hazards.

SAFETY CHECK: Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

Product service centres

For product service or technical advice, contact only authorised Cyrus service centres. Contact details for Cyrus distributors may be found on the Cyrus website at www.cyrusaudio.com.

FCC Notice

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Welcome to the world of Cyrus

Congratulations on your choice of Cyrus hi-fi products. Our state-of-the-art design technology and outstanding quality of manufacture has won countless awards around the world. We are confident that you will derive great pleasure from owning a product from one of the most recognised and respected manufacturers of hi-fi equipment.

Now is a good time to register your new Cyrus product.

To register, click [here](#) or visit - www.cyrusaudio.com/support/warranties.

Please read these instructions carefully before commencing installation. They provide full guidance to help you install your streamer safely and correctly.

Preparations for Installation

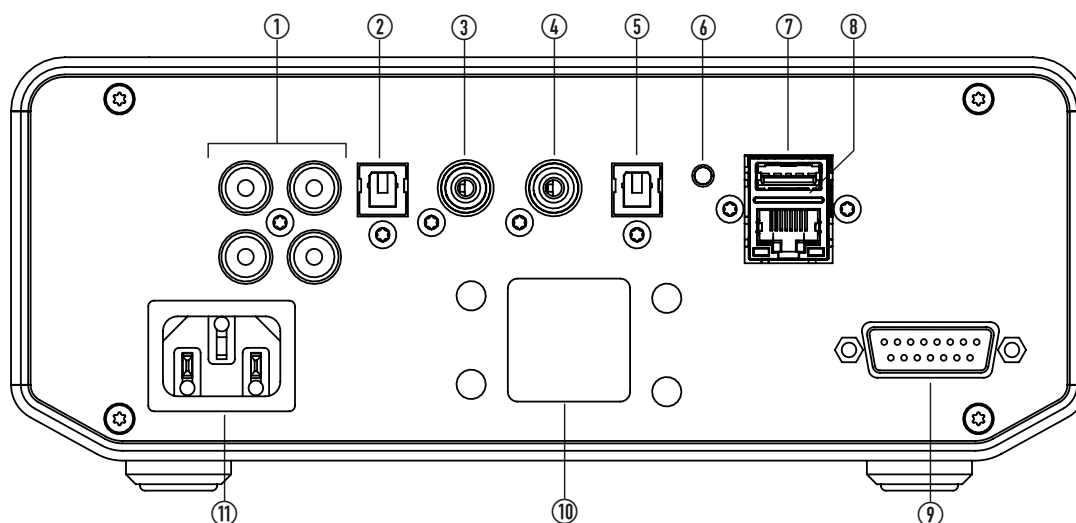
Before installing your Cyrus streamer check that the following items are included in the accessory box.

- Power Cables for UK, US, Europe
- Remote Handset with Batteries
- Ethernet cable
- Quick-Start guide

After removing these items, please retain the packaging.

Install the streamer in a well ventilated location away from sources of high temperature, dust or humidity. Never stand the streamer under another unit or on any surface likely to obstruct its cooling or ventilation.

Installation



Key to the rear panel drawing

- | | |
|------------------------------|-------------------------|
| 1. Analogue outputs | 7. USB |
| 2. Optical digital output | 8. RJ-45 Network socket |
| 3. SPDIF Coax digital output | 9. 40 PSU connection |
| 4. SPDIF Coax digital input | 10. Internal antenna |
| 5. Optical digital input | 11. Power inlet |
| 6. Reset | |

Important – read before making any connections



To avoid possible damage to your audio system, it is essential to disconnect all system components from the mains supply before connecting or disconnecting audio interconnects.

Connecting analogue audio

- Connect a stereo audio interconnect cable between the 40 ST analogue output and the analogue input of an amplifier (e.g. 40 AMP).

Connecting digital audio

- Using a suitable Toslink optical or digital phono interconnect, connect between the 40 ST digital output and the digital input of a pre-amplifier (e.g. Pre-XR) or integrated amplifier (e.g. 40 AMP).

Connecting digital audio sources

- Using a suitable Toslink optical or digital phono interconnect, connect each digital audio source to one of the inputs 'DIG1 - DIG2'.

The digital audio inputs are compatible with a number of different digital audio sources. These include-

Digital audio output from a CD player

Digital audio output from a TV

Digital audio output from a games console

Digital radio

Blu-ray players

Digital satellite receivers

Digital tape/disc recorders

NOTE: The digital audio inputs are only compatible with 2 channel PCM source material and will not reproduce multi-channel surround sound.

