

RECORDERS

EL3787

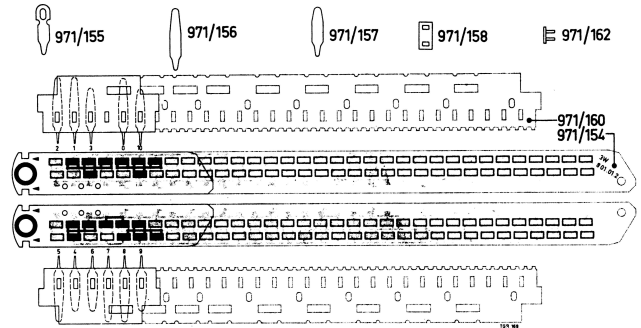
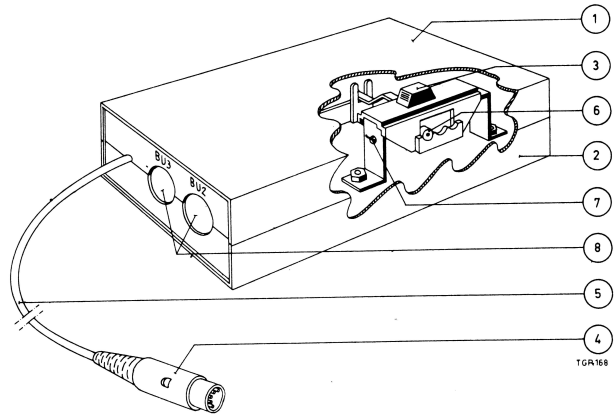


Technical Data :

Power Consumption : 7,5 mA
 Transistors : OC 58-AC 126-OC 44
 Headphone : EL 3775-20
 Dimensions : 100 x 165 x 50 mm

General :

The EL 3787 is a transistor pre-amplifier with which it is possible to play-back stereo pre-modulated tapes with a one-channel recorder. The signal of the left-hand channel is amplified by the recorder and the signal of the right-hand channel is pre-amplified by the EL 3787. This pre-amplified signal is then amplified by e.g. a radio. It is also possible to take a stereo signal from the EL 3787 and to apply it to a stereo output amplifier. Another possibility is to record the signal on to track 1-4 by means of a recorder and to listen to track 2-3 with the EL 3787 (dual-play). The signal of track 2-3 can be recorded on to track 1-4 and a new signal can be added at the same time (multi-play).



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Description of the Circuit Diagram, and Adjustments

The apparatus can be switched to three positions, viz. :

- Play-back 9.5 cm/sec.
- Play-back 19 cm/sec.
- Dual play/Multi-play

These three positions will be described as follows:-

I. Play back 9.5 cm/sec.

The signal from the play-back head of the tape recorder is applied to the base of transistor TS1 via the plug St1 (point 1) and C2. The signal amplified by TS1 is fed to the base of TS2 via C3 and filter R9-C6 and R8. The filter R9-C6 and R8 provide an additional amplification of the low frequencies. The signal is amplified by TS2 after which it is applied to the base of TS3 via C9. From the collector of TS3, the signal is frequency-independently fed back to the collector of TS2 by R24-R17. Then the signal is negatively fed back to the emitter of TS2 via C14, R20, R19-C11, R16 and C8. The low frequencies are additionally amplified due to R19-C11. For the high frequencies, the frequency response is adjusted by R16-C10 and R18. The collector current of TS3 is controlled by the resistor R21. The signal for the headphone is applied to Bu.3 (point 1) via R28. The signal for the output amplifier is applied to Bu.3 (point 3) via R30. The signal for the output amplifier is fed to the Bu.2 (point 5) via R29. The amplified signal of the left-hand channel of the output recorder is also fed to Bu.2 (point 3) via R33. Thus a stereo output amplifier can be connected to Bu.2.

II Play-Back 19 cm/sec

The same description applies as for I, however, the filter R7-C6 and R8 is used in place of the filter R9-C6 and R8. As a result of this, the low frequencies are corrected to a greater extent.

III Dual-play/Multi-play

The same description applies as for I, however, the signal is applied to the base of TS1 via R4-C2, whilst the circuit C1-R2 is connected in parallel with the input. As a result, the r.f. voltage, which is induced into the playback head by the recording head, is attenuated. Also, the filter L1-C7 is connected between TS1 and TS2, as a result of which the r.f. voltage is attenuated.

