

8 LBB4442/00 Line Supervision Set

8.1 Introduction

The LBB4442/00 Line Supervision Set contains a supervision-master PCB and a supervision-slave PCB. The supervision-master PCB must be installed on the output board of the amplifier channel that must be supervised, whereas the supervision-slave must be connected tot the last loudspeaker in the loudspeaker line that must be supervised. So, for each loudspeaker line, one set is needed.

8.2 Controls, connectors and indicators

8.2.1 Supervision-master

The supervision-master contains the following:

- 1 **Connector** - A provision to connect the supervision-master electrically to the output board of the amplifier channel (see section 8.3.1).

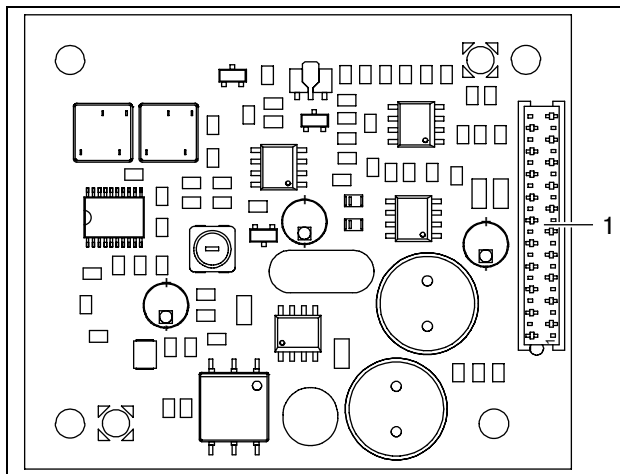


figure 8.1: Component side of supervision-master

8.2.2 Supervision-slave

The supervision-slave contains the following:

- 1 **Connector** - A provision to connect the supervision-slave to the loudspeaker lines.

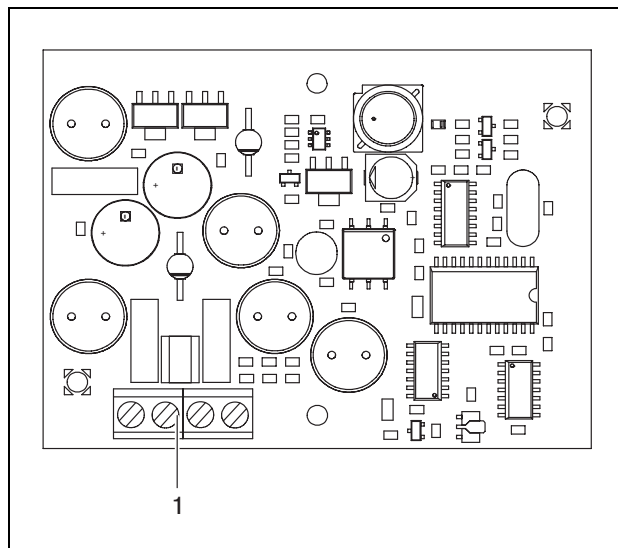


figure 8.2: Component side of supervision-slave

The supervision-slave provides a double connector that allows the supervision-slave to be put anywhere in the loudspeaker line (see figure 8.3). Usually, the supervision-slave is mounted at the end of the loudspeaker line.

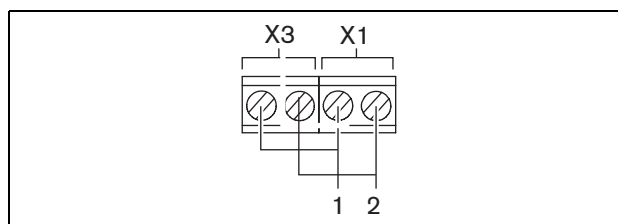


figure 8.3: Supervision-slave connector

table 8.1: Supervision-slave connector details

Connector	Pin	Signal
X1	1	Loudspeaker line +
	2	Loudspeaker line -
X3	1	Loudspeaker line +
	2	Loudspeaker line -

