# TECHNICAL SPECIFICATION DOCUMENT

PCXtender

The PCXtender is a system designed to connect audio sources to any PC based audio card/system and to monitor the output. It was originally designed for Danish Radio to interface with the Digigram audio cards in their Dalet workstations. However, it can be used with any PC audio system. It provides the following features :

- Input selector
- Level alteration
- Left/right balance

- Stereo imaging
- Equaliser with swept mid-range
- Limiter, with limit level & indicator

- Monitor select
- Monitor level
- Headphone level
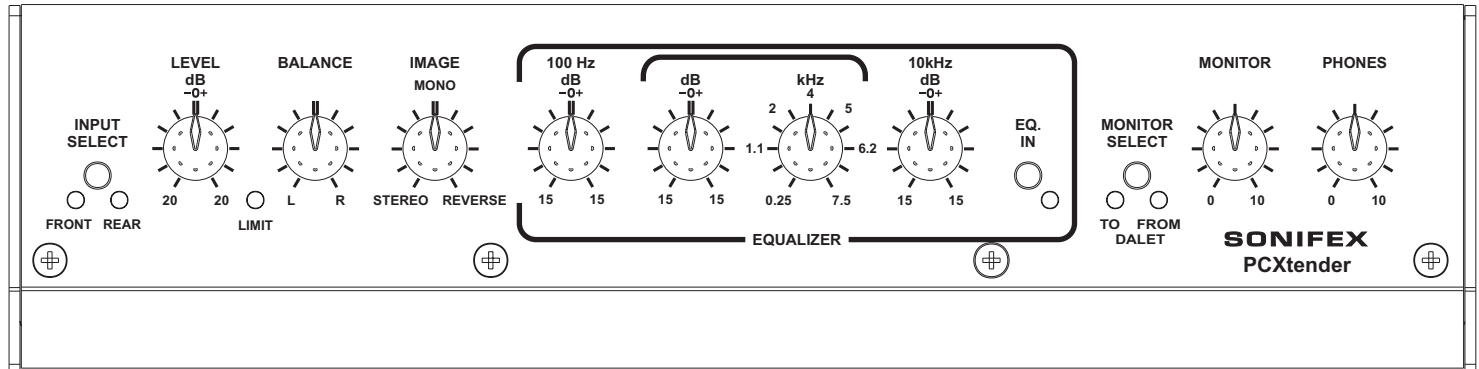
PCXtender desktop unit front view

Summary

The PCXtender is made up of two units together with three cables. The rugged desktop unit is designed to be put on a desktop underneath a PC monitor screen. It is used to select and control analogue signals in both level and frequency response and pass them on to PC audio card.
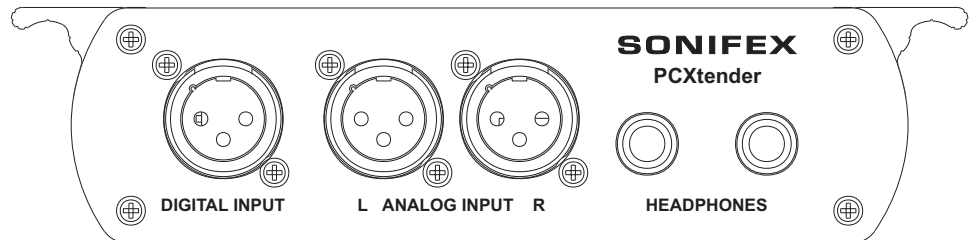
PCXtender equipment interface unit front view

The other equipment interface unit is screwed underneath a desktop or mounted on the side of the desk. The equipment interface is completely passive and serves only as a break-out box, so that there is only one trailing lead over the desktop.

Connections

Two off 2 metre multi-pair cables are supplied to connect the equipment interface and PC audio card to the desktop unit via connectors on the rear panel. A separate 2 metre cable is also supplied to run from the equipment interface directly to the PC for connection of AES/EBU digital audio should this be needed.

The equipment interface has 3 Pin XLR female connectors for left and right inputs and the same for the AES/EBU input. There are also two ¼ inch stereo jack sockets connected in parallel for connection of two pairs of stereo headphones.

The desktop unit has analogue left and right XLR inputs, left and right analogue monitor outputs, a connection to the Equipment interface unit and another 2 metre input/output cable which is connected to the PC audio card.

Input Select, Level Control and Balance

The controls on the front of the PCXtender consist of an INPUT SELECT switch that takes the input from either the front of the PC interface (FRONT) or the input on the back of the desktop unit (REAR).

