

TELEPHONE KIOSKS

Electrical Installation

1. General.—This Instruction deals with the installation of wiring, control and protective equipment required for the lighting of telephone kiosks where the electricity supply is obtained from the normal public supply mains.

2. Arrangement.—The layout of the apparatus and the method of wiring to be adopted is shown on Drgs. P/EL 580 and P/EL 66. The circuit arrangement is shown on Drg. P/P 740.

3. Control of lighting.—The lighting should be controlled by time switch. Two types are available :—

- (a) With an electrically-wound clockwork mechanism, for d.c. supplies and a.c. 50 c/s 200-250V supplies not controlled for timekeeping.
- (b) With a synchronous-motor-driven mechanism for a.c. 50 c/s 200-250V supplies controlled for timekeeping.

The equipment required for various mains supplies is indicated in Table 1.

Proposals to provide control by other means, e.g. by signals, either superimposed on the mains or conducted separately, to operate special switching apparatus should be referred to the Eng. Dept. (P) for examination and approval.

4. Setting of solar dial.—As most of the agreements with the Area Electricity Boards are for lighting kiosks from half an hour after sunset until half an hour before sunrise, it should be checked that the switch operating rollers are set to '½ hr.' in the correct direction on the IN and OUT switch arms. Where local arrangements allow other times the rollers should be set in the appropriate holes.

5. Protective equipment.—Protection against over-current is afforded by fuse(s) within the case containing the time switch.

Where an earth-leakage circuit-breaker is required in accordance with C 3471 this should be mounted directly above the Area Electricity Board's cut-out(s) as indicated in Fig. 2 of Drg. P/EL 580, with as small a separation as possible between the cover and the cut-out, bearing in mind the requirements of cabling. The auxiliary earth electrode should comprise a Spike, Earth, No. 1 driven into the ground so that its top is 1 ft. below the surface at a distance not less than 8 ft. from the main earth electrode and underground cables. The auxiliary earth electrode must be connected to the terminal marked E on the earth-leakage circuit-breaker using 0.0045 sq. in. P.V.C. cable, insulated for 250V and coloured green. (This cable should be purchased locally.)

6. Earthing.—The back panel of the kiosk is provided with an earthing bolt to which the main earth is connected. Where an earth-leakage circuit-breaker is installed a connexion must be made from the earthing bolt to the terminal F of the breaker by means of Wire, Copper, Soft, Stranded, 7/20. Where a connexion to the Supply Authority's cable sheath is permissible (see C 3471) the earthing bolt should be connected to it in a similar manner.

7. Method of supply lead-in.—The supply should be brought in through the base of the kiosk, suitable provision being made during the preparation of the base. In those cases where an earth connexion to the sheath of the cable cannot be made, care must be taken to ensure that there is no contact between the metal-work of the kiosk and (a) the sheath or armouring (if any)

TABLE 1

Supply characteristics	Time switch	Solar dial†	Case
D.C. 200-220V (incl.)	Time-switch No. 1, D.C., 200/220V	Solar Dial No. 1...	Case, Time-switch, No. 1
D.C. Above 220-250V (incl.)	Time-switch No. 1, D.C., 230/250V	Solar Dial No. 1...	Case, Time-switch, No. 1
A.C. 50 c/s 200-250V (incl.) Uncontrolled	Time-switch No. 1, A.C., 200/250V	Solar Dial No. 1...	Case, Time-switch, No. 1‡
A.C. 50 c/s 200-250V (incl.) Controlled	Time-switch No. 2, A.C., 200/250V	Solar Dial No. 2...	Case, Time-switch, No. 2

† Suffix letter (A to H & K as required) to follow numeral to indicate zone (see C 3502).

‡ If the system is operated with the neutral permanently earthed a Case, Time-switch, No. 2 should be requisitioned and the Switch Plate and Socket (see Drg. P/EL 537) removed and returned to the Supplies Dept.

of the supply cable, (b) conduits (if any) containing the service cable and (c) the case of the cut-out, if of metal. This precaution is to prevent the kiosk becoming 'alive' from a fault on the supply cable; the earth-leakage circuit-breaker would operate but would not clear the fault. This requirement precludes the use of metallic ducts in such a case for leading the supply cable through the base of the kiosk.

When plastic cut-outs are used by the Area Electricity Board it has been agreed that they will supply and fit a steel cover for protection (see also C 3501).

8. When the electricity supply is from overhead power lines, reference should be made to C 3501.

9. **Lighting.**—Information regarding lamps, lamp-holders and lighting fittings is given in Lighting, A 3101.

References :—C 3471, C 3501, C 3502
(P3/3) Lighting, A 3101

E N D

STANDARD METHOD OF PROVIDING KIOSKS WITH AN ELECTRICITY SUPPLY FROM OVERHEAD POWER LINES

1. **General.** A standard method of providing electricity supplies to telephone kiosks from L.V. overhead power lines has been agreed between the P.O. and the Area Electricity Boards. This standard method, which is described in this Instruction, should be adopted for all future installations. Directions to Area Boards are contained in Engineering Recommendation L21 issued by the Central Electricity Authority and Area Boards' Chief Engineers' Conference, from which Figs. 1, 2, 3 and 4 in this Instruction have been reproduced.

2. **Details of standard method.** The standard method of providing the supply to a kiosk from an overhead power line is shown in Figs. 1 and 2. The main points to note are as follows:-

(a) The power supply is overhead to a pole in the vicinity of the kiosk, from which it is extended to the kiosk by cable. This pole may be a P.O. pole or a power line pole (see par. 4).

(b) The power cable leading down the pole and into the kiosk is P.V.C. insulated, armoured, and provided with a P.V.C. sheath 60 mils thick over the armouring. The armouring of the cable is bonded to the neutral conductor at the top of the pole (see Fig. 3). The cable on the pole is protected by steel capping or steel conduit to a height of 8 ft. from ground level.

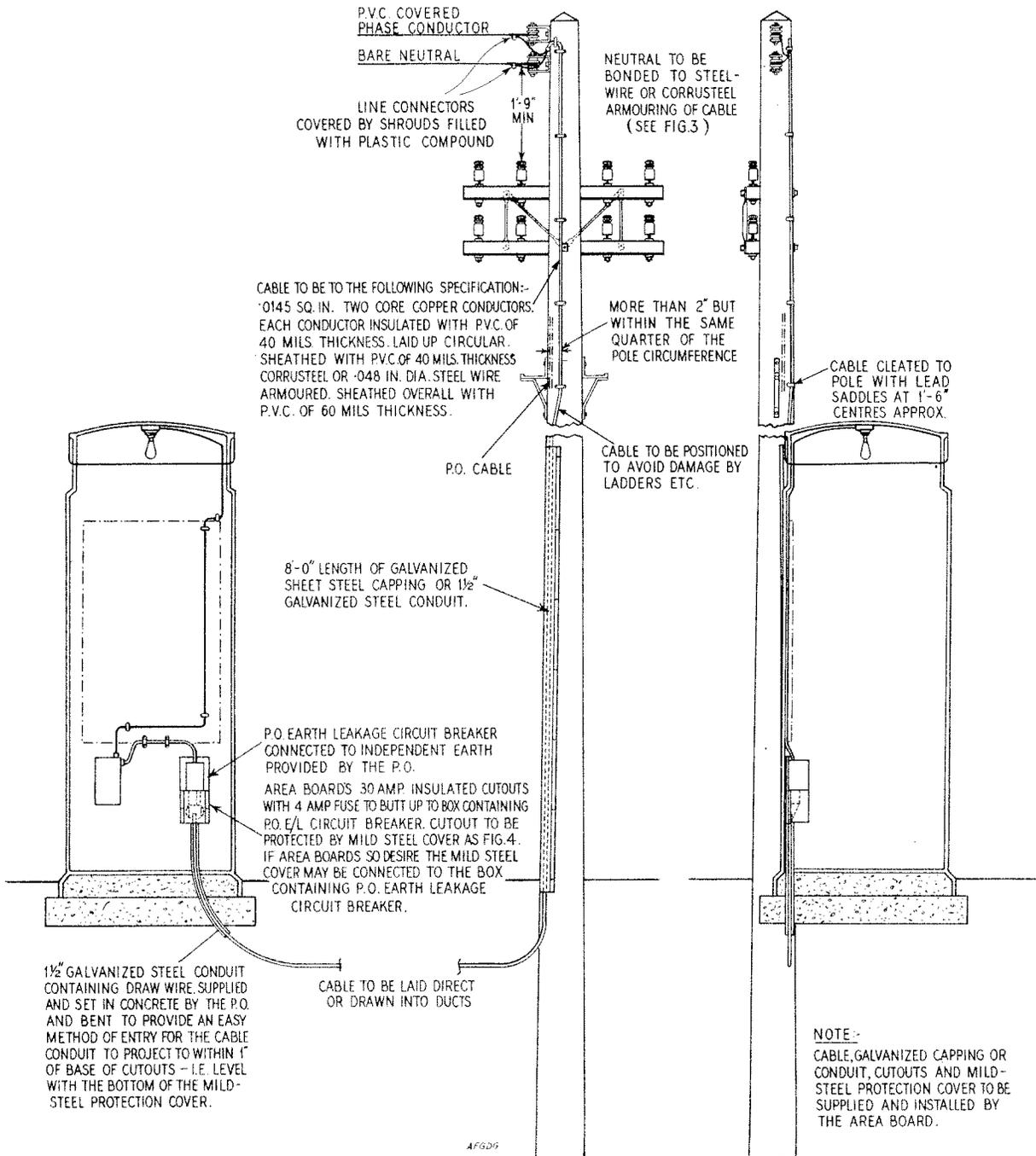
(c) The power cable is led-in through the base of the kiosk, and terminated in an insulated cut-out. The cut-out is protected against mechanical damage by the sheet-steel cover shown in Fig. 4. This cover will be provided by the Area Electricity Board.

