



VNET SC1

TANNOY®

VNET SC1 Controller



VNET SC1 Controller (network enabled)



Product Description

In its basic configuration the Tannoy VNET SC1 is a powerful '2 in 6 out' digital system controller which provides multiple X-Over, EQ, Delay and Limiting options. Using DSP-based digital crossovers with 96kHz sampling rates, this versatile controller will enable simple configuration and optimisation of loudspeakers in terms of speaker management and room EQ functionality.

Two versions of the VNET SC1 are available – one with a VNET™ network card and one without. The 'network enabled' version facilitates VNET™ networking capability with two network ports provided for connection to any Tannoy VNET™ system.

Equalisation is provided on each input and output section with two shelving filters and six fully variable parametric sections. Butterworth, Bessel, Linkwitz Riley and Hardman filters are available.

A high performance, low distortion limiter is incorporated on each output; threshold is user adjustable with two LED's provided for each output channel to indicate the signal level relative to the limiter threshold.

Attack and release constants are automatically calculated by the VNET SC1 dependant on frequency. Input and output gain is adjustable in 0.2dB steps from -40dB to +15dB. Input delay is adjustable in variable steps from 0 to 400ms and output delay is adjustable to 80ms.

Set up of the unit is exceptionally simple thanks to the intuitive signal flow based interface, or it can be controlled from a PC with Tannoy's standard VNET™ software. Any of the inputs (A, B, or sum) can be routed to any output with the unique routing engine of the VNET SC1.

The VNET SC1 can also be linked, via its RS232 connector, to a laptop computer or other PC and controlled using VNET™ software. This will provide improved access to the configuration functionality via simple on-screen graphics.

The universal switch mode power supply automatically adapts to mains voltages from 85 to 240 volts.

Features

Features common to both models:

- Two balanced XLR analogue inputs and six balanced XLR analogue outputs
- Simple configuration and optimisation of loudspeakers in terms of speaker management and room EQ functionality
- Intuitive signal flow based interface and 2 x 24 character backlit LCD
- Unique routing engine allows any input to be sent to any output.
- Butterworth, Bessel, Linkwitz Riley and Hardman type filters are available on all outputs
- Input and output gain is adjustable in 0.2dB steps from -40dB to +15dB
- Input delay adjustable in variable steps from 0 to 400ms, while output delay is adjustable to 80ms
- Automatically calculated attack and release constants dependant on frequency
- RS232 connector enables connection to a laptop computer or other PC for enhanced control functions using VNET™ software
- Automatically adapting universal switch mode power supply - 85 to 240 volts

Additional Feature - Network Enabled version only:

- Two XLR network link ports allow the network-enabled version SC1 to combine any VNET™ system with any other loudspeaker system

Applications

- Fixed Installations
- Touring Applications

Tannoy United Kingdom
Tannoy North America
Tannoy Deutschland
Tannoy France

T: 00 44 (0) 1236 420199
T: 00 1 (519) 745 1158
T: 00 49 (180) 1111 881
T: 00 33 (0)1 7036 7473

E: enquiries@tannoy.com
E: inquiries@tannoyna.com
E: anfragen@tannoy.com
E: ventes@tannoy.com

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TECHNICAL SPECIFICATIONS

System	VNET SC1
GENERAL	
Inputs	2
Input Impedance	> 10k Ohm electronically balanced
Maximum Input level	+20dBu
Outputs	6
Output Impedance	<100 Ohm, ground balanced
Maximum Output Level	+20dBu into 600 Ohm load
Sample Rate	96kHz
Bit Depth	24 bit
Frequency Response	10Hz to 40kHz, +/- 3dB (filters disabled) 20Hz to 20kHz, +/- 0.5dB (filters disabled)
THD	<0.01%, (+10dBu, 20Hz to 20kHz, 30kHz bandwidth)
Dynamic Range	>112dB (A weighted, 22kHz bandwidth) >109dB (un-weighted, 22kHz bandwidth)
Serial Comms Data	38.4kbaud, format: 8 data, 1 stop, no parity
PROCESSING	
Gain	+15dB to -40dB and mute, 0.2dB steps
Output Ch. Source	Input A, Input B and SUM
HP filter frequency	Off, 10Hz to 25.4kHz, 1/36 octave steps
LP filter frequency	10Hz to 25.4kHz and off, 1/36 octave steps
LP / HP filter type	12, 18 & 24dB/octave Bessel and Butterworth 12, 24 and 48dB/octave Linkwitz Riley 4th or 8th order Hardman

