DIGITAL AUDIO SPEAKER PROCESSOR K-SP 236

K-SP 236 it is a 2 input x 6 output Speaker Processor. The 2 input levels are displayed by rows of 6 level leds + 1 clip led, The 6 output levels are displayed by rows of 5 level leds + 1 clip led + 1 Limiter led.
The unit has 2 analog inputs, a stereo digital input, and 6 analog outputs. Each input has 5 filters and each output has 5 parametric filters.

Both input and output filters can be selected to be Bell, 1st/2nd Ord Shelvings with -3dB at cutting Freq., Symmetrical Shelving with variable Q, Hp/Lp with variable Q, 1st/2nd Ord. All Pass(90/180Deg.
Phase rotation at the cutting freq.), bandpass and notch.

The outputs X-Over section has Butterworth, Lin/Reyl and Bessel filters up to 24dB/Oct or Custom selectable Hp/Lp with up to 24dB/Oct with the cascaded Iind Ord cells adjustable in Freq and Q. RMS compressor with selectable Ratio up to 32:1 and adjustable Soft/Hard Knee. Output Peak Limiter with
THR in Vp or dBu for the Loudspeakers protection.

The RMS compressor and Peak Limiter's THR can range up to -30dBu. Each input and output channels have delays up to 850ms, with steps of 22usec.Linking functions between inputs and linking functions between outputs are available.

A function is allowing to have ramps closing the output level on parameter changes, when the unit is used as installation unit; this function can be excluded when the unit is used live and it is necessary to perform small changes to the set parameter...on the fly. The Pc SW for the remote control is allowing to connect in net up to 32 units and is allowing to show the phase of the filter setting and to adjust graphically the RMS compressor and the Peak limiter.

Specifications

Inputs:	XLR balanced
Outputs:	XLR balanced, TCPIP connection
Minimum Load:	150ohm
User memories:	24
Recall memories:	24
VU metering:	7 led for Inputs [-20dBu up to +15dBu; Clip]
	7 led for Outputs [-20dBu up to +15dBu; Clip; Limit]
	Output Leds can be used for displaying the Output level OR the Limiter activity
THD+N:	0.001% at 1kHz 0dBu
S/N:	>110dB
Frequency Response:	20Hz – 20kHz ; -0.5dBu at 20Hz and 20kHz
A/D and D/A Resolution:	24bits
Process Resolution:	24x32 bit for filtering process; 96 bits resolution on intermediate computation results
Display:	Graphic 2x20 characters

Size:	19"X(1U)
Process:	up to 24dBu/Oct HP/LP, +-15dB gain Bell and Shelving filters, RMS compressor/limiter [Attack time from 5ms up to 200ms (1ms resolution up to 20ms, then 10ms resolution up to 100ms and 20ms resolution up to 200ms), Release time from 0.1 sec up to 3 sec (0.1sec resolution)], delay on Inputs and Outputs up to 848.998ms with 21us increment steps.

Limiters

Threshold:	from 20dBu up to -10dBu
Attack time:	Attack time from 5ms up to 200ms (1ms resolution up to 20ms, then 10ms resolution up to 100ms and 20ms resolution up to 200ms)
Release time:	Release time from 0.1 sec up to 3 sec (0.1sec resolution)

High pass and Low Pass Filters

Frequency(HPF):	from 1st order (Butterworth -6dB/Oct) up to 4th Order (Butterworth, Linkwitz or Bessel -24dB/Oct)
Frequency(LPF):	from 1st order (Butterworth -6dB/Oct) up to 4th Order (Butterworth, Linkwitz or Bessel -24dB/Oct)
Filter's setting step:	1/24th of octave

Delay & Gain

Maximum Delay:	848.998ms by 21us increment/decrement step, on each Input and Output channel
Spdif input gain(Digital):	0dBu on RCA connector
Parametric Equalization:	5 filters on each input assignable as Bell or Shelving
	7 filters on each output assignable as Bell or Shelving
Filters:	symmetrical Bell or High/Low Shelving up to second order
Filter gain:	for Bell and Shelving the gain is ranging from -15dBu up to +15dBu by 0.5dBu resolution steps
Centre frequency:	selectable with a 1/24th of octave resolution steps from 20Hz up to 20kHz
Filter Q/BW:	Q from 0.05 up to 3 by 0.05 resolution steps