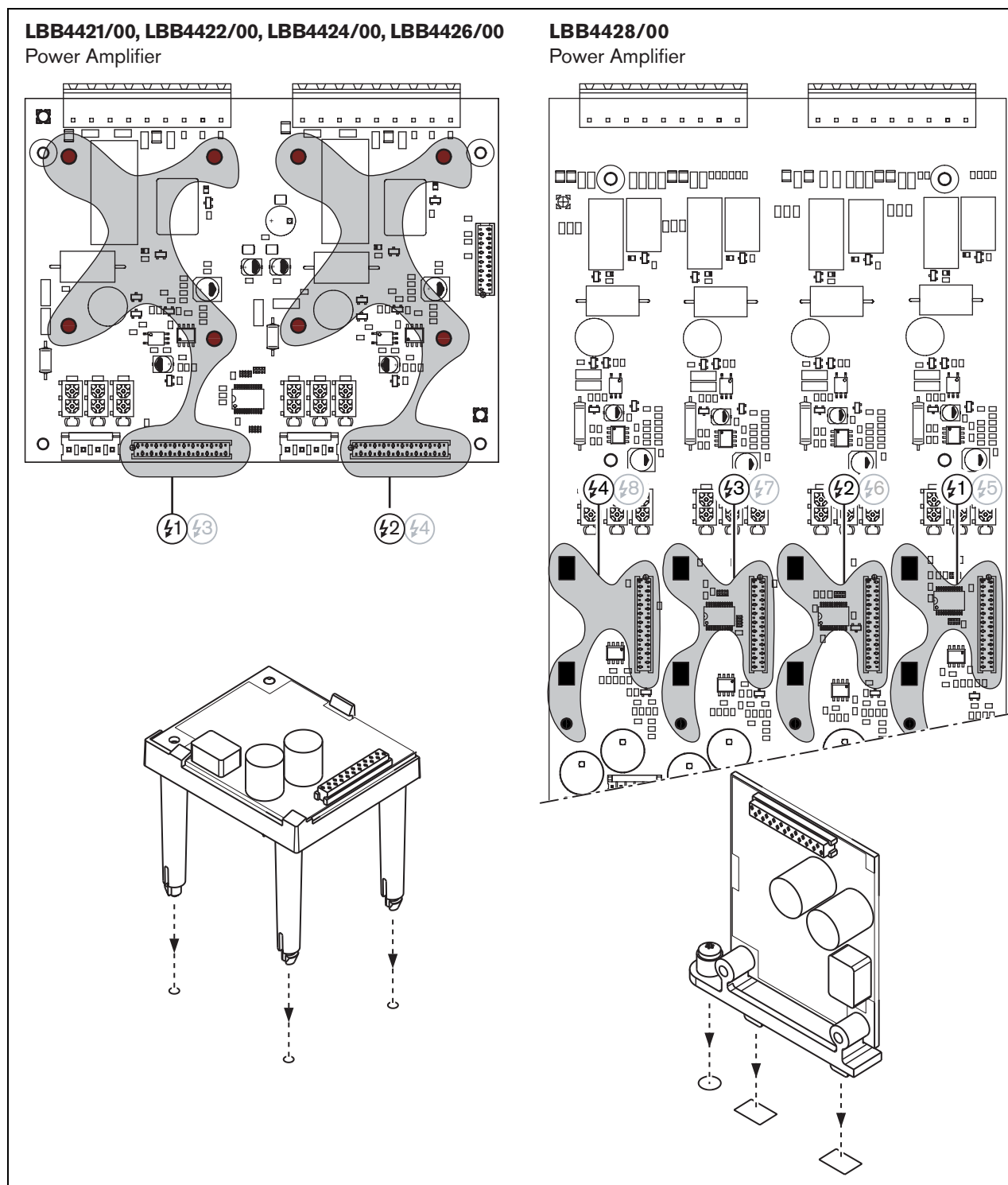


figure 8.4: Supervision-master mounting

8.3 Mounting

8.3.1 Supervision-master

**Warning**

To prevent the hazard of electric shocks, switch the power amplifier and the backup power supplies off, before starting installing the supervision-master.

**Warning**

To prevent the hazard of electric shocks, disconnect the mains cord and the backup power supplies from the power amplifier before starting installing the supervision-master.

**Warning**

The electronics inside the power amplifier and on the supervision-master are susceptible to electrostatic discharges. Wear an anti-ESD bracelet during the installation of the supervision-master.

