



Commander® Vision
Installation & Maintenance Manual

759 / 803

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- Fault issues
- Equipment compatibility
- Modifications
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CHAPTER ONE

General Description

Introduction to the Installation & Maintenance Manual

The Installation and Maintenance Manual is your guide to installing and programming the **Commander Vision** phone system.

Chapter One describes the system hardware, including the full-featured system Keystation, and the system features. It also includes a description of how to use a standard telephone with the system.

Chapter Two deals with installing the system, and includes an installation checklist on page 59.

Chapter Three is a system programming reference.

Chapter Four deals with maintenance procedures.

Finally, the Appendix includes copies of the System Programming Record, the Serial Item List and the system Quick Reference Guide.

Safety and precautions

Safety precautions during installation and system upgrades

WARNING: Always unplug or isolate the mains supply when installing or upgrading the system.

WARNING: Never remove or insert any system card when power is applied to the system.

WARNING: Before plugging in the mains supply, ensure:

- There is a reliable earth at the mains supply socket earth pin.
- All cabled Stations are terminated correctly
- The Main Equipment cover is in place.

Safety precautions using the Keystation handset

WARNING: The earcap of the Keystation handset contains a magnetic material and can therefore attract and hold small metal objects.

Lightning and surge voltage protection

WARNING: Station cabling should not be exposed to high voltage surges, (for example, surges induced by lightning or neighbouring high current-carrying cables). If this is a possibility, external protection of the Main Equipment and Stations using earthed line surge protectors is essential.

WARNING: To protect the system against high voltage surges on incoming PSTN exchange Lines, (for example, caused by lightning), the Functional Earth connector on the Base Motherboard and Station Cards must be connected to a protective earth.

Electrostatic Discharge (ESD) precautions

The **Commander Vision** contains electrostatic-sensitive components. To ensure long-term reliability of the system, precautions should be taken when handling any system boards to prevent electrostatic discharge (ESD).

A connector is provided on the main system board for the connection of ESD straps. If a functional earth is connected to the system, it can also be used for the connection of ESD straps.

WARNING: The mains protective earth should not be used for connecting ESD straps.

Electromagnetic Compatibility (EMC) precautions

The **Commander Vision** is a Class A product. In a domestic environment radio interference may occur. The user may be required to take measures to eliminate such interference.

General description

- The Commander Vision can accommodate up to eight PSTN Lines, or four ISDN Basic Rate Accesses, or a combination of both, and up to eighteen Stations.
- The **Commander Vision** is modular in construction. It is upgraded by adding various system expansion cards.
- The **Commander Vision** has a simple-to-use menu-driven interface.
- The **Commander Vision** is a hybrid PABX / key-system.
- The **Commander Vision** can operate with system Keystations, standard telephones, or approved ISDN devices.
- The **Commander Vision** has remote access and maintenance capability.

The **Commander Vision's** modular design allows it to grow as you grow. No matter what size system you start with, you can expand up to the maximum capacity. The base system includes either two PSTN Lines and allows up to six Stations to be connected, or includes a Base Rate Access instead of the two PSTN Lines. By adding system expansion cards to these base systems you can have up to eight PSTN Lines or four ISDN Basic Rate Accesses, or a combination of both, and up to eighteen Stations. A card providing an interface to an internal ISDN S-bus can also be added, to which up to eight ISDN devices can be attached. One of the ISDN Basic Rate Accesses can also be configured to act as a second internal S-bus.

The system Keystation has a large display area that features an intuitive menu-driven interface. Display Keys activate the facilities that are shown on the Display. It is not necessary to dial any feature codes when using the Keystation. This makes the system easy to use and saves you time.

The **Commander Vision** is extremely flexible. You have the choice of operating the system as either a key system where all users have direct access to all Lines for making and receiving calls, or as a PABX with all calls being answered by an operator console, or as a hybrid combination of both. You can choose to use system Keystations or standard telephones at each Station, and you can change the combination at any time. A Door Station is available that can be programmed to ring at any Station, and a Doorstrike output is also provided. A Long-line Station, a Central Bell, external Music-on-Hold, Call Logging and a Call Manager for Keystation control may also be installed.

The **Commander Vision** is easy to install and maintain. Your Commander consultant can diagnose and programme your system remotely. The system can also be configured to report alarms to your Commander Centre.

