



TABLE TELEPHONE
AUTO
N1905E36T - E42T

BOOK

**PLESSEY TELECOMMUNICATIONS
PLESSEY COMMUNICATIONS AND DATA SYSTEMS LIMITED
Beeston, Nottingham, England NG9 1LA**

PLEASE NOTE

In order that customers may benefit from the improvements made from time to time in the design of components, the current equivalent of any part ordered is always supplied.

It will be interchangeable with the original part but may not necessarily bear the identical Code No.

COLOUR RANGE

PLEASE NOTE :

The Plan Etelphone Types 1, 2, 3 and 15 are available in Two-Tone Grey, Ivory and Black

Spare parts are obtainable in the full colour range

TABLE TELEPHONE, AUTO

N1905 TYPE



A Typical Plan Etelphone



PLAN-ETELPHONE TYPE 1
INTERMEDIATE & EXTENSION TELEPHONES
FOR INTERNAL WORKING

The Plan-Etelphone Type 1 is a battery calling system consisting of an intermediate and either one or two extension telephones, located in the same building. Facilities are listed below.

An auto dial, normally with standard numbering, is provided for calling the exchange, and push buttons for internal calling, switching etc., the buttons being designated (from left to right) as follows:-

<u>Intermediate Telephone</u>	<u>Extension Telephone</u>
'Ring 1'	'Ring'
'Extn.'	'On/Off (2-posn. button)'
'Exch.'	
'Ring 2'	

The intermediate telephone contains a lamp which acts as a supervisory signal to show when the exchange line is engaged by the extension. It also contains the buzzer on which local calls are signalled and an a.c. bell for incoming exchange calls.

The extension telephone also contains both buzzer and a.c. bell.

The 6 volt battery required for local ringing and speech current is supplied only when ordered.

Basic Facilities on the Intermediate Telephone

Intermediate to exchange.

Intermediate to extension.

Information call (intermediate to extension with exchange line held).

Through connection between exchange and extension on replacement of handset, incoming ringing normally signalled and answered on the intermediate.

Additional Facilities

Extension to exchange conversation can be made secret, or non-secret, from the intermediate by appropriate terminal strapping.

Indication that the exchange line is engaged by the extension is provided by a lamp.

Provision is made for one or two extensions, with selective ringing from the intermediate in the latter case.

Terminals for connecting an external a.c. bell, for exchange ringing, are provided on intermediate and extension telephones.

The extension can always make outgoing calls (when the exchange is not engaged by the intermediate) whether the intermediate is attended or not, without 'switching through'.

The extension can be switched to receive incoming exchange ringing, if required, without the intermediate attendant having to remember to 'switch through'.

Extension cannot overhear intermediate to exchange conversations. Transfer or re-call facility, when required, can be provided on all telephones.

The extension has a ring key to call the intermediate, and also a bell 'on-off' key.

The above facilities are also offered as an improved arrangement for use where B.P.O. Plans 5 and 7 (internal) are required.

OPERATING PROCEDURE

Calls from the Intermediate Telephone

Before making any calls, observe that the lines are free by noting that the Engaged Lamp is not illuminated. Take up handset before pressing any buttons.

1. To call the exchange: Press the 'Exch.' button.
2. To call the extension: Press the 'Extn.' button and the appropriate 'ring' button.
3. To make an information call to the extension during conversation with the exchange: Leaving the 'Exch.' button down, press the 'Extn.' button and the appropriate 'ring' button.
4. To transfer the exchange call to the extension: Replace the handset when the extension is ready to receive the call.
5. To return to the exchange line without transferring: Press the 'Exch.' button without restoring the handset. (This releases the Extension button).
6. To take part in the extension to the exchange conversation: Take up the handset. This facility is prohibited when the intermediate is arranged for secrecy.
7. To switch extension through to the exchange: No operation necessary. Replace handset if not on rest.

Answering Calls on the Intermediate Telephone

Take up handset before pressing buttons.

8. Exchange calls are signalled by the bell ringing.
To answer: Press the 'Exch.' button.
9. Extension calls are signalled by the buzzer sounding.
To answer: Press the 'Extn.' button.
See also extension operating procedure.

PLAN-ETELPHONE – TYPE 3

AN INTERMEDIATE TELEPHONE WITH EXTENSION SWITCHING FACILITIES AND ONE EXTERNAL EXTENSION

Suitable for users with one exchange line serving two places some distance apart, such as a shop and associated warehouse.

The Extension is at the end of the exchange line, which may be of up to 1000Ω loop resistance and the Intermediate is located anywhere between the Extension and the Exchange.

No extra conductors are required between the instruments.

Four locking push buttons on the Intermediate provide for the following switching conditions:—

1. Intermediate to Exchange, (Extension cannot overhear)
2. Intermediate to Extension
3. Information call, with Exchange held. (Exchange cannot overhear)
4. Extension to Exchange, (With or without secrecy)

The Intermediate normally answers the i/c exchange call. The call may be held whilst offered to the Extension and may then be transferred to the Extension or reverted to the Intermediate.

An 'Engaged' lamp glows during Extension to Exchange calls.

Self-contained transistor ringing units enable push button calling to be used on both telephones.

FACILITIES OF THE INTERMEDIATE

1. **Intermediate to Exchange**, with a.c. buzzer across the extension line. The Intermediate can use the exchange line in the normal way.
2. **Intermediate to Extension**, with bell across the exchange line.
3. **Information Call**, Intermediate to Extension with Exchange held. Replacement of the handset removes the hold condition if the call is not transferred, so that i/c calls may be received.
4. **Extension Through to Exchange**. When the extension handset is on, the bell is re-connected across the exchange line to signal exchange or extension calls.
5. **Transfer**. The exchange line can be transferred, from the information condition when it is held, through to the extension.
6. **Return to Exchange Line**, if it is not required to transfer the call to the Extension, after the information call condition.