(d) A lead-in pipe is provided through the base of the kiosk. This pipe should be supplied and set in the concrete base of the kiosk by the P.O., and bent to provide an easy method of entry for the cable. The pipe should project through the base of the kiosk to within approximately one inch of the bottom of the cut-out when in position. A draw wire should be left in the pipe by the P.O., to facilitate the work of the Board. As Boards may use different makes and sizes of cut-outs the length of pipe projecting above the floor of the kiosk should be decided in consultation with the Board.

3. An earth-leakage circuit-breaker, a main earth electrode for the kiosk metalwork, and an auxiliary earth electrode for the earth-leakage circuit-breaker should be provided by the P.O. in accordance with PROTECTION, General, S 3901. The Board should fit the insulated cut-out referred to in par. 2(c) to butt up to the "Boxes, Conduit, No. 10", which contains the earth-leakage circuit-breaker.

4. **Joint use of poles for kiosk services.** The pole in the vicinity of the kiosk, referred to in par. 2(a), may be a P.O. pole or a Board's pole. In Fig. 1 (Arrangement 1) the power conductors and power service cable are shown attached to a P.O. pole. It will be noted that the cables on the pole should be positioned so as to avoid possible damage by ladders. In Fig. 2 (Arrangement 2), the kiosk is shown supplied from a 3-phase power line pole. When the supply is taken from the Board's pole, the P.O. wires serving the kiosk may be attached to the Board's pole. This point should be borne in mind when selecting kiosk sites, as the positioning of a kiosk near an existing power line pole may often appreciably reduce the cost of providing the services to the kiosk.

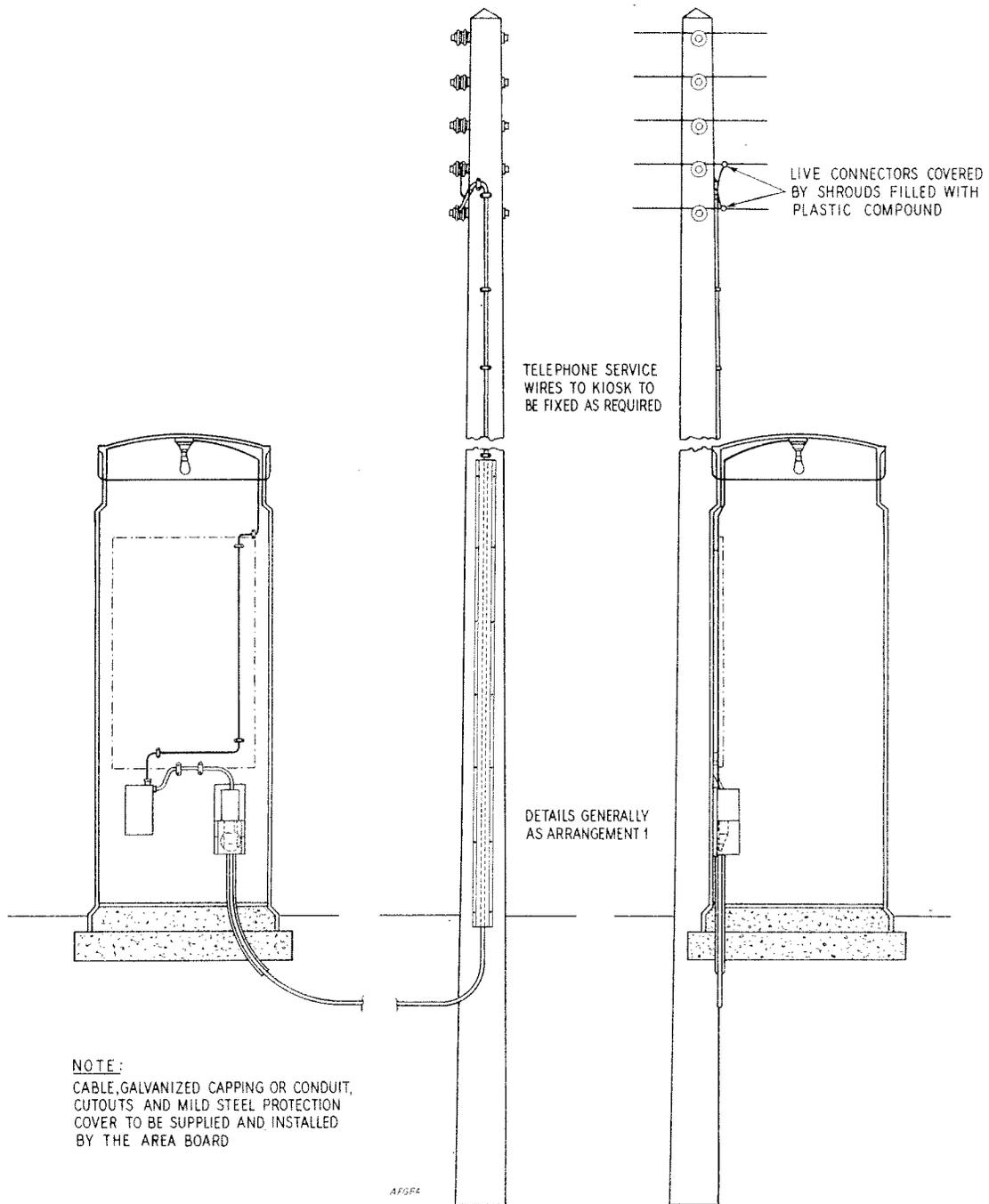
5. Where P.O. wires are attached to Board's poles, or power conductors to P.O. poles, consent for the attachment should be obtained in accordance with WAYLEAVES, Attachments, A 0513, and the technical requirements of PROTECTION, Power, D 0020 should be observed.



ARRANGEMENT 1

KIOSK SUPPLIED FROM POWER SERVICE LINE ATTACHED TO P.O. POLE

FIG. 1



ARRANGEMENT 2
KIOSK SUPPLIED FROM POWER LINE POLE

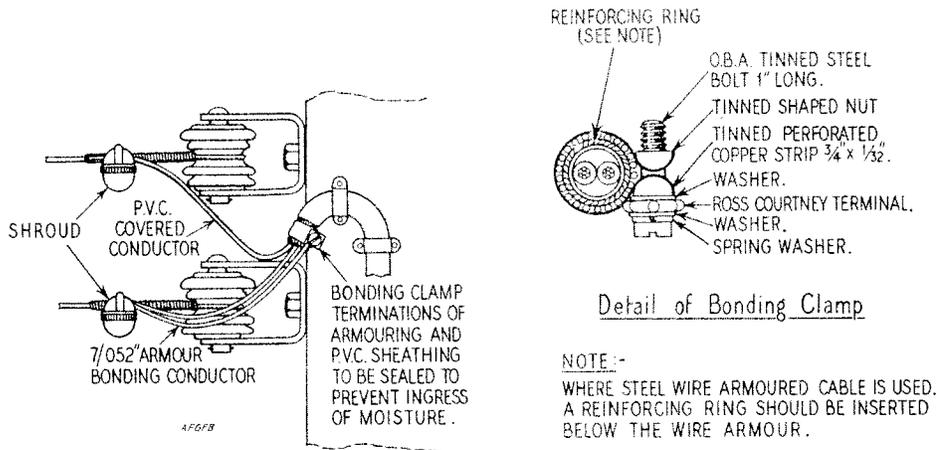


FIG. 3. ARRANGEMENT OF ARMOUR BONDING

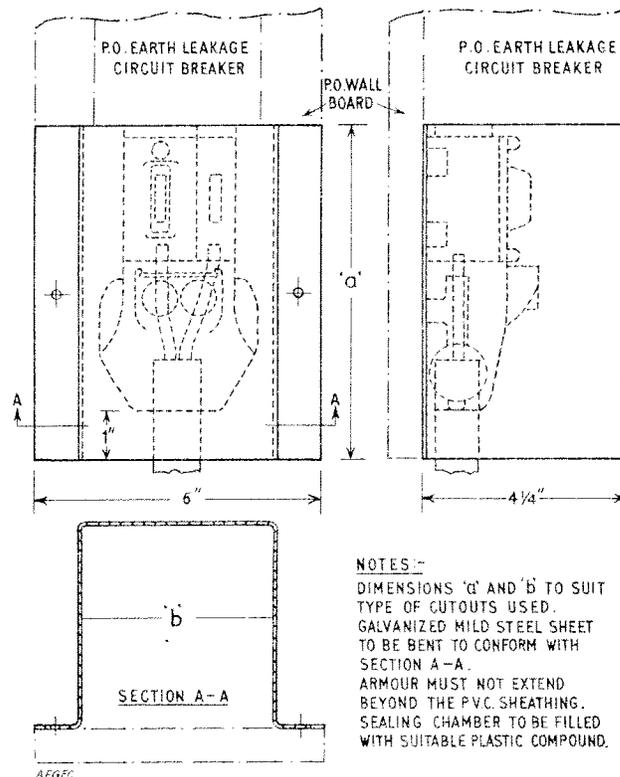


FIG. 4. SHEET-STEEL COVER FOR CUT-OUT

References:- PROTECTION, General, S 3901, Power, E 0020
(Cn 2) WAYLEAVES, Attachments, A 0513

