

- [54] **PRIVACY AND SEIZURE CONTROL
CIRCUIT FOR A REMOTE STATION
DICTATING SYSTEM**
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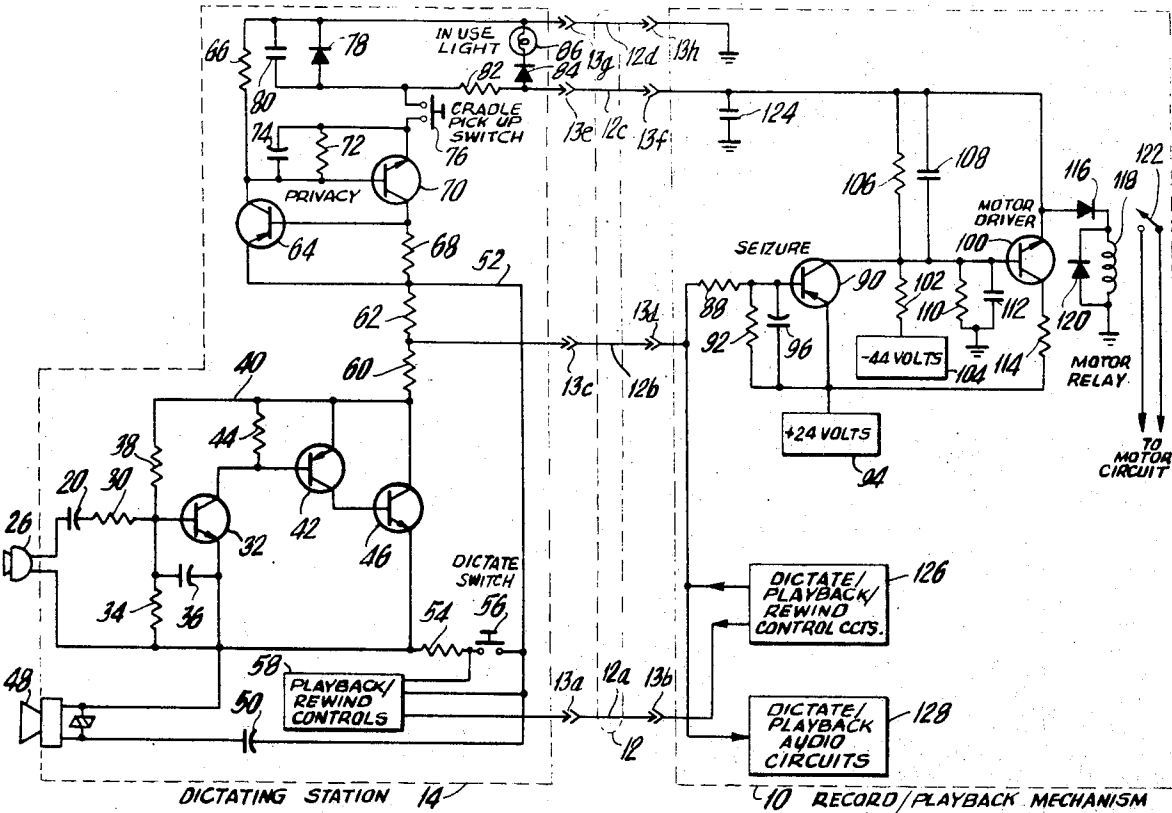
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[57] **ABSTRACT**
Each one of a plurality of remote dictating stations in a recording system includes a first semiconductor

switch which is biased to become conductive ("on") when it is connected to a first bias source in a central record/playback unit by the closing of a cradle switch when the dictator phone of that station is lifted from its cradle. The turning on of the first semiconductor switch turns on a semiconductor seizure switch which in turn activates a semiconductor motor driver switch. The semiconductor motor driver switch, when activated, energizes a relay which controls the motor of the record/playback unit. When the semiconductor seizure switch becomes conductive, a bias voltage is fed back to the activated remote dictating station to switch on a second semiconductor switch in that dictating station which supplies a bias voltage to maintain the first semiconductor switch in its conductive state. Simultaneously the turning on of the motor driver switch produces a second bias voltage which is opposite in polarity to the voltage from the first bias source and which effectively prevents the first bias source from making the first semiconductor switch in any other remote dictating station conductive and thereby blocks the activation of any other remote dictating station and the seizing of control of the record/playback unit.

