TRANSCEND™

Reference Manual

TS-1 Series Active Acoustic System

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Important:
Please review and fully understand these instructions prior to installation or operation.

For further assistance or additional information, please contact Wenger Corporation.

wengercorp.com | 800.4WENGER (493.6437)

Table of Contents

Important User Information

General

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In no event will Wenger Corporation be liable for technical or editorial omissions made herein, nor for direct, indirect, special, incidental, or consequential damages resultant from the use or defect of these instructions. The manufacturer reserves the right to change this product at any time.

The information on this document is not intended to cover all possible conditions and situations that might occur. The end user must exercise caution and common sense when assembling or installing Wenger Corporation products. If any questions or problems arise, call the Wenger Corporation at (800) 4WENGER (493-6437) or +1-507-455-4100 worldwide.

Manufacturer

Transcend® TS-1 Series Systems are manufactured by:

> Wenger Corporation
> 555 Park Drive
> Owatonna, MN 55060
> (800) 4WENGER (493-6437) or +1-507-455-4100
> wengercorp.com

Warranty

Warranty information is available at wengercorp.com.

Important Safety Information

Before operating the Transcend unit, please read and fully understand this Reference Manual and retain these instructions for future reference.

Observe all warnings and follow all safety guidelines.

Electrical Shock Hazard

To reduce the risk of electrical shock, fire, or injury:

- Do not open the unit. There are no user-replaceable components inside. All service must be performed by qualified personnel. If service is required, please contact Wenger Corporation.
- Avoid moisture. Do not use the unit outdoors or in environments with high humidity or condensation. Do not allow water or liquids to contact the unit. If the device has been exposed to moisture or shows signs of liquid damage, discontinue use immediately and contact Wenger Corporation for service.
- Do not operate without fuses or without the fuse holder installed.
- Fuse replacement: Always unplug the unit before removing the fuse holder. Replace only with a fuse of the same type and rating.
- Power cord protection: Ensure the power cord is not subject to damage from sharp edges, pinch points or other hazards.
- Safety symbols: Labels on the product and user manual may include the following safety symbol:

  ⚡ Lightning bolt symbol: Lightning flash with arrowhead symbol within an equilateral triangle. This is intended to alert the user to the presence of un-insulated dangerous voltage within the product's enclosure that may be sufficient to constitute a risk of electric shock to persons.

Important Safety Information (continued)

Electrical Requirements

Ensure that the power source complies with product specifications and applicable national electrical standards.

*   This device must be connected to a grounded mains outlet. Do not remove or bypass the ground prong on the power cord. Operating without a proper ground can result in electric shock or severe injury.

*   Connect only to AC power rated at 110–240 V, 50–60 Hz.

*   Do not attempt to increase voltage by connecting two live wires of a 120 V multiphase system.

*   Circuit protection: Only connect to a power source equipped with a circuit breaker.

*   Generator use: Do not use with non-inverter generators.

*   Do not bypass or defeat the safety features of the polarized NEMA plug.

*   Do not use the device if the power cable is damaged.

Operating Environment

*   Do not operate this device outside of its intended operating temperature.

*   Keep away from open flames, such as lit candles.

*   Avoid placing the device near heat sources (e.g., radiators, stoves, heat registers), which may cause overheating or shorten the product's lifespan.

*   Do not expose the device to direct sunlight.

Avoid Radio and Electromagnetic Interference

This device has been tested and complies with part 15 of the FCC rules.
These limits are designed to provide reasonable protection against harmful interference from electrical equipment, but do not guarantee that interference will never occur.

Cleaning Instructions

*   Always unplug the device before cleaning.

*   Do not use alcohol-based cleaners, as they may degrade or fog plastic components, including the touchscreen and processor enclosure.

*   Use only water or non-abrasive cleaning agents, such as lens or electronics wipes.

*   Apply cleaning solution to a cloth, never directly to the device, doing so may allow moisture to enter the device and pose a risk of electric shock or internal damage.

Welcome to a New Level of Inspiration

Thank you for choosing the Transcend Active Acoustic System

This product represents over 30 years of dedicated research and development by our team of expert engineers with a deep passion for audio and acoustic technology. Designed to support and elevate creativity, it is our hope that it will help inspire the next generation of musicians across the world.

Key Features

All Transcend TS-1 systems include a wide array of features allowing it to integrate as a complete audio solution or alongside other complex AV systems for additional expandability:

- Up to 9 high performance active acoustic presets
- Automated self calibration and setup*
- User friendly recording and playback in uncompressed .WAV format
- USBC track import/export
- Long range bluetooth audio playback
- Auxiliary input mixer*
- Loudspeaker management
- Control via the included 5.5" POE+ touchscreen
- Web control interface for wireless devices
- LAN control API*
- User configurable system behaviors

*Note: Depending on the specific type of installation, some features may be unavailable or limited.

Inside the Box

Each Transcend device is burned in and precision tested before leaving the factory and should arrive in perfect condition.

Transcend TS-1A / TS-1L:
- 1 Transcend processor
- 1 IEC power cable
- 1 Cat 5e ethernet cable
- 2 Removable rack ears
- 4 Rubber feet
- 1 Quick Start Guide
- 4 #10-32 Rack screws
- 1 Set of Phoenix connectors

Transcend TS-C:
- 1 Transcend control panel
- 1 Mounting ring
- 4 #6-32 Screws
- 1 Security set screw
- 1 USB-C dust cover

If any parts are missing or the product is damaged, notify the manufacturer immediately.
Save any packaging which shows damage for inspection by the carrier.

Installation Guide

If your device was purchased as part of a complete system, follow the separate installation instructions that were included in the box. If misplaced, all manuals are available online at wengercorp.com.

TS-1A / 1L Processor

Installing the Processor Freestanding on a Surface
Place the processor upside down on a soft cloth and attach the four included self-adhesive rubber feet to prevent scratches and scuffs.

Self-adhesive Rubber Feet
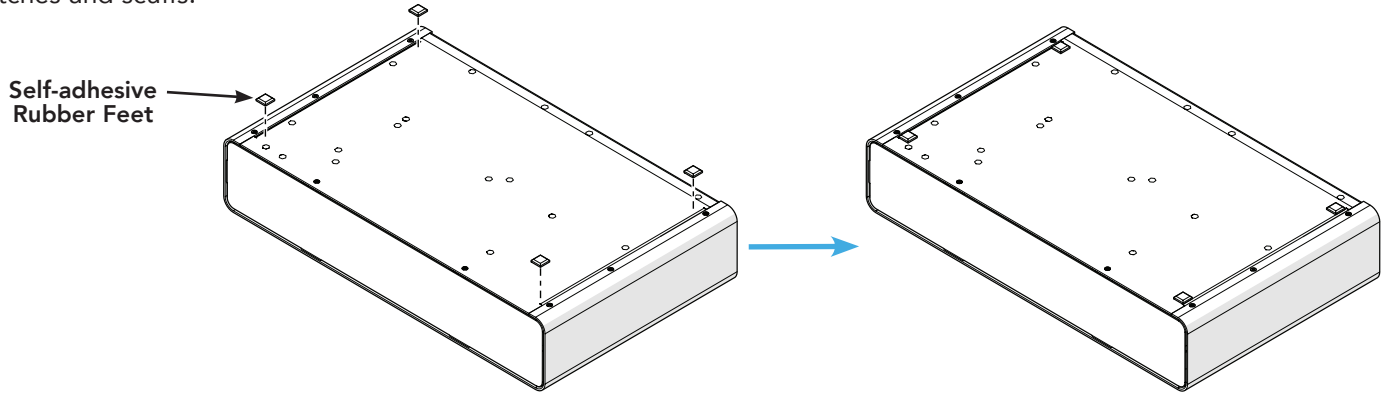
Attach Feet for Freestanding Installation

When operating, keep a 0.5" (13 mm) minimum gap around the sides of the device and do not block the front or rear cooling vents to prevent overheating.

Installing the Processor in a Rack
Place the processor upside down on a soft cloth and remove the four fasteners closest to the front.
Install the included rack ears using the same fasteners.
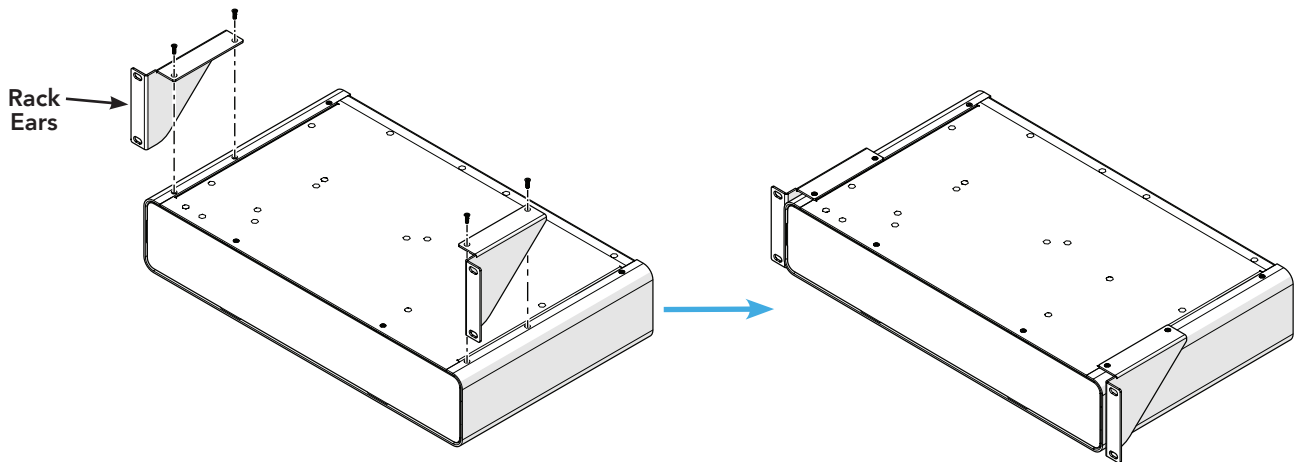
Rack Ears

Attach Rack Ears for Rack Installation

Note: The adhesive rubber feet should not be attached when installing the device into a rack. They will cause interference with the device.

