LONDON 16

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National Telephone Systems

LONDON 16 OFFICE PHONE SYSTEM

PROGRAMMING MANUAL

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PREFACE

This preface contains information which is for reference only; it is not necessary for you to read it in order to program your London 16 system.

Configurations and optional MF facility

The London 16 is a modular system, the configuration of which which can be expanded by adding further exchange line or extension cards, up to a maximum of 8 exchange lines or 16 extensions.

Whenever a line card is added or removed, the London 16 software will, on power up, compare the switch settings for the number of extensions and exchange lines with the previous settings. Any necessary adjustments will be made automatically (provided that the battery back-up is operational; see page 3).

An interface is provided on all systems for the connection of an RS232C/V24 printer to provide call logging information.

Any extension socket on the London 16 is compatible with either MF telephones or loop disconnect telephones. The MF telephones must have timed break recall buttons.

Operation in compliance with approval requirements

This section contains statutory warnings and instructions which must be observed in operating the London 16 office telephone system.

All extension telephone sockets must be labelled:

WARNING: CONNECT ONLY APPARATUS COMPLYING WITH 856301 TO THIS PORT

Only telephone instruments approved to BS6301 should be used as extension telephones on the London 16.

Interconnection directly, or by way of other apparatus, of ports marked "WARNING: CONNECT ONLY APPARATUS COM- PLYING WITH BS6301 TO THIS PORT" with ports not so marked may produce hazardous conditions on the BT lines and advice should be obtained from a competent engineer before such a connection is made.

The London 16-system is suitable for connection to loop calling unguarded clearing bothway BT lines.

The London 16 system has been designed as part of the London Range by National Telephone Systems Ltd and is manufactured in the UK. "London 16" is the designated model number.

The London 16 system is approved for loop disconnect and MF4 signalling to the PSTN.

Extensions must be cabled in a 2 wires per extension star configuration with telephones connected via type LJ2/1A sockets using 0.5 sq mm copper cable. The maximum cable loop resistance is 97.8 ohms (500 m 0.5 sq mm copper cable). The cable should comply with the appropriate parts of BS4808. The installation must comply with the DTI code of practice.

Refer to the next section of this manual for details of the power fail operation of the London 16.

The maximum cable length between the central control unit and the TJF is 30m. 2m cables are supplied as standard.

The London 16 may be operated with either loop disconnect or MF4 telephones. Only simple telephones approved to BS6317 and included in lists 1, 2, 5, 6, 7, 8, 9, and 10 should be connected to the London 16. The sum of the REN numbers of telephones connected to a single extension port must not exceed 3. The sum of the REN numbers of all telephones connected to the London 16 must not exceed 30.

PSTN lines may be selected either automatically by dialling "9" or manually by dialling "8NN" where NN is the number of the PSTN line to be selected.

The printer port fuse disconnection barrier on the system motherboard must be fitted with fuses rated in accordance with the motherboard labelling: 100mA / 250V.

Power fail operation

In the event of a mains power failure London 16 systems will automatically connect up to four of the exchange lines directly to four extensions, lines 1 to 4 being directly connected to extensions 221 to 224.

When power is restored, the exchange will again become fully operative. All stored numbers and system programming information will be retained for up to 2 years by internal battery back up.

Note: In Power Fail mode, where signalling to the PSTN is loop disconnect, the extension telephones connected to the power fail fallback extensions must be loop disconnect, pulse dialling telephones; where signalling to the PSTN is MF, the telephones must be MF with timed break recall.

The LONDON 16 INSTALLATION AND CONFIGURATION REC-ORD will contain information concerning the numbers of the BT lines which will be connected to each power fail extension.

2. INTRODUCTION

The London 16 is a very adaptable system, both in terms of the possible combinations of exchange lines and extensions and in the ways it can be set up to operate.

The installer of your London 16 will have programmed it according to your requirements at the time of installation. However, your needs may change from time to time, in which case you may wish to re-program your system.

Read the relevant section(s) of this manual carefully before you use any programming codes. If you are in any doubt about how to program the system as you wish, consult your approved maintainer.

Note: Section 15 of this manual is headed HOST/SUBSI-DIARY WORKING. Your London 16 may be directly connected to another phone system, either as a subsidiary to a larger system or as a host to another London 16 system. If so, you will be fully briefed by the installer. Most London 16 users can ignore any reference to Host/subsidiary Working in this manual.

London 16 Installation and Configuration Record

The system installer will have completed the Installation and Configuration Record at the back of the Installation Manual for your London 16.

It is important that this document is kept in a safe place and updated whenever the system configuration is altered in any way.

Certain items defining the system configuration can be set or modified only by the installer or approved maintainer of your system. These are:

- The number of exchange lines connected to your London 16: up to eight
- The phone numbers of each line: as defined in the Installation and Configuration Record.
- · The number of extensions: up to 16

- The type of signalling (MF or loop disconnect) on each outside line. This depends on the type of signalling used on your local public exchange.
- The master programming phone (from which most of the codes in this manual must be dialled; see over): normally extension 221, unless you require otherwise.
- Whether your London 16 is directly connected to another phone system, either as a subsidiary to a larger system or as a host to another London 16 (see note above).

If you have special requirements in relation to any of the above facilities then you should ask your installer to configure the system accordingly.

3. THE MASTER PHONE

Most of the programming codes listed in this manual can be dialled only from the *master phone*. This will normally be extension 221, although you can change this as described below. In everyday use, the master phone is no different to any normal extension; however, it has some additional capabilities which you might not wish to be used by every extension.

After dialling any of the codes listed in this manual you should hear Internal Dial tone. This tells you that the London 16 has accepted the programming instructions you have just dialled in.

If, after dialling any programming code, you hear Number Unobtainable tone (continuous high pitch), this means either:

- You have misdialled the code. In this case, hang up the phone, check the code and then try again.
- You are not dialling the programming code from the master phone.
- A password has been set to prevent unauthorised personnel from reprogramming the system (see below).

To make an extension, XXX, other than 221 the master extension, dial on extension 221:

1966 XXX

Extension XXX is now the master extension.

Password for master phone

If you wish to prevent unauthorised users from reprogramming the London 16 system, you may set a password by dialling on the master phone:

1999 password

where 'password' is any four-digit number you wish.

Then, whenever you wish to use any programming codes, you should first dial on the master phone:

1300 password

Anyone attempting to dial programming codes on the master phone without first keying in the password will hear Number Unobtainable tone.

When you have finished programming the system, to bring the password protection back into effect, dial:

170

If you forget to dial 170 after you finish programming, the London 16 will wait until no programming code has been dialled for 20 minutes. It will then automatically bring password protection back into effect.