8 Claims, 2 Drawing Figures



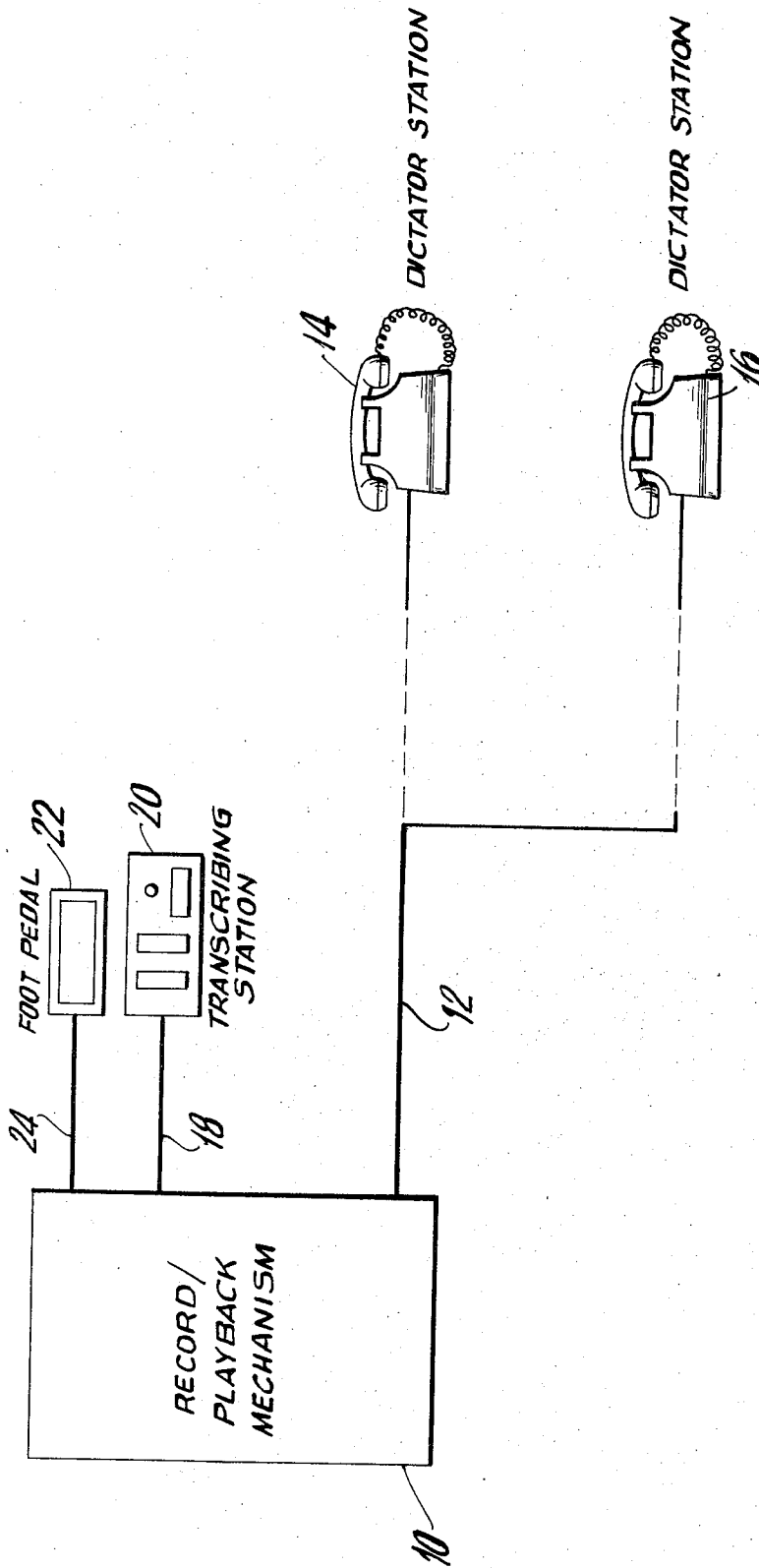
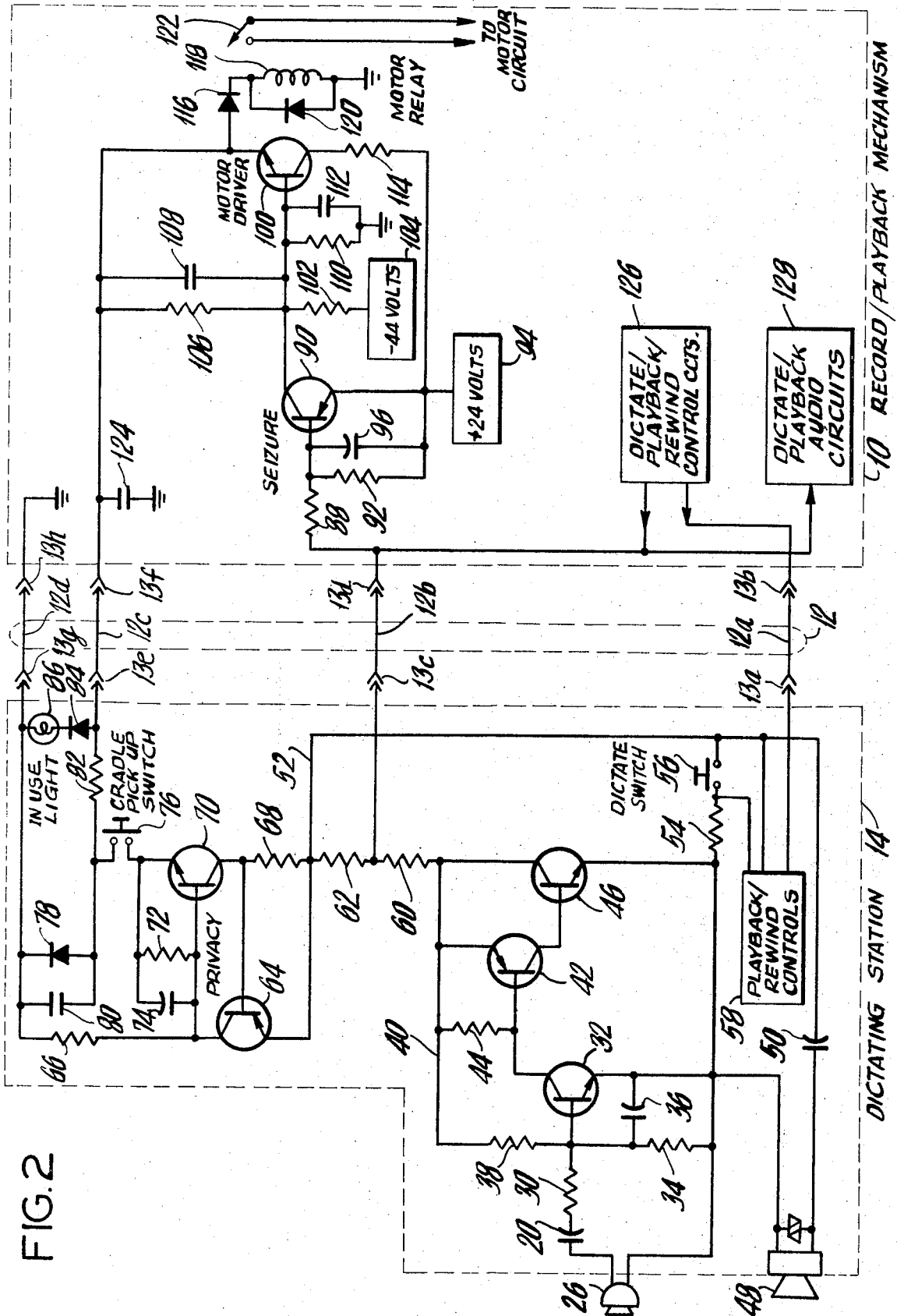


