

DESK PANEL TESTER TE1/13

Introduction

The TE1/13 accepts 16-inch Type-D sound equipment modules and provides the means by which they may be tested, in accordance with the test schedules for the modules in question.* Four jackfields give access to the programme inputs and outputs, and 4-mm pin-sockets supply connections to the switching circuits.

The tester is powered from the a.c. mains, and includes its own stabilised 24-volt d.c. power supplier, either a PS2/49 or a PS2/9. This supplier also feeds a 12-volt 250-mA stabilised circuit for lamp supplies. The echo module PA8/263 requires in addition a 50-volt supply (a PS3/31 is suitable), and this supply is connected to terminals on the top panel of the tester.

A set of cable connectors is supplied, and a pull-out tray located in a tray in the base gives the connections for a number of commonly used Type-D modules. The overall dimensions are about 24 by 10 by 8 inches, the weight is 35 lb, and carrying handles are provided.

General Description (Fig. 1)

The tester consists of an aluminium angle framework to which is fixed a top panel carrying six sockets (two 24-pin and four 16-pin) into which the module under test is plugged, 48 individual pin-sockets (arranged in pairs) for the switching circuits, four individual pin-sockets (also in pairs) wired to test jacks, and power supply terminals.

Four 20-way jackfields are mounted two to each

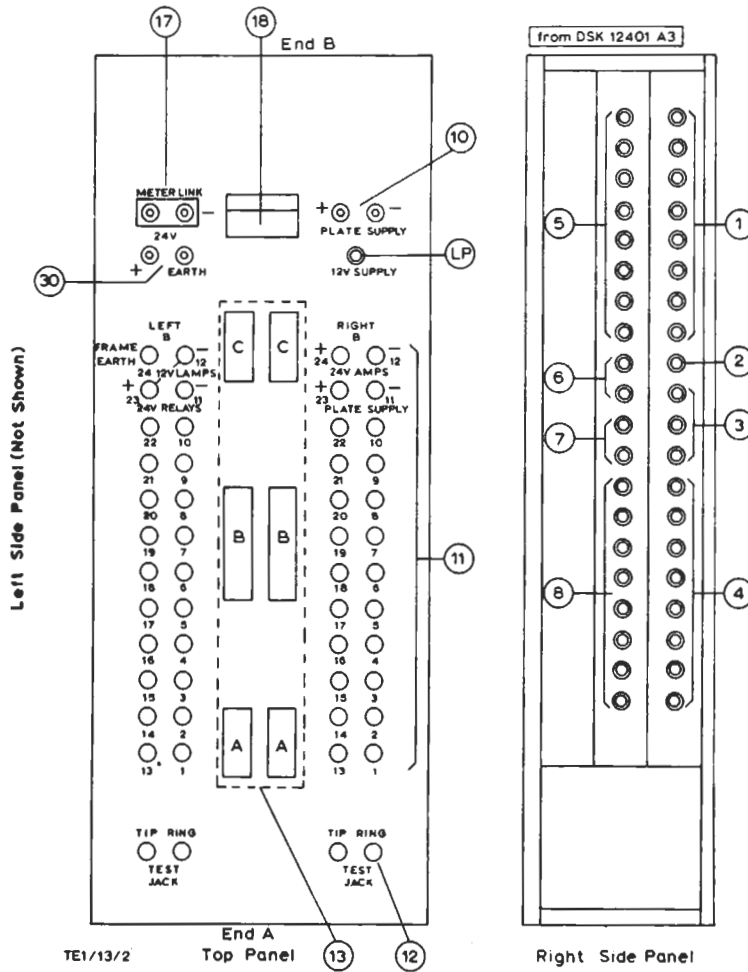


Fig. 1. Layout of the TE1/13

* Test schedules may not be included in the Technical Instructions for some individual modules when the Instructions are first issued. In this event reference should be made to Designs Department Test Specifications.

side of the framework. At the top end of the box there is a space into which the power supplier is plugged, and connection from the mains is made to this through a 3-pin XLR connector fixed to the end-plate. At the other end of the box is the pull-out tray

carrying the connection table. At the rear of the power-supplier 15-way connector-mounting plate is the circuit providing the 12-volt stabilised lamp supply.