You can cancel the password facility at any time, by setting a "password" of 0000. Dial on the master phone:

1999 0000

(Obviously, you will need to know the existing password in order to use the master phone to cancel it!)

Once the password has been cancelled, anyone using the master phone can program the London 16.

NOTE: ONCE YOU HAVE SET A PROGRAMMING PASSWORD IT IS IMPORTANT THAT YOU REMEMBER IT. IF YOU FORGET YOUR PASSWORD YOUR AUTHORISED MAINTAINER WILL HAVE TO VISIT YOU TO RESET THE SYSTEM.

4. EXCHANGE LINE GROUPS

Each exchange line attached to the system belongs to one of six exchange line groups, which are numbered 1 to 6. When your London 16 is first installed, all exchange lines belong to Group 1. This can then be altered if necessary, by dialling codes from a master extension.

Dividing the exchange lines into groups allows you greater control over which extensions will ring for which incoming calls, and which extensions dial out over which lines.

Typically, the groups would correspond to different departments within a company. For example, the Accounts department and the Sales department may have their own lines for incoming calls, which are not answered by the receptionist; or you may wish for billing purposes to allow some extensions to dial out only on certain allocated lines, e.g. those with meter pulses on. Alternatively, the groups could correspond to different companies "sharing" the same London 16.

To put a range of exchange line numbers into a group, dial:

198 group first line number last line number

For example:

198 2 3 4 - put exchange lines 3 and 4 into group 2 198 1 1 7 - put exchange lines 1 to 7 into group 1

5. TABLE OF MASK NUMBERS

The mask number defines a range of exchange lines for programming purposes in terms of the line groups (see Section 3). The value of mask selected when using the programming codes described below determines which exchange lines are available to the extensions being programmed, e.g. for making outside calls.

For example, where '63' appears in the DIAL column of the configuration printout as shown in Section 5, this indicates that the extension can dial out on any of the outside lines connected to the London 16. '15' would indicate that the extension could dial out on lines in groups 1, 2, 3 and 4 only.

For the value of mask you require, refer to the table overleaf.

Mask	G	ros	ıp:	5			Mask	G	ou	ps			
00							33	1					6
01	1						34		2				6
02		2					35	1	2	Ł.			6
03	1	2				_	36			3			6
04			3				37	1		3			6
05	1		3				38		2	3			6
06		2	3				39	1	2	3			6
07	1	2	3				40				4		6
08				4			41	1			4		6
09	1			4			42		2		4		6
10		2		4			43	1	2		4		6
11	1	2		4			44			3	4		6
12			3	4			45	1		3	4		6
13	1		3	4			46		2	3	4		6
14		2		4			47	1	2	3	4		6
15	1		3	4			48					5	6
16					5		49	1				5	6
17	1				5		50		2			5	6
18		2			5		51	1	2			5	6
19	1	2			5		52			3		5	6
20			3		5		53	1		3		5	6
21	1		3		5		54		2	3		5	6
22		2	3		5		55	1	2	3		5	6
23	1	2			5		56				4	5	
24				4	5		57	1			4	5	6
25	1			4	5		58		2		4		6
26		2		4	5		59	1	2		4		6
27	1	2			5	-	60			3	4		6
28				4			61	1		3	4		6
29	1			4			62						6
30		2		4			63	1	2	3	4	5	6
31	1	2											
32						6							

6. EXAMINING THE PROGRAMMING CONFIGURATION

If you have a printer attached to the call logging port of your London 16 you can at any time examine the way the system is currently programmed. Dial on the master phone:

F 1951

Information will be printed out as detailed on the next two pages. It is advisable to check this printout first whenever you do any reprogramming.

The meaning of the terms used in this section will become clear to you as you read through subsequent sections.

Note that if *call logging* is switched on (see page 17), the London 16 will continue to log calls during the time that the configuration is being printed out. Details of any calls made or received in this period will then be printed out after the configuration information.

Format of configuration printout

(Entries in the table show the standard shipping configuration; i.e. the way the London 16 is set when it is delivered and first installed.)

Software version: 16/146.0

Number of extensions Set by the installer Number of exchange lines Set by the installer

hh:mm:ss on ddd dd mmm

Time and date Day/night mode

Whether the system is

currently in night mode

Listed for each extension in table form as shown overleaf:

Extension properties

Extension Programming Configuration

Ext.	Ring	Dial	Answer	Bar	Hunt	Divert	Attrib
221	63/63	63	63	0/0	0		MSO
222	63/63	631	63	0/0	6		S
223	0/0	63 -	63	0/0	0		s
224	0/0	63	63	0/0	0		S
225	0/0	63	63	0/0	0		S
226	0/0	63	63	0/0	0		S
227	0/0	63	63	0/0	0		S
228	0/0	63	63	0/0	0		S
229	0/0	63	63	0/0	0		s s
230	0/0	63	63	0/0	0		
231	0/0	63	63	0/0	0		S
232	0/0	63	63	0/0	0		S
233	0/0	63	63	0/0	0		S
234	0/0	63	63	0/0	0		S
235	0/0	63	63	0/0	0		s
236	0/0	63	63	0/0	0		S
					0		

Day mode starts at hh:mm:ss A.M. Night mode starts at hh:mm:ss P.M.

RING: Outside line group for which this extension is a

reception phone (i.e. it will ring for incoming calls) in

day/night mode

DIAL: Outside line group on which this extension may make

outgoing calls

ANSWER: Outside line group on which this extension can

remotely answer incoming calls using the code '61' (see

the User Guide for details of this facility)

BAR: Call barring level for this extension in day/night mode:

0 = all outgoing calls allowed

1 = international calls not allowed

2 = international + long distance calls not allowed

3 = emergency calls only (999 in UK) allowed

HUNT: Hunting group that this extension is in; 0 = no hunting

group

DIVERT: Extension number to which calls for this extension are

diverted (if diversion has been set)

ATTRIB: M = Master phone

R = Remote answering of/diversion from this extension is barred.

barred

1 = Call interruption is barred for this extension

5 = Unanswered call (40-second) ringing is ON

D = Use of 602 mask code is disabled for this extension

Trunk line programming configuration

This gives information about the exchange lines (trunks) connected to your London 16. See the sections on host/subsidiary working and automatic call distribution for explanations of the terms used.

Trunk	type	access	recall	day	night
1	m£	direct	TBR	UCD	normal

TYPE: LD (loop disconnect) or MF

ACCESS: The host's PSTN access code, if the London 16 is

operating in subsidiary working mode. DIRECT indicates that the trunk has direct access to the PSTN; 0 indicates that the trunk is connected to a host but has no access to

the PSTN.

