

# Digital Band Processor 4:

The most compact, complete and competitive 4 band processor on the market

Power at an unbeatable price



Remote control by software

## Introduction to the DBP4

The DBP4 from IDT is a 4 band audio sound processor where the cross-over filters can be adjusted so you are in control of the full band width. Doted with the highest quality processing the entry level is protected by the most efficient of AGC. As for the output, the Final Clipper is protected and enhanced by IDT's revolutionary APC. As all IDT processors, the DBP4 is open to a number of plug-ins making it the the most open product of its size on the market.

## Features

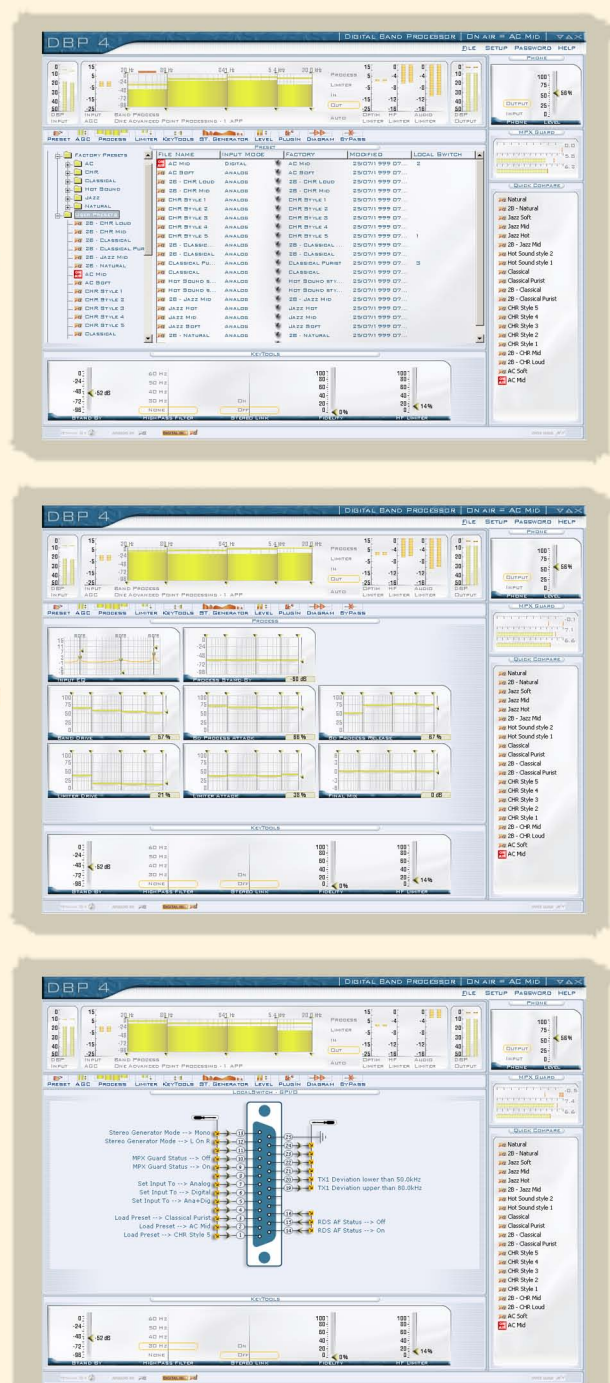
- AGC
- 2 to 4 band processing (adjustable band width)
- 2 to 4 band Limiter
- Optimiser and final limiter
- APC Concept (Advanced Peak Control)<sup>®</sup> : optimising the work of the clipper, increasing loudness and ensuring that all the peaks are eliminated.
- Digital Stereo Generator
- Stereo Enhancer (optional)
- Multiplex Limiter (respect of the ITU 412 standards) (optional)
- RDS / RDBS coder, basic or dynamic, using the UECP protocol via a data port (optional)
- Programmable TX1, TX2
- Sub IN (optional)
- Digital and analogue I/O's
- AES / EBU E/S (32, 44.1, 48, 96 kHz), synchro AES E/S
- RS 232, TCP/IP ethernet (optional), GPI/O

## Driving the DBP4

The DBP4 is supplied with the graphic interface MASTER GATE which runs under Windows<sup>®</sup> 2000 et XP. It can be remote controlled via modem or ethernet TCP/IP (optional).

## The strengths of the DBP4

With the DBP4 you can be sure to have sound processing that is both powerful and open to evolution. Respect of the broadcasting standards today, with the assurance of being able to do so tomorrow at one of the friendliest prices on the market, that's the DBP4 from IDT able to match most of the higher priced processors available.