System terminology:

Your **Commander Vision** system consists of the wall-mounted **Main Equipment**, to which Line and Station connections are made.

Line connections provide access to the switching exchange of your telecommunications Network Provider. The connections can be either standard analogue, called **PSTN Lines**, or digital, called **ISDN Accesses**. Each ISDN Access incorporates two separate **ISDN Lines** over which calls can be made.

You connect either a full-featured **Keystation**, or a **standard telephone**, to the **Station** connections.

System capacity

Option	Capacity	Notes
PSTN Lines	8	
ISDN Accesses (2 ISDN Lines per Access)	4	8 Lines total
ISDN S-bus interfaces	2	5 ISDN interfaces total
Keystations	18	
Standard telephones	18	18 Stations total
Hybrid Stations - Keystation or standard telephone	18	
ISDN devices (connected to S-bus interfaces)	16	8 per interface
Programming Station (via standard Keystation)	1	Station 20 (default)
Operator Station	1	Station 20
Long-line Station	1	Station 22
Headset operation	Yes	
Door Station	1	
Door Open	All Stations	
Fax Detection	Yes	
Public Address	Yes	
Central Bell	Yes	
Pick-up (Station) Groups	4	
Outgoing (Line) Groups	4	
Hunt Groups	4	
Courtesy Service	Yes	
Voice Mailboxes	18	If Voice Module fitted
Customised Courtesy Service	Yes	
Answering Machine Service	Yes	
Auto-attendant Service	Yes	
Speed Dial - Common	200	
Speed Dial - Personal	12	
Classes of Service (Call Restriction)	6 classes	4 Tables of codes
Conference Calls	3 participants 2 external	On ISDN only
Call Logging	Yes	
Internal/External Music On Hold	Yes	
Call Manager (PC control of Keystation)	18	
Battery Backup Unit	Yes	
PABX operation	Yes	
Remote maintenance and programming	Yes	
Remote diagnostics	Yes	

System hardware

As a minimum the system Main Equipment houses a Base Motherboard and a Power Supply Unit. The Basic 206 system includes one PSTN Line Card in addition. The Basic 1T06 system includes one ISDN Access Card and an ISDN Upgrade Card in addition.

The Base Motherboard provides six Station interfaces but does not include PSTN or ISDN functionality. The Main Distribution Frame (MDF) area of the Base Motherboard contains the connection points for all required cabling - PSTN Lines, ISDN Accesses, Stations, Doorstrike, etc. (See Figure 3 and Figure 4 on pages 62 and 63). The Base Motherboard also acts as a connection platform for all system expansion cards.

The system expansion cards are as follows:

- Station Card: This provides interfaces for six Stations and a connector for an ISDN Access Card or a PSTN Line Card.
- PSTN Line Card: This card provides interfaces for two PSTN exchange Lines.
- ISDN Access Card: This card provides one ISDN interface. It can be configured via jumper links to provide either a network Basic Rate Access or access to an internal S-bus.
- ISDN Upgrade Card: This card must be installed if any ISDN Access Cards are installed.
- Voicemail Card: This card provides up to 80 minutes voice storage. When installed a system Answering Machine can be enabled and each Station can be provided with a voice box. The Voicemail Card is also required to provide a personalised greeting in either the Courtesy or Auto Attendant services

Keystation description

Your Keystation is a highly featured display telephone for use with your **Commander Vision** system.

