



1073SPX

Single Microphone Preamplifier & EQ

User Manual
527-413
Issue 1.1



Important Safety Instructions

***For your own safety and for the protection of others,
please observe the following safety precautions:***

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) **WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 10) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 11) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped

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The original Neve 1073® channel amplifiers are very popular mic preamplifiers, considered by many to capture the very essence of the Neve sound. In manufacture since the early 1970s, the discrete class-A design offers 3 bands of EQ with one fixed high frequency and a high-pass filter.

The 1073SPX accommodates a 1073® in a stand-alone 1U rack-mount unit. At its core, the 1073SPX retains the same class-A design as the original 1073, but includes many additional features to ensure the unit sits comfortably in the modern studio environment.

Configuring the 1073SPX

To use the 1073SPX, configure as follows:

- ▶ Connect the supplied 48V power adaptor (PS10501) to the 48V input.
- ▶ Connect your mic/line or DI input source:
 - Mic input uses the XLR input of the XLR combo connector on the front panel, or the XLR connector on the rear panel.
 - Line input uses the 6.35mm jack input of the XLR combo connector on the front panel, or the XLR connector on the rear panel.
 - DI input uses the 6.35mm jack connector on the front panel.
- ▶ Connect any intermediate sources to the insert loop as required, via the 6.35mm jack connectors on the rear panel.
- ▶ Connect the line output XLR (rear panel) into your system
- ▶ Switch on the 1073SPX
- ▶ Set the phantom power, DI earth lift, DI PAD and Mic I/P Z as required.



POWER: Switches the unit on or off. The adjacent LED lights when the unit is ON

FRONT: Switches the audio input to the front mic/line combo connector.

NOTE: *The DI input always overrides the Mic input, whether the FRONT switch is pressed or not.*

DIGI: Switches the line input and output to the rear digital module. In digital mode the front/rear mic input, DI input, and analogue line output continue to operate normally.

NOTE: *The digital module is an optional extra and is not included as standard.*

XLR/Jack combo input:

Use the XLR input for microphone sources and the 6.35mm jack input for line-level sources.

48V: Applies 48V phantom power to the XLR microphone input (front and rear). The adjacent LED lights when phantom power is active.

Lo Z: The default input impedance on the microphone input is 1200Ω. Pressing the Lo Z switch reconfigures the input for 300Ω input impedance.

LIFT: Provides ground lift for the DI input. If hum/buzz occurs when using a DI input, pressing this switch may alleviate the problem by breaking any ground loop.

-20: Provides 20dB of attenuation to the DI input. In the default position (no attenuation) the input impedance of the DI input is approximately 1MΩ. When set to -20dB attenuation (switch depressed) the input impedance of the DI input is approximately 10kΩ.

DI I/P: High-impedance balanced input for direct injection.

NOTE: *When a 6.3mm jack is inserted into the DI input, all other microphone inputs are automatically disconnected. Use the Mic side of the gain control when using the DI input.*

High Frequency:

Smooth +/-16dB fixed frequency shelving at 12kHz,

Mid Frequency:

Smooth +/-18dB peaking, fixed 'Q' with selectable centre frequencies of 0.36kHz, 0.7kHz, 1.6kHz, 3.2kHz, 4.8KHz, 7.2kHz.

Low Frequency:

Smooth +/-16dB shelving with selectable frequencies of 35Hz, 60Hz, 10Hz, 220Hz.

High Pass Filter:

18dB per octave slope, switchable between 50Hz, 80Hz, 160Hz, 300Hz.

Phase: Reverses the phase of the output signal. In the default position, absolute phase is preserved through the unit.

EQ: Switches the equalisation circuit into the signal path.

INS: Switches the insert loop into the signal path.

PRE: Positions the insert loop before the equalisation circuit (pre-EQ). In the default position (switch not depressed) the insert loop is positioned immediately after the equalisation circuit (post EQ).

LEVEL: Adjusts the output audio level. This control is post-EQ but pre-output stage. The thick line on the graticule indicates the point of nominal unity gain; the unit has ~5dB in hand. Short-pressing this knob cycles the level meter take-off point through three possible points in the signal path, indicated by the adjacent LEDs.

When the Digital I/O option is fitted, long-pressing this knob cycles through the sample rate selection and a further long-press will cycle through the clocking source selection.