Adjustments

- Adjustment of R16.
- Put the apparatus into position 9,5 cm/sec.
- Connect the apparatus to a supply voltage of 22 V, d.c. via St1, point 5 is negative point 2 is positive.
- Apply a signal of 1000 c/s to St1, point 1, via a potentiometer of 100 k Ω /100 Ω about 220 mV.
- Connect a vacuum tube voltmeter to BU3, point 3.
- Adjust the amplitude of the input signal so that the vacuum tube voltmeter shows a reading of 650 mV.
- Change the frequency to 14 kc/s and with R16 adjust the output voltage to 310 mV.

Adjustments of R24 and R21

- Put the apparatus into position 9.5 cm/sec.
- Connect the apparatus to 22 V, d.c.
- Apply a voltage of 60 c/s, 22 mV, to St1, point 1, via a potentiometer of 100 k Ω /100 Ω .
- Connect a vacuum tube voltmeter to BU3, point 3.
- With R24, adjust the output voltage to 750 mV.
- Connect a moving coil meter between collector and emitter TS3.
- With R21, adjust the voltage to 7,3 V.

Connection Cables

The connection cable EL 3768-00 must be used to connect a radio, which is to be used as output amplifier, to the EL 3787.

The connecting cable EL 3768-04 must be used in order to connect a stereo output amplifier to the EL 3787.

For "Multi-play" the connection cable EL 3768-00 must be used between the recorder and the EL 3787.

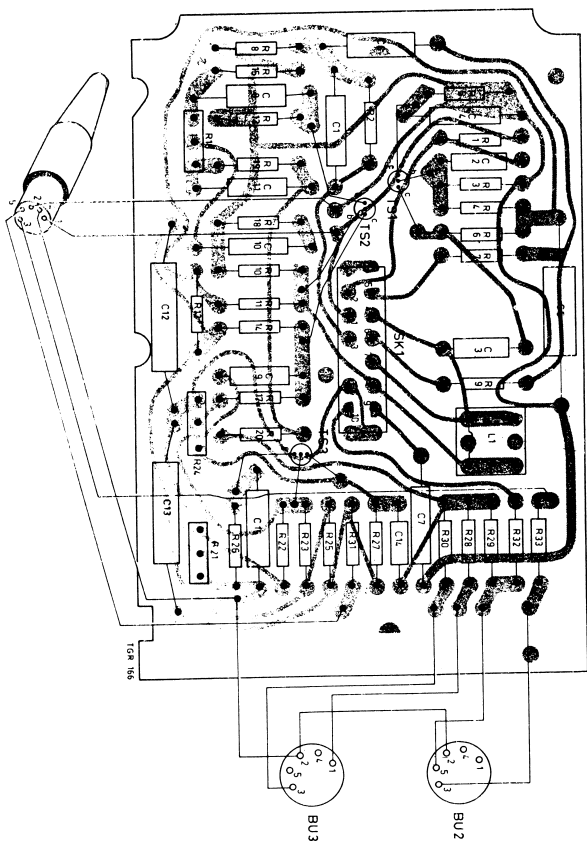
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List of Mechanical Parts :

1. Case-half, upper	WY 841 25
2. Case-half, lower	VT 525 11
3. Knob	VT 540 28
4. Plug	978/5x180
5. Flex per meter	R 365 KA/27KT13
6. Stop roller	VT 575 13
7. Stop spring	WT 766 35
8. Socket	979/5x180

Electrical Parts :

L1	WY 885 45	C 1	906/L22K
SK1	WY 891 00	C 2	909/W10
TS1	OC 58	C 3	909/W10
TS2	AC 126	C 4	C 426 AM/B 100
TS3	OC 44	C 5	909/W200
R16	E 097 AC/1K	C 6	906/L 100K
R21	E 097 AC/5K	C 7	906/L 10K
R24	E 097 AC/50K	C 8	C 426 AM/B 100
		C 9	909/W10
		C10	906/L 47K
		C11	906/56K
		C12	909/W200
		C13	909/C125
		C14	909/x3,2
		C15	C 426 AM/B 100



I STEREO - 18cm/sec
 II STEREO - 35cm/sec
 III MULTI / DUD PLAY

901/.....

902/.....

906/.....