E N D

TELEPHONE KIOSKS

Control of Lighting

Operating Times of Solar Dials

[NOTE:—As this Instruction has been completely revised, individual items have not been 'starred']

1. **General.** The switching times of kiosk lighting are based on the times of sunset and sunrise. As these times vary according to the latitude and longitude, the solar dials are made to suit the average conditions in the area in which they are to be used. For this purpose the country is divided into zones as indicated in Fig. 1. Each zone is lettered and this letter is stamped on the solar dial proper to be used in that zone. The times of operation provided by the solar dials are shown in

Table 1. The times shown refer to Solar Dial No. 2 and the new cam-operated Solar Dial No. 1. The times for the old rack-and-pinion-operated Solar Dial No. 1 used hitherto are slightly different but the variation is generally insignificant.

The dial appropriate to the zone in which the kiosk is installed should be requisitioned and fitted locally. The electrical installation and the setting of solar dials are described in C 3500.

TABLE 1. TIMES OF OPERATION

IN—SUNSET		OUT—SUNRISE				ALL TIMES ARE G.M.T.				
Date	Zone A	Zone B	Zone C	Zone D	Zone E	Zone F	Zone G	Zone H	Zone K	
1 Jan.	IN—p.m.	4.02	4.14	3.54	4.05	3.48	3.59	3.44	4.11	4.20
	OUT—a.m.	8.05	8.17	8.14	8.25	8.32	8.43	8.54	8.55	8.23
1 Feb.	IN—p.m.	4.48	5.00	4.44	4.55	4.42	4.53	4.43	5.05	5.06
	OUT—a.m.	7.42	7.54	7.46	7.57	7.59	8.10	8.17	8.22	8.00
1 Mar.	IN—p.m.	5.39	5.51	5.37	5.48	5.40	5.51	5.45	6.03	5.57
	OUT—a.m.	6.47	6.59	6.50	7.01	6.59	7.10	7.10	7.22	7.05
1 Apr.	IN—p.m.	6.32	6.44	6.33	6.44	6.41	6.52	6.53	7.04	6.50
	OUT—a.m.	5.38	5.50	5.36	5.47	5.40	5.51	5.47	6.03	5.56
1 May	IN—p.m.	7.21	7.33	7.27	7.38	7.40	7.51	7.57	8.03	7.39
	OUT—a.m.	4.34	4.46	4.29	4.40	4.28	4.39	4.29	4.51	4.52
1 June	IN—p.m.	8.07	8.19	8.15	8.26	8.33	8.44	8.56	8.56	8.25
	OUT—a.m.	3.49	4.01	3.41	3.52	3.35	3.46	3.31†	3.58	4.07
1 July	IN—p.m.	8.21	8.33	8.29	8.40	8.48	8.59	9.13	9.11	8.39
	OUT—a.m.	3.46	3.58	3.37	3.48	3.30	3.41	3.31‡	3.53	4.04
1 Aug.	IN—p.m.	7.50	8.02	7.56	8.07	8.11	8.22	8.30	8.34	8.08
	OUT—a.m.	4.22	4.34	4.16	4.27	4.13	4.24	4.11	4.36	4.40
1 Sept.	IN—p.m.	6.48	7.00	6.51	7.02	7.01	7.12	7.14	7.24	7.06
	OUT—a.m.	5.11	5.23	5.08	5.19	5.10	5.21	5.15	5.33	5.29
1 Oct.	IN—p.m.	5.40	5.52	5.39	5.50	5.44	5.55	5.52	6.07	5.58
	OUT—a.m.	5.58	6.10	6.00	6.11	6.07	6.18	6.17	6.30	6.16
1 Nov.	IN—p.m.	4.35	4.47	4.31	4.42	4.31	4.42	4.33	4.54	4.53
	OUT—a.m.	6.51	7.03	6.56	7.07	7.08	7.19	7.24	7.31	7.09
1 Dec.	IN—p.m.	3.56	4.08	3.48	3.59	3.44	3.55	3.41	4.07	4.14
	OUT—a.m.	7.42	7.54	7.49	8.00	8.06	8.17	8.27	8.29	8.00

†3.30 a.m. in the case of Solar Dials No. 1.

‡3.24 a.m. in the case of Solar Dials No. 1



FIG. 1

END

Reference:—C 3500
(P3/3)