RECALL: Either TBR (timed break recall), or 'none'.

DAY/ Incoming call answering modes, either: DSA (direct

NIGHT: station access from host PBX); SEQ (sequential call

distribution); UCD (uniform call distribution); or NORMAL

(no call distribution).

7. DAY/NIGHT MODES

You can program the London 16 to have a different set of functions in operation at different times of the day (for example, a different set of reception phones, or different levels of call barring). These are referred to as day and night modes, although you can switch between the two at any time.

In addition, the London 16 can be programmed to switch automatically between day and night modes at the same times each day.

To set the start of day mode, dial:

1920 hhmm

To set the start of night mode, dial:

1921 hhmm

Where hhmm is the time in 24-hour format.

For example: dialling 19200830 and 19211730 will set the system to switch into day mode at 8.30 a.m. and into night mode at 5.30 p.m.

To cancel the automatic switching, set a "time" of 0000 by dialling 19200000 (day mode) and 19210000 (night mode).

You can switch the London 16 between day and night mode at any time, whether automatic switching is set or not, by dialling from any reception phone:

1600 - set day mode

601 - set night mode

This does not override the automatic switching, if set.

For example, if the London 16 is set to switch into night mode at 5.30 p.m. and into day mode at 8.30 a.m., and you switch manually into night mode at 4.30 p.m., the system will stay in night mode through until 8.30 a.m., when it will switch automatically into day mode.

8. SETTING THE TIME AND DATE

The London 16 has a built in clock and day/month/year calendar. Once the time and date have been set at installation, they need to be reset only: (i) on 1 March during a leap year; (ii) — in the UK only — for British Summertime; (iii) after a mains power failure, once power is restored.

It is particularly important that you remember to do this if you have a call logging printer attached to the system, or if you make use of the alarm call facility.

To set the time, dial:

1961 hhmm

Where hhmm is the time in 24-hour format.

For example:

19610203 2.03 a.m. 19611639 4.39 p.m. 19610000 12.00 (midnight)

The time will be set and the 'seconds' counter zeroed when you have finished dialling the last digit of the code. You will hear *Dial* tone.

The date is set by three different codes:

1960 year (19yy) - two digits

1962 day and month - four digits

1963 day of week - one digit

19631Monday For example: 1986 19632Tuesday 196086 19633Wednesday 9 December 19620912 19623004 30 April 19634Thursday 19635Friday 19620101 1 January 19636Saturday 19637Sunday

After dialling these codes, you should hear dial tone. If you hear Number Unobtainable tone, this indicates that you have mis-dialled the code or that the time/date is invalid. Hang up the phone, check the code and then try again.

9. CALL LOGGING AND COSTING

The call logging printout

If you have a printer attached to the call logging port of your London 16, you can obtain a printout giving details of all external calls made or received.

(Note: If your system has been installed without a printer, and you subsequently decide to fit one; or if you change to a different model of printer—refer to the Installation Manual for details of how to adjust the baud rate if necessary.)

You can switch the call logging facility off or on from the master phone at any time, using the codes:

19650 Call logging off

19651 Call logging on

When the London 16 is first switched on, call logging will be on.

As each external call (outgoing or incoming) is completed, the following information is printed out, in column form from left to right:

- · Date of call (Day of week, day, month, year)
- Finish time (Hours: minutes: seconds 24-hour clock)
- Outside line number (01 to 08)
- For outgoing calls: the first 18 digits of the outside number dialled
- For incoming calls on exchange lines: INCOMING mm:ss

or

UNANSWERED mm:ss

where mm:ss is the time for which the call was ringing before it was answered or the caller rang off, in minutes and seconds.

- For other incoming calls (subsidiary working systems only):
 DIRECT ACCESS for direct dialled call from host PBX
- Charge account code if entered (see the London 16 User Guide); if not, '----'.
- Length of time off hook (hours: minutes: seconds)
- Number of meter pulses used (if meter pulse detection is installed, three digits; if not, then ---)
- Cost of call in pounds and pence (if meter pulse detection is installed). For currencies other than Sterling, refer to notes supplied with the software variant.
- If the call was not on a public exchange line, in place of the above two items: HOST PBX for a call to an extension on the host from a subsidiary working system
- Number of the extension involved when the call finished (221 to 236)
- Number of the extension that originally made or received the call (if different from above; if not, then '--

Examples of the output from the London 16 call logging port are given overleaf.

```
FRI 19 AUG 88 17:02:44 5 1234 22222 00:08:03 HOST PBX 224 ---
```

Incoming call from host PBX using direct dialling:

Notes:

The header line is printed twice daily, at midday and midnight, as well as after dialling 1951 (to print out the programming configuration), 1952 or 1953 (to print out the contents of memories) or 1934 (to print out meter totals).

As well as the header lines, blank lines and lines of diagnostic output may be mixed with the call logging information. For call logging purposes, use only lines beginning with a day (MON to SUN).

Meter pulse detection

Up to eight exchange line cards can be installed in the London 16 (see the *Installation Manual*). As an option, exchange line cards incorporating a meter pulse detection facility are available.

The card will detect and count meter pulses (if they are present) on the exchange line. Meter pulse detection enables you to determine the exact cost of outgoing exchange line calls from the London 16. The number of meter pulses detected, i.e. the number of charge units used on a call, is shown for each call as part of the call logging information (see above).

You can find out the cost of each meter unit from the PTT; in the UK, this is British Telecom. This information should be programmed into the London 16 if you wish to know the cost of your outgoing calls. If for any reason you wish to charge other people for the use of your phones (for example, in a guest house), you may program in whatever 'cost per unit' you choose.

To program in the cost of a meter unit, dial:

1935 pppp

where pppp is the cost of a meter unit in one-hundredths of a penny. For currencies other than Sterling, refer to notes supplied with software variant.

For example:

1935 0540 sets 5.40 p per meter unit 1935 9999 sets 99.99 p per meter unit

When the London 16 is first switched on, the cost per meter unit is set to zero. If there a mains power failure, the unit cost is held by the system's internal battery back-up.

The system's memory keeps a running total of units used, and the associated cost for each extension and exchange line. Each store can be individually reset to zero.

To get a printout of the total meter pulse count (0000 to 9999), and the total cost in pounds (£0000.00 to £9999.99), for each extension and exchange line, dial:

F 1934

To reset a meter store to zero, dial:

1936 extension number

or

1937 exchange line number

(Extension number is 221 to 236; exchange line number is 1 to 8.)

