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## SERVICE POLICY: THE POST OFFICE RADIOPHONE SERVICE

(As this Instruction has been completely REVISED, individual paragraphs have not been "starred".)

## 1 GENERAL

1.1 The Post Office Radiophone Service enables customers with suitable radio equipment (mobiles) to make and receive calls to and from the Public Switched Telephone Network. All calls are controlled by designated Radiophone operators. Some special facilities are available (see para 9), and calls can be made to some foreign countries but calls cannot be received from overseas (see para 10). The mobiles are usually installed in vehicles, but some may be installed where line service is impracticable eg boats on inland waterways and in coastal waters. The system is simplex (ie speech is possible in only one direction at the one time) and there is a 'press-to-speak' switch on the handset of the mobile.

1.2 Each Radiophone Service area is controlled by one AMC, and by one Telephone Area (except for Severnside and S Wales). These are:-

<u>Service Area</u>	<u>Controlling AMC</u>	<u>Telephone Area</u>
Central Scotland	Glasgow Duncan	STB/Glasgow
East Pennine	Huddersfield	NETR/Bradford
Grampian	Dundee	STB/Dundee
London	Pimlico	LTR/South Central
Midlands	Birmingham Trunk & Toll	MTR/Birmingham
Severnside } & S Wales }	Bristol	{ SWTR/Bristol WMTB/Cardiff
South Lancashire	Manchester Chapelgate	NWTB/Manchester Central
Tyne-Wear-Tees	Darlington	NETR/Middlebrough

1.3 Radio coverage in each Service area is provided by a number of base stations (usually 3 or 4). The service has been designed to give good radio reception within service areas, but it is not practicable to define the areas exactly. It is not possible to guarantee good quality speech in all locations and there may be localised areas of indifferent reception. Coverage for each Service area is to be shown in a Marketing Commercial TI in the B4 series.

## 2 MOBILE EQUIPMENT

2.1 Customers obtain their Post Office attachment permitted mobile equipment from nominated suppliers - Pye Telecommunications Ltd or Storno Ltd or Marconi Mobile Radio either by outright purchase or by renting. The mobiles meet PO specifications. The suppliers or their agents install and maintain the equipment under contract with the customer (except for the Home Office which is allowed to maintain Radiophones used by Constabularies).

2.2 There are two basic types of mobile:

2.2.1 ten-channel mobiles use 9 traffic (speech) channels which are allocated between the base stations in each Service area; the tenth channel is a

separate control channel which does not carry speech and is used for signalling between the exchange operator and the mobile. The 55 radio channels allocated to Radiophone are subdivided into groups of ten channels: L1, L2, etc, to L8 for London service, P1, P2, P8 for other Service areas. These channels are shared by all the mobiles (approx 350 to 400) in the same channel group. The customer selects the speech channel appropriate to his location by using a channel selector switch (numbered 1 to 9) on the mobile (for details see para 3.1).

2.2.2 all-channel mobiles use any of the available speech channels and a control channel. As with ten-channel mobiles, the channels are shared with other users and are allocated between the base stations in each Service area. All-channel mobiles, however, do not require the manual selection of a speech channel for different base stations within the same Service area. A panel of six buttons (A, E, I, O, U and X) enables the user to select channels appropriate to a particular Service area. Once the correct button has been pushed (see para 3.2) no further adjustment is needed until the mobile user moves into a different Service area. When the user lifts the handset the mobile automatically searches for a free channel with the best signal at that location.

### 3 ROAMING FACILITIES

3.1 Ten-Channel Mobiles Most customers can use their mobiles in all Radiophone Service areas. The availability and the particular speech channels to use vary according to the mobile's channel group. Some London channel groups (eg L3, L6, L7 and L8) as yet have restricted roaming and the mobiles cannot be used in some Service areas. A channel selector card is provided for users of ten channel mobiles, and this shows which switch positions should be used in each base station area.

3.2 All-Channel Mobiles can be used in different Radiophone Service areas by the selection of the appropriate push button. These are:-

Central Scotland	A
East Pennine	I
Grampian	i
London	A
Midlands	E
Severnside & S Wales	A
South Lancashire	A
Tyne-Wear-Tees	E

Push buttons O, U and X are not used at present.

3.3 New subscribers in provincial service areas who are allocated a number after 15 October 1978 will not be able to roam into London for the time being, and the roaming facility in other service areas may be restricted from time to time. (THQ Circular S1 D7901/79 refers). It is hoped eventually all subscribers will have full roaming facilities.