Note: The TS-1 Series processors are passively cooled and contain no cooling fans. They can be installed in racks with front to back or back to front cooling.
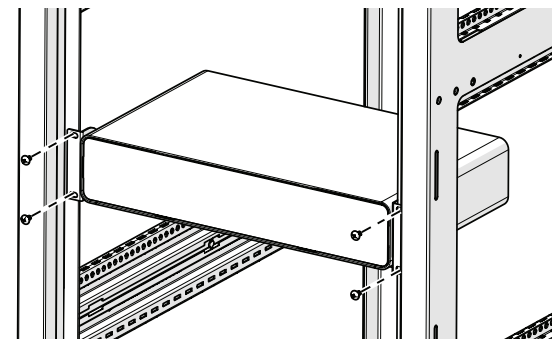
Rack Installation

Installation Guide (continued)

TS-C Control Panel

Use the included four #6 x 32 screws to install the control panel snap ring into any standard three-gang style enclosure. After connecting the ethernet and optional USB-C, attach the control panel to the mount by first inserting the top then pressing firmly on the bottom. Secure the control panel to the snap ring using the included set screw.

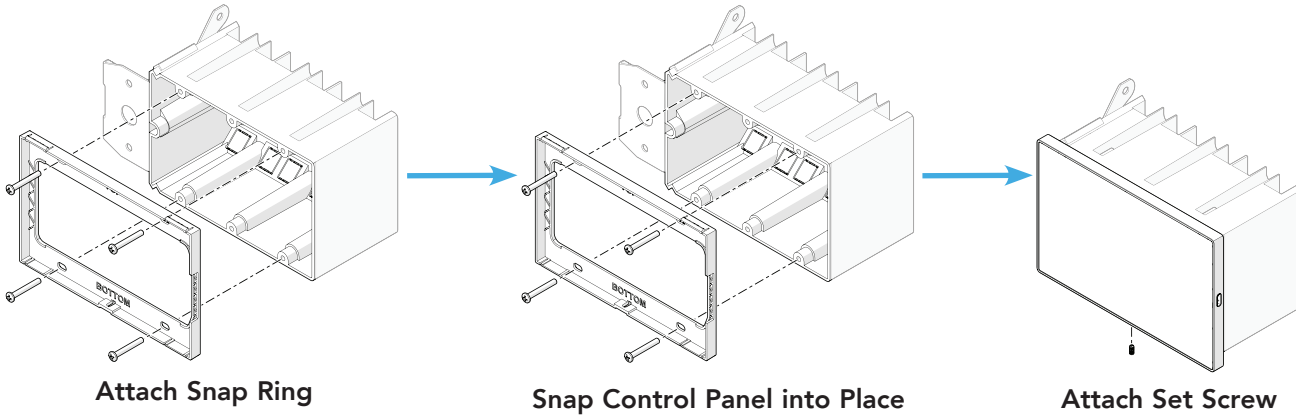**Attach Snap Ring**   **Snap Control Panel into Place**   **Attach Set Screw**

Note: In some cases, the control panel may be too far away from the processor to attach the USB-C extension cable. A snap-in cover is included in the box to prevent confusion.

Installation Accessories

Optional Wall Mount

An optional universal wall mount enclosure is available for the TS-1A if no desk or rack space is available.
Contact Wenger Corporation for ordering information.

**Wall Mount
Accessory**
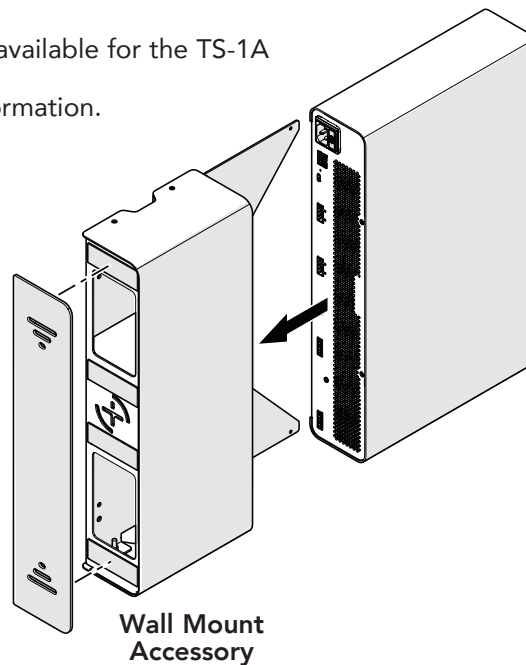
Optional Desk Stand

An optional universal stand is available for placing the control panel on a table or attached to the optional wall mount enclosure.
Contact Wenger Corporation for ordering information.

**Desk Stand
Accessory**
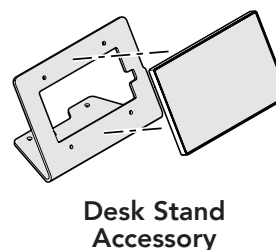
Making Connections

TS-1A: Amplified Model I/O Overview

AC Power
input & fuse,
100-240 VAC
50-60 Hz

USB-C

(4) Speaker
outputs

(1) Balanced
subwoofer
output

(2) Microphone
inputs

Network / control
panel connection

(2) Balanced
auxiliary inputs
(1 stereo set)
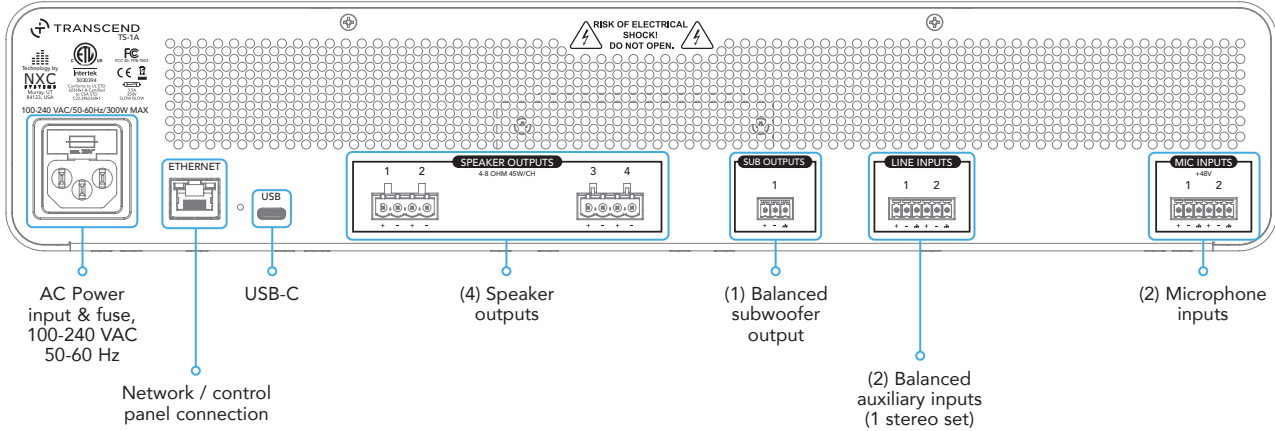
TS-1L: Line Out Model I/O Overview

AC Power
input & fuse,
100-240 VAC
50-60 Hz

USB-C

(6) Balanced
full range
outputs

(4) Balanced
subwoofer
outputs

(6) Auxiliary
inputs,
(3 stereo pairs)

(4) Microphone
inputs

Network / control
panel connection

TS-C: I/O Overview

USB-C
pass
through

POE+ network
connection
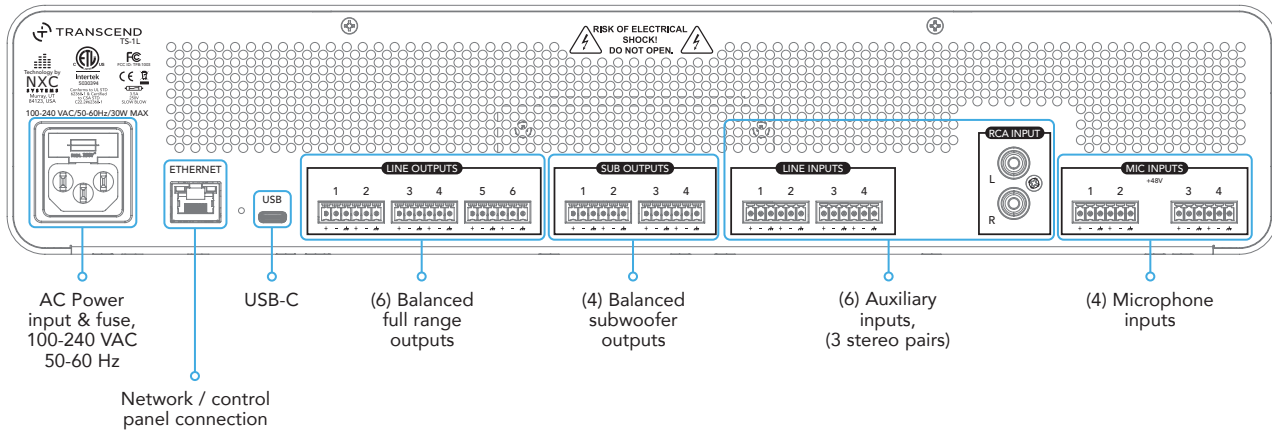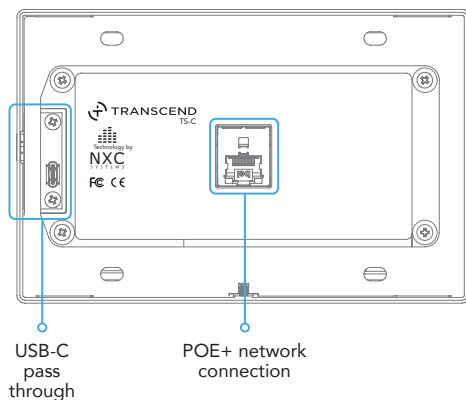
Note: Some connections have unique features and limitations.