Page 2
Issue 2, 9.12.60

Wt. 8205/46/30971 5,125 1/61 AR

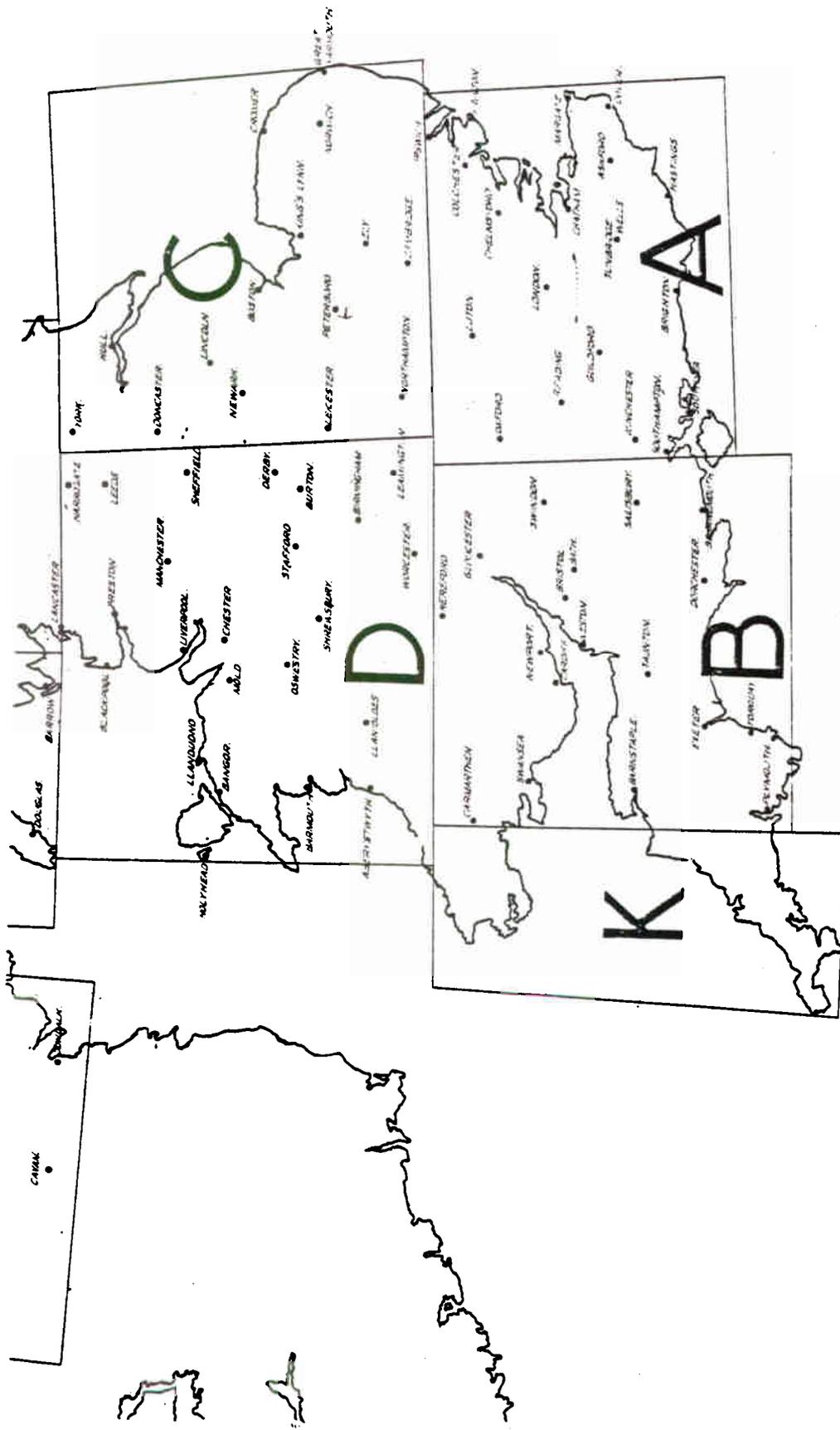


FIG. 2

TABLE 1
TIMES OF OPERATION
IN - SUNSET
OUT - SUNRISE
ALL TIMES ARE GREENWICH MEAN TIME

MONTH	SECTION A.	SECTION B.	SECTION C.	SECTION D.	SECTION E.	SECTION F.	SECTION G.	SECTION H.	SECTION K.
JAN 1st	IN - P.M. 4-6 OUT - A.M. 8-0	4-18 8-12	3-57 8-9	4-8 8-20	4-0 8-17	4-11 8-28	3-53 8-45	4-23 8-40	4-24 8-18
FEB. 1st	IN - P.M. 4-42 OUT - A.M. 7-41	4-54 7-53	4-36 7-46	4-47 7-57	4-42 7-58	4-53 8-9	4-37 8-19	5-5 8-21	5-0 7-59
MARCH 1st	IN - P.M. 5-30 OUT - A.M. 6-52	5-42 7-4	5-29 6-54	5-40 7-5	5-35 7-0	5-46 7-11	5-40 7-20	5-58 7-23	5-48 7-10
APRIL 1st	IN - P.M. 6-35 OUT - A.M. 5-35	6-47 5-47	6-39 5-35	6-50 5-46	6-42 5-42	6-53 5-53	6-52 5-47	7-5 6-5	6-53 5-53
MAY 1st	IN - P.M. 7-32 OUT - A.M. 4-27	7-44 4-39	7-34 4-22	7-45 4-33	7-47 4-26	7-58 4-37	8-0 4-29	8-10 4-49	7-50 4-45
JUNE 1st	IN - P.M. 8-13 OUT - A.M. 3-45	8-25 3-55	8-19 3-35	8-30 3-46	8-31 3-36	8-42 3-47	8-46 3-37	8-54 3-59	8-33 4-1
JULY 1st	IN - P.M. 8-22 OUT - A.M. 3-40	8-34 3-52	8-24 3-32	8-35 3-43	8-40 3-30	8-51 3-41	9-1 3-30	9-3 3-53	8-40 3-58
AUGUST 1st	IN - P.M. 7-50 OUT - A.M. 4-10	8-2 4-22	7-52 4-6	8-3 4-17	8-5 4-5	8-16 4-16	8-30 4-1	8-28 4-28	8-8 4-28
SEPT. 1st	IN - P.M. 6-47 OUT - A.M. 5-0	6-59 5-12	6-42 5-2	6-53 5-13	6-55 5-5	7-6 5-16	7-4 5-5	7-8 5-28	7-5 5-18
OCT. 1st	IN - P.M. 5-35 OUT - A.M. 6-0	5-47 6-12	5-27 6-4	5-38 6-15	5-34 6-10	5-45 6-2	5-40 6-22	5-57 6-33	5-53 6-8
NOV. 1st	IN - P.M. 4-33 OUT - A.M. 7-0	4-45 7-12	4-24 7-4	4-35 7-15	4-26 7-14	4-37 7-25	4-21 7-35	4-49 7-37	4-51 7-8
DEC. 1st	IN - P.M. 4-3 OUT - A.M. 7-45	4-15 7-57	3-49 7-50	4-0 8-1	3-55 8-0	4-6 8-11	3-45 8-29	4-18 8-23	4-2 8-3

6. The boxes are supplied with the time switch set to switch the lighting on at sunset and off at sunrise. As most of the agreements with the supply authorities are for lighting kiosks from half an hour after sunset until half an hour before sunrise, the setting should be altered locally. To do this the roller should be removed from the hole opposite 'S' and refixed in the hole opposite $\frac{1}{2}$ on the IN and OUT switch arms (see Fig. 1).

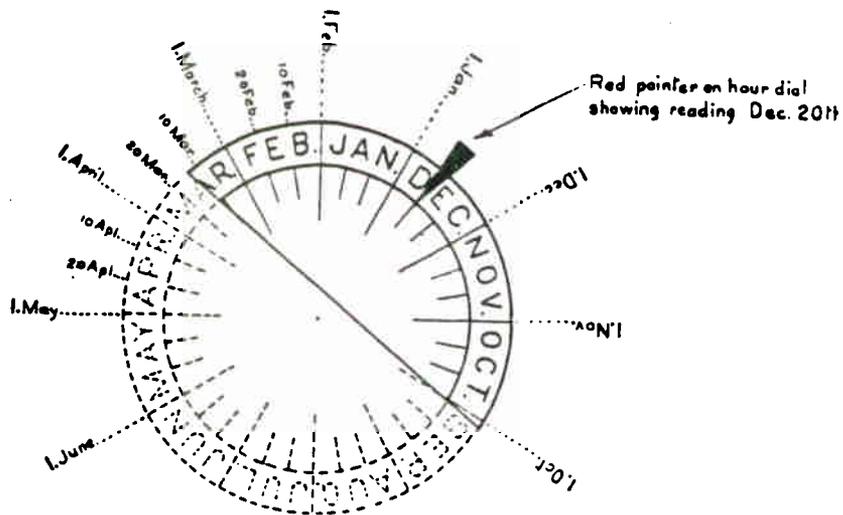


FIG. 3.

7. The clock dial should then be set to correct G.M. time. The clock dial is only friction tight on its driving spindle, and the dial should be rotated until the fixed pointer marked "Time" points to the correct G.M. time, a.m. or p.m. The fuses should then be replaced.

8. Regulation. The "Type D" clock is guaranteed to keep time to within 5 minutes per month. The dial, therefore, requires occasional adjustment for time-keeping, and this should be made whenever a maintenance visit is paid for renewing a lamp, etc. and at least every three months. It should be observed whether the fixed pointer marked "Time" is pointing to correct time; if not, adjustment should be made in accordance with pars. 5 and 7. A regulator is provided and, if necessary, this should be adjusted after sliding back the cover. One small division on the scale represents $2\frac{1}{2}$ minutes per 24 hours.

9. Clocks which cannot be adjusted by the regulator to keep good time should be changed, care being taken that the new dial when fitted is correctly set for date and time.

10. The "Type E" clock is driven by a synchronous self-starting motor which consumes 1.5 watts; it will normally keep correct time without any attention whatever except in the event of a failure of the electric supply, when the clock will stop but will restart immediately the supply is restored. In such cases the dial will require re-adjustment to show the correct time, and this should be done as indicated in pars. 5 and 7.

11. The internal wiring of the service boxes is generally in accordance with Drg. No. P/EL 155. The lamp-testing switch is for the purpose of lamp-testing only and is arranged to return to the 'off' position immediately upon release.

12. Zone (for solar dials). As the times of sunset and sunrise vary according to latitude and longitude, the solar dials of the service boxes are made to suit the zones in which they are to

be used. The map (Drj. P/EL 32) reproduced in Fig. 2 shows the zones for which solar dials are made and also the corresponding letters. Each dial will be stamped with the zone letter which indicates the area in which the time switch will be suitable for use. Times of operation for each zone are shown in Table 1.

13. For the purpose of estimating the annual current consumption the hours of burning between sunset and sunrise may be taken as 4,300 per annum in all zones.

14. Requisitions for "Boxes, Service, E.L., No. 000, Type D or E" should bear the following information:-

- (a) Voltage and nature of supply (periodicity to be stated if A.C.)
- (b) Zone in which item is to be used (e.g. Zone A).

15. Maintenance. Instructions for the maintenance of "Boxes, Service, E.L., No. 000" are given in C 5501.

Reference:- C 5501
(P)

Instructions cancelled:- POWER Lighting B 5102

E N D

BOXES, SERVICE, E.L., NO. 000

For use with electricity supplies other than street lighting mains

1. **General.** Two types of "Boxes, Service, E.L., No. 000" are available for the control of lighting in telephone kiosks for which the electricity supply is not taken from street lighting mains, viz:-

- (a) Boxes, Service, E.L., No. 000, Type D
- (b) Boxes, Service, E.L., No. 000, Type E.

2. The "Box, Service, E.L., No. 000, Type D" consists of an electrically-wound time switch with a solar dial, two S.P. cut-outs and a testing switch mounted in a cast-aluminium box. It is to be used when the mains supply is

- (a) D.C. or
- (b) A.C. *not normally frequency controlled for timekeeping.*

It is not to be used for A.C. 50 c/s. normally frequency controlled.

