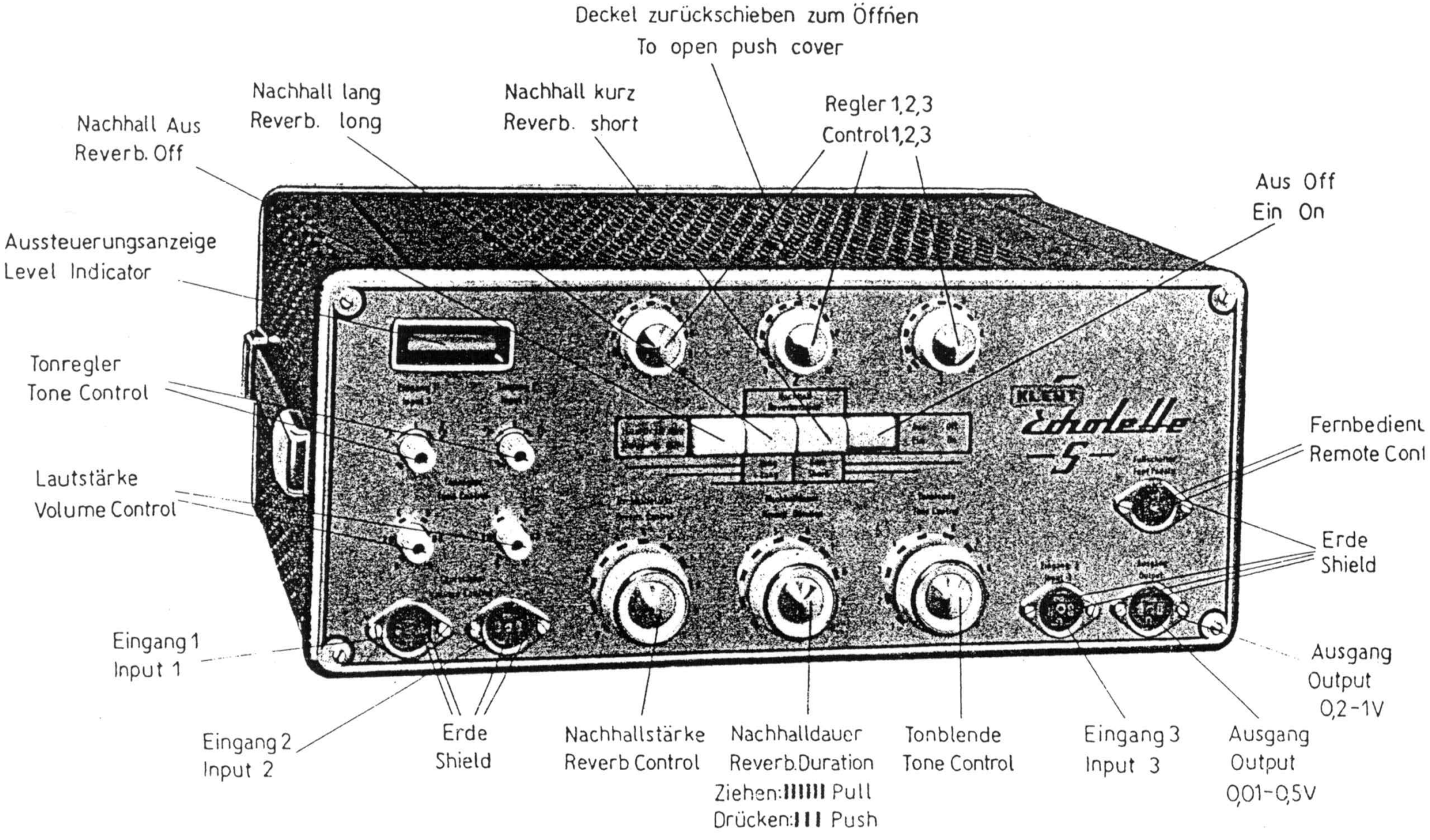
KLEMT

Echolette

Tube Tape Echo

Operating Instructions


Deckel zurückschieben zum Öffnen
To open push cover
Nachhall lang
Reverb. long
Nachhall kurz
Reverb. short
Nachhall Aus
Reverb. Off
Regler 1,2,3
Control 1,2,3
Aus Off
Ein On
Aussteuerungsanzeige
Level Indicator
Tonregler
Tone Control
Lautstärke
Volume Control
Fernbedient
Remote Cont
Erde
Shield
Eingang 1
Input 1
Ausgang
Output
0,2-1V
Eingang 2
Input 2
Erde
Shield
Nachhallstärke
Reverb Control
Nachhalldauer
Reverb.Duration
Ziehen: Pull
Drücken: Push
Tonblende
Tone Control
Eingang 3
Input 3
Ausgang
Output
0,01-0,5V