A LEVEL control operates on the selected input giving +/- 20dB of gain before the signal passes to a stereo BALANCE control for panning the signal either left or right.

Stereo Imaging

An IMAGE control allows the signal to pass through as STEREO (left to left and right to right) or REVERSE (left to right and right to left). With the IMAGE control in the centre position, a MONO image is obtained, with a mix of left and right inputs appearing at both left and right outputs.

Limiter

The desktop unit contains a limiter that can be pre-set by use of a multi-turn potentiometer accessed at the rear. The limit level has a range of 0dBu to +18dBu and a LED indicator on the front panel shows when the limiter is in operation.
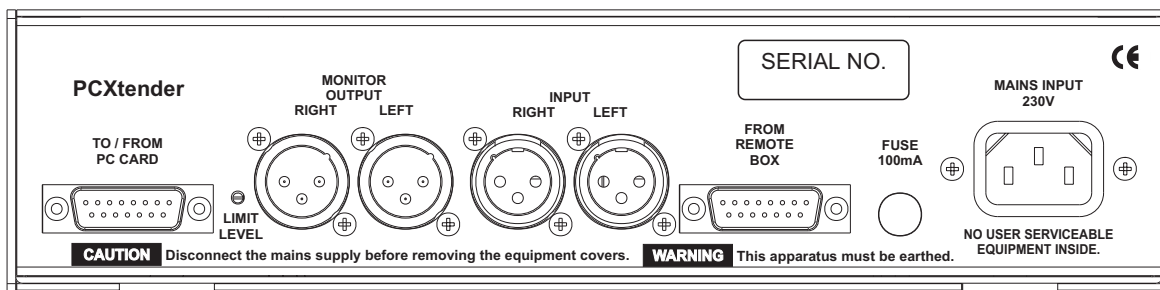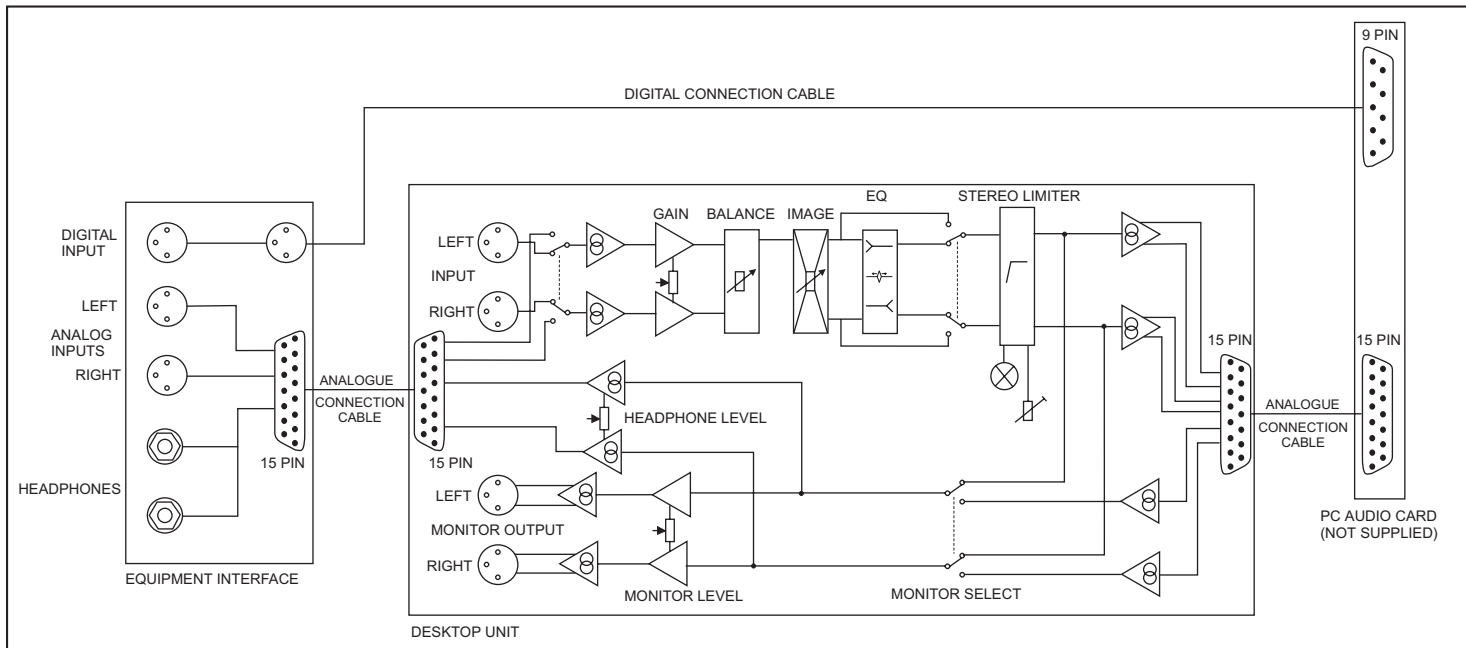
EQ