4 WIRELESS TELEGRAPHY LICENCE The installation and operation of radio equipment requires a licence under the Wireless Telegraphy Act 1949. The Post Office issues a Wireless Telegraphy Licence to every Radiophone customer on behalf of the Home Office. This is issued at the same time as the customer is advised of the allocated Radiophone number. The licence should be signed by a Senior Sales Superintendent (or above) on behalf of the Secretary of State for the Home

Office. The licence is not transferable and terminates when the licensee ceases to be a subscriber to the Radiophone Service. Copies of the WT licence are obtained by RHQs from THQ/Svl.2.1.1.

5 NUMBERING RANGES The Radiophone number consists of 5 digits, and each Service area has a discrete numbering range. These are:-

<u>Service Area</u>	<u>Numbering Range</u>
London	10,000-19,999
South Lancashire	30,000-39,999
Midlands	40,000-49,999
East Pennine	50,000-59,999
Central Scotland	60,000-65,999
Grampian	66,000-69,999
{ Severnside	70,000-79,999
{ South Wales	80,000-89,999
Tyne-Wear-Tees	90,000-99,998

## 6 ACCESS TO MOBILES FROM THE PSTN

6.1 For calls from within a Radiophone Service area to a mobile travelling in the same Service area, the caller contacts the Radiophone by dialling 140 in a Director Area or 100 in non-Director Areas and asks for the Radiophone service (except for telephones with Bristol and Cardiff numbers which have 140 access).

6.2 Calls from telephones outside Radiophone Service areas or to a different Radiophone Service from that in which they are located are made by dialling 100 and asking the operator for the appropriate Radiophone Service by its correct name.

7 PO CHARGES consist of a quarterly subscription fee payable in advance and call charges. Service is provided under the Schemes. For details on tariffs, charging areas and conditions see TI D7 D1200.

8 DIRECTORY ENTRIES AND ENQUIRIES Radiophone is regarded as an exchange line and the normal rules on directory entries and ex-directory treatment should be followed. For details see TI D6 A0117 (para 3) and TI D2 E3003 (para 19). Radiophone users are encouraged to make directory enquiry calls from an ordinary telephone or public call office whenever possible to avoid use of Radiophone channel and operator time.

## 9 INLAND FACILITIES

9.1 Calls can be made to and from ships and oil platforms in coastal waters, and call offices and coinbox lines.

9.2 Calls can be made to Recorded Information Services, and Inland and International Telegrams.

9.3 Calls can be made to, but NOT received from, major towns in the Irish Republic providing the call can be connected immediately.

9.4 The following special call facilities are available to or from mobiles:-

- Advice of duration and/or charge (ADC)
- Directory enquiry (see para 8)
- Fixed time calls
- Personal calls
- Transfer charge calls (XFC)

9.5 Credit card calls can be made to mobiles, but *not from* mobiles.

9.6 The following special card facilities are NOT available:-

- Alarm calls (to be made available during 1979)
- Conference calls
- Contract calls
- Datel calls (but see para 12)
- Freefone (to freefone numbers or as the connect-to number)
- Picture calls
- Public Address
- Prolonged Uninterrupted Telephone Calls (PUT) (except by emergency authorities in civil emergencies or disasters)
- Temporary disconnection of service
- Temporary interception of calls after cessation of service
- Temporary transfer and interception of calls
- Third Party charging

## 10 INTERNATIONAL FACILITIES

10.1 Calls from foreign countries are NOT permitted to Radiophone mobiles.

10.2 Calls to foreign countries can be made where international service is available on a Demand basis but only when the routes are not in delay. Calls are not permitted to mobile services operated by foreign administrations. For details see Appendix A.

10.3 ADC, Station (ie calls to a specified telephone number) and Personal calls are permitted from mobiles to those countries where international service is available.

10.4 Collect calls (ie XFC) can be made from mobiles to those countries where international service is available and where the call is controlled by the UK operator (Method 1). For details see Appendix A.

10.5 Word Left, Credit Card, Datel, Picture, Fixed Time and Standing Order facilities are not available.

11 **EMERGENCY CALLS** It is not possible for Radiophone operators to give priority of answer to a mobile requiring an emergency service, and whenever possible the 999 service should be used from a telephone or call office. The motorway emergency telephones will usually provide the quickest means of contact on motorways with emergency authorities. Emergency calls are connected to the emergency authority appropriate to the location of the mobile.

12 **DATEL CALLS** are not a facility available on the Radiophone Service. However, customers may transmit data on the Radiophone Service using acoustically coupled devices, although such calls will be effectively restricted to less than 3 minutes as the timing signals will distort the transmission. See also paragraph 13.