Proceed as follows to install the supervision-master in the power amplifier:

- 1 Remove the lid from the power amplifier and locate the output board (see figure 8.4).
- 2 The supervision-master is delivered with a plastic bracket. Insert the PCB of the supervision-master into the plastic bracket (see figure 8.4).
- 3 The supervision-master and plastic bracket assembly fit in the holes in the output board. Fit the bracket that contains the supervision-master into the holes in the output board (see figure 8.4)
- 4 The supervision-master is delivered with a flat cable, which fits in the connector on the output board of the power amplifier. Fit the connector of the flat cable to the connector on the output board. Do not twist the flat cable and fit the polarisation pin of the flat cable in the hole in the PCB next to the connector.

**Note**

Do not forget to install supervision-masters in the spare amplifiers. Otherwise, it will not be possible to supervise the loudspeaker lines after spare switching.

8.3.2 Supervision-slave



Warning

To prevent the hazard of electric shocks, switch the power amplifier and the backup power supplies off, before starting installing the supervision-slave.



Warning

To prevent the hazard of electric shocks, disconnect the mains cord and the backup power supplies from the power amplifier before starting installing the supervision-slave.



Note

The supervision-slave is susceptible to electrostatic discharges. Wear an anti-ESD bracelet during the installation of the supervision-slave.

The following loudspeakers have a provision for mounting a supervision-slave:

- LBC3510/00, LBC3510/40
- LBC3520/00, LBC3520/40
- LBC3530/00, LBC3530/40
- LBC3011/41
- LBC3011/51
- LBC3403/14 with LBN9000/00 or LBN9001/00
- LBC3404/14 with LBN9000/00 or LBN9001/00
- LBC3405/14 with LBN9000/00 or LBN9001/00
- LBC3406/14 with LBN9000/00 or LBN9001/00

Proceed as follows to install the supervision-slave in the loudspeaker line:



Note

See the mounting instructions of the loudspeakers for additional information.

- 1 Use the holes in the supervision-slave (see figure 8.5) to mount it in a loudspeaker. The coils on the supervision-slave PCB must be kept at a distance of 3 cm or more from the loudspeaker magnet and a distance of 5 cm or more from the loudspeaker transformer, otherwise the magnetic fields can disturb the correct operation of the supervision-slave.

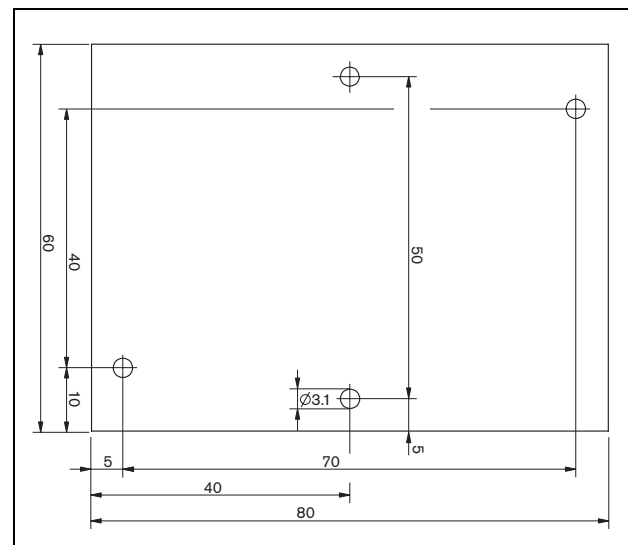


figure 8.5: Supervision-slave PCB dimensions

- 2 Connect the loudspeaker line signal to the supervision-slave PCB (see section 8.2.2).

8.4 Technical Data

8.4.1 Supervision-slave

Dimensions (H x W x D):
80 x 60 x 16 mm
Weight:
50 g
Temperature:
-5 to 55 °C (operating)
MTBF:
50,000 hours at +55 °C
Connector:
Screwable
Preferred cable:
Twisted pair, 0.75 mm ² to 1.5 mm ²
Maximum cable length:
1 km
Maximum cable capacity:
300 nF. However, if the maximum load capacity for the power amplifier output is less than this value, the maximum load capacity of the power amplifier is leading (see section 6.7).
Loudspeaker voltage:
70 V, 100 V

**Note**

Line supervision is not possible if the loudspeaker line voltage is 50 V.