Take-off LEDs and Clip Indication:

One of three LEDs lights green to indicate the selected take-off point for the level meter, chosen by pressing the LEVEL knob. The three possible take-off points are: pre-EQ, post-EQ, post output stage. In addition, LEDs will light red if their respective take-off point is close to clipping. Clip indication is always active whichever take-off point happens to be selected.

Level Meter:

Peak responding level meter. The audio level can be monitored at one of three locations chosen by pressing the LEVEL knob.

Sample Rate indicator and Clock source indicator: (optional Digital I/O module must be fitted)

The Sample Rate indicator LED shows the selected sample rate. The sample rate selection can be changed by long-pressing the LEVEL knob which will begin cycling through the sample rates and releasing the LEVEL knob when the desired sample rate selection LED illuminates.

The Clock Source indicator LED shows the selected clock source. The clock source selection can be changed by long-pressing the LEVEL knob (after long-pressing once to select the sample rate as above and then releasing) which will then begin cycling through the clock source selections and releasing the LEVEL knob when the desired clock source selection LED illuminates.

Rear Panel



+48V DC:	Connect the accompanying power supply (PS10501) to power the unit.
Fuse:	Always use the correct fuse rating, as indicated beside the fuse holder. Fuse Rating: T500mA, 250v 20mm, Ø 5mm.
MIC I/P:	Balanced microphone input.
LINE I/P:	Balanced line input.
INSERT SEND:	Balanced line-level output for insert loop.
INSERT RETURN:	Balanced line-level input for returning signals.
LINE O/P:	Balanced line-level output.
DIGITAL OPTION PANEL:	Optional Digital module is fitted here.

Rack Mount Instructions

- ▶ Elevated Operating Ambient- If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (30°C) specified by the manufacturer.
- ▶ Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
- ▶ Mechanical Loading - Mounting of the equipment in the rack should be such that a hazardous condition is not created by improper or uneven mechanical loading.
- ▶ **Reliable Earthing - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips).**

No audio at the line output

- ▶ Check all connections to the unit. For example, check that all necessary inputs and outputs are plugged into the same channel.
- ▶ Check the setting of the LEVEL control. Turn clockwise to increase the output level
- ▶ Check the setting of the gain control. Turn clockwise (mic mode) when using a microphone source. Turn anti-clockwise (line mode) when using a line-level source.
- ▶ Check that the **FRONT** switch is set to the desired position. This switch should be depressed when the audio source is connected to the front combo connector.
- ▶ Check that the **DIGI** switch is set to the desired position. The switch should be depressed when the audio source is via the digital module.
- ▶ Check whether the insert loop is in use. Set the **INSERT** switch to the default position (not depressed); if line output signal becomes present, this indicates a problem with connections to the insert loop or with the external equipment in the loop.