To clear all meter totals at once, dial:

1933 0000

10. CENTRAL DIALLING MEMORIES

The London 16 has 40 central dialling memories, numbered 30 to 69, shared between all the extensions. These can be dialled using short codes (see below and the *User Guide*). You may use these for storing numbers likely to be used by more than one extension.

Each extension also has five personal memories, which are programmed from the extension phone.

Numbers stored in memories 50 to 69 are subject to the call barring restrictions placed on any extension attempting to dial an outside call. For example, if an international number is stored in one of these memories, any extension barred from making international calls will hear Number Unobtainable if they dial the short code.

Memories 30 to 49 can be used by all extensions regardless of any call barring. For example, you may have barred some extensions from making international calls, but want them to be able to dial your overseas sales office. Store the number in one of these memories, and all extensions can dial it using the short code.

The central memories are programmed from the master phone.

To store a number in central memory, dial:

603 MM outside number

where MM is the 2-digit number of an unused memory in the range 30 to 69. The outside number may be up to 18 digits long.

Wait for a few moments; then put the phone down to store the number.

Any number previously stored in that memory will be overwritten

To dial an outside number from a central memory, pick up the extension phone and dial:

暖5

Wait for an outside dial tone, then dial the 2-digit code from the memory (30 to 69).

Overdialling

You may store the first part of a number in memory, so that after dialling the short code the user can then add the rest of the number. This is useful if you make a lot of calls to the same city or overseas country; you may store the dialling code for that place in memory and users can dial the individual number having dialled the code from memory.

For example, if 01-263 is stored in memory number 33, to make a call to 01-263 0201, the user dials 5 ... 330201.

Remember to store any part numbers in memories 50 to 69 if you wish them to be subject to call barring.

Printing out the memory contents

If you have a printer attached to the call logging port of your London 16, you can obtain a printout of all the numbers stored in the central memories, by dialling:

DE 1952

To list the numbers stored in the personal memory of an extension, dial:

1955 extension number

If there is a mains power failure, all stored numbers will be retained in the system memory.

11. PROGRAMMING INDIVIDUAL EXTENSIONS

You can set certain functions individually for each extension. Many of these functions are independently programmable for day and night mode.

- Hunting group membership
- Outside call barring: which types of call the extension is permitted to make, in day and night mode
- Which outside lines are available to the extension for making outgoing calls
- Which outside lines cause the extension to ring for incoming calls, in day and night mode
- Which outside lines can be remotely answered (using the code '61') by the extension
- Call privacy—protection from call intrusion, remote call answering and remote call diversion
- Local ringing control: whether the extension is able to make itself a reception phone

Setting the range of extensions to be programmed

Before dialling any of the programming codes for setting the facilities listed above, you must indicate to the London 16 which extensions you wish to program. This is done by setting a *range*, using the dialling code:

18 first extn last extn

For example:

18225227 - extensions 225 to 227 18222231 - extensions 222 to 231

18224224 - extension 224 only*

* If you wish to program only one extension, you must enter its number twice, since it is both first and last in the range.

The extension programming codes (listed below) that you subsequently dial will then apply to this range of exten-

sions only, until you set a new range. The properties of any extensions outside the current range will not be affected.

DO NOT FORGET TO SET THE EXTENSION RANGE BEFORE YOU ENTER EXTENSION PROGRAMMING CODES.

Hunting groups

Hunting groups are useful if your company is divided into departments, and any extension in a particular department is equally able to take a call. For example, there may be three extensions in Sales; a caller asking for Sales could be dealt with by any of these. So one hunting group number could be used to dial all three extensions.

You can have up to eight hunting groups on the London 16; these are numbered 1 to 8, and are accessed by dialling 31 to 38.

When a hunting group has been programmed, then dialling the directory number of the group (31 to 38) will ring the first free extension in the group. The exchange will hunt cyclically for a free telephone, starting from the one used the last time the group was dialled. This ensures that calls are distributed evenly around the group. Individual extensions within the hunting group can, of course, still be dialled using their extension numbers.

Another advantage of hunting groups is the use of the '62' remote answering code (see the *User Guide* for details). If an extension phone is ringing unanswered for an internal call, another extension in the same hunting group can pick up the call by simply dialling 62. For this reason, it is often convenient to put extensions in the same room into a hunting group.

To put all the extensions in a programming range into a hunting group, dial:

1978 H

Where H is the hunting group number (1 to 8).

For example:

To put extensions 222, 223, 227 and 228 into hunting group number 1, dial:

18 222 223 1978 1 18 227 228 1978 1

To remove all extensions in the current programming range from any hunting group they are in, dial:

1978 0

Call barring

Each extension can be programmed to be allowed one of four levels of outside call service for day/night mode. If the extension user attempts to dial a number they are barred from calling, they will hear Number Unobtainable tone.

The dialling codes for setting call barring are:

1974 B - day mode barring

1977 8 - night mode barring

Values of B:

- O Allow all calls
- Allow no international calls (numbers beginning with 010 or 000, or international operators)
- 2 Allow no international or long distance calls (numbers beginning with 0 or operator services - 100 to 109 or 15x); i.e. local calls only
- 3 Allow no outgoing calls except emergency (999) calls

(Dialling codes given above are for UK; they may differ in other markets.)

For example:

To allow long distance calls on extensions 225, 226 and 227 in day mode and local calls only in night mode, dial:

18 225 227

1974 1

1977 2

The London 16 is normally installed with all extensions permitted to make any type of call (level 0).

The call barring status of each extension is shown in the BAR column of the configuration printout (see page 12), as a value of B.

Ringing

Each extension may be programmed to ring for incoming calls on certain outside lines. The outside lines are defined by the mask value, as listed on page 10.

To set extensions in the current programming range to ring for incoming calls, dial:

1972 mask - day mode ringing

1973 mask - night mode ringing

For example:

1972 63 - daytime ringing for all lines

1973 14 - nighttime ringing for lines in groups 2, 3 and 4

1972 00 - no ringing at all during day time

To set extension 226 to be an additional reception phone in night mode (for all lines), dial:

18 226 226 1973 63

The London 16 is normally installed with extensions 221 and 222 as reception phones which will ring for all lines during both day and night operation, while the other extensions do not ring in either mode.

The lines for which each extension can be made to ring are shown in the RING column of the configuration printout, as a value of mask. Note that the same lines should also be shown in the ANSWER column (see page 12)

Local ringing control

Extensions are able to make themselves reception phones for any of the lines which they are permitted to answer remotely (as listed in the ANSWER column of the configuration printout; see page 12). This is referred to as local ringing control.

Reception phone facilities are described in more detail in Section 11; briefly, they can answer incoming calls directly, switch between day and night modes and intrude on other calls.

