

## STUDIO CONTROL UNIT UN3/17

**Introduction**

The UN3/17 was designed as part of transportable stereo studio equipment EP5/11, in which it is the central one of three units of the main console. The unit carries subsidiary controls for 10 mono channels whose faders are on the right-hand unit, MX1/9, of the EP5/11 console. It also carries the two main P.P.M.s and their selector switch, the *Transmission/Rehearsal* and *Tone* keys and various other controls.

The UN3/17 is linked with other units of the EP5/11 via six 26-pin sockets at the rear which engage with plugs on 10-pair cables UN1/107.

A general view of the UN3/17 is given in Fig. 1 and a circuit diagram in Fig. 2.

**Mono Channel Controls**

The faders of these channels, for ergonomic reasons, are on the MX1/9. Each channel has also a *Group Selector* switch, an *Echo Mixture* switch

and a pan-pot, all on the UN3/17.

Each channel *Group Selector* switch has three positions, selecting the channel to group 1 or 2, or to *Off*. In the *Off* position, all circuits are dummy-loaded, so that this position may be used to provide a channel-muting facility if required.

Below the *Group Selector* switches are the *Echo Mixture* switches, of the standard BBB/35/Y1 type. The associated hybrid transformers, together with their 300-ohm loading resistors, are on a subchassis behind the front panel of the unit.

Below the *Echo Mixture* switches are the pan-pots which enable the signal to be moved from fully left, through centre, to fully right. Their associated hybrid transformers are also situated on the subchassis behind the front panel. The unbalanced hybrid transformer outputs result in out-of-phase *A* and *B* signals at the star-mixer outputs, a condition corrected by reversing the primary connections to T37 and T42.

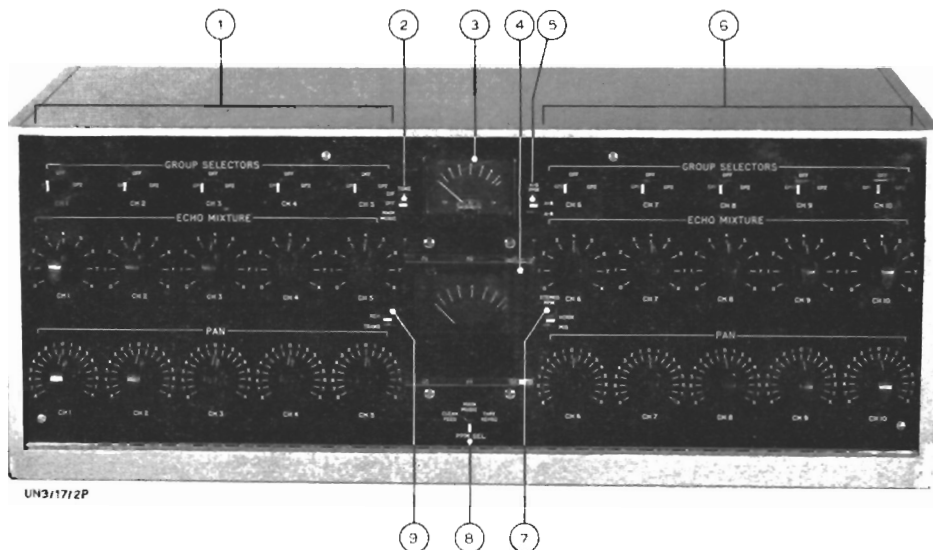


Fig. 1. UN3/17 General View

- |  |   |
|--|---|
| 1. Controls associated with channels 1—5 | 6. Controls associated with channels 6—10 |
| 2. Line-up tone key                      | 7. Stereo P.P.M. c/o key                  |
| 3. (A + B) P.P.M.                        | 8. P.P.M. selector key                    |
| 4. Stereo P.P.M.                         | 9. Trans./Reh. key                        |
| 5. (A ÷ B) P.P.M. c/o key                |   |

**Peak Programme Meters**

The two main peak programme meters are centrally mounted, with the *P.P.M. Selector* switch below them. One P.P.M. follows the ( $A + B$ ) signal; the other has two needles, red for *A* and green for *B*.

To limit operational hazards, selection to these meters is confined to three circuits, *Clean Feed*, *Main Music* and *Tape Repro*. The various other points which may need monitoring are available on an auxiliary P.P.M., with selection switch on the MX1/9 and display instrument on the MX1/8 which is the left-hand unit of the EP5/11 console.

**Line-up Tone**

Line-up tone is derived from an oscillator OS2/15 mounted on trolley 2, and may be switched by the *Tone* key to either *Clean Feed* or the *Main Music* line.

The injection of tone does not involve any switching contacts in series with the programme chain, but relies on the principle of paralleling a low-impedance source with a higher-impedance circuit. The tone is injected at the input of the AM9/5 level-raising amplifiers in trolley 1 (CA2/2) which precede the line-send amplifiers AM7/5 on trolley 2 (CA2/3) of the EP5/11.