Specifications

2 inputs for microphones of any impedance, balanced or unbalanced:	5 – 200 mV, 10 MΩ Inputs may be controlled and mixed independantly. Separate bass or treble control.
Input electronic instruments:	1 – 2 V, 100 kΩ
Output into amplifier:	0,2 V – 1 V, 100 kΩ 0,01 V – 0,5 V, 10 kΩ

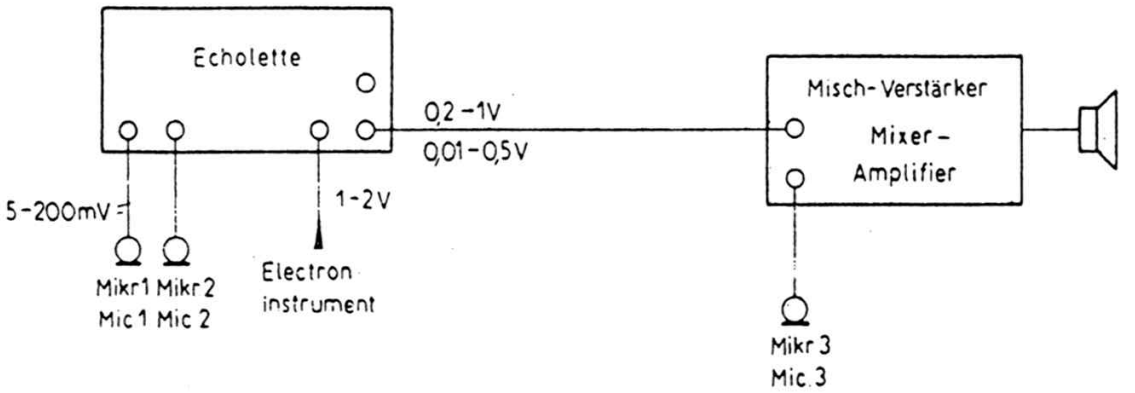
Reverberation produced by endless magnetic tape and 1 – 6 sound-heads.

Reverb. duration:	0,1 – 3 sec. a) by two speeds of tape b) by various adjustable heads c) by adjustable reaction.
Number of reverberations:	1 – 30
Level indication:	by „electric eye"
Mains:	40 - 60 c/s 110, 130, 150, 220, 240, 260 V
Power consumption:	45 VA

How to connect?

1. REMOVE PLASTIC COVER AND LID AND TAKE OUT ADHESIVE TAPE, THE SMALL TRIANGULAR SPACER AND CARDBOARD ROLL.
   Check magnetic tape.

2. ADJUST YOUR ECHOLETTE TO MAINS VOLTAGE (AT BACK-PANEL) AND PLUG IN.



3. The Echolette is to be connected between microphone and the usual amplifier-system.
   CONNECT „OUTPUT" TO AMPLIFIER BY MEANS OF SHIELDED CABLE.
   a) Connect to pin 3 of „output" if amplifier has normal pick-up connection (0,2 – 1 V).
   b) Connect to pin 1 if a high-sensitivity amplifier is used suitable for inputs of 0,01 – 0,5 V.
   c) Simply connect the shielded cable supplied with the specially designed Echolette-amplifier (M 40 or V 40) if the latter is used. In this case the pins 3, 4 and 5 are providing interconnection.

4. a) CONNECT MICROPHONES TO INPUT 1 AND 2.
   b) CONNECT ELECTRONIC INSTRUMENTS (LIKE ORGANS) WITH OUTPUT OF OVER 200 mV TO „INPUT 3".

