iCON
Pro Audio

REALTIME PORTAL
Powered by RealTime Audio®

Connect and play with your bandmates, choir, writing partners, music students or recording studio via the internet…in REAL TIME!

CE UK CA FC N1630

Important Safety Instructions

1. Read this manual thoroughly before using this unit.

2. Keep this manual for future reference.

3. Take notice of and comply with all warnings included in the user's manual or indicated on the appliance.

4. Follow all instructions included in this manual.

5. Do not expose this unit to rain or moisture. Avoid having water or other liquids spilled on this unit.

6. When cleaning the cabinet or other parts of this appliance, use only a dry or slightly damp soft cloth.

7. Do not block any ventilation openings or interfere with the proper ventilation of this unit. Install in accordance with the manufacturer's instructions.

8. Do not use or store near any heat sources such as radiators, heat registers, stoves, or other heat-producing appliances.

9. To avoid the risk of electrical shock, do not touch any exposed wiring while the unit is in operation.

10. Only use attachments/accessories specified by the manufacturer.

11. Unplug this unit and all connected electrical equipment during lightning storms or when left unused a long period of time.

12. Refer all servicing to qualified service personnel. Servicing is required when the appliance has been damaged in any way or fails to operate normally.

13. Protect the power cord from being walked on or otherwise damaged by items placed on or against them.

14. Do not interfere with the mains electrical supply to the unit.

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

Contents

Introduction

It's time to get the band back together! Practise and rehearse with anyone in RealTime via webcam and the 'RealTime Portal' from iCON Pro Audio. Our ultra-low latency technology means you can jam in RealTime within a 1,000-mile radius* & with no discernible lag.

Just plug in your microphone or instrument and headphones into an audio interface. Then, simply connect that to your RealTime Portal. Hook that up to your internet via an ethernet cable and you're ready to go!

Once you've set up the hardware, you'll use the RealTime Audio app to create or join a jam room. Connect and play with your bandmates, your choir, writing partners, music students, a recording studio… there's really no limit to the beautiful music you can make together with RealTime Audio!

Recommended max of 30 millisecond ping time between users

What's in the package?

- **Real Time Portal hardware device**
- **Cat-6 ethernet cable**
- **9V 3A USB-C Adapter (for 120v outlet)**

Register your ICON ProAudio product to your personal account

1. **Check serial number of your device**
   Please go to **http:// iconproaudio.com/registration** or scan the QR code below.

   Input your device's serial number and the other information on the screen. Click "Submit".

   A message will pop up showing your device information such as model name and its serial number - Click "Register this device to my account" or if you see any other message, please contact our after-sales service team

2. **Log in to your personal account page for existing users or sign up as new user**
   Existing users: Please log into your personal user page by inputting your user name and password.

   New users: Please click "Sign Up" and fill in all the information.

3. **Download all useful materials**
   All your registered devices under your account will show on the page. Each product will be listed along with all its available files such as drivers, firmware, user manual in different languages and bundled software etc. for download.

Features

- Play or practise with multiple bandmates with virtually no latency
- Connect and play with other musicians within a 1000 Mile (1609.35 Km) radius*
- Seamless communication and social interaction with bandmates via RealTime Audio app
- Ethernet adapter for internet access
- USB 3.0 Connection (for audio interface)
- Easy setup
- Portable, rugged chassis design

 *Recommended max of 30 millisecond ping time between users

Requirements for using Real Time Portal

- A wired internet connection (ethernet)

- A USB class-compliant audio interface (not included)

- Real Time Audio App (and subscription) for each user connected to a session

- For optimal performance, connections should be made within a 1000 mile radius.