The tone-source is connected via independently variable preset *Adjust Level* attenuators behind the UN3/17 front panel. These attenuators present an impedance of about 3.5 ohms across the 600-ohm programme feeds, thus effectively swamping programme in favour of tone when the *Tone* key is operated.

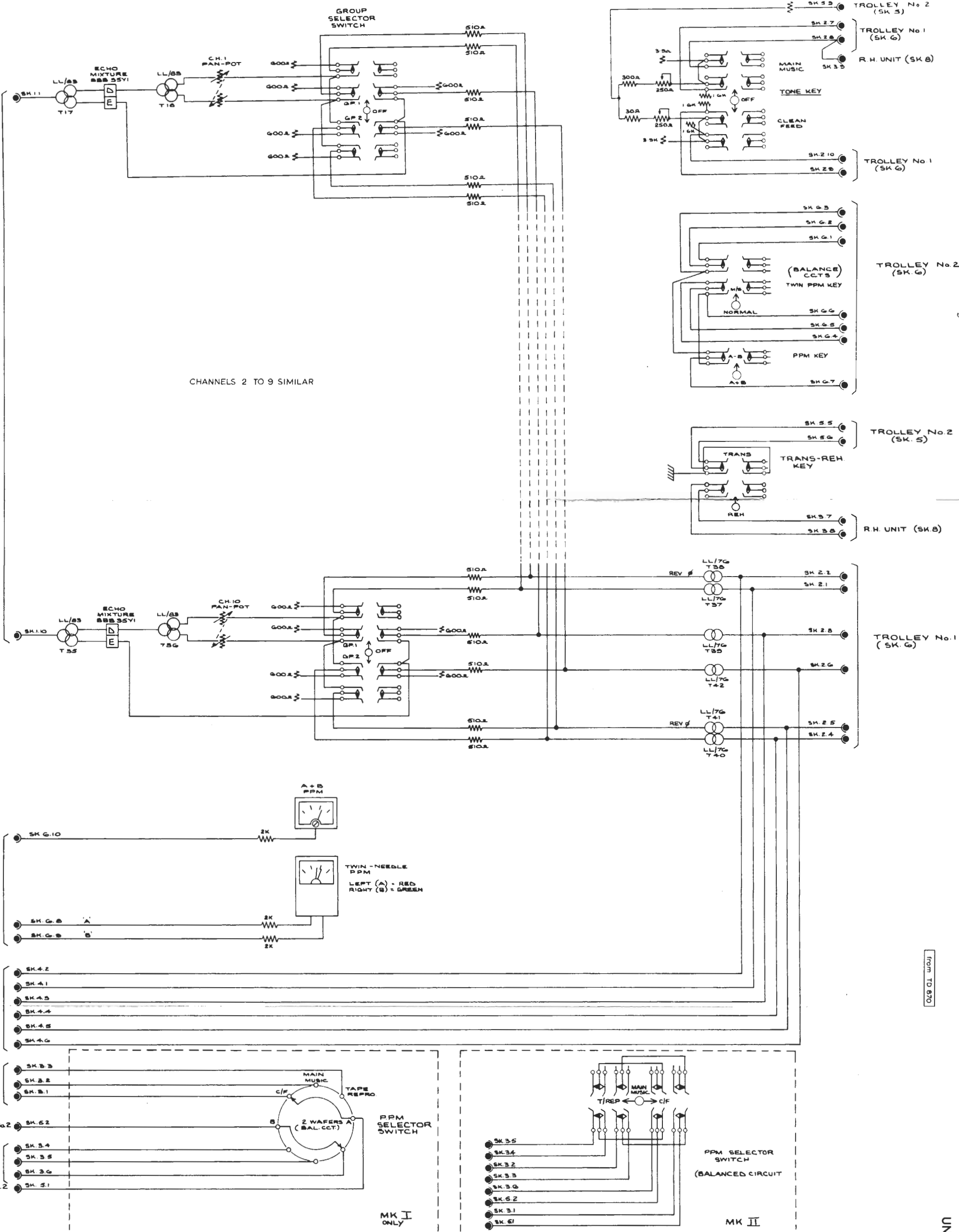
As the position of the *Tone* key makes accidental operation unlikely, no safety interlock with the *Rehearsal/Transmission* key is provided in the tone circuit.

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UN3/17

R.H. UNIT (SK. 3)

CHANNELS 2 TO 9 SIMILAR



TROLLEY No. 2 (SK. 6)

L.H. UNIT (SK. 2)

R.H. UNIT (SK. 8)

TROLLEY No. 2 (SK. 5)

R.H. UNIT (SK. 8)

TROLLEY No. 2 (SK. 5)

from TD 870

Fig. 2. UN3/17 Circuit

UN3/17