5. PUSH BUTTON „REVERB. SHORT" AND WAIT FOR 30 SECONDS.
   TURN „REVERB. CONTROL" TO ITS RIGHT-END POSITION.
   NOW ADJUST THE AMPLIFIER'S VOLUME CONTROL TO SUCH A POSITION THAT (ALMOST) NO NOISE IS PRODUCED BY THE RUNNING TAPE.

   If button „reverb. off" is pushed, the built-in amplifier is switched on. In this position no reverberation is produced and the tape is not running. Hence, with the Echolette in this position, the amplifier has to operate exactly as without Echolette.

   „Reverb. long" provides a long lasting echo and „reverb. short" a shorter one.

6. The input-voltages are adjusted by means of "volume control" and treble or bass control is effected by means of „tone control".
   VOLUME CONTROL 1 AND 2 ARE SET IN SUCH A WAY THAT THE LUMINOUS SPACES OF THE „ELECTRIC EYE" ARE ALMOST „CLOSING" BUT DO NOT OVERLAP – FOR NORMAL SPEECH OVER THE MICROPHONE.

7. For extra convenience the voltage of the combined inputs an be controlled by means of the input-control „PEGEL" under the Echolette's lid. Adjust input „PEGEL" in such a way that maximum position of „volume control" at front panel is possible.

   If one input is to be reproduced with reverb. and the other without – e.g. orchestra without reverberation and solo with echo-effect – the microphone may be connected to the usual input of the amplifier whereas the Echolette is to be connected to the pick-up input.

   The Echolette's reverberation-system can be switched on or off by remote control. A special connector is provided.

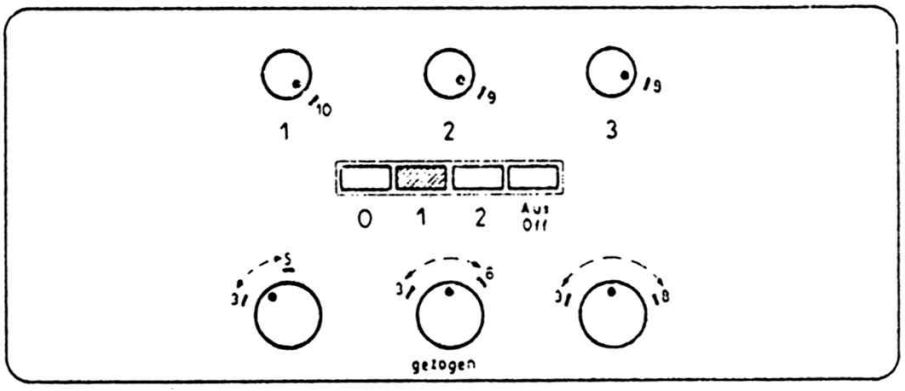
How to operate?

Your Echolette has two speeds, but the number of reverberations may be doubled by pulling out the knob „reverb. duration". To find the best setting is a matter of liking and some experience.

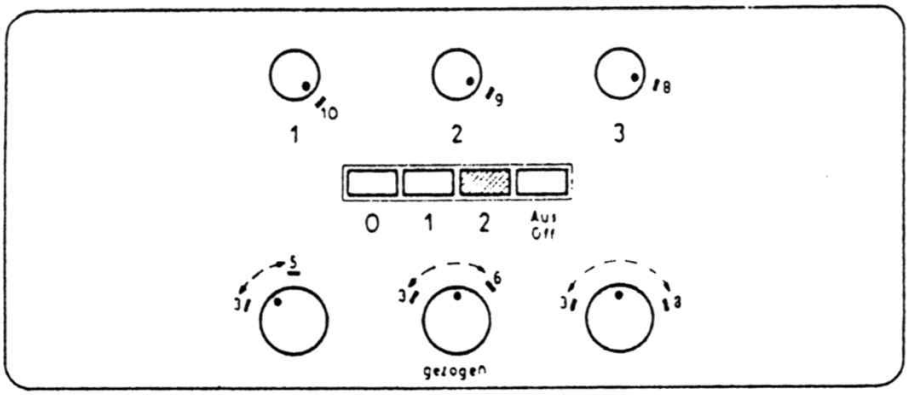
A very popular setting for the Echolette is 10, 6, 4 on the echo-knobs („controls 1, 2 and 3") and 5, 5, 5 on the bottom-knobs. Push in the long speed button „reverb. long" for slow ballads.