3. The "Box, Service, E.L., No. 000, Type E", serial-numbered up to and including 800,000, is fitted with a synchronous-motor-driven clock but is otherwise similar to the "Box, Service, E.L., No. 000, Type D". It is to be used for A.C. 50 c/s. supplies the frequency of which is normally controlled for timekeeping. A further instruction will be issued dealing with "Box, Service, No. 000, Type E", serial No. 800,001 upwards.

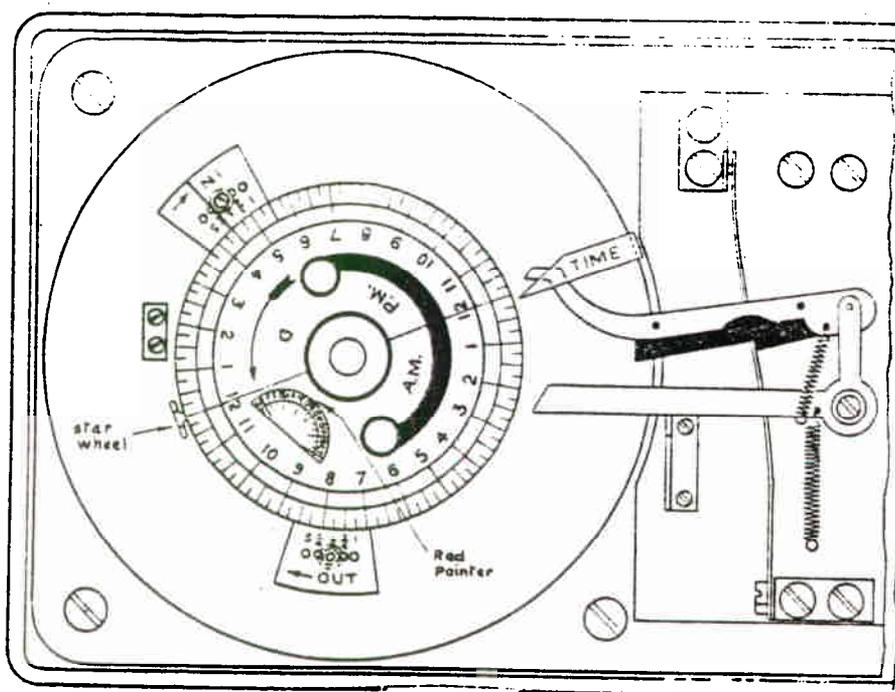
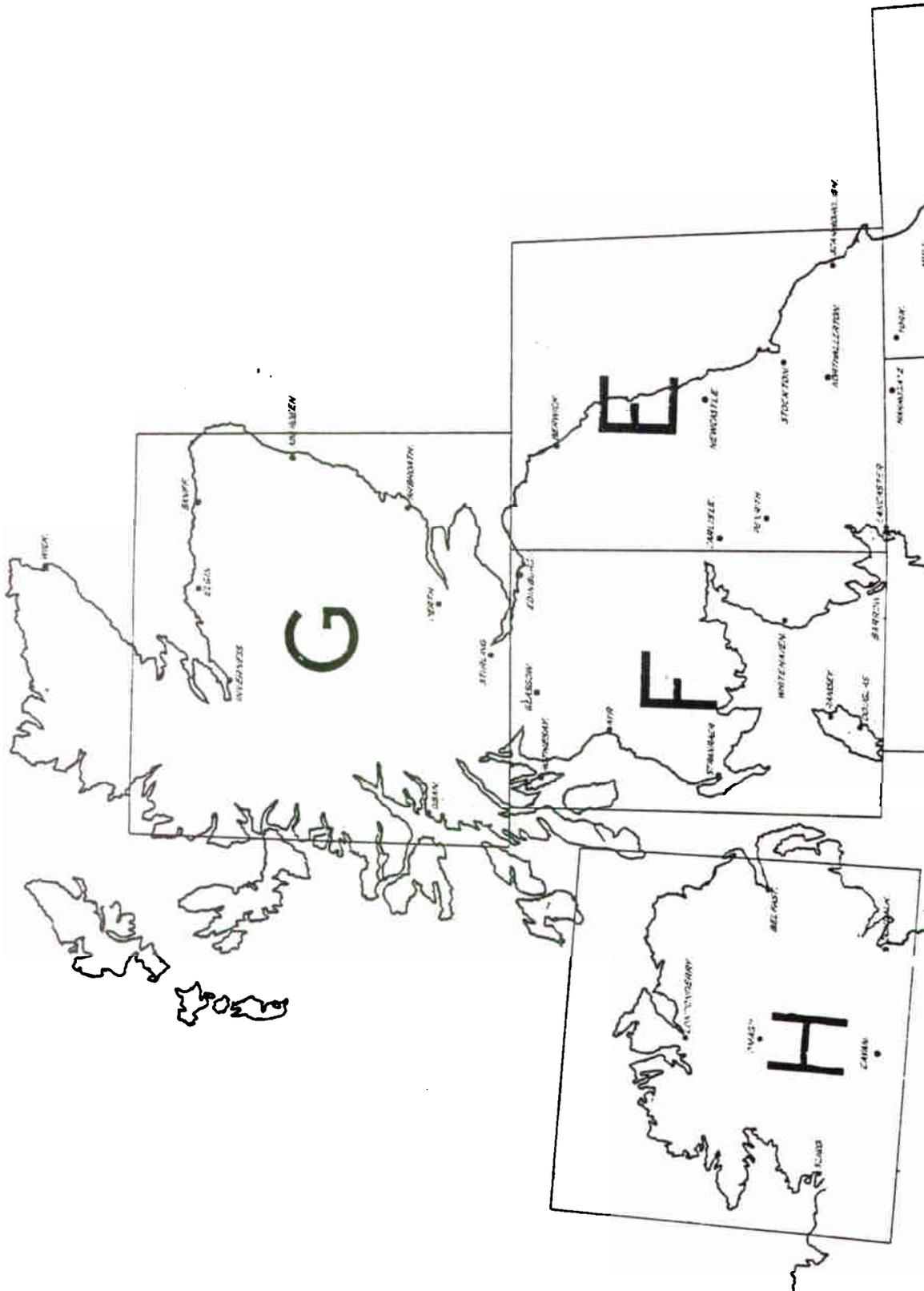


FIG. 1

4. **Instructions for setting.** With each type of box, it is important to see that the clock is set for the correct date and time, but, before attempting to set the clock, the fuses should be withdrawn.

5. The red pointer over the small sunk dial indicates the date. The months are marked Jan., Feb., Mar., etc. The first (long) line for each month represents the first day of the month; the second line the 10th, and the 3rd line the 20th of the month as shown on the enlarged diagram in Fig. 3. If the red pointer is not indicating the correct date, the small dial should be rotated to the correct position by turning the 5-armed star wheel one way or the other. This should be done when the star wheel is clear of its operating pin on the clock cover.



INSTRUCTIONS FOR SETTING

Type E Clocks must only be fitted on A.C. 50 cycle supplies, where the frequency is controlled for Time keeping.

Before setting to work it is important to see that the Clock is set for the correct date and time.

Date. The red pointer over the small sunk dial indicates the date. The months are marked Jan. Feb. Mar. etc. The first long line for each month represents the first day of the month: The second line the 10th, and the 3rd the 20th of the month as shown on the enlarged diagram on Sketch overleaf. If the red pointer is ~~indicating the correct date~~, the small dial should be rotated to the correct position by turning ~~the star wheel one way or the other~~. This should be done when the star wheel is clear of its operating pin on the clock cover.

Time. After connecting to the electric supply the clock dial should be set to correct G.M.T. time. The clock dial is only friction tight on its driving spindle, and the dial should be rotated until the fixed pointer marked "Time" points to the correct G.M.T. time a.m. or p.m. To remove dial unscrew the milled nut marked X on the sketch overleaf from the spindle: the dial can then be lifted off. If this presents any difficulty a slight to and fro twisting movement may be required. When replacing dial see that the jaw engages correctly with the driving spindle and then screw milled nut down firmly.

Clock. The clock is driven by a synchronous self starting motor which consumes 1.5 watts; it will normally keep correct time without any attention whatever except in the event of a failure of the electric supply, when the clock will stop but will restart immediately the supply is restored; in such cases the dial will require re-adjustment to show the correct time and this should be done as indicated in the preceding paragraph.

By drawing back the inspection slide marked "a" on the drawing it can be seen whether the clock is working: the gear wheel exposed has two spots painted on the periphery: this gear wheel makes one revolution per 10 seconds or six revolutions per minute, the inspection slide must not be left open.

When removing a clock for replacement unscrew the three long screws marked "b", disconnect the wires and remove the base complete with contacts, the existing dial should be transferred to the new clock.

Solar Out Hand. When the roller is in the hole opposite "S" the time switch operates at sunrise. The other holes correspond to $\frac{1}{2}$, $\frac{1}{2}$, $\frac{3}{4}$ and 1 hour before sunrise respectively.