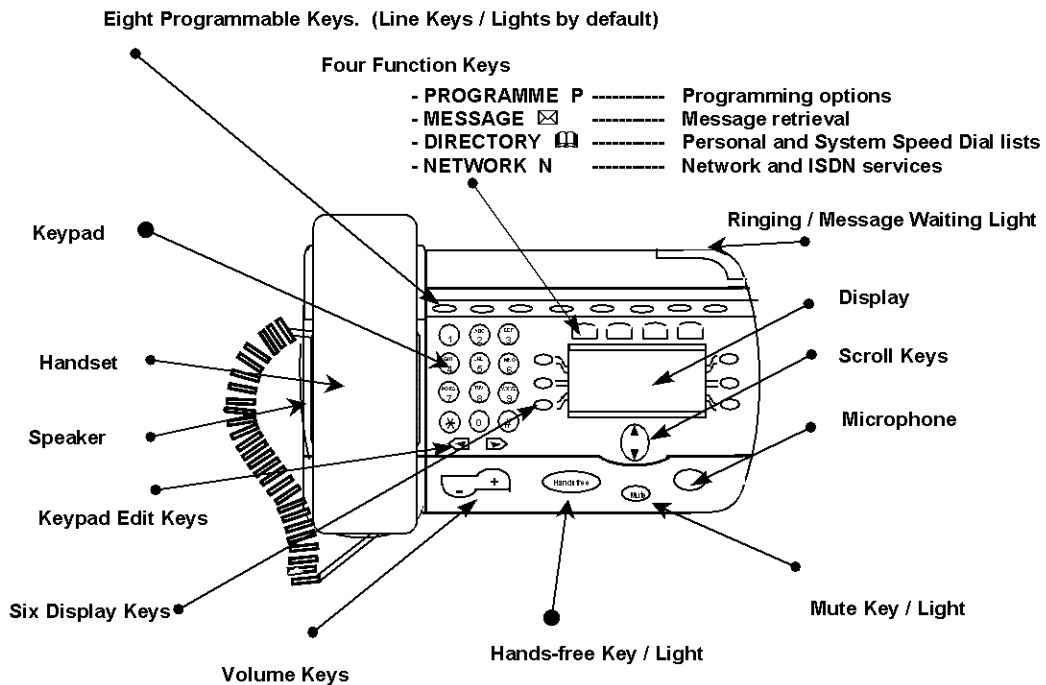
It features a 4-line Display that displays prompts, and menus with selectable options, during operation. This unique menu-driven interface makes the system simple to use - no codes are needed to programme and activate features.

System settings are also programmed via a standard Keystation using the intuitive menu-driven interface, without the need for special codes.

It features eight Programmable Keys, which are pre-programmed to access exchange Lines, and four Function Keys which group often used features in a logical manner.

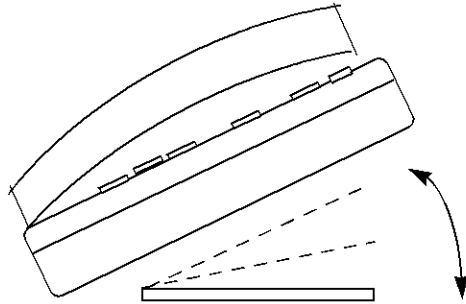
The Keystation is fully hands-free, so you can make calls, receive calls and use its features without lifting the handset.

A Keystation is shown below. The elements that are referenced in this text are pointed out and named.

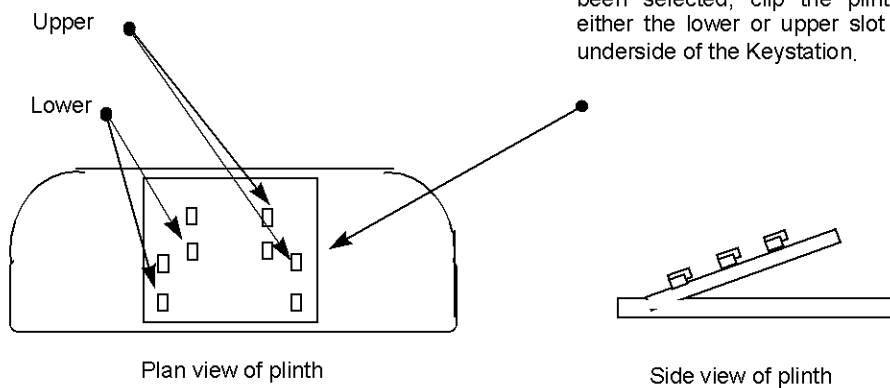


To adjust how your Keystation is mounted:

- The desk plinth allows you to mount the Keystation at two angles, and at two heights as shown below.
- The Keystation may also be wall-mounted. When wall-mounted, the handset retaining hook must be reversed to ensure the handset can be properly retained.



There are retaining clips on the desk plinth which allow the plinth to be set at two angles.



When the correct viewing angle has been selected, clip the plinth onto either the lower or upper slot on the underside of the Keystation.