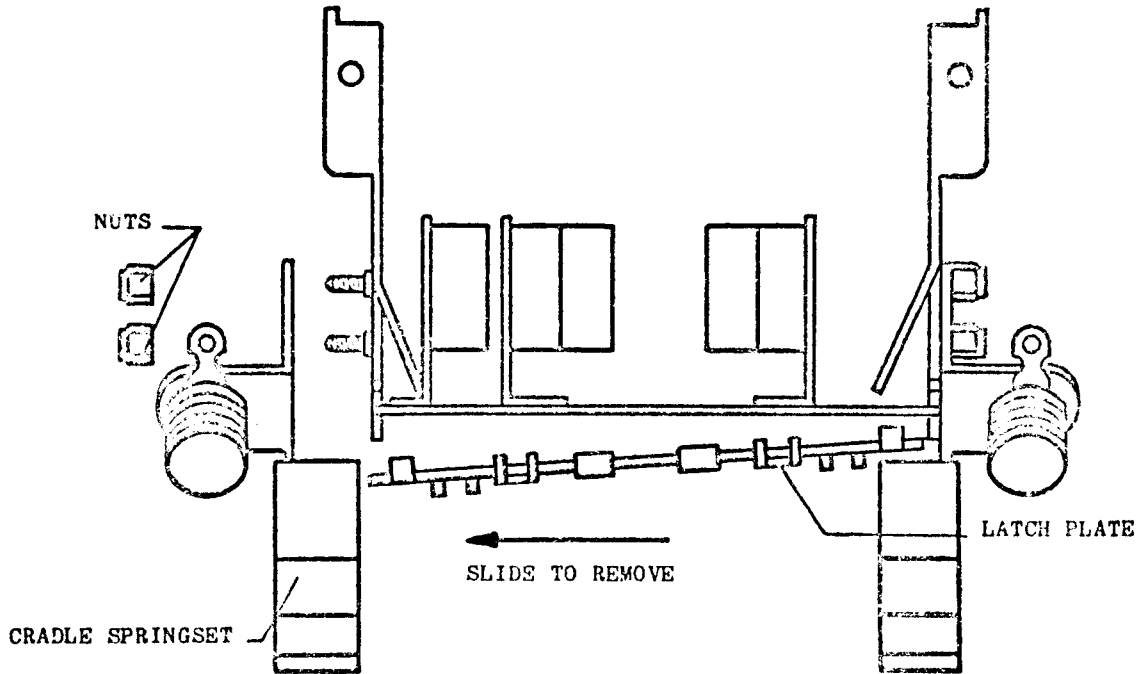
7. **Secrecy.** Extension to Exchange calls may be made secret or non-secret from the Intermediate, by appropriate terminal strapping.
8. **Engaged Lamp** glows under control of the extension telephone loop on through calls.
9. **Ring Extension**, condition is applied when the Extension switching buttons are over-pressed, thus avoiding the need for a separate button.
10. **Power.** A 6V battery is required at the Intermediate and at the Extension.
11. **External Bells** may be added in series with the exchange bell or extension buzzer.
12. **P.B.X. Recall or Transfer** button can be provided if required.
13. **Extra Extensions** may be added in parallel with code ringing.
14. **Cable.** A 2-way cable is required between the Intermediate and Extension.

PLAN ETELPONES

GENERAL OPERATING INSTRUCTIONS

Maintenance of Key Unit

The case, dial, and then the cradleswitch bracket should be removed as detailed on M.6005/2 Page 1 of the maintenance instructions.



REMOVAL OF CRADLE SPRINGSET AND LATCH PLATE

To Remove Cradle Springset

Unscrew the two nuts securing one of the cradleswitch springsets, and lift the complete springset sideways, clear of its mounting studs.

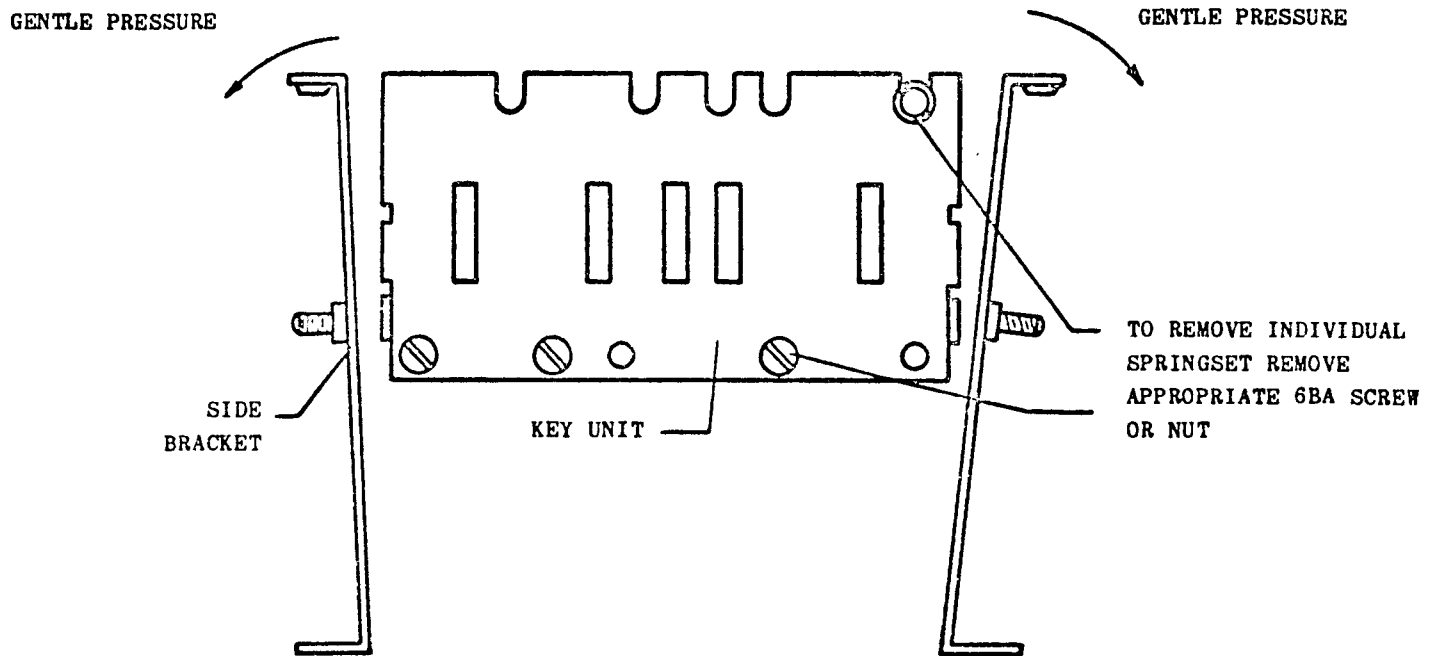
To Remove Latch Plate

Slide the latch plate sideways in its pivot holes, and then swing forwards, away from the key unit.

To Remove Key Unit

The main brackets should be sprung sideways, (excessive force should not be used) and key unit lifted clear of the brackets.

All items of equipment have connecting wires of sufficient length to allow them to be withdrawn for servicing without the need to disconnect soldered joints. With the key unit removed, access to all springsets and associated wiring is obtained.



REMOVAL OF COMPLETE KEY UNIT

To Remove Transparent Dust Shields

Springing of the side brackets to remove the key unit will also release the transparent dust shields, which should then be lifted clear of the instrument.

To Remove an Individual Key Springset

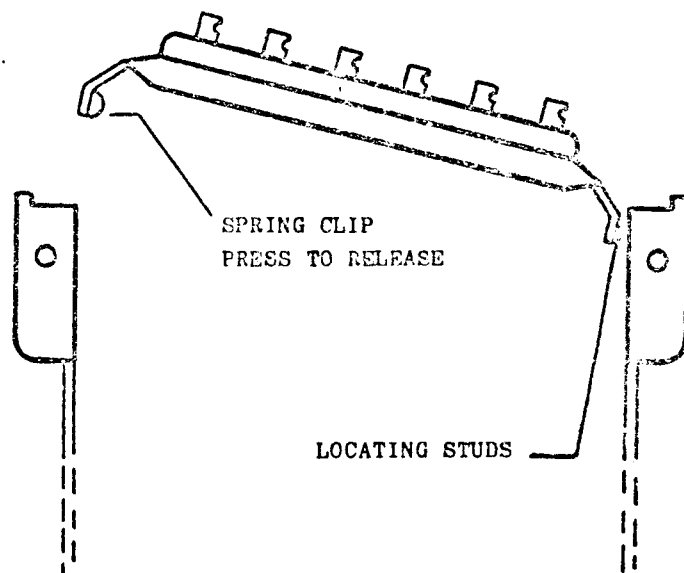
Release the appropriate 6BA screw or nut.