FIG. 1

FIG. 2



PRIVACY AND SEIZURE CONTROL CIRCUIT FOR A REMOTE STATION DICTATING SYSTEM

BACKGROUND OF THE INVENTION

The invention relates to a dictating system of the type having a plurality of remote dictating stations for use with a central record/playback type unit and more particularly to the privacy and seizure control for the remote dictating stations of such a dictating system.

In some types of record/playback dictating systems, for example as disclosed in U.S. Pat. Nos. 3,328,536 and 3,467,790, a plurality of remote dictating stations are interconnected to one or more central record/playback units. Each record/playback unit is, in turn, connected to a transcribing unit. Such systems permit the record/playback reproducing unit and its connected transcriber unit to be shared on a time basis by the remote dictating stations. In such systems, however, it is necessary to provide some means by which a particular remote dictating station may engage the record/playback unit and simultaneously block the seizure of control of the record/playback unit by any other remote dictating stations. In order to accomplish this purpose various privacy and seizure systems and mechanisms have been devised.

In general, the prior art systems of this type utilize electro-mechanical mechanisms such as relays and solenoids either at the record/playback unit or in the remote dictating station. In one such prior art system, for example, each remote dictating station is provided with a solenoid activated switch. After the record/playback unit has been seized by a particular one of the dictating stations, the solenoids in each one of the remaining remote dictating stations are energized to prevent the seizure control switches in each of the remote dictating stations from connecting the dictating stations with the "seized" record/playback unit.

In all such systems of this type relatively large currents must be carried by the wires connecting the remote dictating stations to the record/playback mechanism in order to operate the electro-mechanical devices involved. This requirement makes such prior art systems incompatible for use with modern telephone wiring of the type used in multi-frequency transistorized telephone systems which utilize relatively light gauge wiring because of the small currents which are normally carried by such telephone wiring. A further disadvantage of such prior art systems is that they are relatively expensive, require the installation of bulky components, are relatively heavy and they are noisy.

