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## Reason for change of Issue

Issue 1: First release – X11 software release 20

Issue 2: Inclusion of Orion telephone sets

Issue 3: Inclusion of Taurus telephones sets and Release 25 changes

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# *Introduction*

This handbook provides Meridian 1 System Administrators with an easy to follow reference manual for performing day to day administration tasks.

The handbook provides primarily the reference material required to support the "Meridian 1 Basic System Administration" training course.

It will also provide experienced System Administrators / Communication Managers with background to enable them to convert from other PABX administration systems prior to attending the Meridian 1 Communication Managers course.

The handbook consists of 3 main sections: -

- Meridian 1 Product Description: - This describes the system hardware components.
- Extension Moves and Changes: - This describes how to perform most common administration tasks such as moving extensions.
- Features:- This section describes the most common system features that can be assigned to an extension along with a guide to implementing them.

# Product Description

## Introduction

This section will provide Meridian 1 System Administrators with enough Meridian 1 product information to perform administration tasks covered in this manual.

### Meridian 1

Meridian 1, which is the prime Integrated, Services Private Branch Exchange (ISPBX) offering in the BT product portfolio, meets the most demanding telecommunications needs. Its extensive selection of facilities, features and options provides a highly attractive solution to the communications requirements of a wide variety of customers.

### Meridian 1 System Types/Options

There are currently four Meridian 1 options available in the UK, namely, Option 11C, 51C, 61C, and 81C. The system sizes range from the small wall mounted Option 11C which caters for customers with between 30 & 700 ports, up to the Option 81C which can handle up to 10,000 ports.

The table below shows the basic data on the Meridian 1 Options.

Type/Option	Theoretical Max No. of Ports *	Central Processing Units (CPUs)
11C	700	1
51C	1000	1
61C	2000	2
81C	10000	2

\*A port is the common term given to exchange lines, private circuits and extensions, etc. The main difference between the various Options is the port capacity. The Option 61C and 81C systems have two Central Processing Units (CPUs) for security purposes.

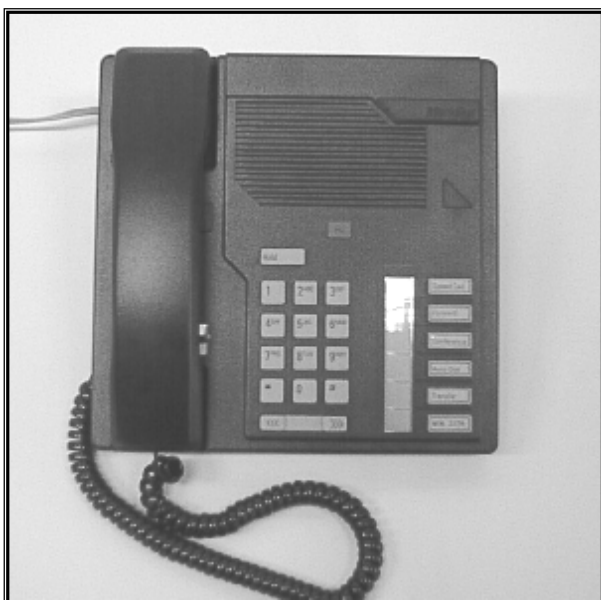
## Telephone Sets

The Meridian 1 system supports two types of telephone:-

- Analogue Phones.  
These are any general-purpose telephone. The Meridian 1 refers to these as 500 sets.
- Meridian 1 Digital Feature Phones.  
These phones are specifically designed for Meridian 1. There are three styles, the Aries, the Orion and the Taurus.

### The Aries range

**M2006**



The M2006 is equipped with six programmable keys, a HOLD key and a RLS (Release) key. The bottom key (Key 0) will always contain a Directory Number (DN) and is designated as the Prime DN. The remaining five programmable keys can be programmed with Meridian 1 features such as Call Forwarding, Call Pickup etc.

A red message waiting lamp is provided for use with Meridian Mail.

On-Hook dialling is available with the M2006 but the user must lift the handset to speak to the other party.

#### *Feature Phone M2006*

### **M2008**

The M2008 is similar to the M2006 with the following exceptions:

- Multiple DN capability.
- Eight programmable keys.

The bottom key (Key 0) is always used for the Prime DN. (Keys 1-7 can be programmed with Meridian 1 features or additional DNs)



*Feature Phone M2008*



### **M2616**

The M2616 is capable of the following features:

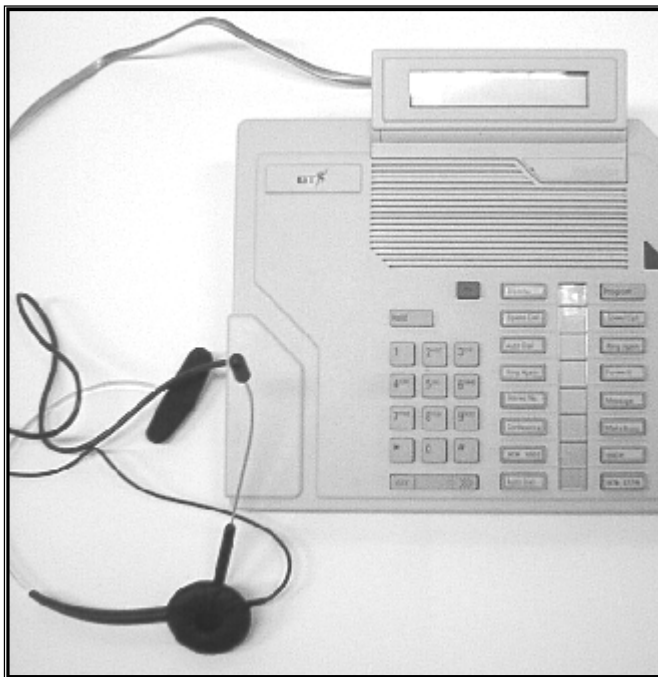
- 16 programmable keys.
- Two way hands free operation.
- Optional key expansion modules.

The bottom key (Key 0) is always used for the Prime DN.

The top left hand key, (Key 15) is used for the hands free/mute function.

The top right hand key (Key 7), is used for programming the display.

### **Feature Phone M2616**



### **M2216 - Automatic Call Distribution (ACD) Feature Phone**

The M2216 is designed to be used in high volume traffic situations associated with Automatic Call Distribution operation.

The M2216 has the following characteristics:-

- Two headset jacks, (one having a "listen only" option).
- Optional expansion key modules.
- A 2 x 24-character display.

### **Feature Phone M2216**

---

Features of the M2216 ACD are similar to the M2616 .



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## Display Module

2 x 24-character display for M2616 & M2216

The display provides alphanumeric information for: -

- Calling / called DN
- Re-routed calls
- Optional Call Party Name Display (CPND)
- Date and Time
- Feature activation assistance

Prompts make the activation of features easier.

A screen menu exists for the following, which is accessed by pressing key 7 on the set: -

- Adjust key click;
- Activation / deactivation of call timer;
- Independent volume controls (handset, buzz, ring, on-hook dial);
- Screen contrast level;
- Predial recall (last number which was dialled);
- Idle screen format (preferred layout of date and time);
- Language selection:

English/ French/ French Canadian/ German/ Dutch/ Spanish

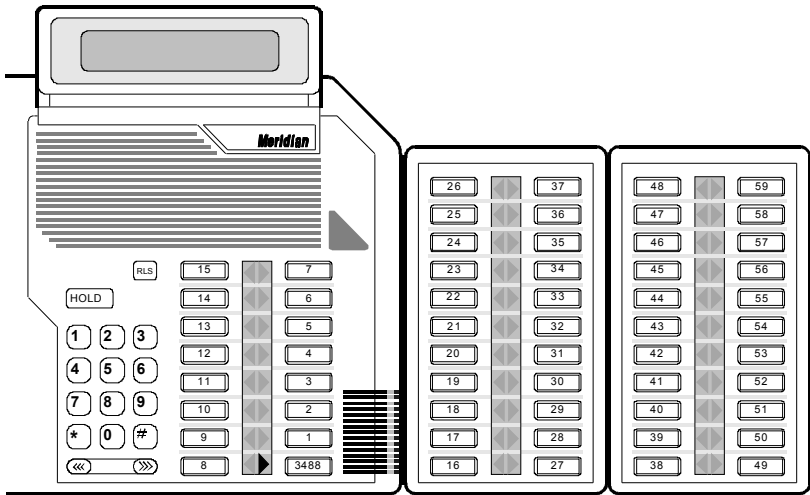
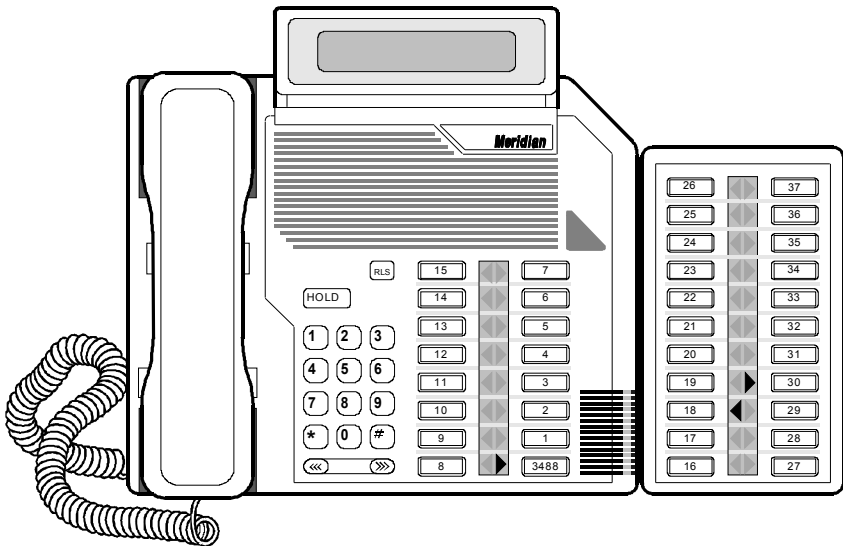
## Meridian Communications Adapter - MCA

This option is used to pass synchronous and asynchronous data through Meridian systems via the Modular Telephones. The option is fitted into the base of any Modular Telephone. It provides:

- V.35 interface
- RS 232

The Aries Feature Key numbering

Comment [SP1]:



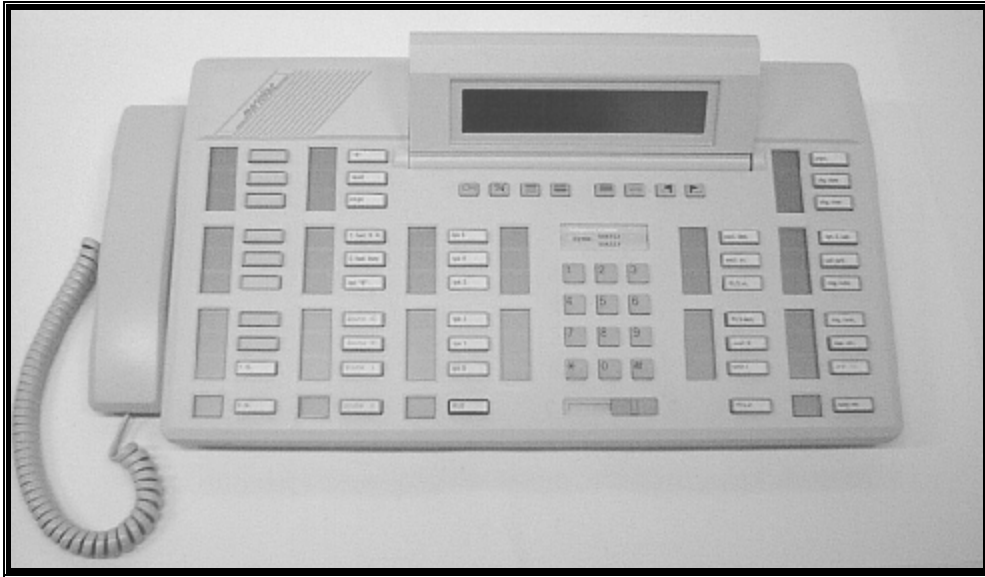
TMD930.

Key Expansion Modules for Aries telephones

Key Expansion Module

The Key Expansion Module is available for use with the M3820, M2616 and M2216 ACD sets. Each expansion module gives an extra 22 key's and up to two modules can be added.

Note: There is No Key one (1) on Orion M3820 sets



*Attendant Console M2250*

### **M2250 Attendant Console**

All Meridian 1's can be equipped with a system console/s (M2250). The console is designed to handle a high volume of calls and there are over 100 call processing features to choose from that can be assigned to the console. Further detail on the console keys and features are included in the M2250 Attendant Console User Guide Reference P0704329.

### **Central Answering Position (CAP)**

The Central Answering Position (CAP) is an alternative to the attendant console, and uses a Meridian M2616 or M2216 ACD telephone. It provides many console features including responding to requests for information, transferring, parking, and placing call's. With the addition of an optional key expansion module(s), the CAP can also have Direct Station Select and Busy Lamp Field features.

For more information on CAP refer to "Option 11 Central Answering Position" Reference 553-3011-320.

## The Orion range



### M3110

- Handsfree, On-Hook Dialling, and Group Listening
- Dedicated Release and Hold keys
- Message Waiting and Speaker/Mute Indicators
- 8 system programmable keys



*Feature Phone M3110*

### M3310

- Handsfree, On-Hook Dialling, and Group Listening
- Dedicated Release and Hold keys
- Message Waiting and Speaker/Mute Indicators
- Headset Socket

- 8 system programmable keys
- 2 x 24 character display

*Feature Phone M3310*



*Feature Phone M3820*

### **M3820**

- Handsfree, On-Hook Dialling, and Group Listening
- Dedicated Release and Hold keys
- Message Waiting and Speaker/Mute Indicators
- Headset Socket
- 2 x 24 character display
- Handsfree/speaker key - Mute key
- Directory key - Caller's List key - Edit key - Delete key
- Add-on Key Expansion Modules (2 maximum)

### **Programming the Orion Keys**

The keys on **M3110** & **M3310** number from 0 (bottom) to 7 (top). Keys 8 to 15 are programmed as NUL.

On **M3310** and **M3820** Key 7 is programmed as NUL as is it used for controlling the display screen.

---

The **M3820** *does not* have Keys 1 and 15 and therefore they are programmed as NUL , as is key 7.

## The Taurus range



### **M3901 Entry Telephone**

The features of the M3901 are:

- one line (Directory Number (DN)) capability
- five programmable features
- Feature Activation and Message Waiting and Incoming Call Status Indicator LED
- supports an amplified headset through the handset jack

*M3901 Entry Telephone*



### **M3902 Basic Telephone**

The features of the M3902 are:

- one line (Directory Number (DN)) capability
- three Programmable Feature Keys (Self-labelled)
- Fixed Feature Keys:
- two lines by 24 character display area
- hands-free calling option
- Group Listening
- on-hook dialling
- supports an amplified headset through handset jack
- one accessory port

*M3902 Basic Telephone*



*M3903 Enhanced Telephone*

### **M3903 Enhanced Telephone**

The features of the M3903 are:

- two Programmable Line/Feature Keys (Self-labelled) which provide two layers each, giving the user access to four line/feature keys
- four Programmable Feature Keys (Self-labelled) which have three layers each, giving the user access to 12 feature keys
- Fixed Feature Keys
- three line by 24 character display area Call Log
- Group Listening
- on-hook dialling
- two accessory ports
- a headset port
- hands-free calling





*M3904 Professional Telephone*

### **M3904 Professional Telephone**

The features of the M3904 are:

- six Programmable Line/Feature Keys (Self-labelled) which have two layers each, giving the user access to 12 line/feature keys
- four Programmable Feature Keys (Self-labelled) which have three layers each, giving the user access to 12 feature keys
- Fixed Feature Keys:
  - four line by 24 character display
  - Personal Directory
  - Call Log
  - Group Listening
  - on-hook Dialling
  - two Accessory Ports
  - speaker Indicator
  - a headset port
  - hands-free calling option



*M3905 Call Centre Telephone*

### **M3905 Call Centre Telephone**

The features of the M3905 Call Centre Telephone are:

- eight Programmable Line/Feature Keys (Self-labelled), giving the user access to eight line/feature keys
- four Programmable Feature Keys (Self-Labelled) which have three layers each, giving the user access to 12 feature keys
- six Fixed Feature Keys
- Personal Directory
- Call Log
- five line by 24 character display
- handset optional
- Supervisor Observe Key with LED
- Supervisor Headset Observe port

---

## Key Programming for Taurus sets

*The following table is given for guidance only. You should refer to the X11 software Administration manuals for accuracy.*

Legend;

<b>ALL</b>	All features, DN's and In-calls unless already available on set
<b>DN</b>	Normal Extension number. (i.e. SCR, SCN, MCR, MCN, Hot line...)
<b>ACD</b>	Automatic Call Distribution In-Call key
<del><b>DN</b></del>	All features except a DN and In-calls unless already available on set
<b>ACD</b>	All features except In-calls unless already available on set
<b>ACD Feat</b>	ACD feature keys only (i.e. AAG,AMG,ASP,DWC,MSB,NRD.)
<b>FEAT</b>	Feature keys only (i.e. No DN's or In-calls)
<b>Chg Label</b>	Key only allows change label function
<b>MWK</b>	Message Waiting Feature, must be programmed with the Mail DN (i.e. 7000)[or NUL]
<b>TRN</b>	Transfer Feature [or NUL]
<b>CONF</b>	Conference Feature [or NUL]
<b>CFW 16</b>	Call Forward all Calls (allows 16 digit input. Number of digits changeable) [or NUL]
<b>RGA</b>	Ring Again Feature [or NUL]
<b>PRK</b>	Call Park Feature [or NUL]
<b>RNP</b>	Pick up Feature (must be programmed with group to be picked-up) [or NUL]
<b>SpdCall</b>	All speed call types (i.e. SSU,SSC, SCC,SCU plus associated list number) [or NUL]
<b>PRS</b>	Privacy release Feature [or NUL]
<b>CHG</b>	Charge Account Feature [or NUL]
<b>CPN</b>	Call Party Number Feature [or NUL]
<b>•</b>	Key NOT APPLICABLE

Key Number	M3901	M3902	M3903	M3904	M3905
0	DN / ACD	DN / ACD	DN / ACD	DN / ACD	ALL
1	<del>DN</del>	<del>DN</del>	<del>ACD</del>	<del>ACD</del>	<del>ACD</del>
2	<del>DN</del>	<del>DN</del>	<del>ACD</del>	<del>ACD</del>	<del>ACD</del>
3	<del>DN</del>	<del>DN</del>	<del>ACD</del>	<del>ACD</del>	<del>ACD</del>
4	<del>DN</del>	TRN / CONF	•	<del>ACD</del>	<del>ACD</del>
5	FEAT	MWK	•	<del>ACD</del>	<del>ACD</del>
6	•	•	•	<del>ACD</del>	<del>ACD</del>
7	•	•	•	<del>ACD</del>	Chg Label
8	•	•	•	<del>ACD</del>	ACD Feat
9	•	•	•	<del>ACD</del>	ACD Feat
10	•	•	•	<del>ACD</del>	ACD Feat
11	•	•	•	<del>ACD</del>	ACD Feat
12	•	•	•	•	•
13	•	•	•	•	•
14	•	•	•	•	•
15	•	•	•	•	•
16	•	•	MWK	MWK	MWK
17	•	•	TRN	TRN	TRN
18	•	•	CONF	CONF	CONF
19	•	•	CFW 16	CFW 16	CFW 16
20	•	•	RGA	RGA	RGA
21	•	•	PRK	PRK	PRK
22	•	•	RNP	RNP	RNP
23	•	•	SpdCall	SpdCall	SpdCall
24	•	•	PRS	PRS	PRS
25	•	•	CHG	CHG	CHG
26	•	•	CPN	CPN	CPN
27	•	•	•	•	•
28	•	•	•	•	•
29	•	•	•	•	•
30	•	•	•	•	•

31	.	.	.	.	.
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# Extension Circuit Card Capacities

An analogue telephone connects into the Meridian 1 using a Flexible Analogue Line Card (FALC).

A digital feature phone connects into the Meridian 1 using a Digital Line Card (DGTL LC).

The maximum number of extensions that can be provided on an extension card is: -

- Flexible Analogue Line Card (FALC) 16
- Digital Line Card (DGTL LC) 16 Voice + Data

Digital sets can have a data adapter fitted into the telephone foot stand to allow data to be sent through the Meridian 1 to/from a terminal or computer.

## Referencing Extensions

A system administrator needs to know how to reference an extension in order to change the features assigned it.

The term given to the number that is used to ring the extension is the "Directory Number" (DN). Note that extension users will probably talk in terms of their "Extension Number" rather than "Directory Number". The length of the DN can range from 2 to 7 digits in length. In all examples in this handbook 4 digit DN's are used.

The term given to the physical point at which an extension connects to the system is the "Terminal Number" (TN) and is comprised of the following:-

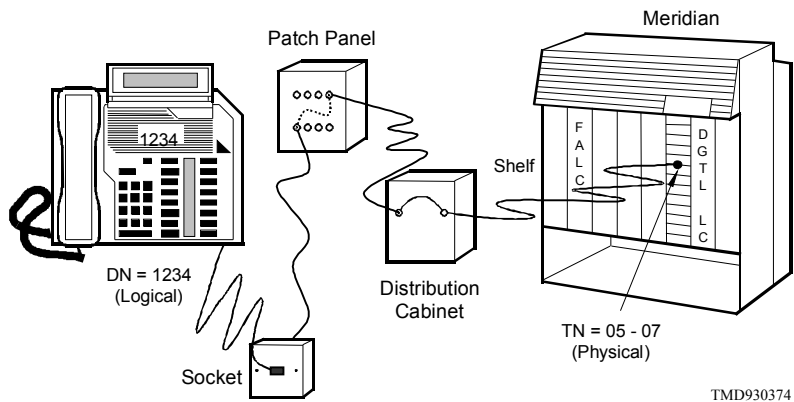
Superloop	Shelf	Card Slot	Unit (Port)
(0-159) eg 008	(0/1)  0	(0-15)  00	(0-15)  09

or on OPTION 11 systems the TN can consist of :-

Card Slot	Unit (Port)
(0-60) eg 08	(0-15)  09

### Note:

The all Options will print the TN details as shown in the Four-field format. When entering the information leading zeros in each field may be omitted. For option types 11, 51, 61, 71 and 81 the TN consists of four fields of information whereas on the Option 11 system it can consist of two, as shown above. Throughout this manual Option 11 two-field TN format will be used in examples.



### *Directory Numbers and Terminal Numbers*

#### **Phantom TN's**

The Phantom Terminal Numbers feature permits users to define and configure TN's with no associated physical hardware. With Phantom TN's configured, administrators can define DN's that can be dialed and then (automatically) forwarded on. This is achieved in conjunction with Call Forward all Calls (CFW) and Remote Call Forward (RCFW). This will allow a call to a phantom DN to be redirected to an existing telephone. Phantom TN's are only available as a 500 sets.

---

## *Documentation*

This section will describe the NorTel (NT) documentation, which can be supplied with your system, with an emphasise on the sections that deal with system administration. The Documents are normally received in the form of a CD ROM, hard copies are also available.

The following documents are used/discussed during the course:

- Software feature guide - Features - Book 1 of 3
- Software feature guide - Features - Book 2 of 3
- Software feature guide - Features - Book 3 of 3
- X11 Administration Input/Output Guide
- Maintenance Input/Output Guide
- X11 System Messages Guide

The software feature guide - features books give feature explanations of Meridian features in the following structure:-

- 1 Feature Description
- 2 Feature Requirements
- 3 Feature Interactions
- 4 Feature Packaging
- 5 Feature Implementation

The X11 Software Input/Output Guides (Administrations) are used to identify valid responses to system prompts when programming from the Teletypewriter TTY terminal.

Other useful system documentation: -

- Attendant Administration User Guide - 553-3001-305 order reference P0702800 This book details how to perform changes from the Attendant Console.
- Option 11 Administration Guide - Reference 553 3011 300 This book provides information and procedures specific to Option 11 only.
- Option 11 Central Answering Position (CAP) - Reference 553-3011-320
- System Security Guide - Reference 553-3001-302



## Routes and Trunks

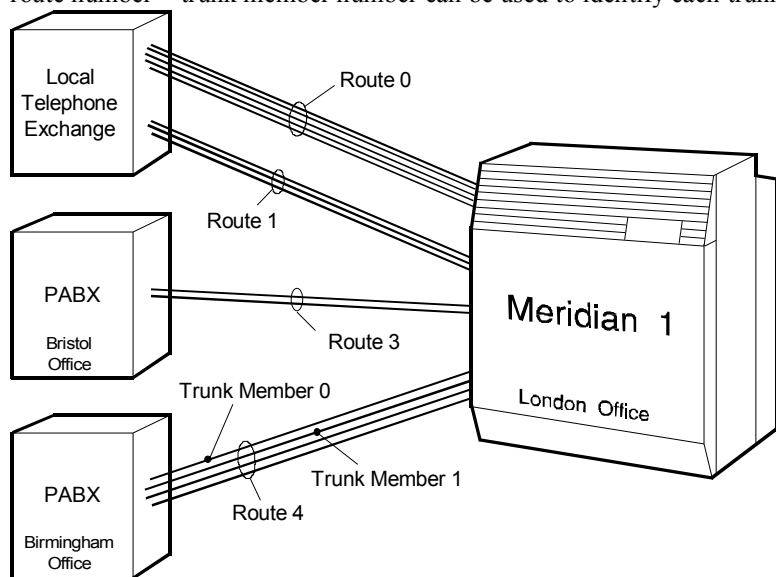
In NT documentation you will often see reference being made to routes and trunks. This section will explain the meaning of these terms.

A "route" is a collection of lines or circuits going to a particular destination. Examples of different routes that you may have on your system include: -

- an exchange route connecting your system to your local telephone exchange,
- a private circuit route connecting your Meridian 1 to another PABX if your Meridian 1 is networked,
- a Recorded Announcement (RAN) route.

Each route has a unique "Route Number" for identification purposes.

A "trunk" is the term given to one of the lines (circuits) in a route. The number of trunks equipped in a route will be determined by the volume of traffic (calls) that the route will carry. Each trunk will have a TN which can be used to identify the trunk. Alternatively the route number + trunk member number can be used to identify each trunk within a route.