13 **ATTACHMENTS TO THE SERVICE** Customers who wish to connect any equipment to their Radiophone eg Datel modems or scrambler devices must have prior written consent from the Post Office for attachment to the Radiophone Service. (See TI D5 D0010 and D5 C0010). The Post Office does not accept responsibility for the quality of signals transmitted or received when acoustically coupled devices are used. The user must not report to the Post Office failures in transmission or reception if the mobile can be used satisfactorily for speech.

14 **BROADCASTING OF CALLS BY RADIO COMPANIES** The Post Office has agreed with the BBC and IBA that 'live' Radiophone calls may be broadcast by radio companies as part of their news reporting operations subject to conditions set out in a Code of Practice (see Appendix B). The Post Office has also agreed to consider sympathetically individual requests for the broadcasting of Radiophone calls exceeding the duration limits specified in condition 8 of the Code of Practice or for non-news reporting. RHQs are responsible for deciding if these individual requests should be permitted taking into account the likely Radiophone traffic conditions at the time the facility is required. RHQs should notify THQ/Sv1.2.1.1 of their decision on such occasions.

15 **MORE THAN ONE MOBILE WITH THE SAME RADIOPHONE NUMBER** This is not a facility provided on the Radiophone Service and a different Radiophone number must be allocated to each mobile.

#### 16 **LIMITATIONS ON THE USE OF RADIOPHONE**

16.1 The use of Radiophone by a driver whilst the vehicle is in motion may be a potential danger to other road users, and may constitute dangerous and careless driving. Drivers should first stop the vehicle before making or responding to a call in the interest of road safety.

16.2 Radiophones must not be installed or used in aircraft or any other form of air transport. The reasons are: System 3 mobiles are approved only for land use and are not approved by the civil Aviation Authority; signals from mobiles would be received simultaneously by several Radiophone AMCs; no spare Radiophone frequencies are currently available for dedicated use by aircraft.

16.3 Several Radiophone Service areas include coverage of coastal waters and customers may install or transfer Radiophone mobiles to yachts or other small craft. There are no objections to the use of Radiophone in coastal waters, but both customers and local PO staff should be aware that the service affords different facilities from VHF maritime radio services provided by the PO. In particular, there is no equivalent to the guard watch on the international VHF distress frequency.

16.4 For quality of service reasons, the Radiophone service is not suitable for calls to or from moving trains.

16.5 Local and police authorities are responsible for licensing taxi-cabs and private hire cars. Some authorities do not permit private hire cars to use radio systems and this may include Radiophone.

17 **SERVICE USE** In a few exceptional circumstances Radiophone may be made available to staff. RHQs are responsible for authorising such use by RHQ and

Telephone Area staff, and for making the necessary arrangements with suppliers. Service use by THQ and CHQ is controlled by THQ/Svl.2.1.1.

**18 SERVICE FOR NOMINATED SUPPLIERS** Concessions allowed to nominated suppliers should be standard throughout all Regions, and be kept to the minimum practicable. Suppliers may be allowed free local demonstration calls from Post Office approved demonstration vehicles. They should be charged the usual quarterly rental applicable to Post Office customers for all mobiles in use. Action should be taken to bring into line any local arrangements which do not fall within these limits. RHQs may at their discretion arrange short term concessions, on an occasional basis, for specific events.

Any queries should be referred to THQ/TMk7.1.2.1 (01-357 2087).

**19 LONG DURATION CALLS** Normally it should not be necessary to restrict the duration of Radiophone calls. However in cases of severe congestion RHQs may at their discretion impose a limit on the length of calls, of whatever multiple of 3 minutes they consider the circumstances warrant. This may be in a particular emergency (eg temporary loss of a channel) or on a more general basis, ie at fixed times of day when peaks frequently occur. In the latter case, all customers would have to be informed of the restriction and the reason for it.

It will be necessary to take into account when deciding the limit that there will be an increase in ineffective channel occupancy caused by setting up additional calls, and consider whether this wastage is justified by allowing a greater number of customers the opportunity of making a call.

## 20 CUSTOMER LITERATURE

20.1 THQ/Svl.2.1.1 are responsible for preparing and producing customer operating instructions for all-channel mobiles and channel selector cards for ten-channel mobiles. Suggested amendments and requests for additional copies should be made to that duty, as soon as requirements are known.

20.2 RHQs are responsible for producing customer operating instructions for ten-channel mobiles, and any off prints of service coverage area maps, and new subscriber cards. Twenty copies of each new or amended version should be sent to THQ/Svl.2.1.1. A copy of the draft text for new versions of customer operating instructions for ten-channel mobiles should be forwarded to THQ/Svl.2.1.1 for vetting.