Furthermore in those prior art systems which utilize vacuum tubes instead of electro-mechanical devices still other disadvantages are presented. Such systems are generally not able to withstand the physical shocks to which systems of this type are subjected and are therefore unreliable. They also consume a relatively large amount of power and therefore are expensive to operate on a continuous basis.

SUMMARY OF THE INVENTION

The above and other disadvantages are overcome by the present invention of a privacy and seizure circuit for use in a dictation system having a plurality of remote dictating stations and a central record/playback unit wherein the remote dictating stations of the invention each include a first electronic switch, first means for biasing the first electronic switch into conductive

and non-conductive states, means, including a normally open pickup switch, for selectively connecting the first biasing means to the first electronic switch, second means for supplying a bias voltage of a polarity opposite to that of the first biasing means and a second electronic switch in each remote dictating station which is connected to the first electronic switch and to the second biasing means such that when the second electronic switch is turned on it maintains the first electronic switch in its conductive or on state. The second electronic switch is so connected to the first electronic switch that when the first electronic switch is made conductive by the closing of the pickup switch the second electronic switch is also made conductive.

The record/playback unit of the invention includes an electronic seizure switch which is connected to the first electronic switches in each one of the remote dictating stations so that when the first electronic switch in any particular remote dictating station is switched into its conductive state, the seizure switch is also switched into its conductive state. An electronic, motor driver circuit is connected in series with the seizure switch to the second bias means so that when the seizure switch becomes conductive the motor driver circuit is activated and the motor of the record/playback unit is activated.

The activation of the motor driver circuit also causes a bias voltage from the second biasing means to be fed to each one of the remote dictating stations to effectively override the voltage of the first biasing means and thereby provide a potential reverse bias for each of the first electronic switches not yet in a conductive state. If the pickup switch connected to one one of these first electronic switches is closed, this reverse bias is applied to block the first electronic switch connected to the closed pickup switch from becoming conductive and thereby turning on its associated second electronic switch. In this manner only the first remote dictating station which is activated will have seizure control of the record/playback unit because only its second electronic switch remains conductive to maintain it in its conductive state.

One advantage of the preferred embodiments of the system of the invention is that semiconductor electronic switches are utilized so that only relatively low currents need be passed through the wires which connect the remote dictating stations with the record/playback unit. This makes the system suitable for use with the low gauge wiring systems of multi-frequency, transistorized telephone systems such as are commonly found in modern office buildings. Furthermore the use of electronic circuitry allows for miniaturization of the system which is not possible when bulky electro-mechanical devices of prior art systems are used.

In prior art systems of the electro-mechanical type it is necessary to actually disconnected each of the blocked out remote dictating stations from this system by complex electro-mechanical circuitry. In contrast, the present invention, because of its use of electronic switches, does not require that such unused remote dictating stations by physically disconnected from the circuit but instead a reverse bias voltage is applied to the electronic switches of the blocked out devices to disable them temporarily. They still remain physically and electrically connected to the record/playback unit, however, which greatly simplifies the construction and operation of the system.

The seizure and privacy control circuit of the present invention is suitable for use in the DICTATING AND TRANSCRIBING SYSTEM described in co-pending application Ser. No. 317,928 filed Dec. 26, 1972 of which the application is a joint inventor, and the disclosure in that application is incorporated herein by reference.

It is therefore an object of the present invention to provide a solid state system to control the privacy and seizure functions of a remote dictator in a dictating/playback system so that if one remote dictating station activates the system all other dictating stations are blocked out of the system.

It is another object of the invention to provide a privacy and seizure control for a remote dictating station of a record/playback system which utilizes relatively low electrical currents.

It is still a further object of the invention to provide a privacy and seizure control circuit for use in a dictating/playback system which is simple in construction and light in weight.

The foregoing and other objectives, features, and advantages of the invention will be more readily understood upon consideration of the following detailed description of certain preferred embodiments of the invention, taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a diagrammatic representational view of a typical dictating/playback system of the type for which the circuit of the invention is intended; and

FIG. 2 is a schematic diagram of a privacy and seizure control circuit according to one embodiment of the invention for use in the dictating/playback system depicted in FIG. 1.