Making Connections (continued)

Direct Connection

The Transcend TS-C Control Panel can be powered directly by a TS-1 Series Processor using a standard Ethernet cable.
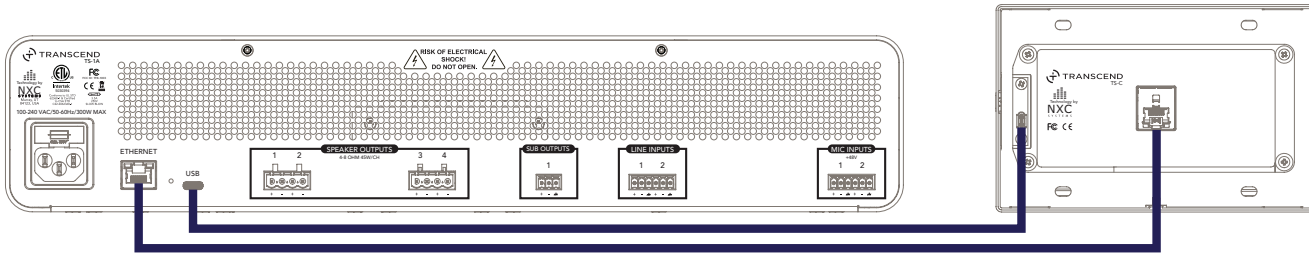
To enable recording to a USB drive via the control panel, a USB-C cable must be connected from the TS-1 Series Processor to the TS-C Control Panel.
Please note that USB-C cables typically have a maximum effective length of 20' (6096 mm). If the control panel is located beyond this distance and a USB-C connection is not possible, install the included dust cover over the USB-C port to prevent confusion or improper use.

Network Connection

TS-1 Series Processors may be operated by multiple TS-C Control Panels at the same time over a local network. Each control panel must be powered via Power over Ethernet Plus (PoE+) using either a PoE+ network switch or PoE+ injector.

Note: The network must support DHCP. Connections through non-managed switches is not supported.

Net Control

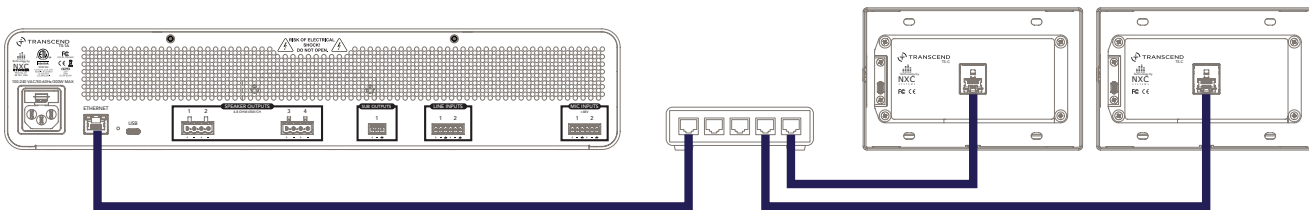When connected to a network, TS-1 Series processors can be conveniently controlled with any wired or wireless device that's connected to the same local network.
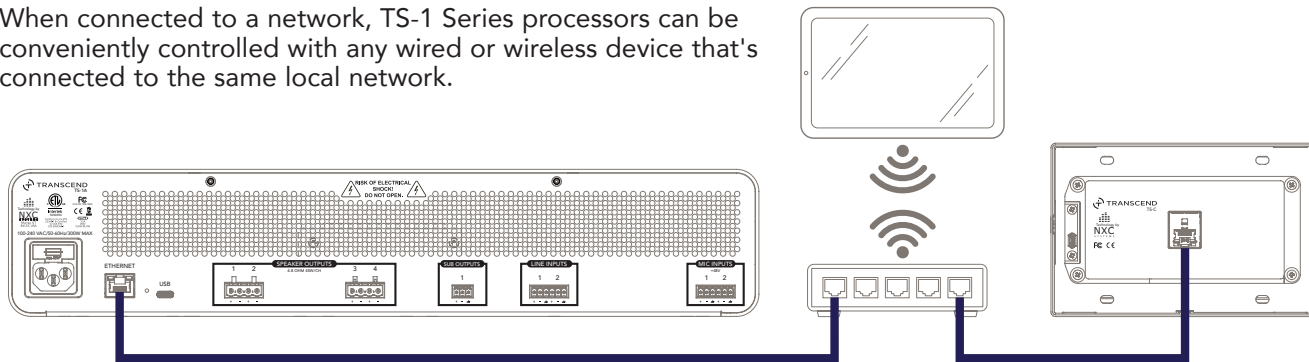
Open a web browser and navigate to the address: http://transcend.local:22181/webui or use the QR code popup on the touchscreen in the pull-down menu.

When a wireless device is being used as the primary point of control, a wired TS-C control panel should still be connected and available in case of feedback or lost connection. Note that some settings and controls are not available on the Net Control interface for security reasons. SoundLok installations have this feature disabled by default.

Control Over Local Network

Scan to open Web Browser

You must be connected to the same Wi-Fi Network as Transcend

Close
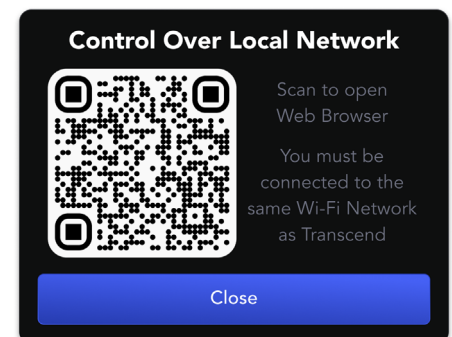
Making Connections (continued)

Acoustic Enhancement Microphones

Securely fasten the microphone cable conductors into the Phoenix contact terminal blocks provided. Be sure to wire the microphone polarity as labeled on the back of the processor. If this device was purchased as part of a kit, use the microphones provided.

Always use a set of high sensitivity condenser microphones for the best performance possible. Do not mix and match different microphones.

Do not use dynamic microphones or any microphone that cannot handle 48 V phantom power. The phantom power on the microphone inputs cannot be turned off and is always present. 48 V power can permanently damage dynamic microphones.

Do not connect or disconnect microphones while the system is on. It can create loud pops.

Do not move microphones or speakers from their installed locations after a calibration has been performed. If microphones need to be relocated you must re run auto calibration.

Auxiliary inputs

If you are connecting an unbalanced device to a balanced input. Add a jumper between the Ground and Negative terminals.
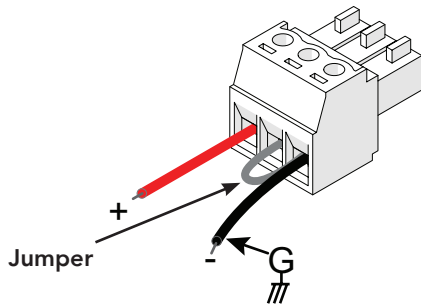
Main User Interface

Ensure that all components are connected and installed in their final locations before connecting power to the device. If you are re-installing the system in a new location, refer to "Troubleshooting and Additional Information" on page 24 for more information.

First Time Startup and Calibration

The first time the system is powered on, the control panel may perform a firmware update. Afterwords, follow the on-screen instructions to set up and calibrate Transcend. **The device cannot be used before a calibration is performed.**
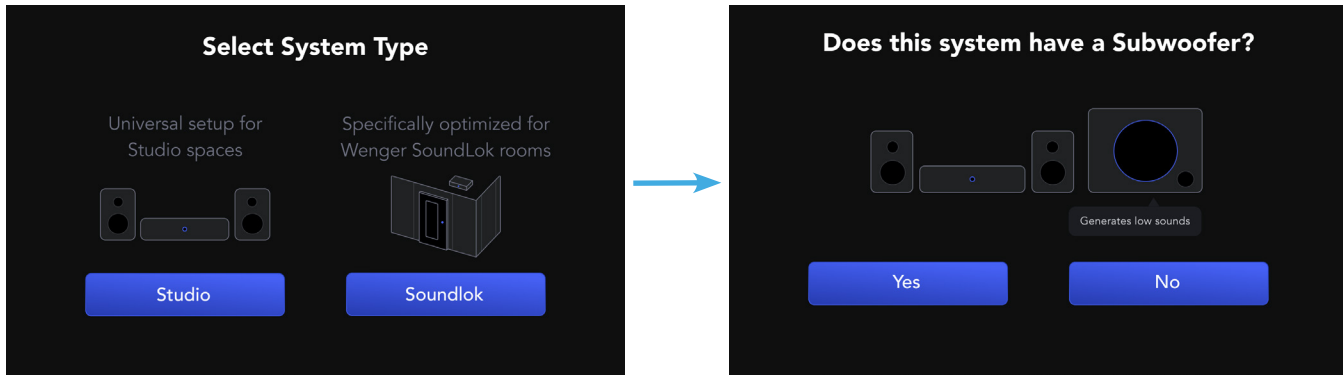
1. **Select System Type**
   Select "Studio" for universal setup if any type of complete kit system was purchased from Wenger Corporation or if using any custom speaker / microphone solutions. This is the General Purpose configuration.