Removal of Auxiliary Terminal Unit

This unit consists of 18 terminals (numbers 20-37) and is fitted at the back of the telephone.

To Release the Unit

Depress the retaining spring, located on the left-hand side and swing the terminal assembly clear of the instrument.



REMOVAL OF AUXILIARY TERMINALS

Reassembly of Telephone

To reassemble the telephone a reverse procedure to that adopted when dismantling it should be employed, i.e. :-

- (a) Position key unit to main brackets and clip in.
- (b) Clip in transparent dust shields.
- (c) Locate cradleswitch bracket and bend the thin arms to secure.
- (d) Locate latch plate in pivot holes.
- (e) Fit cradle springset and adjust position for correct operation (elongated mounting holes allow for this adjustment).
- (f) Refit dial.
- (g) Refit auxiliary terminal unit.
- (h) Replace cover.
- (i) Check cradleswitch and buttons for free operation.

E TELPHONE AND PLAN-E TELPHONE

Conversion from C.R. to Auto

Remove the case from the base by releasing the screws under the handset.

Remove the dial dummy by turning the retaining clip at the back anti-clockwise.

Place the dial number ring in position on the outside of the case, remembering that the numeral '0' is at the bottom of the sloping front on table sets, and near the handset on wall sets.

The number ring fixing clip N92491 is positioned inside the case by its small lug which fits into a rectangular well; the 4 spring lugs on the clip slide into notches in the number ring to hold it in position. Care should be taken to avoid straining the lugs.

Remove the five tagged conductors from the storage well in the base, and also the dust cover from the dial. Thread the conductors through the large circular hole in the dust cover (from the outside) and fasten the tags to the appropriate dial connection screws as shown on the case diagram. Replace the dust cover on the dial so that the small circular hole in the cover is aligned with the tapped lug on the dial. Remove the spacing bush from the dial clamping ring N92545.

Table Set

Insert the dial and cover in the clamping ring in such a position that the cover fixing screw hole is located centrally in the slot between the legs of the clamping ring, then insert the 8BA locating screw, but do not over-tighten, as this may distort the ring.

Tighten the long clamping screw. Set the two legs of the ring into the slots above the ringer domes, swing the dial into position so that the shorter screw of the clamping ring rests in the slot on the main bracket, then tighten the screw.

Wall Set

The procedure is the same as for the table set except that the dial is turned through 180°, i.e. the 8BA locating screw will be below the clamping screw instead of between the legs of the clamping ring.

Replace the telephone case and check that the plungers move freely in the cradle bracket.

Conversion from Auto to C.B.

Remove the telephone case.

Remove the number ring by gently disengaging the retaining spring lugs.

Place the dial dummy moulding on the outside of the case, locating the two small ribs of the dummy in the cut-out nearest to the telephone base.

Insert the window and label from the inside, then insert the clip supplied with the dummy and turn it clockwise until the three small bent lugs are held beneath the three bosses on the moulding.

Release the dial fixing screw and swing the dial out to disengage the legs of the clamping ring from the slots above the ringer domes.

Remove the 8BA locating screw, then the clamping screw and the clamping ring.

Take off the dial dust cover and disconnect the tagged conductors, which can then be pressed into the storage well in the base. Two of these conductors must be commoned (see Case Diagram). This is done by securing them under the screw in the storage well, the other three being pressed into the holes provided.

Replace dust cover and secure it with 8BA locating screw.

Insert the spacing bush N91370 between the ends of the clamping ring to prevent distortion of the ring when the clamping screw is tightened.

Replace and secure the ring in the telephone.

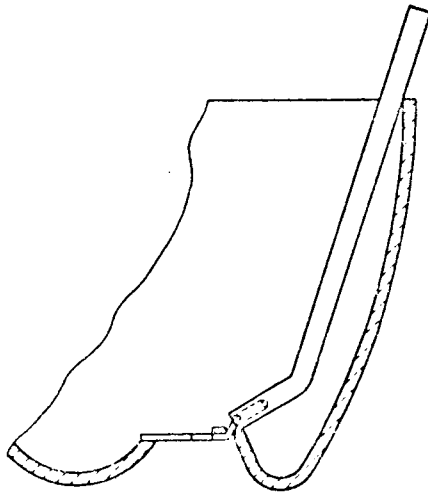
Replace the telephone case and check that the plungers move freely in the cradle bracket.

ETELPHONE AND PLAN-ETELPHONE

Conversion of Table Set for Wall Mounting

(a) Case

Remove case from telephone and replace lifting handle with cradle Bracket N92490. Lifting handle is made captive by bending two lugs through holes in the case; these lugs must be bent towards front of case to release handle. Cradle bracket must be made captive by slightly bending lugs towards back of case. The sketch shows suitable bending tool. Fixing screws and spacing bushes must be transferred from lifting handle to cradle bracket.



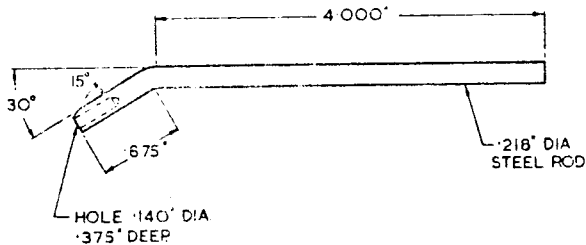
FINAL POSITION OF TOOL

Number ring to be unclipped and turned through 180° .

Note:- Clip is not turned.

(b) Base

Remove two front feet. Drill or remove 'knockout' from $\frac{5}{32}$ " dia. hole near cord entry and fit Bracket N92493 with 4 BA $\frac{1}{4}$ " screw to underside of base.



(c) Dial

Loosen the single screw clamping dial, lift dial and dust cover clear of clamp and rotate 180° before refitting. Securely tighten clamping screw.