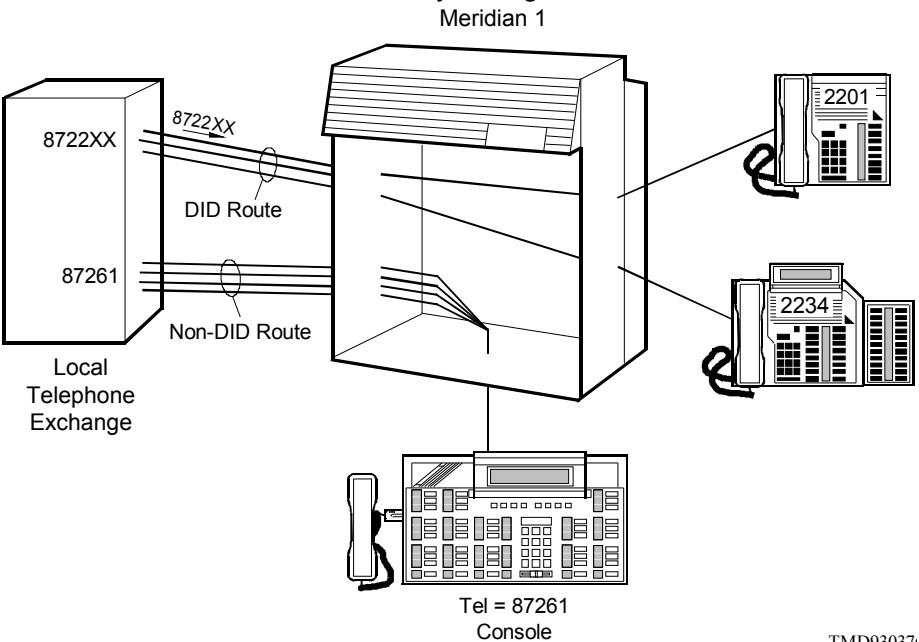


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# Direct Inward Dialling (DID)

## *This feature is known in the UK as Direct Dialling In (DDI)*

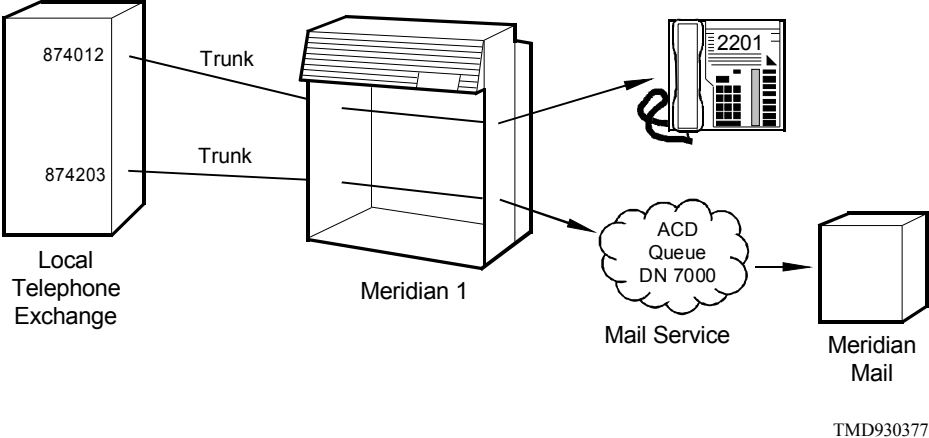
This feature allows external callers to dial direct access to extensions on your Meridian 1. With DID a block of telephone numbers and a number of DID trunks are rented from a supplier. Calls to DID number have the last few digits of the dialled number forwarded by the local telephone exchange to the Meridian 1 which uses these to identify the required extension. Often the DID number matches the DN (extension) number, but translation into any desired number can be configured on the Meridian 1. As the system administrator you can disable DID access to an extension by altering a "Class of Service".



Direct Inward Dialling (DID)

# Direct Inward Access (DIA)

This is a feature similar to DID in that it automatically connects an incoming trunk to an internal extension or service. Unlike DID however digits are not sent by the local exchange. When the Meridian 1 receives a call on a trunk with the DIA feature the system connects the call to a predefined extension number. The latter may be a "real DN", a "Pilot DN" used to access a departmental hunt group or an "Automatic Call Distribution (ACD) Queue DN" used to access a particular internal service eg Meridian Mail. This feature can only be set up or changed by a BT engineer.



Direct Inward Access

---

# *Extension Moves and Changes*

## *Introduction*

*Administration of your Meridian 1 system can be carried out using five different methods.*

### **Using a Teletypewriter (TTY) Terminal:**

This is the primary method through which all administration functions are available.

### **Using the Attendant Console:**

If your system is equipped with the Attendant Administration (AA) software package limited administration functions are available from the M2250 attendant console.

### **Using the Telephone Extensions:**

Extension moves can be performed from telephone extensions if your system is equipped with the Automatic Set Relocation (SR) software package.

### **Using Meridian Administration Tool (MAT) software:**

This software allows the Administrator to make modification to the switch from a personal computer. This product is not covered in this manual. For more information about the MAT product contact your account manager.

### **Using Optivity Telephony Manager (OTM) software:**

This software allows the Administrator to make modification to the switch from a personal computer from LAN based software locally or from Web Browsers remote from the Meridian site. This product is not covered in this manual. For more information about the OTM product contact your account manager.

---

# *Administration from the Teletypewriter Terminal (TTY)*

## *Logging In and Out of the System*

Before any administration work can be performed you must first login to the system. A number of TTY terminals can be connected to a Meridian 1. When the hardware and software are in place, it is possible to have up to 3 people logged in simultaneously performing system administration tasks. When the TTY terminal has not been used recently, the screen will turn itself off.

Press the "Carriage Return"↵ key on the keyboard to refresh the screen.

If nobody is currently logged into the system the screen will display:

OVL111 IDLE

If the system is displaying:

OVL000

this means that you are already logged into the system.

Assume that nobody is logged in and the system is displaying:

OVL111 IDLE

To log in type:

**LOGI** *??name??* and then press the ↵ key.  
(*??name??* is your logon name *if required*)

**Note:** You may use upper or lower case.

The system then prompts you to enter your password:

PASS?

Respond to this by typing your password and then press the ↵ key :

**pppp** ↵

Note: Your password is not displayed on the screen for obvious reasons!

If you have entered the correct password the system returns the ("chevron") prompt :

>

If you press ↵ at this point the system confirms that you are logged in by displaying:

OVL000

To log out at the ">" prompt type :

**LOGO** and then press ↵

If you press ↵ at this point the system confirms that you are logged out by displaying:

OVL111

IDLE

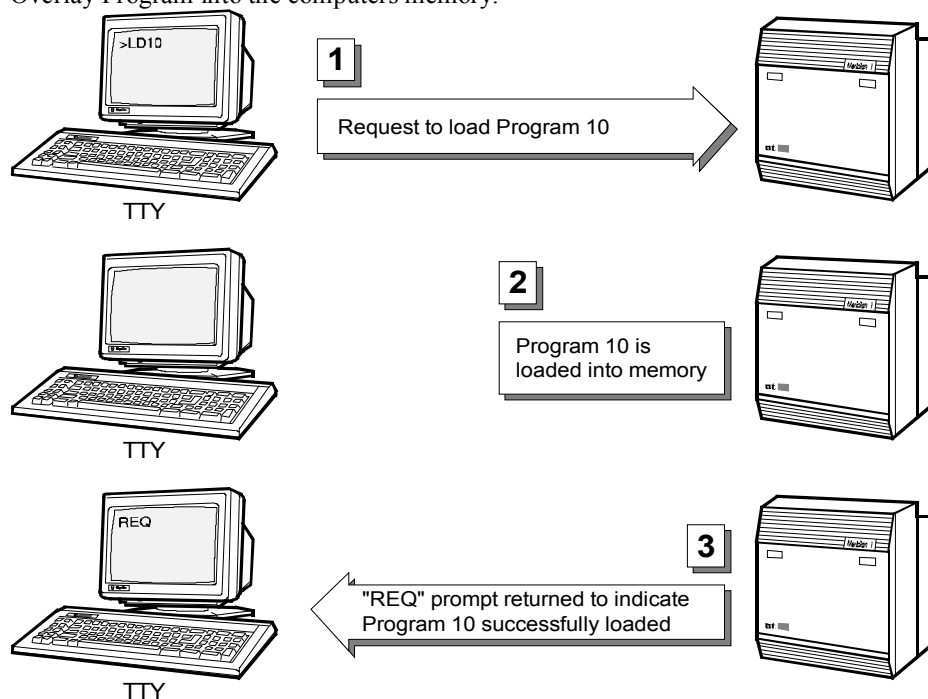
## Passwords

Access to your system administration terminal is password protected for security reasons. Certain functions can only be carried out by BT personnel, either on site or remotely, from the Meridian Customer Advice Line.

**Your password should be changed regularly** (see 'Changing the Administration Password', page 53). You can contact the BT Meridian Customer Advice Line for more details about changing passwords.

## Loading Overlay Programs

In order to perform any administration on the system you need to load (LD) a specific Overlay Program into the computers memory.



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### Loading Overlay Programs from the TTY

Each Overlay Program has a reference number and is brought into memory by typing:

**LD XX ↵**

where XX is the desired Overlay Program Number

For example, to change the features assigned to an analogue telephone (500 set) Overlay Program 10 must be loaded by entering:

> **LD 10** ↵  
REQ  
:

The system responds with the "REQ" prompt. The system is asking "what action is required in Overlay Program 10 ?" ie. is a new extension to be added or are the features assigned to an existing extension to be changed ? All valid responses are listed in: X11 Administration Input/Output Guides.

To exit from the Overlay Program type:

REQ : **END** ↵

The table below is a list of the frequently used Overlay Programs:

Type	To Add, Change or Delete information use Program	To Print existing configuration use Program
Analogue (500) Sets	10	20
Digital Sets	11	20
Customer Data Block	15	21
Speed Call Lists	18	20
Trunk Routes	--	21
Trunk Members	--	20
ACD Queues	23	23
Configuration	--	22
Print Software Packages	--	22
List Unused Units (TNs)	--	20
Set Time/Date	2	2
Data Backup	43	--
Authorisation Codes	88	88
Console Configuration	12	20
Station Print	--	81
Group Hunting Lists	18	20
Group Hunting Pilot DNs	57	57
Scheduled Access Restriction (SAR)	88	88
Flexible Feature Codes	57	57
Call Party Name Display	95	95

---

## *Correction of Typing Mistakes*

The "Backspace" key does not remove characters on the Meridian system. If an error is made when typing, asterisks may be used to correct the input as follows:-

- \* Cancels the current line and re-prompts for input.
- \*\* Takes you back to the beginning (REQ prompt) of the current Overlay Program.
- \*\*\*\* Aborts the current Overlay Program.

## *Error and Warning Codes*

Sometimes the system will display a Service Change (SCH) code, e.g. SCH 3729. A typical case would be if an invalid response to a system prompt is typed. In most cases SCH codes are error codes but in some cases they are merely a warning. All SCH codes are explained at the back of the X11 Software guide including supplementary features - Data Administration Input/Output Guide (Book 2).

### **Note:**

To view explanation on the screen type !, then at the > key ERR then space followed by Service Change Code. (eg >ERR SCH3729.)

## *Overlay Program Linking*

Overlay programs 10, 11 and 20 are linked, this means that as soon as one of these programs is loaded it is possible to immediately access any of the others without having to load them. For example if overlay program 10 is loaded it is possible to print information without loading program 20 or change a digital set without loading program 11.

Entering a question mark at a prompt that is followed by a colon will display the valid responses for all three of the linked overlay programs.

Once an overlay has been loaded and used, entering a carriage return at a prompt that is followed by a colon will copy the last input entered at the prompt. This facility only works for each instance the overlay is loaded.

## *System Messages*

Whilst loading and using the overlay programs various system responses will appear on your screen, these are omitted from the notes for clarity. The most common ones are as follows:

- |  |  |
|--|--|
| A six-character program ID                               | printed when a new program is loaded.  |
| "MARF NOT ACTIVATED"                                     | printed when some programs are loaded and when changes are being made to DN's. "MARF" will be explained in the features section. |
| A five line print out of the configuration of the system | printed when some programs are loaded and when ever a change is executed.  |



---

## Printing Extension Details

### Introduction

Overlay Program 20 is used to print the features assigned to an extension. In order to do this the TN (Terminal Number) of the extension must be known.

### To Identify the TN associated with a DN

The following steps show how the TN associated with DN 2280 can be identified:-

```
> LD 20↵ To load Overlay Program 20.
REQ : PRT↵ Meaning "print".
TYPE : DNB↵ Directory Number to be specified.
CUST 0↵ To identify the customer if "multi-customer" working is used
       Always set to 0 if multi-customer working is not used.
DN 2280↵ Key in the desired extension (DN) number.
DATE ↵
PAGE ↵ Hit the return key to default these three prompts.
DES ↵
```

The system outputs :-

```
DN 2280
CPND*
CPND_LANG ROMAN*
NAME Fred Delegate*
XPLN 24*
DISPLAY_FMT FIRST, LAST*
TYPE 500
TN 008 0 00 07 MARP DES M8009 21 MAY 2000
NACT ↵ Meaning "next action". Press the return key.
REQ : END↵ To exit Overlay Program 20.
```

The system responded by displaying the TN of the set.

The system also displays the "designation (DES)" which is a 6 character field in the extension's data that may be used for remarks or comments as desired. In this case the DES identifies Model of the telephone (required if MAT is used for administration). The system also displayed the date on which this extension was last changed.

\*Note: That the CPND data is only shown when "Name" data has previously been specified.

Now that the TN has been established the features assigned to that TN can be printed using Overlay Program 20.

Printing the Terminal Number Data Block (TNB) of an extension

The following example shows Overlay Program 20 being used to print the features assigned to TN 8 7 :-

> **LD 20**␣  
REQ : **PRT**␣  
TYPE : **TNB**␣ *Terminal Number to be specified.*  
TN **8 7**␣ *Key in the TN.*  
DATE ␣  
PAGE ␣  
DES ␣

The system outputs all the characteristics associated with TN 8 7:-

DES	M8009
TN	008 0 00 07
TYPE	500
CDEN	4D
CUST	0
WRLS	NO
DN	2280 0   MARP
	CPND
	CPND_LANG ROMAN
	NAME Fred Delegate
	XPLN 24
	DISPLAY_FMT FIRST, LAST
AST	NO
IAPG	0
HUNT	
TGAR	1
LDN	NO
NCOS	7
SGRP	0
RNPG	0
LNRS	16
XLST	
SCI	0
SCPW	1111
SFLT	NO
CAC_MFC	0
CLS	UNR DTN FBD XFA WTA THFD FND HTD ONS
	LPR XRA AGRD CWD SWD MWA RMMD SMWD LPA XHD CCSD LNA TVD
	CFTD SFD MRD C6A CNID CLBD AUTU
	ICDD CDMD EHTD MCTA
	GPUA DPUA CFXD ARHD OVDD AGTD CLTD LDTD ASCD
	MBXD UDI RCC HBTD IRGD IAMD DDGA NAMA MIND
	NRWD NRCD NROD CRD PRSD MCRD
	EXR0 SHL SMSD ABDD CFHA DNDY DNO3
	CWND USRA BNRD OCBD RTDD RBDD RBHD FAXD PGND FTTU
RCO	0
PLEV	02
AACS	NO
MLWU_LANG	0
FTR	CFW 4
FTR	SSU 0151
DATE	21 MAY 2000

NACT ↵ *Meaning Next Action - hit the return key.*

REQ : **END**↵ *To exit this Program.*

## Finding a Spare TN

Overlay Program 20 can be used to "List Unused Units (LUU)". The system will list all spare TNs on the system as the following example shows.

> **LD 20**↵

REQ : **LUU**↵ *Meaning "List Unused Units" - TNs.*

TYPE : **500**↵ *To obtain a list of analogue TNs.*

TN ↵ *Hit the return to obtain a list of spare analogue TNs.*

CDEN ↵

TYPE 500 TN 009 0 00 02 4D

TYPE 500 TN 009 0 00 09 4D

TYPE 500 TN 009 0 00 14 4D

TYPE 500 TN 009 0 00 15 4D

REQ : **LUU**↵

TYPE : **2000**↵ *To obtain a list of digital TNs.*

TN ↵

TYPE 2000 TN 007 0 00 08 8D VCE

TYPE 2000 TN 007 0 00 09 8D VCE

TYPE 2000 TN 007 0 00 10 8D VCE

TYPE 2000 TN 007 0 00 13 8D VCE

TYPE 2000 TN 007 0 00 14 8D VCE

TYPE 2000 TN 007 0 00 15 8D VCE

TYPE 2000 TN 007 0 00 16 8D DTA *Note : Only VCE TN's are usable for*

TYPE 2000 TN 007 0 00 17 8D DTA *telephones. DTA TN's are used for MCA*

TYPE 2000 TN 007 0 00 18 8D DTA *units (page 9). If you only wish to print*

TYPE 2000 TN 007 0 00 19 8D DTA *VCE TNs use command LUVU (list*

TYPE 2000 TN 007 0 00 20 8D DTA *unused voice units) at the REQ prompt.*

TYPE 2000 TN 007 0 00 21 8D DTA

TYPE 2000 TN 007 0 00 22 8D DTA

TYPE 2000 TN 007 0 00 23 8D DTA

TYPE 2000 TN 007 0 00 24 8D DTA

TYPE 2000 TN 007 0 00 25 8D DTA

TYPE 2000 TN 007 0 00 26 8D DTA

TYPE 2000 TN 007 0 00 27 8D DTA

TYPE 2000 TN 007 0 00 28 8D DTA

TYPE 2000 TN 007 0 00 29 8D DTA

TYPE 2000 TN 007 0 00 30 8D DTA

TYPE 2000 TN 007 0 00 31 8D DTA

REQ : **END**↵

---

## Finding a Spare DN

Spare DNs can be found by listing unused DNs in a number range or for the entire range. In this example a list of unused DNs in the range 2200 to 2299 has been requested by entering 22.

> **LD 20**

REQ : **PRT**

TYPE : **LUDN**

CUST **0**

DN **22** *Range of DNs: 2200 to 2299.*

### CUSTOMER 00 - UNUSED DNS :

220	221	222	223	224	225	226	2270	2271
2284	2285	2286	2287	2288	2289	229		

From the printout it can be seen that in the 22xx range DNs 2200 to 2271 are spare and 2284 to 2299 are spare DNs.

Listing All Extensions with a Particular Feature Assigned

Overlay Program 81, termed "Station Print" is useful for obtaining a list of extensions that have a particular feature assigned. For example to list all extensions in a Pickup Group (Number 1) use Overlay Program 81 as shown below.

```
>      LD 81↵  Load the station print Program.

REQ    LST↵  List the items on the screen.
CUST   0↵
DATE   ↵
PAGE   ↵
DES    ↵
FEAT   RNP↵  Requesting that any extension in a Ringing Number Pickup
              Group is listed.
RNPG   1↵     Requesting only extensions that are in Pickup Group 1 be listed. You may enter a range if
              required.
FEAT   ↵
```

Feature	Customer	DN	Group No.	Terminal No.	Extn. Type	Designation	Date last changed
PUA	00		0001	TN 007 0 00 01	2000	M3110	NO DATE
PUA	00		0001	TN 007 0 00 02	2000	M3820	15 DEC 1999
PUA	00		0001	TN 007 0 00 04	2000	M2616	NO DATE
PUA	00		0001	TN 007 0 00 05	2000	M2008	NO DATE
PUA	00	2280	0001	TN 008 0 00 00	2500	M8009	21 MAY 2000
PUA	00	2281	0001	TN 008 0 00 01	2500	M8009	15 DEC 1999
PUA	00	2282	0001	TN 008 0 00 02	2500	M8009	20 DEC1999
PUA	00	2284	0001	TN 008 0 00 04	2500	M8009	NO DATE
PUA	00	2285	0001	TN 008 0 00 05	2500	M500	15 DEC 1999
PUA	00		0001	TN 009 0 00 01	2000	M3310	20 DEC 1999
PUA	00		0001	TN 009 0 00 08	2000	M3310	14 DEC 1999

```
REQ    END↵
```

---

## *Adding and Rearranging Extensions*

### **Introduction**

Administration of extensions is achieved by loading the correct Overlay Program into the Meridian 1's memory and then responding to prompts with appropriate information. The Overlay Program initially loaded is dependent on the type of extension:-

Analogue	LD 10
Digital	LD 11

When you load either of these Programs the system displays: -

REQ

The system is asking, "What do you require?"

You can answer by typing one of the following more common responses:

**NEW** - Add a new extension. With this command you have to specify each data item individually. For 500 sets you can enter "NEW" followed by a space and a number (0-255), the system will create that number of extensions with the same data using sequential TN's and DN's.

**CPY** - Add a new extension by copying an existing unit.

**CHG** - Change any feature assigned to an existing extension.

**MOV** - Move an extension with all its features from an existing TN location to a different TN location.

**OUT** - Delete an extension from the system. For 500 sets you can enter "OUT" followed by a space and a number (0-255), the system will delete that number of extensions from sequential TN's.

**END** - Exit the Overlay Program.

The next prompt that the system returns is dependent on how you responded to the "REQ" prompt. We will consider each case separately.

### **Planning Method**

Swapping a couple of extensions can be fairly easy, however if there are three, four, five or more extension users to move then things become more complicated. We therefore recommend that you follow these steps whenever carrying out data changes from the TTY:

-

1. Plan the job
2. Print out all the relevant information as it exists now
3. Program the changes

- 
4. Print out all the relevant information again (to check)
  5. Prove it works

---

## Adding a New Extension

After loading the correct Overlay Program, depending on the type of extension being added (LD10 or 11), the system responds with:-

REQ:

To add a new extension you can respond with one of two commands namely **NEW** or **CPY** (Copy).

With the NEW command the system will in turn display each prompt in the Terminal Number Data Block (TNB) to which you must type a response. This method would typically be used only if there was not an existing extension on the system with similar features to that which you are trying to add. If however there is an existing extension, with similar features already in the system use the CPY command.

With the CPY command you can copy an existing extension (TN) to a new/spare TN. It is also possible to add many new extensions with one session using this command.

### Examples

Two examples are shown below as the system prompts you for different information when you are adding more than one extension. Example 1 shows the copy command being used to add one new analogue extension. Example 2 shows two new analogue extensions being added using the copy command. To add digital feature phones the procedure would be the same except that Overlay Program 11 would be used.

#### Example 1

In the example TN 9 9 with a DN of 2506 will be added by copying from existing TN 9 7.

> **LD 10.↓** *Load Program 10.*

REQ : **CPY 1.↓** *Copy one new extension*

TYPE : **500.↓**

CFTN **9 7.↓** *Copy feature from TN 9 7.*

DES **M8009** *The system displays the designation of TN 9 7.*

\*\*\* MAKE PRINTER READY \*\*\*

*The system prompts you to make sure your printer is switched on*

TN **9 9.↓** *Terminal Number where new extension is to be located.*

DN **2506.↓** *Directory number of new extension.*

NEW 500 TN 009 0 00 09 DN 2506

*The system responds by confirming a new 500 set has been created on TN 9 9 with a DN of 2506*

\*\*\* FINISHED \*\*\*



---

REQ: **END** Exit Program 10.

## Example 2

In this example TN 9 10 with a DN of 2507, and TN 9 14 with a DN of 2508, will be added by copying the features from existing TN 9 7.

> **LD 10.** *Load Program 10.*

REQ : **CPY 2.** *Copy two new extensions.*

TYPE : **500.**

CFTN **9 7.** *Copy features from TN 9 7.*

DES **M8009** *The system displays the designation of TN 9 7.*

\*\*\* MAKE PRINTER READY \*\*\*

*The system prompts you to make sure your printer is switched on*

SFMT **TNDN.** *"TNDN" tells the system that each TN and DN will be specified by the administrator for the new extensions. "AUTO" may be typed instead, which requests the system to "Automatically" select the next free TNs and DNs in the sequence starting from the specified TN and DN. In other words you tell the system the first TN and DN for the extension being added and the system will select the TN and DN for the rest of the extensions being added.*

TN **9 10.** *Specify TN and DN for*

DN **2507.** *1st new extension.*

NEW 500 TN 009 0 00 10 DN 2507

TN **9 14.** *Specify TN and DN for*

DN **2508.** *2nd new extension.*

NEW 500 TN 009 0 00 14 DN 2508

\*\*\* FINISHED \*\*\*

REQ : **END.** *Exit Program 10.*

---

## Changing the DN of an Extension

### Analogue Sets

To change the DN of an analogue set load Overlay Program 10.  
In the example below the TN has already been established as TN 9 3.

The DN for TN 9 3 is to be changed to 2207.

> **LD 10**↵

REQ : **CHG**↵ *Meaning change.*

TYPE : **500**↵

TN **9 3**↵

ECHG **YES**↵ *Type Yes to use the "Easy Change" method of performing the change.*

ITEM **DN 2207**↵ *Type DN "Space" and then the new extension number.*

MARP↵ *Multiple appearance DN redirection prime, see page 139*

CPND↵ *Prompt to allow a name to be assigned to an extension, see page 89*

VMB↵ *Prompt to allow the addition of a Mailbox for this extension.*

ITEM ↵

REQ : **END**↵

### Digital Sets

Every digital extension will have at least one DN assigned. This DN is termed the "Prime DN" and is assigned to key 0. Some feature phones can be assigned additional DNs. These are assigned to keys in the same way as the Prime DN, the only difference being the key number that is assigned. Refer to "Multiple DNs" (page 135) in the "Features" section of this handbook. To change the DN of a digital set load Overlay Program 11 as shown below :-

The DN for TN 8 3 is to be "Single Call Ringing" DN 2277.

> **LD 11**↵

REQ : **CHG**↵

TYPE : **2616**↵

TN **8 3**↵

ECHG **YES**↵ *To use easy change.*

ITEM **KEY 0 SCR 2277**↵ *Specifying a Single Call Ringing DN of 2277 on Key 0*

MARP↵

CPND↵

VMB↵

KEY↵

ITEM ↵

REQ : **END**↵

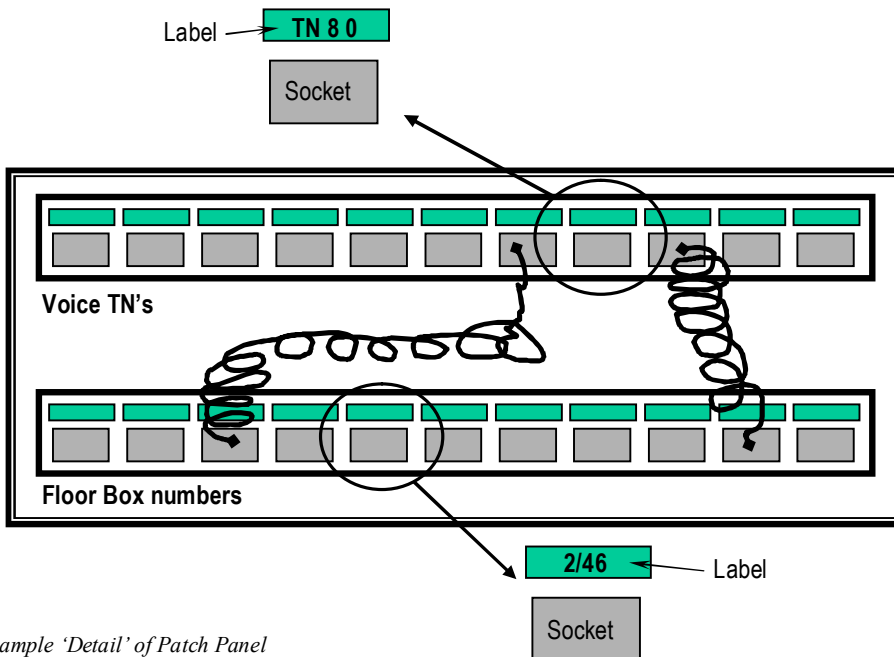
## Moving Extensions

As mentioned earlier in the "Meridian 1 Product Description" section of this handbook analogue and digital extensions connect to different types of circuit card. Hence analogue and digital sets cannot be interchanged by unplugging one type of set from the socket and replacing it with the other type. A wiring change needs to be performed. However matching extensions (analogue or digital) can be moved around the system by programming.

