"POWERDYNAMICS"

DYNAMICS / AUTOMATION

Dyn   VCA assignment
1 to Mod: 1   Mn   CH

GAIN REDUCTION: 2 4 6 8 10 12 15 20

GATE   COMPR.   MISC.   SELECT

DATA ENTRY   UP   DOWN

CONTRAST   INTENS

ON/OFF   ENTER   ESC

MENU SHIFT
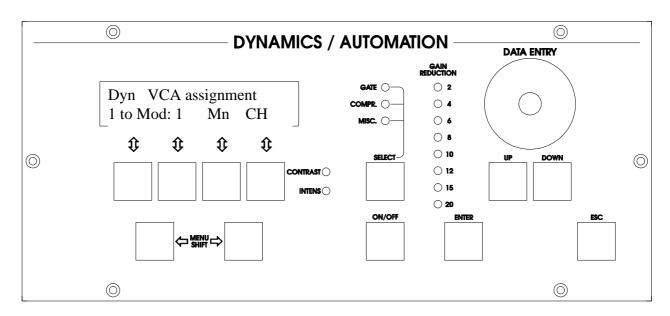
HARDWARE DESCRIPTION

D&R's "PowerDynamics" is a combination of sophisticated real time dynamics software and hardware designed to be integrated into your Cinemix or Merlin mixing console.
"PowerDynamics" provides real time dynamic control of the audio signal by way of built in VCA cards controlled by microprocessor technology up to a maximum of 128 channels.
Every PowerDynamics card contains 8 high quality VCA's to be internally mounted inside the mixing console. Interfacing into the signal path is by way of a two pole connector.
The VCA is inserted in series with the original insert point, permitting external processors to be inserted as well.
PowerDynamics can perform the following functions: It can be used as a gate and a compressor limiter. All functions can be activated to work simultaneously.
Control voltages can be "soft" linked on one card of 8 VCA's. All VCA's can be hard bypassed under software control by way of reed relays, completely eliminating the VCA's from the signal path. Every module in both the Cinemix and Merlin consoles has a Led showing that dynamics is active, when activated.

The Cinemix console can control all parameters in its own L.C. Display with the same switches normally used to activate ARM functions and other control functions of the automated master section.
The Merlin console has a complete dynamic control panel of its own to set all parameters of PowerDynamics. Apart from the usual Threshold, Ratio, Attack, Release, there is a gain reduction meter showing actual performance of the dynamics per selected module.
Direct led indicators show that either the Gate and/or Compressor/limiter is active.
A menu shift button easily shifts the two L.C. Display modes from gate to compressor.
A hardware dynamics ON/OFF switch lets you easily compare treated and untreated signals.
The Cinemix console only needs the individual VCA cards and software to perform.
The Merlin needs apart from the above mentioned VCA cards also the master control panel to perform its functions. Building in of PowerDynamics in both consoles can only be performed in the factory. Due to extensive wiring to be installed and removal of all modules it is advisable to consider the PowerDynamics as a factory installed product only.

System Hardware Features"

* "PowerDynamics" is a software based gate and compressor/limiter for
  Cinemix, Merlin and Orion mixing consoles.
* It uses internally built in VCA cards (8 VCA's per card).
* Built in Reed Relay By-pass switching creating true Hardware VCA Bypass On
  Each Channel.
* High Quality 4302 THAT VCA's as standard with extremely
  low (2nd harmonic) distortion.
* 80 dB control range in 10 bit AD reading 0.5 dB min.
* High-Speed Communication with microprocessor.
* Noise -84dBr
* Frequency response: 10-20.000 Hz within 0.25dB
* Input impedance: > 10 k Ohm
* Output impedance: < 47 Ohm
* Dynamics LED ON indicator: 10 mA
* Optional gain reduction meter.

"System Software Features"

* GateThreshold range:	-61dB up to +20dB
* Gate Attack time:	50 uSec up to 0.5 Sec
* Gate Release time:	5 mSec up to 0.4 Sec
* Gate range:	85dB
* Compressor Threshold:	-61dB to +24dB
* Compressor Ratio:	1:1 up to 10:1
* Compressor Attack:	1 mSec up to 0.2 Sec
* Compressor Release:	5 mSec up to 1 Sec
* Hysteresys range:	10dB

* Link function for a maximum of 8 VCA's within one dynamics PCB
* Key function for a maximum of 8 VCA's within one dynamics PCB
* Hold function for gate: 0.5 mSec to 0.2 Sec
* Adjustment of hysteresys with a range of 10 dB