For songs with a fast tempo push in „reverb. short" and leave setting.

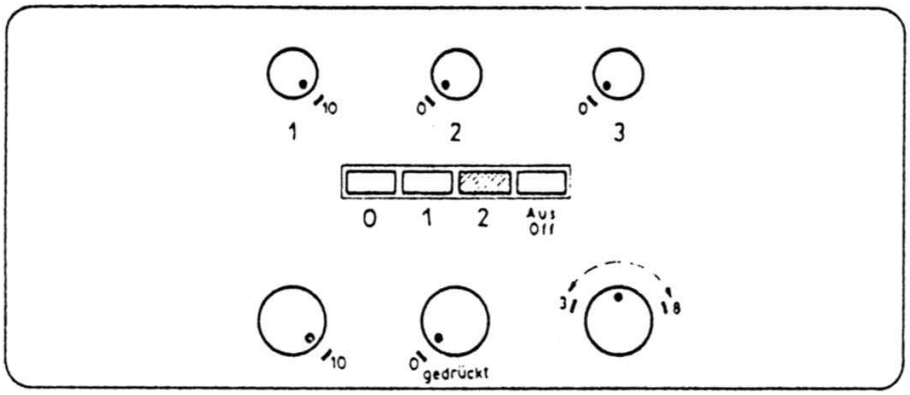
A few examples are given below, but we advise you to use settings to your own liking.



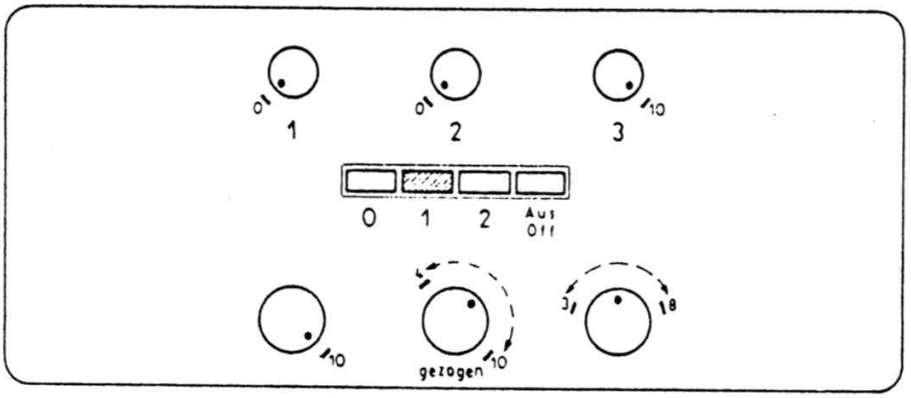
„Reverb. duration" pulled. For slow music like blues, tango, slow fox, slow waltz etc.



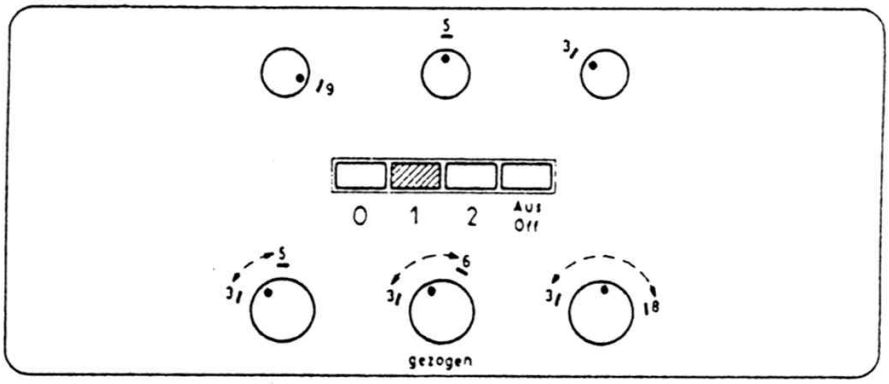
„Reverb. duration" pulled. Fast music like rumba, fox etc. Also for speech.



„Reverb. duration" pushed in. For instruments requiring a fast echo.