Network connection

- Wifi: The 40 ST uses an innovative internal antenna so no external antenna is needed.
- Wired: Connect an RJ-45 network cable from your router to the network socket on the rear of the 40 ST.

Download and install the BluOS app to your device.

bluesound.com/downloads

Follow the instructions in the "Add A player" wizard in the BluOS app to locate and connect your 40 ST to the network.

Factory reset

While powered up, either press and hold the reset button (located on the rear of the 40 ST) for 10 seconds, or select Factory Reset from the System menu.

External power supply - 40 PSU

The 40 PSU is a unique DC power supply that will upgrade the sonic performance of compatible products in the Cyrus range.

CAUTION:

- Disconnect both the 40 PSU and 40 ST from the mains.
- Plug the multi-pin interconnect from the 40 PSU into the 40 PSU socket on the back panel.

CAUTION: Use only the interconnect supplied with the 40 PSU. Other interconnects may damage the 40 PSU and the streamer.

- Connect a mains supply to both units.

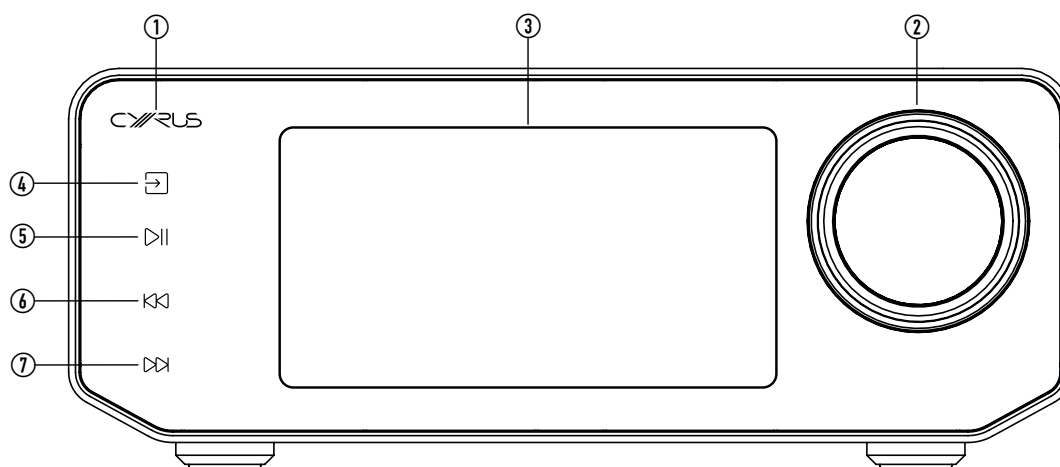
NOTE: Connection of a 40 PSU is detected automatically, so no internal adjustments are required.

Connecting to the AC mains supply

Connect the socket on the AC Power cable to the power inlet on the rear panel of the streamer. Now connect the cable to a suitable AC power point.

NOTE: The means to disconnect this product from the mains supply is the mains plug. Ensure that the mains plug is accessible at all times.

Operation



Key to the front panel drawing

- | | |
|------------------------------------|-----------------|
| 1. Standby and indicator | 5. Play / Pause |
| 2. Volume & IR / proximity sensors | 6. Skip back |
| 3. Display window | 7. Skip forward |
| 4. Input | |

Touch pad controls

The front panel controls are touch sensitive. There is no need to press the controls, just lightly touch or hold a finger on the touchpad to select a function.

Power

Mains power

In regular use mains power can be left connected permanently.

When unattended for a long period (holidays etc) mains power should be disconnected.

Standby

When mains power is connected, the standby touchpad (CYRUS) is used for power control.

When in standby, the touchpad colour will be red.

When set to standby, all settings in use are retained.

Auto-standby

To save energy, standby will set automatically 20 minutes after music last played. If required, the auto-standby feature may be adjusted in the setup menu.

Playing network audio using the BluOS app

Select the 40 ST from the My Players screen in the BluOS app.

From the inputs menu, enter the credentials for your streaming source or setup your SMB local share (Library).

Select the service you wish to stream from and select the music you would like to play.

Playing USB audio from a memory stick or HDD

Insert the memory stick or USB HDD with music files into the USB-A port on the rear of the 40 ST. The USB input will then show in the Inputs list of the BluOS app. Tap USB and then select the music you would like to play.

Playing audio from a digital source

Connect your digital source (PCM only) to either the SPDIF and optical input of the 40 ST and select the input from the front touch pad. Alternatively, from within the BluOS app, select the appropriate input (assuming they have not been "hidden" in the app).

Volume level

Volume

- Rotate the encoder to adjust the volume level of the analogue audio output.