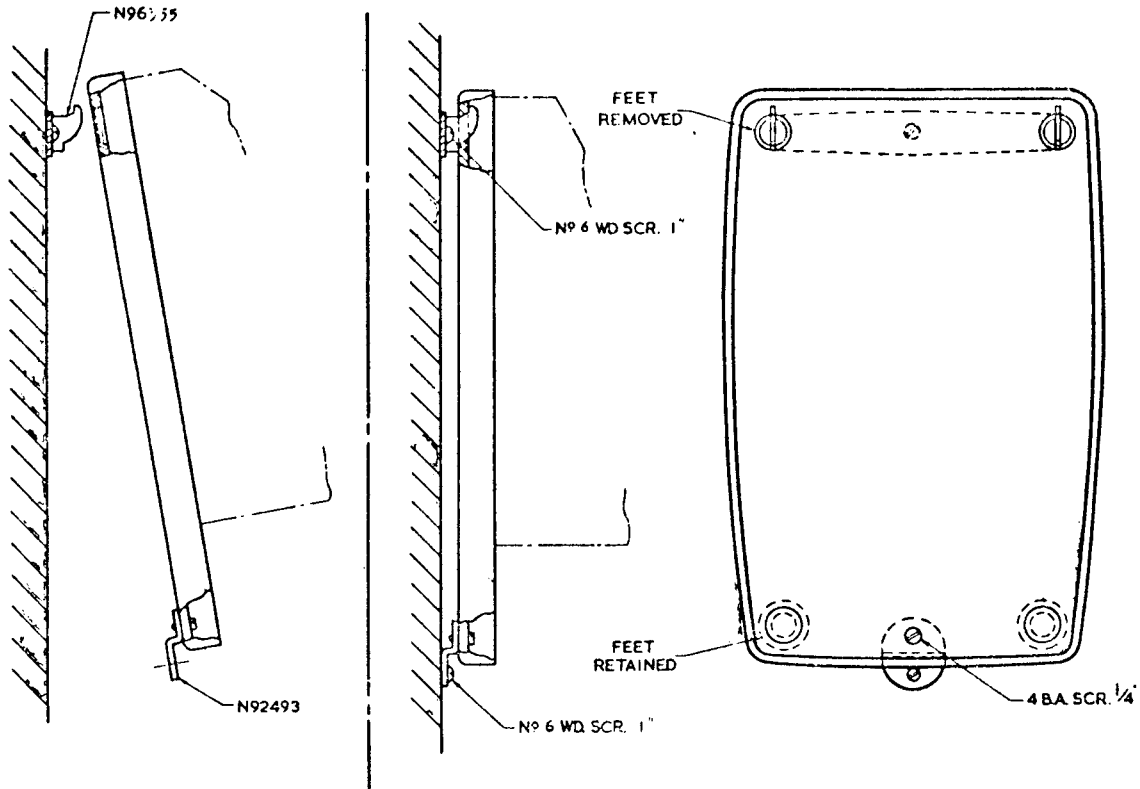
(d) Replace case and check that plungers move freely in cradle bracket.

For Plan-Etelphone it is also necessary to change the buttons in accordance with instruction sheet M.6005/2 in booklets.

The new buttons should then be fitted in their respective positions, with markings toward dial position.

ETELPHONE AND PLAN-ETELPHONE

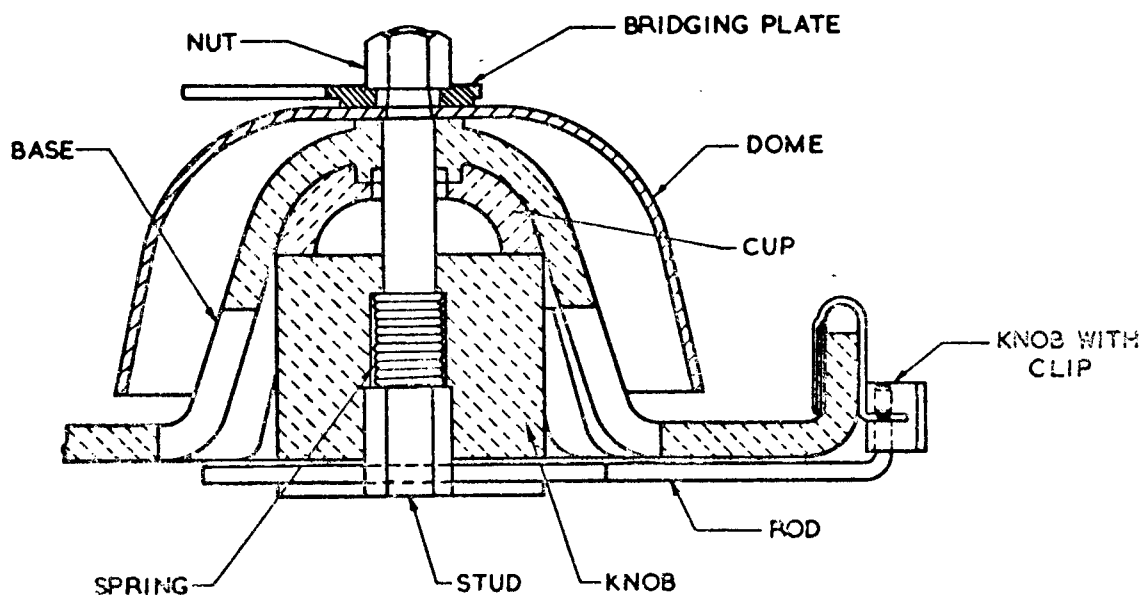
Method of Mounting Wall Set



- 1) Secure Bracket N96355 to wall with No. 6 wood screw provided. Shoulder height, approximately 4ft. 9ins. for average person, is considered to be a suitable position.
- 2) Hook Etelephone, with case removed, on to wall bracket and mark position of second No. 6 wood screw through hole in bracket fitted centrally on telephone base. Lifting forked plate securing cord grommets to base will improve access to lower fixing screw.
- 3) Substantial clearance has been allowed in the bracket to allow for inaccuracies in positioning the lower fixing screw. The screw fixing bracket to base should be loosened whilst telephone is positioned vertically. Securely tighten both screws before refitting case.

EETELPHONE

Conversion to adjustable Bell dome



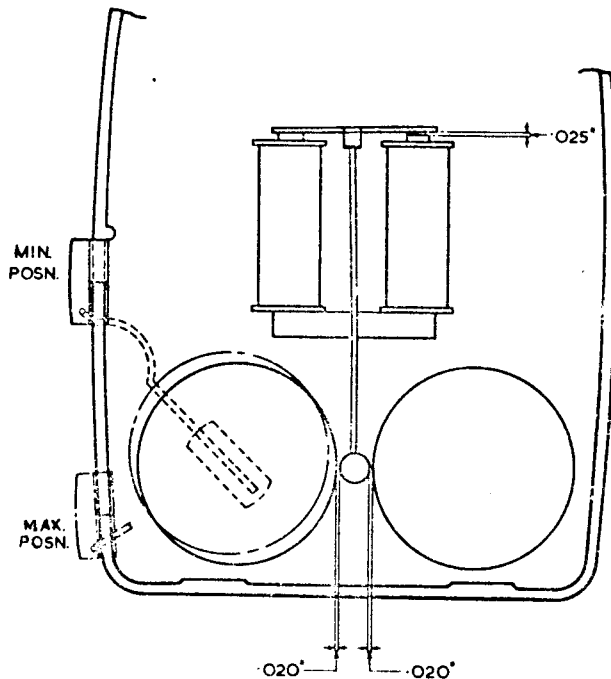
- 1) Remove dome fixing screws, bridging plate and left hand bell dome (looking from front of telephone).
- 2) Remove left hand insert from top of dome housing.
- 3) Assemble spring and knot on stud – such that the hole in the stud is in line with the slot in the knob (see sketch).
- 4) Place cup in position.
Press stud into underside of dome housing and place dome over projecting part of stud. Set new Bridging plate locating the large hole over stud and clamp with nut. (Replace dome fixing screws on other dome).
- 5) Slide rod into hole in stud and fit “knob with clip” on side of base. Press rod into hole in knobs with clip.

For Bell Volume Adjustment see over.