DESCRIPTION OF CERTAIN PREFERRED EMBODIMENTS

Referring now more particularly to FIG. 1 a dictating/playback system is diagrammatically illustrated as comprising a central record/playback unit 10 which is connected through a multi-conductor cable 12 to a plurality of remote dictating stations illustrated generally by dictating stations 14 and 16 which are connected in parallel with the record/playback unit 10. The record/playback unit 10 is also connected through a multi-conductor cable 18 to a transcribing station 20. At the transcribing station messages recorded from the dictating stations 14 or 16 on an endless loop tape (not shown) within the record/playback unit 10 may be played back over the transcribing station 20 to a typist. The transcribe mode of the record/playback unit 10 may be controlled by the typist through a foot pedal 22 connected to the record/playback unit through a cable 24. The playback mode of each dictating station is controlled at the particular dictating station 14 or 16.

When any particular dictating station is being used ("activated") to record or playback messages on the record/playback unit 10, it is desirable that the remaining remote dictating stations connected in parallel with it be blocked from controlling the record/playback unit and be unable to hear what is being recorded or played back through the activated remote dictating station. A privacy and seizure control circuit for this purpose according to the invention will now be described with reference more particularly to FIG. 2.

The dictating station 14, illustrated in FIG. 2 as being enclosed in a dotted line, is comprised of a microphone 26 having one lead connected through a capacitor 20 and a resistor 30 to the base electrode of an NPN transistor 32. The other lead of the microphone 26 is connected directly to the emitter electrode of the transistor 32 and through a resistor 34 to its base electrode. The base electrode of the transistor 32 is also connected to the emitter electrode through a capacitor 36. The base electrode of the transistor 32 is connected through a bias resistor 38 to a bus biasing lead 40.

The collector of the transistor 32 is connected directly to the base electrode of a PNP transistor 42. The base electrode of the transistor 42 is connected through a resistor 44 to the lead 40 and the emitter electrode of the transistor 42 is connected directly to the lead 40.

The collector of the transistor 42 is connected directly to the base of the NPN transistor 46 whose collector is connected directly to the lead 40 and whose emitter is connected directly to the emitter electrode of the transistor 32. The emitters of the transistors 32 and 46 are also connected to one lead of a playback speaker 48 within the dictating station. The other lead of the playback speaker 48 is connected through a capacitor 50 to a common return conductor 52.

The emitter electrodes of the transistors 32 and 46 are also connected through a resistor 54 to one lead of a normally open, dictate switch 56 whose other lead is connected to the common return conductor 52. A playback/rewind control circuit 58 is connected by one lead to an external terminal 13a at the dictating station 14 which is connected by a wire 12a in the multiple conductor 12 to a terminal 13b at the record/playback unit 10. The external terminal 13b is connected to one input of a dictating/playback control circuit, designated generally by reference numeral 126, in the record/playback unit 10. The playback-rewind control circuit 58 in the dictating station 14 is connected by separate leads to the common return conductor 52 and the junction of the resistor 54 and the dictate switch 56. This latter connection serves as a D.C. return path.

The biasing bus lead 40 is connected through a resistor 60 to an external terminal 13c at the dictating station 14 which is connected through a wire 12b in the multiple conductor cable 12 to a terminal 13d at the record/playback unit 10. The external terminal 13c is also connected through a resistor 62 to the common return lead 52.

The common return lead 52 is connected directly to the emitter electrode of a PNP transistor 64 whose collector electrode is connected through a resistor 66 to an external terminal 13g at the dictating station 14. The external terminal 13g is connected through a wire 12d within the multiple conductor cable 12 to an external terminal 13h at the record/playback mechanism 10. The terminal 13h is connected to the circuit ground within the record/playback unit 10.

The common return lead 52 is also connected through a resistor 68 to the base electrode of the transistor 64 and to the collector electrode of an NPN transistor 70. The base electrode of the transistor 70 is connected directly to the collector electrode of the transistor 64 and through a resistor 72 to the emitter electrode of the transistor 70. A capacitor 74 is connected in parallel with the resistor 72. The emitter electrode of the transistor 70 is connected to one lead of a nor-

mally open, cradle pickup switch 76 whose other lead is connected to the anode of a diode 78. The cathode of the diode 78 is connected to the grounded external terminal 13g. The normally open cradle pickup switch is closed when the handset of the dictating station is lifted from its cradle. A capacitor 80 is connected in parallel with the diode 78. The anode of the diode 78 is connected through a resistor 82 to the anode terminal of a diode 84 whose cathode terminal is connected through an "in use" light 86 to the terminal 13g. The anode terminal of the diode 84 is also connected to an external terminal 13e at the dictating station 14. The terminal 13e is connected by a wire 12c in the multiple conductor cable 12 to an external terminal 13f at the record/playback unit 10.