Solar In Hand. When the roller is in the hole opposite "S" the time switch operates at sunset. The other holes correspond to $\frac{1}{2}$, $\frac{1}{2}$, $\frac{3}{4}$ and 1 hour after sunset respectively.

Intermediate Hands (if fitted). To adjust these loosen the two milled nuts on dial, adjust hands to desired times and re-tighten nuts.

IMPORTANT: As this is a solar dial the "Time" pointer should point to actual Greenwich time - Summer Time should be disregarded.

STANDARD.

SKETCH N^o P1389

BOX SERVICE E.L. No. 000 TYPE E.
INSTRUCTIONS FOR
SETTING TO WORK.

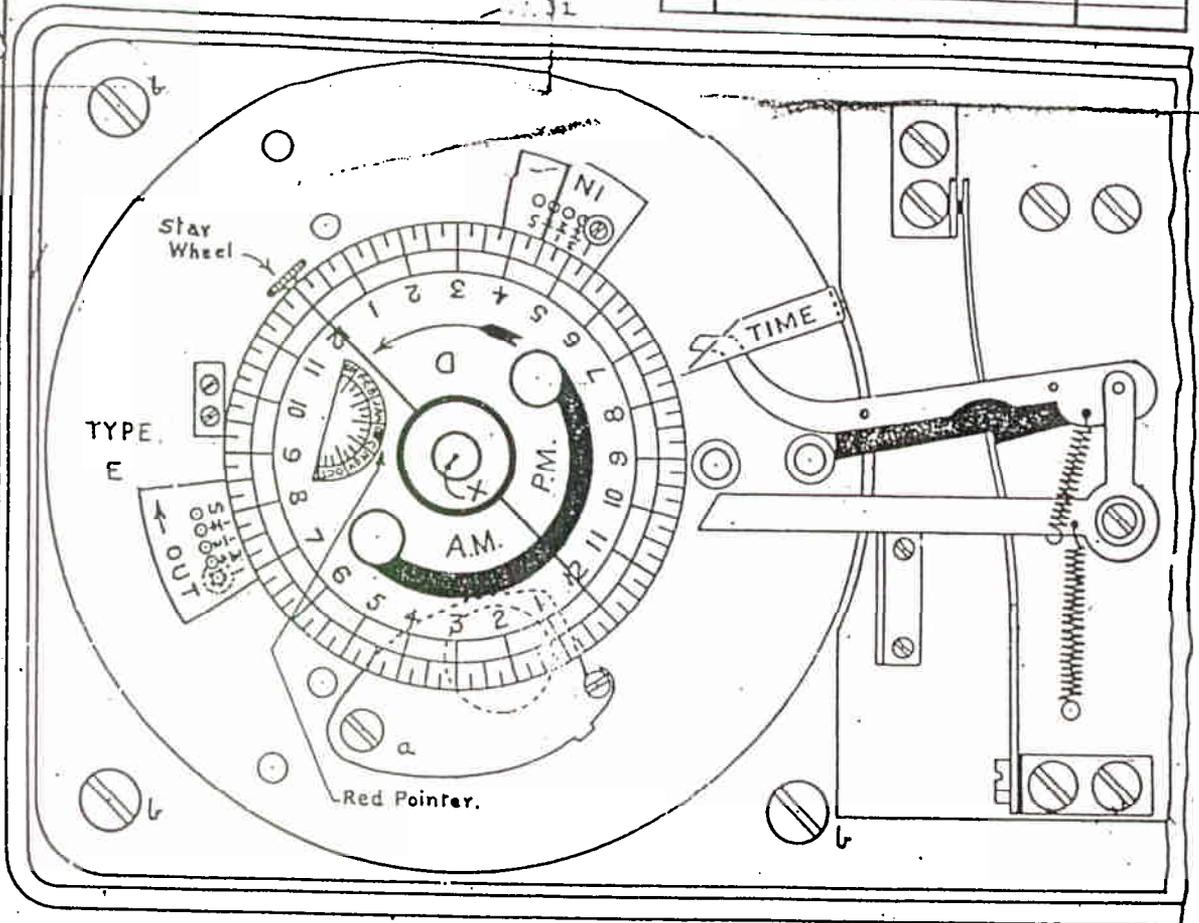
Office of Engineer-in-Chief. G.P.O.

Jan. 1932 T.D.H. T.D.H. POWER SECTION

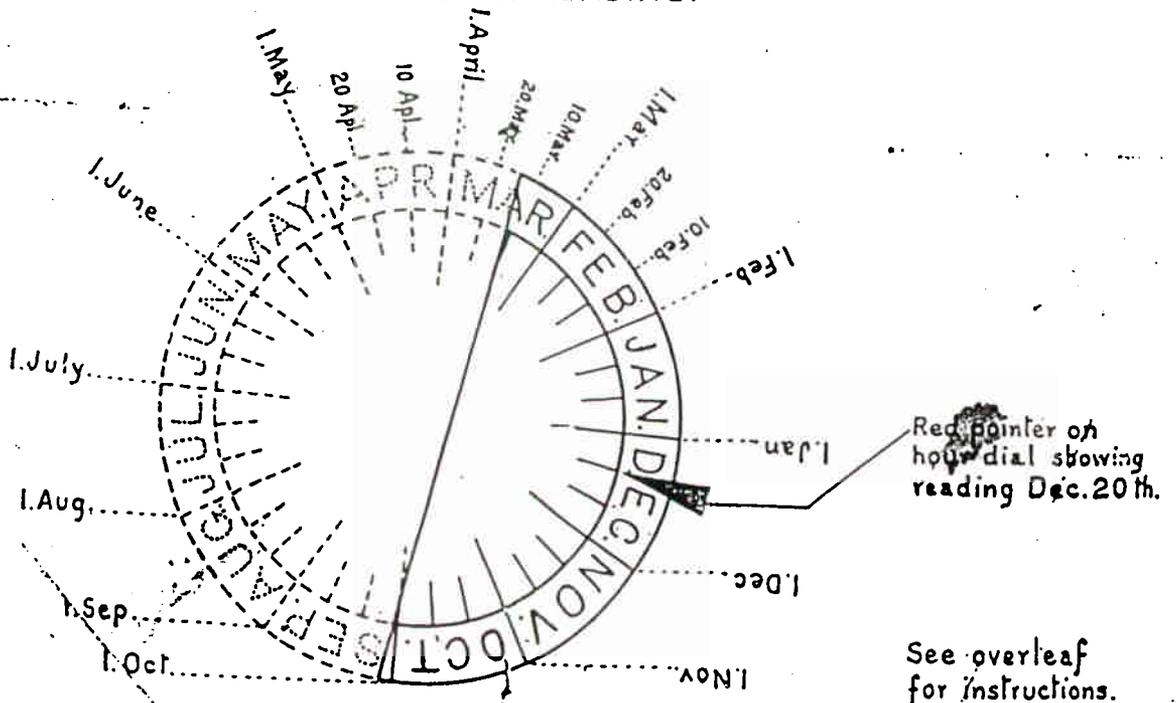
Letter Particulars of Amendment. Date Initial

SUPERSEDED BY SUPERSEDES

N ^o	Reference Drawings.	Number
	Service Box No. 000 TYPE D & E	X. 5260 C
	Wiring dia. " " " "	P. 1018 A



ENLARGED VIEW OF SUNK DATE INDICATING DIAL
GIVING METHOD OF READING.



LIGHTING OF TELEPHONE CALL OFFICES

1. General.—Departmental policy relative to the lighting of telephone call offices, i.e. kiosks and cabinets, is given in TELEPHONES, Call Offices, A 3007 and A 3008. This Instruction deals with the lamps and fittings required to provide the lighting. The electrical installation in telephone kiosks is dealt with in General, C 3500 and power supply agreements in General, A 0502.

2. Gas lighting.—Wherever practicable gas lighting should be replaced with electric lighting. Gas lighting may not be installed inside a new kiosk or cabinet without first referring the matter to the Eng. Dept. (P).

Where gas lighting cannot be replaced, the maintenance of the fittings will be undertaken by the gas supply authority concerned.

★3. Electric lamps.—One electric lamp should be installed inside the kiosk or cabinet to provide illumination for the users of the call office, and in most kiosks to illuminate the opal signs showing the word TELEPHONE to the outside. Normally a Lamp, General Service, 25 watt should be used, but where this will not give sufficient illumination to the opal sign, or improved lighting may help to prevent malicious damage, a 40- or 60-watt general service lamp may be used.

A Lamp, Rough Service, 25 or 40 watt should be used to minimize frequency of renewal of lamps where excessive vibration causes premature failure. Rough service lamps are less efficient than general service lamps however (see B 1106) and should not be used if premature failure can be prevented by the use of Lampholder No. 1D (see par. 7).