Plan view of plinth

Side view of plinth

Using the Keystation Display:

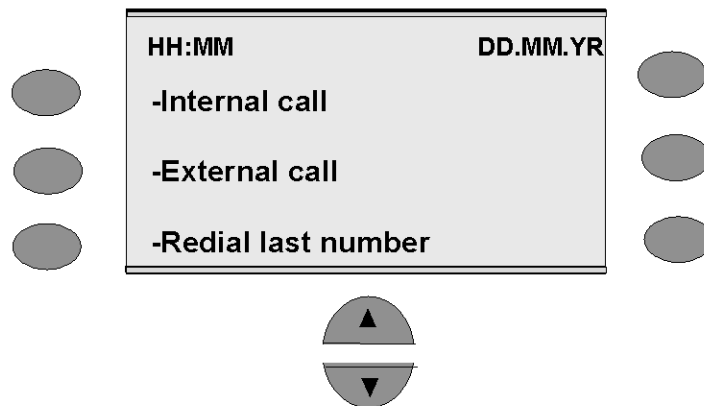
The Keystation Display presents various prompts and information, and various menus containing selectable options to the Station user.

Prompts and information

- Prompts appear telling you what action to take, or warning of an incorrect action. For example, an attempt to access the system programming menus from the wrong Station will result in the prompt 'Programming refused' being displayed.
- When your Keystation is not in use, its Display shows the time and date on the top line. To set the time and date, see page 112.
- When you dial an external number, the Display shows the digits as they are dialled.
- When you make an internal call, the Station number you dialled is displayed. If the Station has been programmed with a name, the name is displayed.
- You can leave a message on your Keystation Display, which will be also seen by other Keystation users who call your Station. (See page 29)
- You can display caller numbers, (or names if programmed), on your Keystation display. (See page 29).

Menus

When the Keystation is idle, the Idle Menu is presented containing a large number of options displayed in groups of three. This menu, showing the first three options, is shown below. (You use the Scroll Keys below the Display to scroll up and down through the options).



If you are on a call or operating a feature, the menu changes to offer only those options relevant to what you are doing. Also, when features such as Station Lock are set, the first prompt on the Display becomes the option to cancel the activated feature.

When activating certain features it is necessary to select the Stations on which you wish to activate the feature. In this case the Station Menu is presented listing all the Stations connected to the system. Similarly, a Line Menu may be presented listing all the PSTN Lines and ISDN Accesses connected to the system.

Note: Most menus will display the option 'Cancel'. This allows you to exit without activating the feature. You may also press the Scroll Up (▲) Key for two seconds to return to the previous menu. Finally, pressing the Hands-free Key exits all menus and returns the Display to the Idle Menu.

Using the Display Keys to select menu options:

The six grey Display Keys, located on each side of the Display, are pressed to select the menu option shown alongside on the Display. This will either activate a feature, cause another menu to be displayed, or select items from a list.

When selecting from a displayed list, (for example selecting Stations from the Station Menu), selected items will be denoted by a ◆ next to the object. Unselected items will be denoted by a ◇ next to the item. Selecting an item with a ◇ alongside causes the item to be selected and the symbol to change to ◆, and vice versa.

Note: Do not press the Display Keys quickly in succession to 'hop' through menus. You must wait for the Display to change before making your next selection.

Using the Scroll Keys:

The Scroll Keys are located under the Display and are used to scroll up and down through the Display options. When the Scroll Down Key (▼) is pressed, the next three available options are displayed. Conversely, pressing the Scroll Up Key (▲) will take you back up the Display to the previous options.

Note: Pressing the Scroll Up Key (▲) for two seconds will exit to the previous menu.

Using the Keypad and the Keypad Edit Keys:

The Keypad can be used to enter digits when dialling, or text when programming names or messages. There are two Keypad Edit Keys below the Keypad. You can use these keys to move left and right when entering names or messages, and to correct digits in Pre-dial mode.

How to enter text when programming names or messages:

- Press 2 once for A, twice for B, and so on. (Pressing 2 continuously loops through ABCabc2). Press 3 once for D, twice for E, three times for F, and so on.
- Wait for two seconds for the cursor to move on or press the right Keypad Edit Key to move to the next location. Pressing 1 or 0 and waiting two seconds gives a blank space.
- When programming a Speed Dial number, you may insert a pause of 1.5 seconds between digits by selecting 'Pause' on the Display.

A maximum of ten characters per name, including spaces, may be entered.