The external terminal 13d of the record/playback unit 10 is connected through a resistor 88 to the base electrode of a PNP "seizure" transistor 90 and through a resistor 92 to a bias source 94 of +24 volts. A capacitor 96 is connected in parallel with the resistor 92. The emitter electrode of the transistor 90 is connected to the bias source 94.

The collector electrode of the transistor 90 is connected to the base electrode of an NPN, motor driver transistor 100 and through a resistor 102 to a bias source 104 of -44 volts. The collector electrode of the transistor 90 is further connected to the external terminal 13f through a resistor 106 connected in parallel with a capacitor 108. The external terminal 13f is connected to the circuit ground through a capacitor 124.

The base electrode of the transistor 100 is connected to the circuit ground through a resistor 110 connected in parallel with a capacitor 112. The collector electrode of the transistor 100 is connected through a resistor 114 to the bias source 94. The emitter electrode of the transistor 100 is connected directly to the terminal 13f and to the anode of a diode 116 whose cathode is connected to one lead of the coil of a motor control relay 118. The other lead of the relay coil 118 is connected to the circuit ground. The anode of a diode 120 is connected to the circuit ground and the cathode of the diode 120 is connected to the cathode of the diode 116. The purpose of the diode 120 is to provide a shunt circuit for back EMF generated in the relay coil 118 when voltage is rapidly supplied and discontinued through the diode 116. The motor relay 118 opens and closes a pair of relay contacts 122 to energize the motor (not shown) of the record/playback unit 10.

The external terminal 13d is connected to a separate input of the dictate/playback/rewind control circuit 126 and to the dictate/playback audio circuit 128 which are within the record/playback unit 10. The circuits 126 and 128 are not shown in detail since they are not directly pertinent to the present invention and they may comprise circuits of the type known to those skilled in the art. As will be explained in greater detail hereinafter, the control circuits 56 and 58 in the dictating unit 14 activate the circuits 126 and 128 by providing a circuit ground path to the "input" leads of the circuits 126 and 128. It is to be understood that a plurality of dictating stations are connected in parallel through the multiple conductor cable 12 to the terminals 13b, 13d, 13f and 13h of the record/playback unit 10.

In operation, when the hand unit of a particular dictating station, such as dictating station 14, is lifted from its cradle the cradle pickup switch 76 is closed thereby

supplying a -44 volt bias from the source 104 through the resistors 102, 106 and 82 and the switch 76 to the emitter electrode of the transistor 70. The -44 volt bias supplied to the emitter electrode of the transistor 70 also flows through the resistors 72 and 66 to the circuit ground thereby developing a positive bias voltage on the base of transistor 70 which makes it become conductive or "on."

When transistor 70 becomes conductive current from the +24 volt source 94 flows through the resistors 92, 88, and 62, the emitter-base junction of the transistor 64 in parallel with the resistor 68, the collector-emitter junction of the transistor 70, the switch 76 and the diode 78 to the circuit ground. The voltage drop developed across the resistor 68 places a negative bias on the base of the transistor 64 with respect to its emitter thereby making it conductive. When transistor 64 becomes conductive it supplies a positive bias to the base of transistor 70 from the junction of the resistors 62 and 68 and thus the transistors 64 and 70 "lock up" on each other in the conductive condition.

The flow of bias current from the +24 volt source 94 through the resistor 92 as described above also develops a negative bias voltage on the base electrode of the transistor 90 thereby turning it on. When transistor 90 thus becomes conductive, current from the +24 volt source 94 flows through the emitter-collector junction of the transistor 90 and the resistor 110 to the circuit ground thereby providing a positive bias voltage to the base of the motor driver transistor 100. This causes the transistor 100 to become conductive and thereby supply a voltage from the +24 volt source through the collector load resistor 114 and the collector-emitter junction of the transistor 100 to the motor relay 118 through the semiconductor diode 116. The current flowing through the motor relay 118 energizes it and closes the contact switch 122 to thereby turn the record/playback unit motor on.

The positive voltage supplied to the motor relay 118 at the emitter electrode of the motor driver transistor 100 is also supplied to the external terminal 13e of the dictating station. The resistances 106 and 102 in series with the -44 volt source 104 are sufficiently high in magnitude that the potential developed at the external terminal 13e after the motor driver transistor 100 becomes conductive is substantially +24 volts. The +24 volt potential at terminal 13e flows through the diodes 84 and the in use lights 86 of each of the dictating stations which are connected in parallel with the dictating station 14.

This positive bias voltage at terminal 13e also prevents any other dictating stations from seizing control of the system. When the cradle pickup switch 76 in any dictating station is closed subsequent to the seizure of control by another dictating station there is no -44 volt bias voltage to be applied to the emitter electrode of the transistor 70. This prevents the transistor pairs 64 and 70 from locking up on each other and, as will be explained in greater detail, thereby prevents such other dictating stations from seizing control of the system.