   Only select "SoundLok" If this system is specifically installed in a Wenger SoundLok room. This will load custom configurations and presets tuned for the components included in these rooms. If Soundlok is inadvertently selected, the device will need to be factory reset, contact Wenger Corporation.

2. **Subwoofer Selection**
   Select "Yes" if an optional Subwoofer is connected to the system. A subwoofer is a larger speaker that generates low frequency sounds. The subwoofer connects to the "Sub Output" on the back of the processor. This will enable that output.

Main User Interface (continued)

3. **Auto Calibration**

   Now that Transcend knows what's connected to it, it's ready to calibrate. For the best results, it's necessary to leave the room before this process occurs. A 15 second countdown delay is provided so the user has time to leave the room before the calibration starts. Calibration takes a total of 50 seconds to complete.

   Select "Start Countdown" when ready to proceed. A series of short tones will be produced by the system as it automatically calculates tonality, balance and loudness.
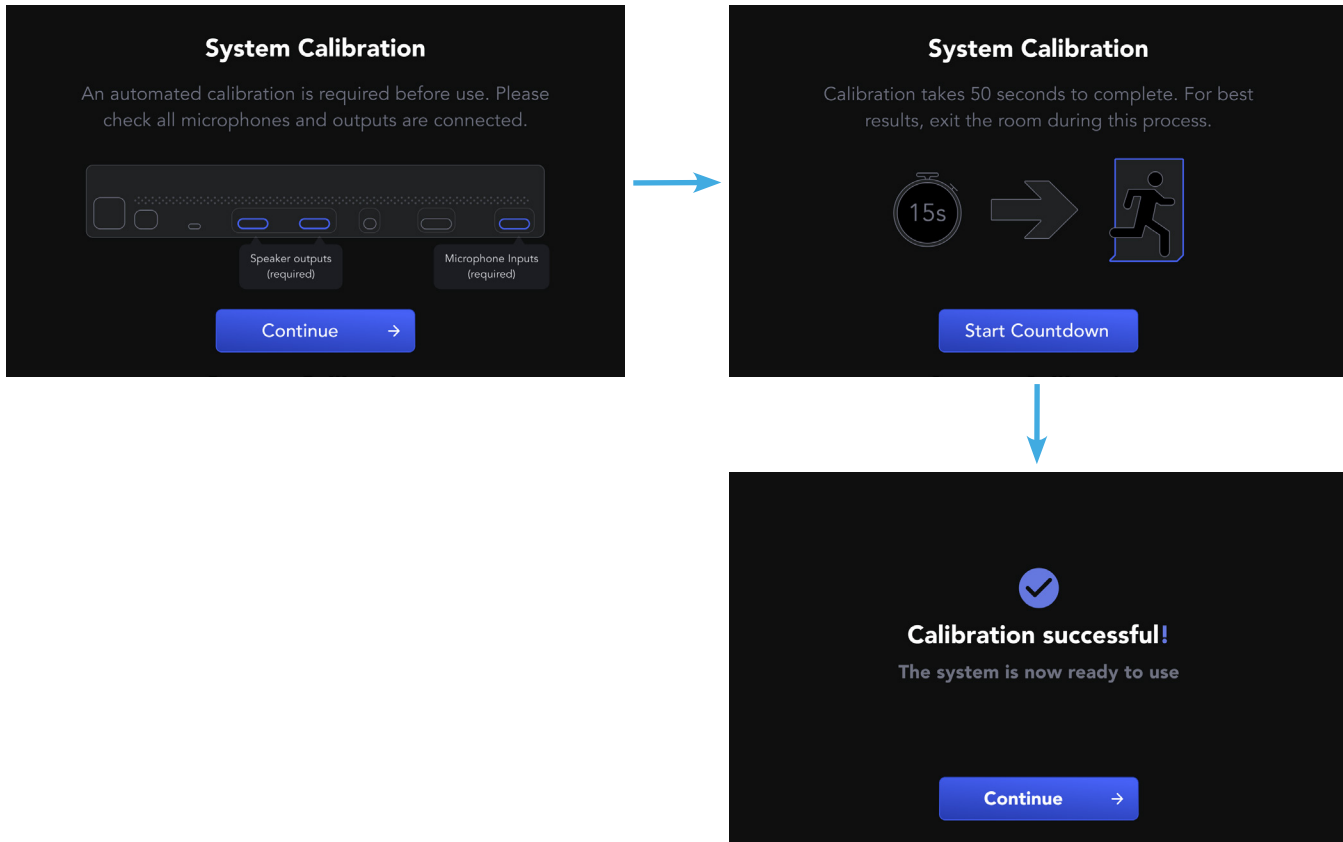
After calibration is completed it will continue to the home page. If a calibration error was detected, The screen will show specifically what microphone or speaker caused the error. Check to make sure the devices are connected properly and restart the calibration. If errors continue, refer to "Troubleshooting and Additional Information" on page 24 for more information.

Do not move any speakers or microphones after a calibration is completed or the system could become unstable! If components need to be moved to a new location, recalibration is required. Refer to "Calibration" in the "Administrator Settings" section on page 17 for more information.

Home Page

Note: Selecting the active preset will display a description of the acoustic setting.

Quick Settings menu
(swipe down from the top of the screen)

Auxiliary input
controls

Selected
preset

Acoustics
preset
selection

Active
Acoustics
volume

Audio file
management

Active
Acoustics
mute

Record and
playback controls

Record and
playback volume

Active Acoustics

Studio A   Studio B   Recital Hall

Chamber Hall   Concert Hall   Great Hall

Chapel   Arena   Grand Cathedral

Selected: Track 1   01:10.32

REC

Playback

Create a New Recording

Press "REC" to start a new recording and "Stop" to end the recording.
If a USB storage device is connected to the system it will automatically record directly to the USB device.

Start
Recording

REC

Recording
in Progress

Recording...   01:10.32
Stop   Discard

Preview
Recording

Playing recorded track   01:10.32
Save   Discard
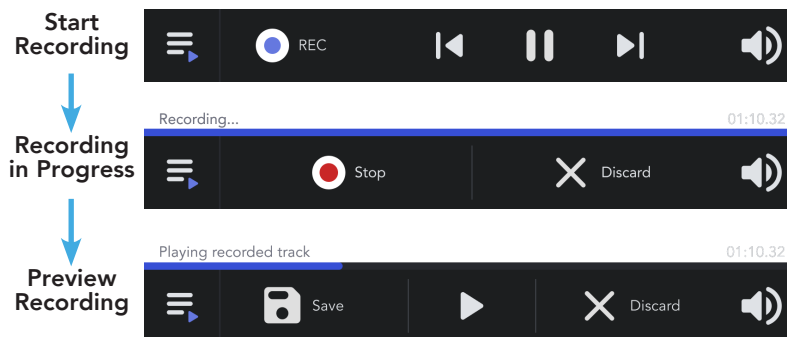
• The Play/Pause icon previews the recording without saving it.
• "Save" stores the recording and adds it to the Track List.
• "Discard" permanently deletes the recording.

Audio File Management

Local Storage Directory

External USB Directory

Local (120 min. left)

USB

Track 1

Transfer File

Track 2

Rename File

Delete File

Selected File

♪ Track 3

Track 4

Scrub Track

Track 5

Selected: Track 1   01:10.32

Collapse Menu

REC

Start New Recording

Transport Controls

Adjust Playback Volume
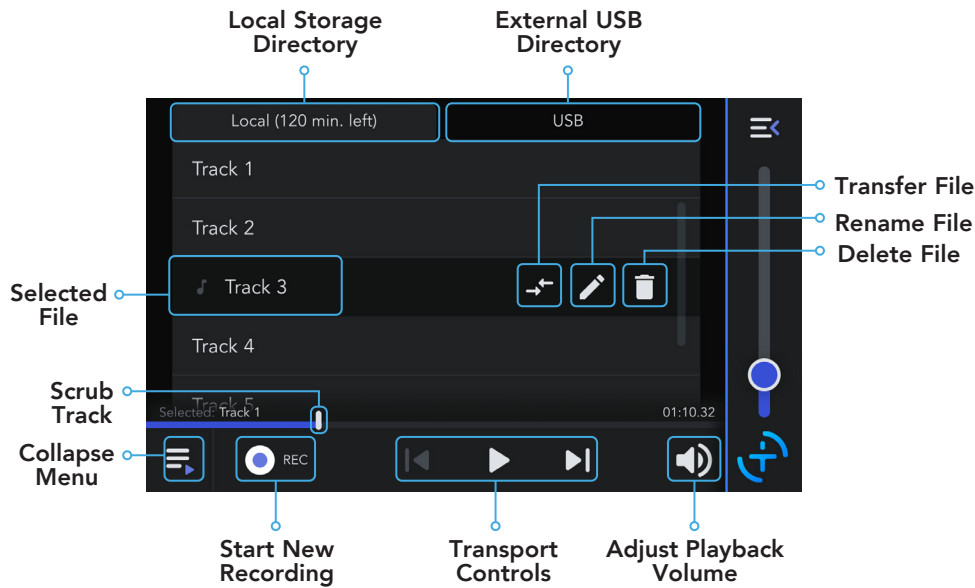
USB Recording and Playback

When a USB storage device is connected to the Transcend system, it will automatically create a directory named "Transcend" on the drive.

