

## CXL-80T 70/100 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-80T 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 100 V<sub>rms</sub> (141 V<sub>peak</sub>).

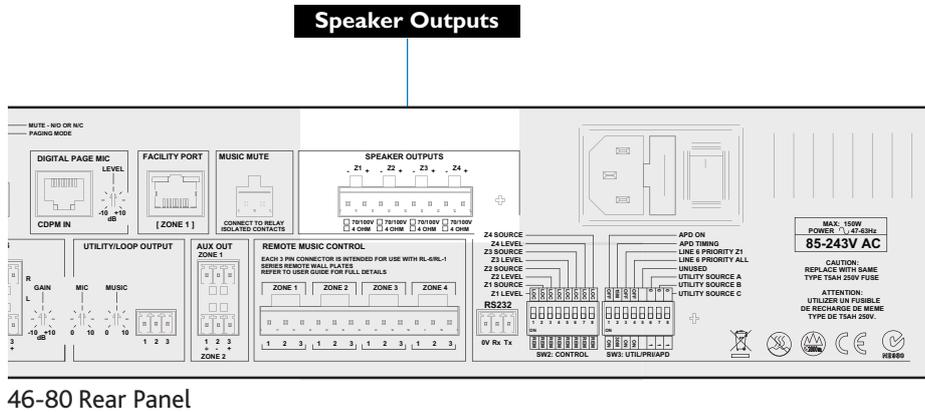
Do not expose the transformer to rain or moisture.

The transformer module must be installed in a safe manner.

Cloud Electronics Ltd. accept no responsibility for hazardous installations.

## INTRODUCTION

The CXL-80T is an optional transformer for the 46-80 Multi-Zone Mixer Amplifier, to permit the Mixer Amplifier to directly drive 100 V-line or 70 V-line loudspeaker systems. The transformer is rated at 80 W output, and is mounted internally. Up to four CXL-80Ts (one per output channel) may be fitted to a 46-80. The outputs are available on the 8-pin 5 mm-pitch screw-terminal **SPEAKER OUTPUTS** connector on the host unit's rear panel.

