



# Neve sound for the surround age



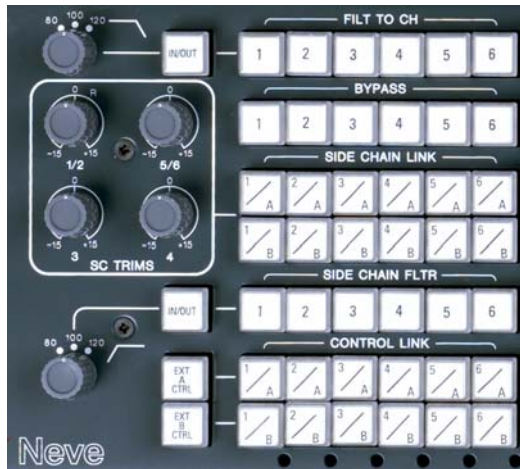
[ 8051 ]



# 8051



**The 8051** is an analogue compressor with six transformer balanced audio paths complemented by two side chains and a key input. Flexible side chain routing, trimming and filtering make this a powerful and responsive tool for surround mixing.



Each side chain can derive a control signal from any combination of input channels and the key input. Side chain insert points may also be used to process the signal or provide control from an external source. Each side chain can control any combination of the six channels





# innovation, design & sonic superiority



## Visual Feedback

Is provided by gain reduction meters and switches which illuminate to indicate routing and change colour to indicate which signal is driving each side chain at any moment

Most compressors apply gain reduction based entirely on the signal level at their inputs, this is known as a feed-forward system. **The 8051** uses a feedback topology, monitoring the output of each gain cell and continually adjusting the control voltage returned to give the required gain reduction

*“This is the style of compression that has created the famous*

***N e v e S o u n d ”***

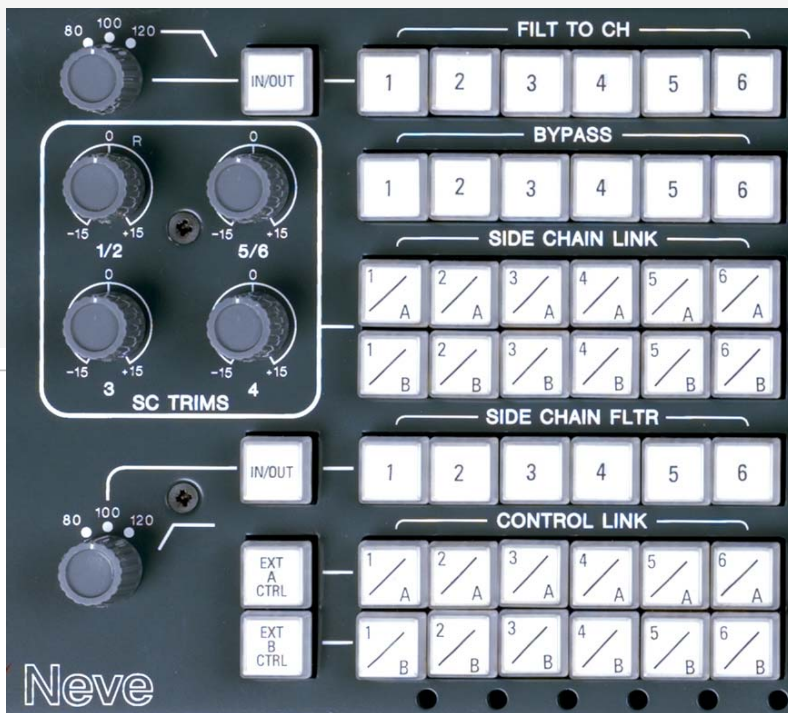




# 8051



## Control Link



*Each channel can be controlled from either Side Chain A or Side Chain B. The Control Link switches determine which side chain and which gain makeup control affects each channel. The six signal paths can be split between the two side chains in any format required. For example with L, C, R, LS, RS on Side Chain A and LFE on Side Chain B, with L, C, R on Side Chain A and LS, RS on Side Chain B, as a pair of separate stereo compressors, etc.*



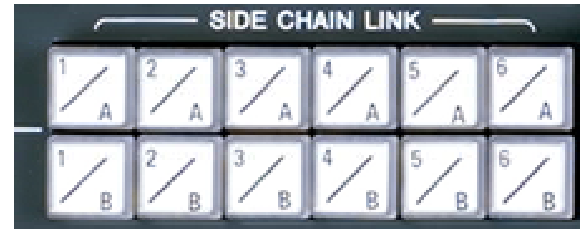
# route, trim & filter



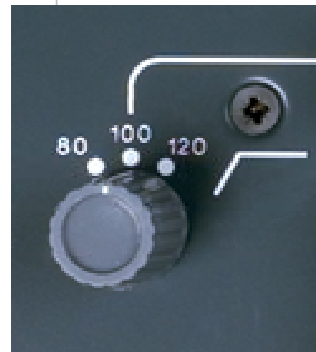
## Side Chain Link

Each audio channel can be routed to Side Chain A, Side Chain B, or both side chains. When multiple channels are routed to the same side chain, the compression circuit responds to the highest signal present. The resulting control voltage is then applied equally to all channels avoiding any image shift as compression is applied across a surround mix

Once above the side chain's threshold level, the link button for the largest signal on that side chain illuminates red. Any signal that is above threshold and within 2dB of the dominant signal will also illuminate



Side chain levels can be trimmed on four controls grouping the six channels into two stereo pairs and two mono channels



A high-pass filter can be inserted in the channel's side chain path, preventing unwanted compression due to LFE content without affecting the output sound. The frequency can be set to 80Hz, 100Hz, or 120Hz



# 8051



## Compression Controls

**Threshold** can be set between  $-20\text{dBu}$  and  $+16\text{dBu}$  and determines the signal level at which compression is applied.