### Moving extensions via the Patch panel

This is the easiest and probably the best method. However patch panels vary in type and size, so the example described is only intended as a general outline of the procedure. The Patch panel is normally located in the 'Comms room' or adjacent to the Meridian switch. In some cases it may be found adjacent to the Computing equipment (as this can also utilise the patch panel).

The Labelling on the Patch panel varies greatly, therefore this description only uses general terminology, on your site different terms may be used. Refer to your installer for further information.



Example 'Detail' of Patch Panel

The example shows two patching cords in place. Within your Patch panel there will be many.

### To Move two extensions:-

*Note: Where telephone outlet sockets are NOT of the RG45 type then wiring modification or Adapters may be required.*

- Locate the Floor boxes for the extensions to be swapped and note their number (i.e. where the telephones plug into the floor/wall)
- Within the Patch panel, find the corresponding points (look at the Labels for the Floor Boxes)
- Remove the plug from each socket and reverse them.

**Moving extensions using the MOV command**

In this example extension 2206 and 2404 want to swap locations but keep their existing DN and features. The MOV command will be used three times to achieve this, utilising spare TN's.

```
> LD 10. First use LD 20 to obtain the TNs of the extensions and a spare TN. We will swap extension
      2206 (TN 9 2) and extension 2404 (TN 9 10) using TN 9 9 as the spare.

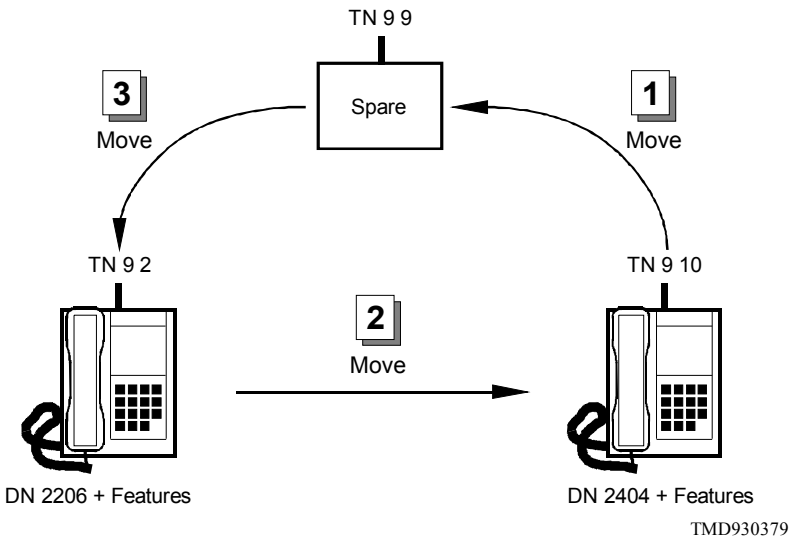
REQ : MOV. Move 1. Move extension 2404 and all its features to the spare TN 9 9..
TYPE : 500.
TN    9 10.
TOTN  9 9. This leaves TN 9 10 spare after this action.

REQ : MOV. Move 2. Move extension 2206 and all its features to TN 9 10.
TYPE : 500.
TN    9 2.
TOTN  9 10. This leaves TN 9 2 spare after this action.

REQ : MOV. Move 3. Move extension 2204 and all its features to TN 9 2.
TYPE : 500.
TN    9 9.
TOTN  9 2. After this action TN 9 9 is once again spare.

REQ : END. Exit Program 10.
```

The following diagram illustrates the 3 moves.



Using the MOV command

---

## Deleting an Extension

This process will delete the extension number (DN) and all the features currently assigned to a TN, making the TN spare.

Respond to the REQ prompt by typing "OUT" to delete an extension, see below.

>        **LD 10**␣        *Load Program 10.*

REQ :   **OUT**␣        *Out is used to delete extensions.*

TYPE :   **500**␣

TN       **9 2**␣

REQ :   **END**␣        *Exit Program 10.*

All the features previously assigned to TN 9 2 will be removed, making TN 9 2 spare.

---

## Assigning Features to an Extension

### 1. Changing a class of service.

Certain features are "switched on" by changing a Class of Service (CLS) eg to switch on the "Transfer" feature change the CLS XFD (Transfer Denied) to XFA (Transfer Allowed).

> **LD 10**↵ *LD 10 is loaded for an analogue telephone.*

REQ : **CHG**↵

TYPE : **500**↵

TN **9 1**↵

ECHG **YES**↵ *Use the easy change method.*

ITEM **CLS XFA**↵ *Class of service for Transfer is Allowed.*

ITEM ↵

REQ : **END**↵ *Exit Program 10.*

### 2. Adding a feature using mnemonics.

Certain features are assigned by specifying a feature mnemonic and a value, eg to add an extension in "Ringing Number Pickup Group" (RNPG) 2 you would input "RNPG 2" in response to the ITEM prompt in LD 10 for analogue extensions or LD 11 for digital extensions.

> **LD 10**↵ *Load Program 10.*

REQ : **CHG**↵

TYPE : **500**↵

TN **9 1**↵

ECHG **YES**↵

ITEM **RNPG 2**↵ *This extension is included into pickup group 2.*

ITEM ↵

REQ : **END**↵ *Exit Program 10.*

### 3. Assigning a feature to a key (digital sets only).

To assign a feature to a key you would simply assign the feature mnemonic to the key number. The example below shows the "Transfer" feature being assigned to key 2 of a digital set.

> **LD 11**↵ *Load Program 11.*

REQ : **CHG**↵

TYPE : **2616**↵

TN **8 5**↵

ECHG **YES**↵

ITEM **KEY 2 TRN**↵ *Mnemonic for Transfer is specified after key number.*

KEY ↵

ITEM ↵

---

REQ : **END**↵

*Exit Program 11.*



---

## Deleting Features

We will cover here the three methods of deleting features from an extension.

### 1. Changing a class of service.

Certain features are "switched off" by changing a Class of Service (CLS) eg to switch off the "Transfer" feature change the CLS XFA (Transfer Allowed) to XFD (Transfer Denied)

> **LD 10**↵ *LD 10 is loaded for an analogue extension.*

REQ : **CHG**↵  
TYPE : **500**↵  
TN **9 1**↵  
ECHG **YES**↵  
ITEM **CLS XFD**↵ *Class of Service for Transfer is denied.*  
ITEM ↵

REQ : **END**↵ *Exit Program 10.*

### 2. Deleting a feature using mnemonics.

Certain features are deleted by typing an "X" before the feature mnemonic, eg. to remove the "Call Forward All Calls" (CFW) feature you would type "XCFW" in response to the ITEM prompt.

> **LD 10**↵ *Load Program 10.*

REQ : **CHG**↵  
TYPE : **500**↵  
TN **9 1**↵  
ECHG **YES**↵  
ITEM **FTR XCFW**↵ *"X" before the feature mnemonic deletes the feature.*  
FTR↵  
ITEM ↵

REQ : **END**↵ *Exit Program 10.*

### 3. Deleting a feature from a key (digital sets only).

To delete a feature from a key you would simply assign the feature mnemonic "NUL" to the key number. The example below shows the "Transfer" feature on key 2 being set to NUL.

> **LD 11**↵ *Load Program 11.*

REQ : **CHG**↵  
TYPE : **2616**↵  
TN **8 5**↵  
ECHG **YES**↵  
ITEM **KEY 2 NUL**↵ *Key 2 is set to NUL. Any feature previously assigned to this key will be removed.*

---

KEY ↵  
ITEM ↵

REQ : **END**↵      *Exit Program 11.*

---

# Other Important Tasks

## Assigning Features to the Console Keys

The attendant console has 20 feature keys that can be programmed.

Overlay Program 12 is used to assign a feature to a key on the console. The process is almost identical to assigning a feature to a key on a digital extension.

The example below shows the Modify Date (MDT) feature being programmed onto console key 10 and the Modify Time (MTM) feature being programmed onto key 11 :-

```
>      LD 12.␣      Program 12 is loaded.

REQ    CHG.␣
TYPE   2250.␣
TN      7 11.␣

SETN   007 0 00 12
ANUM   ␣           Press the return key at these prompts until "KEY" is displayed.
IADN   ␣
SSU    ␣
ICDR   ␣
CPND   ␣
DNDI   ␣
LANG   ␣
EBLF   ␣
SGRP   ␣
QTHM   ␣
DAPC   ␣
KEY    10 MDT.␣    "Modify Date" feature is assigned to key 10.
KEY    11 MTM.␣    "Modify Time" feature is assigned to key 11.
KEY    ␣
REQ    END.␣       Exit Program 12.
```

## Issue and Release

To print out the Release and Issue of your system use overlay program 22.

```
>      LD 22.␣
REQ:   ISS.␣
VERSION                2111
RELEASE      25
ISSUE        15

REQ:   END.␣
```

---

## Setting the Time and Date

It is important to keep the system time and date correct.

It can be set and tested from the attendant console or from the TTY using Overlay Program 2. This section will concentrate on the TTY method. Refer to the section titled "Administration from the Attendant Console" for the procedure to change the time and date from the console.

Once LD 2 is loaded, you will receive a "." prompt instead of ">". This is because LD 2 used to be a maintenance program.

To test the current time and date setting type :-

**.TTAD** (note NO carriage return is needed).

To set the time and date type :-

**.STAD (DAY IN MONTH) (MONTH) (YEAR) (HOUR) (MIN) (SEC).**

The clock is set and begins when the carriage return is pressed.

**>LD 2.** *Program 2 is loaded.*

TFC000

**.TTAD SAT 25 12 1999 18 34 21** *Test time and date.*

**.STAD 23 12 1999 09 31 00.** *Set time and date.*

(Use the speaking clock for accuracy).

**.TTAD THUR 23 12 1999 09 31 04** *Test time and date*

TFC000

**.\*\*\*\*** *Exit Program 2.*

**>**

## Re-enabling Digital TNs

If a digital feature phone is unplugged from its socket, the TN may be disabled during a background routine. This means that the phone will not work when it is plugged back into the socket.

To re-enable the TN follow these steps:-

**> LD 11.** *Program 11 is loaded.*

REQ : **CHG.**

TYPE : **2616.**

TN **8 5.** *Being the TN of the Disabled telephone*

ECHG **YES.**

---

ITEM ↵ *At the ITEM prompt, hit the return key. This will not make any changes to the extension but will cause the system to re-enable the TN.*

REQ : **END**↵ *Exit Program 11.*

## *Backing Up Your System Data*

Meridian 1 automatically backs up data changes during the midnight routine. However after extensive changes have been made, it is advisable that a manual back up is performed as shown below.

> **LD 43**↵ *Program 43 is loaded.*

. **EDD**↵ *Execute a data dump.*

*Wait for the system to display "DATABASE BACKUP COMPLETE". This may take a few minutes to complete.*

. \*\*\*\*↵ *Exit Program 43.*

This operation backs up the data to a floppy disk on Option 51 to 81 switches. On the Option 11 switch the data is backed up to the back up area on the SSC card.

It is possible to back up the Option 11 switches to a personal computer (IBM or Macintosh) using the customer configuration backup & restore facility. This procedure is described in the Option 11 Customer Configuration Backup & Restore manual (553-3011-330).

Alternatively this procedure can be done by BT, contact 0800 7315109 for details.

## *Changing the Administrators Password.*

**This procedure should be carried regularly** or if you suspect that a third party knows your password.

The Maintenance people have their own higher level passwords and will be unaffected by your change.

> **LD 17**↵ *LD 17 is loaded.*

REQ : **CHG**↵

TYPE : **PWD**↵

LPWD **????**↵ *Enter your existing password*

NLPW **nnnn**↵ *Enter your New password.*

REQ **END**↵

**LOGO**↵

The new password is now active.

Remember - **KEEP PASSWORDS SECURE!**

**Note:**

---

If you find you cannot follow this procedure, contact the Helpdesk (0800 7315109) and they can activate it for you.

---

# *Administration from the Attendant Console*

Certain administration tasks can be performed from the attendant console if the Meridian 1 is equipped with a M2250 Attendant Console and the Attendant Administration (AA) software package.

Supplied with the Attendant Administration software package is a plastic overlay for the console which labels the keys for use with this feature and an Attendant Administration User Guide - 553-3001-305, order reference P0702800. The user guide shows in easy to follow steps how to perform each administration task. This module will refer to the relevant sections of the user guide and provide supplementary information where required.

## *Basic Operations*

The following basic operations are covered in pages 11 - 21 of the AA User Guide:

- Entering the Attendant Administration mode.
- Selecting the telephone to be changed.
- Selecting the feature to be changed.
- Leaving the Attendant Administration mode.
- How to identify and correct errors.

The following notes are supplementary information that may be useful when reading the AA User Guide:

On page 13 of the AA User Guide, step 1, reference is made to the "Pos Busy" key. This stands for Position Busy and is the key on the top row of the console, below the display, labelled with a picture of the sun and the moon. This is the key that is used to switch the console into night service.

On page 13 of the AA User Guide, step 5, reference is made to the "Attendant Administration password". If you do not know your password the Meridian Advice Line (0800 446466) should be contacted.

Page 14 of the AA User Guide shows how to select an analogue set to be changed.

Page 15 of the AA User Guide shows how to select a digital set to be changed.

There are two ways to select the extension:-

- using the Directory Number (DN) - page 16 of the AA User Guide.
- using the Terminal Number - page 17 of the AA User Guide.

When using Attendant Administration, specifying a TN on Option 11 systems (instead of specifying the TN in two parts) it has to be written as four parts each separated by a # symbol. The middle two parts are always written as zeros. For the other Option switches (51, 61, 71 and 81) all four fields in the TN are used as normal.

An Option11 TN of 9 13 would be written as 9#0#0#13##.

Other switch options TN's are written as 121#1#3#12##

The following syntax is commonly used in Attendant Administration :

---

# denotes a separator or space  
## equates to pressing the "Carriage Return" key on the Teletypewriter (TTY)  
Terminal.

## *Step by Step Guide to Changing Features*

Pages 23 to 48 of the AA User Guide provide detailed steps on how to change features using the Attendant Administration package.

## *Error Codes*

Pages 49 to 54 of the AA User Guide details the meaning of each error code. Refer to page 21 for a procedure to correct errors.

## *Quick Reference Feature Chart*

Pages 55 to 57 of the AA User Guide provide a quick reference guide for changing features for experienced users.



---

## *Setting the System Time and Date*

Two feature keys need to be programmed on the attendant console to allow the time and date to be changed; one for "modifying the time" (MTM) and one for "modifying the date" (MDT). This is achieved using Overlay Programme 12. Refer to an earlier section of this manual titled "Assigning Features To Console Keys".

The date and time is displayed simply by pressing the respective key (MDT or MTM).

To set the time or date from the attendant console proceed as follows:-

1. Press a spare loop key.
2. Press the MTM key, if it is the time that needs to be changed, or the MDT key if it is the date that needs to be changed.
3. Key in the new time or date. Note just key in the new date or time as numbers without spaces e.g. 260395 for the 26th of March 1995 and 1315 for 'one-fifteen' in the afternoon. The system will automatically separate the day from the month and the month from the year.
4. Press the MTM or MDT key again.
5. Press the Release Key.

# Features

## Feature Activation Codes

Extension features of the Meridian system can help extension users save time and effort, making their working day more efficient.

Features are activated and deactivated by keying codes into the telephone set and, in the case of digital sets, by pressing keys for certain features. There are two methods of invoking features, namely Special Prefix (SPRE) code working and Flexible Feature Code (FFC) working.

### Flexible Feature Code (FFC) Working

Flexible Feature Code working allows the System Administrator to assign their own codes to chosen features. This allows each Meridian 1 to be tailored to a logical pattern of codes to suit each company or to retain the same feature codes as those used on their previous telephone system. Flexible Feature Codes are set and printed through Program 57.

Some Example Flexible Feature Codes are given in the table below:-

Feature	Flexible Feature Code	Feature	Flexible Feature Code
Authorisation code	*21	Make Set Busy (500) [Deny]	#62
Automatic set relocation	*90	Malicious Call Trace	*28
Automatic set removal	*92	Night Service pick-up	*8
Automatic Wake-up	*40	Override	*26
Automatic Wake-up (Cancel)	*41	Permanent Hold	*55
Automatic Wake-up (Verify)	*42	Pick-up, Call	**0
Call Forward all calls	#1	Pick-up, Directed	*09
Call Forward all calls (Cancel)	#1	Pick-up, Group	*00
Call Forward Destination Deactivation	*29	Remote Call Forward	*56
Call Forward/HUNT override via FFC	*27	Ring again	#31
Call Park	#51	Ring again (Cancel)	#32
Call Park Retrieve	#52	Set based Administration - Installer	*96
Cancel Remote Call Forward	*57	Set based Administration - User	*97
Charge Account	#56	Speed Call, Erase entry	#34
Electronic Lock (Off)	*59	Speed Call, Controller Code	#33
Electronic Lock (On)	*58	Speed Call, User Code	#23
Group Hunt - Opt in	#58	System Speed Call, User Code	*3
Group Hunt - Opt out	#59	Station control password change	*98
Internal call forward	#67	Store called number	*24
Internal call forward (Cancel)	#68	Stored number, Re-dial	*25
Last Number Re-dial	*44	Trunk Maintenance	*91
Maintenance access for telephone	*93	Trunk verify code	*95
Make Set Busy (500) [Allow]	#61	User Selectable Call Redirection	#69

### SPRE Code Working

This method of working is not very common. These codes are used by extension users without multi frequency tone key phones.

SPRE code working consist of two parts:-

SPRE code *followed by the* Fixed Feature Code

The SPRE code tells the system that a feature is about to be activated or deactivated and the Fixed Feature Code identifies the particular feature.

The SPRE code can be changed to be any value (maximum 4 digits) so long as it doesn't clash with the extension number range or access codes for routes.

The Option 11 system default SPRE code is 12.

The Fixed Feature Codes however cannot be changed. Common codes are below:-

<b>Feature</b>	<b>Fixed Feature Code</b>
Ring Again	1
Cancel Ring Again	2
Answer Call Pickup	3
Answer Group Pickup	94
Directed (DN) Pickup	95
Authorisation Code	6
Call Park	71
Retrieve Parked Call	72
Dial System Speed Call	73
Store Speed Call (personal)	75
Dial Speed Call (personal)	76
Dial Speed Call (system)	73
Call Forward all Calls	74
Call Forward All Calls (cancel)	74
Hold (Permanent)	77
Store Number for Redial	78
Dial Stored Number Redial	79
Last Number Redial	89
Night Service Pickup	4
Charge Account	5
Automatic Set Relocation	81
Internal Call Forward	9914
Internal Call Forward (Cancel)	9914
Malicious Call Trace	83
User Selectable Call Redirection	9915

---

## Activating Features From Digital Sets

With digital sets some features must be assigned to a programmable key whereas other features can be invoked either by dialling a feature code or be assigned to a key.

The following features if used must be assigned to a programmable key for activation:-

- Call Forward All Calls
- Ring Again
- Stored Number Redial
- Last Number Redial
- Speed Call User and Controller
- System Speed Call Controller
- Six Party Conference
- Call Transfer
- Call Park (Activation)
- Call Waiting

The following features may be assigned to a key or invoked using the relevant feature code :-

- Call Park (retrieve)
- System Speed Call User
- Call Pickup
- Charge Account
- User Selectable Call Redirection

Listing all the Flexible Feature Codes on your System

You can print out the current code for all FFCs on your system using Program 57.

> **LD 57.** Load Program 57.

REQ **PRT.** Meaning "Print".  
TYPE **FFC.** Meaning "Flexible Feature Code".  
CUST **0.** Set to 0 unless using the multi-customer feature.  
CODE **ALL.** Meaning list every code.

The system responds by printing all FFCs, and a typical printout is shown below.  
Note: The Print out appears continuous not as shown.

CUST	00	ICPD		SAEN	
FFCT	YES	CFHO	*27	SALK	
ASRC	*90	ICPP		SAUN	
AUTH	*21	IMS		ATDA	
AWUA	*40	MNTC	*93	ATDD	
AWUD	*41	MTRC	*28	CWGA	
AWUV	*42	OVRD	*26	CWGD	
CDRC	#56	RPAX		MSBA	#61
CFWA	#1	RPAN		MSBD	#62
CFWD	#1	ITXX		MWUA	
CFWV		PUDN	*09	MWRA	
COND		PUGR	*00	MWUD	
CPAC	*52	PURN	**0	SFAC	
CPRK	*51	RCFA	*56	AREM	*92
CSHF		RCFD	*57	ADMN	*91
C6DS		RCFV		ICFA	#67
DEAF		RDLN	*44	ICFD	#68
DPVS		RDNE		ICFV	
ELKA	*58	RDSN	*25	USCR	#69
ELKD	*59	RDST	*24	INST	*96
		RGAA	#31	USER	*97
PLDN	2000	RGAD	#32	BNRA	
USE	GPHT	RGAV		BNRD	
LSNO	50	RMST		CCFA	
HTYP	RRB	SCPC	*98	CCFD	
CFWI	NO	SPCC	#33	OCBA	
MQUE	0	SPCE	#34	OCBD	
		SPCU	#23	OCBV	
PLDN	2010	SSPU	*3	CPP	
USE	GPHT	TFAS	*8	CPPO	
LSNO	51	TRMD		CFDD	
HTYP	RRB	TRVS	*95	VTLN	
CFWI	NO	USTA		VTLF	
MQUE	0	LILO			
		NRDY			
GRPF		GHTA	#58	REQ	<b>END.</b>
HOLD	#55	GHTD	#59		
ICPA		SADS			

---

## Listing a Particular Flexible Feature Code

You can identify the code for a particular feature by using the Program 57.

The following example shows how to print the Flexible Feature Code associated with the "Ring Again Activation (RGAA)" feature.

> **LD 57.↵** *Load Program 57.*

REQ **PRT.↵** *Meaning Print.*

TYPE **FFC.↵** *Meaning Flexible Feature Code.*

CUST **0.↵**

CODE **RGAA.↵** *Ring Again Activation.*

The system responds with:-

CUST 00

FFCT YES

RGAA #31

CODE ↵ *To obtain the REQ prompt again.*

REQ **END.↵** *Exit Program 57.*

## Adding a New Flexible Feature Code

A code for any FFC can be added using Program 57.

The following example shows a new "Ring Again Activation Code (RGAA)" of #66 being added.

> **LD 57.↵** *Load Program 57.*

REQ **CHG.↵** *Meaning "Change". This command is used even when you are adding a new code.*

TYPE **FFC.↵** *Meaning "Flexible Feature Code".*

CUST **0.↵**

FFCT ↵

CODE **RGAA.↵** *Define the feature mnemonic.*

RGAA **#66.↵** *Define the code number.*

RGAA ↵ *Carriage return indicates that*

CODE ↵ *no other features will be defined.*

REQ **END.↵** *Exit Program 57.*

---

### Deleting a Flexible Feature Code

Use Program 57 to delete an FFC.  
The following example shows a "Ring Again Activation Code (RGAA)" of #31 being deleted:-

```
>      LD 57↵  Load Program 57.

REQ    OUT↵  Meaning "Delete a Code".
TYPE   FFC↵
CUST    0↵
ALL     NO↵
CODE    RGAA↵ Define the feature mnemonic.
RGAA    #31↵
RGAA    ↵      Carriage return indicates that the code
               for this feature is to be deleted.
CODE    ↵      Carriage return indicates that no other feature is to be deleted.
REQ     END↵  Exit Program 57.
```

### Changing a Flexible Feature Code

To change an FFC delete the existing code and then add the new code.

---

# Feature Packaging

## Introduction

Most features are supplied as standard with the system. Optional feature groups can be purchased for specific applications eg. Automatic Call Distribution (ACD). This section demonstrates how to list the features on your current system and shows how to identify the software package containing any particular feature.

## Printing the Features that Exist on your System

You can list the features currently on the system by loading Program 22 and following the steps listed below.

> **LD 22**␣ *Load Program 22.*

REQ **PRT**␣ *Meaning "Print".*  
TYPE **PKG**␣ *Meaning "Packages".*

The system responds by listing the mnemonic and number for all the feature packages installed on the system.

OPTF	1
CUST	2
CDR	4
CTY	5
CLNK	6
RAN	7
TAD	8
:	:
:	:
:	:
SR	53
AA	56
HIST	55
BARS	57
NARS	58
:	:
:	:
:	:
XPE	203
XCT0	204
XCT1	205
NACD	207

REQ **END**␣ *Exit Program 22.*

## To Identify the Package needed for a Particular Feature

For each feature in the NT documentation (Software feature guide Books 1, 2 & 3 - Features) there will be a section titled "Feature Packaging". This section will detail the



---

"Option Number" and the mnemonic that identifies the software package containing the feature.

---

# *Feature Descriptions*

This section describes the more commonly used features along with a guide to implementing them. Also discussed is the method by which extension users invoke features. For each feature listed, there will be a section covering the following:

- 1 Feature Description.
- 2 Feature Implementation.
- 3 A worked example showing how to assign the feature to an extension.
- 4 NT Documentation Reference and from which X11 Release the feature is available.

---

# Autodial

## Feature Description

The Autodial feature allows extension users with digital sets to store a telephone number under an "Autodial Key" and when desired make a call to that number by pressing the key. The system administrator can restrict the length of number that an extension user can store under the key to one of the following maxima 4, 8, 12, 16, 20 or 23. To store the number under an Autodial key press the key , then key in the desired number and finally press the Autodial key again to save the number. To use the autodial key first press an idle DN key and then press the Autodial key.

## Feature Implementation

To configure this feature first identify the TN of the extension, the key to be used and then determine the maximum number of digits the extension user will be allowed to store. Then the administrator can either input a stored number or leave it for the extension user to input from their telephone. Use Program 11 as follows.

ITEM    **KEY xx ADL yy zzzzzzzz**↵  
where **xx** = key number  
      **yy** = maximum length of Autodial number  
      **zz** = the digits to be dialled automatically (optional)

## Example

In this example the Autodial feature has been assigned to key 8 of a digital set located at TN 8 3. The user is allowed to store up to 16 digits and the number 901785762300 is initially stored.