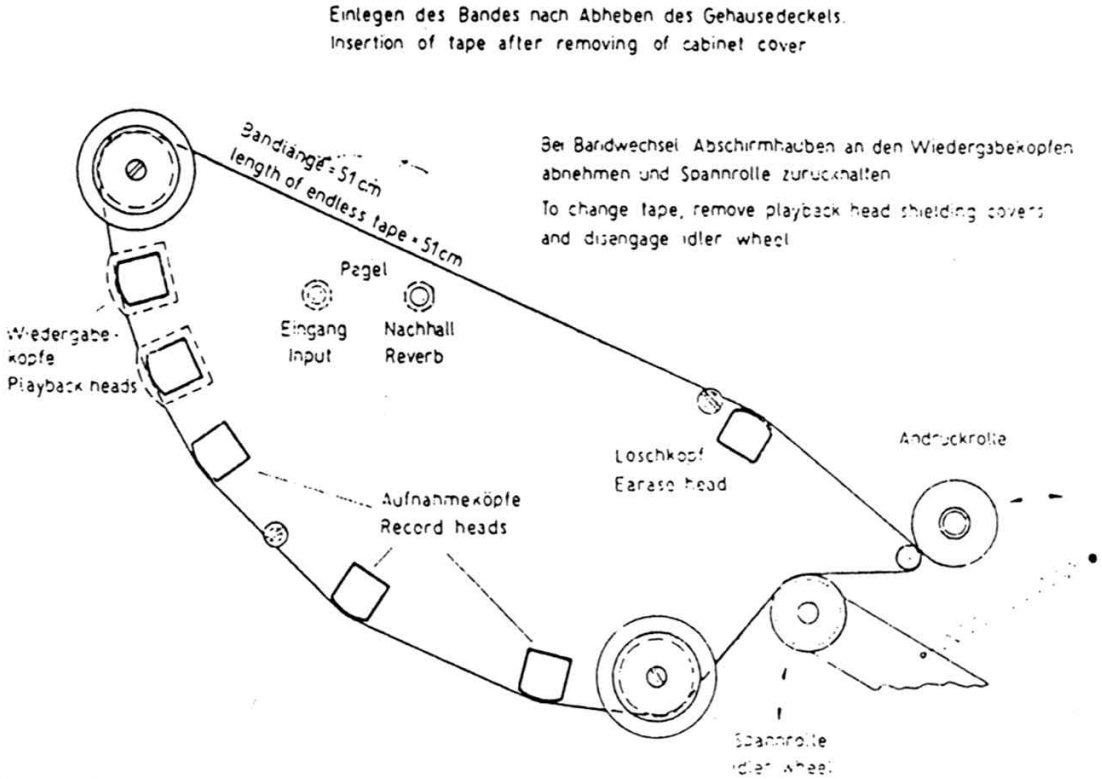
„Reverb. duration" pulled out. Sing or play row row your boat.



„Reverb. duration" pulled out. Setting used with electronic organs.

An interesting feature of the Echolette is its electric eye which, when ov lapping occurs, indicates overdriving and consequently distortion. In that c turn down (to te left) your „volume control" and increase the amplifier volu

The schematic that comes with your Echolette is given to any Hi-Fi-mar there are any repairs to be done.



What about the tape?

Before switching on the Echolette, remove plastic cover and lid.
See to it that the tape is well inserted.
Insert only in off-switch position. To change tape remove the shielding cov of the reproducing heads and put these back after replacing tape.

Your magnetic tape will last about 100 hours. So change the tape say once a month. Make sure to clean all sound-heads whenever your change the tape.

Precautions

For switching on or off always use knob „on – off". Do not stop your Echolette by pulling out the plug.

Before changing the speed of the tape (e. i. when pushing knob „reverb. off", „reverb. short" or „reverb. long") turn down the volume „reverb. control" or operate your remote control.

Change of tape-speed may produce excessive noise through the amplifier-system, and this is easily avoided by momentarily switching off the echo-system.

To a certain extent „reverb. duration" depends on controls 1, 2 and 3. Too much reaction may produce hisses. In that case turn down „reverb. duration".