This is achieved by dialling, on the extension itself:

602 mask

You can control from the master phone which extensions have the ability to use the 602-mask code, as follows:

19461 disables the use of the 602-mask code...

19460 enables the use of the 602-mask code...

.....by all extensions in the current programming range.

Extensions which have been disabled from using the 602mask code will hear Number Unobtainable tone if they dial it.

Extensions with local ringing control disabled are indicated in the configuration printout by a D in the ATTRIBUTE column.

The London 16 is normally installed with all extensions permitted to make themselves reception phones for all outside lines.

Outgoing line restrictions

You can program which outside line groups (as defined by the mask value) are available to each extension for making outgoing calls. Whenever the user dials '9', '5' or '8N' to get an outside line, only those lines belonging to the group you have specified can be used to make the outgoing call. If none of these lines are available, the extension user will hear *Busy* tone.

For all extensions in the current programming range, the dialling code:

1975 mask

programs which outside lines can be used to make outgoing calls. For example:

1975 63 - can dial out on any line

1975 03 - can dial out on line groups 1 and 2 only

1975 12 - can dial out on line groups 3 and 4 only

To program extensions 221 to 223 to make outgoing calls on line groups 1 and 2 only and extension 224 to make outgoing calls on all lines, dial:

18 221 223 1975 03 18 224 224 1975 63

The line groups on which each extension can dial out are shown in the DIAL column of the configuration printout, as a value of mask.

The London 16 is normally installed with all extensions allowed to dial out on all outside lines.

Incoming call answering using '61'

Incoming calls can normally be remotely answered (picked up) from non-ringing extension phones using the code 61 (see the *User Guide* for more detail). You can control which outside line groups (defined by the mask value) can be remotely answered by each extension in the current programming range by dialling:

1976 mask

For example:

1976 63 - can remotely answer calls on any line

1976 17 - can remotely answer calls on outside line groups 1 and 5 only

1976 00 - cannot remotely answer calls on any line

The line groups which may be remotely answered by each extension (and hence the lines for which that extension may be made a reception phone) are shown in the ANSWER column of the configuration printout, as a value of mask.

The London 16 is normally installed with all extensions able to answer calls remotely on any line using '61'.

Remote call answering protection

By setting this attribute, you can prevent internal calls to an extension from being intercepted by another extension using any of the remote answering or diversion codes (see the *User Guide* for full details of these codes):

62 remote answer within hunting group

65xx remote answer

694xx remote diversion (follow me)

695xx cancel remote diversion

This may be useful for security reasons, if calls to a particular extension are especially confidential.

To set or clear the 'remote call answering/diversion protection' attribute for all extensions in the current programming range, dial:

19430 - Allow remote call answering/diversion (cancel protection)

19431 - Prohibit remote call answering/diversion (set protection)

Extensions which have remote answering/diversion protection set are indicated by an R in the ATTRIBUTE column of the configuration printout.

The London 16 is normally installed with remote answering and diversion permitted for all extensions.

Call intrusion protection

By setting this attribute, you can protect calls in progress on an extension from intrusion by a reception phone (see the section on reception phones in the *User Guide* for full details). If a reception phone dials **66** in an attempt to interrupt a call on a protected extension, they will continue to hear *Busy* tone. This may be useful for security reasons, if your calls on a particular extension are especially confidential or important and therefore not to be interrupted.

To set or clear the intrusion protection attribute for all extensions in the current programming range, dial:

19440 - Allow call intrusion (cancel protection)

19441 - Prohibit call intrusion (set protection)

Extensions which have call intrusion protection set are indicated by an I in the ATTRIBUTE column if the configuration printout.

The London 16 is normally installed with call intrusion permitted on all extensions.

12. RECEPTION PHONES

Setting reception phones

An extension can be made to ring for incoming calls on selected outside line groups by dialling from the extension itself:

602 mask

if the extension has local ringing control enabled (see pages 25–26).

This will make the extension a reception phone for the lines defined by the mask value, for whichever mode the London 16 is currently in (day or night) only.

For example:

Dialling 60263 on extension 224 when the system is in night mode will result in extension 224 ringing when there is an incoming call on any outside line, whenever the system is in night mode.

To cancel the reception phone facility, dial on the extension concerned:

60200

This may be useful, for example, if your receptionist is temporarily absent or especially busy, and you wish to take incoming calls on another extension.

This facility is available to every extension on the London 16 (unless disabled by the master phone using the code 19460); however, it is not described on the extension user card for security reasons. This means that you can control which extensions know how to make themselves reception phones.

Note: If an extension has been restricted from remotely answering certain lines using '61' (see page 26), the same restriction will apply when that extension is made a reception phone; so it will ring only for those lines that it is allowed to answer.

For example: If extension 223 has been set by dialling 197601, then dialling 60263 on extension 223 will make it a reception phone for line group 1 only. If you have a printer attached to the call logging port of your London 16, you can check this by dialling 1951 to obtain a configuration printout and referring to the ANSWER column.

Call diversion

Call diversion, which is described in the *User Guide*, applies both to incoming trunk calls on reception phones and to internal calls.

Note that if calls to extension A have been diverted to extension B, then extension B will get calls intended for both extensions; i.e. it will ring for calls on any incoming line group for which either extension is a reception phone. Dialling 60200 on extension B will not stop it ringing for incoming trunk calls intended for extension A; this is implemented by dialling 60200 on extension A, or by cancelling the diversion.

For example: Suppose that extension 225 has dialled 60263, making it a reception phone for all lines; and extension 223 has dialled 60210, making it a reception phone for lines in groups 2 and 4 only. Extension 225 diverts its calls to extension 223 by dialling 604223. Calls on all lines will then ring on extension 223. If extension 223 does not wish to be a reception phone for lines in groups other than 2 and 4, the user should either dial 60200 on extension 225 or cancel the diversion by dialling 695225.

Unanswered call ringing

By default, all extensions ring for incoming calls which remain unanswered after 40 seconds. This 40-second ringing can be turned off for an extension by dialling on that extension:

FF 69900

To turn 40-second ringing on again, dial:

FF 69901

Extensions with 40-second ringing turned on are indicated in the configuration printout by an S in the ATTRIBUTE column.

Note: There must be at least one ringing phone for every two exchange-lines on the London 16. If by dialling 69900 you would take the system below this minimum, then you will hear Number Unobtainable tone in response to the code instead of the usual dial tone.

13. AUTOMATIC CALL DISTRIBUTION

Incoming calls on outside lines (trunks*) can be answered in one of three different **reception modes**, which are explained below. Different incoming modes can be set for each line in day mode and night mode.