Delay	Input 400ms, output 80ms
Limiter	High performance limiter, adjustable threshold in 0.2dB steps, automatic time constants
EQ frequency	10Hz to 25kHz, 1/36 octave steps
EQ gain	+15dB to -15dB, 0.2dB steps
EQ width	5.0 to 0.1 octaves bandwidth, 1/36 octave steps

CONNECTORS

Audio inputs	3 pin female XLR
Audio outputs	3 pin male XLR
Serial comms	Available via RS232 port
Network comms	Only available on network enabled SC1
Mains	3 pin IEC
Mains Power	Universal switch-mode PSU, 85v to 250v AC, 50 / 60Hz
Consumption	< 25watts
Dimensions	45mm (H), 482mm (W), 254mm (D) 1.80" (H), 19.00" (W), 10.00" (D)
Weight	2.7 Kgs net 5.94 lbs net

The introduction of new materials or manufacturing methods will always equal or exceed the published specifications, which Tannoy reserves the right to alter without prior notice. Please verify the latest specifications when dealing with critical applications.

Ordering Information

PART NUMBER	MODEL NAME	BAFFLE / GRILLE COLOUR	PACKED QUANTITY	PACKED WEIGHT
8001 4420	VNET SC1 UK / EURO	Black	1	3.2 (7 lbs)
8001 4421	VNET SC1 110V	Black	1	3.2 (7 lbs)
8001 4423	VNET SC1 (network enabled) UK / EURO	Black	1	3.2 (7 lbs)
8001 4424	VNET SC1 (network enabled) 110V	Black	1	3.2 (7 lbs)