The EQUALIZER can be switched in or out. It consists of a three band equaliser giving +/- 15dB gain with low frequency at 100Hz, high frequency at 10kHz and a swept mid-frequency that can be varied via a potentiometer from 250Hz to 7.5kHz.

Monitoring

The other controls on the unit are used for the selection of the source to be monitored at the monitor and headphone outputs. A latching push switch is used to select either the signal that is being sent to the PC audio card, or the signal coming from the PC audio card. This enables you to monitor a signal that is being routed straight from the AES/EBU digital input directly to the PC audio card.

The levels presented at the monitor output and the headphone output are controlled independently of one another via two potentiometers acting as fader controls.

PCXtender Block Diagram

9 PIN

DIGITAL CONNECTION CABLE

DIGITAL INPUT

LEFT

ANALOG INPUTS

RIGHT

HEADPHONES

15 PIN

EQUIPMENT INTERFACE

ANALOGUE CONNECTION CABLE

15 PIN

LEFT

INPUT

RIGHT

GAIN   BALANCE   IMAGE   EQ   STEREO LIMITER

HEADPHONE LEVEL

15 PIN

LEFT

MONITOR OUTPUT

RIGHT

MONITOR LEVEL

MONITOR SELECT

15 PIN

ANALOGUE CONNECTION CABLE

15 PIN

PC AUDIO CARD (NOT SUPPLIED)

DESKTOP UNIT

PCXtender

SERIAL NO.   CE

MONITOR OUTPUT
RIGHT   LEFT

INPUT
RIGHT   LEFT

TO / FROM PC CARD

LIMIT LEVEL

FROM REMOTE BOX

FUSE 100mA

MAINS INPUT 230V

NO USER SERVICEABLE EQUIPMENT INSIDE.

CAUTION Disconnect the mains supply before removing the equipment covers.   **WARNING** This apparatus must be earthed.

PCXtender desktop unit rear view

CE

ANALOG TO / FROM MAIN UNIT

DIGITAL OUT TO PC
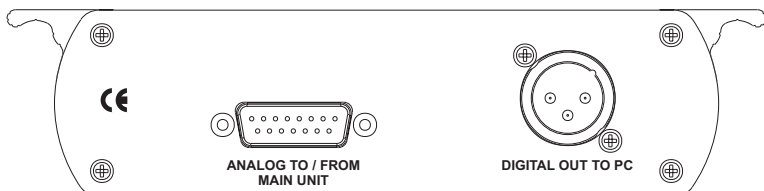
PCXtender equipment interface unit rear view

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interstage

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Technical Specification

Connections

Inputs x 2 (L & R):	XLR 3 pin female (Balanced)
AES/EBU Digital Input:	XLR 3 pin female (Balanced)
AES/EBU Digital Output:	XLR 3 pin male (Balanced)
Monitor Output:	XLR 3 pin male (Balanced)
Headphones x 2:	1/4" Stereo jack
Interconnect cables:	Supplied 2 meters long terminated in 15 pin 'D-Type' female connectors.
Connection to PC card:	15 pin 'D-Type'
Power:	IEC Power plug, 220-240V 50Hz

Input/Output

Stereo Inputs:	>20k ohms electronically balanced
Input Gain Adjust:	±20dB
Limiter Level:	0dBu to 18dBu
Outputs:	<75 ohm electronically balanced

Crosstalk

Left-right:	-88dBu at 1kHz, -68dBu at 10kHz

Distortion

Total Harmonic Distortion:	0.020% at 1kHz, 0dBu
	0.030% at 10kHz, 0dBu

Frequency Response

Line Inputs:	20Hz to 20kHz at 0.5dB, +0dB

Noise (20Hz to 20kHz)

Stereo Inputs:	-85dB (ref +8dB)

EQ

LF:	±15dB shelving at 100Hz
HF:	±15dB shelving at 10kHz
MF:	±15dB selectable 250Hz to 7.5 kHz

Common Mode Rejection Ratio

Line Input:	>60dB

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