>	<b>LD 11</b> ↵	<i>Load Program 11.</i>
REQ :	<b>CHG</b> ↵	
TYPE :	<b>2616</b> ↵	
TN	<b>8 3</b> ↵	<i>Identify the TN.</i>
ECHG	<b>YES</b> ↵	<i>Meaning use Easy Change.</i>
ITEM	<b>KEY 8 ADL 16 901785762300</b> ↵	<i>Allocate Autodial to key 8, limit the number of digits stored to 16 and store 901785762300</i>
	<b>KEY</b> ↵	<i>Meaning no other keys to program</i>
ITEM	↵	
REQ :	<b>END</b> ↵	<i>Exit Program 11.</i>

## NT Documentation Reference and Release

Software Feature Guide - "Autodial" (reference 553 - 3001 - 306)  
Available from Software Release 1.

---

# Automatic Answerback

## Feature Description

This feature is useful to anyone that requires complete hands free operation of his or her M2616 type set. When the feature is activated any incoming calls to that set will ring the phone once and then be automatically answered.

## Feature Implementation

This feature can be implemented in two ways.  
The first is by setting the Class of Service to AAA (a class of service of HFA is also required). This will cause every incoming call to ring the extension once and then be automatically answered.  
The second is to allocate the feature to a key. This allows the extension user to activate or deactivate the feature as desired.

## Example

In this example the Automatic Answerback feature has been assigned to key 8 of a digital set located at TN 8 3.

```
>      LD 11↓      Load Program 11.

REQ :  CHG↓
TYPE : 2616↓
TN     8 3↓      Identify the TN.
ECHG   YES↓      Use Easy Change.
ITEM   KEY 8 AAK↓ Allocate Automatic Answerback to key 8.
        KEY↓      Indicates that no other key is to be programmed
ITEM   ↓
REQ :  END↓      Exit Program 11.
```

## NT Documentation Reference and Release

Software Feature Guide - "Automatic Answerback" (reference 553 - 3001 - 306)  
Available from Software Release 1

---

## Automatic Hold

### Feature Description

This feature can only be assigned to digital sets. It allows users to place a call on hold without using the "Hold" key. For sets with multiple DNs the user can have two or more calls active at the same time and switch between the calls without placing the active call on hold. As the DN of a held call is pressed to retrieve that call the active call is automatically put on hold. Attempting to switch between DNs without this feature would cause the active call to be cut off !

### Feature Implementation

This feature is configured in the Class of Service in Overlay Program 11.

### Example

In this example the Automatic Hold feature has been assigned to a digital set located at TN 8 3.

> **LD 11**↵ *Load Program 11.*

REQ : **CHG**↵

TYPE : **2616**↵

TN **8 3**↵ *Identify the TN.*

ECHG **YES**↵ *Meaning use easy change.*

ITEM **CLS AHA**↵ *Allow Automatic Hold.*

ITEM ↵

REQ : **END**↵ *Exit Program 11.*

### NT Documentation Reference and Release

Software Feature Guide - "Automatic Hold" (reference 553 - 3001 - 306)

Available from Software Release 10

---

# Authorisation Codes

## Feature Description

This feature gives "authorised personnel" a mechanism to temporarily override the Call Restriction (Barring) applicable to an extension thus allowing them to make a call from normally barred extensions. Such an example might be a manager who is regularly called to other parts of the factory complex. The manager dials the Authorisation Code FFC (e.g. \*21) followed by their "Personal Identification Number (or CODE)" then, when dial tone is returned, the telephone number they require. This action will then override the barring of that extension for one call only.

## Feature Implementation

Authorisation codes are added, changed, deleted and printed in LD 88. They are programmed in two parts. First to define the authorisation codes, and secondly to define the call restrictions applied to that code:

- a. Type AUB (Authorisation data block). This allows different combinations of Class of Service (COS), Trunk Group Access Restriction (TGAR) and/or Network Class of Service (NCOS) to be defined. The different combinations of COS, TGAR and NCOS are assigned to what is termed a classcode (CLAS). There can be a maximum of 116 (0 to 115) different CLAS on your system.

AUB	
CLAS	COS
0	UNR, TGAR=1
1	TLD, NCOS=2
2	UNR
:	:
:	:
115	UNR

- b. Type AUT (Authorisation code Entries). This is where the individual their "Personal Identification Numbers" are defined. The Authorisation CODE, (or PIN,) is assigned to a Classcode value (CLAS) which will determine any restriction that will apply when the code is used.

AUT	
CODE	CLAS
2745	0
2632	1
9789	2
3428	1
6679	2

Example

In this example two new Authorisation Codes with unrestricted access will be set up. First print the AUB to find a CLAS which has a COS = UNR (unrestricted). Then print the AUT to identify, which CODES (PINs) are already in use. Then create two new CODES.

```
> LD 88 ↵ Load Program 88.
REQ PRT ↵
TYPE AUB ↵ Request printout of AUB
CUST 0 ↵
```

The system responds by printing the Authorisation Data Block. From this you can see that CLAS 1 has a COS of UNR.

```
CUST 00
ALEN 04
ACDR YES
AUTHCOD_ALARM OFF
RANR X
ACLE NO
BRST 10
RTRY NO
AUTO NO
```

CLAS	COS	TGAR	NCOS	CLAS	COS	TGAR	NCOS	CLAS	COS	TGAR	NCOS
000	TLD	01	07	001	UNR	00	07	002	TLD	00	02
003	TLD	01	03	004	CTD	00	00	005	CTD	00	00
006	CTD	00	00	007	CTD	00	00	008	CTD	00	00
009	CTD	00	00	010	CTD	00	00	011	CTD	00	00
012	CTD	00	00	013	CTD	00	00	014	CTD	00	00
⋮			⋮	⋮			⋮	⋮			⋮
111	CTD	00	00	112	CTD	00	00	113	CTD	00	00
114	CTD	00	00	115	CTD	00	00				

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To find which authorisation codes are in use.

```
REQ PRT ↵
TYPE AUT ↵ Request printout of Authorisation code entries.
CUST 0 ↵
CODE
```

The system responds with the list.

```
CODE 1361 CLAS 001
CODE 1734 CLAS 000
```

---

Now two new codes can be set up, eg 5218 and 2465.

REQ **NEW** ↵

TYPE **AUT** ↵ *Add new authorisation codes.*

CUST **0** ↵

CODE **5218** ↵ *Add new code 5218.*

SARC ↵ *Return at this entry leaves the prompt at default. The default is NO to indicate that this code is not being used for the Schedule Access Restriction feature.*

CLAS **1** ↵ *To allocate code to CLAS 001.*

CODE **2465** ↵ *Repeat procedure to add code 2465.*

SARC ↵

CLAS **1** ↵

CODE ↵

REQ **END** ↵ *Exit Program 88.*

## NT Documentation Reference and Release

Software Feature Guide - "Basic Authorisation Code"(reference 553 - 3001 - 306)

Available from Software Release 1

## *Station Specific Authorisation Code*

On a per phone basis, via LD 10 & 11, it is possible to define the authorisation codes that can be used from a set. The options for this feature are as follows:

- All authorisation codes can be used(class of service of AUTU).
- No authorisation codes can be used(class of service of AUTD).
- Some authorisation codes can be used( class of service of AUTR).With this option a separate parameter has to be entered (AUTH) defining up to six Authorisation codes that can be used. These codes must be defined in LD 88.

## NT Documentation Reference and Release

Software Feature Guide - "Station Specific Authorisation Code" (reference 553 - 3001 - 306)

Available from Software Release 19



---

## Call Forwarding

On the Meridian system there are a number of features associated with call forwarding. This section will concentrate on the common ones :-

- Call Forward All Calls
- Call Forward Internal Calls
- Call Forward No Answer
- Call Forward No Answer, Second Level
- Hunting (on busy)
- Call Forward Busy (DID Calls Only)
- Call Forward and Hunt by Call Type

### Overriding Call forwarding

It is possible to allow a phone (via a flexible feature code) to terminate a call on a phone that would normally forward the call by any of the methods listed above. A phone that can override the call forwarding must have a class of service of CFHA assigned in LD 10 or 11.

#### Example

> **LD 10**↓ *Load Program 10.*

REQ : **CHG**↓

TYPE : **500**↓

TN **9 3**↓

ECHG **YES**↓

ITEM **CLS CFHA**↓ *Call Forward override allowed.*

ITEM ↓

REQ : **END**↓ *Exit Program 10.*

On a digital set TN 7 4 Call Forward override is to be assigned.

> **LD 11**↓ *Load Program 11.*

REQ : **CHG**↓

TYPE **2616**↓

TN **7 4**↓

ECHG **YES**↓

ITEM **CLS CFHA**↓ *Call Forward override allowed.*

ITEM ↓

REQ : **END**↓ *Exit Program 11.*

### NT Documentation Reference and Release

Software Feature Guide - "Call forward/hunt override via FFC" (reference 553 - 3001 - 306)

Available from Software Release 20

---

# Call Forward All Calls

## Feature Description

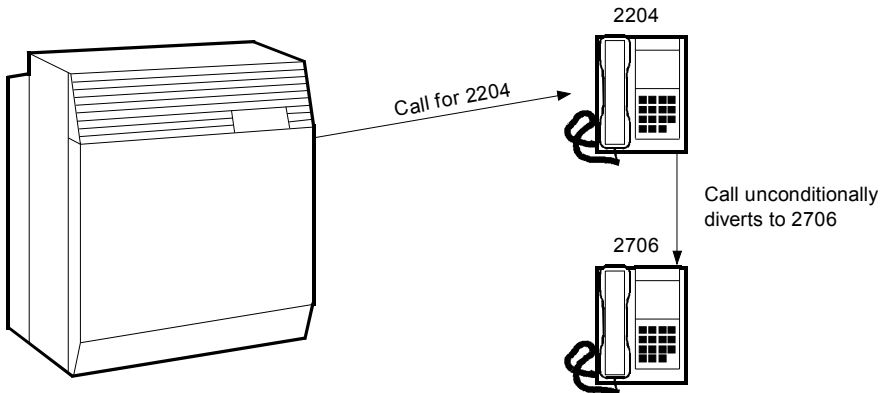
This feature is also known on other systems as Divert All Calls.

The Call Forward All Calls feature allows an extension user, to unconditionally divert their incoming calls to another extension or to an external number. The extension user can change the forwarding number at any time from their set. This feature can be assigned to both analogue and digital sets, but if assigned to a digital set it must be programmed onto a key.

For systems that have Meridian Mail equipped, the extension user can divert their calls to Mail by keying in the access DN for Meridian Mail.

The feature called "Remote Call Forward" allows an extension user to program their Call Forward DN from a remote set. Refer to Book 2 - X11 Features and Services for more detail.

The feature called "Call Forward Remote" allows the Attendant to Program the Call Forward DN from the console. Refer to Software Feature Guide Book 1 - for more detail.



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## Feature Implementation

The Call Forward feature is assigned to analogue sets using Overlay Program 10. The Call Forward feature is assigned to a key on a digital set using Overlay Program 11. In order to minimise fraudulent use of the feature, the number of digits that a user is allowed to Call Forward all Calls (CFW) to is 4 digits (i.e. internal extensions, although '9100' would still be possible). The number of digits allowed for the forwarding number is in the range 4 to 23.

The extension user can be restricted to forwarding their calls to internal destinations only by setting a Class Of Service to CFXD (Call Forward External Denied), this is the default setting.

---

## Examples

In this example Call Forwarding is assigned to analogue TN 9 3 and Call Forward External allowed.

```
> LD 10↓ Load Program 10.

REQ : CHG↓
TYPE : 500↓
TN 9 3↓
ECHG YES↓
ITEM FTR CFW 16↓ Call Forward All Calls to numbers with a maximum of 16 digits.
FTR↓
ITEM CLS CFXA↓ Call Forward to external numbers allowed.
ITEM ↓↓
REQ : END↓ Exit Program 10.
```

On a digital set TN 7 4 Call Forward is to be assigned to key 3 and Call Forward External denied.

```
> LD 11↓ Load Program 11.

REQ : CHG↓
TYPE 2616↓
TN 7 4↓
ECHG YES↓
ITEM KEY 3 CFW 8↓ Allocate to key 3 as Call Forward All Calls with a maximum of 8 digits in the forwarding number.
KEY↓
ITEM CLS CFXD↓ Call Forward to external numbers denied.
ITEM ↓↓
REQ : END↓ Exit Program 11.
```

## NT Documentation Reference and Release

Software Feature Guide - "Call Forward All Calls" (reference 553 - 3001 - 306)  
Available from Software Release 1

---

# Call Forward Internal Calls

## Feature Description

The Call Forward Internal Calls feature allows an extension user, to unconditionally divert their incoming internal calls to another extension or to an external number as in the Call Forward All Calls feature except this feature allows external calls to terminate normally.

## Feature Implementation

The implementation of this feature is the same as the Call Forward All Calls feature using the mnemonic ICF instead of CFW.

## Example

In this example Call Forwarding is assigned to analogue TN 9 3 and Call Forward External allowed.

```
>      LD 10.      Load Program 10.

REQ :  CHG.
TYPE : 500.
TN     9 3.
ECHG   YES.
ITEM   FTR  ICF 16.      Call Forward All Internal Calls to numbers with a maximum of 16
digits.
      FTR.
ITEM   CLS  CFXA.      Call Forward to external numbers allowed.
ITEM   .
REQ :  END.      Exit Program 10.
```

On a digital set TN 7 4 Call Forward is to be assigned to key 3 and Call Forward External denied.

```
>      LD 11.      Load Program 11.

REQ :  CHG.
TYPE : 2616.
TN     7 4.
ECHG   YES.
ITEM   KEY 3  ICF 8.      Allocate to key 3 Call Forward All Internal Calls to numbers with a maximum of
8 digits
      KEY.
ITEM   CLS  CFXD.      Call Forward to external numbers denied.
ITEM   .
REQ :  END.      Exit Program 11.
```

## NT Documentation Reference and Release

Software Feature Guide - "Call Forward, Internal Calls" (reference 553 - 3001 - 306)  
Available from Software Release 19

---

# Call Forward No Answer

## Feature Description

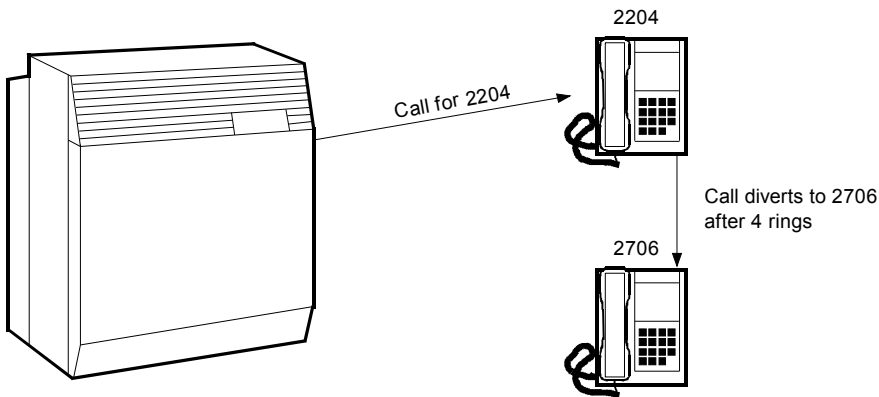
This feature is also known as Call Forward On No Reply.

With Call Forward No Answer, a call that is not answered after a set number of rings will automatically forward to an alternative extension.

The feature *cannot* be activated / deactivated by the extension user. There are three options for the number of rings before a call diverts. They are defined in the system and each will allow between 1 and 15 rings (4 is the default) before forwarding occurs. Only one (RCO) value is assigned to an extension and it is possible to allow a user to change their assigned option from the telephone set (see User Selectable Call Redirection page 152).

For systems that have Meridian Mail, the extension user can elect to have their calls forward on no answer to Meridian Mail by specifying the access DN for Mail.

Call forward no answer will only work single step i.e. once a call has been forwarded after 4 rings to another extension and it is not answered at that second extension, it will ring indefinitely unless the extension has "Call Forward No Answer, Second Level" assigned (See next feature)



TMD930

## Feature Implementation

### Analogue and Digital Sets

The feature is assigned in two steps. First the Class of Service must allow Call Forward No Answer (FNA), and then the number to which calls are to be forwarded must be defined. This is known as the Flexible Directory Number (FDN). The extension user can change this value if USRA is allowed. (see User Selectable Call Redirection page 152)

---

### Example

In this example Call Forward No Answer has been assigned to analogue TN 9 3 and the calls will divert to DN 2205.

```
>      LD 10↓      Load Program 10.

REQ :  CHG↓
TYPE :  500↓
TN      9 3↓
ECHG    YES↓
ITEM     CLS FNA↓   Allow the Call Forward No Answer feature.
ITEM     FTR FDN 2205↓ The Flexible DN is 2205.
          FTR↓
ITEM      ↓
REQ :  END↓      Exit Program 10.
```

In this example Call Forward No Answer has been assigned to digital TN 7 4 and the calls will divert to DN 2205.

```
>      LD 11↓      Load Program 11.

REQ :  CHG↓
TYPE :  2616↓
TN      7 4↓
ECHG    YES↓
ITEM     CLS FNA↓   Allow the Call Forward No Answer feature.
ITEM     FDN 2205↓   The Flexible DN is 2205.
ITEM      ↓
REQ :  END↓      Exit Program 11.
```

### When forwarding will occur

The number of rings before forwarding occurs is dependent upon the RCO value (0, 1 or 2)

```
>      LD 10/11↓    Load Program 10/11.

REQ :  CHG↓
TYPE :  500/2616↓   Select the telephone type
TN      X Y↓
ECHG    YES↓
ITEM     RCO 2↓     Range: 0, 1, 2. For the definition of the values see USCR page 152
ITEM      ↓
REQ :  END↓      Exit Program.
```

### NT Documentation Reference and Release

Software Feature Guide - "Call Forward No Answer" (reference 553-3001-306)  
Available from Software Release 1

---

## Call Forward No Answer, Second Level

### Feature Description

Call Forward No Answer will normally only work single step i.e. once a call has been forwarded on 'No answer' to a second extension it will ring indefinitely at that extension. If however the second set has a Class of Service Secondary Call Forwarding Allowed (SFA) then the call will, after a set number rings, (governed by the RCO value, see page 152) forward to a third DN as defined in the Flexible Directory Number (FDN) of the second set.

### Feature Implementation

The feature is assigned to both analogue and digital sets by setting the Class of Service to SFA. The Flexible Directory Number must also be defined to identify where the calls will be forwarded.

### Example

In this example Call Forward No Answer, Second Level has been assigned to an analogue TN 9 3 and the call will be forwarded to 2205.

> **LD 10**↓ *Load Program 10.*

REQ : **CHG**↓

TYPE : **500**↓

TN **9 3**↓

ECHG **YES**↓

ITEM **CLS SFA**↓ *Allow Second Level Call Forward No Reply. (Must have CLS FNA)*

ITEM ↓

REQ : **END**↓ *Exit Program 10.*

### NT Documentation Reference and Release

Software Feature Guide - "Call Forward No Answer, Second Level" (reference 553 - 3001 - 306)

Available from Software Release 10

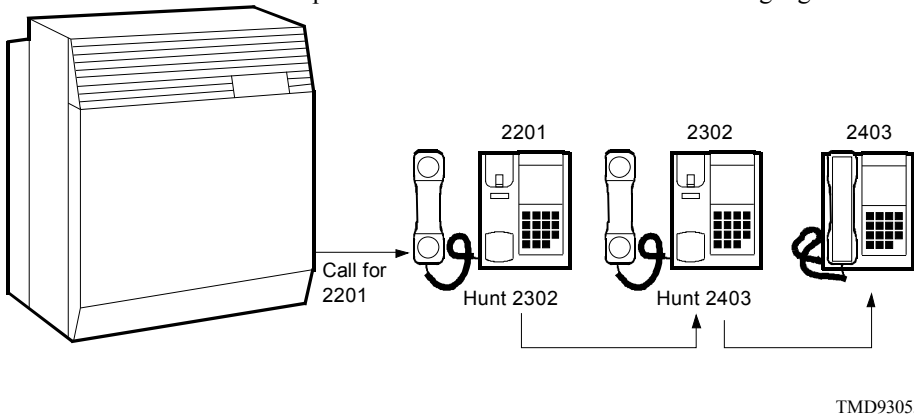
# Hunting

## Feature Description

This feature is also known on other systems as Divert On Busy.

This feature allows a call, which encounters a busy extension to automatically Hunt (forward), to a predefined DN. If the extension that is hunted to, is also busy, the system will look at the Hunt DN of that second set and Hunt (forward) again to that DN. This continues until an idle DN is found. The Hunt DN is set on a per extension basis and cannot be disabled by the extension user.

For systems that have Meridian Mail equipped, the extension user can have their calls hunt on busy to Meridian Mail in the same way as hunting to another extension. This is achieved by specifying the access DN for Mail instead of an extension number. Hunting to Meridian Mail will however preclude the use of some features like Ring Again.



The maximum number of hunt steps is as follows :-

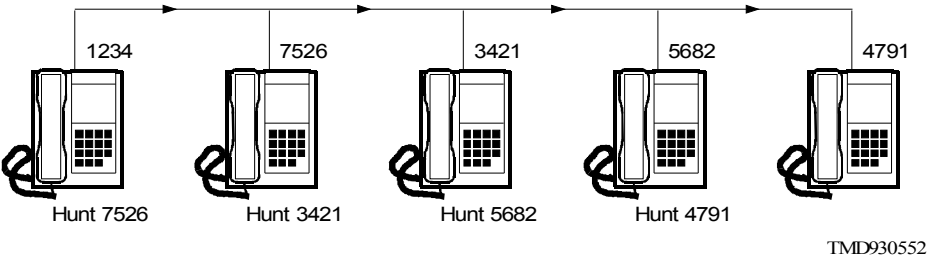
- For Option 11, 51 & 61 systems 18 steps
- For Option 71 & 81 systems 30 steps



**Hunting Chains**

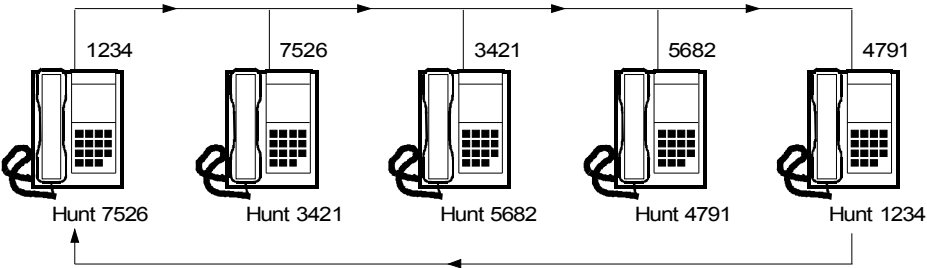
By linking the Hunt DN's together in this fashion various types of hunting chain can be achieved: -

**Linear**



Linear Hunting starts at the called DN and continues through to the last DN in the chain, therefore a call to 3421 will hunt to 5682 and 4791 only.

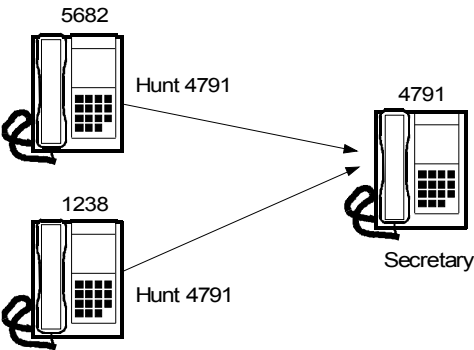
**Circular**



TMD93038

For Circular Hunting the last DN in the chain is given the first DN in the chain as its hunt number. When a call encounters a busy extension the system will step along the chain until it returns to the original number dialled.

**Secretarial**



TMD930.

Secretarial Hunting uses a specific DN, as the last DN in two or more hunt chains.

---

## Feature Implementation

The feature is assigned to both analogue and digital sets by allowing the feature in the Class of Service and also defining the Hunt directory number.

### Example

In this example Hunting has been assigned to an analogue TN 9 3 with the calls to be forwarded to DN 2432.

> **LD 10**␣ *Load Program 10.*

REQ : **CHG**␣

TYPE : **500**␣

TN **9 3**␣

ECHG **YES**␣

ITEM **HUNT 2432**␣ *Hunt to extension (DN) 2432 when busy.*

ITEM **CLS HTA**␣ *Allow Hunting.*

ITEM ␣

REQ : **END**␣ *Exit Program 10.*

> **LD 11**␣ *Load Program 11.*

REQ : **CHG**␣

TYPE : **2616**␣

TN **7 4**␣

ECHG **YES**␣

ITEM **HUNT 2432**␣ *Hunt to extension (DN) 2432 when busy.*

ITEM **CLS HTA**␣ *Allow Hunting.*

ITEM ␣

REQ : **END**␣ *Exit Program 11.*

## NT Documentation Reference and Release

Software Feature Guide - "Hunting" (reference 553 - 3001 - 306)

Available from Software Release 1

---

## Call Forward Busy

### Feature Description

This feature is set on a per extension basis, and allows for Direct Inward Dialling (DID) calls only, that encounter a busy extension, to be forwarded to the Attendant Console if all the steps in the hunting chain are busy.

### Feature Implementation

The feature is assigned to both analogue and digital sets in the Class of Service.

### Example

In this example Call Forward Busy has been assigned to an analogue TN 9 3.

> **LD 10**↵ *Load Program 10.*

REQ : **CHG**↵

TYPE : **500**↵

TN **9 3**↵

ECHG **YES**↵

ITEM **CLS FBA**↵ *Allow Call Forward Busy.*

ITEM ↵

REQ : **END**↵ *Exit Program 10.*

In this example the Call Forward Busy has been assigned to a digital TN 7 4.

> **LD 11**↵ *Load Program 11.*

REQ : **CHG**↵

TYPE : **2616**↵

TN **7 4**↵

ECHG **YES**↵

ITEM **CLS FBA**↵ *Allow Call Forward Busy.*

ITEM ↵

REQ : **END**↵ *Exit Program 11.*

### NT Documentation Reference and Release

Software Feature Guide - "Call Forward Busy" (reference 553 - 3001 - 306)

Available from Software Release 1

---

# Call Forward and Hunt by Call Type

## Feature Description

This feature allows internal and external calls to be routed to different destination DNs under Call Forward No Answer and Hunting situations.

## Feature Implementation

Note that to implement this feature there are a number of data items, associated with routes, that cannot be changed by the system administrator.