All recordings made by the system will be saved within this folder as a .WAV audio file.
Additionally, external .WAV audio files placed in the "Transcend" folder may be played back through the system.

Note: Transcend does not support compressed audio formats such as MP3 or AAC.
Transcend supports NTFS, EXFat, or FAT32 file systems.

Adjust Auxiliary Inputs

Signal Indicator

Collapse Menu

Aux Inputs

Bluetooth: Connected

Disabled Input

RCA

Balanced 1

Balanced 2

Input Volume

Input Mute
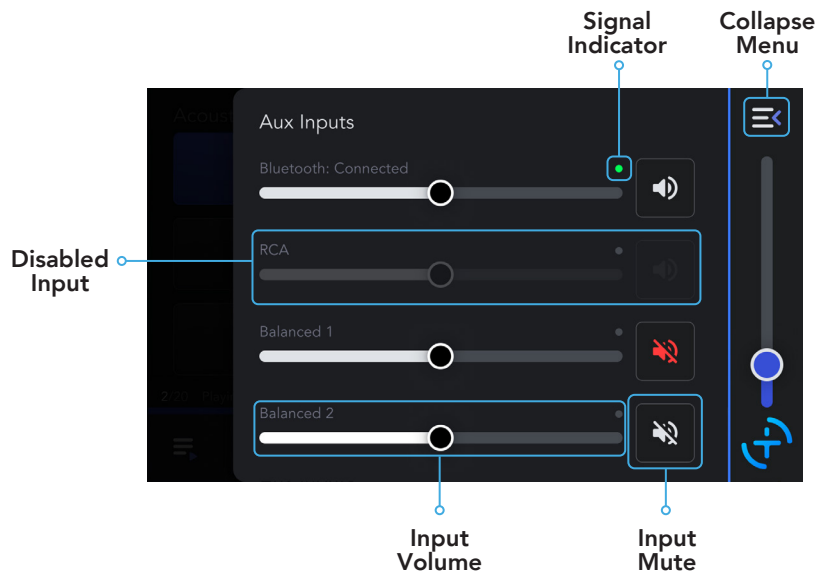
By default, all inputs will operate and display normally. Volume Lock out and Disabled inputs are configurable in the system settings. All auxiliary inputs operate independently from the active acoustics.

Quick Settings Menu

Swipe down from the top of the screen to access the quick settings panel.

Enable Stereo
Playback Mode

Pair a Bluetooth
Device

Displays a QR Code
that Links to Help Files

Stereo Mode   Connected

Help   Net Control   Settings   Standby

Puts the System into
a Low Power State

Displays a QR Code Link
to the Net Control Page

Displays a QR Code Link
to the Net Control Page

Bluetooth Pairing

To access Bluetooth settings, swipe down from the top of the screen to open the Quick Settings panel.
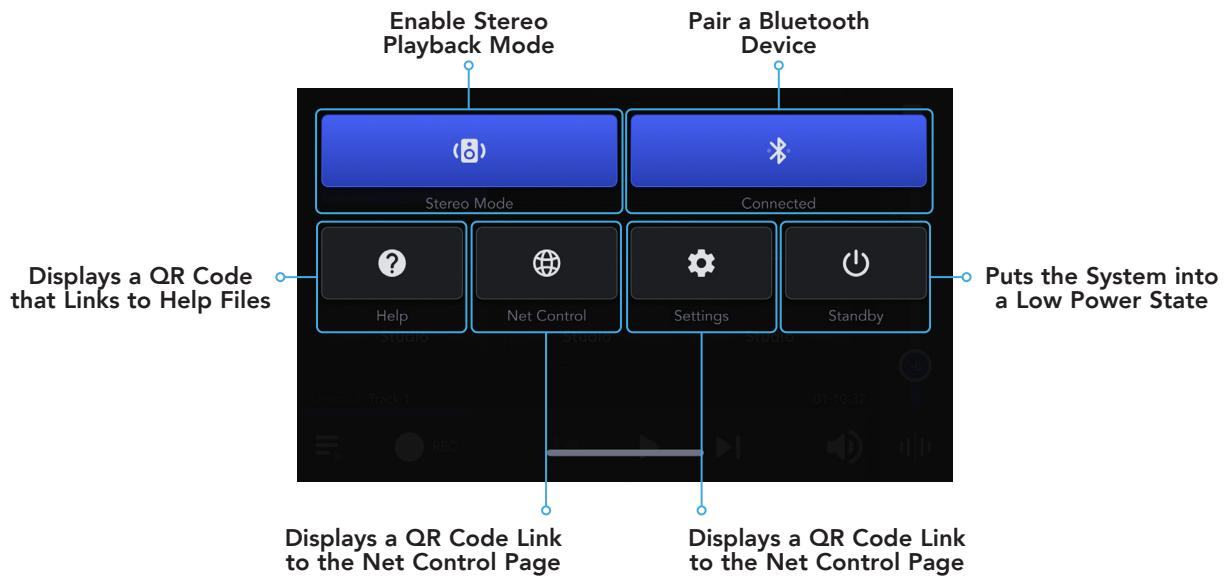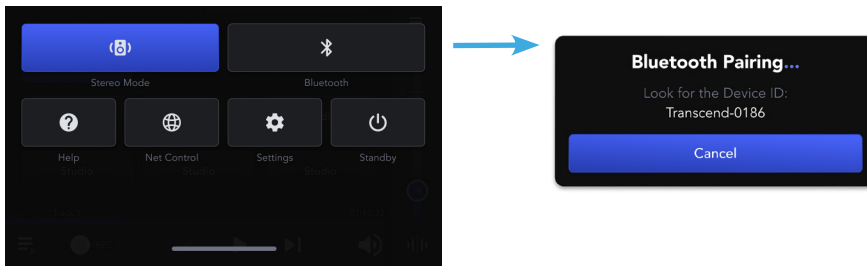
Tap the Bluetooth icon to initiate pairing mode, and display the device's Bluetooth ID. Follow the instructions for your phone, tablet or computer to add the Transcend TS-1 as an audio device.

Stereo Mode   Bluetooth

Help   Net Control   Settings   Standby

Bluetooth Pairing...
Look for the Device ID:
Transcend-0186

Cancel

Note: Transcend can pair with only one device at a time and will retain only the most recently connected device.

Enable Stereo Mode

Stereo Mode

Playback, Auxiliary and Bluetooth audio inputs may be routed to all speakers simultaneously, or a stereo L / R pair. Note that this option may be unavailable for some systems.

System Settings

Settings

Transcend offers customizable configuration options that may be tailored for each installation. Access to the Settings menu is secured by a 5-digit numerical passcode to prevent unauthorized changes.

The default passcode is "12345." For installations in public or shared environments, it is strongly recommended to change this passcode and securely record it in a location you can easily access. If you need to reset the passcode, please contact Wenger Corporation for recovery assistance and instructions.

Power Off the System

Standby

Select the "Standby" icon to place the system into a low-power state, conserving energy.

To wake the system, simply touch anywhere on the screen.

Administrator Settings

To access the Administrator Settings, open the vertical pull down menu by swiping down on the home page from the top of the screen and select settings

You will be prompted to enter a 5-digit passcode. The default passcode is "12345". It is suggested to change the passcode upon installing the device if it's in a public area.
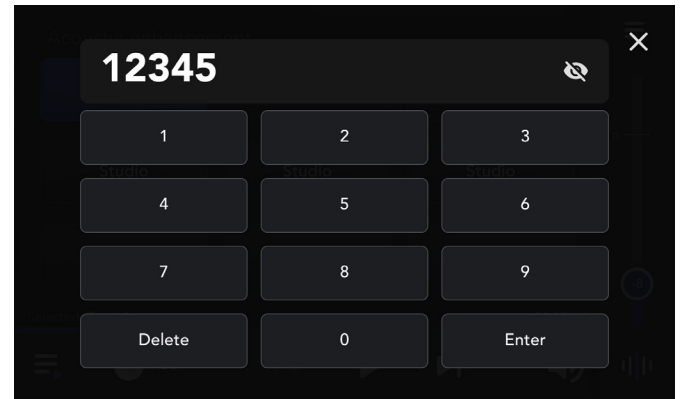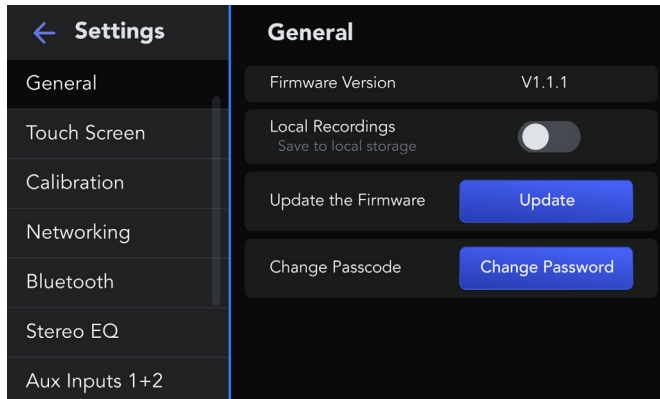
General

Firmware Version
Displays the current version of firmware running on the processor. To check for new firmware navigate to wengercorp.com/transcend.