E TELPHONE

Ringer Adjustment for Volume

- 1) Ringer adjustment, normal armature travel of $.025''$, measured on one side.
- 2) Set adjusting knob to minimum position as stopped by extension rod and knob.
- 3) With adjusting knob held in position stated under (2) above, the dome clamping nut left loose, rotate the dome until the maximum eccentricity is towards the centre line of the telephone, i.e. towards the adjacent dome. Tighten clamping nut.
- 4) With ringer armature operated to the side which will bring striking ball farthest away from adjustable dome, set ball position (by bending stem) to within $.020''$ nominally from dome.
- 5) Adjust and securely tighten second dome to within $.020''$ of knob with the ringer armature held in the same position as in (4) above.
- 6) Both domes should ring in the minimum condition stated above. If it is not found possible to bring the fixed dome close enough to ring, set the stem to increase the clearance between ball and **adjustable** dome until very light ringing of the fixed dome is achieved.
- 7) The maximum position is controlled by the extension rod and knob which is stopped by a rib in the case.



MINIMUM VOLUME SETTING

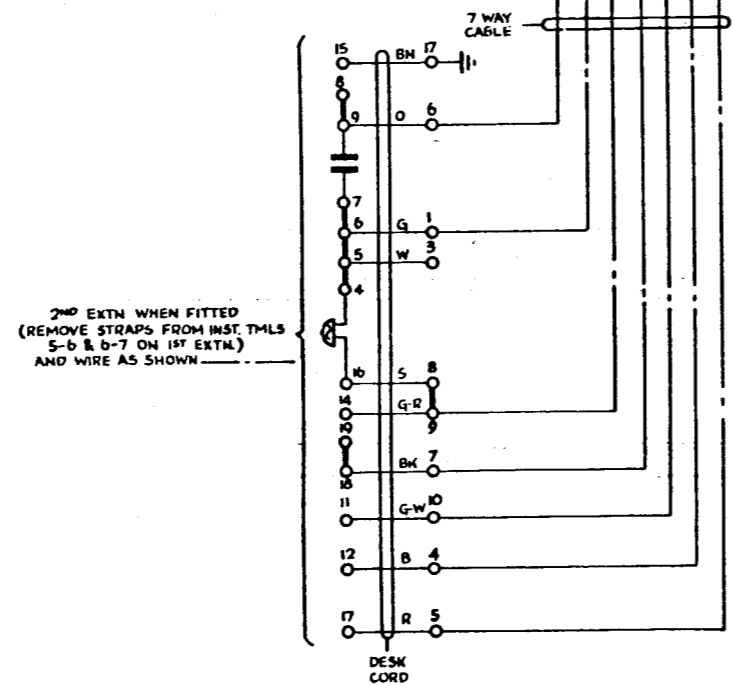
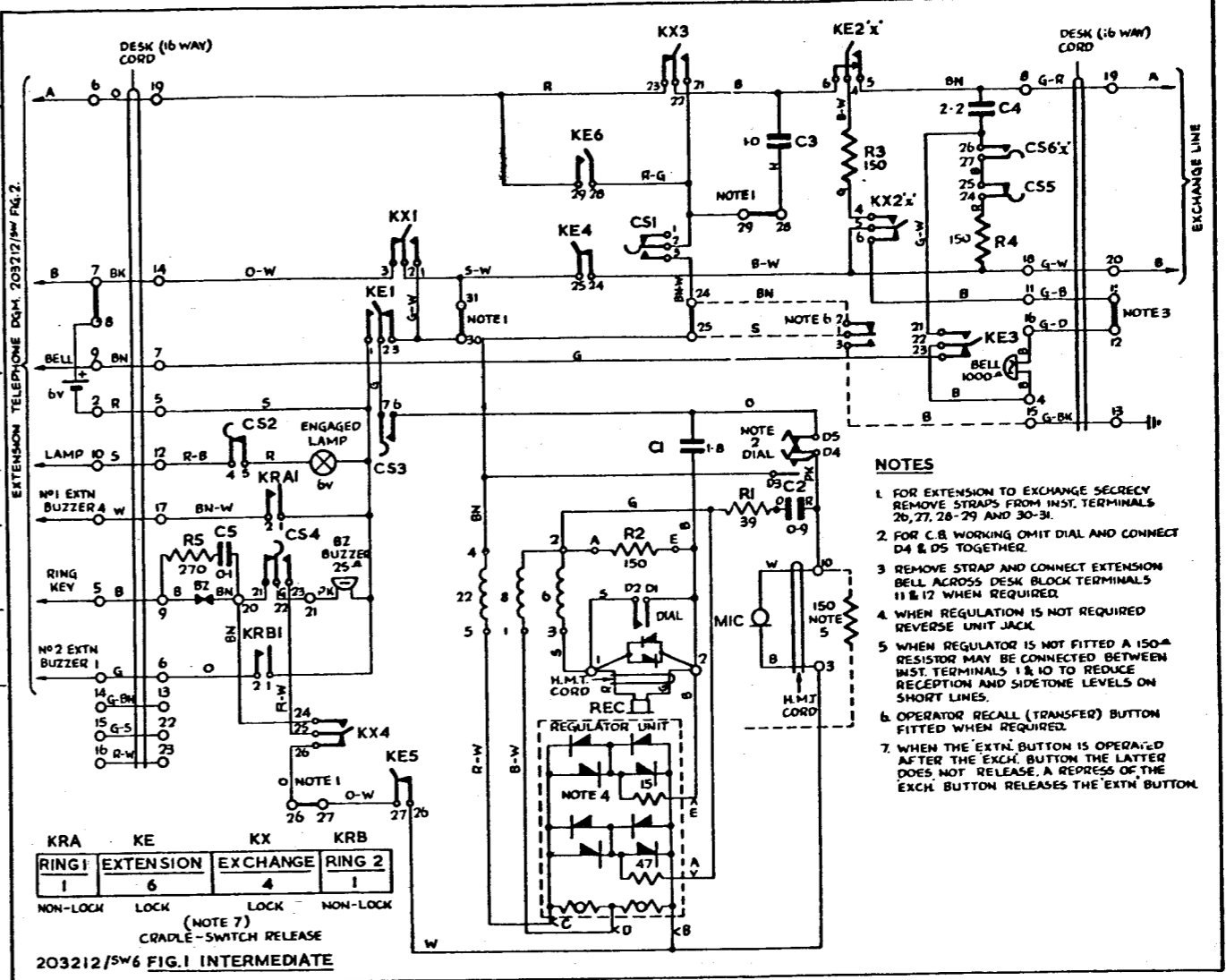
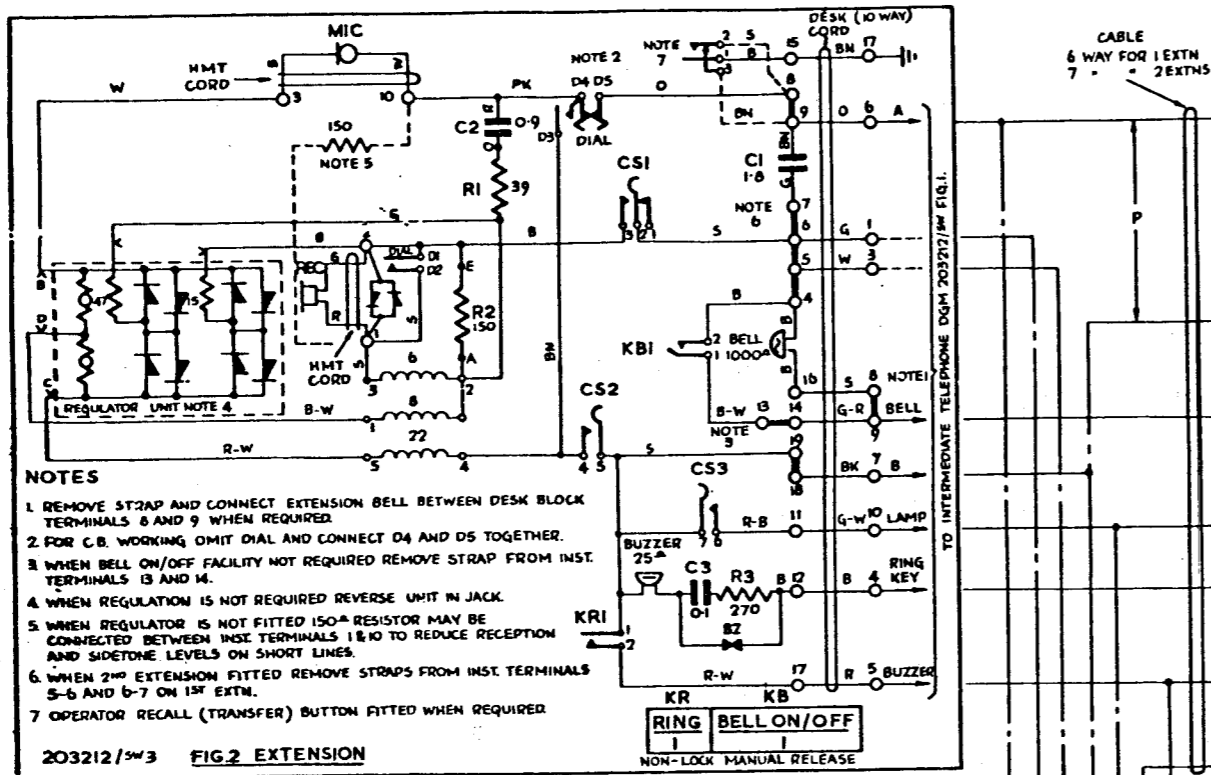