Standard INPUT

INPUT FILTER

AGC PROCESS

DYNAMIC PROCESS

OPTIMISER LIMITER

HF LIMITER

FINAL CLIPPER

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## Specifications

### General specifications :

Frequency response : +0 / - 0.4dB, 10-20000Hz (Bypass mode).  
System distortion : < 0.01% THD, de-emphasised  
Signal to Noise : 92 dB unweighted, 20 Hz - 20 kHz  
I/O Delay : ~5 milliseconds  
Internal sample rate : 96 kHz  
Internal resolution : 40 bit floating point  
I/O resolution : 24 bit  
Maximum Overshoot : 0.1 dB  
Phase Response : Linear 20 Hz - 20 kHz  
Process Architecture : Wide band AGC / 4 band Process / 4 band limiter / Final limiter APC® overdriven  
DSP : 6 Sharc 21065,  
Maximum number of Factory Presets : 30  
Maximum number of User Presets : 60  
Remote contact closure : 16 inputs and 6 outputs

### Analogue Audio Input :

Configuration : Stereo  
Impedance : > 6 kOhms  
Type : Electronically balanced  
Maximum Input Level : +25 dBu, for THD + N < 0.01%  
Equivalent Input Noise: < - 84 dBu  
Common Mode Rejection Ratio: 90 dB  
Connector : Two XLR female  
AD Conversion : 24 bit 128X oversampled

### Analogue Audio Output :

Configuration : Stereo  
Source impedance : < 1 Ohms  
Type : Electronically balanced  
Maximum Output Level :  
+24 dBu, on 10 kOhms Load for THD + N < 0.01 %  
+18 dBu on 600 Ohms Load for THD + N < 0.05 %  
Signal to Noise : > 100 dB unweighted, 20 Hz - 20 kHz  
Connector : Two XLR Male  
DA Conversion : 24 bit 128X oversampled

### Digital Audio Input :

Configuration : Stereo per AES/EBU (AES3), 16, 18, 20 or 24 bit resolution.  
Impedance : 110 ohms  
Sampling Rate : 32, 44.1, 48, 96kHz autodetect  
Status bits : Input channel status is decoded for control.  
Input User bits are optionally passed through the output  
Connector : XLR female, EMI-suppressed  
Filtering : RFI filtered. Effective 0.5-1000MHz

### Digital Audio Output :

Configuration : Stereo per AES/EBU (AES3), 20 or 24 bits resolution.  
Impedance : 110 ohms  
Sampling Rate : Software selectable , free running at 32kHz +/- 10 PPM, 44.1kHz +/- 10 PPM, 48kHz +/- 10 PPM, 96kHz +/- 10 PPM.  
Synchronisation mode : Internal free running or external or delivery mode for 32, 44.1, 48, 96kHz  
Word Length : Selectable 18, 20, 24 bits.  
Jitter : Less than 5 ns rms.  
Status bits : Output channel status can be generated.  
Input User bits are optionally passed through the output  
Connector : XLR male, EMI-suppressed  
Filtering : RFI filtered. Effective 0.5-1000MHz

### Digital Sync Input / Output :

Configuration : Two mode, input to provide sync, Output to deliver sync  
Impedance : 75 ohms  
Sampling Rate for Input mode : 32, 44.1, 48, 96kHz Sampling Rate for Output mode : Software selectable , 32kHz +/- 10 PPM, 44.1kHz +/- 10 PPM, 48kHz +/- 10 PPM, 96kHz +/- 10 PPM.  
Connector : BNC female,

### Digital Stereo Generator :

Frequency Response : +/- 0.1 dB 20Hz - 15kHz  
Configuration : Two independently controlled output  
TX1 : Multiplex signal  
TX2 : Programmable (multiplex or 19 kHz)  
Sub channel input (optional)  
Source impedance : 75 ohms  
Load Impedance : 75 ohms or greater  
Level : Adjustable max 15 Vp-p (100% modulation ~ -3 dBFS)  
Connector : BNC  
Pre-emphasis : 50 or 75µs  
Stereo separation : More than 90dB, 20Hz - 15kHz Main to Sub crosstalk, Sub to Main crosstalk : < -85 dB  
Audio Filtering : 80 dB rejection at 19kHz  
Pilot stability : +/- 0.2 Hz

### RDS / RDBS : (optional)

Basic RDS/RDBS : PI, PS, AF, PTY, RT, RTC  
Dynamic RDS/RDBS : via port data UECF (Universal Encoder Communication Protocol)  
Data port : RS232 manual selection baud rate 9600 to 115200

### Remote computer interface :

Configuration : Two RS 232  
Connector : One Sub-D 9 pin female and one Sub-D 9 pin male on the back side and one Sub-D 9 pin female on the front panel  
Baud rate : Auto selectable baud rate to 115200 bauds

### Remote control

Configuration : Fully remote controllable by external modem or with the TCP/IP option  
Rate : 115200 bauds

### Local Switch GPI/O :

Configuration : 16 inputs and 6 outputs software controlable

### Compact Flash Memory :

Type : Compact flash  
Configuration : 1 slot for save, recall and upgrade facilities

### Power :

Voltage : 80 to 265 VAC, 50 - 60 Hz, 130 VA  
Connector : IEC, EMI-suppressed  
Safety Standard : CE / DBT

### Environmental and Dimensions :

Operating Temperature : 0° to 50° C or 32° to 122° F  
Humidity : 0 to 95% RH, non condensing  
Size : 19", One rack unit high.  
Weight : 6 Kg - 13.2 lb.