## Analogue and Digital Sets

The feature is assigned in the Class of Service (CFTA). When both ‘Call Forward NO Answer’ and ‘Hunting’ (FNA & HTA) are also allowed, then four directory numbers must be input:-

- a) the DN where internal calls are to forward to on No Answer
- b) the DN where internal calls are to hunt (forward) to on Busy
- c) the DN where external calls are to forward to on No Answer
- d) the DN where external calls are to hunt (forward) to on Busy

*Note: Where Hunting or Forward No Answer has been set as Deny, then their associated prompts are NOT programmed*

## Example

In this example Call Forward and Hunt by Call Type has been assigned to analogue TN 93.

```
> LD 10␣ Load Program 10.

REQ : CHG␣
TYPE : 500␣
TN 93␣
ECHG YES␣
ITEM CLS CFTA FNA HTA␣ Call Forward and Hunt by Call type allowed (including Hunting and Forward No Answer).
ITEM HUNT 3341␣ Destination for Internal calls encountering busy.
ITEM FTR FDN 2205␣ Destination for Internal calls not answered.
ITEM FTR EFD 2731␣ Destination for External calls not answered.
ITEM FTR EHT 3421␣ Destination for External calls encountering busy.
ITEM FTR␣
ITEM ␣
REQ : END␣ Exit Program 10.
```

In this example Call Forward and Hunt by Call Type has been assigned to a digital TN 7 4.

```
>      LD 11␣                               Load Program 11.

REQ :  CHG␣
TYPE : 2616␣
TN      7 4␣
ECHG    YES␣
ITEM     CLS CFTA FNA HTA␣      Call Forward and Hunt by Call type allowed (including Hunting and
                                Forward No Answer).
ITEM     FDN 4356␣              Destination for Internal calls not answered.
ITEM     HUNT 2111␣             Destination for Internal calls encountering busy.
ITEM     EFD 2344␣             Destination for External calls not answered.
ITEM     EHT 2266␣             Destination for External calls encountering busy.
ITEM     ␣␣
REQ :    END␣                   Exit Program 11.
```

**NT Documentation Reference and Release**

Software Feature Guide - "Call Forward and Hunt by Call Type" (reference 553 - 3001 - 306)  
Available from Software Release 10

---

## Call Hold, Permanent

### Feature Description

This feature allows an analogue extension to place an established call on hold when desired. This feature is not required on digital sets as they have a dedicated Hold key.

The analogue extension user places the call on hold by following these steps:-

- Press the "Recall" key
- Enter the Flexible Feature Code for Call Hold (e.g. #55)
- Replace the handset
- To take the call off hold and speak to the caller again simply lift the handset

There is a system wide Permanent Hold Recall Timer which specifies the maximum length of time that a call can be left in the permanent hold state. If this timer expires the system will automatically call the user back and reconnect them to the original caller.

Whilst the caller is on hold they hear silence unless the "Music On Hold" feature is equipped.

Permanent Hold also requires that the set has the Call Transfer feature allowed.

### Feature Implementation

The feature must be assigned in Overlay Program 10 and the Class of Service must allow Call Transfer (XFA).

### Example

In this example the Permanent Hold feature has been assigned to TN 9 1.

```
>      LD 10␣      Load Program 10.

REQ :  CHG␣
TYPE :  500␣
TN      9 1␣
ECHG    YES␣
ITEM     CLS XFA␣  Transfer Allowed.
ITEM     FTR PHD␣  Permanent Hold feature assigned.
          FTR␣
ITEM     ␣
REQ :    END␣      Exit program 10.
```

### NT Documentation Reference and Release

Software Feature Guide - "Call Hold, Permanent" (reference 553 - 3001 - 306)  
Available from Software Release 1

---

# Call Park

## Feature Description

This feature allows the extension user, or the attendant, to place a call in a parked state where it can be retrieved from that parked state from any extension. The extension user can park the call on any DN that is defined in the system, however there is a range of DNs set aside on your system for parking calls. They are termed System Park DNs. To park an established call the user should follow these steps:-

500 Set	Digital Set
Press Recall	Press the Park key
+	+
Key in the Call Park FFC (e.g. #51)	Key in a System Park DN or any valid DN
+	+
Key in a System Park DN or any valid DN	Press the Park key again
+	
Replace Handset	

The call can be retrieved from any extension by following one of these steps, depending on how the call was earlier parked:-

**If; Call was Parked using a System Park DN.**

- Lift Handset
- +
- Key in the System Park DN (As used earlier)

**If; Call was Parked using a Valid DN.**

- Lift Handset
- +
- Key in the Retrieve Parked Call FFC(e.g. #52)
- +
- Key in the DN used earlier to Park Call

The caller normally hears silence when parked, however the system can be set to provide music on Hold.

---

## Feature Implementation

### Analogue Sets

Allow the Class of Service for Call Transfer (XFA).

### Digital Sets

Assign the Park feature to a key number.

System Park DNs are set up and printed in LD 50. The maximum time that a call may be left in the parked state is also defined here.

### Example

In this example the Call Park feature has been assigned to analogue TN 9 3.

> **LD 10**↓ *Load Program 10.*

REQ : **CHG**↓

TYPE : **500**↓

TN **9 3**↓

ECHG **YES**↓

ITEM **CLS XFA**↓ *Transfer allowed.*

ITEM ↓

REQ : **END**↓ *Exit program 10.*

In this example the Call Park feature has been assigned to key 8 of a digital set located at TN 8 3.

> **LD 11**↓ *Load Program 11.*

REQ : **CHG**↓

TYPE : **2616**↓

TN **8 3**↓

ECHG **YES**↓

ITEM **KEY 8 PRK**↓ *Call Park feature assigned to key 8.*

KEY↓

ITEM ↓

REQ : **END**↓ *Exit program 11.*

This example shows the print out from the Call park data block.

> **LD 50**↓ *Load Program 50.*

REQ **PRT**↓

TYPE **CPK**↓ *Call Park information is requested.*

CUST **0**↓

CPTM **45**↓ *Call Park Recall Timer = 45 seconds.*

SPDN **20 1800**↓ *Special Park DNs (1800-1819).*

MURT **NONE**↓ *No Music Route.*

REQ **END**↓ *Exit program 50.*

## NT Documentation Reference and Release

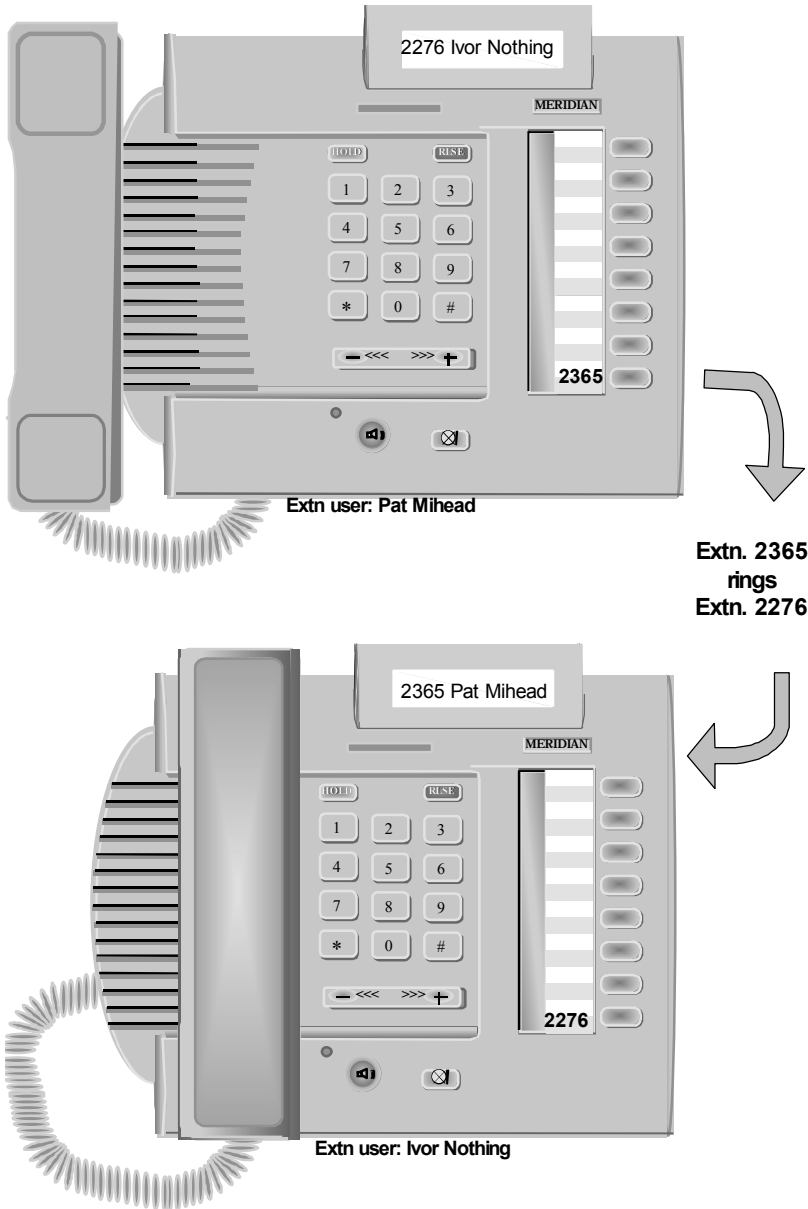
Software Feature Guide - "Call Park" (reference 553 - 3001 - 306)

Available from Software Release 2



# Call Party Name Display

## Feature Description



This feature allows a name of up to 24 characters in length to be associated with a DN or an access code of a route. When the DN is called it will display the name associated with the called DN on the calling party's display module. Analogue sets and digital sets without a display can have a name associated with their DN that will automatically be sent as they originate calls.

## Feature Implementation

The Class of Service for both the calling and called extensions must be set (in LD 10 or LD 11) to allow Call Party Name Display. The name to be displayed is set and changed in LD 95 or it can be set on a per extension basis in LD 10 and LD 11 when the DN is first allocated or changed. LD 95 is used to print all existing names and DN associations.

### Example

In this example a name has been associated with DN 2302. Note DN 2302 (TN 7 5) is assigned to a digital set which has a display module fitted. The example also shows how a name can be associated with the access code of a route (e.g. 1500) to enable extension users to easily identify where calls are coming from.

> **LD 95**↓ *Program 95 is loaded to assign names to DNs.*

REQ **NEW**↓  
TYPE **NAME**↓ *Name tells the system you are adding names.*  
CUST **0**↓  
CPND\_LANG  
DIG ↓ *Names can be assigned to "Dial Intercom Group" members.*  
DN **2302**↓ *DN is specified.*  
NAME **Nick Fox**↓ *Name assigned to DN 2302.*  
XPLN **24**↓ *Set the maximum name length to 24 characters to allow for future changes.*  
DISPLAY\_FMT↓ *Display format - which way round to display name default is first name first.*  
DN **2468**↓ *DN is specified.*  
NAME **Lee Wolf**↓ *Name Assigned to DN 2468.*  
XPLN **24**↓  
DISPLAY\_FMT↓  
DN ↓  
DCNO ↓

> **LD 95**

REQ **PRT**↓ *Print out names to check.*  
TYPE **NAME**↓  
CUST **0**↓  
CPND\_LANG  
PAGE ↓  
DIG ↓  
DN **ALL**↓ *All causes all names to be printed.*  
SHRT **YES**↓ *Short format of printout requested.*

0 **ATTENDANT** *The system responds by printing a list of DNs*  
1500 **BT Route 0** *and names assigned to them.*  
1501 **BT Route 1**  
2302 **Nick Fox**  
2468 **Lee Wolf**  
7000 **Meridian Mail**

DCNO ↓

---

REQ    **END**␣    *Exit Program 95.*

**Note:** When using program 95, use command CHG to change a name or OUT to remove a name.

---

> **LD 11.**

REQ : **CHG.**

TYPE : **2616.**

TN **7 5.**

ECHG **YES.**

ITEM **CLS CNDA.** *Call Party Name Display Allowed. This enables the displaying of incoming names on digital sets with a display module equipped.*

ITEM ↵

REQ : **END.** *Exit Program 11.*

The following examples show names being assigned to analogue and digital sets when the extensions DN is being changed. The same format is followed when a DN is being assigned to a new extension.

> **LD 10.**

REQ : **CHG.**

TYPE : **500.**

TN **9 3.**

ECHG **YES.**

ITEM **DN 2207.**

MARP.

CPND **NEW.**

CPND\_LANG.

NAME **John Tiger.**

XPLN **24.**

DISPLAY\_FMT.

VMB.

ITEM ↵

REQ : **END.**

> **LD 11.**

REQ : **CHG.**

TYPE : **2616.**

TN **8 3.**

ECHG **YES.**

ITEM **KEY 0 SCR 2277.**

MARP.

CPND **NEW.**

CPND\_LANG

NAME **Sarah Lion.**

XPLN **24.**

DISPLAY\_FMT.

VMB.

KEY.

ITEM ↵

REQ : **END.**

## NT Documentation Reference and Release

Software Feature Guide Book 1 - "Call Party Name Display" (reference 553-3001-306)

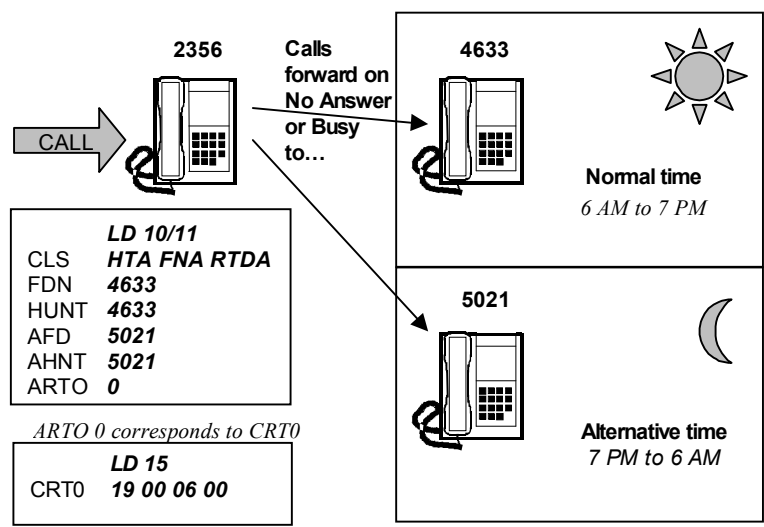
Software Feature Guide Book 1 - "Calling Party Name Display Denied" (reference 553 - 3001 - 306)

Both available from Software Release 10

# Call Redirection by Time of Day

## Feature Description

This feature provides automatic redirection of an incoming call to a pre-defined DN depending on the time of day. Alternate time options are defined at the customer level in Overlay 15, with four alternate time options available per customer. The feature is then activated/deactivated on a per set basis in Overlays10 and 11. Call Redirection by Time of Day applies to: Hunt, Call Forward No Answer, and Call Forward/Hunt by Call Type.



Call Redirection by time of day

## Feature Implementation

This feature is implemented in two stages. The first stage uses Program 15 to define the time options. There are four alternate time options available at the customer level for the CRT0D feature: CRT0, CRT1, CRT2 and CRT3. This feature is enabled when at least one of the alternate time options is defined. The alternate time options are entered in International time format.

Example

This example shows how the alternate time options that are set in the Customer data block for the above example. The section of CDB you require is Call Redirection (RDR).

```
> LD 15.↓ Load Program 15

REQ : CHG.↓
TYPE : RDR.↓
CUST: 0.↓
???? ↓ Step on until you reach CRTOD
CRTOD YES.↓ Call redirection by time of day.
CRTO 19 00 06 00.↓ Alternate time option 0*
Exter "x" to remove the value and reset to starttime=endtime=0

CRT1 SH SM EH EM.↓ Alternate time option 1*
CRT2 SH SM EH EM.↓ Alternate time option 2*
CRT3 SH SM EH EM.↓ Alternate time option 3*
???? ↓ Step on until..
REQ END

*S=Start, E=End, H=Hour, M=Minute
```

Printing Call Forward Number Rings and Call redirection Times

```
> LD 21.↓

REQ: PRT.↓
TYPE: RDR.↓
RDR_DATA
OPT CFO CFRA DSTD PVCA CWRD
FNAD FDN
FNAT FDN
FNAL FDN
CFTA NO
CCFWDN
CFNO 4 Call Forward number rings for RCO 0
CFN1 2 Call Forward number rings for RCO 1
CFN2 6 Call Forward number rings for RCO 2
DFNO 4
DFN1 4
DFN2 4
DNDH NO
MDID NO
NDID NO
MWFB NO
TRCL 0
DFNR 0
CRT0 19 00 06 00 Call redirection time 0
CRT1 00 00 00 00 Call redirection time 1
CRT2 00 00 00 00 Call redirection time 2
CRT3 00 00 00 00 Call redirection time 3
DAY0
DAY1
DAY2
DAY3
HOLIDAY0
HOLIDAY1
HOLIDAY2
HOLIDAY3
```

---

REQ: **END**

---

The second stage uses Programs 10 or 11 to set class of service call redirection by time of day allowed/denied (RTDA/RTDD). The alternate redirection time option (ARTO) and alternate forwarding prompts (AFD/AHNT) are set.

### Example

This example shows how to set alternate redirection prompts for an analogue set. The alternative time option forwards to DN 5020 on call forward no answer and busy. (It is assumed that Call Forward No Answer and Hunting are already assigned)

```
>      LD 10↓      Load Program 10

REQ :   CHG↓
TYPE :   500↓
TN:     9 3↓
ECHG:   YES
ITEM :   CLS RTDA↓      Call redirection by time of day allowed.
                        If CLS = RTDD, AFD/AHNT will
                        be removed, and ARTO will be reset to zero.

ITEM     ARTO 0↓      Alternate redirection time option for call
                    redirection set to zero (options 0-3)
ITEM     FTR AFD 5021↓      Alternate flexible call forward to DN 5021.
ITEM     FTR AHNT 5021↓      Alternate hunt to DN 5021.
ITEM     ↓
REQ:     END
```

This example shows how to set alternate redirection prompts for a digital set. The alternative time option forwards to DN 5021 on call forward no answer and busy. (It is assumed that Call Forward No Answer and Hunting are already assigned)

```
>      LD 11↓      Load Program 11

REQ :   CHG↓
TYPE :   2616↓
TN:     7 4↓
ECHG:   YES
ITEM:   CLS RTDA↓      Call redirection by time of day allowed.
ITEM:   ARTO 0↓      Alternate redirection time option for call
                    redirection set to zero (options 0-3)
ITEM     AFD 5021↓      Alternate flexible call forward to DN 5021
ITEM     AHNT 5021↓      Alternate hunt to DN
ITEM     ↓
REQ:     END
```

### NT Documentation Reference and Release

Software Feature Guide - "Call Redirection by Time of Day" (reference 553 - 3001 - 306)  
Available from Software Release 22



# Call Restriction (Barring)

## Feature Description

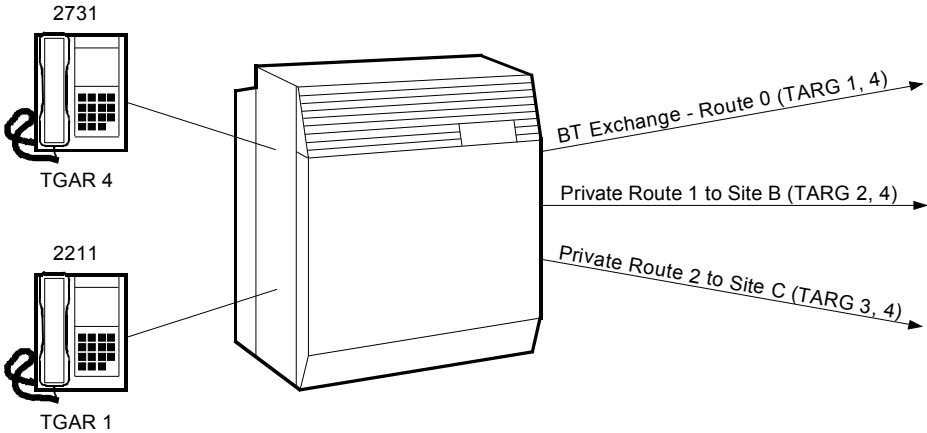
### Introduction

The Meridian 1 has comprehensive call barring and restriction facilities which can be implemented in several ways:-

### Restriction to Outgoing Routes

Using this process an extension user can be barred from using particular routes out of the system.

Each outgoing route can be assigned to up to 32 TARGs (Trunk Access Restriction Groups) which are simply numbers between 0 and 31. Each extension also has a data item called TGAR (Trunk Group Access Restriction) to which only one number, between 0 and 31, may be defined. The extension user is denied from using the route when the TGAR of that extension matches one of the TARGs of the route. In the diagram below extension 2731 is barred from using routes 0, 1 and 2. Extension 2211 is barred from using route 0.



TGAR	Restriction Applied
TGAR 1	No access to BT exchange
TGAR 2	No access to site B
TGAR 3	No access to site C
TGAR 4	No access to any routes

TMD930548

Trunk Group Access Restriction

---

## **Restriction by Class of Service**

Another method of barring calls is by applying one of seven alternatives in the extension's Class of Service.

The seven Class of Service types are:-

**UNR** - Unrestricted - The extension user can dial anywhere they want - literally without restriction.

**FRE** - Fully Restricted - No exchange line access. The extension user can make internal calls, can use privately wired (Tie) lines, however they can have calls using exchange lines transferred to them from another extension user.

**FR1** - Fully Restricted 1 - Same as FRE, but calls using exchange lines cannot be transferred to them.

**FR2** - Fully Restricted 2 - This restricts the extension to internal calls only.

**SRE** - Semi-restricted - Allowed outgoing external calls via the attendant console only. Can receive external incoming calls.

**TLD** - Toll Denied - Allowed outgoing calls to certain destinations only. The Meridian 1 monitors the digits that are dialled to determine if the call is to be allowed. This process is called New Flexible Code Restriction.

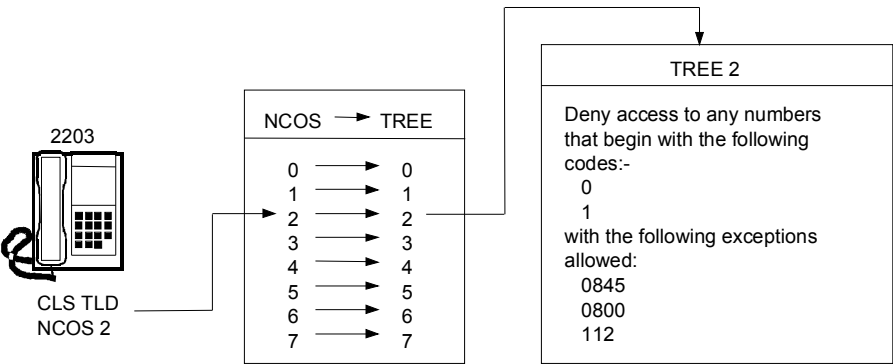
**CTD** - Conditional Toll Denied – Not currently used in the UK.

**New Flexible Code Restriction**

Each individual extension, that has a Class of Service of TLD, will have a NCOS - Network Class of Service defined. The value assigned to NCOS will ultimately identify a call barring table (TREE), that contain the numbers that are permitted or denied from being dialled. Up to 8 trees can be defined on Meridian 1 and these are identified by NCOS 0 to 7.

Note the example below simplifies the NCOS to TREE relationship. In reality the relationship may not be linear (ie) 1-1, 2-2 etc.

**Example**



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*New Flexible Code Restriction*

**Example Settings**

The system may have barring trees set with the following pattern, however they are normally customised to suit customer requirements. They are in any case most restrictive at NCOS 1 and least restrictive at NCOS 7 (NCOS 0 is a special case):-

NCOS 0 = TREE 0    No Barring ie Unrestricted (for use with System speed call list)

NCOS 1 = TREE 1    Bar Everything except 112 (European Emergency Number) and 999

NCOS 2 = TREE 2 Bar any numbers beginning with 0 or 1 with the exception of 112, Freephone and LoCall (0800 and 0845).

NCOS 3 = TREE 3 Bar International (00), Premium rate numbers (09 formally 0898, 0891 etc.) and any number beginning with a 1 with the exception of 112.

NCOS 4, 5, & 6    Spare

NCOS 7 = TREE 7 No Barring i.e. Unrestricted

---

## Feature Implementation

The type of call restriction applied to an extension is configured in the Class of Service using Program 10 (analogue sets) or 11(digital sets). These programs are also used to define the extent of the restriction using the TGAR and NCOS prompts as appropriate.

### Example

This example shows three different extensions being set up for the following call restriction:-

TN 9 1 Totally Unrestricted

TN 8 4 Restricted from gaining access to any route with a TARG of 3

TN 7 4 Restricted from dialling international numbers and 09 numbers as detailed in TREE 3.

> **LD 10**↓ *Load Program 10.*

REQ : **CHG**↓

TYPE : **500**↓

TN **9 1**↓

ECHG **YES**↓

ITEM **CLS UNR**↓ *Class of Service set to unrestricted.*

ITEM **TGAR 0**↓ *No Trunk Group Access Restriction is applied.*

ITEM

REQ : **END**↓ *Exit Program 10.*

> **LD 11**↓ *Load Program 11.*

REQ : **CHG**↓

TYPE : **2616**↓

TN **8 4**↓

ECHG **YES**↓

ITEM **CLS UNR**↓ *Class of Service set to unrestricted.*

ITEM **TGAR 3**↓ *Restrict this extension from accessing any route with a TARG of 3.*

ITEM ↓

REQ : **END**↓ *Exit Program 11..*

> **LD 11**↓ *Load Program 11.*

REQ : **CHG**↓

TYPE : **2616**↓

TN **7 4**↓

ECHG **YES**↓

ITEM **CLS TLD**↓ *Toll Denied causes the system to look at the NCOS value for this extension.*

ITEM **NCOS 3**↓ *NCOS 3 causes Code Restriction Tree 3 to be applied to this extension.*

ITEM **TGAR 0**↓ *No trunk group Access Restriction is applied.*

ITEM ↓

REQ : **END**↓ *Exit Program 11.*

### NT Documentation Reference and Release

Software Feature Guide - "Access Restrictions" (reference 553 - 3001 - 306)

Available from Software Release 1

---

## To print the Restriction trees

### Example

This example uses LD 49 to print all the Code restriction trees. INIT means initially, (i.e. INIT DENY - initial deny all digits)

```
>      LD 49.

REQ    PRT.
TYPE   FCR.      Meaning Flexible Code Restriction
CUST   0.
CRNO   .         Carriage return = all trees, or enter a single tree to be printed

CRNO 0
INIT   ALLOW     Allow all digits

CRNO 1
INIT   DENY      Deny all digits....
ALLOW 112        ....except 112....
          999     ...and 999

CRNO 2
INIT   ALLOW
DENY   1
ALLOW 112
DENY   0
ALLOW 0845
          0800

CRNO 3
INIT   ALLOW
DENY   1
ALLOW 112
DENY   09
          00

CRNO 4          Spare trees

CRNO 5          :

CRNO 6          :

CRNO 7
INIT   ALLOW

REQ    END
```

### NT Documentation Reference and Release

Software Feature Guide - "Access Restrictions" (reference 553 - 3001 - 306)  
Available from Software Release 1

---

# Call Transfer

## Feature Description

This feature allows an extension user to transfer an established (answered) call to another extension. The feature can be assigned to both analogue and digital extensions and is invoked by the extension user as follows:

Analogue Sets	Digital Sets
Press Recall Key	Press Transfer Key
+	+
Dial Extension Number Where Call Is To Be Transferred To	
+	+

If free, the 3rd party extension rings. When the 3rd party answers a speech link is established that excludes the original caller. The call can then be transferred to the 3rd party as follows:

+	+
Replace Handset	Press Transfer Key Again

Note with Call Transfer there is no need to wait for the 3rd party to answer before replacing the handset.