FIG. 1 INTERMEDIATE

NOTE
SIZE OF CASE DIAGRAMED
FIGS 1 & 2 TO BE 3" x 2 1/2" (76.2 mm x 63.5 mm)

DRM WPG
A1
A2
CERTIFICATION
M

FIG. 1 C4 WAS 1-8 W/ CASSE DIAGRAM MADE 155 6	203367	6	17-1-78
FIG. 1 CS4/23-KX4/25 WIRE WAS B-W	112172	5	12-8-78
FIG. 1 DIAL SPGR D1188 INCORRECTLY SHOWN AS MAKING CONTACT 103683	104277	3	14-8-78
CLICK SUPPRESSOR ADDED		2	10-2-78
RETRACED WITHOUT ALTERATION 1250		2	10-2-78
AMENDMENT	ISS. DATE	APPD	

PLAN - ETELPHONE
TYPE I

203212/SW

REC. 11/28/78

LIST OF PARTS		SHEET 1-3	TABLE TELEPHONE AUTO	DRG. N 1906E TYPE
CODE: N 1905E36T - E42T				P.B.
PART No.	DESCRIPTION	CODE	B.P.O. CODE	
1	Base complete	N 103751T		
1A	Base with Parts 1E, 1Q & 1R	N 103203		
1C	Tag, connection	N 91393	1/DTA/179A	
1D	Rivet Fixing Bracket	999/4/00949/132		
1E	Terminal	N 91345	Part of 1/DBA/92	
1F	Bush Dome Fixing	N 91364	1/DBU/283	
1H	Spring Latch	N 91356	1/DSP/1200	
1J	Rivet Latch Spring Fixing	N 56337		
1K	Gauze Sound Holes	N 91384		
1P	Screw, Connection	SSX46 Ch.¼"		
1Q	Nut, Dial Cord connection	SNX 48 P	Part of 1/DBA/92	
1R	Nut, connection	SNX 46 P	Part of 1/DBA/92	
1S	Bracket, L.H.	N 95147A	2/DBR/375	
1U	Bracket, R.H.	N 95146A	1/DBR/375	
1W	Gauze, Regulator	N 103205		
2	Bracket Cradle with Tips	N 94493		
3	Plate, Dome & Dial Mtg.	N 91362	1/DPL/381	
4	Mounting, Dial	N 92545	2/DRI/51	
6	Clip, Capacitor	N 91361	1/DCL/135	
7	Clip, Induction Coil	N 106590		
8	Dome, Ringer	607/2/00971/001	24B	
9	Dome, Ringer	607/2/00970/001	24A	
10	Buzzer, 12.5Ω + 12.5Ω + 270Ω Resistor	N 3323B1		
11	Foot, Rubber	915/4/98403/000		
19	Body	See Table		
20	Handle, Carrying	See Table		
25	Coil, Induction	N 3850A4T	31/3	
26	Ringer, 1000Ω	N 9268C3T		
28	Regulator, Unit	N 102960T		P.B.
29	Resistor 39Ω	403/4/78088/154		25/1/76
30	Resistor, 150Ω	403/4/78088/164		6 x 32500
31	Capacitor, 1.8μ F + 0.9μ F	435/4/98005/000		

LIST OF PARTS

SHEET
2-3

TABLE TELEPHONE AUTO

CODE: N 1905E36T - E42T

P.B

PART No.	DESCRIPTION	CODE	B.P.O. CODE
32	Tag connection	N 92499	10/STA/71
33	Handset	See Table	3 (State colour)
34	Dial Auto	N 43945A20A	
35	Cord Desk	E54389-151J-54	
36	Number Ring	See Table	
37	Block, Terminal	N 3221D6 (ELEPHANT GREY)	37B (ELEPHANT GREY)
40	Clip, Number Ring	N 92491	1/DSP/504
41	Cover, Dial	617/4/00987/000	1/DCO/631
42	Label, Dial	N 95601	
45	Case Diagram	203212/SW Fig.2	
76	Key, Plunger Unit	N 24005E1	
77	Clip, Key Plunger	N 101975	1/DP1/205
82	Bracket, Mounting	N 94497	
83	Plunger, Key (Recall L.H.)	See Table	
84	Plunger, Key (Ring)	See Table	
85	Plunger, Key ('ON' 'OFF')	See Table	2/DBU/262 (State Colour)
86	Dummy, Plunger	See Table	2/DBU/261 (State Colour)
87	Cover, Springset	N 94695	1/DPL/2055
88	Cover, Springset	N 94696	1/DPL/2056
102	Bracket	617/2/01257/000	2/DBR/379
122	Suppressor, Click	N 91378	
	Card Operation	N 98524	