See to sufficient cooling or your Echolette. Therefore, always take off the plastic cover, do not place your Echolette on top of a heat-producing amplifier, do not place things on the Echolette's lid.

Never use oil or grease when lubricating the tape-rolls. Graphite-powder only should be used. Lubricate every 500 hours.

Description

The sound-potential which is to produce reverberations is applied to three recording heads 1, 2 and 3, which are magnetising an endless tape.
The three recording heads are spaced apart along the tape so that magnetising of the tape occurs at intervals depending on the speed of the tape.
Then the magnetised tape is passing along two reproducing heads 4 and 5 (5 may be switched off) which convert the tape recordings into „sound-potential".
This voltage is amplified and mixed with the original-sound voltage.
Therefore the output consists of the original sound signal and 3 or 6 successive similar signals producing the echo effect.
Finally the tape is passing the erase head 6, thus allowing new tape recordings to be made.

By adjusting the reaction between recording heads 1, 2, 3 and reproducing heads 4, 5 the duration and number of reverb. may be increased.
Two tape-speeds can be used (15 cm/sec and 30 cm/sec).

The two microphone-inputs (5 – 200 mV) are amplifled by two separate tube-systems of tube 1 and may be controlled and mixed independantly.

Tube 2 is providing additional amplification.
Higher inputs (like inputs from electronic musical instruments) are applied directly to tube 2.
The voltages provided by the reproducing heads 4 and 5 are amplified by tubes 3 and 4 and are lead to the output together with the original sound-voltage.

Tube 6 (electric eye) provides control over tape setting and operation. Erasing of recordings on the tape and HF-biasing is effected by means of a H. F.-tension produced by tube 6.

By means of the controls 1, 2 and 3 the three recording heads producing the reverberation can be switched on or off and gradually adjusted.

Control 1 in right-end position and controls 2 and 3 left-end will produce a single reverberation.

1, 2 and 3 in position „right" will produce three reverberations at equal intervals.

The knob „reverb. duration" may be used to increase the number of reverberations.

Controls 1, 2 and 3 switched on and „reverb. duration" in right-end position will produce about 15 separate reverberations – at the same equal intervals.

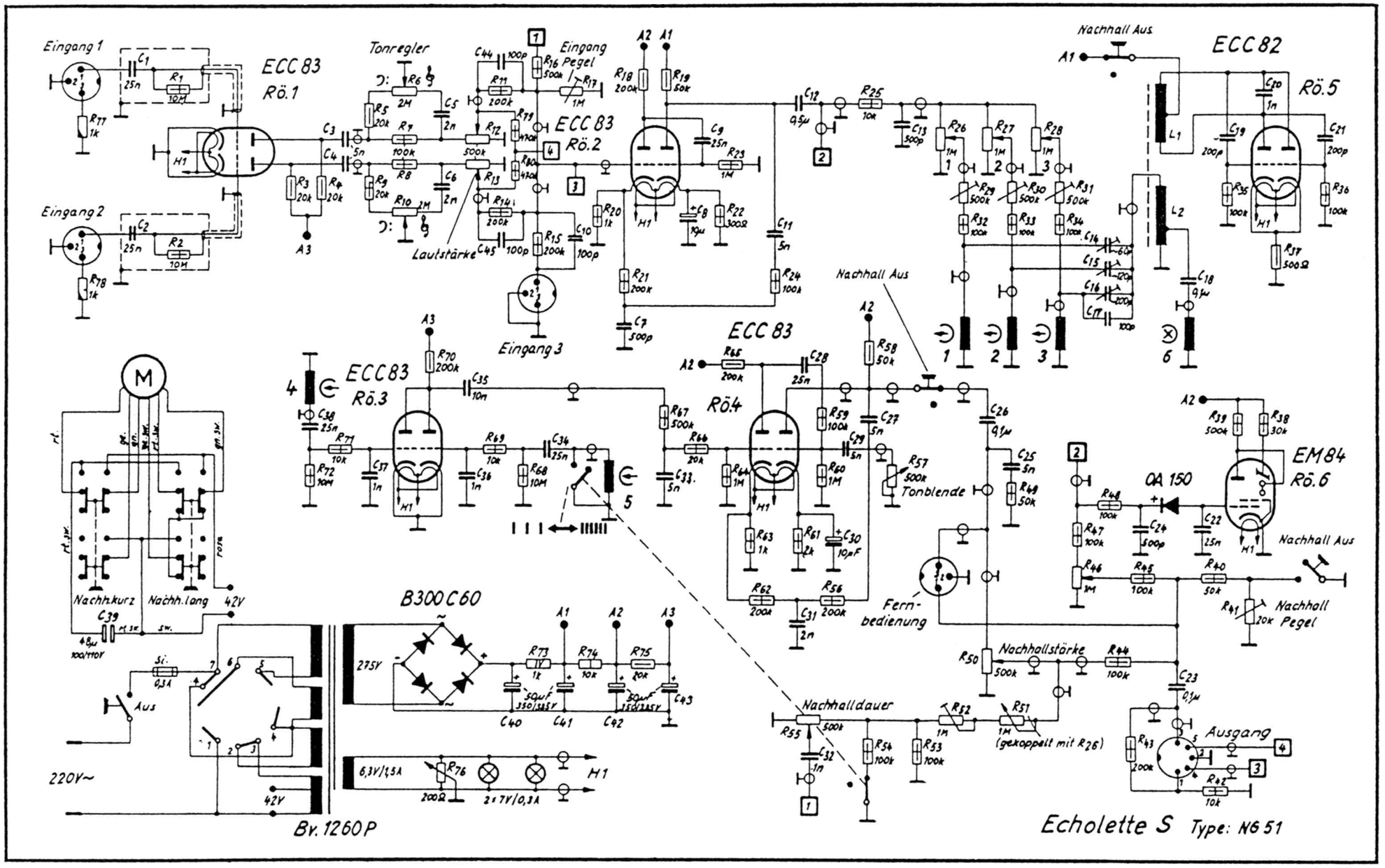
Controls 1 and 2 in position „left" and control 3 „right" will result in the original sound and a single delayed reverberation.
If „reverb. duration" is turned to the right up to 10 reverberations may be produced.

