

# Operation Manual



## The Vertigo Sound VSP-2

### Dual Mic Preamp 1976

Thank you for purchasing a VERTIGO SOUND PRODUCT.

The VSP-2 is VERTIGO SOUND's third BIG IMPACT DESIGN and is setting a new benchmark in microphone amplification.



The heart of this unit is Vertigo Sound 100% discrete Twin Op Amp circuit called the OPA (operational amplifier) 1976.

These *in house* engineered and built discrete amplifier stage is combined with Jensens world famous JT-16 Mic transformers and provide a smooth warm and defined sound from the lowest bass to the the the very top end of the sonic spectrum. The JT-16 transformer can handle very high input levels and provides a very linear phase behaviour because of low capacitance problems due to it's low ratio of 1 : 2. Further the low ratio of the transformer forces the discrete OP Amp to provide most of the amplification in the VSP-2. This *full throttle, pedal to the floor* circuitry enables a unique, rich, full and charcterful sound.

## Controls and Features

### Gain control:

10-position Grayhill Rotaryswitch with 6db step increments. The full range of the unit is 12–72 db

### Fine Gain control:

41 click Alps 0–6 db fine gain trim

### 120Hz/off/80hz:

Switch that engages lowcut input filter 12 db/oct at 80hz or 120hz.

### Signal and Clip LED:

This LED either indicates Green for a reasonable signal level presence at the output or red for close to Overload. There is no inbetween orange state to indicate clipping clearly.

### LED green:

– 6 dBu to 19 dBu at the output of the VSP-2  
→ reasonable output level

### LED red:

+19 dBu at the output of the VSP-2  
→ close to clipping level.

#### > **NOTE**

The maximum output of the VSP-2 is **+24 dBU**, the red clipping led indicates the maximum capable input level of most common converters and analog gear.



### INSTRUMENT IN:

This is an unbalanced input for guitar, bass, samples, etc. This unbalanced input goes directly to the TWIN OPA input without using any circuitry inbetween. (Real DI Input)

Simply throw the toggle switch and you're off.

The output is muted when switching to avoid loud clicks in your monitors.

### 48V:

48V switches ramped phantom power.

### 20 dB:

Pads the input signal 20 dB down. The pad does not affect the input impedance of the VSP-2!

The pad circuitry is switched out of the Input stage completely when disabled.

**Please use the Pad for the gain Settings**

**12 dB–18 dB–24 dB and 30 dB on!**

**The Pad does not effect the sound of your signal but settings like 54 dB with Pad engaged e.G. will worsen your signal to noise ratio.**

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→ reasonable output level

### LED red:

+19 dBu at the output of the VSP-2  
→ close to clipping level.

### PHASE:

Reverses the polarity of the pre amp's output.



## Installation and Hook Up

The VSP-2 generates very little heat so it is not necessary to leave an empty space for ventilation above or below the unit.

But: Discrete OPAs are sensitive for thermal and magnetic influences. Don't put heat or magnetic strayfield generating devices below and above inside your rack.

### **Input:**

The audio input is totally isolated by a *JENSEN* Mic transformer. The primary winding of the transformer is wired to Pin 2 and Pin 3.

Max. Input Level at 20Hz is +9dbu.

The outputs can be loaded either balanced or unbalanced.

### **Output:**

The audio output is of the type electronically floating balanced 1646 IC type.

#### **Balanced IN/OUT**

Pin 1 = Ground/Shield

Pin 2 = Audio + (hot)

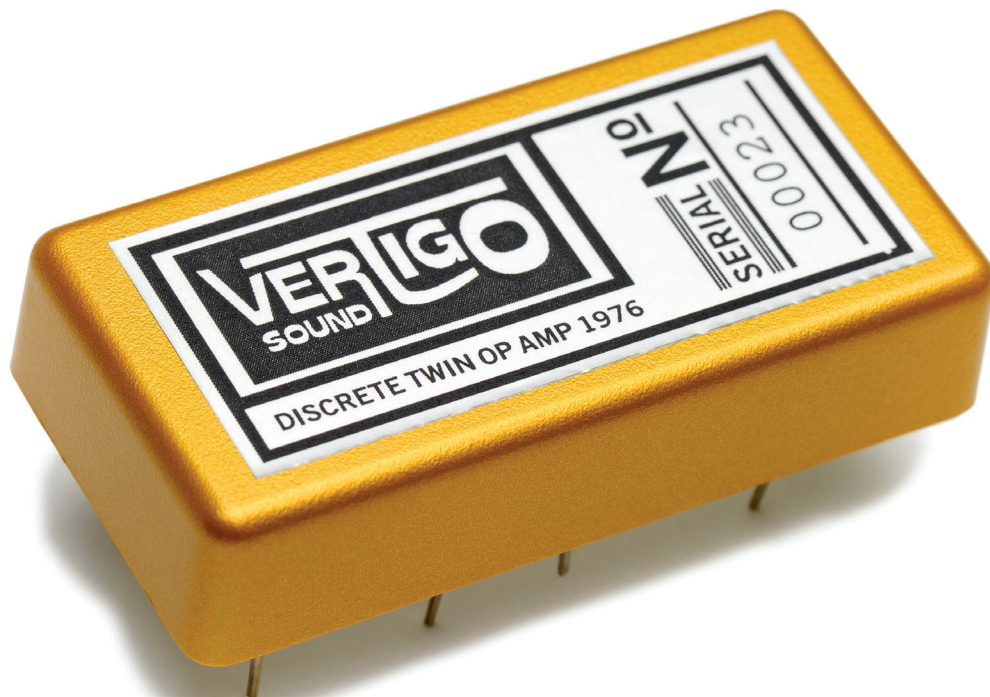
Pin 3 = Audio - (cold)