Metadata

When playing from a streaming source, network SMB share (Library) or USB device, track metadata (where provided) such as track name, album title, artist info, track time will be shown on the display as each new track starts.

Remote control operation

Remote control introduction

The 40 remote control will send commands to Cyrus amplifiers, CD players and audio streamers.

Remote control backlight

The remote control keypad includes a back-light on the mode keys. The back-light will switch on automatically when a command is sent to show which mode the remote is in.

Fitting batteries to the remote control

The battery compartment is on the back of the remote control.

1. Turn over the remote and slide off the cover.
2. Fit two AAA batteries into the battery compartment.
3. Replace the battery cover.

Replace the handset batteries only with AAA batteries of the same voltage and type.

Discard used batteries in accordance with recycling regulations in force in your area.

Sending commands to Cyrus components

- Press the AMP key to switch on a Cyrus amplifier. The remote control will now send commands to a Cyrus amplifier.

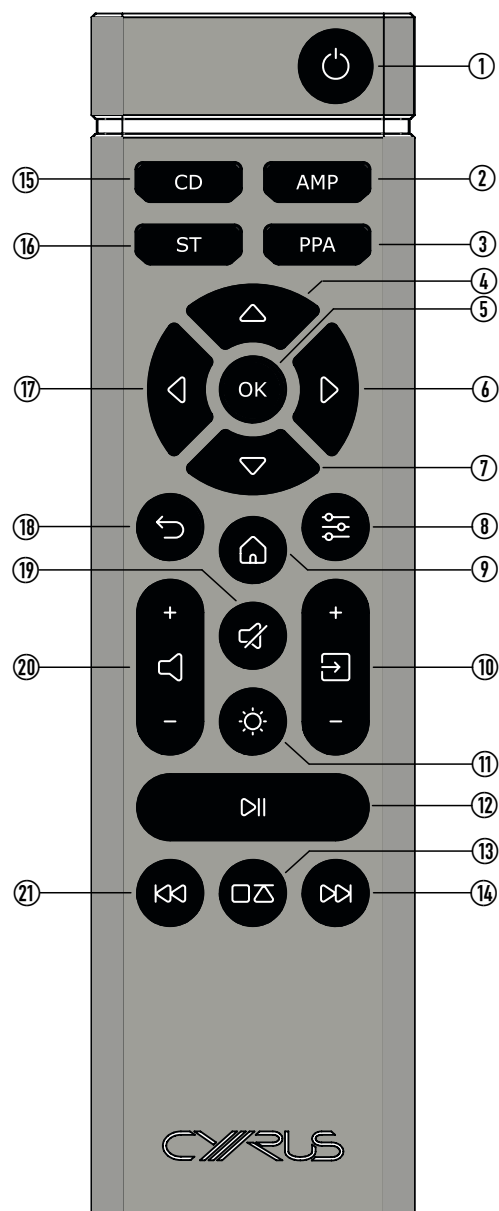
Switching on Cyrus source components

- Press the CD key to switch on a Cyrus CD player and send commands to the CD player and an amplifier.
- Press the ST key to switch on a Cyrus audio streamer and send commands to the streamer and an amplifier.
- Press the PPA key to switch on a Cyrus audio phono preamp and send commands to the phono preamp and an amplifier.

Cyrus remote commands

1. Set Cyrus amplifiers, CD players, phono preamplifiers and audio streamers to standby.
2. Set the handset to send commands to Cyrus amplifier.
3. Set the handset to send commands to Cyrus phono preamplifier.
4. Navigate up.
5. OK.
6. Navigate right.
7. Navigate down.
8. Access settings menu.
9. Home.
10. Input +/-.

11. Access brightness menu.
12. Play/Pause.
13. Stop/Eject.
14. Skip track forward
15. Set the handset to send commands to Cyrus CD.
16. Set the handset to send commands to Cyrus streamer.
17. Navigate left.
18. Return.
19. Mute.
20. Volume + / -.
21. Skip track back.