Using the Programmable Keys / Line Keys:

There are eight Programmable Keys across the top of your Keystation. These keys are pre-programmed as **Line Keys**. Each Line Key is associated with a Line, the first key with Line 1 and so on, (in so far as the system has Lines equipped). Pressing Line Key 1 seizes Line 1, returning a dial tone and allowing you to dial an external telephone number. The Line Keys incorporate a red light, which is lit on all Keystations when the associated Line is seized. When a call on a Line is put on hold the associated Line Key light flashes on all Keystations. (unless the system programming is changed from the default as detailed on page115).

If you have less than eight Lines some Programmable Keys will not be pre-programmed as Line Keys. You can programme these, (and the Line Keys if desired), to activate other system features. (See page 105).

Using the Hands-free Key:

You can use the Hands-free Key to have a conversation without having to lift the handset. Press the Hands-free Key to go off-hook, as if the handset were lifted with the Keystation speaker and microphone replacing the handset. Pressing the key again goes back on-hook, as if the handset were replaced.

You may also use the Keystation with a headset - replace the handset with a headset and use the Hands-free Key to go on- and off-hook. (You must also programme the system to work in Headset Mode - see page 106).

When you have the handset off-hook, pressing the Hands-free Key turns the speaker on and allows other people in the room to hear the caller.

The Hands-free key has a red light, which is lit whenever the Hands-free Key has been pressed to go off-hook or to turn on the speaker.

Note: Pressing the Hands-free Key at any time during programming exits the programming menus and returns the Display to the Idle Menu.

Using the Volume Key:

- To adjust the speaker volume, press the Volume Key when in Hands-free Mode.
- To adjust the handset receiver volume, press the Volume Key when in Handset Mode.
- To adjust the ringing volume, press the Volume Key when the Keystation is ringing.

Note: Volume will increase/decrease by one level for every press of the Volume Key.

Using the Mute Key

The Mute Key can be pressed when you are using the handset or in Hands-free Mode. When pressed, the other person on the call cannot hear you. The Mute Key has a red light, which is lit when mute is active.


The Ringing / Message Waiting Light:

There is a red light on the top right-hand corner of the Keystation. This light flashes when there is an incoming call. It also lights up when a voice message has been left in your Voice Mailbox.

Using the Function Keys:

There are four Function Keys located directly above the Keystation's Display. Particular features are grouped under these keys, as follows:

PROGRAMME P: This key accesses the options available to customise your Keystation settings and enter your Personal Speed Dial list. It also accesses system programming from the Programming Station only.

MESSAGE : This key accesses Voicemail and Display Messaging features.

DIRECTORY : This key allows you to dial numbers in the System and Personal Speed Dial lists, and also allows convenient dialling of the **Commander Service and Sales** telephone numbers.

NETWORK N: This key accesses ISDN services, and also allows convenient dialling of the Telstra network access code.

Feature description

Calling / Answering

To make an external call:

- Lift the handset and seize a free Line in one of the following ways:
 - Select the 'External call' option on the Display. The Line menu will be presented. Select a free Line. (Busy Lines are indicated by a ◆ beside the Line on the Display).
 - Press the Line Key 1 for Line 1, Line Key 2 for Line 2, and so on. (This is applicable only if the Programmable Keys are programmed as Line Keys, which is the default programming).
 - Dial 0, (to seize a Line from Outgoing Group 1).
 - Dial 81, 82 or 83, (to seize a Line from Outgoing Groups 2, 3 or 4 respectively).
 - Dial 51, 52, 53, 54, 55, 56, 57 or 58 to seize Line 1, 2, 3, 4, 5, 6, 7 or 8 respectively.
- Dial the telephone number you require. Digits are sent to Line as they are dialled.

Note: If you do not lift the handset then you may enter digits in Pre-dial mode - digits will not be sent for processing until you either lift the handset, press the Hands-free key, or select 'Send digits' from the Display. You can edit the number you have entered prior to sending to the Line, by using the left-hand Keypad Edit Key, located below the keypad.

Note: If you are entering an external number in Pre-dial mode, enter 0, 81 - 83 or 51 - 58 first, to have a Line seized when you send the digits for processing.

To make an internal call:

You can place an internal call in one of the following ways:


- Select the 'Internal call' option on the Display and select the desired Station from the list
- Dial the Station number (20 - 37) and select 'Send digits'.
- Lift the handset and dial the Station number.

The Display will show the Station number, or, if programmed, the Station name.