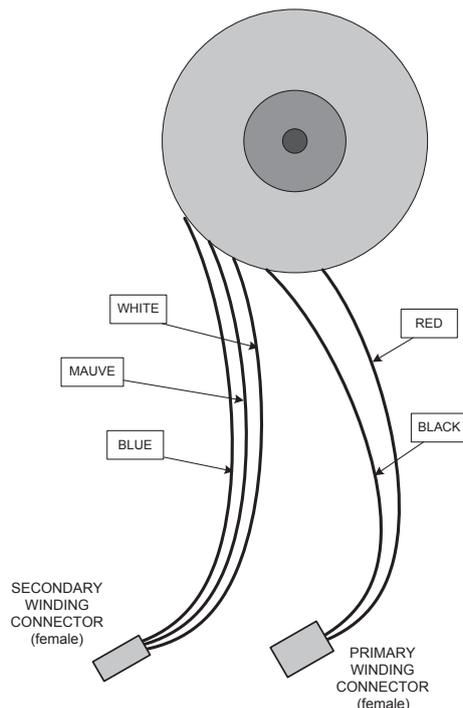


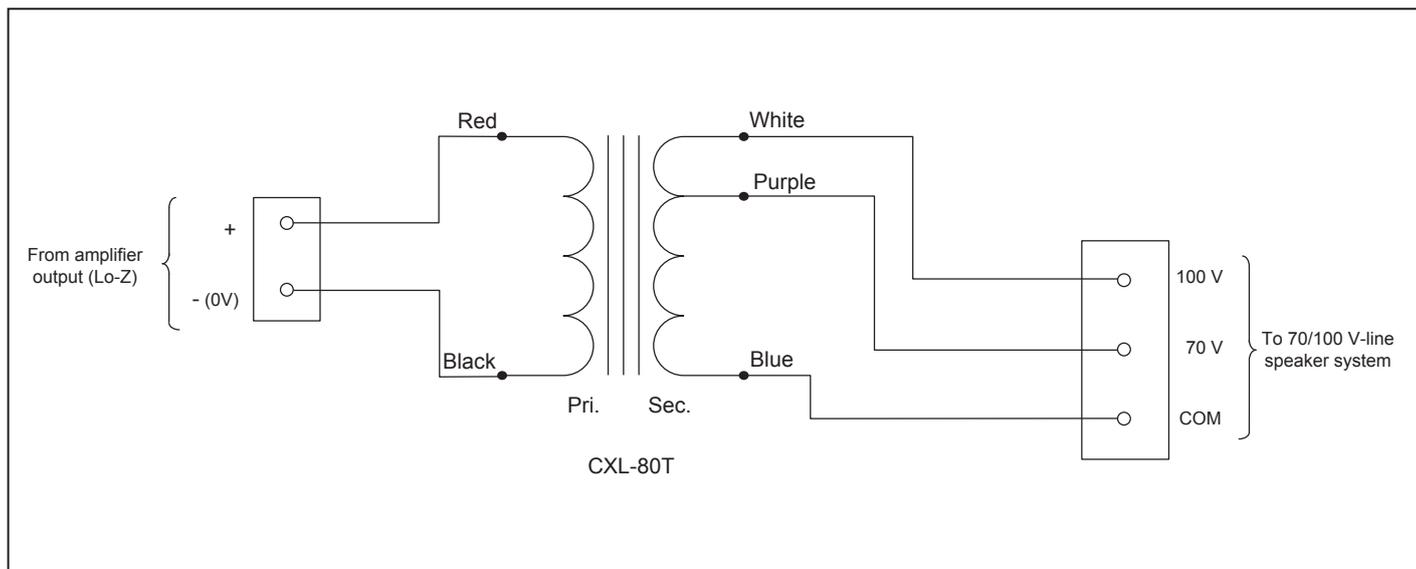
46-80 Rear Panel

**NOTE:** unlike some other Cloud multi-channel amplifiers, the 46-80 uses a single output connector for both low impedance and 70/100 V-line operation. Thus it is NOT possible for any channel of a 46-80 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-80T TRANSFORMER

The CXL-80T transformer is a toroidal type, and is supplied pre-terminated with 2-pin and 3-pin connectors as shown:

