



Sintefex Audio



SINTEFEX FX8000 DIGITAL AUDIO EFFECTS REPLICATOR

Installation Guide

Notice: Whilst all reasonable effort has been made to ensure that the information in this document is accurate, Sintefex Audio Lda accepts no liability for inadvertent errors, omissions or changes in operating software or hardware specification referred to in this manual.

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2 Installation

Physical

Replicator is a standard 2U rack mount unit and should be mounted in a 19" rack by means of 4 rack-mount bolts through the front panel flanges. You must support Replicator manually until the bolts are tightened (especially the lower two bolts) to prevent deformation to the front panel.

If the installation is at a fixed site no further support is required. If the installation is mobile or subject to shocks you must provide support at the rear of the unit.

Ventilation

Replicator is ventilated by forced airflow (fan) with air entering the unit from the right side as seen from the front and leaving by the rear adjacent to the power inlet. **THIS AIRFLOW MUST NOT BE RESTRICTED.** The temperature of the air entering the unit (the ambient temperature) should not exceed 25 degrees C. Exceeding this temperature can cause improper operation.

Replicator does not require unused rack space above and below (unlike many convection cooled units). This is a significant benefit in installations where rack space is at a premium.

Power

The power inlet of Replicator is by means of a standard 3 pin IEC power inlet. You should ensure that the voltage selector (if fitted) matches the line voltage before you make any connection. In some territories Replicator may be supplied with a fixed line voltage setting. You should make sure that the line voltage specified matches your supply before making a connection.

The power switch on the rear of the unit can be left on in normal operation and the unit can be switched from operation to standby by means of the POWER switch on the front panel. Use of this power switch allows Replicator to save its operating state when you power down.

If your installation has line power switched remotely it is advisable to shut Replicator down by means of the front panel switch before removing installation power. Failure to do this will not harm Replicator but does not allow Replicator to resume its operation as switched off. It is advisable to save Replicator's mode of operation as a program that may be reloaded if it is desired to return to the same operating state.

When the installation line power is switched on or the rear power switch is switched on with power present, Replicator will immediately start up. If your installation requires that Replicator does not power on until the front panel POWER switch is operated, this is achievable by means of an internal link. Please contact Sintefex Audio or your supplier for details.

Grounding

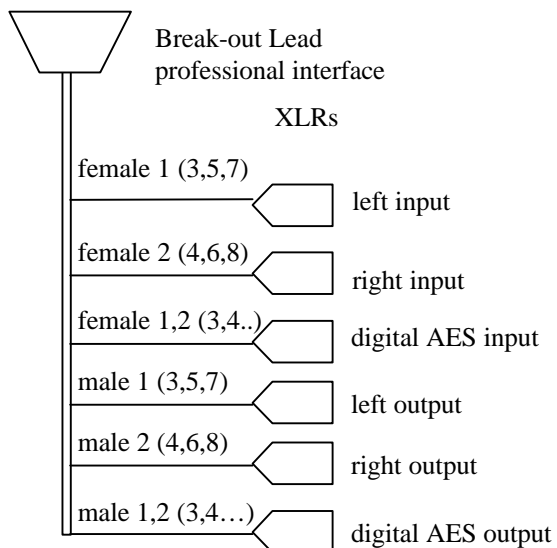
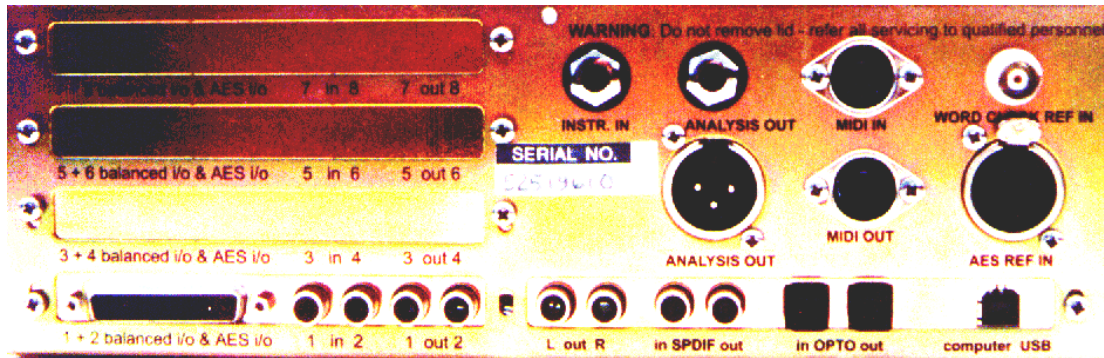
Replicator is grounded by means of the power inlet. A proper safety ground must always be provided on this connector according to good wiring practice. Failure to provide this can result in danger to personnel and equipment which is not covered by warranty.

