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Owner's Manual

Firstly, let us congratulate you on your purchase of the Ascent/500 Microphone Pre-Amplifier designed for the API 500 series Lunchbox or suitable compatible rack.
We know you will be as pleased with its sonic qualities as we are.

You are now the proud owner of a mic-pre that has the advantages of more than 40 years of experience in audio engineering, today's component and manufacturing technology, but still retaining "that sound" uniquely achievable through Class A design.

As you can tell, Phoenix Audio is dedicated to the development of Class A discrete technology used within high build-quality equipment.

The Ascent/500uses our well proven and loved Class A output stage (DSOP2), but also has our latest breakthrough in transformer-less Class A, Discrete Mic Input Technology which gives a "valve-like" sound.

You CAN hear the difference!!!

Ascent/500 Specifications

API 500 series compatible rack unit:

Class A (DSOP2) Output specs. Frequency response: 20Hz to 20kHz + 0.5dB,

Maximum Output = +26dBu @ 1kHz, Noise = -90dB @ 20Hz to 20kHz.

Phoenix Audio's unique Class A, transformer-less, True electronically balanced Mic input stage.

Gain Range (Mic input): -30 to -70 in 5dB steps With 10dB more available on the output fader.

Gain reduction: -20dB pad push-button

Gain Meter: LED Metering. ((Green = -2dbu, +4dbu & 10dBu, Yellow = +13dbu Red= +16dBu)

Phantom Power: Switchable phantom on Push-button Switch

EQ on Selectable Frequencies – 10K, 15K & Sheen (25k)

EQ Gain – 16db of cut & boost

Variable High Pass Filter: on Push-button Switch set at 40hz -250hz db roll off per octave

Phase Reverse: on Push-button Switch

Frequency Response Mic Input Stage: -0.4dB @ 40Hz, -0.3dB @ 25kHz

Frequency Response: DI Input Stage: -0.3dB @ 40Hz, - 0.5dB @ 25kHz

Typical Headroom: +26dB on Mic-Pre stage

Ascent/500 SETUP INSTRUCTIONS

VARIABLE HIGH-PASS FILTER CONTROL

PAD PUSH-BUTTON

PHASE REVERSE PUSH-BUTTON

PHANTOM POWER PUSH-BUTTON

LED LEVEL METER

VARIABLE HF Eq CONTROL

HF Eq FREQUENCY SELECTOR TOGGLE SWITCH

OUTPUT LEVEL CONTROL

MIC INPUT SENSITIVITY SWITCH - 5dB INCREMENTS

The Ascent/500 has a vertical row of LED's to indicate level. These LED's are connected to the OUTPUT of the unit, NOT the mic-pre section. This makes the LED's indication much more useful for setting up levels on the Mic-Pre and to give you a clear view of what level is being sent to external equipment.
The LED's are marked –2,+4 and +10 (Green) and +13 (Yellow) and +18 (Red). When the Red Led lights, this isn't a sign of clipping as the Pre-amp will have at least another 8db of headroom.
The Mic Sensitivity Knob and the OUTPUT level knob work independently of each other.

The simplest method of setup is to plug a microphone into the Mic input, turn the Mic sensitivity knob to its minimum position (-30dB) and set the OUTPUT level knob to around the 2 'O' Clock position.

While a constant sound source is applied to the microphone, turn the Mic sensitivity. knob one click at a time, until the 0dB (Green) Led is just illuminated.

The Mic gain is now set to optimum, but with PLENTY of headroom Available and the output will be around 0dB.

The OUTPUT level knob is provided to allow OUTPUT level adjustment. If you prefer to have a "hotter" output, turn the OUTPUT knob up to suit. You can turn the OUTPUT knob fully up without any distortion as there is plenty of headroom on the output stage.

Also, if you prefer to have a LOWER level on the output (I.E.: for semi-professional outboard gear which requires around -10dB input), simply turn the OUTPUT knob down to taste.

The combination of the Class A discrete output stage and our custom wound coupled transformer will impart second harmonics into your music and also a form of compression, similar to tape compression. If you wanted to have a fairly clean tone for say acoustic music then you would employ more input gain and less output gain. For the complete opposite, where you use a lot of output gain and less input gain, you will get far more coloration and saturation, this maybe a good setting for rock music.
For a degree of both settings, you should use some input gain and some output gain, this might be a good setting for RnB/pop music.

The Equalizer section on the Ascent/500 is derived from the Ascent Two EQ mic pre & EQ, the HF section is especially optimized for vocal operation where you have great control of three selectable frequencies – 10K, 15K & the Sheen control which brings great breath and air necessary to bring vocals and certain instruments or can be used to roll off some harsh HF that maybe present. The EQ section has great control with 16db of cut and boost which makes it incredibly powerful but it will always remain musical.

The variable high pass filter has a great control over a range of frequencies from 40hz to 250hz this enables you to select frequencies and eliminate the frequency below that point.

Additional Setup Information

Firstly, unlike a lot of mic-pre's, the Red LED is not a warning that the output of the unit is clipping. It is purely there to indicate +16dB output level.

You can turn the output knob all the way up to maximum and still be sure the output of the unit will not clip. The amount of headroom on both the input AND output stage is HUGE!!! There will never be a time when you can't get a hot enough output, only occasionally too hot an input (then you just simply turn down the Mic Sens. knob (in Mic mode).

For Microphone Input:

1: Set the output knob to about the 12 'O' Clock position.
(or just over half-way)
2: Set the mic input level so that the 0dB green LED is just beginning to come on solidly. (this indicates around 0dB OUTPUT level)
3: If the Red LED is coming on (+16dB OUTPUT level) and you think the unit is clipping it is NOT the output stage, just step the input gain knob back one click or two.
4: Turn the output knob up to the level you would like (If you wanted a very hot output level, ignore the Red LED.

Let's try to explain a little more.....The LED's on the front panel are there to give you an indication of output level only. This is because most semi-pro (and indeed, a lot of Professional!) equipment cannot handle the full output of the Ascent/500, and the LED's give you a good indication of output level so that you can determine where in the audio chain you may be getting clipping. They do NOT indicate that the DRS-1R's OUTPUT stage is clipping.

The only place you might get clipping on the Ascent/500 is in the INPUT stage (although the headroom on the INPUT stage is very high!).....
So if you believe the Ascent/500 IS clipping, just turn the INPUT down, but the OUTPUT can be turned up to maximum if you wanted.
The DRS-1R is capable of handling a huge input range, from -70dB right up to 0dB, and STILL have 10dB of headroom. The output stage can easily deliver +26dB!!!
Please don't automatically believe the Ascent/500 is clipping!

INPUT and OUTPUT connections:

The Ascent/500 is fitted with an XLR input and output on both the rear panel of your API rack or API approved rack.

If the +48V phantom power is button is engaged it will apply +48V to the XLR input on the rack.