

DBL-1

Digital Broadcast Limiter

Following on from the well established Analogue Limiter F601RS, The DBL-1 is a digital version of this famous product and it has all the existing analogue features, but a tighter performance and external PC software control of all the operational parameters.

Designed as a "black box" facility, the unit has no front panel controls and is specifically set-up via an RS232 or RS422 (AVS) control port located on the front and rear panels respectively. The actual set-up parameters are displayed and adjusted on a computer such as a laptop or desk-top pc. The software program runs under Windows 95/98/NT. Once set up, the unit can then be left in circuit as a "complete brick wall Limiter", giving signal control status indication, but no user controls for tamper proof operation.

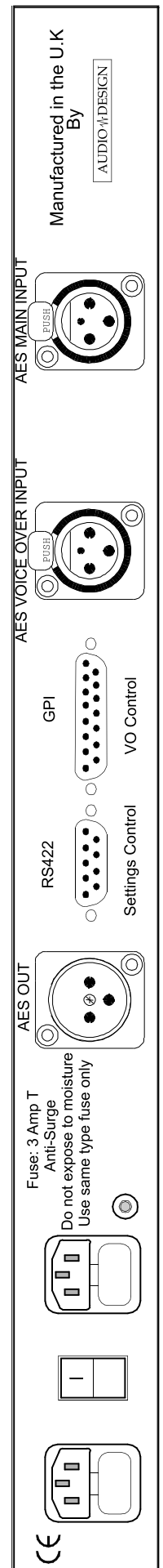
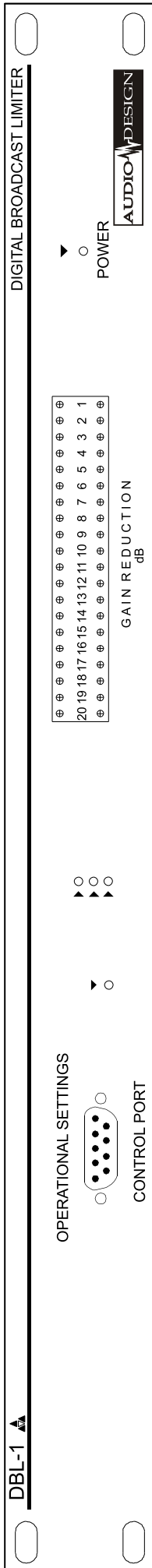
The unit is 1U rack mounted with the following features and facilities:

Rear Panel:

1. Main programme input accepting AES digital protocol.
2. Voice Over input accepting AES digital protocol.
3. Main programme output producing full 20bit AES digital protocol.
4. GPI 25 way D type connector to enable/disable voice over facility and give closing contacts for redundant internal power supply failure.
5. A control port to allow parameter configuration via an RS422 protocol on 9 way D type socket (can be controlled by the AVS protocol).
6. Dual mains and internal power supplies with status information via GPI connector.

Front Panel:

1. A control port to allow parameter configuration via an RS232 protocol on 9 way D type plug.
2. LED to show Voice Over facility is active.
3. 20 LED bar graph display showing Gain Reduction in 1 dB steps
4. 4 LED's showing selected program memory



SPECIFICATION

DBL-1

FRONT PANEL

2 LED's showing power supplies 1 and 2 are functioning.
20 bar LED column showing GR (gain reduction in 1dB steps).
VO LED lights to show voice over facility is active.
4 LED's showing selected program memory.
RS232 control port allows parameter set-up via a PC or laptop.

REAR PANEL

A second switch mode power supply is fitted for redundancy.
25-way D range to allow VO to be remotely operated. Closing contacts for power failure.
RS422 remote control port allows parameter set-up via a PC or laptop.

OPERATION

Limit Threshold:

Adjustable via control port as follows: -30dBFS to -0dBFS in 1dB steps.

System Delay:

Limiter type is feed forward (look ahead) with built in program delay adjustable from 0.3mS to 500mS in 10ms steps.

Attack:

Adjustable via control port as follows: 150uS, 300uS, 500uS, 1mS, 3mS, 5mS 10mS, 30mS 50mS, 100mS, 300mS, 500mS, 1Sec, 3Sec.

Release:

Adjustable via control port as follows: 15mS, 30mS, 60mS, 120mS, 500mS, 1Sec 1.2Sec 1.4Sec, 1.5Sec, 1.6Sec, 1.8Sec, 2Sec, 2.4Sec, 3Sec, 5.5Sec, 8.5Sec, 17Sec, 34Sec. Adjustable Secondary (Auto) Attack & Release (Same time constants).

Compression/Limiting Ratio:

Adjustable via control port as follows: 1:1, 1.1:1, 1.2:1, 1.3:1, 1.5:1, 1.6:1, 1.8:1, 2:1, 2.2:1, 2.4:1, 2.6:1, 3:1, 3.3:1, 3.6:1, 4:1, 4.4:1, 5:1, 5.5:1, 6:1, 7:1, 8:1, 9:1, 10:1, 100:1, Limit (normal setting for broadcast use).

Fail Safe:

When power is disconnected, the main program input is connected to the output via relay.

Stereo Linking:

Selectable on/off via control port.

Voice Over Facility:

Adjustable via control port as follows:

VO Delay: from 0.3mS to 500mS

VO Range: from 0 (out) to 30dB in 1 dB steps+ "Max" - full attenuation.

VO Sensitivity: from -24dBFS (4 bit below 0dBFS) to -6dBFS (1 bit below 0dBFS) in 1 dB steps.

VO Attack: Values as Main signal Attack. VO Release: Values as Main signal Release.

The pre-set Voice Over facility can be switch in and out of circuit via GPI control located on rear panel.

Pre-set Memories – allows up to 4 different system settings.

VO operation:

The unit will operate the Voice Over function only if the normal program level is actively at the pre-set Limiter threshold or above. At the time Voice Over ducking occurs, the program content of the VO input can be mixed with the Main program content at the Main output or used to duck the main output (not mixed).

POWER: 90 - 260V / 45 - 65 Hz, IEC inlet with on/off rocker switch
Fuse: 3 Amp anti-surge

SIZE: 482.60mm (19") wide x 44.45mm (1U) high x 320mm deep

WEIGHT: 2.5Kg

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