## Feature Implementation

For Analogue Sets set the Class of Service to allow Call Transfer (XFA).  
For Digital Sets assign the transfer feature (TRN) to a key.

### Example

In this example the Transfer feature has been assigned to analogue TN 9 6.

> **LD 10**␣ *Load Program 10.*

REQ : **CHG**␣  
TYPE : **500**␣  
TN **9 6**␣  
ECHG **YES**␣  
ITEM **CLS XFA**␣*Allow "Transfer".*  
ITEM ␣  
REQ : **END**␣ *Exit Program 10.*

---

In this example the Transfer feature has been assigned to key 3 of digital TN 8 2

> **LD 11**␣ *Load Program 11.*

REQ : **CHG**␣

TYPE : **2616**␣

TN **8 2**␣

ECHG **YES**␣

ITEM **KEY 3 TRN**␣ *Assign "Transfer" feature to key 3.*

KEY␣

ITEM ␣␣

REQ : **END**␣ *Exit Program 11.*

#### **NT Documentation Reference and Release**

Software Feature Guide - "Call Transfer" (reference 553 - 3001 - 306)

Available from Software Release 1

---

# Call Waiting

## Feature Description

This feature notifies an extension user, currently engaged on an established call, that another call is waiting to be answered. On a digital set notification is by a flashing lamp associated with the Call Waiting key and a buzz tone through the loudspeaker of the set. On analogue sets notification is by two bursts of tone through the ear-piece of the handset.

The user can put the first call on hold, answer the second call, and return to the first call when desired. The analogue set use a Flexible Feature Code to activate and deactivate this feature and the digital extensions must have a dedicated key.

There is an option to notify that internal calls and/or external calls are waiting.

## Feature Implementation

For analogue sets, allow the Class of Service Call Waiting (CWA), Internal Call Waiting (SWA) and Warning Tone (WTA).

For digital sets, allow the Class of Service Internal Call Waiting (SWA) and Warning Tone (WTA). The Call Waiting feature must be allocated to a key.

## Example

In this example Call Waiting has been assigned to analogue TN 9 8.

```
>      LD 10␣                               Load Program 10.

REQ :  CHG␣
TYPE :  500␣
TN      9 8␣
ECHG    YES␣
ITEM     CLS CWA SWA WTA␣ Call Waiting, Internal Call Waiting and Warning Tone allowed.
ITEM     ␣
REQ :    END␣                               Exit Program 10.
```



---

In this example Call Waiting has been assigned to key 4 on digital TN 7 0 .

> **LD 11**↵

*Load Program 11.*

REQ : **CHG**↵

TYPE : **2616**↵

TN **7 0**↵

ECHG **YES**↵

ITEM **CLS SWA WTA**↵

*Internal Call Waiting and Warning Tone allowed.*

ITEM **KEY 4 CWT**↵

*Call Waiting allocated to key 4.*

**KEY**↵

ITEM ↵

REQ : **END**↵

*Exit Program 11.*

## **NT Documentation Reference and Release**

Software Feature Guide - "Call Waiting"(reference 553 - 3001 - 306)

Available from Software Release 1

“Software Feature Guide – “Internal Call Waiting” (reference 553 - 3001 - 306)

Available from Software Release 8

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# Conference

## Feature Description

This feature allows an extension user to add additional parties to an established call. The maximum number of parties allowed in conference is six and only one of the parties may be external.

To establish a conference call the extension user would follow these steps :-

### Analogue Sets

Press Recall Key  
+  
Dial the number of the extension that is to be added to the call  
+

### Digital Sets

Press Conference Key  
+  
+

If free, the 3rd party extension rings. After answer a speech link is established that excludes other conference members. To establish a conference proceed as follows :-

+  
Press Recall Key again  
+  
Press the Conference key again

Repeat these steps to add additional extensions.

## Feature Implementation

For analogue sets the Class of Service must be set to allow Call Transfer (XFA) and Conference (C6A).

For digital sets Conference (AO6) must be assigned to a key.

## Example

In this example the Conference feature has been assigned to analogue TN 9 3.

> **LD 10.**␣ *Load Program 10.*

REQ : **CHG.**␣  
TYPE : **500.**␣  
TN **9 6.**␣  
ECHG **YES.**␣  
ITEM **CLS XFA C6A.**␣ *Transfer and 6 Party Conference allowed.*  
ITEM ␣  
REQ : **END.**␣ *Exit Program 10.*

In this example the Conference feature has been assigned to key 3 of digital TN 8 2.

```
>      LD 11↵      Load Program 11.

REQ :  CHG↵
TYPE : 2616↵
TN     8 2↵
ECHG   YES↵
ITEM   KEY 3 AO6↵Conference has been assigned to key 3.
        KEY↵
ITEM   ↵
REQ :  END↵      Exit Program 11.
```

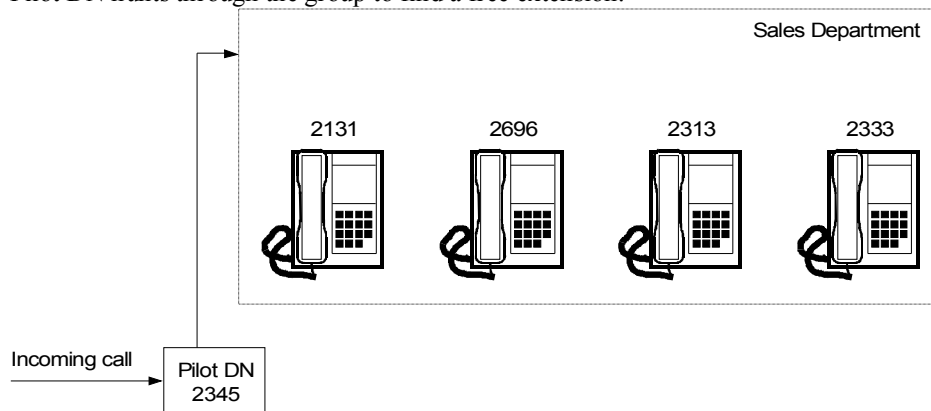
**NT Documentation Reference and Release**

Software Feature Guide - "Conference" (reference 553 - 3001 - 306)  
AO6 Available from Software Release 1  
C6A Available from Software Release 10

## Departmental Hunt Groups (Group Hunting)

### Feature Description

This feature allows a group of extensions to be accessed by a single Directory Number (DN) known as a “Pilot DN”. An incoming call to this Pilot DN hunts through the group to find a free extension.



TMD930554

### Group Hunting

One of two hunting types may be specified to determine the order in which the extensions in the group will be searched to find a free extension. These are :-

#### i. Linear Hunting (LIN)

Hunting starts from the first DN in the list to the last, until an idle extension is found.

#### ii. Round Robin (RRB)

Hunting starts at the first free extension after the last extension used therefore distributing calls evenly amongst the members of the group.

Any member can opt out of the group to prevent being accessed via the pilot DN. Users enter a Flexible Feature Code for Group Hunt Termination Deactivation - GHTD (e.g. #59). Digital set users may have a dedicated key to opt out.

---

## Feature Implementation

This feature is implemented in two stages.

The first stage uses Program 18 to define the extensions in the group. Each extension is placed in "STOR" of what is termed the "Group Hunt List". The list is identified by a unique list number. There is a separate list for each hunt group in the system. The second stage uses Program 57 to define the Pilot DN and associate it with the "Group Hunt List".

### Examples

Two examples are given below. Example 1 details the steps taken to change the extensions in an existing group. Example 2 details how to create a new group.

#### Example 1 - Changing the Extensions In a Departmental Hunt Group

In this example an extension (DN 2555) is added to the group identified by Pilot DN 2111. The procedure consists of three part:-

- 1 Using Program 57 to obtain the list number for Pilot DN (2111)
- 2 Using Program 20 to print the extensions in the list.
- 3 Using Program 18 to change the list

First find the list number.

> **LD 57**␣ *Load Program 57.*

REQ **PRT**␣

TYPE **FFC**␣ *Always enter FFC to this prompt.*

CUST **0**␣

CODE **PLDN**␣ *Request printout of Pilot Directory Numbers.*

The system responds by printing out all Pilot DNs defined on the system.

CUST 00

FFCT YES

PLDN 2000

USE GPHT

LSNO 050

HTYP RRB

CFWI NO

MQUE 0

PLDN 2010

USE GPHT

LSNO 051

HTYP RRB

CFWI NO

MQUE 0

Cont...

Printout Cont...

PLDN 2111 Pilot DN is 2111.  
USE GPHT Used for Group Hunting.  
LSNO 063 List number 63.  
HTYP RRB Round Robin type hunting.  
CFWI NO **NO** indicates that any extension in the group that activates Call Forwarding will be excluded from the hunt group (**YES** would indicate that any extension in the group that activates Call Forwarding will still be included in the hunt group.)  
  
MQUE ALL Calls may be queued when all extensions in the group are busy.  
**ALL** indicates that every incoming call will be queued and will hear ring tone when all extensions in the group are busy.  
**1** indicates that only the first call will be queued.  
**0** Indicates that no calls will be queued.  
**ACTM** indicates that the number of calls allow to queue will be equal the number of Active members

CODE \*\*\*\*␣ Exit Program 57.  
Now print the extensions in list 63.  
> LD 20␣ Load Program 20.

REQ PRT␣  
TYPE GHT␣  
LSNO 63␣ Specify the list number.  
SIZE 6 This is a system response indicating the maximum number of extension permitted in this list.  
RNGE ␣ You can limit the number of group members (extensions) printed by specifying the numbers of the stores you wish to print. Carriage return indicates that all stores are to be printed.

The system responds with the listing.

GHLN 0063 List number.  
GHT List type.  
  
PLDN 2111 Pilot DN.  
DNSZ 4 Indicates that the DNs stored have a maximum of 4 Digits.  
STOR 0 2202 DN 2202 is held in store 0.  
STOR 1 2303  
STOR 2 2404  
STOR 3 2505  
STOR 4 Store 4 is spare.  
STOR 5  
  
REQ END␣ Exit Program 20.

In this third stage we add DN 2555 to list 63.

> **LD 18**↵ *Load Program 18.*

REQ **CHG**↵

TYPE **GHT**↵ *Identify the type of list.*

LSNO **63**↵ *Identify the list number.*

SIZE ↵

WRT ↵

STOR **4 2555**↵ *Add DN 2555 to the spare store number 4.*

WRT ↵

STOR ↵

REQ **END**↵ *Exit Program 180.*

**Note:** To delete an entry from a store, select the store as if you were changing its contents (above) and press the space bar twice then carriage return until the REQ prompt appears and then exit the program.

## Example 2 - Creating a New Hunt Group

In this example four extensions (2206, 2401, 2405 and 2406) have been arranged into a departmental hunt group (List Number 60) that will be accessed through Pilot DN 2100.

```
>      LD 18↓   Load Program 18 to define the extensions in the group.

REQ    NEW↓
TYPE   GHT↓    Define that the list will be used for Group Hunting.
LSNO   60↓     Define the list number.
CUST   0↓
DNSZ   4↓      Define the maximum number of digits in DNs. 4, 8, 12, 16 and 23 are valid entries.
SIZE   10↓     Define the maximum number of DNs to be included in this list.
WRT    ↓
STOR   0 2206↓ Allocate each DN to a store number.
WRT    ↓
STOR   1 2401↓
WRT    ↓
STOR   2 2405↓
WRT    ↓
STOR   3 2406↓
WRT    ↓
STOR   ↓

REQ    END↓    Exit Program 18.

>      LD 57↓   Load Program 57 to define the Pilot DN.

REQ    CHG↓    Use Change even if creating a new Pilot Number.
TYPE   FFC↓    Always input FFC.
CUST   0↓
FFCT   ↓
CODE   PLDN↓   Indicate that a Pilot DN will be input.
PLDN   2100↓   Define the DN.
USE     GPHT↓   Indicate that the list is for Group Hunting.
LSNO   60↓     Indicate that the Pilot DN is to be assigned to list 60.
HTYP   RRB↓    Round Robin type hunting assigned.
CFWI   NO↓     NO indicates that any extension in the group that activates Call Forwarding will be
               excluded from the hunt group.(YES would indicate that any extension in the group that
               activates Call Forwarding will still be included in the hunting.)

MQUE   ALL↓    Calls may be queued when all extensions in the group are busy.
               ALL indicates that every incoming call will be queued and will hear ringing tone.
               1 indicates that only the first call will be queued.
               0 Indicates that no calls will be queued.
               ACTM indicates that the number of calls allow to queue will be equal the number of Active
               members

PLDN   ↓       Press carriage return unless you wish to create another Pilot DN.
CODE   ↓       Press carriage return to commit the change.
```

## NT Documentation Reference and Release

Software Feature Guide - "Group Hunting" (reference 553 - 3001 - 306)



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Available from Software Release 15 (ACTM Available from Software  
Release 24)

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## *Dial Intercom Group (DIG)*

### **Feature Description**

This feature allows an extension user to call another extension by dialling just one or two digits. When a user, with a digital set, uses this feature they press their "Dial Intercom" key and then dial the one or two digit member number of the person they require. A user with an analogue set however lifts their handset and then dials the one or two digit member number of the person they wish to speak to.

The called party's set rings with a distinctive ring that alerts the called party that the call is coming from another DIG member rather than being an ordinary call. The following information applies to DIGs:-

Maximum number of group members for single digit dialling = 10 (0 to 9).

Maximum number of group members for two digit dialling = 100 (00 to 99).

Maximum number of DIGs possible on a system = 2046

### **Feature Implementation**

#### **Analogue Sets**

To implement this feature on an existing extension the extension must first be deleted using "OUT" and then the TN must be re-provided using "NEW" in Program 10 identifying the group number, and the member number within the group.

The Class of Service (CLS) of the TN must be set to DTN if the extension user has a touchtone phone or DIP if using a dial pulse type phone.

#### **Digital Sets**

The feature is assigned to a key on a digital set using Program 11. The Dial Intercom Group Number and the Member Number within group must be assigned to a key. Additionally the Ring or Voice option must be selected when assigning the feature to a key. When Ring (R) is specified the called party's set will ring until it is answered, and when Voice (V) is selected the called party's set will ring once and then automatically answer.

Example

This example shows an analogue extension being added to DIG 1 as member 4 of the group.

```
>          LD 10↵          Load Program 10.

REQ :      NEW↵          Analogue sets for use on DIG's can only be added from new
TYPE :      500↵
TN         9 14↵
CDEN       ↵
DES        M8009↵
CUST       0↵
DIG        1 4↵          Dial Intercom Group 1, Member 4.
NCOS       ↵
RNPG       ↵
SCPW       ↵
SGRP       ↵
SFLT       ↵
CAC_MFC    ↵
CLS        DTN↵          Identify dial method- touchtone (DTN) or dial pulse (DIP) type telephone.
SCI        ↵
MLWU_LANG  ↵↵
PLEV       ↵
REQ :      END↵          Exit Program 10.
```

This example shows a digital extension being added on key 3 to DIG 1 as member 5 of the group.

```
>          LD 11↵          Load Program 11.

REQ :      CHG↵
TYPE :      2616↵
TN         7 13↵
ECHG       YES↵
ITEM       KEY 3 DIG 1 5 R↵ Dial Intercom Group 1, Member 5 with the Ring option.
           KEY↵
ITEM       ↵
REQ :      END↵          Exit Program 11.
```

NT Documentation Reference and Release

Software Feature Guide - "Dial Intercom" (reference 553 - 3001 - 306)  
Available from Software Release 1

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# Distinctive Ringing Groups (DRGs)

## Feature Description

When a number of similar telephone sets are situated in close proximity it can be difficult to identify which phone is actually ringing if they all have the same ring sound. The Meridian 1 system provides four different ringing cadences, which may be assigned to digital sets. The four can best be described in terms of frequency (pitch) and rate of change as follows:-

CLS	Pitch	and	Rate of change
DRG1	High	and	Fast
DRG2	High	and	Slow
DRG3	Low	and	Fast
DRG4	Low	and	Slow

**Note:**

The distinctive ringing groups 3/4 are different for M2006 and M2008.

**Note:**

On some analogue sets it is possible to change the ringing sound by changing a switch setting on the phone itself.

The Meridian 1 system can also be programmed to ring extensions differently for internal and external calls. This is set up by BT personnel and is set on a system wide basis.

## Feature Implementation

The Class of Service is set to identify which of the 4 ringing cadences should be applied to the TN.

### Example

This example shows how DRG3 has been assigned to TN 8 3

```
> LD 11␣ Load Program 11.

REQ : CHG␣
TYPE : 2616␣
TN 8 3␣
ECHG YES␣
ITEM CLS DRG3␣Assign Distinctive Ringing Group 3.
ITEM ␣
REQ : END␣ Exit Program 11.
```

## NT Documentation Reference and Release

Software Feature Guide - "Distinctive/New Distinctive Ringing" (reference 553 - 3001 - 306)

Available from Software Release 4

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# Group Call

## Feature Description

This feature allows many, predefined extensions to be called simultaneously at the press of a key on a digital set. As each extension answers they automatically enter the conference call. Analogue sets cannot initiate a Group Call however they can be included in the group.

The maximum number of members in a group is 20.

The maximum number of groups on a system is 64.

## Feature Implementation

The members in the group (extensions) are defined in a list, using Program 18. After the list has been defined the Class of Service, for each extension in the group must be set to Warning Tone Allowed(WTA) and the feature needs to be programmed to a key for any digital set that is to initiate the group call.

## Example

This example shows how a Group Call List (22) has been set up to call four extensions (2206, 2401, 2405, 2406). It also shows how the feature has been assigned to key 4 on TN 7 13.

> **LD 18.** Load Program 18.

REQ **NEW.**  
TYPE **GRP.** Identify that the Group Call feature is being set up.  
CUST **0.**  
GRNO **22.** Select the group number.  
GRPC **YES.** YES indicates that the originator of the group call controls the call i.e. if the controller clears down, then everyone in the group is cleared down. If this field is set to NO and the originator of the group call clears down everybody will remain in conference until they clear down themselves.  
  
STOR **0 2206.** DN 2206 is input into store 0.  
STOR **1 2401.**  
STOR **2 2405.**  
STOR **3 2406.**  
STOR **.**  
REQ **END.** Exit Program 18.

---

Now change the Class of Service to WTA for each group member and allocate the feature to a key for each member that is to originate the group call.

>       **LD 11**↵       *Load Program 11.*

REQ :   **CHG**↵

TYPE :   **2616**↵

TN       **7 13**↵

ECHG   **YES**↵

ITEM   **KEY 4 GRC 22**↵   *Assign Group Call for list 22 to key 4.*

KEY↵

ITEM   **CLS WTA**↵       *Allow Warning Tone.*

ITEM   ↵

REQ :   **END**↵       *Exit Program 11.*

## **NT Documentation Reference and Release**

Software Feature Guide - "Group Call" (reference 553 - 3001 - 306)

Available from Software Release 1

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## Hot Lines

There are three types of Hotline on the Meridian 1 System. These are :-

- Direct One Way Hotline
- Enhanced Hotline (Hotlist)
- Two Way Hotline

### Direct One Way Hotline

#### Feature Description

This feature allows an extension to call the attendant console or another extension simply by lifting the handset. An example of this could be an emergency phone in a lift. Should an emergency arise then the person only need pick up the handset to call for help.

#### Feature Implementation

##### Analogue Sets

The Class of Service (CLS) must first be set to Manual (MNL). The DN to be called is then defined as a "FTR" (feature). If no DN is specified the attendant console will be called on lifting the handset.

##### Digital Sets

In Program 11 the key number and DN to be called are specified.

#### Example

In this example a Hotline has been set up on analogue TN 9 7 to ring 2501.

```
>      LD 10␣      Load Program 10.

REQ :  CHG␣
TYPE :  500␣
TN      9 7␣
ECHG    YES␣
ITEM     CLS MNL␣      Class of Service set to Manual.
ITEM     FTR HOT D 4 2501␣  Assign a Direct Hotline to call extension 2501.
        FTR␣
ITEM     ␣
REQ :    END␣      Exit Program 10.
```

In this example a Hotline has been assigned to key 3 of digital TN 7 12 to ring 2501.

```
>      LD 11↵      Load Program 11.

REQ    CHG↵
TYPE   2616↵
TN      7 12↵
ECHG   YES↵
ITEM    KEY 3 HOT D 4 2501↵  A Direct Hotline to call extension 2501.
      KEY↵
ITEM    ↵
REQ     END↵      Exit Program 11.
```

**NT Documentation Reference and Release**

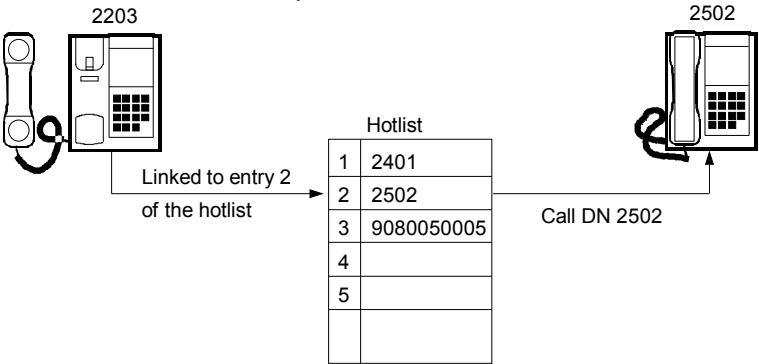
Software Feature Guide - "Hotline" (reference 553 - 3001 - 306)  
Available from Software Release 1



# Enhanced Hotline (Hotlist)

## Feature Description

This feature is the same as a One Way Hotline from a user's point of view i.e. an extension can call the attendant console or a pre-defined number (DN) simply by lifting the handset. The difference is in how the feature is implemented. Rather than specify the DN that is to be called in each extension's data, we index a list termed the "Hotlist". When the handset is lifted the system looks at the index number specified in the extension's data, fetches the respective number from the Hotlist, and then dials the number automatically for the user. There is one Hotlist in the system which stores all the hotline numbers.



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## Enhanced Hotline

## Feature Implementation

### Creating A Hotlist

The first step is to define the Hotlist using Program 18. For analogue sets the second step is to make each extension in the Hotlist an Enhanced Hotline in the Class of Service and define the Hotline feature along with the index number in the list.

For digital set the second step is to allocate the feature to a key and specify the index number.

### Example

In this example a Hotlist has been created (List 29). The example also shows how an Enhanced Hotline has been set up on analogue TN 9 7 and key 3 of digital TN 7 12 to ring extension 2402 in both cases.

---

```

>      LD 18.↓      Load Program 18.

REQ    NEW.↓
TYPE   HTL.↓      Identify that a Hotlist will be created.
CUST    0.↓
LSNO    29.↓      Specify the list number.
NCOS    0.↓
DNSZ    16.↓      Specify the maximum size of DN permitted in the list.
SIZE    10.↓      Specify the maximum number of DNs that will be in the list.
WRT     ↓
STOR    0 2406.↓   Input each DN into a store.
WRT     ↓
STOR    1 901785762300.↓
WRT     ↓
STOR    2 2402.↓
WRT     ↓
STOR    ↓
REQ     END.↓      Exit Program 18.
Allocate the Enhanced Hotline feature to an analogue set.
>      LD 10.↓      Load Program 10.

```

```

REQ :   CHG.↓
TYPE :  500.↓
TN      9 7.↓
ECHG    YES.↓
ITEM    CLS EHTA.↓  Make the set an Enhanced Hotline extension.
ITEM    FTR HOT L 2.↓  Specify that the DN to be called is in store 2 of the Hotlist i.e.2402.
        FTR.↓
ITEM    ↓
REQ :   END.↓      Exit Program 10.
Allocate the feature to a digital set.
>      LD 11.↓      Load Program 11.

REQ :   CHG.↓
TYPE :  2616.↓
TN      7 12.↓
ECHG    YES.↓
ITEM    KEY 3 HOT L 2.↓  Assign the DN in Hotlist store 2 (2402) to key 3.
        KEY.↓
ITEM    ↓
REQ :   END.↓      Exit Program 11.

```

## NT Documentation Reference and Release

Software Feature Guide - "Hotline" (reference 553 - 3001 - 306)  
 Available from Software Release 1

---

## Two Way Hotline

### Feature Description

This feature provides a two-way intercom arrangement between two digital sets. A call is made to the other set by pressing the Hotline key. The called party then answers the call by pressing their Hotline key and in so doing establishes a two way speaking circuit with the calling party. This feature works just the same in the other direction. A typical use for this feature is Manager/Secretary working.

### Feature Implementation

The two digital sets need to have the two dedicated Hotline DN's allocated against a key. In practice the Hotline DN's are any two spare DN's on your system.

### Example

This example shows a Two Way Hotline between key 11 of TN 7 3 and key 4 of TN 7 2.

```
>      LD 11↓                               Load Program 11.
REQ :   CHG↓
TYPE :  2616↓
TN      7 3↓
ECHG    YES↓
ITEM    KEY 11 HOT D 4 2222 3333↓  Key 11 is assigned the Two Way Hotline feature 2222
                                   KEY↓                               is the destination DN and 3333 is the originating DN.
ITEM    ↓
REQ :   CHG↓
TYPE :  2616↓
TN      7 2↓
ECHG    YES↓
ITEM    KEY 4 HOT D 4 3333 2222↓  Key 4 is assigned the Two Way Hotline feature 3333
                                   KEY↓                               is the destination DN and 2222 is the originating DN.
ITEM    ↓
REQ :   END↓                               Exit Program 11.
```

### NT Documentation Reference and Release

Software Feature Guide - "Hotline" (reference 553 - 3001 - 306)  
Available from Software Release 1

---

## *Off Hook Alarm Security*

Another type of hotline is the Off Hook Alarm Security feature. This allows a DN to be assigned to an extension or a group of extensions that is rung if any of the phones goes off hook or has an interdigit pause for a predetermined number of seconds and if the line is cut to a digital set.

The time period (1 to 63 seconds) and the lists of phone identities (0-9) that can be rung is set up in LD 15 under the OHAS prompt.

Phones that need alarming must have a class of service of "ASCA" and the identify of the phone to be rung (OHID) defined in LD 10 or LD 11. For digital sets a further prompt in LD 11(FSVC) allows another phone identity to be entered that is rung if the phone line is cut.

### **NT Documentation Reference and Release**

Software Feature Guide - "Off Hook Alarm Security feature" (reference 553 - 3001 - 306)  
Available from Software Release 18

---

## *Last Number Redial*

### Feature Description

This feature allows the last number that was dialled by an extension to be automatically redialled by the system. Analogue extensions achieve this by entering a Flexible Feature code (e.g. \*44). Digital sets achieve this by pressing the DN key twice or by pressing a dedicated feature key.