Dimensions

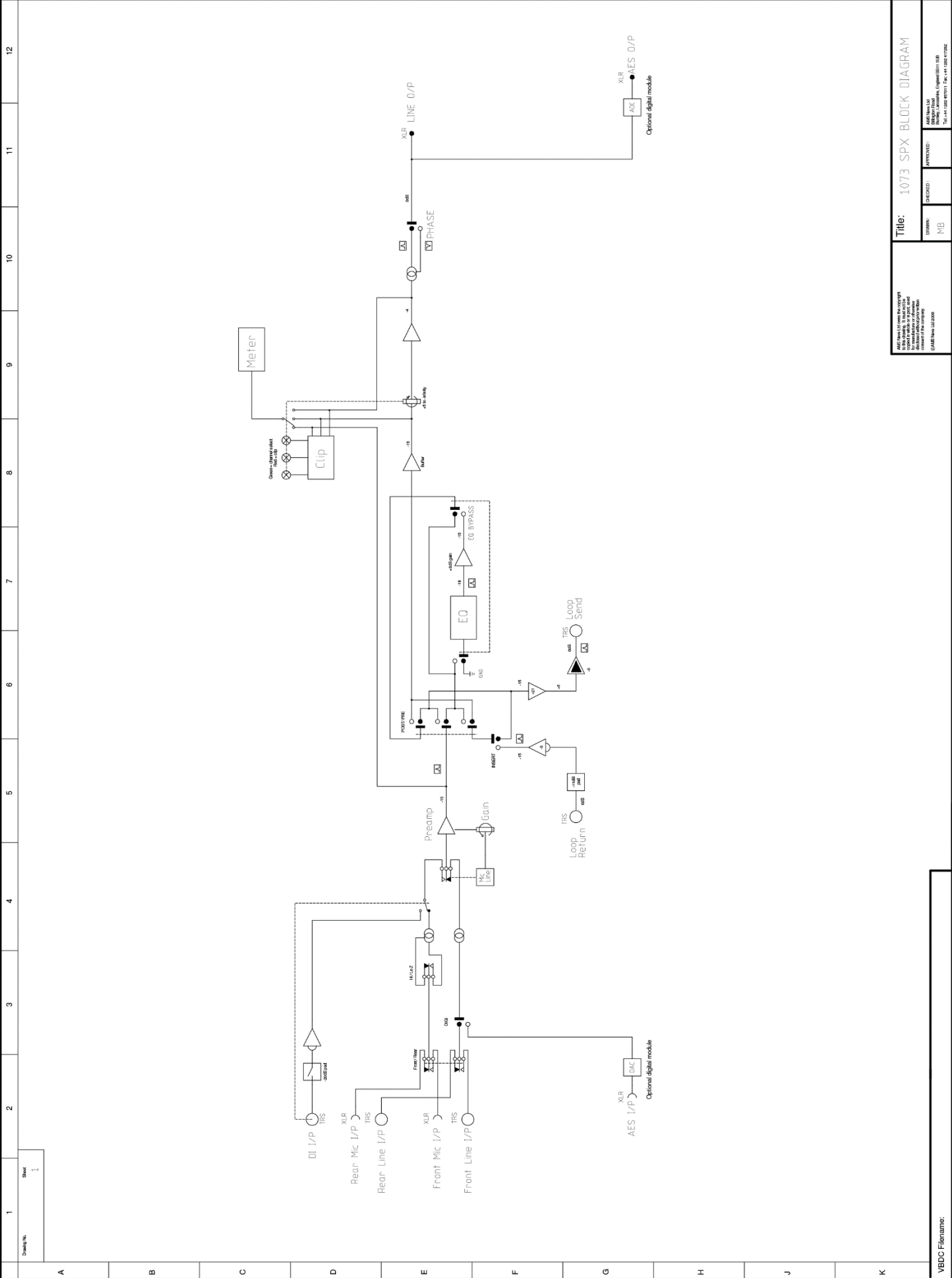
Stand-alone Modules	Width mm (inches)	Height mm (inches)	Depth mm (inches)	Approx. Weight kg (lbs)
1073SPX Unit	480 (19)	44 (1.75)	310 (12)	5 (11)

Modules	Power
1073SPX Unit	48V _{dc} , 250mA ±20mA excluding digital module. Negative Earth

Specifications

- ▶ Microphone Input:
Input Impedance 300Ω or 1200Ω, gain +80dB to +20dB in 5dB steps.
- ▶ Line Input:
Input Impedance 10kΩ bridging, gain +20dB to -10dB in 5dB steps. Both inputs are transformer balanced and earth free.
- ▶ DI Input:
Input Impedance 1MΩ (PAD off) 10kΩ (PAD on). Gain +80dB to +20dB in 5dB steps.
- ▶ Output:
Maximum output is >+26dBu into 600Ω. Output impedance is 75Ω @1kHz. Outputs are transformer balanced.
- ▶ Distortion:
Not more than 0.07% from 50Hz to 10kHz at +20dBu output (80kHz bandwidth) into 600Ω.
- ▶ Frequency Response:
+/-0.5dB 20Hz to 20kHz, -3dB at 40kHz Eq Out.
- ▶ Noise:
Not more than -82dBu at all Line gain settings Eq In Flat/Out (22Hz to 22kHz bandwidth, 150Ω input termination), EIN better than -125dBu @ 60dB gain.

1	2	3	4	5	6	7	8	9	10	11	12
<p>Symbols:</p> <ul style="list-style-type: none"> = I/P XLR = O/P XLR = 25/15W D con = 1/4" Jack = 50 W Variac = Power up default = Center detent = LED = Transformer = Amplifier = Electronic unbalancer = Electronic balancer 											



<p>Drawn No. _____ Sheet 1 of 1</p>											
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NEVE

Drawn No. EBZ0555 Sheet 1

Title: 1073 SPX BLOCK DIAGRAM

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