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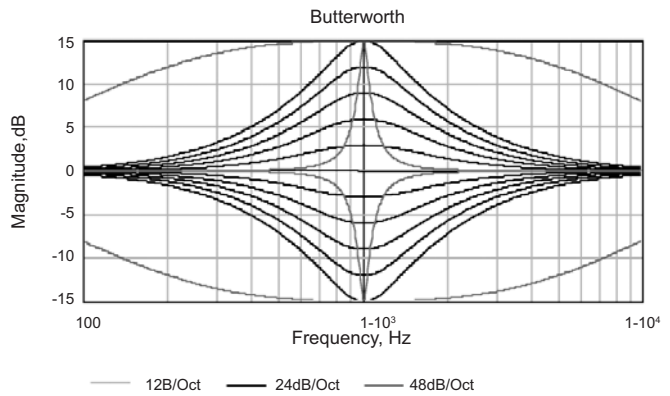
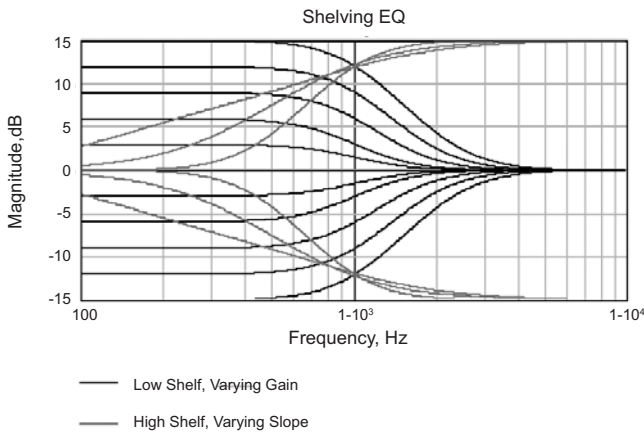
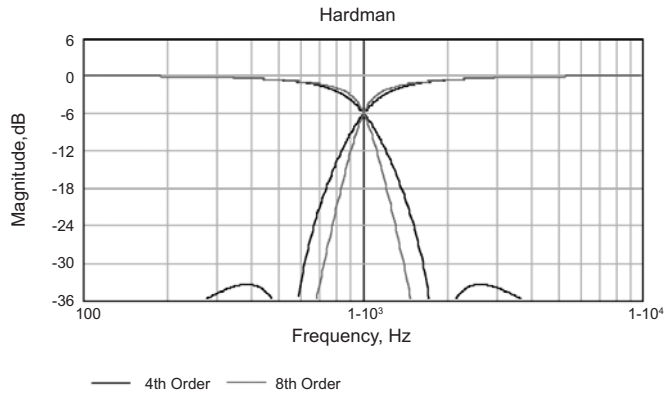
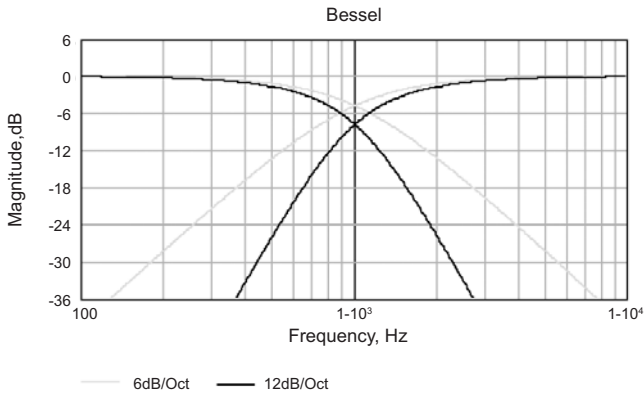
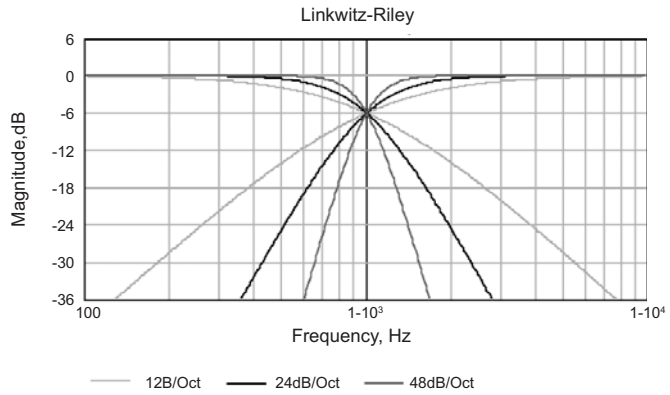
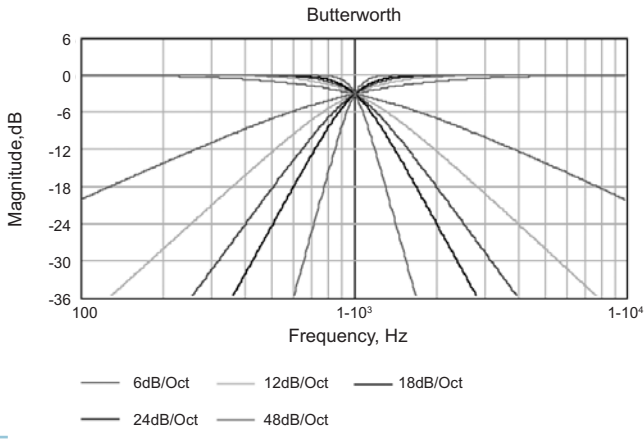
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EQ AND FILTER RESPONSE GRAPHS



