

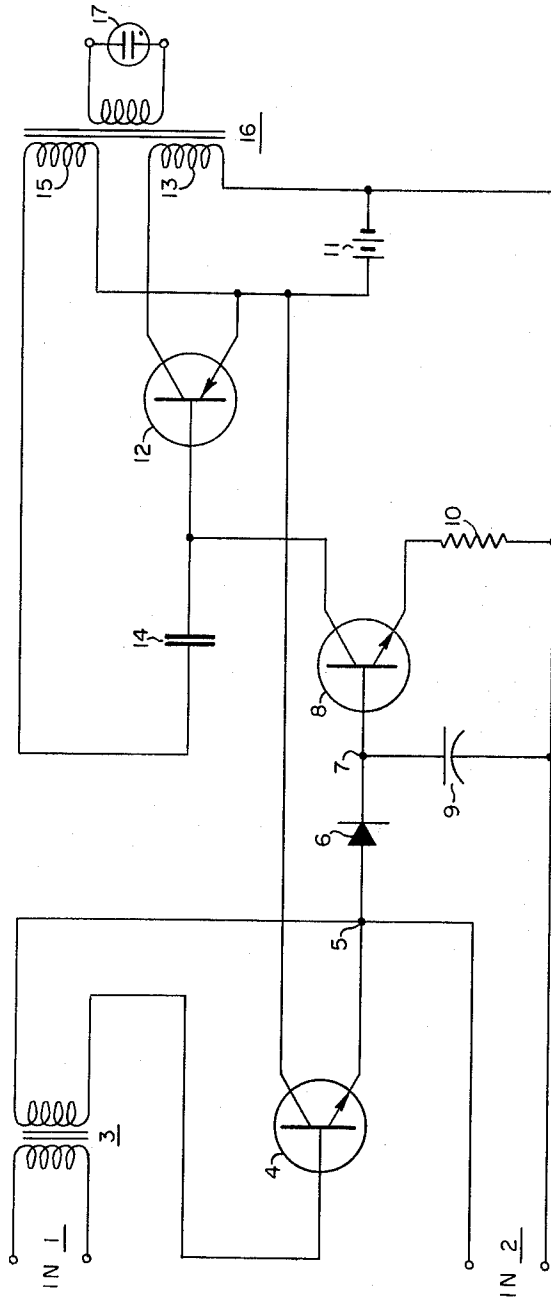
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VISUAL CALL INDICATOR

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3,243,794

VISUAL CALL INDICATOR

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3 Claims. (Cl. 340-248)

The invention described herein may be manufactured and used by or for the Government of the United States of America for governmental purposes without the payment of any royalties thereon or therefor.

This invention relates to a visual call indicator, and more particularly to a visual indicating means for locating any one of a number of phones when time is of the essence.

During blackout conditions on the bridge of a ship, vital time may be lost in locating the proper calling device. Such lost time could be operationally dangerous. The indicating device must be capable of being triggered by pack sets, sound powered phones, or any other type of calling and talking device that may be on board the particular vessel. The visual indication must be long enough for the watch to pick up the instrument, but not bright enough to affect night vision or blackout conditions. The device must reset automatically.

It is therefore an object of this invention to provide a signal device adapted to be used with a calling means under the conditions described, to give a suitable signal to the party using the device so that it may be located readily.

It is another object of the invention to provide a signal device which may be used with a number of calling means.

It is still another object of this invention to provide a signal device of relatively simple design and which is economical to manufacture, install and operate.

Further objects and advantages of this invention will become evident as the description proceeds and from an examination of the accompanying drawing which illustrates one embodiment of the invention.

The single figure of the drawing is a schematic diagram of a simple embodiment of the present invention.

Referring now to the drawing, two inputs are shown at 1 and 2. Such input connection should allow the device to be connected to any type of calling unit in use. The low level input 1 feeds through a single stage amplifier 4 to terminal 5 to the base of a second transistor 8 through a diode 6. A low level input transformer is shown at 3. The high level input 2 is connected to terminal 5, and thereafter passes to the second transistor 8 through diode 6 and point 7. The high level input 2 may be protected by a limiting resistor and a Zener diode (not shown), thus protecting the entire circuit from unusually high voltage inputs. If input voltages at 2 exceed 5 volts the limiting resistor should be increased or the voltage input to the Zener diode may be fed through a voltage divider.

In the indicating circuit, transistor 12 is a freerunning blocking oscillator biased below cutoff. Transistor 8 with resistor 10 forms a bias resistor in the base circuit of this oscillator. Upon receipt of a signal from the inputs 1 or 2, which correspondingly raises the charge on the condenser 9, transistor 8, acting as a normal current amplifier, supplies current to the base of transistor oscillator 12. This transistor, in effect a resistor variable in response to the input voltage, will raise the bias on transistor 12, upon the appearance of a voltage at inputs 1

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or 2, causing it to oscillate. The bias on the transistor 12 shifts it to an oscillate region and this circuit will oscillate until the charge on capacitor 9 is bled back down through resistor 10. The output of the indicating transistor 12 actuates the neon indicator lamp 17 through transformer 16. The primary of the indicating circuit transformer 16 is designated 13 and the feedback winding is designated 15. Capacitor 14 discharges through resistor 10 and variable resistor 8 to control brilliance of neon indicator 17.

The circuit is powered by two flashlight cells 11. A switch (not shown) may be placed in the battery circuit.

The input therefore will make the neon lamp 17 glow for 15 seconds more or less, after the triggering signal stops, depending on the value chosen for 9. The visual call means will not place a heavy load on the calling means, when tapped by the input 1 or 2.

The drawing and the above discussion are not intended to represent the only possible form of this invention, in regard to details of construction. Changes in form and the proportioning of parts, as well as the substitution of equivalents are contemplated, as circumstances may suggest or render expedient, without departing from the spirit and scope of this invention.

What is claimed is:

1. An indicating device capable of producing a visual output signal in response to an input signal, comprising: first and second pairs of input terminals; said first pair of input terminals being adapted to receive weak signals requiring amplification; amplifier means connected to said first pair of input terminals to supply said required amplification; a capacitor connected across said second pair of input terminals and to the output of said amplifier means; oscillator means; transistor means having an input connected to said capacitor and an output connected to said oscillator means; said transistor causing said oscillator to be biased into oscillation when a voltage appears across said capacitor; and indicator means connected to said oscillator means; said indicator means providing a visual indication for the duration of the time that a voltage appears across said capacitor.

2. An indicating device for providing a visual output signal in response to an input signal, comprising:

- an input,
- a capacitor coupled to said input for receiving said input signal and for being charged thereby,
- oscillator means,
- variable impedance means coupling said capacitor to said oscillator means wherein said variable impedance means presents a high conductance path to cause said oscillator means to oscillate when said capacitor is charged, and presenting such a low conductance path in the absence of a charge on said capacitor that said oscillator means is biased below cutoff,

- indicating means coupled to said oscillator means for providing a visual indication so long as there is a charge on said capacitor, and

- intensity regulating means connected to said indicating means for controlling the brilliance of said indicating means.

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3. An indicating device as set forth in claim 2 wherein said intensity regulating means comprises means for discharging through said variable impedance means.

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