The microphone 26 of the dictating station 14 supplies audio signals to the transistor pre-amplifier comprised of the transistors 32, 42 and 46 which amplify the audio signals and feed the signals through the lead 12b to the dictate/playback audio circuit 128 in the record/playback unit 10 when the dictating switch 56 is closed. Closing of the dictating switch 56 connects

the audio amplifier circuit of the microphone 26 to the common return lead 52 which is connected to the circuit ground through the emitter-base junction of transistor 64 in parallel with the resistor 68, the collector-emitter junction of transistor 70, the closed cradle pickup switch 76, and the parallel circuit of diode 78 and the capacitor 80. The closing of the dictate switch 56 also provides a ground return path for dictate portion of the control circuit 126 through the lead 12b, the collector-emitter junction of the transistor 46, the resistor 54, the switch 56, the common return lead 52, the emitter-base junction of the transistor 64 in parallel with the resistor 68, the collector-emitter junction of the transistor 70, the switch 76 and the diode 78.

The other dictating stations connected in parallel with the dictating station 14 are disabled from dictating into the record/playback unit 10 so long as dictating station 14 has seized control of the system because in the other dictating stations the transistors 70 are in their non-conductive state, and as explained above, may not be made conductive because of the +24 volt bias voltage applied to the lead 12c.

In the playback mode of the system signals are supplied from the dictate/playback audio circuits 128 through the lead 12b, the resistor 60, and the collector-emitter junction of the transistor 46 to one lead of the playback loudspeaker 48 in the dictating station 14. The other lead of the loudspeaker 48 is connected in series through the capacitor 50, the common return lead 52, the emitter-base junction of the transistor 64 in parallel with the resistor 68, the collector-emitter junction of the transistor 70, the cradle pickup switch 76 and the diode 78 to the circuit ground. None of the other dictating stations which have not seized control of the system can play back the recorded signal because their transistors 70 are not conductive and may not be made conductive. Thus in such other dictating stations the circuit ground return path is electrically "open." During dictation, signals recorded through the microphone 26 are not simultaneously played back on the loudspeaker 48 because a muting circuit (not shown) contained within the dictating/playback audio circuit mutes any playback signal during the dictating function. A sidetone is, however, produced in the speaker 48 due to the voltage appearing across the resistor 54 when the dictate 56 is closed. This sidetone notifies the user that the system is operating.

In a similar manner all of the playback/rewind controls in each of the dictating stations are connected both to the common return lead 52 and to the conductor 12a which is connected to a separate input of the dictate/playback/rewind control circuit 126. The playback/rewind controls in all of the dictating stations except the dictating station which has seized control of the dictating system are thus disabled because they are blocked from being connected through the common return lead 52 to the circuit ground by the non-conductive transistor 70.

While transistors of certain conductivity types have been described above it should be apparent that in other embodiments transistors of different conductivity types may be substituted with appropriate changes in the polarities of the biasing circuits. Furthermore in still other embodiments other types of semiconductor electronic switches, such as silicon controlled rectifiers, by way of example only, may be substituted indi-

vidually or for combinations of the switching transistors 64, 70, 90 and 100.

The terms and expressions which have been employed here are used as terms of description and not of limitation, and there is no intention in the use of such terms and expressions, of excluding equivalents of the features shown and described, or portions thereof, it being recognized that various modifications are possible within the scope of the invention claimed.

What is claimed is:

1. A remote unit for controlling a central mechanism of a system of the type having a plurality of remote units connected to at least one common terminal at the central mechanism, the remote unit comprising at least one control circuit, first electronic switch means connected in series between the control circuit and the common terminal, means at said central mechanism for supplying a first biasing voltage to said first electronic switch means to thereby selectively bias the first electronic switch means into its conductive state, means responsive to the conductive state of the first electronic switch means for supplying a second biasing voltage to maintain the first electronic switch means in its conductive state, means at said central mechanism responsive to the conductive state of the first electronic switch to disable the means for supplying the first biasing voltage when the first electronic switch means becomes conductive, and means for selectively disabling the means for supplying the second biasing voltage.

2. A remote unit as recited in claim 1 wherein the first electronic switch means includes a first semiconductor device having a first electrode, a second electrode and a first control electrode, the means for applying the first biasing voltage includes a first voltage source of a predetermined polarity, means for applying the first biasing voltage to the first electrode, first resistance means connected between the first electrode and the first control electrode and means connecting the first control electrode to the common terminal, the means for supplying the second bias voltage includes a second semiconductor device having a third electrode, a fourth electrode, and a second control electrode, a second voltage source having a polarity opposite to that of the first voltage source, second resistance means connected between the second electrode and the second voltage source, the second control electrode being connected to the second electrode, the third electrode being connected to the second resistance means and the fourth electrode being connected to the first control electrode, and the means for selectively disabling the means for supplying the second biasing voltage includes a switch connected in series between the first electrode and the common terminal.