4. Cabinets.—Fitting, E.L., No. 19 should be installed in all standard cabinets except Cabinets, Telephone, 6 ft. 6 in., Folding Door. This fitting includes a grille for ventilation of the cabinet. The fitting is designed for a 25-watt lamp (general service or rough service) and a larger lamp must not be used as it would cause overheating.

Cabinets, Telephone, 6 ft. 6 in., Folding Door should be fitted with a Lampholder No. 5.

5. Switching.—The lamp in a cabinet on Post Office premises should be controlled by a switch placed in a convenient position for operation by the responsible Post Office staff and out of reach of members of the public. If this arrangement is uneconomical or impracticable, a switch operated by the cabinet door may be provided as shown in Drg. P/EL 168.

On the premises of British Railways and other authorities where a cabinet or a kiosk is installed, the light switch should be placed in a position agreed

with the authority concerned. Time switches should not be provided.

Time switches in kiosks are dealt with in General, C 3500.

6. Lighting fittings for kiosks.—Normally a bare lamp is used inside Kiosks Nos. 2, 3, 4 and 6. Fitting, E.L., No. 5A was used in Kiosk No. 1 but is now obsolete. Where replacement is necessary Fitting, E.L., No. 5 should be used.

Bracket, E.L., B 16, which is now obsolete, was provided on the outside of Kiosk No. 4 to illuminate the stamp-selling machine. Where replacement is necessary a bracket should be made up locally according to Drg. P/EL 637 and fitted with a 25-watt lamp.

Where it is necessary to protect the lamp from malicious breakage a Fitting, E.L., No. 20 should be installed in any kiosk other than a Kiosk No. 1. This is a robust, well-glass fitting (Drg. P/EL 303) which may be opened with a Key for Fitting E.L. The fitting is designed for use in Kiosks No. 6 as shown in Drg. P/EL 636 but can be installed in other kiosks. The arrangement for Kiosks Nos. 2 and 4 is shown in Drg. P/EL 639 and the arrangement for Kiosk No. 3 is shown in Drgs. P/EL 638 and P/EL 640. The additional parts required should be made up locally.

7. Lampholders.—Lampholder No. 1C should normally be fitted in Kiosks Nos. 2, 3, 4 and 6 and attached to the ceiling boss in Kiosks 2, 3 and 4 with a Pendant, Brass, P3 and in Kiosks No. 6 with a Pendant, Brass, P4, as shown in Drg. P/EL 152. For Kiosk No. 3 Mark 2, the lampholder is attached to a Cover, Boxes, Conduit, Dome, Galvanized as shown in Drg. P/EL 162.

Lampholder No. 1C as shown in Drg. P/EL 634 is similar to other brass lampholders but provided with locking rings to prevent unauthorized removal of the lamp. Two locking rings are threaded on to the lampholder in place of a shade ring and a third slotted, unthreaded, ring is provided. The top threaded ring should be screwed up against the union ring of the lampholder and tightened by means of a Spanner, Long, Lampholder. This prevents unscrewing of the union ring to release the lower part of the lampholder complete with the lamp. The unthreaded lamp ring should be slipped over the lampholder with the slots in line with the bayonet slots in the lampholder. The lamp should then be inserted in the lampholder with the bayonet pins in the slots of the ring. The lower threaded ring should then be screwed downwards against the slotted ring, using the Spanner, Long, Lampholder to lock the lamp in position.

The locking rings have sharp edges so that after tightening with the spanner they cannot be loosened with the fingers.

Although the lampholder will prevent theft of the lamp complete, it will not prevent the lamp bulb from being broken from the lamp cap by an intending thief. Where frequent breakages of lamps have occurred Fitting, E.L., No. 20 should be installed to protect the bulb.

Lampholder No. 1D (Drg. P/EL 635) is similar to No. 1C but sprung to reduce transmission of vibra-

tion from the kiosk to the lamp. Where premature failure of lamp filaments occurs with Lampholder No. 1C, Lampholder No. 1D should be substituted. Lampholder No. 1D may be used in Fitting, E.L., No. 20 if necessary to reduce vibration of the lamp. If premature failure of general service lamps occurs when used in Lampholder No. 1D, rough service lamps should be used instead.

References:---B 1106
(P1/1) General, A 0502, C 3500
TELEPHONES, Call Offices, A 3007, A 3008

E N D

STANDARD

NOT TO BE TAKEN AWAY

E.L. BRACKET FITTING
REF. DRG. N° 1.



3/029 TWIN LEAD
COVERED V.I.R. CABLE
E.L. FITTING REF.
DRG. N° 3

POST OFFICE

NIPPLE, CONDUIT,
BONDING N° 2.

BOX SERVICE N° 000
TYPE "D" REF. DRG. N° 2.

TESTING SWITCH.

TAMP VENDING
MACHINES.

3/4 CONDUIT.

LETTER BOX.

SUPPLY AUTHORITY'S
CUT OUTS (IF
REQUIRED.)

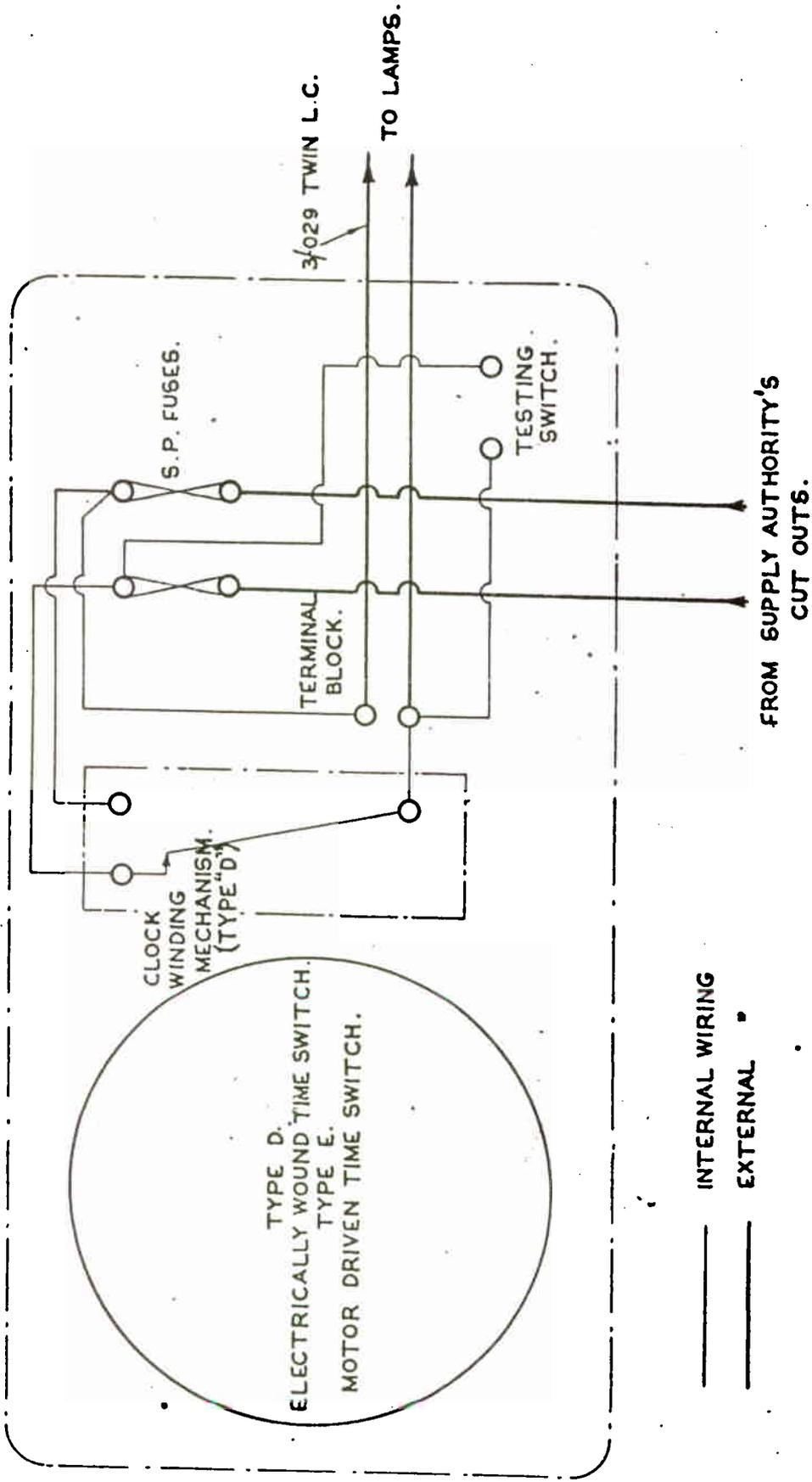
ARMoured SUPPLY
CABLE OR CONDUIT
AS REQUIRED.



BOX SERVICE N°000 TYPE "D." & "E."

Drn.	Trd. <i>W.L.</i>	Appd. In PI Sect.
Ckd. <i>R.W.</i>		
<i>6.10.44</i>		
Spec. D1000	Supersedes P.1018A. & P/EL 63.	