**Ratio** controls the amount of gain reduction applied as the input level increases. Values available are characteristic, and its ratio gradually increases as the compression becomes heavier at all settings.



**Attack** Settings of  $2\text{ms}$  to  $165\text{ms}$  are available. With slower attack settings compression is more dependant on the average signal level, with faster settings it is more dependant on signal peaks.



**Recovery** Settings between  $100\text{ms}$  and  $3\text{s}$  are available. Recovery compliments the attack control, longer recovery times prevent pumping effects where gain reduction follows the program material too closely.

**Output** Level control provides a variable active pad across all six outputs, from  $0\text{dB}$  to  $-5.5\text{dB}$  in  $0.25$  steps. The pad is outside of the relay bypass loop and so always controls all six channels together in order to maximise the units output level without clipping.

**Gain** Makeup is used to restore the average level or loudness of a compressed signal. The gain is adjustable from  $-10$  to  $+20\text{dB}$ .



# flexible powerful control



## EXT Control

The EXT buttons provide an insert point in the control voltage signal for each Side Chain. By using the send and return the signal controlling the compression may be externally processed. Alternatively the EXT mode can take a control voltage from the rear connector instead of the side chain outputs, allowing the unit to be slaved from a second 8051 or a 33609.

## Bias Control

The bias control is used to balance the control voltages from the two side chains by applying up to 6dB of cut and boost, effectively modifying their ratios. If only a single side chain is in use, for example when used as a stereo compressor, the bias control allows ratio values between the standard settings to be selected with continuously variable control.

## Key Input

A Key Input is provided to allow adjustable control from an external source. Like the side chains the key input has a threshold level control ranging from  $-20\text{dBu}$  to  $+16\text{dBu}$  to set the intended level at which compression control is required.



It can be used in several ways including ducking from a voice channel. It can also be connected in parallel with one of the inputs which allows that input to be routed onto both side chains with different compression thresholds, for example to allow a Centre Channel to control separate compression of front and rear signals in a surround mix. The key input is provided with a selectable 12dB/octave high-pass filter to remove unwanted low frequencies from the input signal being used to control the compressor.



# 8051



## LFE Filter

A 12dB per octave low-pass filter can be assigned to any one channel. This filter is applied directly to the input before the relay-bypass point, and its  $-3\text{dB}$  frequency is selectable from 80, 100 or 120Hz. This can be used to create a Sub-Bass or LFE channel.

## Models

In addition to the standard model the 8051 can also be supplied as a specialised mastering version. This unit is slightly different to the standard 8051 in two ways. The Trim and Bias controls are indented to aid total mechanical recall of the unit, 1dB switches are fitted to the Threshold and Gain Make-Up controls to allow stepped switching.



The 8051 can be fitted to Neve 88R series consoles. It can be supplied with new consoles or retro-fitted to existing consoles.

## Bypass

If a channel routed to a side chain is bypassed, its connection to the side chain is maintained. This means that other channels controlled by that side chain are unaffected and allows a channel to control others without being compressed itself (as though it were another key input.) Two bypass modes are available, single or master. In single mode each switch bypasses its respective channel. In master mode all channels are bypassed together. Master mode is toggled by pressing and holding the channel 1 bypass switch and is indicated by the MST LED to the left of channel 1 being lit. If individual channels are placed in Bypass mode, the Master Bypass function then becomes a Group Bypass control for the remaining channels.



# 8051



## Specifications

### I / O

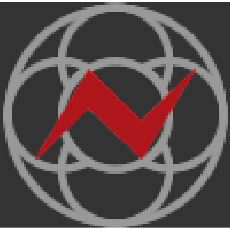
- ▶ The key input and LFE filter inputs are electronically balanced with an input impedance of 10kOhms
- ▶ All other inputs are transformer balanced with 3.6kOhms input impedances.
- ▶ All outputs are electronically balanced post the output transformers, with maximum output of +26dBu into 600Ohms. The unit is calibrated for bridging loads greater than 10kOhms
- ▶ Control Voltage I/O is provided for linking multiple units, or linking to 33609

### Audio Performance

- ▶ Equivalent input noise (20kHz band): <-78dBu
- ▶ THD+N (for 20dBu input @ 1kHz): <0.03%
- ▶ Maximum Output Level: >26dBu into 600 ohms
- ▶ Interchannel Crosstalk: <-80dB at 15kHz
- ▶ Frequency Response +/-0.5dB 20Hz to 20kHz

### Control

- ▶ LFE Filter: 12dB/octave low-pass, -3dB frequency selectable to 80Hz, 100Hz or 120Hz
- ▶ Sidechain & Key Filters: 12dB/octave high-pass, -3dB frequency selectable to 80Hz, 100Hz or 120Hz.
- ▶ Threshold: -20dBu to +16dBu master control, with  $\pm 15$ dB trims on all channels.
- ▶ Make-up gain: -10dB to +20dB
- ▶ Ratio: 1.5:1, 2:1, 3:1, 4:1, 6:1, MAX (~8:1).
- ▶ Attack: 2ms, 4ms, 6ms, 8ms and 16ms.
- ▶ Release: 100ms, 200ms, 400ms, 800ms, 1.5s and 3s.
- ▶ Output Level Trim: 0dB to -5.5dB pad, in 0.25dB steps.



# *Neve Sound – No Question*



**Head Office  
AMS Neve plc  
Billington Road  
Burnley  
Lancashire  
BB11 5UB  
United Kingdom**

**Tel: +44 (0)1282 457011**

**Email: [enquiry@ams-neve.com](mailto:enquiry@ams-neve.com)**

**[www.ams-neve.com](http://www.ams-neve.com)**

**[ 8051 ]**