Local Recordings (Toggle)
When toggled on it enables the ability to make and store recordings on the internal memory. When toggled off, recordings can only be made on an attached external USB flash drive.

Update Firmware
When a USB drive is connected with a valid firmware file, the system can be updated. Firmware update files must be placed in the "Transcend" directory on the USB drive and specifically named "transcend.swu" for the processor to recognize it. Once the processor updates it will automatically update all the control panels.

Change Passcode:
Displays a keypad prompting to change the numeric passcode. For an unknown passcode, see the "Utility Menu and Password Reset" section on page 30. By design, resetting a password isn't easy, so be sure to document it.

Touchscreen

Firmware Version
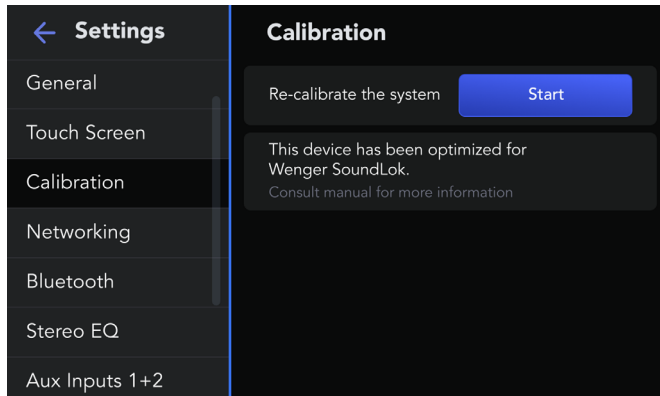Displays the firmware version of the touchscreen at hand.

Screen Brightness
Adjusts the screen brightness of the POE touchscreen.

Administrator Settings (continued)

Calibration

Transcend can be easily re-calibrated at any time through the calibration menu to re-optimize system performance. This needs to be done if any speakers or microphones get relocated, or even if you add/remove a large piece of furniture in your space that significantly affect the acoustics of the room its installed in. To enter calibration mode, click Start.

Settings	Calibration
General	Re-calibrate the system **Start**
Touch Screen	
Calibration	This device has been optimized for Wenger SoundLok.
Networking	Consult manual for more information
Bluetooth	
Stereo EQ	
Aux Inputs 1+2	

For Wenger SoundLok room installations, you should see an additional description box that identifies the system as "optimized for Wenger SoundLok". If the system is not installed in a SoundLok room, Transcend will need to be factory reset to switch out of this mode.

Note: Depending on the type of installation and setup configuration, you may not see all of these settings below.

Levels
Displays the velocity meters of the enhancement microphones. Use this to check for faulty mic connections.

Pink Noise Generator (Toggle)
Toggles pink noise output through all outputs of the processor. Use this to check for faulty speakers or connections.

AES Crossover (Toggle)
Enables a 2-way matrix crossover that sends all low frequency content from the active acoustics to the subwoofer output. This should be used if a subwoofer is connected, or to filter low frequency range of connected speakers. Use the gain adjustment to balance the volume output to the subwoofer.

Stereo Output Crossover (Toggle)
Enables a separate 2-way matrix crossover that sends all Stereo Mode content from the Aux mixer to the subwoofer output. This should be used if a subwoofer is connected, or to separately filter the low frequency range of the speakers connected to the stereo outputs. Use the gain adjustment to balance the volume output to the subwoofer.

There are two separate settings for crossover because acoustic enhancement content performs best spatially with the crossover point set lower so low frequency content is better spread through the room across the mains. This helps mix room modes around. Alternatively, when listening to stereo playback you may want it set higher so there's more punch in mixed/mastered content output.

Re-calibrate
Selecting this button will start a 15 second countdown before the system calibrates. In some rare cases, large scale systems may have calibration disabled to prevent custom tuned settings from being overwritten. Contact Wenger Corporation directly if you have any questions or issues with your system re-calibration.

Networking

Displays various network statistics and serial numbers for the control panel and processor. Transcend uses MDNS to access the net control page. If web control is enabled on your system and you cant access the web page, try using the "Remote Control Direct" address. Most often, accessing the system over a VPN requires the direct address.

Stereo EQ

All Auxiliary Inputs, Bluetooth and Playback are routed through a dedicated six band minimum phase PEQ when Transcend is in Stereo Mode. Use the six PEQ settings in this sub menu to tune the stereo output. This will not affect acoustic enhancement or surround playback. The system must be in stereo mode for this option to show in the administrator settings.

Administrator Settings (continued)

Bluetooth

Bluetooth ID
Displays the processors unique Bluetooth ID.

Status
Displays the current pairing state of the Bluetooth module.

Levels
Displays the velocity meters for the Bluetooth input directly into the preamp.

Enable Input
When toggled on, this enables the Bluetooth input. Disabling the Bluetooth input will gray out the ability to pair to the device or change any options on the auxiliary inputs page.

Sensitivity Adjustment
Adjusts the pre-gain of the Bluetooth input. This can be used to limit the maximum amount of volume accessible to the user.

Auxiliary Inputs

There is a Settings Menu for each of the three auxiliary inputs all with the same options. Note that if you have a TS-1A model, Aux Inputs 3-6 are by disabled by default as there is only one set of stereo inputs on the 1A processor.

Levels
Displays the velocity meters for the auxiliary input preamp. Use this to gauge the input level when setting up new devices. "0dB" on the meter is the clipping point, adjust accordingly to minimize distortion.

Input Name
Displays the current name of the input. Selecting "Rename" will display a full keyboard to change the name shown on all user interfaces.

Enable Input (Toggle)
When toggled on enables the input. When toggled off, the input will be muted and the on screen user controls will be grayed-out and inaccessible.

Volume Lockout (Toggle)
When enabled, the volume control on the user interface will be grayed-out and become unadjustable at the currently set volume level. The mute button will still be available.

Sensitivity
Adjusts the post gain of the input preamp of the input. Use this control to boost inputs that are to quiet or limit inputs that are too loud.

Resources for Professionals

To view complete product offerings from out of the box solutions to turnkey installations using the TS-1 Series processors, visit wengercorp.com/transcend. Technical sheets, specifications, example applications, tutorials, research papers and more are all available for download.

Replacement Components

• TS-C USB-C Pass-through Port

• TS-C Mounting Ring

USB-C Pass-through Port

Mounting Ring
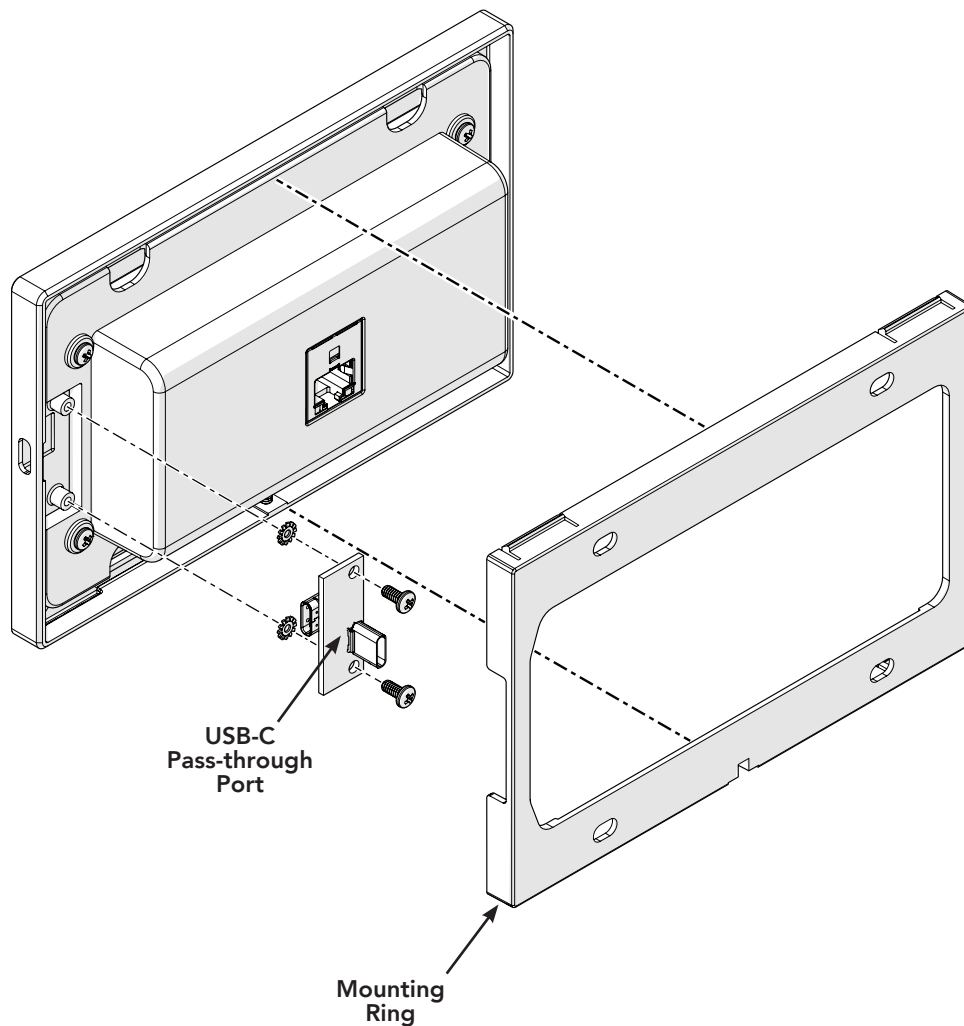
Product Technical Specifications