### Feature Implementation

#### Analogue Sets

The feature is assigned by setting the Class of Service to LNA.

#### Digital Sets

If the extension user wants to use the feature by pressing the DN key twice the feature is assigned by setting the Class of Service to LNA.

If the extension user wants to use the feature by pressing a separate "Redial" key the LNK mnemonic is assigned to a key.

### Example

In this example Last Number Redial has been set up on analogue TN 9 7.

> **LD 10.** *Load Program 10.*

REQ : **CHG.**

TYPE : **500.**

TN **9 7.**

ECHG **YES.**

ITEM **CLS LNA.** *Allow Last Number Redial.*

ITEM **.**

REQ : **END.** *Exit Program 10.*

### NT Documentation Reference and Release

Software Feature Guide - "Last Number Redial" (reference 553 - 3001 - 306)

Available from Software Release 8

---

## Make Set Busy

### Feature Description

This feature can be assigned to a key on a digital set. When the key is pressed, it will cause any calls to a single appearance DN (a DN that appears only on one set) to receive busy tone. Calls to a multiple appearance DN (a DN that appears on more than one set) will still flash the lamp associated with the DN key but will not cause the audible ringer on the set to sound. Make Set Busy for Analogue sets can be activated by dialling the Flexible Feature Code i.e. '#61'(FFC MSBA) This feature thus provides a "Do Not Disturb" facility typically for use whilst a meeting is in progress.

### Feature Implementation

The MSB mnemonic is assigned to a key on a digital set.

#### Example

In this example the Make Set Busy feature has been assigned to key 5 on TN 8 3.

> **LD 11**↵ *Load Program 11.*

REQ : **CHG**↵

TYPE : **2616**↵

TN **8 3**↵

ECHG **YES**↵

ITEM **KEY 5 MSB**↵ *Assign Make Set Busy to key 5.*

KEY↵

ITEM ↵

REQ : **END**↵ *Exit Program 11.*

### NT Documentation Reference and Release

Software Feature Guide - "Make Set Busy" (reference 553 - 3001 - 306)

For Digital sets available from Software Release 1

For Analogue sets available from Software Release 20

---

## *Manager / Secretary Features*

### **Introduction**

This section focuses on a group of features used mainly in a Manager / Secretary arrangement on digital sets. Each feature and its implementation it will be described followed by an example. The following features will be discussed:-

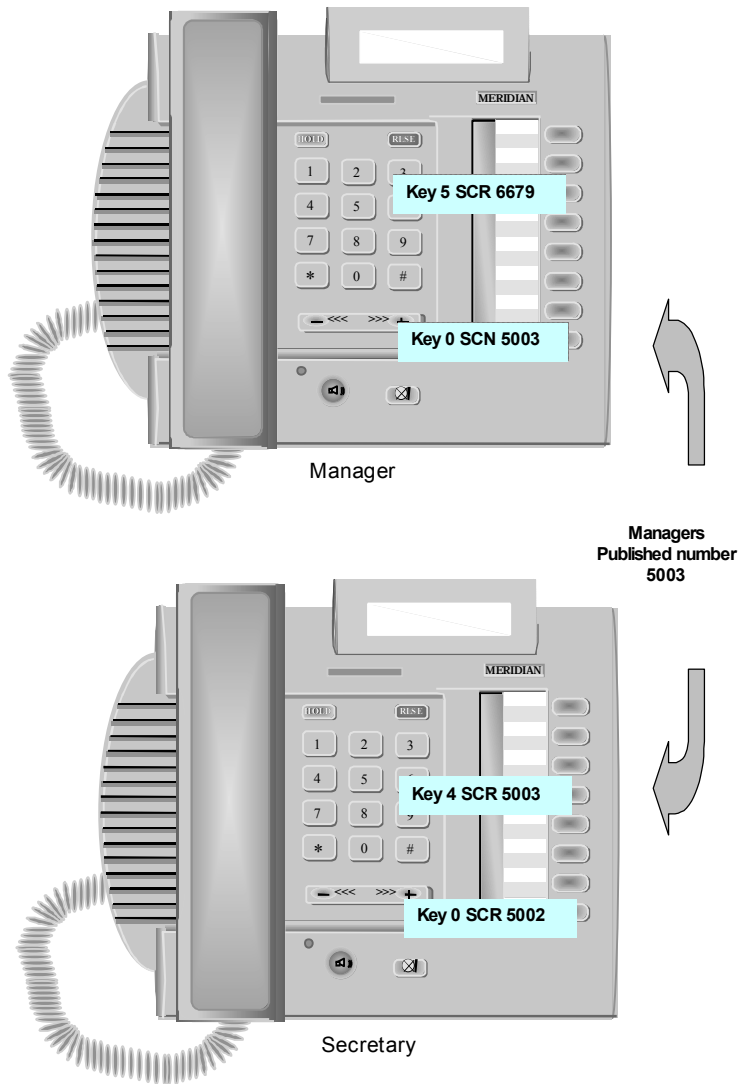
- Secretarial Filtering
- Call Forward and Busy Status
- Two Way Hotline
- Voice Call
- Manual Signalling
- Call Hold, Deluxe or Exclusive Hold

# Secretarial Filtering

## Feature Description

In the diagram below, both manager and secretary are given an appearance of the managers published number (5003), which has a ringing appearance on the secretary's set and a non-ringing appearance on the manager's set. This means that calls for the manager will only flash the lamp next to the DN key on the manager's set and will sound the audible ringer on the secretary's set.

Should the secretary fail to answer this, Directory Number Delayed Ring can be set to make the SCN start ringing (see DNDR Feature, page 139).





---

## Feature Implementation

The implementation is shown on page 134

Other sections of this manual to which you may wish to refer before implementing this feature are:-

- Extension Moves and Changes - Changing the DN of an Extension (page 43)
- Feature - Multiple DNs (page 135)
- Feature - Directory Number Delayed Ring (page 139)

The manager's set must have the manager's published number assigned to a Single Call Non Ringer.

The secretary must have the manager's published number programmed as a ringing DN on a key. See example

**Note:**

This is only one form of secretarial filtering.

## NT Documentation Reference and Release

Software Feature Guide - "Directory Number"(reference 553 - 3001 - 306)

Available from Software Release 12

---

## *Call Forward and Busy Status (BFS)*

### **Feature Description**

This feature is normally assigned to a key on a secretary's set. It allows the secretary to:-

- a. Obtain a visual indication as to the state of the manager's set (free, busy or call forwarded).

The lamp associated with the BFS key will display one of the four conditions below:-

Not lit	Manager is free and is not call forwarded
Lit Steady	Manager is busy and not call forwarded
Fast Flash	Manager is free and has call forward active
Slow Flash	Manager is busy and has call forward active

- b. Remotely call forward the manager's set to the secretary's set by pressing the key.

If the secretary pushes the BFS key any call to a DN on the manager's set will be diverted to the secretary's set. Whilst the BFS key is pressed the lamp next to the "Call Forward" key on the manager's set will remain lit thus giving the manager a visual indication that calls are being diverted.

- c. By selecting a DN key then pressing the BFS, a call will be made to the prime DN of the TN assigned to the BFS key.

### **Feature Implementation**

The BFS mnemonic and the manager's TN are assigned to a key on the secretary's set using LD 11. See page 134.

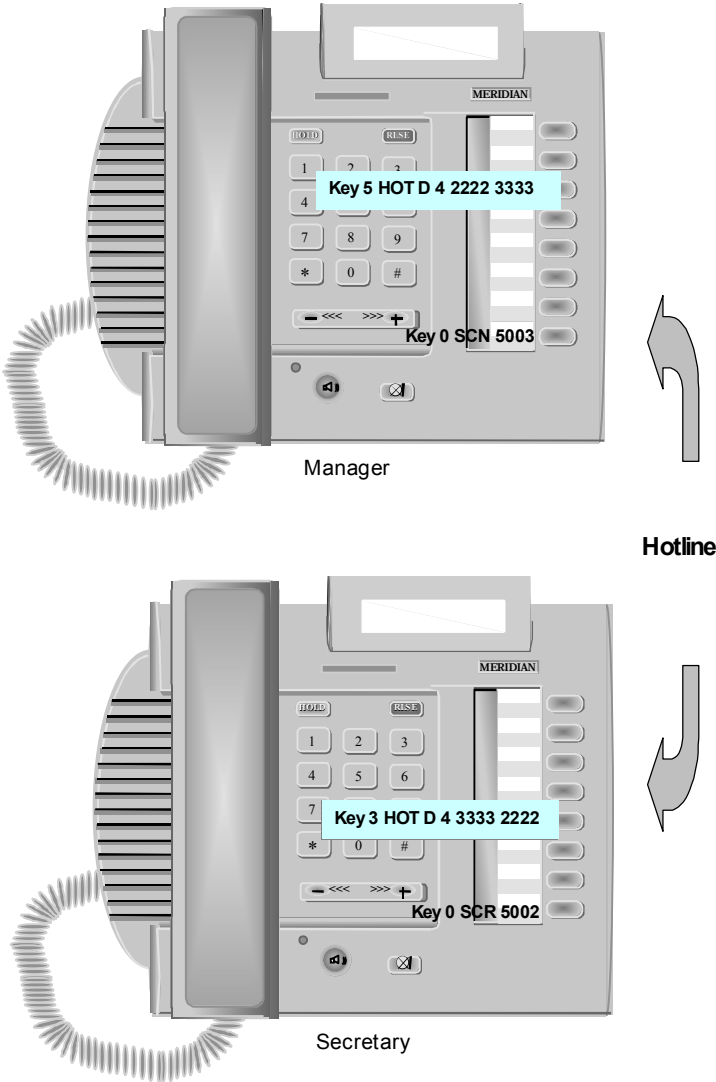
### **NT Documentation Reference and Release**

Software Feature Guide - "Call Forward and Busy Status" (reference 553 - 3001 - 306)  
Available from Software Release 15

# Two Way Hotline

## Feature Description

This feature provides a two way intercom arrangement between the manager and the secretary.



Two Way Hotline

---

## **Feature Implementation**

This feature is implemented on each set by programming the Hotline feature with two Hotline DNs to a key. Two spare DNs should be used as the Hotline numbers. Refer to "Hotlines" for more detail on how to implement this feature (page 123). Also see page 134.

### **NT Documentation Reference and Release**

Software Feature Guide - "Hotline" (reference 553 - 3001 - 306)

Available from Software Release 1

## *Voice Call*

### **Feature Description**

This feature is usually assigned to a key on the manager's set. When the key is pressed a call will be made to a DN on the secretary's set that will ring once and then automatically answer. There are two modes in which the set can answer either in handsfree two way (this requires the set to be a 2616) or in broadcast only to the secretaries set. The chosen mode is set on a system wide basis and thus applies to all voice call appearances.

### **Feature Implementation**

The VCC mnemonic and the DN that is being called are assigned to a key on the manager's set. See page 134.

### **NT Documentation Reference and Release**

Software Feature Guide - "Voice Call" (reference 553 - 3001 - 306)

Available from Software Release 1

Handsfree available from Software Release 19

---

## *Manual Signalling (Buzz)*

### **Feature Description**

This feature is typically assigned to a key on the manager's set . With each press of the key an audible bleep will sound out of the loudspeaker on the secretary's set. This allows the manager to signal to the secretary using some form of code.

### **Feature Implementation**

The SIG mnemonic and the DN on the manager's set that is to be called are assigned to a key on the manager's set. See page 134.

### **NT Documentation Reference and Release**

Software Feature Guide - "Voice Call" (reference 553 - 3001 - 306)  
Available from Software Release 1

## *Call Hold, Deluxe (Exclusive Hold)*

### **Feature Description**

If a multiple appearance DN is answered at one station and then put on hold, with the Exclusive Hold feature allowed, the call can only be received at the set which originally put the call on hold. This is not desirable in a manager / secretary situation whereby if the secretary answers a call, and puts it on hold, the manager needs to pick up the call and visa versa. To achieve this "Deny" the Exclusive Hold feature on both sets.

### **Feature Implementation**

On both the manager's and the secretary's set the Class Of Service should be set to XHD (Exclusive Hold Denied). See page 134.

### **NT Documentation Reference and Release**

Software Feature Guide - "Call Hold, Deluxe" (reference 553 - 3001 - 306)  
Available from Software Release 4

---

## Example

In this example the implementation of the manager/secretary features discussed previously are demonstrated:-

### Manager's Set

> **LD 11**␣ *Load Program 11.*

REQ : **CHG**␣  
TYPE : **2616**␣  
TN **7 3**␣  
ECHG **YES**␣  
ITEM **KEY 0 SCN 5003**␣ *Manager's published number assigned to key 0 and made Single Call Non Ringing.*

MARP␣  
CPND␣  
VMB␣  
**KEY 4 SCR 6697**␣ *Manager's secondary number allocated to key 4 and made Single Call Ringing.*

MARP␣  
CPND␣  
VMB␣  
**KEY 5 HOT D 4 2222 3333**␣ *Key 5 is a dedicated Hotline to Secretary.*  
**KEY 12 SIG 2222**␣ *Buzz key to Secretary on key 12 using the Hotline DN.*  
**KEY 13 VCC 2222**␣ *Voice Call to secretary on key 13 using the Hotline DN.*  
KEY ␣  
ITEM **CLS XHD**␣ *Exclusive Hold allowed.*  
ITEM **DNDR 10**␣ *Directory Number Delayed Ring to allow secretarial filtering.*  
ITEM ␣  
**Secretary's Set**

REQ : **CHG**␣  
TYPE : **2616**␣  
TN **7 2**␣  
ECHG **YES**␣  
ITEM **KEY 4 SCR 5003**␣ *Manager's published number is allocated to key 3 and made Single Call Ringing.*

MARP␣  
CPND␣  
VMB␣  
**KEY 3 HOT D 4 3333 2222**␣ *Key 3 is a dedicated Hotline to the Manager.*  
**KEY 6 BFS 7 3**␣ *Busy and Forward Status is assigned to key 6 and the Manager's TN is identified (7 3).*

KEY␣  
ITEM **CLS XHD**␣ *Exclusive Hold Denied.*  
ITEM ␣  
REQ : **END**␣ *Exit Program 11.*

---

# Multiple DNs

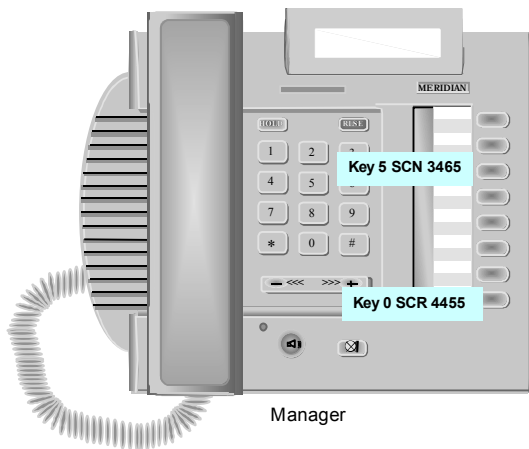
## Feature Description

### Introduction

Digital sets must have a DN assigned to key 0 which is termed the "Prime DN". For some digital sets additionally DNs may be assigned to other keys. There are four different types of DN that can be assigned to keys on a digital set.

These are :-

- Single Call Ringing (SCR)
- Single Call Non-Ringing (SCN)
- Multiple Call Ringing (MCR)
- Multiple Call Non-Ringing (MCN)

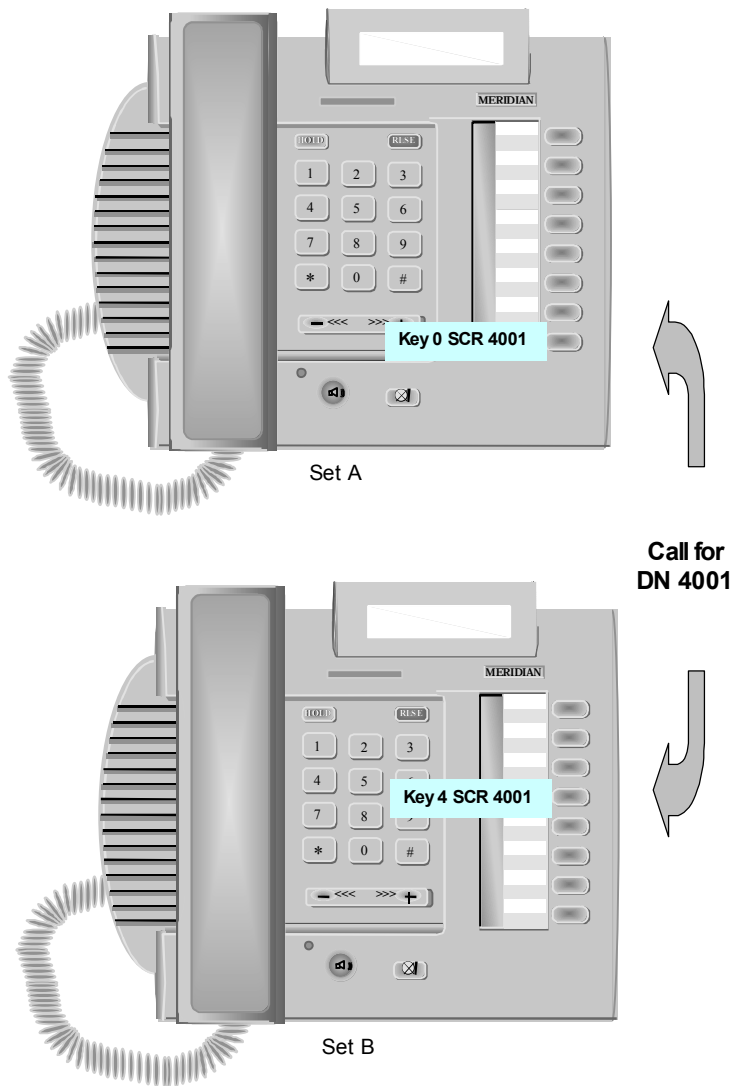


### Single Call / Single Appearance DNs

#### Single Call DNs

The diagram above shows a M3310 set with two DNs assigned. Key 0 is the Prime DN which is a "Single Call Ringing" (SCR) DN and Key 3 has a secondary DN assigned to it which is a "Single Call Non-ringing" (SCN) DN. With Ringing DNs when the DN is called the lamp next to the key flashes and an audible ring sounds out of the loudspeaker. With Non-ringing DNs however only the lamp flashes. In both cases the DN can be used for one call at any time and hence they are said to be "Single Calling". Since each DN appears on one set only they are "Single Appearance".

Single Call / Multiple Appearance DNs

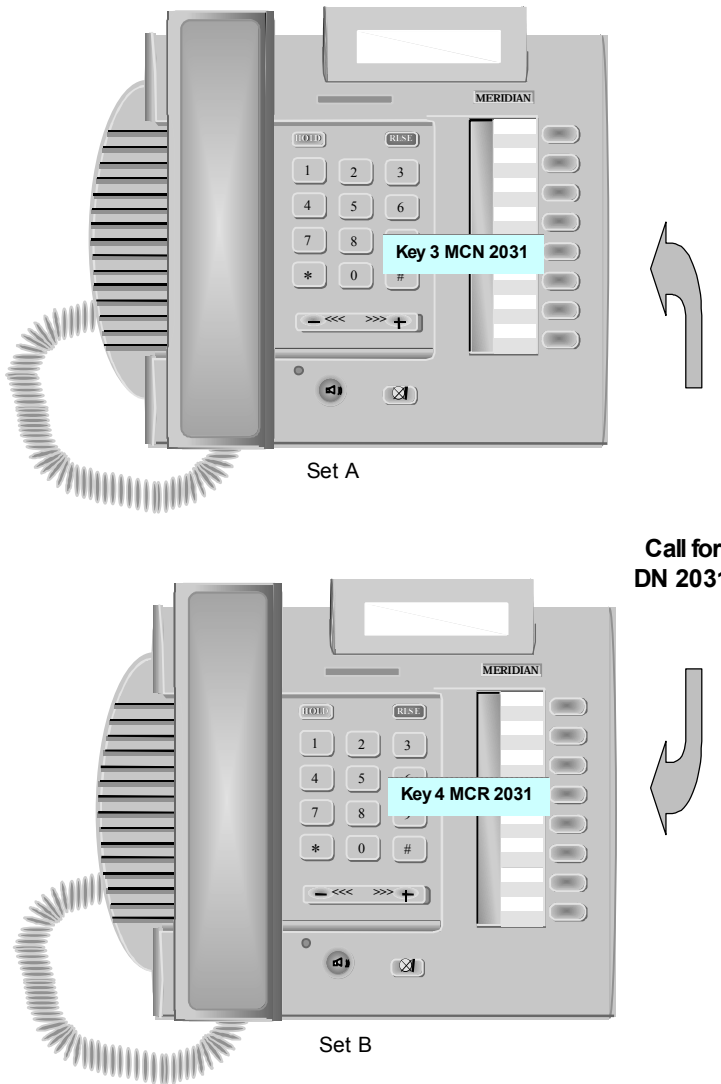


Single Call / Multiple Appearance DNs

In the diagram above it can be seen that the Prime DN of set A (4001), also has an appearance on Set B. A DN can be assigned to a maximum of 30 sets. As soon as the DN is used by one set it cannot be used by any other set, therefore it is said to be "Single Calling" and since it appears on more than one set it is said to be "Multiple Appearance".



## Multiple Calling DNs



### Multiple Calling DNs

The diagram above shows an example of a Multiple Calling DN. With Multiple Call DNs whilst the DN is being used on one set the same DN is free to be used on another set that has an appearance of that DN. A maximum of 30 sets can have an appearance of a Multiple Calling DN. With a maximum of 30 appearances this means that 30, different calls can be in progress at any time on that one DN. Multiple Calling DNs can be a good solution to small Call Centre applications e.g. help desks where only one number is published.

Each set having an appearance of a Multiple Calling DN can be individually programmed to be ringing or non-ringing.

## Feature Implementation

On each set the Directory Number must be assigned to a key and the DN type (Single Calling or Multiple Calling) Ringing or Non Ringing must be specified.

Refer also to "Extension Moves And Changes - Changing The DN of an Extension" (page 43) for more information.

### Example

In this example a Multiple Call Ringing DN (2031) has been assigned to two digital sets. It has been placed on key 3 of one set and on key 4 of the other. Set a DNDR value of 10 seconds on the digital set with the non-ringing appearance.

```
>      LD 11↓      Load Program 11.

REQ :  CHG↓
TYPE : 2616↓
TN     8 5↓
ECHG   YES↓
ITEM   KEY 3 MCN 2031↓      Multiple Call Non-Ringing DN 2031 assigned to key 3
      MARP↓
      CPND↓
      VMB↓
      KEY↓
ITEM   DNDR 10↓      Directory Number Delayed Ring set for 10 seconds
ITEM   ↓
```

```
REQ :  CHG↓
TYPE : 2616↓
TN     8 6↓
ECHG   YES↓
ITEM   KEY 4 MCR 2031↓      Multiple Call Ringing DN 2031 assigned to key 4.
      MARP ON TN 008 0 00 05
      MARP↓
      CPND↓
      VMB↓
      KEY↓
ITEM   ↓
REQ :  END↓      Exit Program 11.
```

## NT Documentation Reference and Release

Software Feature Guide - "Directory Number" (reference 553 - 3001 - 306)  
Available from Software Release 1

---

## *Directory Number Delayed Ringing*

This feature allows a Single Call Non-ringing (SCN) or Multiple Call Non-ringing (MCN) key on a telephone to receive an audible notification after a specified delay.

When an incoming call is presented to an SCN/MCN key, the associated lamp starts flashing. If Directory Number Delayed Ringing (DNDR) is defined for the set, the audible notification is given after 1 to 120 seconds. The DNDR value is defined in Overlay 11 and is disabled if zero is selected as the delay value.

The DNDR value can be different on multiple TNs with the same DN appearance, therefore the audible notification may begin at different times for a single call. If Call Forward No Answer occurs before the DNDR delay expires, the call will be forwarded before the tone is given.

### **NT Documentation Reference and Release**

Software Feature Guide Book - "Directory Number" (reference 553 - 3001 - 306)

Available from Software Release 21

## *Multiple Appearance DN Redirection Prime*

### **(MARP)**

When a call arrives at a Multiple appearance DN and all appearances have a form of call forward activated, to avoid confusion the call will follow the forwarding of the DN marked as MARP.

For multiple appearance DN's only one of the TN's that the DN appears on is designated as the MARP. (For single appearance DN's the MARP TN is the same as the extensions TN.) This is set either manually at the MARP prompt when the DN's are being configured or if automatically, the default is the lowest TN that the DN appears on, with prime appearances taking precedence over secondary appearances.

If the MARP facility isn't active on your system MARP TN's are still assigned but the call forwarding and hunting will ignore them. The system will also print "MARP NOT ACTIVE" at various times when certain programs are loaded and used.

### **NT Documentation Reference and Release**

Software Feature Guide - "Multiple Appearance DN Redirection Prime" (reference 553 - 3001 - 306)

Available from Software Release 18

---

# Override

## Feature Description

If an extension user calls a busy extension they may use the Override feature to "barge in" or enter the established call. On receiving busy tone an analogue extension user would press the "Recall" key followed by a Flexible Feature Code (\*26 is the default) . In the case of a digital set the user would press their Override key. If the called party has a class of service of WTA (Warning Tone Allowed) they will receive bursts of tone to indicate that a third party is about to enter the call and then a 3-party conference is automatically established. If the called party has a class of service of WTD (Warning Tone Denied) the user attempting the override will not be allowed to enter the conversation.

## Feature Implementation

For analogue sets the Class of Service is set to Override Allowed (OVDA)  
For digital sets the OVR mnemonic is assigned to a key.

## Example

In this example the Override feature has been assigned to analogue TN 9 6.

```
>      LD 10.      Load Program 10.
```

```
REQ :  CHG.
TYPE : 500.
TN     9 6.
ECHG   YES.
ITEM    CLS OVDA. Allow Override.
ITEM    .
REQ :  END.      Exit Program 10.
```

In this example the Override feature has been assigned to key 3 of digital TN 8 2.

```
>      LD 11.      Load Program 11.
```

```
REQ :  CHG.
TYPE : 2616.
TN     8 2.
ECHG   YES.
ITEM    KEY 3 OVR. Override assigned to key 3.
        KEY.
ITEM    .
REQ :  END.      Exit Program 11.
```

## NT Documentation Reference and Release

Software Feature Guide - "Override" (reference 553 - 3001 - 306)  
Available from Software Release 15

# Pick-Up Groups

## Feature Description

Meridian 1 provides three methods of picking up calls which are ringing unanswered at other extensions. The method used depends whether the ringing extension is in your pick-up group or not. This feature can be used by both analogue and digital sets; the latter can have a dedicated feature key if preferred.