From a standard telephone, go off-hook and dial the Station number.

To make a Speed Dial call:

You have access to a Personal Speed Dial list of up to twelve numbers, and a System Speed Dial List of up to two hundred numbers. Refer to page 105 for how to add numbers to your Personal Speed Dial list and page 113 to add numbers to the System Speed Dial list.

- Press the DIRECTORY Key 
- Select 'Personal speed dial' to access your Personal Speed Dial list and 'System speed dial' to access the System Speed Dial list.
- Select the number or name you wish to dial. Use the Scroll Down Key (▼) to move down the list. A Line will automatically be seized and the number dialled.

To answer a call:

When the Keystation rings, you can do one of the following:

- Select 'Answer the call' on the Display.
- Lift the handset.
- Press the Hands-free Key.

From a standard telephone, lift the handset.

Call Hold / Call Transfer

To place an external call on hold:

- Whilst on the call, select 'System hold' on the Display, or press a free Line Key.
- To retrieve the call, select 'Return to line' on the Display, or press its Line Key.

Note: If a Station has two calls on system hold, selecting 'Return to line' will return the Station to the first call that was put on hold.

To transfer a call to another Station:

- Whilst on the call, select 'Internal transfer' on the Display.
- Select the desired Station from the Station list presented on the Display, or dial the Station number.
- Select 'Transfer' or replace the handset, to transfer the call.

Note: You can transfer a call to a Station when the Station has answered, or whilst ringing the Station, or whilst the busy tone is being received from the Station.

From a standard telephone, press the Recall (R) key on the telephone and dial the Station number. To transfer the call, replace the handset.

To transfer a call to an external number:

- Whilst on the call, press the Scroll Down Key (▼) until 'External transfer' is displayed.
- Select 'External transfer'.
- Select a free Line and dial the number.
- When the call is answered, press 'Transfer'.

Note: Transferring an external call to an external number ties up two exchange Lines. Such calls are called trunk-to-trunk calls and are set to last five minutes when both Lines are standard PSTN Lines and are unsupervised, that is, they do not have the 'Reversal-on-Idle' network option. See page 144.

To make an external consultation call:

Whilst on an external call, you can contact another external number to make an enquiry, as follows:

- Press the Scroll Down Key (▼) until 'External consultation' is displayed.
- Select the 'External consultation' option on the Display.
- Select a free Line and dial the number.
- When the call is answered, you can go back and forth between both calls. Select the 'Return and hold' option on the Display each time you want to swap to the other call.

Call Deflect

This allows you to divert a call that is actually ringing at your Station.

To deflect a call ringing at your Station:

- When a call is ringing at your Keystation, select 'Deflect the call' on the Display.
- Select a free Station from the Station list presented on the Display. The call is presented to the selected Station and stops ringing at your Keystation. If you attempt to deflect a call to an unavailable Station, it will continue to ring at your Keystation.
- To deflect your call to your Voice Mailbox, dial 38 after selecting 'Deflect the call'.

Note: For information on setting up and using a Voice Mailbox refer to page 128.

Call Divert

To divert all calls from your Station:

Before you leave your Station, you can divert all your calls to ring at another Station. Alternatively, you can divert all external calls presented to your Station to an external number.

- From the Idle Menu, press the Scroll Down Key (▼) until 'Divert' is displayed.
- Select 'Divert'.
- Select 'Divert all calls'.
 - Enter an internal number if you want to divert all your calls to another Station.
 - Enter 0 followed by an external number if you want to divert external calls to an external number. If diversion is set to an external number, it will be ignored for internal calls. Internal calls will ring the telephone.
- Select 'Confirm'.

Note: Once set the Idle Menu will show the option 'Cancel divert'. To cancel the diversion, select 'Cancel divert'.

Note: Broken dial tone will be heard at your Station until all call diversion is cancelled.

Note: You cannot divert to a Station that has the 'Do Not Disturb' feature set.

Note: Diverting an external call to an external number ties up two exchange Lines. Such calls are called trunk-to-trunk calls and are set to last five minutes when both Lines are standard PSTN Lines and are unsupervised, that is, they do not have the 'Reversal-on-Idle' network option. See page 144.

From a standard telephone, the code to set and cancel the diversion is 151.

To divert your calls to you whilst you are at another Station:

The Follow Me feature allows you to set a call divert to another Station after you have left your Station.