(* If trunks are not in direct dialling in mode; this applies only when the London 16 is connected to a host system.)

175 6 G m

selects daytime incoming mode m

for line group G

175 7 G m

selects nighttime incoming mode m for line group G

where m is the incoming mode number—0, 1 or 2—as follows:

Mode 0 - no call distribution All extensions which have been set as reception phones for line group G ring simultaneously when there is an incoming call on a line in that group.

Mode 1 -sequential hunting Incoming calls on lines in group G will ring first on the lowest numbered free extension which has been set as a reception phone for that line.

For example: if extensions 221, 222 and 225 have been set to ring for incoming calls on all lines (mask = 63), then an incoming call will ring first on extension 221. When a second call comes in (and extension 221 is busy), this call will ring on extension 222. If both extensions 221 and 222 are busy, then it will ring on extension 225. If the call has rung for a (programmable) period on extension 221 and not been answered, then extension 222 will start ringing. If after the same period extension 222 has not been answered either, extension 225 will start to ring.

The default timeout for ringing each new phone is 15 seconds. This can be reset by dialling:

175 8 ss

where ss is the timeout period in seconds (01 to 39).

If none of the reception phones are free, then the first one to become free will get the call.

In all cases, if the call remains unanswered for 40 seconds, secondary ringing applies, i.e. all phones which have not been disabled using the 69900 code will ring.

Mode 2 uniform call distribution

This is similar to sequential mode, except that the hunting starts from the reception phone after the one that last received a call.

In the example above, if extension 222 had received the last incoming call, then the next call would ring first on extension 225.

The configuration printout shows the incoming call answering mode in day and night mode for all trunk lines.

When the London 16 is first installed, extensions 221 and 222 are reception phones for all trunks in both day and night mode, with no call distribution set.

14. THE RECEPTION CONSOLE

A reception console is provided as an option on the London 16.-

If a console is installed, it will be associated with one extension port. Anyone dialling this extension number, or dialling 0, will be put through to the console.

When your London 16 is initially installed, extension 221 will be programmed as being associated with the console, if fitted. However, it is not advisable to install the console on extension ports 221–224, as these are the power-fail extensions for exchange line 1–4.

The London 16 Installation Manual instructs the installer to connect the console to a different extension port, for example 225, and to reconfigure the system accordingly. You should ensure that this has been done; if the system is still configured with 221 as the console extension, refer to the next section for instructions on changing the console extension.

The console provides:

- · Lights to show the status of extensions
- Lights to show the status of exchange lines
- Eight keys selectively to answer different types of incoming calls
- A 12-button keypad
- A 16-character liquid crystal display
- 10 facility keys
- An indicator light for POWER OFF/ON
- An indicator light for NIGHT/DAY MODE
- An indicator light for CALLS PARKED

The above features are described in detail in the Console User Guide.

Changing the console extension

The code:

1967 extension number 23 [

causes the specified extension to become the reception console extension, i.e. the extension to which the console is linked; this extension does not have dial tone. This extension can now be called by dialling "0". You should always ensure that the console, if fitted, is connected on a non-power-fail extension port, and that the correct extension is programmed as being associated with the console.

If you do not have a console on your London 16, you should dial **1967220** to ensure that no extensions are set as the console extension. Any user dialling "0" will be directed to extension 221.

Assigning outside line groups to call answer keys

There are four keys on the console for answering incoming calls.

Any of the six outside line groups may be assigned to any of the four keys. For example, incoming calls on outside line group 1 could appear on key 1, group 2 on key 2, etc.

1901 G assigns group G to key 1

1902 G assigns group G to key 2

1903 G assigns group G to key 3

1904 G assigns group G to key 4

For example:

to assign groups 1 and 5 to key 1, groups 2 and 6 to key 2, group 3 to key 3, and group 4 to key 4 - Dial: 19011 19015 19022 19026 19033 19044

Each outside line group can be assigned to one key only.

When your London 16 is first installed, all the outside lines are in group 1; this will be assigned to key 1 on the console.

Any assignment of a group to a key can be cancelled by dialling:

1900 group

Note: 40-second ringing for unanswered calls (see page 30) activates all four incoming group keys on the console, whether or not they are programmed to ring for the line in question.

15. OPTIONAL EXTRAS

In the cabinet of your London 16 is a slot for the connection of a number of different types of plug-in options cards. See the *Installation Manual* for details of how these cards, and associated devices, are connected. Options include:

Intruder alert alarm

If you have an alarm connected to your London 16, to set it to detect intruders, first ensure that it is in the idle state (refer to the documentation supplied with the alarm itself) then dial on the master phone:

19221

If the alarm is triggered by an intruder, all phones on the system will ring with a distinctive triple cadence.

This ringing will continue until one extension answers. The answering extension will hear the *Alarm* tone (for a demonstration of how this sounds, you can dial **207** on any phone). Other extension phones will carry on ringing for the time set as the alarm call timeout* or until they are picked up.

(* By default, 4 minutes; the Installation Manual gives details of how to alter this.)

After the alarm has been activated and ringing has stopped, it will not be triggered again until it has been reset by your dialling 19221 on the master extension.

To disable (inactivate) the alarm, dial:

19220

This code will not inactivate the alarm once it has been triggered; the only way to stop the phones ringing is to pick them up individually.

If you have a call logging printer attached to your London 16, and call logging is switched on, details of alarm activity will appear in the call logging printout as in the following example:

```
TUE 19 JAN 88 17:30:05 ALARM ENABLED
WED 20 JAN 88 08:30:00 ALARM DISABLED
WED 20 JAN 88 17:30:50 ALARM ENABLED
THU 21 JAN 88 00:45:30 ALARM TRIGGERED
```

Note that this is not a true burglar alarm, since if mains power fails or is disconnected, it will not operate.

However, if there is a mains power failure, programming information (i.e. whether or not the alarm is set) will be retained in the London 16's memory by battery back-up.

Music on hold

If this option is fitted and switched on, any callers who are put on hold or park will hear electronically synthesised music. For a demonstration of how this sounds, you can dial 201 on any phone.

To switch on music on hold, dial from a master phone:

19641

To switch off, dial:

19640

Note that if a caller is camped on to a ringing or busy extension (see the *User Guide*), they will hear *Busy* or *Ring*ing tone until the extension becomes free or is answered, whether music on hold is switched on or not.

Door latch control

With this option fitted, you can lock and unlock your door from the master phone. This may be used, for example, as a security intercom.

The codes for locking and unlocking the door are:

19231 drives pin HIGH 19230 drives pin LOW

Refer to the instructions supplied with the door latch device as to which position means locked and which means unlocked. **Note:** If you have placed an extension phone near the door for use as a security intercom, you may wish to bar all external calls from this extension. Refer to page 24 for programming codes.

