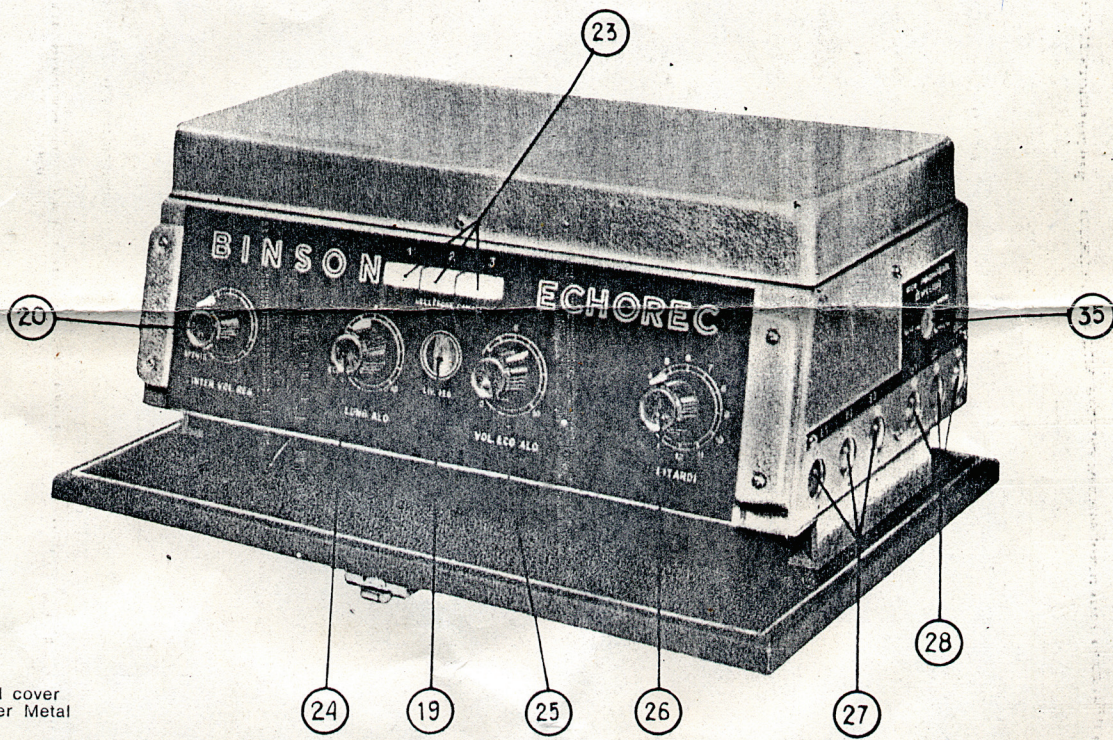


ALL BINSON ECHOREC 2°

OPERATING INSTRUCTIONS

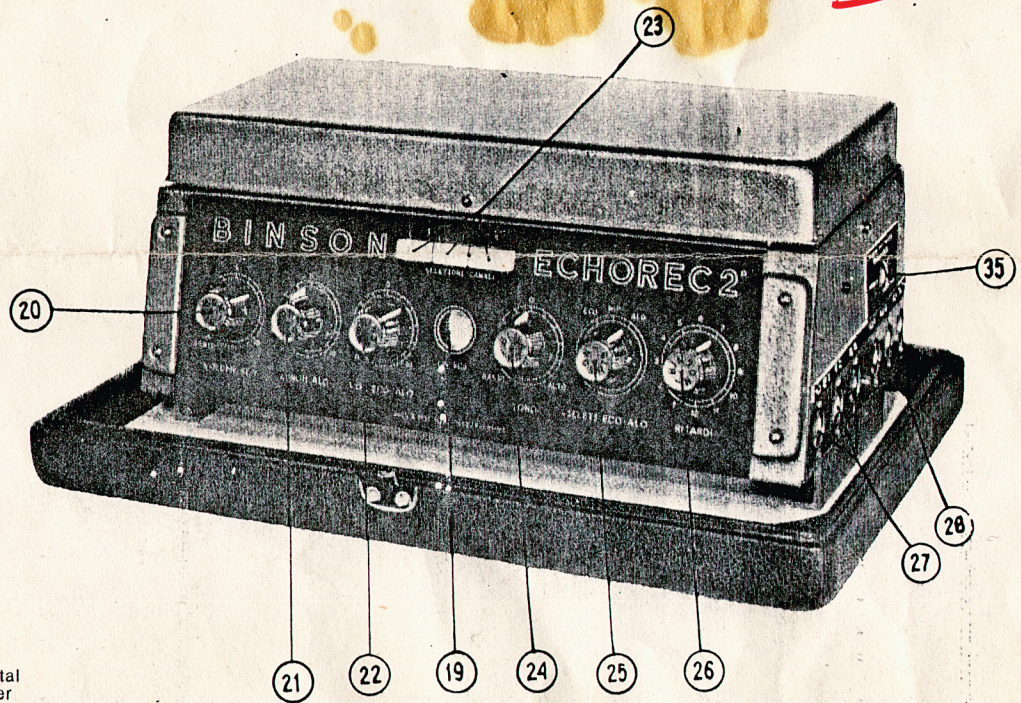
1. Set the Mains Voltage Selector to correspond with your Mains voltage.
2. Insert Mains Lead (32) into socket (18).
3. Insert into input socket (27) the microphone or other source of signal. The impedance of the input and output sockets is 47K ohms and the maximum signal to fully load is 10 millivolts.
4. Insert screened cable (33) into output socket (28) and connect to amplifier having suitable 47K ohms impedance.
5. Press selector button (23) corresponding to input and output channel required, i. e. press button 1 for channels 1 and press button 2 for channels 2.
6. Switch on (20) and check that the panel is illuminated and the disc rotating by indications in the « Magic Eye » (19).
7. Rotate the input control (20) and adjust until the segments of the Magic eye move in sympathy with the incoming signal. Do not let the segments of the magic eye overlap.
8. Rotate knobs (21) and (22) to position 6. Rotate selector switch (26) to position 4. Move Echo-Repeat-Swell selector (25) to « REP. ». Any signal now fed into input sockets (27) will appear at the output sockets (28) with reverberation added and in descending volume. Timing of the reverberation can be made by adjusting knob (21). Volume can be adjusted by knob (22). Other effects can be obtained by setting knob (26).
9. Set selector (25) to « Echo ». Set knob (26) for single « Echo » repeats to positions 1-4 and from 5-12 for multiple « Echo » repeats.
10. Set selector (25) to « Swell ». This gives an effect of « Cathedral tone » if (21) is set about point 6 and (26) between 1-4.