3. In a dictating station of a record/playback system of the type having a plurality of dictating stations, all of the dictating stations being connected to at least one common terminal at a record/playback unit and each dictating station having at least one circuit for selectively controlling the record/playback unit, a privacy and seizure circuit comprising first electronic switch means connected in series circuit between the control circuit and the common terminal, first means at said record/playback unit for selectively applying a first bias voltage of a predetermined polarity to the first electronic switch means to make it become substantially conductive, second means at said record/playback unit for supplying a second bias voltage of the opposite po-

larity, second electronic switch means responsive to the conductive state of the first electronic switch means and supplied with the second bias voltage for supplying the second bias voltage to the first electronic switch means to maintain it in its substantially conductive state when the first electronic switch means is made substantially conductive by the first bias means, and means at said record/playback unit responsive to the conductivity of said first electronic switch means for removing said first bias voltage from said first electronic switch means.

4. A privacy and seizure control circuit for a dictating station as recited in claim 3 further comprising a first diode, a first, a second, and a third resistor and a third switch means having two terminals, wherein the first electronic switch means includes a first transistor of one conductivity type having collector and emitter electrodes one of which is connected to one terminal of the third switch means, its base electrode connected through the first resistor to the common terminal, and the other of its collector and emitter electrodes connected to one lead of the second resistor, the third resistor being connected between the base electrode of the first transistor and the one terminal of the third switch, wherein the second bias means includes a voltage source connected to the other lead of the second resistor, and wherein the second electronic switch means includes a second transistor of a conductivity type opposite to that of the first transistor and having collector and emitter electrodes one of which is connected to the base electrode of the first transistor and the other of its collector and emitter electrodes connected to the voltage source of the second bias means, and its base electrode connected to the of the collector and emitter electrodes of the first transistor which is connected to the second resistor, the first diode being connected between the other terminal of the third switch means and the common terminal with its polarity oriented such that current which passes through the first transistor and third switch means is passed through the first diode of the common terminal, the first bias means including a first bias voltage source which is connected to the terminal of the third switch means which is connected to the first diode.

5. A privacy and seizure control circuit for a dictating station as recited in claim 4 further comprising means responsive to the flow of current from the second bias means through the first transistor for disabling the first biasing means.

6. In a record/playback system of the type having a plurality of remote dictating stations connected to at least one common terminal at a central record/playback unit, each remote dictating station including at least on separate circuit for controlling the record/playback unit, a privacy and seizure control circuit

comprising in each remote dictating station a first switch connected between the control circuit of each dictating station and the common terminal, second electronic switch means connected between the first switch and the control circuit, first bias means within the central record/playback unit for applying a first bias voltage of a predetermined polarity through the first switch to the second electronic switch means to make it substantially conductive, second bias means within the central record/playback unit for supplying to the second electronic switch means a second bias voltage of polarity opposite to that of the first bias voltage to maintain it in a substantially conductive state, third electronic switch means responsive to the conductive state of the second electronic switch means and connected between the second bias means and the second electronic switch means for supplying the second bias voltage to the second electronic switch means when the second electronic switch means is made conductive by being connected through the closing of the first switch to the first bias means.

7. A privacy and seizure control circuit for a record/playback system as recited in claim 6 and further comprising, in the central record/playback unit, fourth electronic switch means responsive to the flow of current from the second bias means to the second electronic switch means for activating the central record/playback unit and for disabling the first bias means as long as the second electronic switch is in its conductive state.

8. A dictating system having a central record/playback unit and a plurality of remote dictating stations, each of said dictating stations being connected to said central unit, apparatus for permitting a single dictating station to seize said central unit, comprising first biasing means at said central unit for extending a first bias voltage simultaneously to all of said remote dictating stations; second biasing means at said central unit for extending a second bias voltage simultaneously to all of said remote dictating stations; an electronic switch at each of said dictating stations and adapted to respond to said first bias voltage to be rendered conductive; selective means at each of said dictating stations, each selective means being responsive to the actuation of its associated dictating station to supply said first bias voltage to said electronic switch; and means at said central unit responsive to the conductivity of an electronic switch to simultaneously remove the first bias voltage extended to all of said dictating stations and to extend the second bias voltage to all of said dictating stations, said second bias voltage maintaining said conductive electronic switch in its conductive state and preventing the remaining dictating stations from being rendered conductive.

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