16. HOST/SUBSIDIARY WORKING

The outside line ports on the London 16 may each be connected either to the PSTN or to a host PBX system. This is determined at installation, and should be indicated to the London 16 as detailed below. The London 16 may also act as host to another London Range system, usually another London 16 or a London 8.

If your London 16 is not installed in host/subsidiary working mode, you may ignore this section completely.

London 16 as subsidiary

Programming PSTN access codes

When programming, it is necessary to indicate to the London 16 system if a line is connected to a host and, if so, what the host's PSTN access code is. The default is a direct PSTN line.

1750 N outside line port N is a direct PSTN line

1751 N D outside line port N is connected to a host, with PSTN access code digits D

1752 N DD outside line port N is connected to a host, with PSTN access code digits DD

outside line port N is connected to a host, but without access to PSTN allowed

If the host is another London system, D is 9. If the host is not a London system, the PSTN access code (D or DD) should be obtained from the documentation supplied with the host system.

When a user of the London 16 dials 9 or 5 to access an outside line, if the line is a direct PSTN line, the user hears Public Dial tone and then dials the required outside number.

If the line is connected to a host, the host's PSTN access code (DD) is automatically dialled 1 second after seizing the host extension line; speech is not connected until this access code has been dialled. The user will then hear public dial tone and can dial as normal.

For call barring and call logging purposes, the one- or twodigit host PSTN access code is ignored.

Where some of the outside lines are connected to a host and some are directly connected to the PSTN, it is advisable to set the lines going to the host as having no access to the PSTN. This means that all PSTN calls made from the London 16 will be on direct lines rather than going through the host. This is particularly important when the host system and the London 16 are in different telephone areas.

It is not possible for users of the London 16 to transfer calls made or received on direct PSTN lines to extensions on the host. If users wish to make outside calls which can be transferred to host extensions, certain lines can be set to have access to the PSTN through the host and the users can be advised to use 8N to select a specific outside line if necessary.

Access to host PBX

The London 16 user can access the host system either by dialling 7, which selects any outside line port connected to the host; or by dialling 8N to select a specific outside line port N. Whichever code is used, no PSTN access digits are dialled; but any digits dialled by the user will be forwarded to the host PBX, allowing the user to dial extensions on the host.

To prevent users from undermining the London 16's call logging and call barring facilities when using the 7 or 8N codes, the host PBX's PSTN access code(s) should be barred. For example, if the host is a London Range system, then the '5' and '9' codes should be barred.

176 1 D bar host dialling codes beginning with digit D

176 0 D allow host dialling codes beginning with digit D

The default is all host dialling codes allowed.

Host recall

When a London 16 user is on a call involving the host PBX, and the host PBX line is set for MF dialling, then the user can dial R* (on an MF extension) or 60 (on a loop disconnect extension) to issue a timed break recall to the host. Any further digits dialled by the user are then ignored by the London 16 but repeated to the host PABX in DTMF. This feature-times out if nothing has been dialled after 10 seconds, or until the R button is pressed again.

It is necessary to program the trunk(s) in question for timed break recall, using the following codes:

1740 N N No recall on outside lines N to N1

1741 N N Timed break recall on outside lines N to N

The length of the timed break can be varied from 100 to 900 ms in steps of 100 ms, as follows:

1754 n gives a break time of n x 100 ms

For example:

17541 gives a break time of 100 ms 17545 gives a break time of 500 ms

The default value is 100 ms; this will be the correct value in most cases in the UK. If a higher value needs to be set, refer to the documentation supplied with the host system.

Direct station access

If the trunks connected to the host use MF signalling, direct station access (DSA) is possible; this allows MF extensions on the host PBX to dial direct to extensions on the London 16 without going through a reception phone and being transferred.

If an outside line port is programmed for DSA mode, host PBX users seizing the trunk will hear internal dialling tone, and can then dial the London 16 extension number they require (or they can dial a hunt group, or request tone demonstration). If the outside line port is not programmed for DSA mode, incoming calls on the trunk will be answered on London 16 reception phones in the same way as incoming exchange line calls.

1791 N N¹ sets DSA mode for outside line ports N to N¹

1790 N N¹ sets non-DSA mode for outside line ports

N to N¹

The default is non-DSA (reception) mode.

Because there is no way for the London 16 to detect clearforward on a call from an exchange line, DSA calls are subject to a timeout to avoid permanent seizure of the trunk, as follows:

Extension busy 20 seconds*
Number Unobtainable 20 seconds
Tone demonstration 20 seconds

Dial tone/dialling in 20 seconds unless further

progress digits are dialled

Secondary ringing applies on unanswered calls in the normal way when DSA mode is set.

* The 'Extension busy' timeout is configurable; see Table 2 of the Installation Manual for details of how to change it.

London 16 as host

Other London Range systems can be connected as subsidiaries to extension ports on the London 16. When programming the system, ensure that:

- Extensions to which subsidiary systems are connected have 40-second ringing disabled using 69900
- Extensions to which subsidiary systems are connected are not power-fail extensions

Access to subsidiary

The number of the extension port to which the subsidiary is connected may be used as the access code to the subsidiary. If the subsidiary is in DSA mode (see above), extensions on the host dialling this extension number will hear internal dialling tone; they can then dial the extension number they require. If the subsidiary is in non-DSA (reception) mode, host extensions will be connected to the reception phone(s) on the subsidiary.

Note: Only telephones with DTMF4 signalling have access to the subsidiary. make sure that MF phones (with timed

break recall) are fitted on all extensions requiring this facility.

If more than one extension is connected to a subsidiary, it is recommended for ease of use that these extensions are put into a hunting group. In this way, one access code, 31 to 38, can be used to preface all extension numbers on the subsidiary. Even if only one extension is connected to the subsidiary, it may still be desirable to make this extension a hunting group; users dialling a code beginning with the digit '3' (rather than '2' for a normal extension number) will be reminded that they are dialling a number on the subsidiary and that they cannot use all the facilities available to them on a straightforward internal call.

If there is more than one department sharing the subsidiary, you can divide the relevant extensions into different hunting groups, and the trunks on the subsidiary into corresponding outside line groups. Making extensions in the subsidiary departments reception phones for particular outside line groups allows users on the host system to use different hunting group numbers to access different departments.

Compiling an internal telephone directory

The Appendix to the London 16 User Guide gives a brief explanation of host/subsidiary working, and what facilities may be used in this situation. However, to make use of the system as simple to use as possible, the internal directory should be compiled so that the user has only to refer to it to make calls to the host or subsidiary. Two examples are given below for guidance.