11. The tone control (24) should be adjusted for either voice or instrument reproduction.
12. By adjustments to (21), (22), (25) and (26) a wide variety of sounds and effects can be obtained.
13. If the selector buttons (23) are NOT depressed the signal will pass through without the addition of echo-reverberation or swell.

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| 12 Plexiglass cover | } head cover |
| 13 Binson oil | |
| 14 Fuse | } Under Metal |
| 15 Foot pedal | |
| 16 Earth | } On the left side |
| 17 Mains selector | |
| 18 Mains socket | |
| 19 Magic eye | |
| 20 On-off and Vol. control. | |
| 23 Channel Selector | |
| 24 Length of swell | |
| 25 Vol. Echo - Swell | |
| 26 Delay selector | |
| 27 Input sockets | |
| 28 Output sockets | |
| 35 Connection socket to mixers PA3/4/6MN | |

7



- 12 Plexiglass cover
 - 13 Binson oil
 - 14 Fuse
 - 15 Foot pedal
 - 16 Earth
 - 17 Mains volt selector
 - 18 Mains socket
 - 19 Magic eye
 - 20 On-off and input control
 - 21 Length of swell
 - 22 Vol. control - Echo-Repeat-Swell
 - 23 Channel selector
 - 24 Tone control
 - 25 Echo-Repeat-Swell selector
 - 26 Delay selector
 - 27 Input sockets
 - 28 Output sockets
 - 35 Connection socket to mixer PA3/4/6MN
- } under metal
} head cover
- } On the right side

Cleaning the drive mechanism

Fig. 1 illustrates the magnetic memory driving parts which need to be cleaned. The operation is necessary whenever the sounds memory, which depend on the « Selector Heads », are falling or rising (modulation) and denote slipping of the rubber wheel on the contact parts.