## 21 FUTURE PLANS

21.1 It is proposed to extend the coverage of some existing Service areas: east Pennine to include Hull; Midlands to cover M6 to Stoke-on-Trent; and Severnside and South Wales to include Swansea.

21.2 Enquiries relating to future plans including those for an automatic system should be made to THQ/TMk7.1.2.1.

## 22 ASSOCIATED TIs

- D2 E3003 Radiophone Service: operating procedures.
- D6 A0117 Telephone Directories: entries for freefone, recorded information and Radiophone Service.
- D7 D1200 Radiophone Service (tariffs and conditions).
- F3 E1161 Radiophone calls (international).

TIs are to be issued in the Marketing and Commercial series, and the proposed TI on Computer Billing will also include information on the Radiophone Service.

Any queries relating to this instruction should be made to THQ/Svl.2.1.1 (01-432 9236) unless otherwise specified.

Appendices A and B follow

## APPENDIX A

## INTERNATIONAL FACILITIES ON RADIOPHONE

Calls can be made from Radiophone mobiles to the following countries where service is provided on a Demand basis but only when these routes are not in delay. Collect calls can be made to those countries marked with a dagger (†).

†Alaska	†Tanzania
Algeria	†Uganda
Andorra	†United Arab Emirates:
†Australia	Abu Dhabi
†Austria	Ajman
†Bahamas	Al Ain
Bahrain	Fujairah
†Belgium	Jebel Dhana
†Bermuda	Ras Al Khaimah
†Canada	Sharjah
†Cyprus	Umm El Qaiwain
Czechoslovakia	†United States
†Denmark	USSR (Moscow only)
Dubai	Vatican City
†Faroe Isles	†Virgin Islands (USA)
Finland	Wake Islands
†France	West Malaysia
Germany, East	Yugoslavia
†Germany, West	
Greece	
†Hawaii	
†Hong Kong	
Hungary	
†Israel	
Italy	
†Jamaica (inc Cayman Islands)	
†Japan	
†Kenya	
Liechtenstein	
†Luxembourg	
Malta	
Midway Island	
Monaco	
†Netherlands	
†New Zealand	
Norway	
Portugal	
Puerto Rico	
Qatar	
San Marino	
Singapore	
†South Africa	
Spain	
†Swaziland	
†Sweden	
†Switzerland	

## APPENDIX B

## CODE OF PRACTICE

Broadcasting of Calls from Post Office Radiophone Services by  
Radio Companies as Part of their News Reporting Operations

The Post Office appreciates that the use of the Post Office Radiophone Service in radio news programmes is considered a desirable feature by radio broadcasters. Difficulties may arise, however, if this use of Radiophone is not subject to certain essential controls. Therefore, the following code of practice has been accepted by the IBA and BBC to safeguard the quality of service for other Radiophone users.

- 1 Any equipment to be attached to Post Office lines to make possible the broadcasting of Radiophone calls must, if not Post Office provided, have received prior permission in writing from the Post Office for its use in connection with the broadcast of Radiophone calls.
- 2 The broadcasting of Radiophone calls will only be used by BBC and IBA for their news reporting operations.
- 3 The Radiophone system was not designed to produce speech of a quality suitable for broadcasting, and occasions might arise when the quality of broadcast speech is poor. If this should occur criticism should not be levelled at the Post Office and such calls should not be broadcast.
- 4 Contingency plans exist for the Radiophone service to be made available to the emergency services in the event of a major incident. This may result in channels being held open with the consequent loss or severe deterioration of Radiophone Service to other users. Criticism should not be levelled at the Post Office if under these circumstances the Radiophone service obtained by the radio companies is poor.
- 5 All users should be made aware that speech is only possible in one direction at one time. The user should be experienced in the operation of Radiophone, especially the press-to-speak switch.
- 6 No attempt should be made to broadcast any Radiophone call whilst Post Office operators are engaged in setting up the connection.
- 7 Only standard Radiophone mobiles as provided by the nominated suppliers are permitted on the Radiophone system, and no modifications are to be made to the standard mobiles.
- 8 Long duration calls may lead to congestion and consequent deterioration of service to other Radiophone users as traffic channels are shared by a large number of Radiophone users. Broadcast Radiophone calls must be restricted to a maximum duration of:-
  - 8.1 3 minutes between 08.00 and 20.00 hours Monday to Friday;
  - 8.2 6 minutes between 20.00 and 08.00 hours Monday to Friday, all day Saturday and Sunday and Public Holidays.
- 9 The Post Office reserves the right to withdraw the facility for the broadcasting of Radiophone calls.