P.B
3x 1250 25/8/76

LIST OF PARTS

SHEET
3-3

TABLE TELEPHONE AUTO

CODE:- N 1905E36T – E42T

PART No.	DESCRIPTION	CODE	B.P.O. CODE
	SCREWS FIXING:-		
12	Dial, Clamping	SSX64 Ch. 1/2"	
13	Dome, Ringer	SSX64 Ch. 3/8"	
14	Mounting, Dial	SSX64 Ch. 3/16"	
18	Ringer	SSX64 Ch. 3/8"	
23	Handle, Carrying	N 91388	1/DSC/100
92	Block, Terminal	SSX68 Ch. 3/8"	
103	Bracket	SSX66 Ch. 3/32"	
	NUTS FIXING:-		
90	Springset Cradle	N 86091	
	Ringer	SNX 64 P	

CODE	N 1905E36T Black	N 1905E37T Ivory	N 1905E38T Lacquer Red	N 1905E39T Topaz Yellow	N 1905E40T Concord Blue	N 1905E41T Two-Tone Grey	N 1905E42T Two-Tone Green
Part No.19	N 94520D1	N 94520D2	N 94520D3	N 94520D4	N 94520D5	N 94520D8 French Grey	N 94520D9 Aircraft Grey-Green
Part No.20 Handle Carrying	N 110584A1	N 110584A2	N 110584A3	N 110584A4	N 110584A5	N 110584A8 French Grey	N 110584A9 Aircraft Grey-Green
Part No.33 Handset	N 9506E1	N 9506E2	N 9506E3	N 9506E4	N 9506E5	N 9506E6 Elephant Grey	N 9506E7 Forest Green
Part No.36 Number Ring	N 93034A1	N 93034A2	N 93034A3	N 93034A4	N 93034A5	N 93034A6 Elephant Grey	N 93034A7 Forest Green
Part No.83 Plunger Key	N 96458D8	N 96458D7	N 96458D6	N 96458D7	N 96458D6	N 96458D8	N 96458D7
Part No.84 Plunger Key	N 95826D6	N 95826D7	N 95826D6	N 95826D7	N 95826D6	N 95826D6	N 95826D7
Part No.85 Plunger Key	N 95694D6	N 95694D7	N 95694D6	N 95694D7	N 95694D6	N 95694D6	N 95694D7
Part No.86 Dummy Plunger	N 95183D1	N 95183D2	N 95183D3	N 95183D4	N 95183D5	N 95183D6 Elephant Grey	N 95183D7 Forest Green

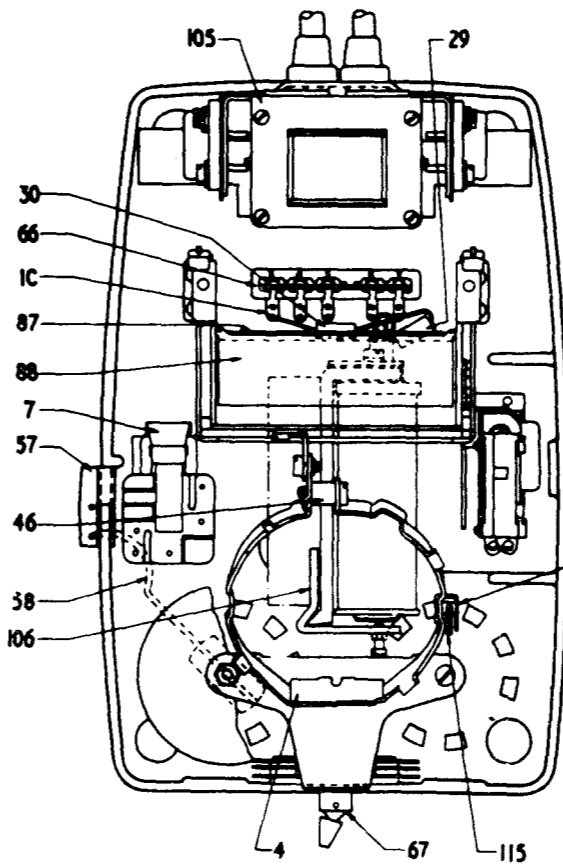
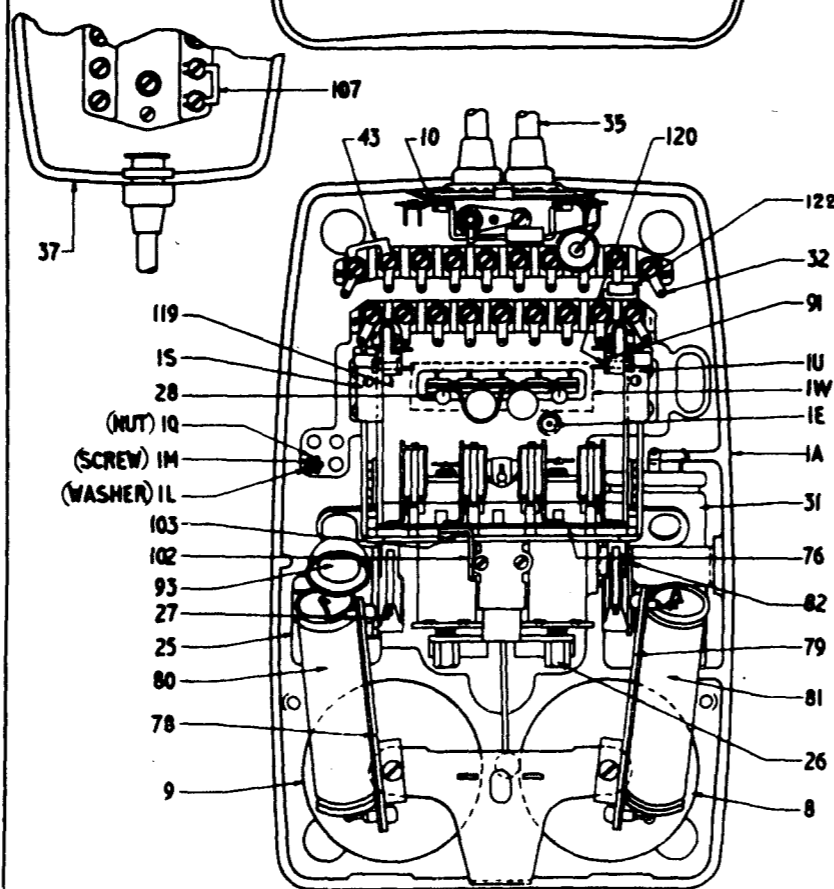
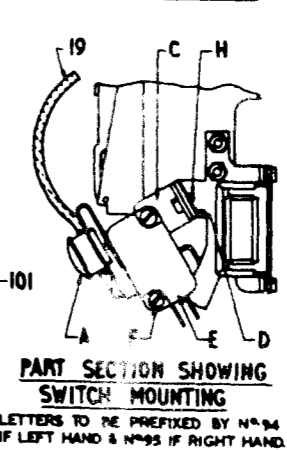
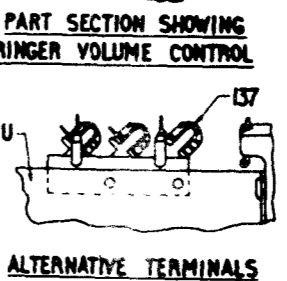
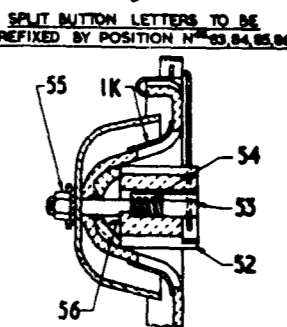
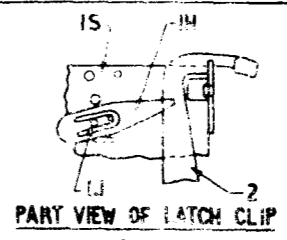
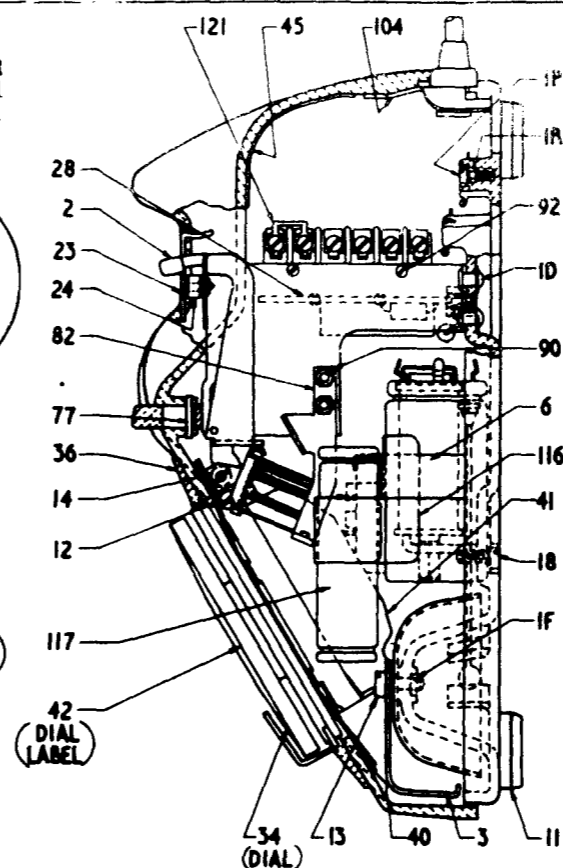
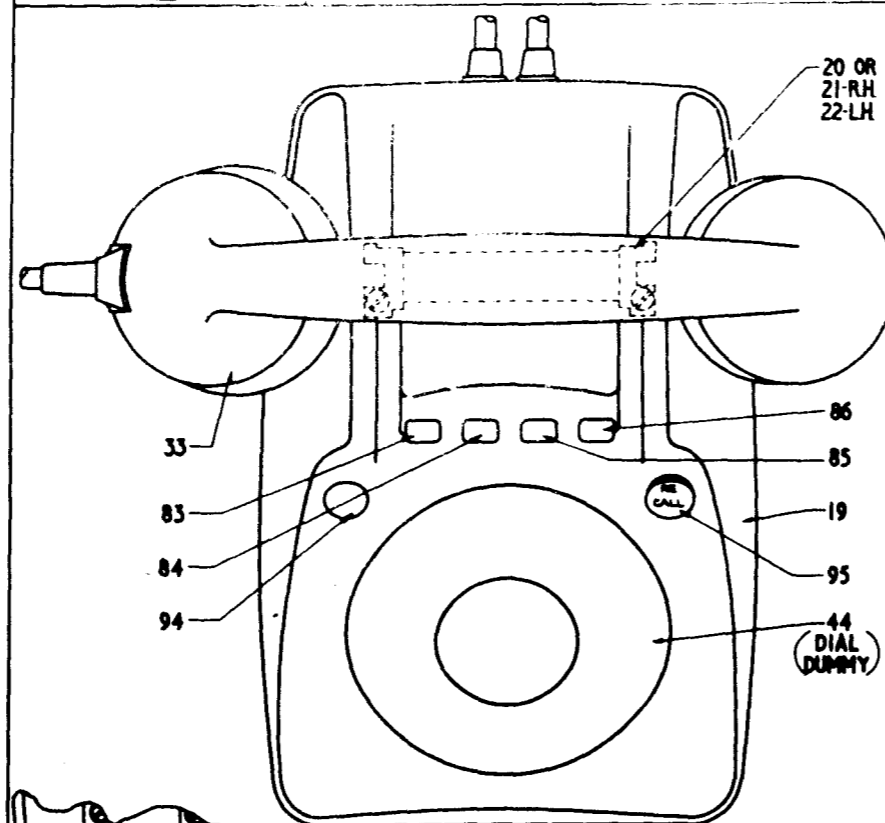
NOTE: BPO codes quoted are for Standard Finish
only