Instructions:

1. The parts involved in this operation are: motor pin (4); transmission wheel (3), and flywheel (6).
2. Take a piece of cloth soaked in pure acetone and hold it in contact with the lower part of the flywheel (6) while it rotates. Repeat the operation several times, changing the piece of cloth. Proceed in the same way with the transmission wheel (3), holding the slide (2) still and with the motor pin (4).

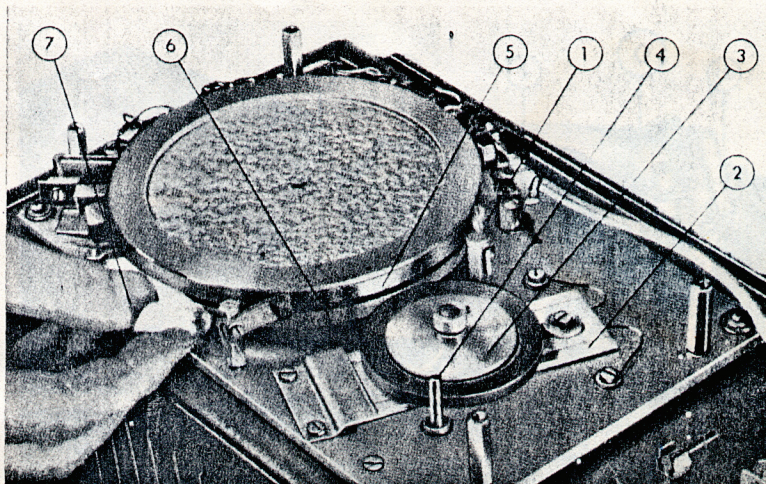


Fig. 1

3. To make sure that the operation has been carried out properly, it is only necessary to press with a piece of dry cloth on the bottom part of the flywheel. If, with the pressure, the transmission wheel and motor pin stop as well as the flywheel,

the operation has been successfully accomplished.

4. If, after carrying out the operation of para. 1 several times, the desired result is not obtained, the acetone used must be replaced with a purer kind.

Cleaning of magnetic band and relevant parts

Fig. 2 illustrates the best position in which to carry out this operation. It is necessary whenever a black strip is formed on the magnetic band and reduces the performance of the equipment. Use a piece of cloth, the special BINSON oil and ordinary petrol.

Instructions:

1. With the disc in movement take a piece of cloth soaked in petrol and hold it against the magnetic band.
2. Repeat the operation until the cloth comes away clean.
3. Put two drops of BINSON oil on the cleaning brushes and let the disc rotate for some minutes.

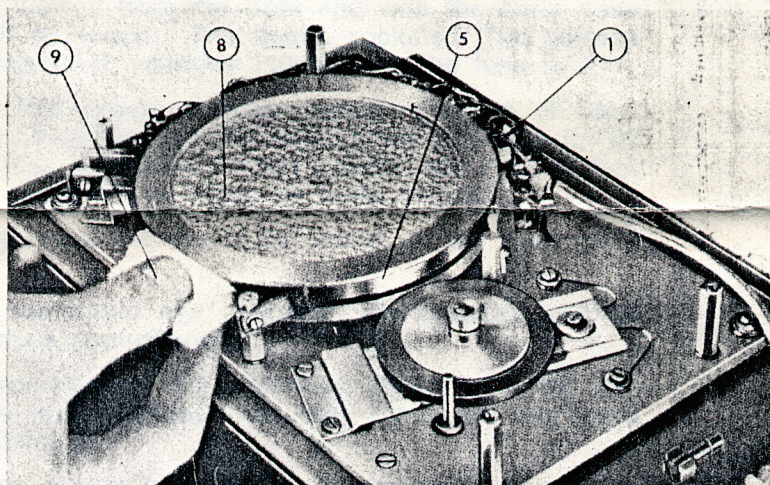


Fig. 2

4. If the black strip forms on the magnetic band again, repeat the operation. When the desi-

red result has been obtained, the heads can be cleaned.