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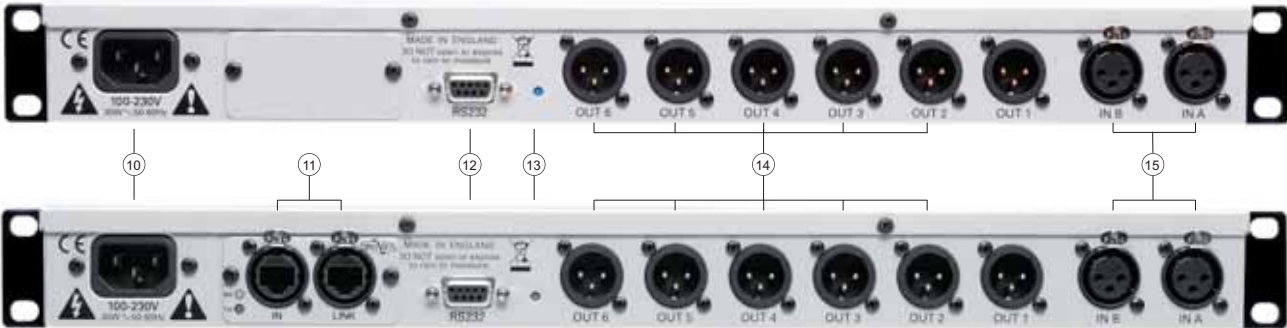
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PRODUCT FEATURE IDENTIFICATION



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Front Panel

- ① **INPUT SIGNAL INDICATORS**
A set of three pairs of LEDs indicate signal present, +4dBu and input clip for each channel.
- ② **STORE BUTTON**
The unit has 45 preset locations.
- ③ **RECALL BUTTON**
To recall a preset, press the recall button and use parameter knob A to select the required preset.
- ④ **CHANNEL SELECT BUTTONS**
The currently selected input or output channel is shown in the top left corner of the display. Pressing the channel select buttons scrolls through the available inputs and outputs.
- ⑤ **EDIT PARAMETER SELECT BUTTON**
The name of the edit parameter page is displayed in the bottom left portion of the LCD.
- ⑥ **DISPLAY SCREEN**
Preset, channel, parameter and status information is shown on the 2x 24-character text display. In most screens the currently selected channel is displayed being the upper line and the edit parameter on the lower line.
- ⑦ **PARAMETER EDIT ENCODERS**
Three velocity sensitive parameter knobs are used to adjust parameters shown on the display. Up to three parameters at a time are displayed on the screen.
- ⑧ **LIMITER INDICATOR**
Two LEDs are provided for each output channel.
- ⑨ **MUTE BUTTONS**
Each output has a mute button and associated mute status LED.

Rear Panel

- ⑩ **POWER INLET**
The processor has a switch mode power supply that is capable of operating with a nominal mains voltage of 85V to 240V, 50/60Hz without re-configuration.
- ⑪ **VNET™ NETWORK PORTS**
The network enabled VNET SC1 controller features two network ports for connection to any VNET™ system.
- ⑫ **COMMUNICATIONS PORT CONNECTOR**
Tannoy VNET SC1 processors may be controlled entirely from a PC running VNET™ software using this RS232 serial port connector. This port is also used for updating the firmware in the unit.
- ⑬ **SECURE MODE SWITCH**
A momentary button is fitted behind the rear panel, between the output XLRs and the RS232 port. When activated, this will disable all the front panel controls so they cannot affect the signal path, making the unit secure against tampering.
- ⑭ **AUDIO OUTPUT CONNECTORS**
The processed outputs are impedance balanced.
- ⑮ **AUDIO INPUT CONNECTORS**
All audio connections are fully balanced.