Menu Maps

Menu

Audio

DAC Filter

- Minimum Phase
- Linear Phase Apodising (default)
- Linear Phase Fast Roll Off
- Linear Phase Fast Low Ripple
- Linear Phase Slow Roll Off
- Minimum Phase Fast Roll Off
- Minimum Phase Slow Roll Off
- Minimum Phase Low Dispersion

Display

Auto Hide

- Yes (default)
- No

Display Brightness

- Level 1
- Level 2
- Level 3 (default)
- Level 4
- Level 5

LED Brightness

- Level 1
- Level 2
- Level 3 (default)
- Level 4
- Level 5

System

About

(Displays Device Information)

Auto Standby

- Yes (default)
- No

Standby Type

- Full (default)
- Network

Factory Reset

- Yes
- No

IR Volume Control

- Yes (default)
- No

Time Zone

(Set Time Zone)

Cyrus Devices

Device Group

- Unlinked
- Group A
- Group B
- Group C
- Group D

Cyrus Devices

(Lists devices)

PSU

(Displays 40 PSU information)

DAC Filters

Digital filters are required to minimise unwanted antialiasing distortion in the audio band, but no digital filter is perfect, all are a compromise between various parameters.

Eight filter settings are available, described in this section.

Minimum Phase

Low pre-ringing and the phase response varies at higher frequencies. There is more post-ringing than compared with linear phase and apodizing filters.

Linear Phase Apodising (default)

A compromise between phase, frequency response and ringing. Its main advantage is that it removes most of the ringing that has been introduced as part of the recording process when the original material was recorded and mastered.

Linear Phase Fast Roll Off

Higher and equal levels of pre- and post-ringing compared with linear phase, slow roll off. No phase shifts and with minimal high frequency aliasing compared with minimum phase, slow roll off. Optimised for image rejection at $0.55 \times F_s$.

Linear Phase Fast Roll Off Low Ripple

Higher and equal levels of pre- and post-ringing compared with linear phase, slow roll off. No phase shifts and with minimal high frequency aliasing compared with minimum phase, slow roll off. Optimised for in-band ripple.

Linear Phase Slow Roll Off

Low and equal levels of pre- and post-ringing. No phase shift but can introduce high frequency aliasing at a higher level than linear phase, fast roll off. Very high frequencies will be slightly attenuated. Optimised for lower latency.

Minimum Phase Fast Roll Off

No pre-ringing and the phase response varies at higher frequencies. There are much higher amounts of post ringing than compared with the linear phase filter options.

Minimum Phase Slow Roll Off

No pre-ringing artefacts but can introduce phase shifts at higher frequencies. It has less post-ringing than the Minimum Phase Fast Roll Off, but this is still higher than the linear phase filter options. Very high frequencies in the last half octave of the filter pass band will be slightly attenuated.

Minimum Phase Fast Roll Off Low Dispersion

Optimised for balance of the low latency of minimum phase filters and low dispersion of linear phase filters.

Digital filter terms

The terms used to describe the behaviour of the digital filters in the previous section include:

Frequency response

Audio level vs. frequency. This should be effectively flat between 20Hz and 20kHz.

Phase

The time delay introduced between reproducing different frequencies that pass through the filter. Ideally this would be as low as possible which would give a linear phase vs. frequency or constant group delay.

Pre-ringing

Audio artefacts that precede the original audio impulse. These are normally undesirable as this phenomenon does not exist in the natural world, so ideally this should be minimised.

Post-ringing

Audio artefacts that follow the original audio impulse. Ideally these should be minimised, but are not normally as detrimental as pre-ringing artefacts.

Aliasing

Audio artefacts introduced into the audio band from high frequency signals.

Firmware updates

The operational firmware may be upgraded from time to time to add new features and to fix operational issues.

New firmware versions will be available from the 'Support' pages of the Cyrus website www.cyrusaudio.com.

If new firmware is available, this will be packaged with other documents including -

- Firmware version change log.
- Latest firmware update procedure.
- Revised handbook (if required).

Troubleshooting guide

If your streamer is not operating properly, disconnect the power and check carefully all connections.

If you are in any doubt, consult your retailer.

No sound	
The streamer is switched off or in standby (indicator is red).	Bring the unit out of standby.
The connected amplifier is off or the incorrect input is selected.	Bring the amplifier out of standby / select correct input.
The 40 ST is not playing or paused.	Check the BluOS app is connected to the correct 40 ST and playing.
No sound (digital sources)	
The sample rate or sound format of the digital signal from the source may not be correct.	Check that the sample rate from the source is within the specification of the streamer and that the program is encoded as two channel stereo.
Not recognising USB	
USB device not recognised by the 40 ST.	Check the contents of the USB drive are accessible with a computer.
Streaming problems	
Playback is interrupted due to network interruption or external interference.	Press play on the 40 ST or from within the BluOS app to continue playback.
Standby is activated randomly	
Auto standby may have operated.	To save energy, the unit will automatically set to standby if no music plays for 20 minutes.
Remote control not operating	
The batteries may be flat.	Check the batteries.
Remote control lights flash	
This indicates that the batteries are flat.	Replace the batteries.