Cleaning of heads

Fig. 3 shows the best way to clean in the space between the heads and the magnetic band. This is necessary whenever performance of the magnetic memory apparatus decreases in quality and volume; it must be done whenever the magnetic band is cleaned. Cleaning is carried out with strips of ordinary typing paper about 1 cm. wide.

Instructions:

1. With the disc (8) rotating, insert a strip of paper as above (11) between the magnetic band (5) and one of the five heads (10) moving the paper vertically and horizontally several times. Remove the paper and tear off the dirty piece used: repeat the operation until the paper comes out clean.
2. Carry out the same operation for each head and for the two cleaning brushes already seen in Fig. 2. Make sure that the strip of paper passes easily between the erasing magnet (0) and the magnetic band (5).
3. On completion of these operations, in order to ascertain whether the magnetic band and the heads are clean, carry out the following check: set control to Swell or Rep. Set Length of

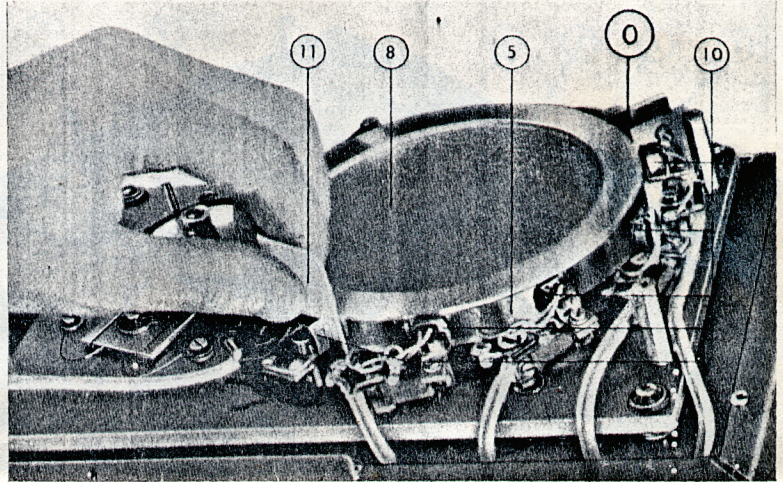


Fig. 3

Swell control to 8/9 position/ after few minutes self-oscillation should be generated.

4. If, the self-oscillations are not obtained the cleaning operation must be repeated.

The « BINSON ECHOREC » is available in various models and the following information is applicable to all types. Viewed from the front and with the carry case opened... on the left hand side will be found... The mains sockets... The voltage adjustment panels containing the fuse. For voltages 110-160volts the fuse is 0.7A.

For other voltages the fuse is 0.4A. The voltage selector covers a range of 100... 130... 145... 160... 220... 240 volts all 50 cycles. Special models are available for 60 cycle supplies. Mounted above the fuse holder on models I and II are the two foot pedal sockets and near the fuse holder will be found the earth socket.

On all machines the input and output sockets are to be found on the right hand side.

The plexiglass front panel contains the magic eye indicator; the channel selector switches (mark I and II) and the various control knobs.

The metal head cover of the Echorec houses the « Memory Disc » with its plexiglass protective cover. Also to be found beneath the head cover are the spare fuses and the special bottle of cleaning oil.

Do not remove the plexiglass cover except for cleaning the magnetic band. The adjustments of the recording and play-back heads are set to fine limits and should not be disturbed. Cleaning instructions are given later in this booklet. While the equipment is in use the plexiglass cover and metal head cover should be in position on the machine. This is essential to prevent atmospheric dirt and dust interfering with the perfect functioning of the equipment.

While the equipment is in use it is necessary to have sufficient air circulation around the base to prevent overheating.

In view of our constant research we reserve the right to modify or alter designs or circuits without notification.