#### **Unbalanced OUT**

Pin 1 = Ground/Shield

Pin 2 = Audio + (hot)

Pin 3 = Audio common/Ground/Shield

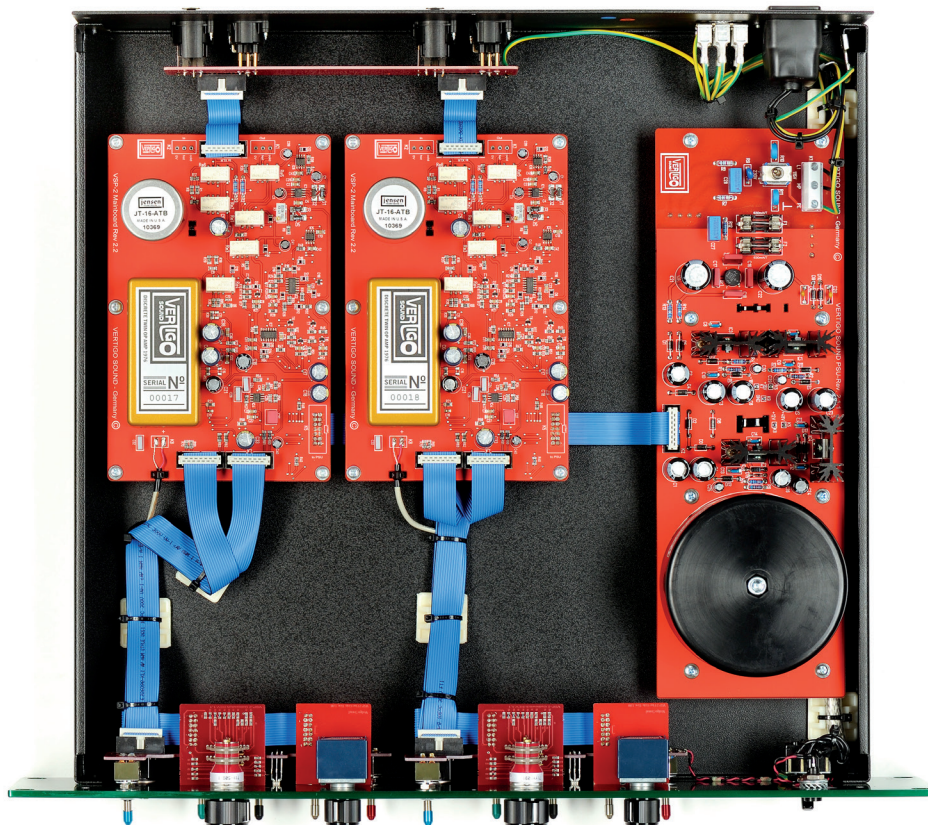




>> Vertigo Sound – One name steps out of the herd.

### *Technical Specifications*

- > Dual Mono Mic pre with 1,5K input impedance
- > Jensen Balanced In. That 1646 Balanced Out
- > Dynamic Range: 116 db  $\leq$  36 db Gain
  
- > Frequency response: 10 Hz–35 kHz (  $\pm$  1db)  
 $\leq$  36db Gain
- > Output Level: +24 dBu/600 $\Omega$  balanced floating
- > Noise: –81 dBu (20Hz–22 khz–unweighted, RMS)  
 $\leq$  36db Gain





#### SAFETY INSTRUCTIONS:

Mains Voltage either 115V or 230V

Please contact the manufacturer for Mains voltage change.

Mainfuse 230V 315–400mA

Mainfuse 115V 630–800mA

#### SAFETY, GROUNDING, GROUNDLOOPS AND MORE

This Appartus must be earthed!

To avoid groundloops all Audio-Grounds (XLR-Pin 1) are separated from the outer metallcase (housing of the VSP-2).

To keep them separated, please avoid connecting any XLR-Pin1 with of any XLR-housing or the housing of the VSP-2. Unnecessary groundloops might occur!

XLR-Pin 1 of the inputs are soft-grounded internally over 10 $\Omega$  Resistors.

The powersupply is secured against overload and is fire-protected:

Several melting fuses, overheat sensors, security resistors etc. The powersupply is of noiseless linear construction: There is no digitally switching type psu with unaudible but AD-Conversion disturbing HF-Noise.

There are no signal relevant magnetic or static fields coming out of the unit. The toroidal power transformer works with reduced primary voltage, therewith the already neglectable stray field is reduced once again dramatically. The steelcase of the VSP-2 shields all the rest, electrostatic and magnetic and for that reason your studio stays 100 % clean after installing the VSP-2.

NOTE: Check the line voltage marked on the rear panel of the VSP-2 and verify that it is correct for your country.

CAUTION: Never remove the cover. There are no user serviceable parts inside.

WARNING: If the ground is defeated, certain fault conditions in the unit or in the system to which it is connected can result in full line voltage between chassis and earth ground. Severe injury or death can then result if the chassis and earth ground are touched simultaneously.

WATER AND MOISTURE: Appliance should not be used near water (e.g. near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc). Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

POWER SOURCES: The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

GROUNDING OR POLARIZATION: Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.

SERVICING: To reduce the risk of fire or electric shock, the user should not attempt to service the appliance. All servicing should be referred to qualified service personnel.

FOR UNITS EQUIPPED WITH EXTERNALLY ACCESSIBLE FUSE RECEPTACLE:

Replace fuse with same type and rating only.



## Contact

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