C303(W)-D-P

Tri-element Array Dante Microphone

User Manual

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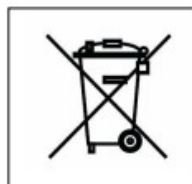
IMPORTANT SAFETY INSTRUCTIONS

⚠️ TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

1. Read these instructions.

2. Keep these instructions.

3. Heed all warnings.

4. Follow all instructions.

5. Do not use this apparatus near water.

6. Clean only with a dry cloth.

7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

10. Only use attachments/accessories as specified by Clockaudio.

11. Use only with the bracket specified by the manufacturer.

12. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, if the apparatus has been exposed to rain or moisture, does not operate normally or has been dropped.

13. If rack mounting, provide adequate ventilation. Equipment may be located above or below this apparatus but some equipment (like large power amplifiers) may cause an unacceptable amount of hum may generate too much heat and degrade the performance of this apparatus.

<u>**At the end of the life of this equipment**</u>

<u>**Dispose of according to local regulations**</u>

Warranty

Thank you for purchasing a Clockaudio product. We are confident that this product will give you many years of trouble free operation and is backed up with a one year warranty.

This product is guaranteed for 12 months from the date of purchase. Any defect that arises due to faulty materials or workmanship will either be repaired free of charge or replaced by the agent from whom you purchased the unit. Please note charges will be incurred on any product returned for service / repair not in warranty or has been subject to customer abuse or incorrect wiring.

The guarantee is subject to the following provisions:

The warranty does not cover accidental damage, misuse, cabinet parts, knobs, batteries or consumable items. Any product returned to Clockaudio failing to meet the terms listed will incur a repair and shipping charge.

The product must be correctly installed and operated in accordance with the instructions supplied with the product.

Unauthorized modifications and alterations to the original specifications will render the warranty void

The product must be used for the sole purpose that it was designed for.

The warranty given is strictly with the original owner and becomes invalid if the product is resold or becomes damaged by inexpert repair.

Product purchased outside of the countries served by Clockaudio designated / approved agents are not covered by the warranty.

Specifications / improvements are subject to change without notice.

Clockaudio disclaims any liability for incidental or consequential damages.

The warranty is in addition to and does not diminish your statutory legal rights

As part of a continuous product improvement program we reserve the right to change specification without prior notice.

This warranty applies only to items returned to Clockaudio, shipping costs prepaid, within one year from the date of purchase.
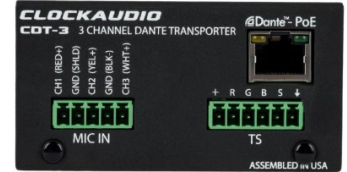
Package Content

C303(W) microphone

RGB Ceiling Rose with

Threaded past-through

 and Flanged nut

CDT-3 Dante Transporter

Plenum rated enclosure

EZ-Firestop® Grommet

Locking Ring

2.5 meter Mic cable with
Mini XLR connector

Cable gripper / Eye bolt

Safety Cable

Dual-Lock strips / Allen key

Grounding wire / cable tie

Installation guide

Installation Instructions

Remove the ceiling tile to install the C303-D-P microphone.

Drill a 16 mm / 0.65" diameter hole in the ceiling tile.

Remove the flanged nut from the threaded pass-through.
Insert the threaded pass-through into hole of the ceiling tile and
refit the flanged nut to secure the plenum enclosure and the ceiling rose to
the tile.

Connect the C303 microphone to the Mini XLR connector and feed the other
end of the cable in the pass-through.

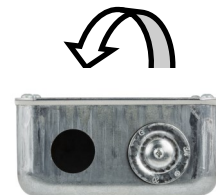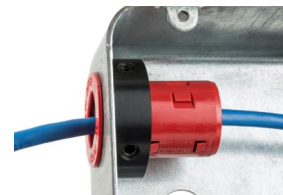Pull the cable until the desired height of the microphone is obtained.

The spare cable may be coiled up and looped inside the ceiling enclosure to
allow future height adjustment if required. Lock the cable in place with the ca-
ble tie.

Place the two halves of the EZ-Firestop grommet around a CAT5e or better
cable and snap together.

Leave approximately 6" of cable to make connections easily inside the ple-
num enclosure.

Firmly push into opening. Using the Allen key, tighten the locking ring around
the grommet.