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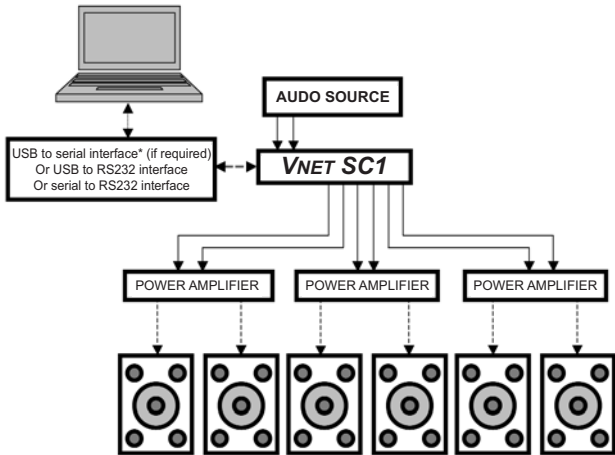
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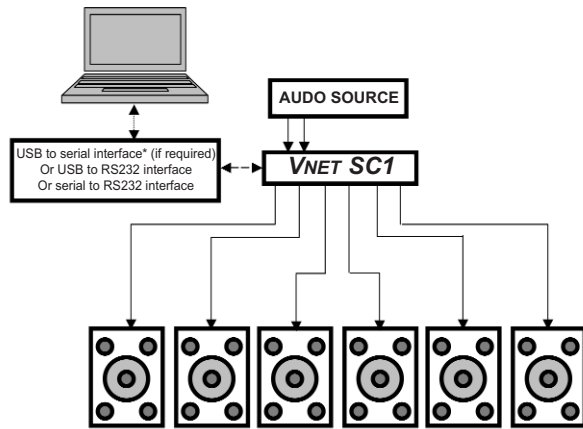
OPERATION AND SYSTEM CONFIGURATION OPTIONS

Connecting the VNET SC1

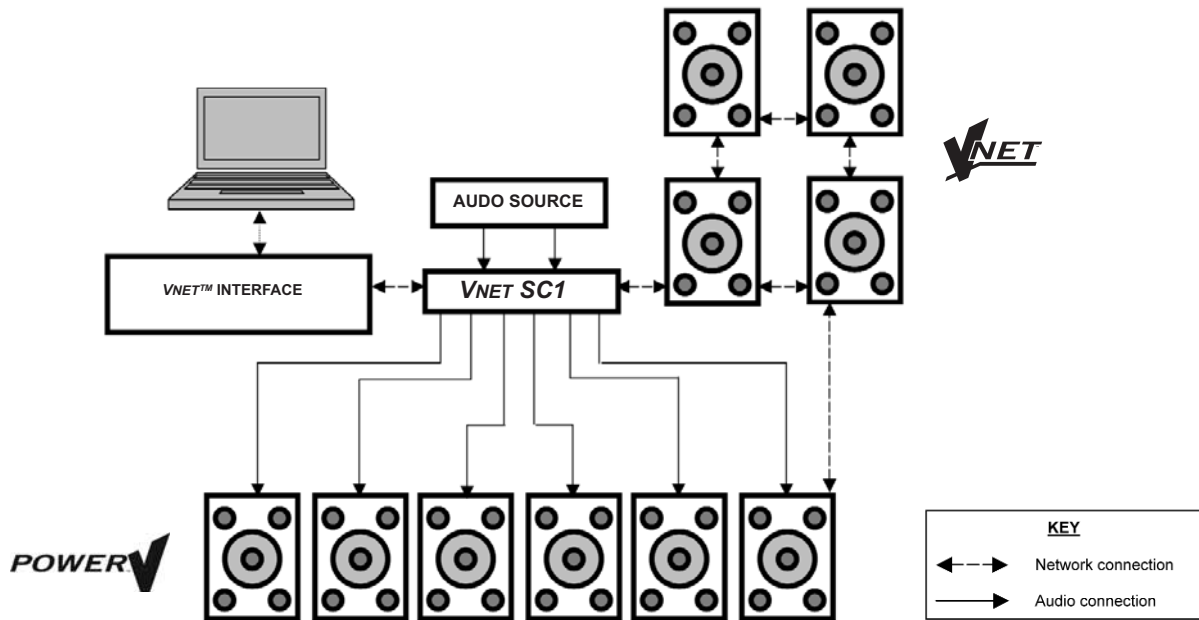
Example 1: Using a Tannoy VNET SC1 with a passive loudspeaker system (e.g. Tannoy V-Series™)



Example 2: Using a Tannoy VNET SC1 with a powered loudspeaker system (e.g. Tannoy PowerV™)