Data Interfaces

1 RJ45	POE+ out or network interface
1 USB type C	USB 2.0
Bluetooth	SBC

Hardware Conditions

Operating Temperature	0°C – 40°C (32°C – 104°F)
Weight (In Box)	13.8 lb (6.3 kg)

Power Supply

Connector Type	IEC C14
Voltage Range	100 – 240 V
Frequency Range	50 – 60 Hz
Power Consumption	TS-1L 30w Max, TS-1A 300w Max

DSP Processing

Sample Rate	44.1 kHz
A/D & D/A Converter Depth	24-bit
Digital Processing Depth	32-bit floating
Recording Depth	16-bit
Recording File Type	WAV

Acoustic Enhancement Microphone Preamps (At +19dB Gain)

Phantom Power Voltage	48 V
Phantom Power Current	15 mA/CH Max
Input Impedance	750 Ohms
Frequency Response (-3dB)	10 Hz – 22 kHz
EIN (A-weighted 150 ohm)	120 dBA
THD+N (1kHz @ -1 dBFS)	0.002%
SNR	102.2 dBA
DNR AES17 (A-Weighted)	102.6 dBA
IMD (SMPTE) @-20dBFS	-80 dB
Crosstalk	106.3 dB
Input Gain Settings	Low +19 dB, High +25 dB

Balanced Line Inputs

SNR (A-Weighted)	111 dBA
THD+N (1kHz @ 0 dBFS)	0.002%
DNR AES17 (A-Weighted)	111 dBA
IMD (SMPTE) @-20dBFS	-90 dB
Maximum input Level	+14 dBU
Crosstalk	-114 dB

Unbalanced Line Input (RCA):

SNR (A-Weighted)	108 dBA
THD+N (1kHz @ -3 dBFS)	0.01%
DNR AES17 (A-Weighted)	109 dBA
IMD (SMPTE) @-20dBFS	-80 dB
Maximum input level	2 Vrms

Balanced Line Outputs:

SNR (A-Weighted)	114 dBA
THD+N (1KHz @ -1dBFS)	0.004%
DNR AES17 (A-Weighted)	114 dBA
IMD (SMPTE) @ 1Vrms	-95 dB
Crosstalk	-115 dB

Powered Outputs (On TS-1A)

Amplifier Class	D
SNR (A-Weighted)	111.5 dBA
THD+N (1KHz @ -1dBFS)	0.04%
DNR AES17 (A-Weighted)	112 dBA
IMD (SMPTE) @ 1Vrms	-53 dB
Impedance Range	4 – 8 Ohms
Output Rating (<1% THD)	45w RMS x4ch (4 Ohms)
	25w RMS x4ch (8 Ohms)

Dimensions

TS-1A / TS-1L Processor

17.35"
(441 mm)

10.38"
(264 mm)

19"
(483 mm)

18.28"
(464 mm)

3.48"
(88 mm)

3"
(76 mm)

4x
0.25 x 0.44
(6 x 11 mm)
Slot

3.4"
(86 mm)

TS-C Control Panel

Front

6.25"
(159 mm)

4.05"
(103 mm)

1.13"
(29 mm)

2.26"
(57 mm)

Back

3.63"
(92 mm)

1.31"
(33 mm)

0.4"
(10 mm)

3.25"
(83 mm)

3-Gang
Snap Ring

4x
0.186 x 0.311
(5 x 8 mm)
Slot
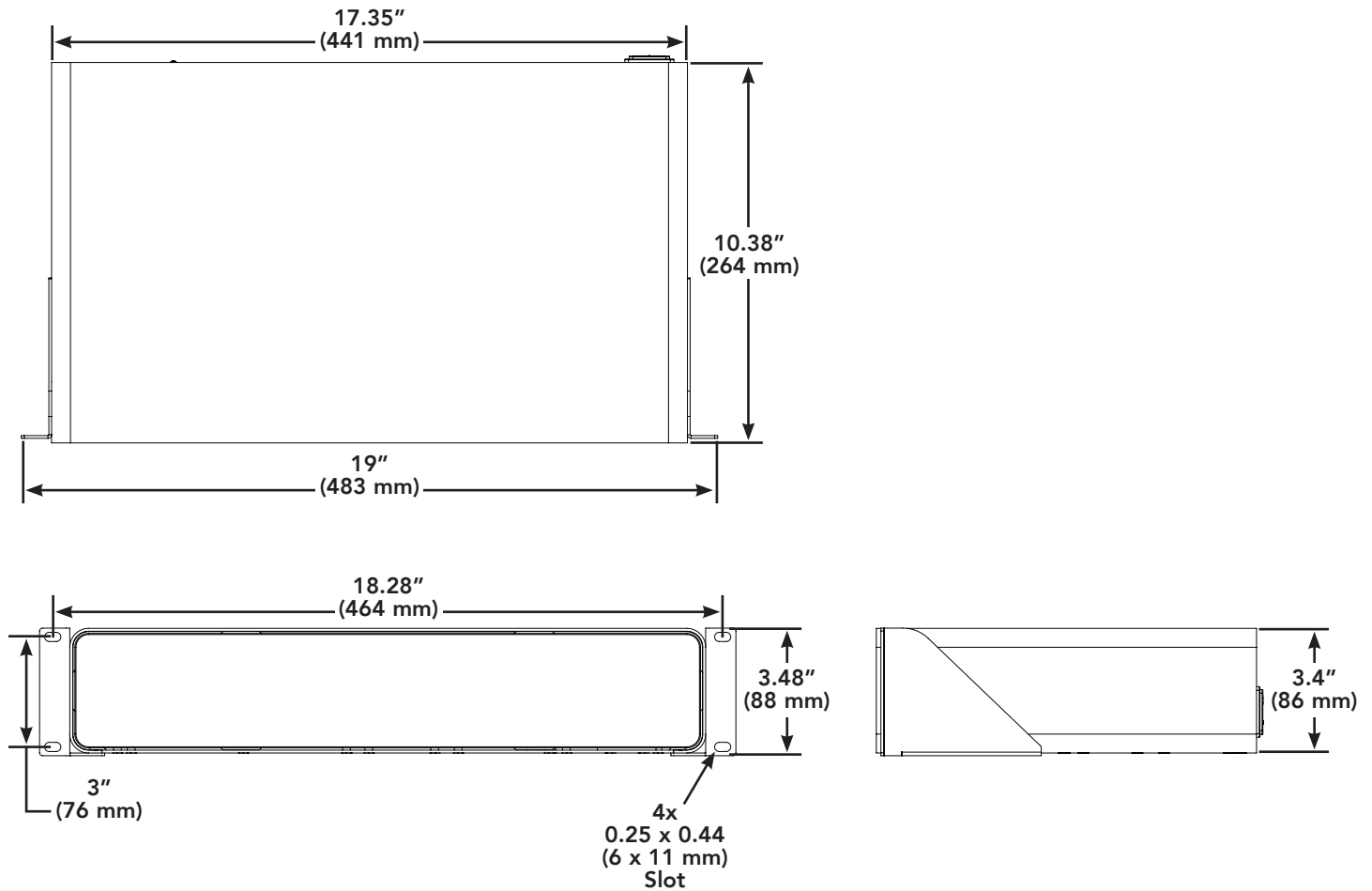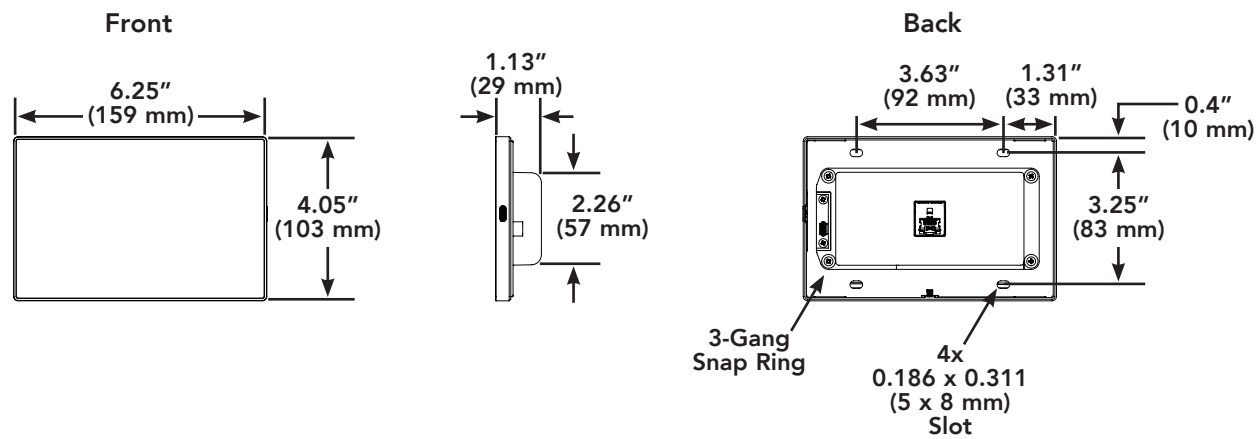
Declaration of Conformity

Manufacturer's Name: NXC Systems LLC, on behalf of Wenger Corporation

Manufacturer's Address: 5223 S. Ascension Way, Suite 100, Murray, UT 84123

Manufacturer's Email: support@NXCsystems.com

Model Numbers: TS-C, TS-1A, TS-1L Audio Processing and Amplification System

We, the Manufacturer, declare under our sole responsibility that the products listed have been tested and conform to the following technical specifications:

- AS/NZS CISPR 32:2015 + AMD 1: 2020

- EN 55032:2015 + A1:2020

- EN 55032:2015 + A11:2020

- EN 55035:2017 + A11:2020

- CISPR 35:2016

- ETSI EN 301 489-1: V2.2.3

- ETSI EN 301 489-17: V3.2.4

- 47 CFR FCC PAR 15 SUBPART B

- ICES-003, ISSUE 7

- IEC 62368-1 (Third Edition): 2018

- UL/CSA 62368-1:2019

- EN IEC 62368-1:2020+A11:2020

- National Standard SASO-IEC 62368-1:2020

- J62368-1 (2023)

- AS/NZS 62368.1:2022

RoHS Compliant

Intertek 5030394
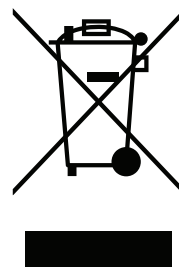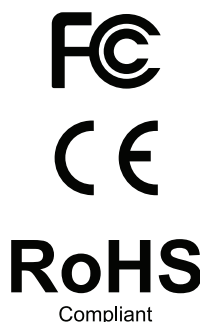
United States, FCC
(TS-1A / TS-1L) Contain Transmitter Module FCC ID: TFB-1003

These devices comply with Part 15 of the FCC Rules, and the requirements for modular transmitter approval as detailed in FCC public Notice DTS LWB 052716. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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 to 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.

Notice: Modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment!

WEEE Notice
This appliance is labeled in accordance with European Directive 2012/19/EU concerning Waste of Electrical and Electronic Equipment (WEEE). This label indicates that this product should not be disposed of with household waste. It should be deposited at an appropriate facility to enable recovery and recycling.

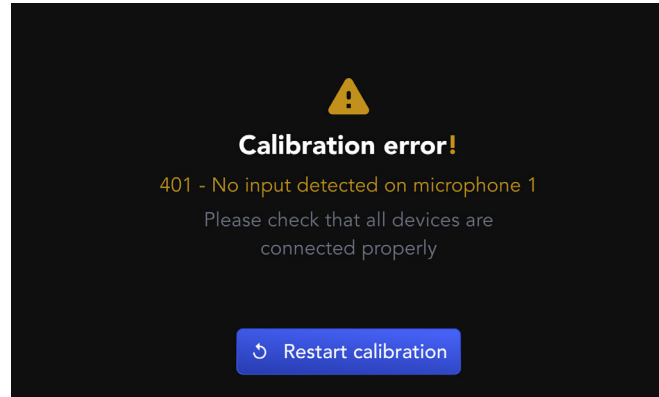# Troubleshooting and Additional Information

Popup Error Messages

File does not exist; Rename Failed	If multiple users are simultaneously using the system it may take a couple seconds to update the track list across the Web interfaces. Wait a few seconds for the list to update.
Name Invalid	There may be a file with the same name already on the device or an invalid character was used to name the file.
USB Memory Full	The removeable storage drive is at full capacity. Transfer some of the recordings onto another device and remove them from the USB to make more space. There may also be excess files outside the Transcend folder taking up storage on the drive.
Track capacity reached	The internal storage on Transcend is limited to 20 individual tracks. Delete some of the stored recordings before transferring more from a USB.
Internal recordings are prohibited	Saving to the internal storage has been disabled by the administrator. To change this behavior, toggle on the "Local Recordings" option in the administrator settings on the general page.
USB storage unavailable	A USB storage device is not detected. Try re inserting the USB device. Connect it to a computer and verify its formatted NTFS, EXFAT, or FAT32 file system. If your are using the pass through on the control panel, check if the cable Is bad by connecting the USB directly to the processor.
Transfer Failed	Transferring data from the connected USB was interrupted. Check that the USB drive and any extension cables are plugged in all the way. Try connecting the USB directly to the processor to determine if a cable or connector may be bad.
Transfer Aborted	Displays when the user cancels a file transfer.
Not enough space on destination media	The track being transferred Is larger than the remaining amount of storage space on the device. Delete or offload files to make space.
Storage full	The internal memory of the processor has reached the maximum 120 minutes of recording time. Delete tracks to make space or offload them onto a USB drive.
Backup / Restore Failed	Any file system error while performing this function can cause this message. Check to make sure the USB has available capacity to generate new files. Make sure the USB is connected properly. If this error continues, try reformatting the drive in case there are corrupted files.
Factory Reset Failed	This is a critical file system error. Contact Wenger Corporation
Firmware Update Failed	If the firmware update process was interrupted in any way the device will restore itself back to the previous version and display this error. Removing the USB mid update, corrupted files, loss of power, disconnecting TC-C control panels, or a random glitch in the matrix can cause this. Try performing the update again, if it continues re download the update file and try a different USB.
Unsupported file format	Transcend only supports playing back .WAV files, It does not support compressed file formats like .mp3 .ogg .m4a etc.. The file will need to be converted to .WAV on an external device before it can be played.

Troubleshooting and Additional Information (continued)

Calibration Errors

When performing an automated calibration this page will be displayed if an error has been detected.

When Transcend calibrates it detects each individual input and output is connected properly. If one of the microphones or speakers is not connected or wired incorrectly it will display a message identifying which device to check. You can not skip this step and go directly to the home page


Calibration error!

401 - No input detected on microphone 1

Please check that all devices are
connected properly

↻ Restart calibration

Low input detected on microphone Input
- Check that all microphones are securely connected to the processor and no stray wire strands are bridging between the connections on the phoenix connector.
- Check the polarity is correct.
- If all microphones are detected as at fault, this can occur if all the speakers are turned off or disconnected. Check that the speakers are connected.

Amp Fault (TS-1A)

The Class D amplifiers inside the TS-1A have built-in fault detection that can auto shutdown the internal circuitry to prevent damage to the system. This can be caused by thermal overload, short circuiting, low impedance detection and output over voltage. The processor must be physically unplugged from power to be reset from this state.

Amp Fault Detected!
Disconnect power from the processor to reset.
See Reference Manual for more information.
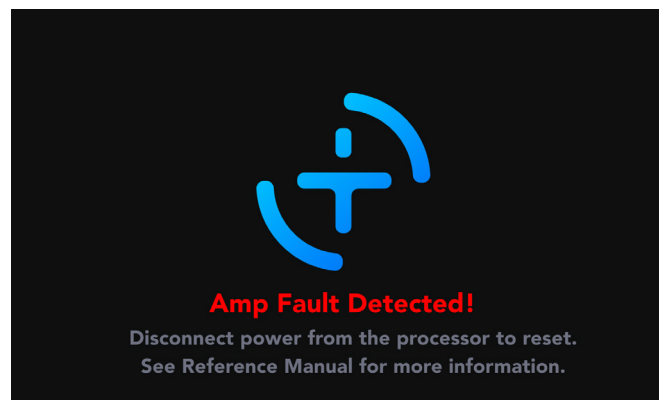
Troubleshooting Amp Faults

- Check the speaker wiring. If any of the speakers are short circuited or a driver is potentially blown, that will trigger an amp fault. Detecting an ohm load significantly lower than 4 ohms is what causes this particular failure mode.
- Check if the processor is over heated. If it is, remove any objects that may be blocking ventilation. The amps in the TS-1A are designed to have a low threshold for thermal overload to increase the longevity of the circuitry.
- This can occur while playing back loud content at max volume or after a potential burst of loud audio output. Consider adjusting the sensitivity of external audio inputs so its not as likely to occur in the future. Transcend has built in hard limiting but in rare cases things can slip by depending on the impedance of the speakers.

Troubleshooting and Additional Information (continued)

Utility Menu and Password Reset

It is intentionally difficult to perform a password reset, system restore, or factory reset on the device for obvious security reasons. If you need to do any of the above, Contact Wenger corporation for a unique security key file and follow the instructions as given.

The security key file will bypass the password screen allowing a new password to be set on the general page. An additional utility menu will be available at the bottom of the list.
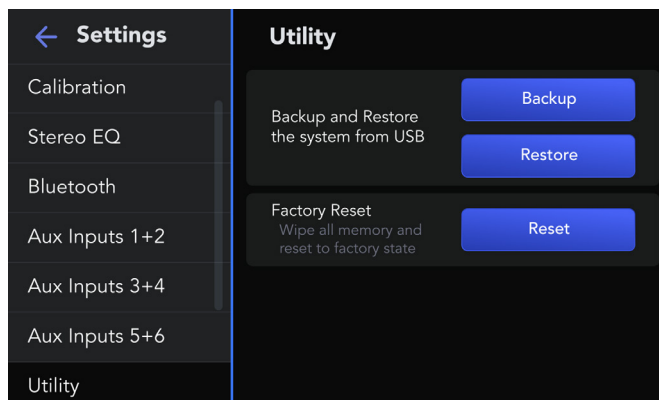
Backup System
Creates a complete backup file of the system including calibration, custom presets, and all user settings onto the attached USB drive.

Restore System
If a backup file is preset on the USB, it will read it and restore all calibration data, custom presets and user settings on it.

Factory Reset
Performing a factory reset completely wipes the system and resets it to factory default settings. Any custom presets or tuning on the system done by Wenger Technicians will be completely overwritten. For a system locked in SoundLok Mode, this is where the device can be reset and switched into Studio Mode.

Wenger®

C O R P O R A T I O N

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JRCLANCY · creative conners · TSC | TEXAS SCENIC COMPANY