Note: Enclosure ships ready to use with the Firestop grommet. If using a conduit
to pass the network cable, remove the cap covering the 1 ⅛ " opening for conduit
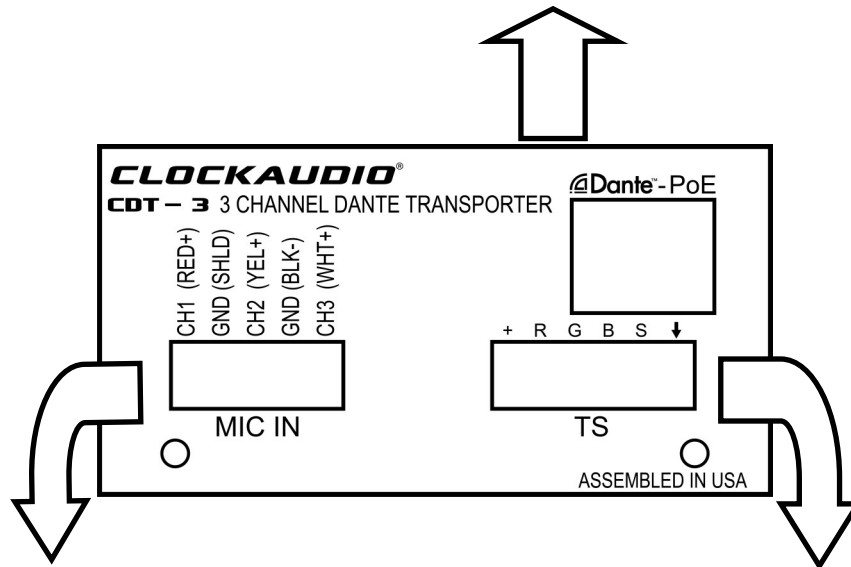and install it on the 1" opening.

Connections

All connections should be made before the power is applied.

Connect the network cable to the Dante port and to a network switch that supplies Power over the Ethernet (PoE).

If an active connection is detected, both LEDs will come on and if there is network activity, the yellow LED will flash.

Connect the Microphone cable

to the 5-Pin PCB Phoenix block connector.

Also connect the grounding wire to Pin 4.

Pin	Name	Cable color
1	CH1	Red
2	GND	Shield
3	CH2	Yellow
4	GND	Black + Grounding wire
5	CH3	White

Connect the Ceiling Rose RGB LED cable

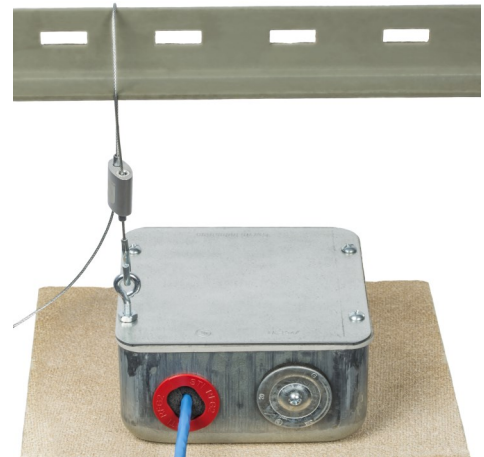to the 6-Pin PCB Phoenix block connector.

Pin	Name	Cable color
1	+	White
2	R	Red
3	G	Yellow
4	B	Black
5	S	x
6	↓	Shield

Safety Harness

Remove the protective strip on the self-adhesive dual-lock fastener and stick to the bottom of the CDT3. Remove the second protective strip and stick the unit to the bottom of the enclosure .

Affix lid down with 3 screws and supplied M3 eyebolt and washer.

Use one the lid screws to secure the eye bolt of the grounding wire.

IMPORTANT: For safety reasons the completed installation should be secured to a ceiling truss or any structure capable of taking 3Kgs (7lbs) this includes the weight of a ceiling tile. Attach the supplied safety harness hook to the eyebolt and insert the free end of the cable through the entrance hole on the gripper. Loop the cable over a secured structure then pass the cable back through the other hole in the gripper and slide / tension the cable through the gripper.

To release, press the clutch button allowing the cable to freely move back and forth for quick and easy adjustments.

Warning: Do not pull on the microphone cable once installation has been completed.
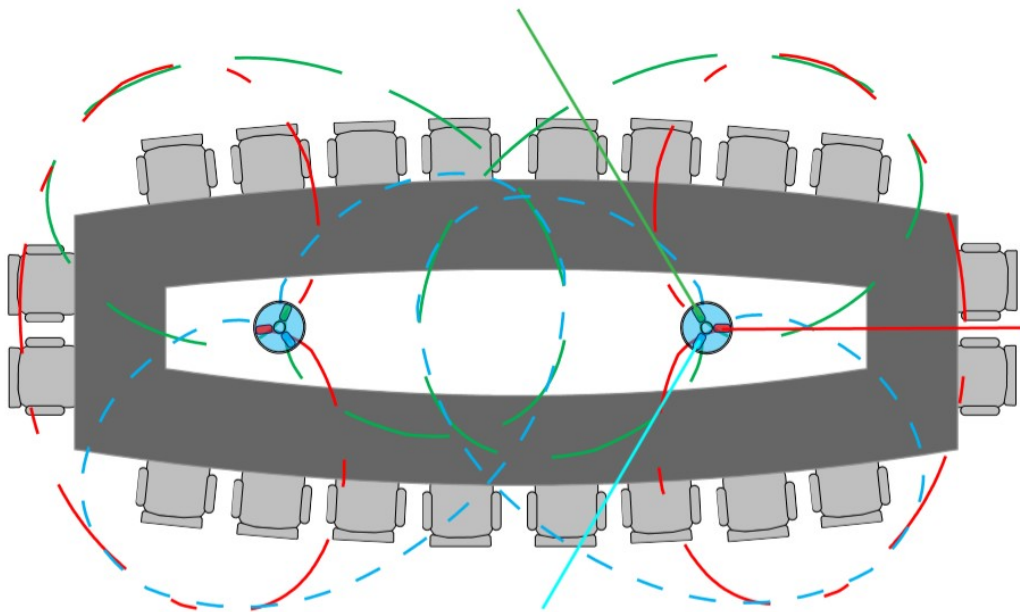
Microphone Placement