P.B.
25/8/76
5 x 32500



TABLE TELEPHONE (AUTO & C.B. MULTI BUTTONS)

NI906E TYPE SHEET I



THE PLAN TELEPHONE TYPICAL INSTRUMENT. THIS IS A COMPREHENSIVE DRG. OF THE TABLE TELEPHONE AUTO & C.B. MULTI-BUTTON INSTRUMENTS.

IT IS INTENDED AS A VARIABLE SET INTO WHICH CAN BE FITTED DIFFERENT UNITS TO PROVIDE ALL NECESSARY FACILITIES IN THE LARGE VARIETY OF STANDARD & SPECIAL PLANS.

PART NOS ALLOCATED TO POSITIONS FOR CERTAIN ITEMS, FOR RELEVANT CODE OF ITEM SEE PARTS LIST UNDER CODE OF INSTRUMENT.

THE INSTRUMENTS ARE AVAILABLE IN THE FOLLOWING COLOURS - BLACK, LIGHT IVORY, TOPAZ YELLOW, LACQUER RED, CONCORD BLUE, TWO TONE GREY & TWO TONE GREEN.

COLOUR OF DUMMY BUTTONS AS THE COLOUR OF HANDSET.

COLOUR OF OPERATING BUTTONS - FOREST GREEN ON GREEN, IVORY, TOPAZ, ELEPHANT GREY ON BLACK, GREY, RED & BLUE.

HANDSET CORDS WILL BE COILED P.V.C. WITH COLOUR MATCHING HANDSET.

DESK CORD WILL BE P.V.C. SHEATHED OF MATCHING COLOUR TO INSTRUMENT & DESK BLOCK, UP TO & INCLUDING 6 WAY.

7 WAY & ABOVE WILL BE ELEPHANT GREY FOR ALL COLOURS OF INSTRUMENTS. DESK BLOCKS WILL BE ELEPHANT GREY.

EACH INSTRUMENT NORMALLY FITTED WITH CARRYING HANDLE PART N° 20 & REGULATOR UNIT PART N° 28. DIAL 10 I.P.S. RATIO 2:1 WITH PLASTIC MOULDED FINGER PLATE. NON DIRECTOR AREA NUMBER RING.

IF CUSTOMERS REQUIREMENTS DIFFER FROM THE ABOVE ARRANGEMENTS, THEY SHOULD BE STATED.

FOR TROPICAL ADD LETTER 'T' TO CODE.

ISSUE N°	1	2			
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SEE CONT. SHT.			
CODE			
APPROX WEIGHT -	6 LB. MAX.		
SCALE -			