Error indication

Your streamer has a unique error indication system to help you to diagnose problems. If an error is detected in use, the display will show 'Error' with indication of the type of error as shown in the table.

Mains	
The mains supply voltage has been outside of safe limits.	Disconnect the amplifier from mains power and re-connect it. If the fault persists arrange for an electrician to check the mains supply voltage.
Internal PSU fault	
This fault condition will be displayed if there is a fault with the internal power supply of the amplifier.	A PSU fault cannot be corrected by the user. The streamer should be returned to your retailer.
External PSU fault	
This fault condition will be displayed if there is a fault with a connected 40 PSU.	Disconnect the streamer and 40 PSU from mains power. Check the interconnect between the two units, then re-connect to the mains. If the fault persists the 40 PSU should be returned to your retailer. Check the latest firmware is installed on both units.

If a fault condition still remains, return the streamer to your Cyrus appointed retailer or an authorised Service Centre.

Specifications

Power Supply

Voltage 100-230V

Power Consumption

Standby..... <0.5W

Maximum 30W

Safety compliance UKCA, CE

EMC (230V)..... UKCA, CE

EMC (115V)..... FCC

BluOS

Formats MP3, AAC, WMA, OGG, WMA-L, ALAC, OPUS

Hi-res formats.....MQA, FLAC, WAV, AIFF

Sample rate Up to 32 bit /192 kHz

Network...RJ45 (GigE, 1Gbps), Wi-Fi 5(802.11ac, 2.4/5GHz)

Analogue output

DAC..... ESS ES9039Q2M 32 bit DAC

SNR 117dBA

THD+N 0.002%

Enclosure

Size (HxWxD) ... 88 x 220 x 385 mm (3.46" x 8.66" x 15.16")

Weight 4.8kg (10.6lbs)

Material.....Anodised aluminium chassis

Cyrus reserves the right to change all specifications without notice. E &OE

Acknowledgements

This product uses the LVGL graphics library.

See <https://lvgl.io>



Apple, AirPlay, Apple Home, Apple TV, Apple Watch, HomeKit, HomePod, HomePod mini, iPad, iPad Air, iPhone, and tvOS are trademarks of Apple Inc., registered in the U.S. and other countries and regions.

To use AirPlay with this Cyrus Streamer, the latest version of iOS, iPadOS, or macOS is recommended.



MQA and the Sound Wave Device are registered trademarks of MQA Limited. © 2016

MQA (Master Quality Authenticated).

MQA is an award-winning British technology that delivers the sound of the original master recording. The master MQA file is fully authenticated and is small enough to stream or download.

Visit mqa.co.uk for more information.

The 40 ST includes MQA technology, which enables you to play back MQA audio files and streams, delivering the sound of the original master recording.

MQA or MQA Studio indicates that the product is decoding and playing an MQA stream or file, and denotes

provenance to ensure that the sound is identical to that of the source material.

MQA Studio indicates it is playing an MQA Studio file, which has either been approved in the studio by the artist/producer or has been verified by the copyright owner.

ROON READY

Being Roon Ready means that Cyrus uses Roon streaming technology, for an incredible user interface, simple setup, rock-solid daily reliability, and the highest levels of audio performance, without compromise.



Licenses:

The Spotify software is subject to third party licenses found here:

<https://developer.spotify.com/legal/third-party-licenses/>

Warranty

The warranty period is five years. No retailer or distributor may vary the terms of this warranty, which is personal to the original purchaser and is not transferable.

Please retain the sales receipt as proof of purchase.

Warranty claims must wherever possible be made through the retailer from whom the equipment was purchased.

This warranty excludes:

- Damage caused through neglect, accident, misuse, wear and tear, or through incorrect installation, adjustment or repair by unauthorised personnel. Any unauthorised servicing will result in loss of warranty.
- Liability for damage or loss occurring in transit to or from the purchaser.
- Consequential damage, loss or injury, arising from or in conjunction with this equipment.

Equipment for attention under warranty should be consigned return carriage paid. If returned equipment is found to comply with the published specification, CYRUS reserves the right to raise a charge.

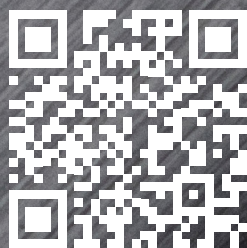
The above conditions do not affect your statutory rights as a consumer.

WEEE

This logo means that this product is not to be disposed of with your household waste. This product should be handed over to a designated collection point to be recycled. Your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources. For more information on collection points, contact your local government for more information about recycling.



CYRUS



www.cyrusaudio.com/products/40ST