A plug with a self-contained solid state preamplifier primarily for musical instruments. This device includes resistors, capacitors and battery means, coupled to pre-amplify input signals to conventional amplifiers.

3 Claims, 4 Drawing Figures
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PRE-AMPLIFIER PLUG FOR MUSICAL INSTRUMENTS WITH BATTERY RETAINING AND SWITCH ACTIVATING ROD MEANS

This invention relates to electronic amplifiers and more particularly to a plug for musical instruments having self-contained pre-amplifier means for adaptation to musical instruments.

It is therefore the primary purpose of this invention to provide a plug for musical instruments which will have a self-contained and transistorized pre-amplifier.

Another object of this invention is to provide a device of the type described which will be adaptable to both musical instruments and microphones.

Still another object of this invention is to provide a device of the type described which will have self-contained battery means for powering the solid state circuitry thereof.

A further object of this invention is to provide a plug of the type described which may be used with any electronically amplified musical instrument such as a guitar, and will serve to greatly improve the amplified sound and in the case of the guitar, will require less pressure to be applied in picking the strings of the guitar.

Yet another object of this invention is to provide a plug of the type described which will provide a means of operating the main amplifier at a much reduced volume and will also serve to improve the sound obtained from inexpensive amplifiers, thus making them produce sound, much like the larger and more expensive equipment.

An even further object of this invention is to provide a plug of the type described which will have all the components coated with a suitable material so as to provide electrical insulation and protection from mechanical shock.

Other objects of the present invention are to provide a pre-amplifier plug for musical instruments which is simple in design, inexpensive to manufacture, rugged in construction, easy to use and efficient in operation.

These and other objects will become readily evident upon a study of the following specification together with the accompanying drawing wherein:

FIG. 1 is a top plan view of the present invention;
FIG. 2 is a side view of FIG. 1 shown in elevation;
FIG. 3 is an end view of FIG. 2; and
FIG. 4 is a schematic wiring diagram of the invention.

According to this invention, a plug 10 is shown to include a self-contained solid state circuit 11 which is connected electrically to an extending male prong 12 of casing 13. Prong 12 is held to casing 13 by means of screw fasteners 14. Extending from one end of casing 13 is a switch and battery retaining rod 15 and a battery retaining rod 16.

Included within casing 13 are spring contacts 17. Rods 15 and 16 provide a means of retaining the batteries 18. A pair of snap wires 19 serve to engage and hold rods 15 and 16 in position within casing 13 of plug 10. A cable 20 connected to circuit 11 of plug 10, provides a means of connecting plug 10 to the amplifier.

Circuit 11 includes a transistor 21 having its emitter 22, its collector 23 and its base 24 coupled with resistors 25, 26, and 27. The circuit 11 also includes capacitors 28 and a switch 29 which is closed by means of rod 15 when it is pulled outwards of casing 13 to the first notch thereof.

In use, the original cord connecting the musical instrument with its amplifier is removed and the coil cable 20 is used in its place to connect the musical instrument to the amplifier and when switch 29 is closed, the pre-amplifier circuit 11 serves to pre-amplify the signal produced at the musical instrument prior to its being placed on the input of the amplifier.

What I now claim is:

1. A pre-amplifier plug for musical instruments, comprising a casing, a male plug carried by said casing for connecting the musical instrument to an amplifier, a transistorized circuit for pre-amplification, carried within said casing, cable means carried by said plug for connecting said plug to the musical instrument and the pre-amplifier circuit, battery means carried by said plug providing self-contained power means for said pre-amplifier circuit, a pair of battery retaining rods, carried by said casing, one of which serves as switch means for said circuit, spring contact means carried within said casing providing connection means with the transistorized circuit.

2. The combination according to claim 1, wherein said rods within said casing, snappably engage with snap wires for retaining said battery within said casing and said spring contact means within said casing serve as electrical connection means for said circuit.

3. The combination according to claim 2, wherein one of said rods is provided with a pair of notches, so that when said rod is pulled outwards the second or end notch will engage with this associated snap wire and will close said switch of said circuit, thus energizing said transistorized pre-amplifier circuit within said plug.

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