- From the Keystation that is to answer the calls, press the Scroll Down Key (▼) until 'Divert' is displayed.
- Select 'Divert'.
- Select 'Follow me'. You will be prompted to enter your Station number and your Station Lock Password. (The default Station Lock Password is 123). When these are entered, the diversion is activated.

Note: Once set the Idle Menu on your own Station will show the option 'Cancel divert'. To cancel the Follow Me diversion, select 'Cancel divert'.

Note: Follow Me will not divert a call from a Station, if the call has been previously diverted by Follow Me to that Station.

From a standard telephone, the code is 154.

To divert calls when your Station is busy:

The Divert on Busy feature allows you to divert all your calls to ring at another Station if your Station is busy (engaged). Alternatively you can divert all external calls to an external number if your Station is busy. In this case internal calls will not be diverted but will be given the busy tone.

- From the Idle Menu, press the Scroll Down Key (▼) until 'Divert' is displayed.
- Select 'Divert'.
- Select 'Divert when busy'.
 - Enter an internal number if you want to divert all your calls to another Station.
 - Enter 0 followed by an external number if you want to divert external calls only to an external number.
- Select 'Confirm' to accept the number.

Note: When Divert on Busy is enabled on a Station to divert to an external number, external incoming calls will divert but internal calls will not.

Note: Diverting an external call to an external number ties up two exchange Lines. Such calls are called trunk-to-trunk calls and are set to last five minutes when both Lines are standard PSTN Lines and are unsupervised, that is, they do not have the 'Reversal-on-Idle' network option. See page 144.

To cancel a Divert on Busy diversion:

- From the Idle Menu, select 'Divert'.
- Select 'Divert when busy'. The diversion is automatically cancelled and the Display returns to the Idle Menu.

From a standard telephone, the code is 152.

To divert calls when your Station does not answer:

The Divert on No Answer allows you to divert all your calls to ring at another Station if there is no answer at your Station after four rings. Alternatively, you can divert all external calls to an external number if your Station has not answered after four rings. In this case internal calls will not be diverted but will continue to ring your Station.

- From the Idle Menu, press the Scroll Down Key (▼) until 'Divert' is displayed.
- Select 'Divert'.
- Select 'Divert on no answer'.
 - Enter an internal number if you want to divert all your calls to another Station.
 - Enter 0 followed by an external number if you want to divert external calls to an external number.
- Press 'Confirm' to accept the number.

Note: If Divert on No Answer is enabled on a Station to divert to an external number, external incoming calls will divert, but internal calls will not.

Note: Diverting an external call to an external number ties up two exchange Lines. Such calls are called trunk-to-trunk calls and are set to last five minutes when both Lines are standard PSTN Lines and are unsupervised, that is, they do not have the 'Reversal-on-Idle' network option. See page 144.

To cancel a Divert on No Answer diversion:

- From the Idle Menu, press the Scroll Down Key (▼) until 'Divert' is displayed
- Select 'Divert'.
- Select 'Divert on no answer'. The diversion is automatically cancelled and the Display returns to the Idle Menu.

From a standard telephone, the code is 153.

Conference Calls

This feature allows you to hold a three-way conversation between three Stations, or between two Stations and an exchange Line, or between two exchange Lines and a Station.

To hold an Internal Conference:

- When on a call, press the Scroll Down Key (▼) until 'Internal Conference' is displayed.
- Select 'Internal conference'.
- Select the Station to be included in the conference.
- When the Station answers, select 'Conference' on the Display.

To hold an External Conference:

- When on a call, press the Scroll Down Key (▼) until 'External Conference' is displayed.
- Select 'External conference'.
- Select a free Line and dial the external number.
- When the call is answered, select 'Conference' on the Display.

Note: An external conference call ties up two exchange Lines. Such calls are called trunk-to-trunk calls. If both Lines are standard PSTN Lines and are unsupervised, (that is, they do not have the 'Reversal-on-Idle' network option), then the conference call will be cleared down when the party at the **Commander Vision** hangs up, irrespective of whether the external parties have hung up or not. See page 144.

Note: At the start of a conference call a single tone is presented to all parties to indicate that the call is a conference call.

From a standard telephone, press R when on a call, place the second call and, when it is answered, dial R3.

