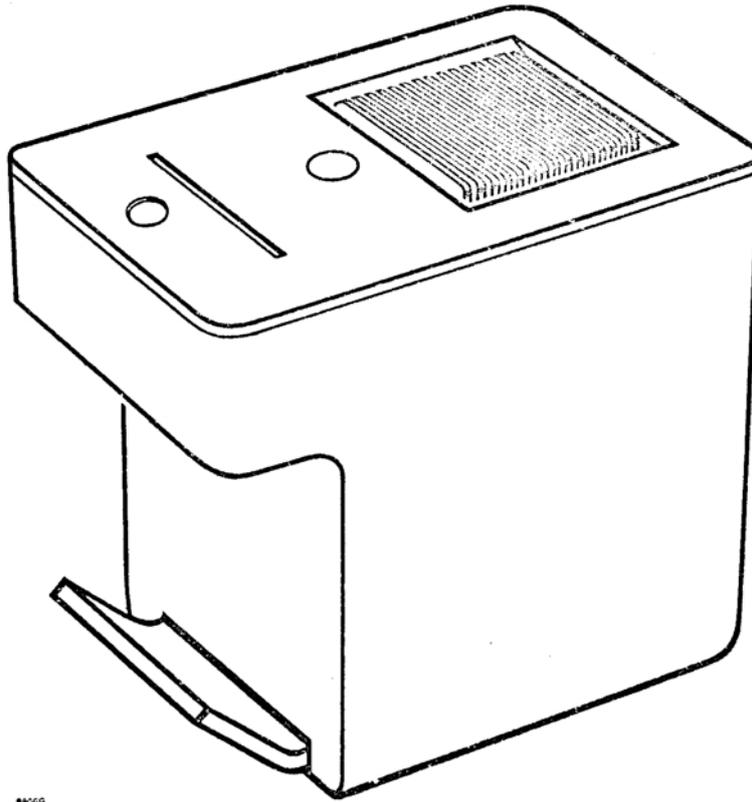


AUTODIAL No 302A
(Card Callmaker)
Description and Installation

*1 GENERAL This Instruction describes the Autodial No. 302A which enables subscribers connected to automatic exchanges to call other frequently used subscribers' numbers without the necessity of remembering or dialling the telephone numbers. To call other subscribers the normal telephone dial may be used. The Autodial is shown in Fig 1.



2 DESCRIPTION The autodial is a "repertory dialler" with a punched card memory and is used in conjunction with the normal telephone. Each telephone number is punched on an individual card, which has a capacity of 16 digits. About thirty cards can be stored in the recessed top of the autodial (See Fig 1). The autodial is mains-powered with an integral power unit, measures 5½ in x 6 in x 4 in and weighs 3½ lb. When the mains supply is switched on, the red opal on the lid of the autodial glows.

When a punched card is placed in the slot, the autodial pulses the first recorded digit. The card then drops, under the force of gravity, until arrested by a latch. The next digit is then transmitted. This procedure continues until all the recorded digits have been transmitted, when the card drops from the slot and is caught by a transparent tray fitted to the base.

When a punched card is positioned in the slot, light shines through the punched out holes in the card on to photocells. The difference in the resistance of the lit and unlit photocells sets a pulse counter and starts a pulse generator.

The pulse generator sends dial pulses to line and steps the pulse counter until it is restored to zero, at which time the generator stops and a monostable multivibrator is set to give an interdigital pause (IDP) of 850 ms. The latch on which the card is resting is released and the second latch is operated to allow the card to drop to the position in which the next row of holes is presented to the photocells.

After this number has been pulsed out, the second latch is released and the first reoperated, to allow the following row of holes to be presented to the photocells. This process is repeated until no holes are presented to the photocells causing both latches to be released and allowing the card to fall from the slot. If an exchange line access digit at a PABX is required to precede the telephone number, the digit is recorded in the normal manner but one additional hole is punched. When this particular hole is presented to the appropriate photocell the IDP is extended to allow main exchange dial tone to be obtained prior to the dialling of the remaining digits. Should an incorrect card be inserted in the slot, the call may be cancelled at any time during the dialling process by pressing the button in front of the card slot, and replacing the telephone handset.

* The cards (Card, Autodial, D 92879) are supplied in boxes of 50. Each card is $2\frac{1}{4}$ x $3\frac{1}{2}$ in, has five columns of 16 semi-punched holes and, on the edges, two columns of slots in which the latch pins locate. A roughened surface is provided at the top, on which to write the name or other details of the relevant subscriber, and down the left-hand side, on which to write the number being called. Each row of holes corresponds to one digit of the telephone number starting from the bottom and working upwards. The code used is shown in Fig 2. This code is derived by deducting the required digit from 16 and punching out the holes required to total the result. The first column on the left represents the value 1, the second column the value 2, the third column the value 4, and the fourth column the value 8, eg to record the digit 7, $16-7 = 9$, 9 is represented by punching out the hole in the 1 column and the hole in the 8 column, the digit 0 must be considered as 10, ie $16-10 = 6$ represented by holes in the 2 and 4 column. The use of the fifth column of holes is explained in par 4. When more than 700 cards are required kit Autodial 3/D 93151, item Code 372724 should be supplied.

3 TO RECORD A NUMBER A guide is provided to facilitate the recording of telephone numbers on the cards as follows:

(a) Write the name of the subscriber to be called at the top of the card, and the number to be recorded along the left-hand side, starting from the bottom with each digit coinciding with one row of holes.