„Reverb. control" is controlling the ratio volume original sound to volume reverberation.
„Reverb. control" in left-end position will produce no reverb. at all. Its right-end position will result in a reverb. of approximately the same volume as the original sound.

The knob „Pegel" (input) of the upper tape-recorder plate allows further adjustment of the total volume.

These reverb.-effects occur if control „reverb. duration" is pushed in – which means that one reproducing head only is operating.
If this knob is pulled out, both reproducing heads are operating and the number of reverberations is doubled.
In that case 6 reverberations (instead of 3) will result if controls 1, 2 and 3 are turned to the right.
If controls 1 and 2 are in left-end position, control 3 in position „right" and „reverb. duration" pulled out two delayed reverberations will be produced.
Normally the Echolette is operated with „reverb. duration" pulled out.
For special effects however the „pushed in" position may be useful.

The connection and operating conditions of the Echolette and amplifier-system may be tested by producing a short sound like a single clap of your hands. According to the positions of the various controls 1 – 15 reverberations should be reproduced by the loudspeaker.
Controls 1, 2, 3 and „reverb. control" as well as „reverb. duration" can be tested in the same way.
Control 1, 2 and 3 in right-end position, „reverb. duration" left-end and pushed in should produce 3 seperate reverberations.
If „reverb. duration" is pulled out 6 reverb. should result.
The intervals should change if „reverb. short" or „reverb. long" is pushed.
By means of „tone control" the high tones of the reverberations can be diminished.


Eingang 1
Eingang 2
Eingang 3
ECC 83
Rö.1
ECC 83
Rö.2
ECC 83
Rö.3
ECC 83
Rö.4
ECC 82
Rö.5
EM 84
Rö.6
OA 150
Tonregler
Eingang Pegel
Lautstärke
Nachhall Aus
Nachhall Aus
Tonblende
Fern-
bedienung
Nachhallstärke
Nachhalldauer
(gekoppelt mit R26)
Nachhall
Pegel
Ausgang
Nachh.kurz
Nachh.lang
42V
B300C60
Aus
220V~
6,3V/1,5A
2x7V/0,3A
Br. 1260P
Echolette S
Type: NG 51