STANDARD
NOT TO BE TAKEN AWAY



EARTHING OF LIGHTING INSTALLATIONS IN TELEPHONE KIOSKS

Use of Supply Authority's Cable Sheath

1. General.—Agreement has been reached between the P.O. and all Area Electricity Boards whereby the Board's service cable sheath may be used for earthing the lighting installations in telephone kiosks, provided the following conditions are complied with.

(a) Permission shall be obtained from the Area Board concerned, for each individual kiosk installation.

(b) The P.O. shall be responsible for ensuring the efficacy of the earth so obtained.

(c) Where the Board provides an earthing terminal this will be used; otherwise, the P.O. standard earth bonding clip will be used.

(d) The P.O. shall indemnify the Board if required to do so.

The remainder of this Instruction deals with the interpretation and application of these conditions.

2. This method of earthing should be adopted for all new kiosk installations except where local conditions are such that it is obviously unsuitable (e.g. where the supply is by overhead line).

3. Approach to Area Board.—Telephone Managers should use a form of request based on the following:—

'I hereby make application to use the sheath of your service cable for earthing the lighting installation in the telephone kiosk at....., the conditions governing such use being those agreed between the Engineer-in-Chief of the Post Office and yourselves.'

This request could be conveniently incorporated when application for an electricity supply to a kiosk is being made.

★4. Testing.—Before using the service cable sheath as an earth, tests should be made in accordance with C 3003 to ensure that it will be effective. The responsibility for ensuring its effectiveness lies with the P.O. alone, notwithstanding that permission for its use has been given by the supply authority.

5. Connexion to cable sheath.—Certain Area Boards will supply a fixing lug, terminal block, or special form of earthing clamp for the connexion of the earth continuity conductor. If such a termination is provided it must be used. If the Board does not provide special means of termination a Clip, Bonding, No. 6 should be used and should be bonded to the sheath just below the point where the cable enters the Board's cut-out.

Reference:—C 3003
(P3/3)

6. Alternative method of earthing.—If the Area Board does not allow the use of its cable sheath, or if the sheath does not constitute an effective earth, a Circuit-breaker, Earth Leakage must be fitted.

7. Indemnity.—If the Area Board requires that a form of indemnity be signed this should be done. The Board's standard form of indemnity will usually be used for this purpose, the text of a typical form being as shown in Fig. 1.

Certain Boards may, however, proffer a more formal and elaborate legal document for this purpose, but provided that this merely contains the usual conditions to be expected (which are those set out in Fig. 1) it should be accepted.

*TO: THE.....ELECTRICITY BOARD
EARTHING OF CONSUMERS' INSTALLATIONS:
FORM OF INDEMNITY*

I/We..... in consideration of your having agreed to the use of your apparatus as an earth connexion for our installation at..... hereby indemnify you against any loss or damage to any person or property caused directly or indirectly by such use. Your consent to such use does not imply obligation on your part or any surrender of your normal rights.

I/We will, on receiving one month's notice from you, disconnect our installation from your apparatus.

(Signed).....

(Date).....

FIG. 1

8. Where the indemnity form is a duplicate standard letter setting out the conditions of acceptance by the Board, one copy should be returned, endorsed to the effect that the P.O. accepts these conditions and the other copy retained for record. The conditions should, of course, be in accordance with pars. 1 and 7 of this Instruction.

9. Queries.—Any queries regarding the application of this Instruction should be referred to the Eng. Dept. (P3/3).

E N D

[For Official Use Only]

POWER SUPPLY FOR LIGHTING TELEPHONE CALL OFFICES

Agreements

1. General.—This Instruction deals with the supply of power for lighting telephone call offices, i.e. kiosks and cabinets. The general policy and working rules governing the conditions under which call office lighting is to be provided are dealt with in TELEPHONES, Call Offices, A 3007. The electrical installation in telephone kiosks is dealt with in General, C 3500 and Lighting, A 3101.

2. Negotiations for a supply.—When electric lighting is to be installed in a kiosk it may be connected to the street lighting mains when these are available provided that:—

- (a) the street lighting is on from dusk till dawn
- (b) the local street lighting authority agrees
- (c) the Area Electricity Board assent.

This should be ascertained by correspondence with the authorities concerned. No mention should be made of a special charge for switching on and off, it being assumed that the agreed charge for power covers these operations.

If it is not practicable to connect to street lighting mains, the supply should be taken from the Area Electricity Board's ordinary distribution mains, and the kiosk lighting should be controlled by a time switch.

3. Charges for the supply of energy by Electricity Boards.—Standard agreements have been made with all Electricity Boards for the supply of energy at fixed annual charges to kiosks fitted with either a 25-watt or 40-watt filament lamp.

The annual charge only covers the supply of energy for lighting a lamp of the wattage stated from dusk to dawn (normally defined as from half an hour after sunset until half an hour before sunrise). In addition a charge for providing and connecting the service line is payable by the P.O. and a quotation for this should be obtained before the Board is instructed to provide the service (see TELEPHONES, Call Offices, A 3007).

4. Initial and final accounts for electricity supply to call offices.—Following an agreement made in 1956 with the South Wales Electricity Board the effective date for calculation of the charges for current for call offices in its area should be the first day of the month following the date of connexion or disconnexion. Similar arrangements may be made with other Electricity Boards.

5. Kiosk lighting record cards A 3364.—The T.M. (Clerical Divn., Accommodation Duty) is responsible for the payment of accounts for kiosk lighting charges.

A separate record card A 3364 should be maintained for each authority, company or individual to whom payments are made. Where practicable a common date for all payments to each authority, etc., should be arranged, but where this is not possible a card should be prepared for each date. Particulars of standard lighting charges per kiosk should be shown at the head of each card. Where a uniform charge is not made the various rates should be entered, together with the number of call offices to be charged at each particular rate. The entries should be amended as changes occur. When a payment is made particulars of the cheque and the period covered should be entered on the relative record card.

6. Air Ministry services.—An arrangement has been made with the Air Ministry for services to be given, on request from the T.M., to telephone kiosks on Air Ministry property or adjacent public roads, if no public service is available. The arrangement provides for the lighting of a 25-watt lamp, time switch controlled, from half an hour after sunset until half an hour before sunrise. A fixed annual payment is made by the A.G.D. to the Air Ministry for the electricity supplies.

7. War Department services.—Arrangements have been made with the War Department for the supply of electricity for the purpose of lighting telephone kiosks on War Department property. The actual kiosks to be lit should be agreed between the T.M. and the local station Commander. Charges are as follows:—

- (a) Kiosks lit with a 25-watt lamp
 - (i) from one hour after sunset to sunrise
£1. 10s. 0d. per annum.
 - (ii) from one hour after sunset to midnight
15s. 0d. per annum.
- (b) Kiosks lit with a 40-watt lamp
 - (i) from one hour after sunset to sunrise
£1. 15s. 0d. per annum.
 - (ii) from one hour after sunset to midnight
17s. 6d. per annum.

The accounts will be submitted by the local station Commander, to whom payment should be made by the T.M.

8. British Transport Commission.—Under an agreement with the British Transport Commission (see Tp.S.I. G3 VII and Appendix H), the Commission arrange for electric lighting, where available, to be provided in telephone call offices (and adjacent directory holders) on their property during the hours of darkness by means of a lamp of not less than 25 watts.

The charge is £2 10s. 0d. per annum for each call office lighted and £5 per annum for each directory holder lighted; payment should be made by the T.M. direct to the Regional Office of British Railways, the London Transport Executive or to the Dock Manager, as appropriate. The Clerical Divn. (Accommodation Duty) is responsible for the assessment of lighting charges (of cleaning also in the London Postal Area) and of site rents for 'waste land' call offices, and for the completion of the statement (see Appendix A to Tp.S.I. D5 III), on receipt from the Call Office Duty. Payment should be made, accompanied by this statement, half-yearly, not later than one month after 30 June and 31 December. The payments should be claimed in the Cash Account (commercial column) under the heading 'Water, Light and Fuel'. In some cases however, e.g. in kiosks situated on station forecourts or approach roads, lighting is provided by the Area Electricity Board under a separate agreement

with the P.O. and care should be taken to ensure that, in such cases, no lighting payment is made to the British Transport Commission.

9. *Telephone call offices lit by gas.*—An agreement with the British Transport Commission is in force in respect of those call offices on railway property which are lit by gas. This agreement provides that:—

(a) where a gas lamp has been provided specifically for lighting a call office from the outside, whether the station premises are fortuitously lighted or not, the full scale of £2 10s. 0d. per annum is to be paid.

(b) where a gas lamp, being part of the station general lighting, lights both the call office and the station premises, nothing is to be paid.

Payments should be made, and claimed, as in par. 8.

References:—C 3500
(P3/3) Lighting, A 3101
 TELEPHONES, Call Offices, A 3007

END