(b) Using the guide, line up the first digit to be recorded with the corresponding digit on the guide and punch through the holes provided.

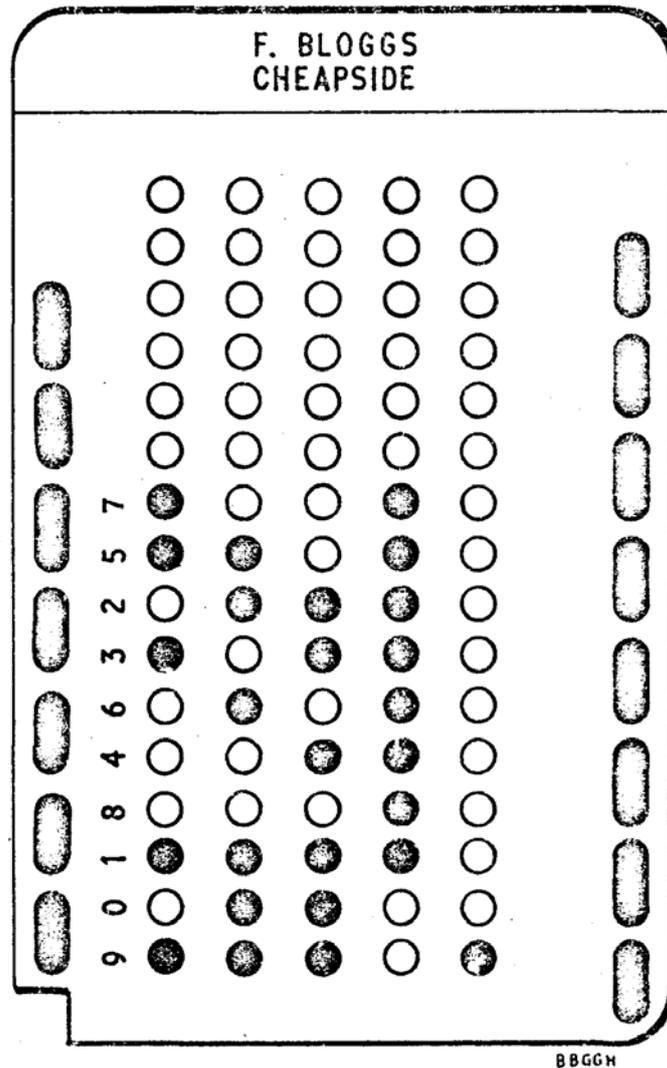
(c) Slide the card in the guide to locate the second digit to be recorded with the corresponding digit on the guide and repeat as in (b).

(d) Repeat (c) for third and subsequent digits.

(e) After the last digit has been recorded slide the card from the guide. it is now ready for use in the autodial.

When a guide has not been provided, the cards should be prepared in the manner described in par 2 and shown in Fig 2.

FIG 2 follows



*4 LONG INTERDIGITAL PAUSE The autodial automatically inserts an interdigital pause of about 850 ms. The card can be programmed to provide a long IDP. A special column of semi-punched holes (the fifth) is provided for this facility. After punching out the digit preceding the long pause, the hole in the fifth column in the same row is punched out (see Fig 2). The hole corresponding to this, facility is designated * on the guide.

The long IDP is 2.5 to 3 seconds on the Autodial No. 302A.

5 TO MAKE A CALL

- (a) Select the card with the desired name and number on it.
- (b) Lift the telephone handset and obtain dial tone.
- (c) Insert the card in the slot, with the subscriber's name at the top, and allow it to fall freely into the slot.

The autodial will now automatically transmit the recorded number leaving the call held by the telephone.

To call a number not recorded on a card the telephone dial is used in the normal manner.

6 INSTALLATION (see N2312)

(a) Connect a three-pin plug to the mains lead, to suit the socket outlet provided by the subscriber. If a fused plug is used the fuse rating should not be more than 3 amp. A three-pin plug must be used and the green/yellow wire must be connected to the earth terminal.

(b) Locate the autodial near the telephone. It may be connected in all automatic exchange areas to any ordinary telephone installation, PBX operator's dialling circuit or any extension which is provided with a dial. The autodial should be connected to the exchange line or extension pair whenever practicable by using the existing terminal block.

When the autodial is connected to a 700-type telephone or to a switchboard dialling circuit the spark quench strap must be removed. This strap consists of a wire link connected between two pillars and is located on the rear printed circuit board.

On completion of the installation it should be ensured that the subscriber can operate the autodial, has a copy of the operating instructions and understands that the telephone dial can be used in the normal manner when a telephone number required which has not been recorded on a card, or if the autodial fails to function eg during a mains-power failure.

* (c) Apparatus to be Requisitioned

Autodial No. 302A Item Code 372712

Kit Autodial 1./D 93151 (Punch and Guide Kit) Item Code 372644

Kit Autodial 2/D 93151 (Box of 50 Cards) Item Code 372645

Kit Autodial 3/D 93151 (Box of 1000 Cards) Item Code 372724

7 DISMANTLING The lid is removed by slackening the two screws at the rear of the base and one screw underneath the card slot projection. Two further screws, passing through the transparent tray, secure the case to the chassis. the removal of these will allow the chassis to be withdrawn. Before removing the chassis from the case the mains supply must be disconnected.

TMkD/TMk2.6.1

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