For the subsidiary system All extension numbers on the host system should be listed preceded by the access code. The access code is normally 7.

For example: Suppose that the host is a London 16. Extensions on the host should be listed in the directory as: 7 pause 221 (or 0)

7 pause 222

.. etc.

It may also be useful if the following points are included in the directory:

- Before making enquiry calls to extensions beginning with 7, press R* (on a touch-tone phone) or 60 (on a pulse phone). Calls may then be transferred as normal.
- Calls to extensions beginning with 7 can be put on hold using the codes R*9 (R*8 to return to the call) or 60 9 (60 8)
- It is not possible to request a ringback on an extension beginning with 7; however, if you dial 7 and get Busy tone before you dial the rest of the extension number, you may use (R) 68 to request a ringback; when the system rings you back, dial the rest of the extension number.
- You may not set up a conference involving an extension beginning with 7.

Remember that if users on the subsidiary are making and receiving calls on direct PSTN lines, such calls cannot be transferred onto the host. If some outside lines are connected to the host and some are not, users should be advised to use 8N to select outside lines connected via the host when they make calls on which they intend to involve host extensions.

For the host system

If the subsidiary system is in DSA mode, extension numbers on the subsidiary system should be listed with the access codes.

For example:

Suppose that the Sales Office of the company has a London 8 system installed, connected to two extension ports of the host London 16. You have put these two extension ports into hunting group number 3, for which the access code is 33. Extensions in the Sales Office should be listed on the internal directory as:

33 pause 21

33 pause 22

....etc.

It may also be useful if the following points are included in the directory:

- Only extensions with MF (touch-tone) phones can dial extensions beginning with. 3.
- You may not request a ringback on an extension beginning with 3. However, if you dial 33 and get Busy tone before you dial the rest of the number, you may dial R68 to request a ringback; when the system rings you back, dial the rest of the number.
- You may not set up a conference involving numbers beginning with 3.

If the subsidiary system is in reception mode, the internal directory should list the number for the Sales Office as 33. Users simply dial 33 and ask the receptionist for the person to whom they wish to speak.

17. SUMMARY OF PROGRAMMING CODES

1999 password Set password (password = 4 digits)

1300 password Open access to programming codes

170 Terminate access to programming codes

602 mask Set ringing mode for this extension only

1951 Print out programming configuration

1920 hhmm Set start of day mode

1921 hhmm Set start of night mode

603 MM number Set outside dialling memory number MM

1952 Print contents of central dialling memories

1955 extn Print contents of extension's dialling memories

1961 hhmm Set time (hours 00 to 23; minutes 00 to 59)

1962 ddmm Set date (day 01 to 31; month 01 to 12)

1963 day Set day of week (Monday = 1 ... Sunday = 7)

1960 yy Set year (19yy)

19650 Turn off call logging

19651 Turn on call logging

1756 N mode Select daytime incoming call mode for line N

1757 N mode Select nighttime incoming call mode for line N

18 xxyy Set extension range for programming; xx = first extn,

yy = last extn

The following codes act on	y on extensions in the current	programming range:
----------------------------	--------------------------------	--------------------

1978 H	Set hunting group $(H = 01 \text{ to } 08)$
--------	---

19221	Intruder alert alarm on
19220	Intruder alert alarm off

19641	Music on hold on	
19640	Music on hold off	

19231	Door latch pin high
19230	Door latch pin low

The following codes are dialled on the extension phone itself, rather than on a master phone:

602 mask	Make extension a reception phone
602 00	Cancel reception phone facility

69900	Turn 40 second ringing OFF
69901	Turn 40 second ringing ON

600	Set day mode (reception phones only)
601	Set night mode (reception phones only)

The following codes are dialled on a master phone and apply if your London 16 has an operator console:

1900 group	Cancel group assignment to console key
1901 group	Assign group to console key 1
1902 group	Assign group to console key 2
1903 group	Assign group to console key 3
1904 group	Assign group to console key 4
0.000	

1967 extn Make extension the console phone

The following codes are only applicable if your London 16 is set up in host/subsidiary working mode:

1750 N	Program outside line port N as a direct PSTN line
1751 N D	Program outside line port N as connected to a host, with PSTN access code digit D
1752 N DD	Program outside line port N as connected to a host, with PSTN access code digits DD
1753 N	Program outside line port N as connected to a host, but without access to PSTN allowed
1760 D	Bar host PBX codes beginning with digit D
1761 D	Allow host PBX codes beginning with digit D

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Set no recall for outside lines N to N
Set timed break recall for outside lines N to N1
Set timed break of n x 100 ms
Set DSA mode for outside line port N
Set non-DSA mode for outside line port N

18. PROGRAMMING CHECKLIST

It may be useful to run through the following questions when first programming the London 16.

	Page
Do you want the London 16 to switch automatically between day and night modes? At what times?	14
Are the time and date set correctly?	15
Is there a call logging printer attached to the London 16? Do you want call logging switched on? What is the cost of a meter unit? Is this the cost you want programmed in?	16–19
Are there any numbers you want stored in the central dialling memories? Do you wish these numbers to override call barring (memories 30 to 49)?	20–21
Do you want any extensions to be placed in hunting groups?	23
What levels of outside call do wish each extension to be allowed to make in day mode? And in night mode?	24
Which extensions do you wish to ring for incoming calls (in day mode and in night mode)? On which lines?	25
Which extensions are to be allowed to make themselves reception phones?	25
Which outside lines do you wish to make available to each extension for making outside calls?	26
Which outside lines do you wish each extension to be able to answer remotely using '61'? (Note that these are the lines for which the extension can make itself a reception phone.)	27
Do you wish any extensions to be protected from remote call answering or diversion?	28

Do you wish any extensions to be protected from having calls in progress interrupted by reception phones?	28
Do you want all extensions to ring for any incoming calls unanswered after 40 seconds?	31
Having set reception phones for each incoming line, do you wish to have automatic call distribution? Sequential or uniform? Do you wish this to be the same in day and night modes?	33–34
Is there an operator console on the system? If not, dial 1967220. If so, ensure that the console is not associated with extensions 221–224.	35
Do you want calls on different incoming line groups to appear on different console answer keys?	36
Are there any optional "extras" on the system?	38-39
Do you wish to set a password to prevent unauthorised personnel from reprogramming the system?	6

After programming the London 16, dial 1951 to obtain a printout of the programming configuration (if a printer is attached), and check that this conforms to your requirements.

If the London 16 is installed as a host or subsidiary to another telephone system, refer to pages 37 to 42.