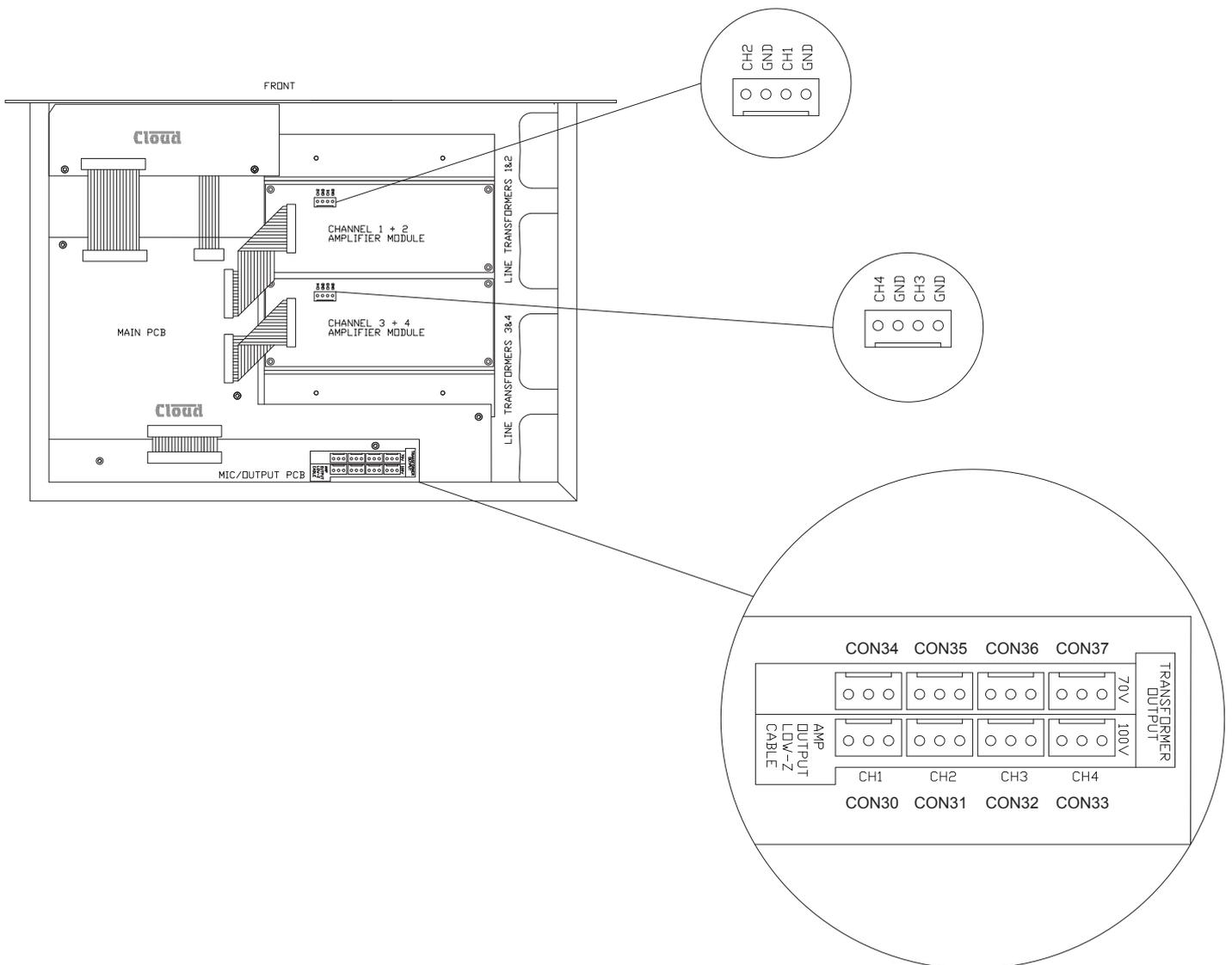




Each transformer is also supplied with an M4 x 45 Posi-head bolt.