Hum due to "earth loops" ("grounding loops") can be avoided by fully balanced professional wiring practices. **DO NOT LIFT THE POWER GROUND.**

If connecting to unbalanced external equipment using the unbalanced connectors on Replicator, hum loops are a possibility and can be eliminated by careful routing of wiring, keeping audio wiring away from power wiring or centralising power and ground connection at one point ("star grounding").

Signal Wiring

Replicator is supplied with one or more 2-channel breakout leads (according to the number of channels fitted). This is 1.5m in length and is terminated in 3 male and 3 female XLR connectors. These are illustrated here for a 2-channel unit.



There are two labelling options for the flying leads:

1. The flying leads are labelled with 1 or 2 to indicate the analogue audio channel of a stereo unit they carry. The AES digital connections are labelled both 1 and 2 to indicate that it is a single stereo interface.
2. The flying leads are labelled with 1,3,5,7 or 2,4,6,8 to indicate the channel number in a multi-channel machine. We recommend that once the connector is fitted to a pair of channels the unwanted numbers are cut off (taking care not to damage the cable) so that they indicate the exact channel number in your installation.

Note that Replicator outputs are on male XLRs and inputs are on female XLRs with pin 2 “hot” as is standard practice. If you require different cable lengths or terminations the connector wiring details are shown under “Multiway Audio Connector”.

We also recommend that you bring out all the other connections to your patch bay. In particular we suggest that both the high level and low level (3-pole jack) analysis outputs are brought out to the analogue patch bay, and that the SPDIF in and out and AES reference are connected to your digital patch bay.

Sync in Digital Systems

By default Replicator will synchronise to a selected digital input or to its internal clock if an analogue input is selected. However in multi-channel systems Replicator cannot sync to digital inputs on channels 3 to 8. By default Replicator will try and sync to the digital input on channel 1 and 2 if you select digital input unless you override the default and specify AES reference, BNC wordclock or other reference.

For this reason if you will be supplying digital inputs to channel 3 - 8 while channels 1 and 2 are not fed with a synchronous digital signal, you will have to provide a reference AES or BNC wordclock and make sure Replicator is selected to use this.

Replicator has a fully programmable internal word clock which may be set to any integer sampling rate from 30,000 samples per second to 96,000 samples per second. If you want to use Replicator as a reference in a digital system be sure to select Replicator always to use internal clock even when a digital input is selected, and ensure that the digital input is synchronised to Replicator.

3 Multiway Audio Connector

The professional interface to and from each Replicator channel pair is a standard density 25 way female D-type connector.

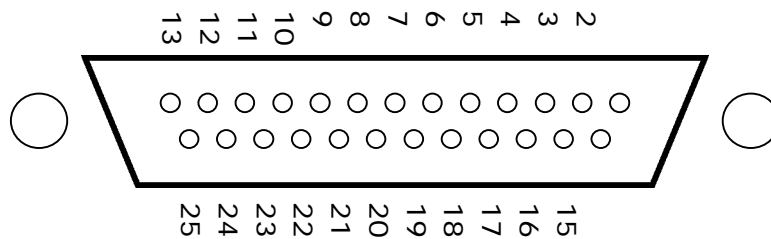


Illustration of the female D type connector as seen from the rear of Replicator.

Each pin is connected as follows:

<i>Pin #</i>	<i>Connection</i>	<i>Pin #</i>	<i>Connection</i>
1	Analogue out channel 1 positive ("hot")	14	Analogue out channel 1 negative ("cold")
2	Ground	15	Ground
3	Analogue out channel 2 positive ("hot")	16	Analogue out channel 2 negative ("cold")
4	Ground	17	Ground
5	Analogue in channel 1 positive ("hot")	18	Analogue in channel 1 negative ("cold")
6	Ground	19	Ground
7	Analogue in channel 2 positive ("hot")	20	Analogue in channel 2 negative ("cold")
8	Ground	21	Ground
9	Ground	22	Ground
10	Digital AES out channels 1&2 positive ("hot")	23	Digital AES out channels 1&2 negative ("cold")
11	Ground	24	Ground
12	Digital AES in channels 1&2 positive ("hot")	25	Digital AES in channels 1&2 negative ("cold")
13	Ground		

In a multi-channel Replicator the lowest channel pair is channel 1 and channel 2. The next higher channel pair is channel 3 and channel 4, etc. The connection for these channels is as above with channels 3, 5 and 7 appearing where channel 1 is indicated and channels 4, 6 and 8 appearing where channel 2 is indicated.