R1 ACTIVE

Vintage Style Active Ribbon Microphone

INTRODUCTION

Congratulations on choosing the Golden Age Project R1 Active microphone!

The R1 Active is a unique microphone since it is one of the very few high quality vintage style ribbon microphone with active electronics on the market and especially since it probably is the first low cost one!

The R1 Active offers the unique and natural sound that has been available in classical microphones like the RCA 44 and 77 that are still used to make high quality recordings today after almost 70 years. On top of that, the active circuitry raises the output level considerably to be similar to that of many condenser microphones. This has the good effect that one does not need special high gain microphone preamps when using the R1 Active on quiet sound sources. It also makes the R1 Active able to drive long microphone cables without any problems and insures that the sound is consistent with different preamps.

One of the factors that usually changes the sound of passive ribbon microphones is the input impedance of the following microphone preamp. The active output circuitry in the R1 Active buffers the ribbon and the gain make-up transformer from the outside world and the result is that the R1 Active will consistently give you maximum performance in any situation.

The R1 Active is very well suited for the recording of most sound sources like vocals, acoustic instruments, strings, horns, orchestras and choral groups and many live sound applications.

In spite of its low cost, the R1 Active meets the most stringent demands.

To get maximum benefit and trouble free use out of the R1 Active, please read this manual carefully.

UNPACKING, INSPECTION STORAGE AND TRANSPORT

The R1 Active was carefully tested and packed at the factory. The aluminium case has been designed to protect the microphone when you store, ship or move it. Please always use it when you need to transport the R1 Active for service or for any other reason.

IMPORTANT NOTICE:

The ribbon assembly in the R1 Active, as in any ribbon microphones, is very sensitive and fragile and can be easily damaged if handled the wrong way,

That is why it is important that you immediately after you have received the R1 Active, verifies that it is working properly and that it has not been damaged during shipping.

The warranty of the ribbon assembly in the R1 Active does not extend beyond this initial inspection, since it can be damaged so easily if it isn´t handled properly.

In the rare case that the R1 Active is not working properly when receiving it, please contact your dealer.

FEATURES

- The unmatched natural and musical sound of a classical ribbon microphone combined with the consistent sound quality offered by the addition of active electronics.

- A FET / Bipolar discrete low-noise current amplifier, powered by standard 48V phantom power, that isolates the ribbon and gain make-up transformer from the outside world.

- A stunning realism with the feeling of “being-there”.

- The typical large and mellow ribbon sound quality with a very smooth top end and an extended low end.

- A fast and life-like transient reproduction.

- An ultra-high SPL capability, 160 dB SPL (1% THD @ 1000Hz) and a very high sensitivity for a ribbon microphone, similar to many condenser microphones.

- A Figure-8 directional pattern for wide sweet spots both in the front and in the back of the microphone. Zero spots towards the sides.

- A 50mm long ribbon made of 2 microns thick aluminium foil.

- An internal shock mount for the ribbon and magnet assembly.

- A removable microphone cable and a nice aluminium flight case.

- Manufactured of the finest materials for a great performance and long-term reliability.

- The R1 Active can be used with any standard mixer or preamp with a balanced input that can supply 48V phantom power.



USE OF THE R1 ACTIVE

The R1 Active needs standard 48V phantom power to operate.

The Figure-8 pattern of the R1 Active gives you the ability to separate sound sources by placing the unwanted ones in the side zero pick-up directions.

Placing the unwanted ones towards the sides of the R1 Active will remove most of the direct sound from the sound source. The R1 Active will still pick up that source from the reverberant field in the recording room though.

Due to the small width of the ribbon, the horizontal pick-up pattern is very wide. It is much wider compared to a large capsule condenser microphone.

The vertical pick-up pattern is narrow at the higher frequencies though due to the length of the ribbon. This is due to the fact the wavelength at higher frequencies is much shorter than the length of the ribbon. If you want maximum top end response from the R1 Active, it is important that the R1 Active is mounted so that it is parallel to the sound source. If it is vertically angled against the sound source, then there will inevitably be a loss of top end. This can sometimes be a good thing so this effect can be used creatively. The narrow vertical pick-up pattern will lower the effect of high frequency sound reflections.

Be aware of the proximity effect (an increase in bass response) when the R1 Active is close to the sound source. This can be a good or a bad thing. You can adjust the bass response by changing the distance from the microphone to the sound source for an optimum result in different situations. You can also use a high-pass filter in your preamp or mixer.

PRECAUTIONS

-The transducer part of the R1 Active consists of a very thin and ultra-light corrugated aluminium ribbon clamped under light tension and mounted between the poles of a strong magnet. When the sound waves hits the ribbon and moves it, a small current is generated in the ribbon since it is suspended in a magnetic field.

The good part of this design is that it results in one of the warmest and most natural sound available from any type of microphone. The bad part of it is that it also make ribbon microphones the most sensitive and fragile ones. It is therefore very important that the R1 Active, as any other ribbon microphone, is treated with very special care if it is not to be seriously damaged.

In order to ensure a long life for your R1 Active, please always follow these guidelines:

1. Do never subject the R1 Active to hard knocks, such as dropping it or not packing it properly when you move or transport it since this can destroy the ribbon assembly.

2. Do never blow into the R1 Active and protect it from any strong blast of air movement as this can tear and destroy the fragile ribbon.

3. Do never move around fast with the R1 Active in your hand, please remember that any excessive air movement can damage the ribbon.

4. Do always use a pop-filter when there is a risk of excessive air movements reaching the ribbon from the sound source. One example is close-up vocals. The pop-filter will also protect the R1 Active from mouth spray.

5. Do always protect the R1 Active from dirt and moisture.

6. Switch the phantom power on after the R1 Active has been connected to the mixer or preamp and switch the phantom power of and wait at least ten seconds before unplugging the R1 Active from the mixer or preamp.

7. When the R1 Active is not in use, always keep it in its aluminium case.

8. Do always store the R1 Active in a vertical position. If it is stored horizontally, the 50 mm long ribbon can sag by time which will gradually degrade the performance of the R1 Active.

9. Avoid exposing the R1 Active to direct sunlight or extremes in humidity for extended periods of time.

10. Do never try to service the R1 Active yourself since this will void the warranty.

WARRANTY

- Due to the extremely delicate nature of ribbon microphones which can so easily be damaged by improper handling and use, the ribbon assembly is not covered under warranty.

Please check your R1 Active carefully immediately when you receive it and make sure that there are no problems with the microphone. After that first initial inspection, the standard one year warranty only apply to defects in materials and workmanship in parts other than the ribbon assembly.

If the ribbon assembly is damaged during use, contact your dealer or us for a quote for replacement of the ribbon assembly.

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SPECIFICATIONS

Type: Large ribbon geometry, pure aluminium, 2 um thick, 50 x 5 mm size with active electronics.

Polar pattern: Figure 8

Frequency response: 30 Hz – 18 kHz +/- 3 dB

Sensitivity: -42 dB (0 dB = 1V/Pa) @ 1 kHz.

Equivalent Noise Level (A-weighted per IEC 268-4): < 18 dB typical.

Maximum SPL (<1% THD @ 1 kHz): 160 dB.

Output impedance: 200 ohm, balanced.

Recommended load impedance: > 1000 Ohms.

Current consumption: 4 mA.

Dimensions: 69x185 mm.

Weight: 1 450 g.

Please note: Specifications can be changed at any time without notice.



Many thanks for purchasing the Golden Age Project R1 Active

- We wish you much joy and many wonderful recordings with it!