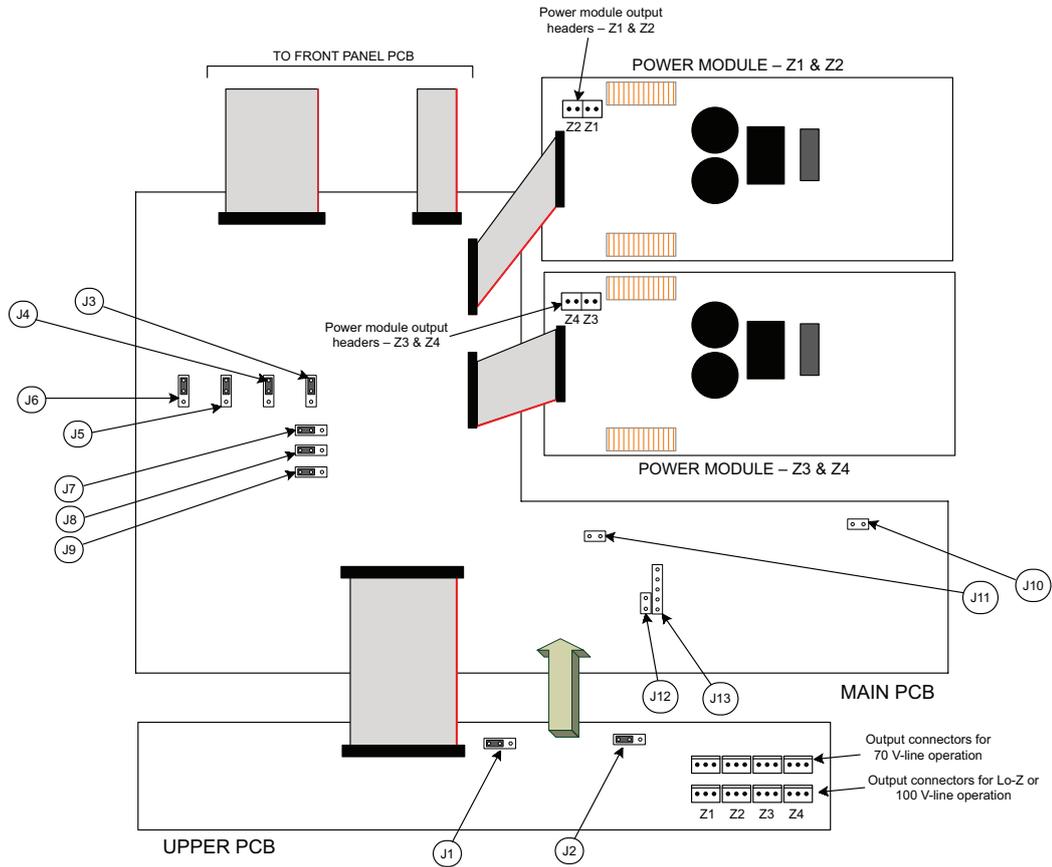
To convert one channel of a 46-80 to 70/100 V-line operation, proceed as follows:

1. Disconnect the 46-80 from the mains.
2. Remove the top cover (8 screws) and orient the unit with the rear panel towards you.
3. Mount the CXL-80T transformer on the right-hand side of the 46-80 chassis, using one of the holes in the side of the chassis and the M4 bolt supplied with the transformer. The centre of the toroid has a captive M4 nut, so the bolt head should be on the outside of the chassis. If fitting fewer than four CXL-80Ts, 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 both ends of the relevant blue/white twisted pair which connects the power amplifier modules to the 3-pin headers on the PCB immediately behind the **SPEAKER OUTPUT** connector. There are four of these (one per zone): CON30 (Zone 1), CON31 (Zone 2), CON32 (Zone 3) and CON33 (Zone 4) - see diagram on the following page.



5. Identify the transformer's primary winding – this is the red/black flying lead fitted with a 2-pin connector. Plug this into the relevant power module output connector. Note that each module has two channels, that nearer the front of the chassis powers Zones 1 and 2, the other Zones 3 and 4. Refer to the diagram on page 5.
6. If configuring the zone output for 100 V-line operation, plug the transformer's secondary winding – the other flying lead (blue/mauve/white) - into the 3-pin header behind the **SPEAKER OUTPUT** connector vacated in Step 4. (This will be the one closer to the rear panel.)
7. If configuring the zone output for 70 V-line operation, plug the transformer's other flying lead (blue/mauve/white) into the alternative 3-pin header behind the **SPEAKER OUTPUT** connector (this will be the one further away from the rear panel). The headers are CON34 (Zone 1), CON35 (Zone 2), CON36 (Zone 3) and CON37 (Zone 4).
8. For each zone being converted to 70/100 V-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), J5 (Zone 3) and J6 (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 the following diagram for location of PCB jumpers.

9. If converting further Zone outputs to 70/100 V-line operation, repeat Steps 3 to 8 for each output.
10. Replace the cover, using the original screws.
11. Mark the checkboxes below the **SPEAKER OUTPUTS** connector with a felt-tip pen to indicate the mode of operation for each channel.



46-80 MAIN PCB - REAR VIEW  
 SIMPLIFIED VIEW - ONLY PRIMARY  
 COMPONENTS SHOWN

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