RealTime Audio

ROUTER   REALTIME PORTAL   AUDIO INTERFACE
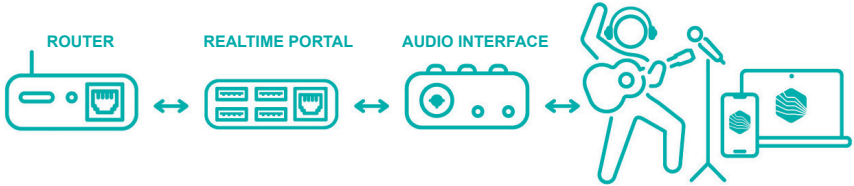
Connecting Your RealTime Portal

Scan for a setup video

Step 1. Connect Power Supply to RealTime Portal

Plug the USB-C power supply into your RealTime Portal and then into the wall.

Step 2. Connect Router & Audio Interface to RealTime Portal

ROUTER   **REALTIME PORTAL**   **AUDIO INTERFACE**

Ⓐ   Ⓑ

A Using the ethernet cable provided, connect your RealTime Portal to your internet router.
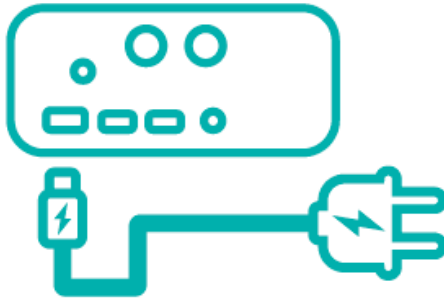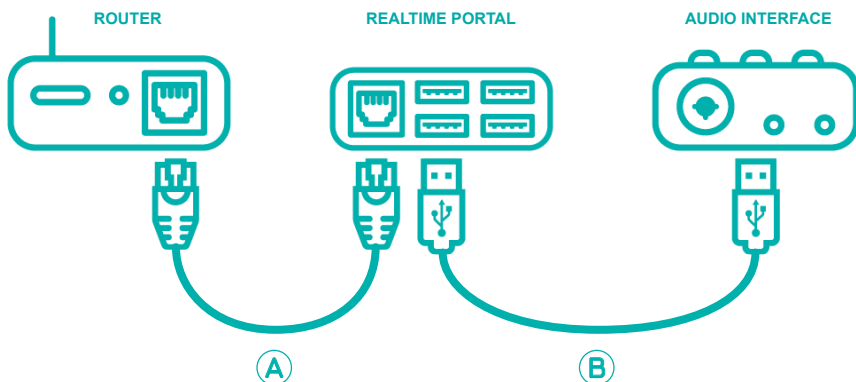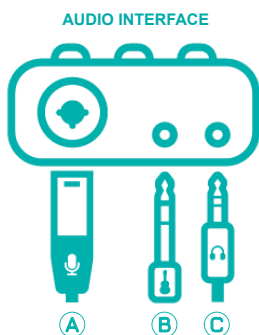
B Using a USB cable, connect your RealTime Portal to any, class compliant, USB audio interface (not provided).

Step 3. Connect Microphone, Instrument & Headphones

AUDIO INTERFACE

Ⓐ   Ⓑ   Ⓒ

A **Plug in your microphone.**
The microphone will be used for talkback, singing, and for use with acoustic instruments.

B **Plug in your instrument.**

C **Plug in your headphones.**

⚠ Only use headphones with two insulating bands on the connector plug (1/8" [3.5 mm] TRS).

✓   ✗

D **Turn up the volume!**

⚠ Make sure your audio interface has **Direct Monitor** disabled.

DIRECT MONITOR
OFF ON

⚠ If you have an **"Input/Playback"** knob make sure it's turned all the way to **"Playback"**.