Follow these guidelines for best results:

Optimal height for covering seated participants is 7.5' above finished floor.

At this height, one C303-D-P will cover a 15' area.

Overlapping the polar patterns , as represented by the dotted lines,

is essential to achieve adequate coverage when using more than one C303-D-P.

The recommended spacing between each C303-D-P is 10'.

The axis of each element should point at the farthest seats from the

microphone, as represented by the solid lines.

For more microphone placement recommendations please contact the Clockaudio technical support department.

Device Configuration

There are two parts of the device that require software to setup:

1. The audio routing.

2. The configurable features of the device itself.

The audio routing should be carried out using Audinate's Dante Controller, available for Windows and Mac OS X from the Audinate website www.audinate.com along with instructions on how to use the software and setting up routes on a Dante network.

Dante Controller is a free software application that enables you to route audio and configure devices on a Dante network.

With automatic device discovery, one-click signal routing and user-editable device and channel labels.

Features:

- View all Dante-enabled audio devices and their channels on the network..

- View and edit device clock and network settings

- Route audio between devices, and view the state of existing audio routes

- Rename devices and channels using your own friendly names

- Customize the receive latency (latency before playout)

- Save and reapply audio routing presets

- Edit presets offline, and apply as configurations for new network deployments

- Change sample rates and clock settings

IP Address Setup

Important Notes:

- When using Dante controller, the C303-D will be shown using a default device name of C303-###### where '######' is the last six characters of the devices MAC address.

- Failure to correctly configure IP addresses will not allow an C303-D device to correctly authenticate in the software and while it will show up in Dante Controller. The input and output channels won't be visible and routing of audio to and from the C303-D

In order to configure a C303-D both to set up its internal parameters and also setup audio routing, the PC will need to be able

to communicate with it over the network.

While all Dante devices will be discovered regardless of the IP address setup on the PC, communication can only occur if the PC

and the device have compatible IP addresses.

By default, C303-D is set to get a dynamic IP address. As with all Dante devices, if the C303-D device does not find a DHCP server to retrieve an IP address from, it will give itself an automatic private IP address (APIPA) instead.

An APIPA (link local) is always in the range 169.254.x.y.

Control Modules

The C303-D-P can be controlled and monitored with 3rd party control software using direct UDP messages.

Parameters that can be controlled includes:

1. IP Address

2. RGB LED color and status

3. Button Status

Download the AMX and Crestron interface modules and application notes from the C303-D product / Technical Downloads section of the website www.clockaudio.com. Refer to the manufacturer website for other control systems.

CDT-3 Technical Specifications

Audio Inputs	
Input Type:	Balanced and RF filtered
Gain:	+34 dB
Input Impedance:	>1.8K ohms
Phantom Power:	9.85V Bias
Audio Performance:	
EIN:	-115dBu
System THD+N:	<0.01% at any gain input signal 3dB below maximum
Frequency Response	20Hz – 20kHz, +/- 1dB

Dante Network	
Physical Level:	Standard Ethernet
Connector:	RJ-45
Cable Quality:	CAT 5e, CAT 6
Transmission Speed:	100 Mbps
Power Requirements	PoE Class 0
Power Consumption	3.3W Max
Dimensions	3.31" W x 1.75" H x 1.95" D
Weight	0.18 Kg
Compliance	FCC PART 15, SUBPART B, EN 55032:2015 & EN 55024:2010

C303 Technical Specifications

Type	Condenser (Electret)
Polar Pattern	3 X Cardioid Patterns, 120° from each other, covering 360°
Frequency response	50Hz – 20KHz +/-3dB
Sensitivity	-40dB @ 1KHz 0dB (1v/Pa)
Impedance	200 Ohms
S/N	69dBA
Max sound pressure level	125dB @ 1%THD

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