



CXL-40T

Installation Guide

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1 Introduction

The CXL-40T is a high performance 70V/100V-line output transformer intended for use in high quality background music and public address applications in systems up to 40W rms. It is compatible with the following Cloud products: 36/50, 46/50, CX-A450 & CX-A850.

2 Electrical safety

The 100V/70V-line system is capable of delivering an electric shock. To comply with relevant safety standards, the CXL-40T must be installed with the appropriate level of care into the Cloud CXL-800 rack housing. The internal insulation board and external connector cover must be fitted to the CXL-800 to provide adequate shock protection.

3 Wiring the CXL-40T

Using at least 1.5 mm² cable, wire the output of the amplifier to the 2 pole connector and connect to the CXL-40T 'AMPLIFIER' terminations observing polarity. The 70V/100V-line output uses the 3 pole connector; for 70V speakers, use the 0V (-) and 70V (+) terminations and for 100V speakers use the 0V (-) and 100V (+) terminations. The speaker cable must be at least 0.75mm², double insulated. With long distances it may advantageous to use thicker cable. The CXL-40T provides a fully balanced output signal which is isolated from the amplifier.

PCB Pin N ^o	Cable-colour	Connection Name
1	Red	Amplifier positive
2	Black	Amplifier negative
3	White	100V
4	Purple	70V
5	Blue	0V

Connections to the CXL-40T

4 High pass filter - jumper settings

The CXL-40T may be used at full power with frequencies down to 45Hz. If it is operated with high input levels at frequencies below 45Hz it may saturate and cause the driving amplifier's VI limiter to operate. The Cloud 36/50, 46/50, CX-A450 and CX-A850 are fitted with an internal 65Hz filter that can be turned ON or OFF by configuring its specific jumper. The filter of a channel or zone must be ON when the channel has a CXL-40T installed since it will protect the transformer from the high level low frequency signals that cause saturation.

Caution: Remove the power cable before removing any cover to reveal the jumpers. Always use identical fixing screws when replacing product covers.

36/50 The list below details the relevant jumpers for the 65Hz high pass filter:
Zone 1 = J5 Zone 2 = J8 Utility = J9
(Refer to the 36/50 manual for full details)

46/50 The list below details the relevant jumpers for the 65Hz high pass filter:
Zone 1 = J7 Zone 2 = J8 Zone 3 = J13 Zone 4 = J14
(Refer to the 46/50 manual for full details)

CX-A450 The list below details the relevant jumpers for the 65Hz high pass filter:
Ch 1 = J1 Ch 2 = J2 Ch 3 = J3 Ch 4 = J4
(Refer to the CX-A450 manual for full details)

CX-A850 The list below details the relevant jumpers for the 65Hz high pass filter:
Ch 1 = J1 Ch 2 = J2 Ch 3 = J3 Ch 4 = J4
Ch 5 = J5 Ch 6 = J6 Ch 7 = J7 Ch 8 = J8
(Refer to the CX-A850 manual for full details)

5 Mechanical Installation

Important: The CXL-40T must be fitted to the CXL-800 rack housing to comply with the relevant safety standards.

The CXL-40T is a toroidal transformer. A single M6 mounting bolt is supplied to fix the toroid to the CXL-800 rack housing. Once the CXL-40T is fitted, remove the insulation board to gain access to the inside surface of the rear panel; the attached PCB should be fixed to the inside surface of the rear panel using the two M3 x 6mm machine screws. No special ventilation provisions need to be made for the CXL-40T as its high efficiency means little power is dissipated. The CXL-40T should not be mounted close to mains transformers or any other source of strong magnetic fields. Where the use of the CXL-800 is not possible, the CXL-40T must be installed within an insulated housing that conforms to the requirements of BS EN 60065.

6 The CXL-800

The CXL-800 provides convenient and safe rack mounting for up to eight CXL-40T 100V/70V-line transformers into a 19" rack enclosure (2U). The CXL-800 is 225mm deep but allows a depth of at least 250mm to provide clearance for connectors. Once the toroidal transformers have been fitted, it is important to replace the internal insulation board and the plastic cover used to protect the rear panel connectors. The CXL-800 is designed for static applications only; extra support may be required in portable equipment.

7 Technical Specifications

Maximum input voltage	16V rms
Input impedance	4 Ohms (with 250 Ohm secondary load)
Output power rating	40W RMS
Minimum load impedance	250 Ohms
Distortion	<0.01% @ 1kHz
Frequency response	40Hz to 20KHz (-2dB)

The CXL-40T conforms to the following European Standards:

BS EN 55103-1: 1997

BS EN 55103-2: 1997

CAUTION - SERVICING

THIS UNIT CONTAINS NO USER SERVICEABLE PARTS. REFER ALL SERVICING TO QUALIFIED SERVICE PERSONNEL. DO NOT PERFORM ANY SERVICING UNLESS YOU ARE QUALIFIED TO DO SO.

WARNING

TO REDUCE THE RISK OF ELECTRICAL SHOCK DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

CAUTION - SHOCK HAZARD

**THE CXL-40T MUST BE MOUNTED IN THE CXL-800 HOUSING
CLOUD ELECTRONICS LTD ACCEPT NO RESPONSIBILITY FOR HAZARDOUS INSTALLATIONS.**

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