Example 3: Using a network enabled VNET SC1 to combine an existing Tannoy VNET™ system with another loudspeaker system (e.g. Tannoy PowerV)



* USB to Serial interface allows networking of multiple VNET™ speakers or SC1 controllers

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ACCESSORIES



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PART NUMBER	MODEL NAME	BAFFLE / GRILLE COLOUR	PACKED QUANTITY	PACKED WEIGHT
8001 4450	VNET™ USB / RS 232 Interface	Black	1	0.75 (1.65lb)
8001 4460	VNET™ Power Supply Interface	Black	1	0.75 (1.65lb)
8001 4470	VNET™ Interface 1U rack mount kit	Black	1	0.75 (1.65lb)

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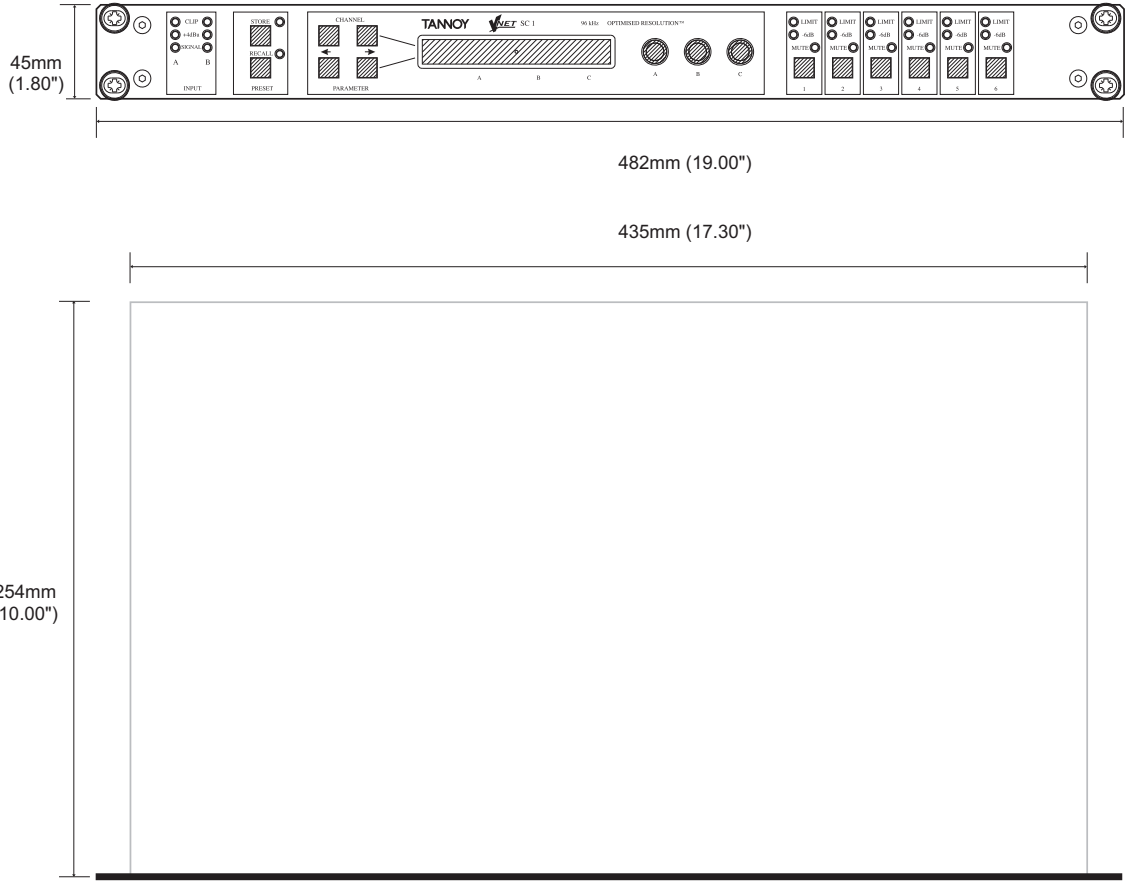
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