

## Grounding and shielding.

### Line Output.

One of the objectives of an output transformer is to give the output line a high and symmetrical impedance versus ground. This is obtained with transformer faradays shield(s) or symmetrical winding arrangements. The symmetry is necessary to prevent mode transfer, i.e. common mode signals picked up by the output line creating differential mode signals (IRT test).

The shield(s) also contributes to output signal balance (IEC test) and to the protection of the output stage from high line voltages caused by lightning.

The line shield and the transformer shield / the transformer primary cold connection should be connected to the ground of the line output device.

### Line Input.

A line input transformer must not allow common mode signals from the line to form differential mode signals (good CMR). For best result, the shield of an input transformer should be connected to the ground of the receiving device. To avoid ground loops, the shield of the line cable should not be connected to this ground.

### Microphone Input.

If the mic. is not grounded, the shield of the microphone cable must be connected to the mic amplifier ground, together with the shields of the mic input transformer. In case of mic splitting, the grounding scheme must be carefully designed to make shure all cable shields are grounded without creating ground loops.