INPUT   PLAYBACK

9

The Complete Setup
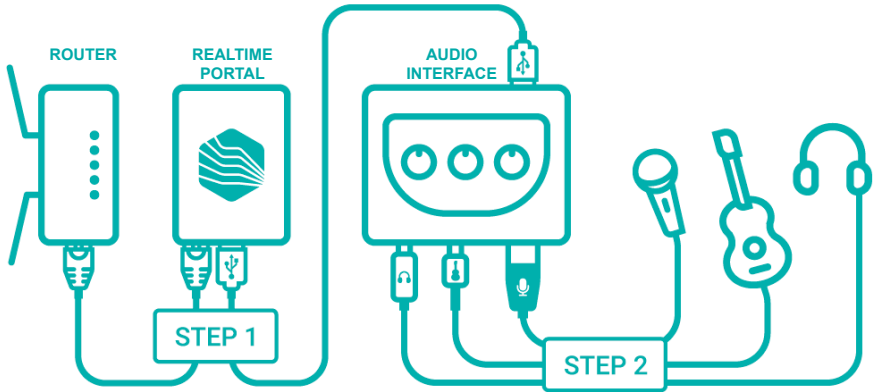
⚠️ When you hear "Your RealTime Portal is ready to connect" you are ready to open the RealTime Audio app.

Step 4. Go to:
www.social.realtimeaudio.com/
?video=tutorial

Step 5. Register & Pair with your RealTime Portal
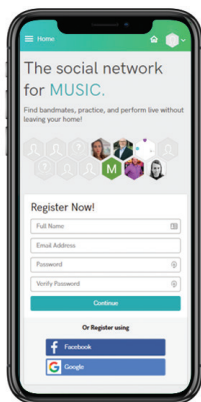
A **Register your account**
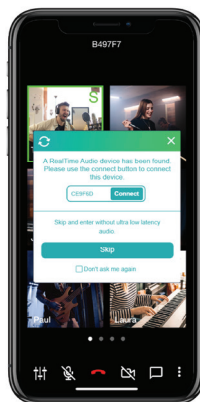
B **Wirelessly pair the app with your RealTime Portal**

⚠️ If prompted, grant access to your microphone and camera.

You Are Now Connected!
Lets get some friends here!

Click the 👤+ icon to to invite others with a Realtime Audio powered device to join the jam.
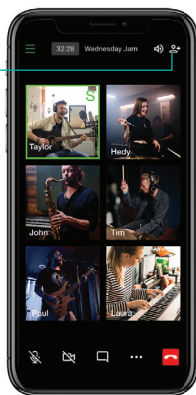
Click the ⚙️ icon on your personal mixer to explore and change your settings.

Webcam View
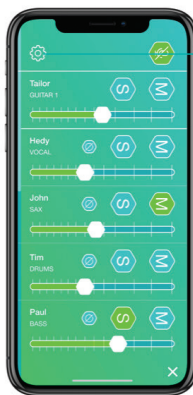
Mixer

Have fun jamming!

For more information, contact:
support@realtimeaudio.com
www.realtimeaudio.com

RealTime Audio

Specifications

Hardware

Processor	Rockchip RK3399 - 64bit hexa core
Memory	2GB SD Card
Ethernet Port	Ethernet, GbE LAN
Power Port	USB C
Audio Interface Port	2 x USB 3
Ethernet Cable	5ft Cat 6
USB Cable	USB

Requirements

Ethernet cable	Included
USB Cable (for audio interface)	Included
Power Adapter	Included
USB Audio Interface - Class Compliant	Not Included
Access to Router or Live Ethernet Port	Required
Recommended User Internet Speed	Min of 10mbps Upload

Connection

Self Host[1]	☑
Client-Server[2]	☑
Ethernet connection required	☑

Max Group Size

12 (self host), 150 (client-server)

Range / Distance

1,000 miles (varies with user ping times)

Hardware Options

Requires USB Audio Interface	☑

Accessibility

IOS App	☑
Ipad App	☑
Android App	☑
Browser App	☑

Easy of Use / Setup

Software / App	Very Easy

	Easy
Hardware	
Robust Customer Support	☑

Enterprise Features

Customization available	☑
White label / rebranding available	☑

Audio Features   Mixer Controls

Personal Mix Track Faders	☑
Reverb	☑
Pan	☑
3D Audio	☑
Mute	☑
Solo	☑
Master Mute	☑
Mute Input	☑