The three methods are:-

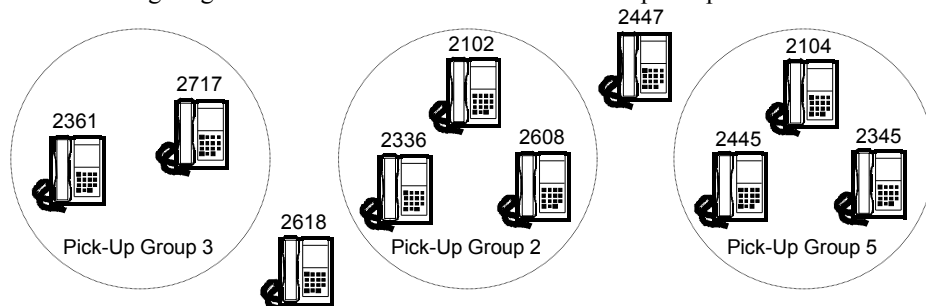
**Answer Call Pick-Up** This enables you to pick up calls within your own group.

**Directed Pick-Up** This allows you to pick up calls in other pick-up groups using the DN of the ringing extension.

**Answer Group Pick-Up** This allows you to pick up calls in other pick-up groups using the group number of the ringing extension.

Groups are identified by a "Ringing Number Pick-Up Group" (RNPG) number (1 - 4095). A value of 0 indicates that the extension is not a member of a group.

The following diagram illustrates the three methods of call pick up.



TMD930555

## Pick-Up Groups

Consider Extension 2345:-

- 1 With CLS PUA (Pick Up Allowed) it can pick up calls to all extensions in RNPG 5.
- 2 With CLS DPUA (Directed Pickup Allowed) it can pick up calls ringing at any other extension, that is in a pick-up group, using the DN of the ringing extension.
- 3 With CLS GPUA (Group Pickup Allowed) it can pick up calls ringing at any other extension, that is in a pick-up group, using the group number of the ringing extension.

---

## Feature Implementation

For either analogue or digital sets the Pick-Up Group (RNPG) must be specified and the Class of Service (PUA, DPUA, GPUA) set depending which of the three pick-up methods is required by the user.

### Example

In this example a digital TN 8 7 has been added to Pick-Up Group 2 and has been assigned all three methods of picking up calls, including a Pick-Up feature key to pick-up it's own group.

```
>      LD 11↓          Load Program 11.

REQ :  CHG↓
TYPE : 2616↓
TN     8 7↓
ECHG   YES↓
ITEM    RNPG 2↓      Ringing Number Pick-Up Group 2.
ITEM    CLS PUA DPUA GPUA↓  Pickup, Directed Pickup and Group Pickup Allowed.
ITEM    KEY 5 RNP↓    Ring Number Pick-Up key, is added to key 5.
ITEM    ↓
REQ :   END↓         Exit Program 11.
```

### NT Documentation Reference and Release

- Software Feature Guide - "Call Pick Up" (reference 553 - 3001 - 306)  
Available from Software Release 1
- Software Feature Guide - "Call Pick Up Directed" (reference 553 - 3001 - 306)  
Available from Software Release 12

---

## *Ring Again (Ring Back When Free / Ring Back No Answer)*

### Feature Description

This feature allows extension users, on calling a busy extension, to be called back when the busy extension becomes free, after which the system will automatically call the extension again for the user. This saves the extension user wasting time periodically trying the extension to see if it has become free. Analogue sets invoke the feature using a Flexible Feature Code whereas digital sets have the feature assigned to a key. It is also possible to cancel a Ring Again should the extension user change their mind.

### Feature Implementation

For analogue sets the Ring Again (XRA) feature is allowed in the Class of Service. For digital sets the RGA mnemonic is assigned to a key.

### Example

In this example Ring Again has been assigned to analogue TN 9 4.

> **LD 10**␣ *Load Program 10.*

REQ : **CHG**␣

TYPE : **500**␣

TN **9 4**␣

ECHG **YES**␣

ITEM **CLS XRA**␣ *Ring Again allowed.*

ITEM ␣

REQ : **END**␣ *Exit Program 10.*

In this example Ring Again has been assigned to key 6 of digital TN 8 2.

> **LD 11**␣ *Load Program 11.*

REQ : **CHG**␣

TYPE : **2616**␣

TN **8 2**␣

ECHG **YES**␣

ITEM **KEY 6 RGA**␣ *Ring Again assigned to key 6.*

KEY␣

ITEM ␣

REQ : **END**␣ *Exit Program 11.*

### NT Documentation Reference and Release

Software Feature Guide - "Ring Again" (reference 553 - 3001 - 306)

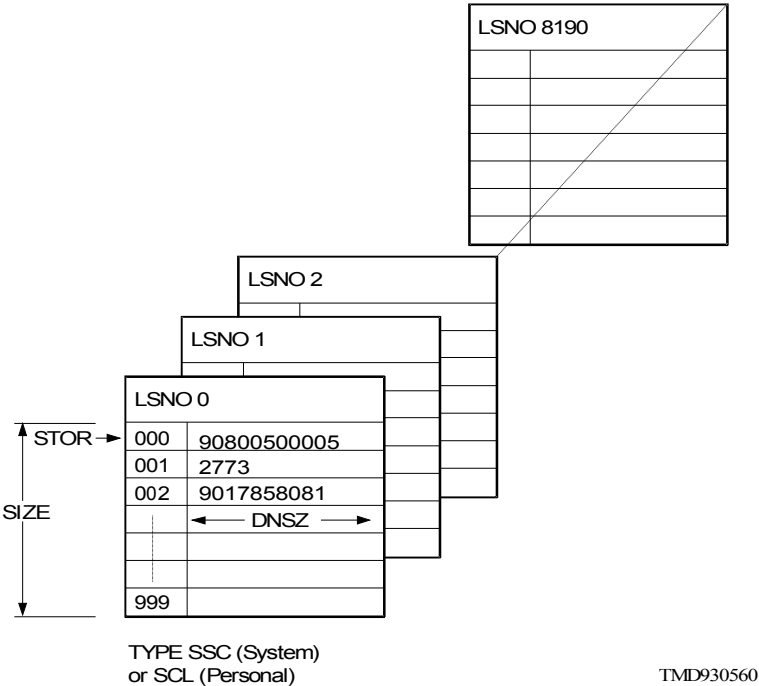
Available from Software Release 1

("Ring Again No Answer" Available from Software Release 16)

# Speed Calling

## Feature Description

This feature allows an extension user to store telephone numbers in what is termed a "Speed Call List", and then, by dialling short codes, instruct the system to dial the numbers in the list. This saves the user having to manually dial the numbers that they frequently call. The diagram below shows how speed call lists are organised on Meridian 1.



### Speed Call Lists

There can be a theoretical maximum of 8191 lists defined on the system with a maximum of 1000 numbers stored in any list. A list can be used by any number of extensions. When a list is created the system administrator must specify the type of the list which can be one of two types:-

- System Speed Call (SSC)
- Speed Call - Personal (SCL)

The basic difference is that System Speed Call Lists can be set up to override the call restrictions applied to an extension. This means that if you have certain telephone numbers that you want normally barred extensions to reach then by placing the numbers in a System Speed Call List this can be achieved. Such a list has its own Network Class Of Service (NCOS) which can effectively change the restriction of a telephone while the call is made using that list.



---

## Feature Implementation

This section is split into three parts:-

- Creating new lists
- Updating lists.
- Assigning lists to extensions

### Creating a New List

Speed Call Lists are created, changed and deleted using Program 18. Speed Call Lists are printed using Program 20.

To create a new list you will need to define the list number and specify whether it is a System or Personal list. For either type the maximum number of telephone numbers allowed in the list and the maximum number of digits allowed in those telephone numbers must be defined. If it is a System List then the NCOS value must be specified.

Once a list has been created it is then available to be assigned to any number of extensions.

### Updating Lists.

Adding, changing or deleting telephone numbers from the list can be performed by the System Administrator or delegated to a list "Controller".

A controller can programme numbers into the list from their extension.

Analogue sets can be Controllers of Personal lists. The procedure to add, change or delete numbers in a list is given in the telephone set user guide.

Digital sets can be Controllers of System lists and Personal lists. The procedure to add, change or delete numbers in the lists is given in the telephone set user guide.

Remember to include the access code for an outside line in the stored number.

### Assigning Lists to Extensions

#### Analogue Sets

Use Program 10 to assign one of the following feature mnemonics followed by the list number:-

**SSU** System Speed Call User.

**SCU** Personal Speed Call User.

**SCC** Personal Speed Call Controller.

---

## Digital Sets

A digital set can be assigned to many lists using dedicated keys and additionally can be a user of one System Speed Call list without assigning it to a key. Use Program 11 to assign one of the following mnemonics followed by the list number to a key:-

**SCU** Speed Call User.

**SCC** Speed Call Controller.

**SSU** System Speed Call User.

**SSC** System Speed Call Controller.

### Additional Notes

If the size of the list is between 0 and 10 then single digit indexing is required (0-9).

If the size of the list is between 11 and 100 then two digit indexing is required (00-99).

If the size of a list is between 101 and 1000 then 3 digit indexing is required (000-999).

## Example

In this example a new Personal Speed Call List 130 has been created. The list has then been assigned to analogue TN 9 6 as the Controller and to key 3 of digital TN 8 2 as a user. The digital set is also given access to System list 131 without assigning it to a key.

Create new list.

```
> LD 18␣ Load Program 18.

REQ NEW␣ NEW creates a new list, or CHG to amend an existing list

TYPE SCL␣ Personal Speed Call list. (SSC for System List).
LSNO 130␣ Specify list number.
DNSZ 12␣ Maximum number of digits in the numbers that can stored.
SIZE 10␣ Maximum number of DNs in the list.
WRT ␣
STOR 0 901785762300␣ Defines number in first store including 9 to access of line.
WRT ␣
STOR 1 908005000005␣ Defines number in second store.
WRT ␣
STOR 2 2273␣
WRT ␣
STOR ␣
REQ END␣ Exit Program 18.
```

**Note:** Use the CHG command at the REQ prompt to add or amend the list.

When creating a *system* speed call list the prompt NCOS (Network Class of Service) will appear. This prompt refers to the restriction level associated with the list, (normally the default is required (i.e. NCOS 0)) to accept the default press carriage return at this prompt.

---

To print the numbers assigned in List 130:

> **LD 20**↵

REQ : **PRT**↵

TYPE : **SCL**↵ *To print System or personal lists*

LSNO **130**↵

SIZE **10**

RANGE **xx yy** *You can print out a range of store numbers.*

STOR **0 901785762300**↵

STOR **1 90800500005**↵

STOR **2 2273**↵

REQ : **END**↵ *Exit Program 20*

Assign feature to an analogue set.

> **LD 10**↵ *Load Program 10.*

REQ : **CHG**↵

TYPE : **500**↵

TN **9 6**↵

ECHG **YES**↵

ITEM **FTR SCC 130**↵ *Controller and User of Speed Call list 130.*

ITEM **FTR**↵

ITEM ↵

REQ : **END**↵ *Exit Program 10.*

Allocate feature to a digital set

> **LD 11**↵ *Load Program 11.*

REQ : **CHG**↵

TYPE : **2616**↵

TN **8 2**↵

ECHG **YES**↵

ITEM **KEY 3 SCU 130**↵ *User of Speed Call list 130 assigned to key 3.*

KEY↵

ITEM **SSU 131**↵ *User of System Speed Call list 131.*

ITEM ↵

REQ : **END**↵ *Exit Program 11.*

## NT Documentation Reference and Release

Software Feature Guide - "Speed Call and Speed Call, System" (reference 553 - 3001 - 306)

Available from Software Release 1

---

# Stored Number Redial (Save Number)

## Feature Description

This feature is typically used when a call is made to a busy extension. It allows the extension user to save the number that was just dialled so that at a later time the extension user can instruct the system to automatically redial the saved number. In the case of analogue extensions this is achieved by entering a Flexible Feature code. For digital sets the feature is assigned to a key. The saved number will remain stored until the user activates the feature again for a different number. This feature has the advantage over "Last Number Redial" in that, on calling a busy extension, it allows the user to make calls to other numbers in between subsequent re-attempts to busy extension. The feature also permits manual programming of the saved number in the same way as an "Autodial" key on a digital set.

## Feature Implementation

### Analogue Sets

The feature is assigned using Program 10 as follows:-

ITEM FTR RDL xx

(where xx is the maximum number of digits which may be stored)

### Digital Sets

The RDL mnemonic is assigned to a key using Program 11:-

ITEM KEY aa RDL xx

(where aa is the desired key number and xx is the maximum number of digits which may be stored)

## Example

In this example Stored Number Redial has been assigned to analogue TN 9 7 and key 3 of digital TN 7 12 .

```
>      LD 10.␣      Load Program 10.

REQ :  CHG.␣
TYPE : 500.␣
TN     9 7.␣
ECHG   YES.␣
ITEM    FTR RDL 16.␣  Stored Number Redial assigned.
        FTR.␣
ITEM    ␣
REQ :   END.␣      Exit Program 10.
```

---

>        **LD 11**␣        *Load Program 11.*

REQ : **CHG**␣

TYPE : **2616**␣

TN     **7 12**␣

ECHG **YES**␣

ITEM **KEY 3 RDL 16**␣ *Stored Number Redial assigned to Key 3.*

KEY␣

ITEM ␣

REQ : **END**␣        *Exit Program 11.*

## **NT Documentation Reference and Release**

Software Feature Guide - "Stored Number Redial" (reference 553 - 3001 - 306)

Available from Software Release 3

## Three Way Service (Broker Call)

### Feature Description

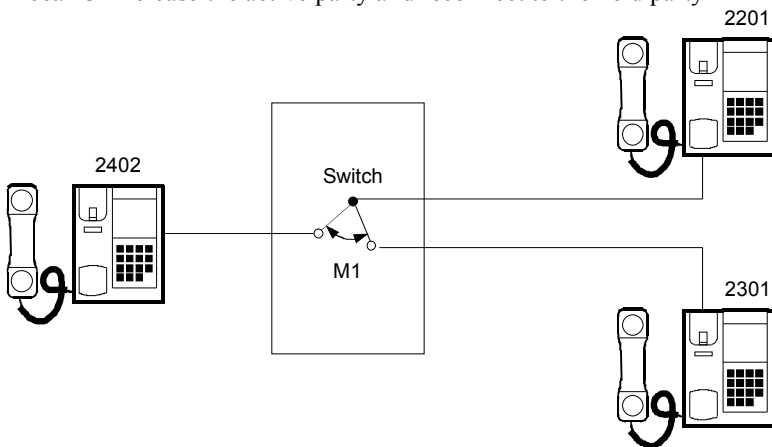
This feature allows a user of an analogue set to toggle between an active party and a held party, with the option of forming a conference between them or releasing the active party and reconnecting to the held party.

The user switches between the parties by dialling programme control digits. These can be changed but the default system comes with them programmed as follows :-

'Recall 1' Establish a conference call between active and held parties

'Recall 2' Toggle between active and held parties

'Recall 3' Release the active party and reconnect to the held party



1. Extension 2402 calls extension 2201.
2. Extension 2201 has the Broker Call feature assigned.
3. Extension 2201 invokes transfer to extension 2301.
4. When 2301 answers, extension 2201 may dial the following :-

- Recall 1 to establish a conference
- Recall 2 to toggle between extension 2402 and extension 2301
- Recall 3 to release extension 2301 and speak to extension 2402.

TMD930.

### Three Way Service (Broker Call)

Note this feature is mutually exclusive with the Call Transfer feature i.e. if this feature is enabled on an extension the system will automatically disable the Call Transfer feature.

---

## Feature Implementation

This feature is assigned by setting the Class of Service to TSA.

### Example

In this example the Broker feature is assigned to TN 9 7.

> **LD 10**↵ *Load Program 10.*

REQ : **CHG**↵

TYPE : **500**↵

TN **9 4**↵

ECHG **YES**↵

ITEM **CLS TSA**↵ *Allow Three Way Service.*

ITEM ↵

REQ : **END**↵ *Exit Program 10.*

### NT Documentation Reference and Release

Software Feature Guide - "Multi-Party Operations" (reference 553 - 3001 - 306)

Available from Software Release 14

---

## User Selectable Call Redirection

### Feature Description

The extension user can use a code or an assigned key to change any of the forwarding DN's from the telephone set and select any of the three options for the number of rings before a call diverts on 'No Answer'. To be able to do this the extension must have "USRA" in the class of service and a station control password defined (SCPW).

### Feature Implementation

The user is given access to this feature in Overlay Programs LD10/11. [The three Ringing Cycle Options (RCO) values are set up in Overlay Program LD15. The values can be in the range 1-15.]

#### Example

In this example USCR is assigned to analogue TN 9 3 and has a Station control Password of 6842.

```
>      LD 10↓      Load Program 10.

REQ:   CHG↓
TYPE:  500↓
TN     9 3↓
ECHG   YES
ITEM   CLS USRA↓      User selectable redirections allowed.
ITEM   SCPW 6842↓     Station Control Password.
ITEM   ↓
REQ:   END↓      Exit program 10.
```

In this example USCR is assigned to digital TN 7 4 and has a Station control Password of 7549. User selectable redirection has been assigned to Key 4.

```
>      LD 11↓      Load Program 11.

REQ:   CHG↓
TYPE:  2616↓
TN:    7 4↓
ECHG   YES
ITEM   SCPW 7549↓     Station Control Password.
ITEM   CLS USRA↓     User selectable redirections allowed.
ITEM   KEY 4 USR↓     Allocate User Selectable Call redirection to Key 4.
ITEM   KEY ↓
ITEM   ↓
REQ:   END↓      Exit program 11.
```

To assign or change a redirection DN or change the Ringing Cycle Options from a telephone:

- 1 Press the USR Key or lift the handset and enter the USCR FFC.
- 2 Enter the Station Control Password.
- 3 Enter the USCR Option Code from Table 1.



- 
- 4 Enter the new RCO if assigning the RCO(0-2); enter the redirection DN if assigning the DN.
  - 5 Press the USR Key or replace the receiver.

Table 1 - USCR Option Codes

Code	Used to Assign
1	FDN redirection DN
2	HUNT redirection
3	DN
4	EFD redirection DN
5	EHT redirection DN
	RCO

**To change/print to global settings for the Call Forward No Answer (CFNA) number of rings**

**Example**

The RCO, 0, 1 or 2 value specified in the TN data corresponds to the CFN0/1/2 (global) value in program 15. In this example the number of rings set in Overlay Program LD 15. has been changed for 'Option 1' to 6 rings and for 'Option 2' to 3 rings.

```
>          LD 15.␣

REQ :  CHG.␣
TYPE :  RDR.␣
CUST  0.␣          Then step on (↵) until you reach CFNO
~~~~~
CFN0   ␣           No change made to Option 0(Range 1-15).
CFN1   6.␣        Number of normal rings for CFNA Option 1.. (Range 1-15).
CFN2   3.␣        Number of normal rings for CFNA Option 2. (Range 1-15).
~~~~~
                Then step on (↵) until you see the REQ prompt again.
REQ    END.␣      Exit program 15.
```

To print out the changes in the Customer Data Block:

```
>          LD 21.␣

REQ :  PRT.␣
TYPE :  RDR.␣
CUST  0.␣
~~~~~
                Other values displayed are not of interest at this time
CFN0   4           Number of rings if RCO 0 is set
CFN1   6           Number of rings if RCO 1 is set
CFN2   3           Number of rings if RCO 2 is set
~~~~~
                Other values displayed are not of interest at this time
REQ    END.␣      Exit program 21.
```

**NT Documentation Reference and Release**  
Software Feature Guide - "User Selectable Call Redirection" (reference 553 - 3001 - 306)

Available from Software Release 19

---

# *Glossary Of Terms*

## *Terminal Number Data Block Mnemonics*

Listed below are mnemonics that can be seen in a printout of an extension (TNB):

AEFD	Alternate external flexible call forward DN
AEHT	Alternate external hunt DN
AFD	Alternate Flexible Call Forward DN
AHNT	Alternate Hunt DN
AOM	Number of add on key modules
ARTO	Alternate redirection time option
CDEN	Card density - used for provisioning
CPND	Calling party name display name
CLS	Class of Service (see list below)
CUST	Customer number. Always 0 unless Multi-customer working is used.
DES	Designation. Used for comments or remarks e.g. room number.
DIG	Dial Intercom Group and member (Refer to feature "Dial Intercom Group")
DN	Directory Number (Extension Number)
EFD	External Flexible Directory Number for External Call Forward No Answer when "Call Forward and Hunt by Call Type" is implemented.
EHT	External Hunt Number for external hunting on busy when "Call Forward and Hunt by Call Type" is implemented.
FDN	Flexible Directory Number for "Call Forward No Answer"
FTR	Features assigned to 500 sets (see list below)
HUNT	Hunt DN for "Hunting" on busy (refer to "Call Forwarding")
KEY	Features assigned to keys on digital sets (see list below)
LNRS	"Last Number Redial" maximum size
MARP	Indicates that this is a Multiple appearance DN redirection prime TN
NCOS	Network Class Of Service for "Call Restriction"
OHID	The ID number of the Off Hook Alarm Security DN
RCO	The option ID for the number of rings before Call Forward no Answer
RNPG	Ringing Number Pickup Group (Refer to "Pickup Groups")
SGRP	"Scheduled Access Restriction" Group (time of day barring)
SSU	List number for System Speed Call User (Refer to "Speed Calling")
TGAR	Trunk Group Access Restriction for "Call Restriction"
TN	Terminal Number
VMB	Voice Mailbox Administration

---

## *Classes of Service (CLS)*

This list explains the abbreviations. For details of the feature see the "Features" section of this handbook or the Northern Telecom documentation - books 1 and 2.

Note "A/D" in this list means allowed/denied.

AAA/D	"Automatic Answerback"
ADD	Allowed Digit Display (Display Module is equipped; NDD when not equipped)
AHA/D	"Automatic Hold"
ARHA/D	"Audible Reminder Of Held Calls"
ASCA/D	Off Hook Alarm Security
AUTU/R/D	Authorization Code unrestricted / restricted / denied
C6A/D	6 Party "Conference"
CCSA/D	"Controlled Class Of Service"
CFHA/D	"Call Forward and Hunt Override"
CFTA/D	"Call Forward and Hunt by Call Type"
CFXA/D	Call Forward External (refer to "Call Forwarding")
CTD	Conditional Toll Denied for "Call Restriction"
CWA/D	"Call Waiting"
DDGA/D	Display the calling extension's DN to the called party when a call is made
DIP	Dial Pulse Type Phone
DNDA/D	Dialled Name Display For Redirected Calls. Refer to the Call Party NameDisplay Feature
DPUA/D	Directed Pickup (Refer to Pickup Groups)
DTN	Touchtone (Dial Tone Multi-frequency) type phone
EHTA/D	Enhanced Hotline (Refer To "Hotlines")
FBA/D	Call Forward Busy (Refer to "Call Forwarding")
FNA/D	Forward No Answer (Refer to "Call Forwarding")
FR1	Fully Restricted Level 1 for Call Restriction
FR2	Fully Restricted Level 2 for Call Restriction
FRE	Fully Restricted for Call Restriction
GPUA/D	Group Pickup (Refer to Pickup Groups)
HFA/D	Handsfree (whether or not telephone microphone on a 2616 type set is to be used)
HTA/D	"Hunting" (Refer to "Call Forwarding")
ICDA/D	Internal Call Detail Recording (is logging of internal calls required)
LNA/D	"Last Number Redial"
LPA/D	Message Waiting Lamp On 500 sets
MCTA/D	"Malicious Call Trace"
MNL	Manual Hotline (Refer to "Hotlines")
MWA/D	Message Waiting
NAMA/D	Call Party Name Display Name to be sent or not to the called party
NDD	No Digit Display (Display Module on M2008, M2216 and M2616 is not equipped)
OVDA/D	"Override"
PRSA/D	Priority Call Pickup
PUA/D	Pickup (Refer to Pickup Groups)
RDI	Restricted Access to DID calls
RTDA/D	Redirection by time of day
SFA/D	Secondary Forwarding (Refer To "Call Forwarding")

---

SRE	Semi-restricted for "Call Restriction"
SWA/D	Secondary Call Waiting
TLD	Toll Denied for "Call Restriction"
TSA	Three Way Service (Broker Call)
UDI	Unrestricted Access to DID Calls
UNR	Unrestricted for "Call Restriction"
USRA/D	User Selectable Call Redirection
WTA/D	Warning Tone
XFA/D	"Transfer"
XHA/D	"Exclusive Hold"
XRA/D	"Ring Again"

---

## *Features Assigned to Keys on Digital Sets*

This list explains the abbreviations. For details of the feature see the "Features" section of this handbook or the Northern Telecom documentation - books 1 and 2.

AAK	"Automatic Answerback"
ACD	Automatic Call Distribution
ADL	"Autodial"
AO6	"6 Party Conference"
BFS	Busy and Call Forward Status (Refer to Manager/Secretary Features)
CFW	Call Forward All Calls (Refer to Call Forwarding)
CWT	"Call Waiting"
DIG	"Dial Intercom Group"
DPU	Directed Pickup
DSP	Display Key
DWC	Display Calls Waiting
GHD	Group Hunt Deactivation
GPU	Group Pickup
GRC	"Group Call"
HOT	"Hotline"
ICF	Call Forward Internal Calls
LNK	"Last Number Redial"
MCK	Message Cancellation
MCN	Multiple Call Non-ringing DN
MCR	Multiple Call Ringing DN
MIK	Message Indication
MSB	"Make Set Busy"
MWK	Message Waiting
NHC	No Hold Conference
NUL	Blank a Key
OVR	"Override"
PRK	"Call Park"
RDL	"Stored Number Redial"
RGA	"Ring Again"
RNP	Ringing Number Pickup
SCC	Speed Call Controller
SCN	Single Call Non-ringing DN
SCR	Single Call Ringing DN
SCU	Speed Call User
SIG	Signal (Refer to Manager/Secretary features)
SSC	System Speed Call Controller
SSU	System Speed Call User
TRC	"Malicious Call Trace"
TRN	"Transfer"
USR	User Selectable Call Redirection
VCC	"Voice Call" (Refer to Manager/Secretary features)

---

## *500 Set Features (FTRs)*

Each of these mnemonics may be seen in a 500 Set TNB printout after the "FTR" prompt. This list explains the abbreviations. For details of the feature see the "Features" section of this handbook or the Northern Telecom documentation - books 1 and 2.

ACD	Automatic Call Distribution DN
AEFD	Alternate external flexible call forward DN
AEHT	Alternate external hunt DN
AFD	Alternate Flexible Call Forward DN
AHNT	Alternate Hunt DN
CFW	"Call Forward All Calls"
CPND	"Call Party Name Display"
EFD	External Flexible Directory Number for Call Forward No Answer
EHT	External Hunt DN
FDN	Flexible Directory Number for Call Forward No Answer
HOT	"Hotline"
ICF	Call Forward Internal Calls
PHD	"Permanent Hold"
RDL	"Stored Number Redial"
SCC	Speed Call Controller
SCU	Speed Call User
SSU	System Speed Call User