

CXL-46T

100/70 V Transformer

Installation Instructions

Important Safety Notes

It should be recognised that 100 V-line or 70 V-line speaker systems have the potential to deliver an electric shock. Install the CXL-46T only in accordance with these instructions.

In all cases, the external wiring and associated speakers will need to comply with local electrical regulations for AC voltages up to $100V_{\text{rms}}$ ($141V_{\text{peak}}$).

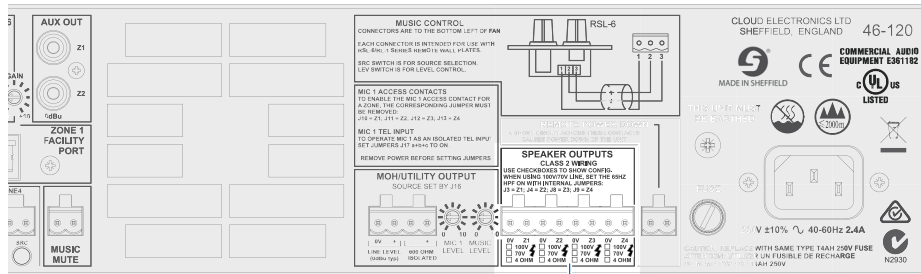
Do not expose the transformer to rain or moisture.

The transformer module must be installed in a safe manner.

Cloud Electronics Ltd. accept no responsibility for hazardous installations.

INTRODUCTION

The CXL-46T is an optional transformer for the 46-120 and 46-120MEDIA Multi-Zone Mixer Amplifiers, to permit the Mixer Amplifiers to directly drive 100 V-line or 70 V-line loudspeaker systems. The transformer is rated at 120 W output, and is mounted internally. Up to four CXL-46Ts (one per output channel) may be fitted to a 46-120 or 46-120MEDIA. The outputs are available on the 8-pin 5 mm-pitch screw-terminal **SPEAKER OUTPUTS** connector on the host unit's rear panel.