Advanced Audio Settings

Auto Jitter Buffer[3]	☑
Manual Buffer Slider (Server)	☑
Manual Buffer Slider (Client)	☑
Buffer Frame Toggle (Turbo)	☑
Stereo / Mono/ Stereo in- Mono out	☑

Metrics Dashboard

Overall Delay	☑
Ping Time	☑
Processing Delay	☑
Dropout Counter	☑

Host Controls

Toggle Host Role[4]	☑
View Every Users Upload Speed	☑
View Every Users Ping Rate	☑
Auto Optimize Server Location	☑
Manual Optimize Server Location	☑

Sharing and Performing Tools

MP4 Recording	☑
Multitrack Audio Recording	☑

Streaming	☑
Director Mode[5]	☑

Quality

Audio Compression	☑
Audio Quality	48kHz

Music Tools

Metronome	☑
GPS Metronome[6]	☑
Instrument Tuner	☑
Drum Machine	☑
Scale Generator	☑
Chord Generator	☑
Interactive Keyboard	☑
Whiteboard	☑
Sheet Music Library	☑
Audio File Library	☑

Video Features

Has Video Component	☑

Moderator Permissions

Unlimited Breakout Rooms	☑
Everyone starts muted	☑
Everyone starts hidden	☑
Everyone follows me	☑
Remove user	☑
Mute user	☑

Music Making Mode

Dominant speaker Toggle	☑
Noise Suppression Toggle	☑
Low Pass Filter Toggle	☑
Echo cancellation Toggle	☑
Stereo Mode Toggle	☑
Peer to Peer Mode Toggle	☑
Lipsync Toggle	☑

Profile Settings

Display name	☑
Gravitar email	☑
Instrument	☑

Live Speech Translation

Text to Text	☑
Text to Speech	☑
Speech to Text	☑
Select Voice Gender	☑
Select Voice Accent	☑
Over 50+ Languages	☑

Toggle Media Inputs

Easy toggle video	☑
Easy toggle audio	☑
Use multiple audio inputs	☑
Use multiple video inputs	☑

Screenshare

Entire Screen	☑
Application Window	☑
Chrome Tab	☑
Multiple Monitors	☑
Share Audio with Screenshare	☑
Share Audio Only	☑
Share Youtube Video	☑
Picture in Picture Mode	☑
Toggle Screenshare Resolution	☑
Presenter mode	☑

Security

Encryption type	☑
Server Access	☑
Peer to Peer Mode	☑
Client Server Mode	☑
Password protection	☑
Waiting room	☑

Chat

Text chat to group	☑
Text chat to individual	☑

Copy/ paste image into chat	☑
File sharing	☑
Emoji Chat	☑
Raise hand	☑

Room Creation Settings

Custom room name	☑
Own unlimited rooms	☑
One click room creation	☑
Set paywall	☑
Publish or unpublish room	☑
Categorize/ Tag published rooms	☑
Password protect room	

Invite

Share link	☑
Invite by email	☑
Invite by SMS	☑
Embed Iframe	☑

Other

Google Calendar Integration	☑
Backgrounds	☑

Networking Features

Explore![7]	☑
Full Featured Social Network[8]	☑

[1]This is a innovative solution that is unique to RealTime Audio in which attempts to maximize the benefits of both the client-server relationship along with the peer-to-peer model while mitigating each's downsides. This "self host" model takes the architecture of the client-server model and allows it put the server on the same box that runs the client app. In other words, in a group of RTA box users, one of the boxes (the first to pair) also does the work of the mixing server. In this way, the max users per room is increased from 4 to 12. Also, this model benefits from not running into the accessiblity issues that the peer-to-peer model has with port forwarding. Also, because it does not rely on a third party cloud server (like the client-server model), users can be anywhere (not just in the ten US cities that have large datacenters). Also, because the host role can be moved from one user to the another user at will (or automatically), the group distance radius can get from 500 miles to 1,500 miles since the host role can be placed with the user that is centrally located

geographically. Also, since the host role created automatically, this system does not require the users to create their own server though Amazon or Google Cloud which can be a costly and extremely complicated process.