A set of connecting leads is available as shown below. For further details of these see *Operating Instructions*.

3 TE1A/2A
 1 TE1A/2B
 1 TE1A/2C
 1 TE1A/2D
 1 TE1A/2E
 ** TE1A/2F
 ** TE1A/2G

Circuit Description (Fig. 2)

There are two identical sets of circuits, one on each side of the centre-line of the top panel. Component parts of these circuits are identified by large ringed numbers on Fig. 1 and reference is made to these in the following description, which deals with the right-hand circuits. (The circuit diagram, Fig. 2, is a 'rear view', with left and right reversed.)

The A and C sockets (13) are wired directly to the tip and ring of the upper rows of jacks (1 and 4). The jack designations and panel engraving indicate the socket pin numbers, the tip being wired to the lower numbered pin. Wired across the inners of the jacks in the top row are resistors, 600 ohms \pm 2 per cent for the jacks connected to the A socket and 100 ohms \pm ¼ per cent for the C socket jacks. The jacks in the lower row (5 and 8) are wired as parallels to the corresponding jacks in the upper row, and they are used as listen jacks when the upper row jacks are in use. When the upper row jacks are not in use, and no termination is required, the upper jacks must be dummy plugged. An exception is the jack wired to A1 and A9; this has no terminating resistor, but a 38.7-dB attenuator is wired between the upper and lower jacks. This is required to provide an accurate -80 dB input for testing channel modules PA8/260. Also in the upper row of jacks is a test jack (2) wired to two 4-mm sockets on the top panel (12), and three parallel-connected jacks (3). In the lower row are two jacks (6) with 100-ohm terminating resistors, and two jacks (7) with 600-ohm terminating resistors.

The B sockets are connected to the 4-mm test sockets which are numbered to correspond with the socket pin numbers. These are used for d.c. supplies and switching connections, and also in some cases for high level programme. The 4-mm *Test Jack* sockets may be plugged to other pairs of test sockets using the special lead TE1A/2C provided, thus giving access to the B sockets through the test jack. Sockets 11 and 23 on the left-hand side of the panel are connected to the 24-volt supply for relays, socket 12 and 23 to the 12-volt supply for lamps and socket 24 to frame

earth. Sockets 11 and 23 on the right-hand side are connected to the *Plate Supply* terminals (10) for the reverberation plate control circuit supply, and sockets 12 and 24 are connected to the 24-volt supply for amplifiers. The 24-volt supply and frame earth are also brought out to terminals (30), and across the 12-volt supply there is a lamp (LP). A pair of terminals in the 24-volt negative line is shorted by a link (17) to enable a meter to be connected in circuit to measure the total current consumption from the 24-volt supply.

Operating Instructions

Plugging and Unplugging a Module

The module is plugged to the tester sockets (13). The pins on the plugs and sockets are 'polarised' to obviate incorrect plugging, and it is important to ensure that they are all mating properly before any tests are carried out.

Removal of the module is effected by grasping the module handle at end 'A' and lifting. At the same time the other hand should hold the tester down by its carrying handle at the same end. The module should then pivot about the block (18) at end 'B'.

Connector Cables

The schedules of tests for individual modules require certain connections to be made using the connector cables supplied. The main uses for these cables are as follows.

TE1A/2A (Double-ended jack-plug lead)

- (a) To extend an input by using a parallel jack, for making level measurements.
- (b) To make connections between jacks A or C.
- (c) To enable an alternative termination to be made to a circuit via a parallel jack or listen jack.

TE1A/2B (Single-ended jack-plug lead)

- (a) For making capacity balance tests.
- (b) To give single-ended access to any jacks for measurements such as input or output transformer continuity.

TE1A/2C (P.O. 4-mm two-pin double-ended plug lead)

For plugging pairs of 4-mm test sockets to the *Test Jack* via the 4-mm *Test Jack* sockets.

TE1A/2D to 2G (4-mm single-pin double-ended plug leads)

These are for making external d.c. connections, and are as follows:

TE1A/2D	red	18-inch lead
TE1A/2E	black	18-inch lead
TE1A/2F	red	36-inch lead
TE1A/2G	black	36-inch lead

** Not normally provided.

WWM(X) 1/71