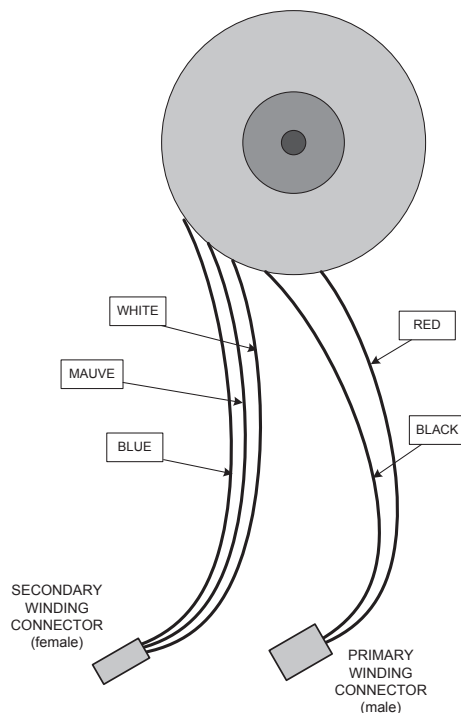
46-120 / 46-120MEDIA Rear Panel

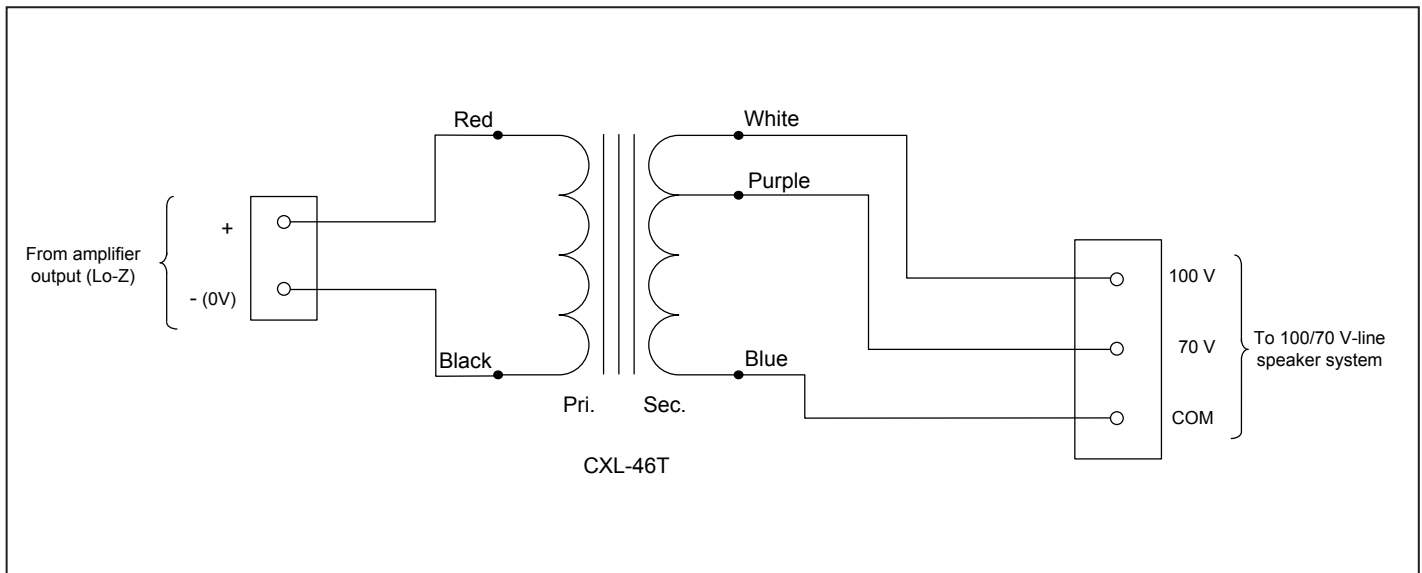
Speaker Outputs

NOTE: unlike other Cloud multi-channel amplifiers, all 46-120 models use a single output connector for both low impedance and 70/100 V-line operation. Thus it is NOT possible for any channel of a 46-120 to drive both low impedance speakers and 70/100 V-line systems simultaneously. The check boxes below the connector should be used to indicate the standard each output is set for.

FITTING THE CXL-46T TRANSFORMER

The CXL-46T transformer is a toroidal type, and is supplied pre-terminated with 2-pin and 3-pin connectors as shown:

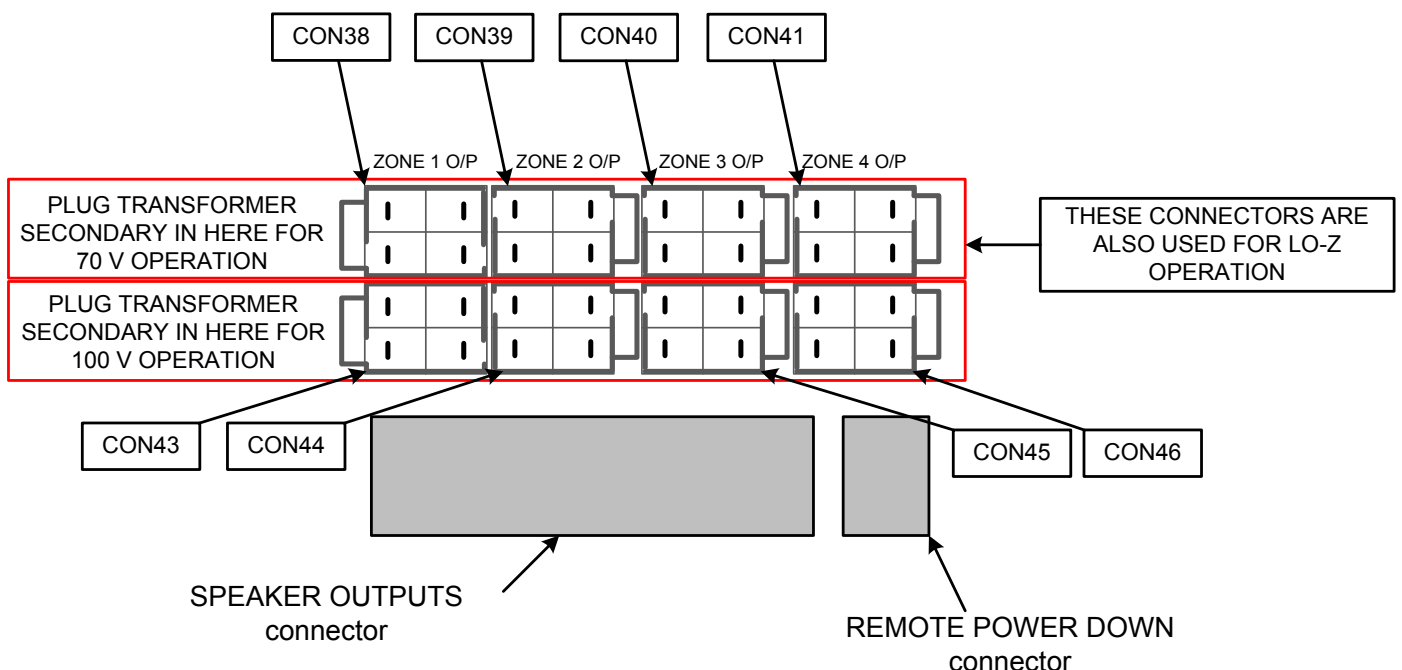




Each transformer is also supplied with an M5 hex-head screw, locknut and washer.