[2]Client-server systems use an intermediary server that receives, mixes, and sends all users audio from a central location. The benefit of these system are larger room sizes (often up to 150 users). Also, they do not have the same accessiblity issues that peer-to-peer networks have for one out of seven users (requiring complicated port forwarding of the users router). The downside is that these central servers add travel time to the overall latency as each signal need to make a stop first before heading to it's final destination. Another downside is that these servers are extremely complicated to setup. They generally require an IT expert to make that happen. These central servers also cost money to rent. Another downside is that these servers are run from specific data centers that only exists in around 10 cities in the US. This means that users need to be no more than 500 miles away from these ten cities in order for this system to work for them. All other users in the US (outside of these ten cities) will not be able to use these solutions.

[3]This feature detects network jitter in realtime and automatically adjust the buffer the minimum size needed. Uniquely minimizes la

[4]RTA's system displays each users performance metrics and recommends which user should be the host. It also provides a butto

[5]Director mode allows users to zoom in on a particular player of show the whole group while recording or streaming effectively playing the camera "director" role of a music video or live performance.

[6]The GPS metronome allows users to sync up the clocks on their boxes via satelite GPS to play a metronome that everyone can follow along with. Drastically expands the max distance RTA users can sucessfully put between them while still jamming in time.

[7]Allows users to publish their room and categorize by topics and to explore other rooms where the room owner has done the same

[8]RTA's "Facebook for Music", this feature set helps musicians find others to jam with. Users will create persona and band pages, post band and job openings, post classfieds, sell merchandise, post pictures/videos/live streams, host virtual tip jars, etc.

Services

If your Real Time Portal needs servicing, please follow these instructions.

Check our online Help Center at **http://support.iconproaudio.com,** for information, knowledge, and downloads such as:
1. FAQ
2. Download
3. Product Registration
4. Video Tutorials

Very often you will find solutions on these pages. If you don't find a solution, create a support ticket at our online Help Center at the link below, and our technical support team will assist you as soon as we can.

Navigate to **http://support.iconproaudio.com** and then sign in to submit a ticket. Once you have submitted an inquiry ticket, our support team will assist you to resolve the problem with your ICON ProAudio device as soon as possible.

To send defective products for service:

1. Ensure the problem is not related to operation error or external system devices.

2. Keep this owner's manual. We don't need it to repair the unit.

3. Pack the unit in its original packaging including end card and box. This is very important. If you have lost the packaging, please make sure you have packed the unit properly. ICON is not responsible for any damage that occurs due to non-factory packing.

4. Ship to the ICON tech support center or the local return authorization. See our service centers and distributor service points at the link below:

If you are located in US
Send the product to:
North America
Mixware, LLC – U.S. Distributor
3086 W. POST RD.
LAS VEGAS NV 89118
Tel.: (818) 578 4030
Contact: www.mixware.net/help

If you are located in Europe
Send the product to:
Sound Service GmbH
European Headquarter Moriz-Seeler-Straße3 D-12489 Berlin
Telephone: +49 (0)30 707 130-0
Fax: +49 (0)30 707 130-189
E-Mail: info@sound-service.eu

If you are located in Hong Kong
Send the product to:
ASIA OFFICE:
Unit F, 15/F., Fu Cheung Centre,
No. 5-7 Wong Chuk Yueng Street,
Fotan,
Sha Tin, N.T., Hong Kong.
Tel: (852) 2398 2286
Fax: (852) 2789 3947
Email: info.asia@icon-global.com

5. For additional update information please visit our website at:
   www.iconproaudio.com

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