To fit convert one channel of a 46-120 to 70/100 V-line operation, proceed as follows:

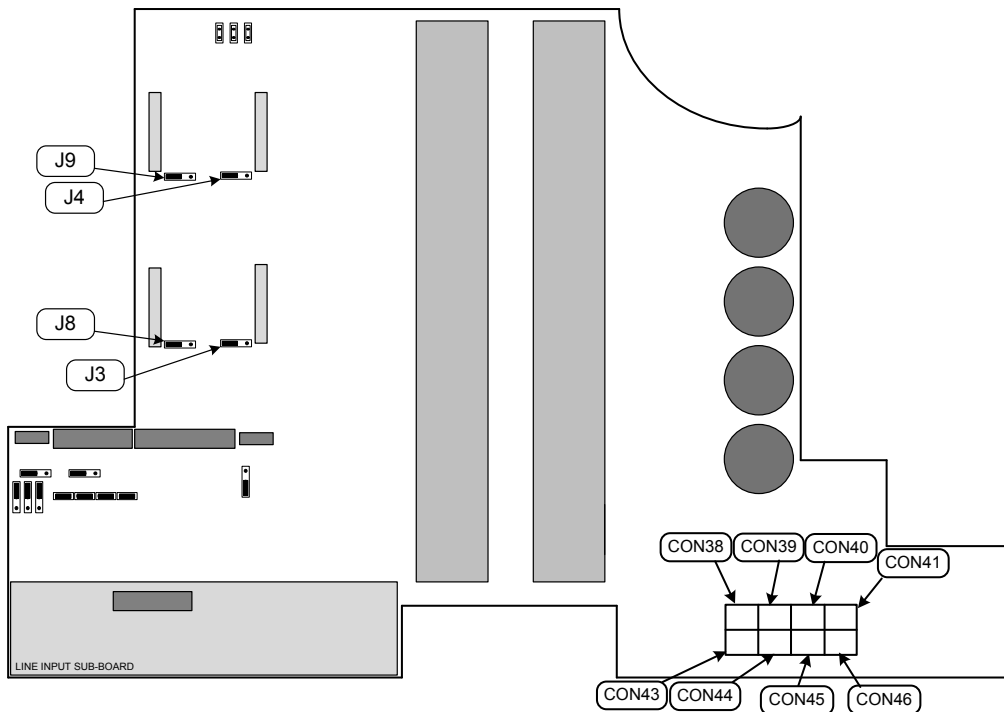
1. Disconnect the 46-120 from the mains.
2. Remove the top cover (10 screws) and orient the unit with the rear panel towards you.
3. Mount the CXL-46T transformer on the right-hand side of the 46-120 chassis, using one of the holes in the side of the chassis and the M5 screw, washer and locknut supplied with each transformer. The bolt passes through the centre of the toroid, and the screw head should be on the outside of the chassis. If fitting fewer than four CXL-46Ts, any of the fixing positions may be used. Orient the transformers so that the flying leads face the rear of the chassis.
4. For the zone being converted to 70/100 V-line operation, unplug the relevant 4-pin female connector from its **ZONE O/P** socket on the main PCB immediately behind the rear panel **SPEAKER OUTPUTS** connector. There are four of these (one per zone): CON38 (Zone 1), CON39 (Zone 2), CON40 (Zone 3) and CON41 (Zone 4) - see diagram below. Note that CON38 is orientated at 180° relative to the other three.



The wires on these connectors are colour-coded to aid zone identification:

ZONE	OUTPUT WIRING
1	Red & Black
2	Orange & Black
3	Yellow & Black
4	Purple & Black

- Identify the transformer’s primary winding – this is the red/black flying lead fitted with a male connector. Plug the female connector removed in Step 4 into this. Note the pin and latch orientation – the connectors will only mate one way.
- If configuring the zone output for 100V-line operation, plug the transformer’s secondary winding – the other flying lead (blue/mauve/white) - into the second **ZONE O/P** socket; this will be the one paired with the socket unplugged in Step 4, and closer to the **SPEAKER OUTPUTS** connector. These are: CON43 (Zone 1), CON44 (Zone 2), CON45 (Zone 3) and CON46 (Zone 4). Note that CON43 is orientated at 180° relative to the other three. See diagram on previous page.
- If configuring the zone output for 70V-line operation, plug the transformer’s other flying lead (blue/mauve/white) into the **ZONE O/P** connector vacated in Step 4.
- For each zone being converted to 70/100V-line operation, enable the channel’s 65 Hz hi-pass filter by moving the appropriate jumper from OFF to ON: these are J3 (Zone 1), J4 (Zone 2), J8 (Zone 3) and J9 (Zone 4). This is important, as low frequency signals at high level can saturate the transformer cores, causing unpleasant distortion and possibly activating the amplifier’s limiter circuitry. See diagram below for location of PCB jumpers.
- If converting further Zone outputs to 70/100V-line operation, repeat Steps 3 to 8 for each output.
- Replace the cover, using the original screws.
- Mark the checkboxes below the **SPEAKER OUTPUTS** connector with a felt-tip pen to indicate the mode of operation for each channel.



46-120 MAIN PCB – REAR VIEW
SIMPLIFIED VIEW – ONLY PRIMARY COMPONENTS SHOWN



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