Headset

To use the Keystation with a headset you must first set the Keystation in Headset Mode as described on page 106. In Headset Mode you use the Hands-free Key in place of lifting or replacing the handset.

To make an internal or external call when using a headset:

- Press the Hands-free Key and dial your calls in the normal way.

To clear down (end) a call when using headset:

- Press the Hands-free Key.

To answer a call when using a headset:

- Select the 'Answer the call' option on the Display, or press the Hands-free Key.

Redial

Use the Redial feature to redial the external number you most recently dialed. A Line is seized automatically.

To redial the last external number dialled:

- From the Idle Menu, select 'Redial last number'.

From a standard telephone, the code is 60.

Call Pick-up

You can group Stations in Pick-up Groups as detailed below. You can pick up any call, (internal or external), that is ringing at another Station provided both Stations are programmed in the same Pick-up Group.

For Stations not in your Pick-up Group, you can pick up external, but not internal, calls. You can also pick up an external call that is ringing on a Central Bell.

To pick up a call ringing at another Station in your Pick-up Group:

- From the Idle Menu, select the 'Call pick-up' option on the Display.

From a standard telephone, the code is 68.

To pick up an external incoming call:

- Select 'External call pick-up'.

Note: This feature will not work for internal calls.

From a standard telephone, the code is 67.

Ring Back

If the Station you call is busy, use the Ring Back feature to have the Station call you back when it becomes free. If you dial for an exchange Line and no Lines are free, use the Ring Back feature to receive an exchange Line as soon as one is available.

To have a busy Station call you back when it becomes free:

- When you have called a busy Station, select 'Ring back' on the Display.
When the Station becomes free, your Station will ring and your Display will show 'Ring back from station'.
- Select 'Answer the call' or pick up the handset to ring the Station.

From a standard telephone, dial R5 when you have called a busy Station.

To receive an exchange Line as soon as one is available:

- When you have dialled for a Line and none are free, select 'Ring back' on the Display.
When the Line becomes free, your Station will ring and your Display will show 'Ring back from line'.
- Select 'Answer the call' or pick up the handset to seize a Line.

From a standard telephone, dial R5 when you have dialled for a Line and none are free.

Camp on Busy

Camp on Busy allows you to have your Station call a busy Station as soon as it becomes free.

To have your Station dial a busy Station as soon as it becomes free:

- When you get a busy (engaged) tone on calling a Station, stay off-hook and when the called Station becomes free, your Station will call the telephone.

Call Waiting

If you get a busy tone when you call a Station, you can present the Station with a Call Waiting tone, provided the Station is not protected against receiving Call Waiting tones. (See page 35). An audible tone will sound on the called Station, and the option 'Call wait. - Stn xx' will appear on its Display. If the called Station is protected against Call Waiting tones, it will not signal your call to the user.

To present a busy Station with a Call Waiting tone:

- Select 'Waiting tone' on the Display when a busy tone is returned from a Station.

From a standard telephone, the code is R8.

To accept a waiting call:

If another Station presents you with Call Waiting, this will be indicated on your Display and you will hear the Call Waiting tone, provided your Station is not protected against Call Waiting tones.

- Select from the Display to answer the waiting call and either hold or release the current call.

Note: If you ignore the Call Waiting tone for a short period, the calling telephone will be presented with the message 'Call waiting rejected'.

Call Park

The Call Park feature allows you to put an external call on special hold by 'parking' it in the system. Any Station may then pick up the call.

To park and retrieve a call:

- On a Keystation, select 'Call park' on the Display.
- 'Pick up park' is then displayed on the top line on the Display on all Keystations. Select this option to retrieve the parked call.

Note: Only one call may be parked in the system. A parked call will recall after three minutes.

On a standard telephone, the code is R40 to park a call, and 40 to retrieve it.

Operator Services

You can choose to use an operator with the **Commander Vision** hybrid system. For example, the operator can transfer internal and external callers to internal Stations.

To call the operator:

- Dial the code (9) for the operator's Station. The operator's Station is Station 20 by default.

To Intrude on a Line-to-Line call:

The Intrude feature is only available from Station 20, and is used to intrude on a call involving two Lines, that is when an external transfer or external divert has occurred.

When two Lines are connected in conversation:

- Select one of the lines by pressing its Line key, or
- Select 'Intrude' on the Display.

You will then be connected in a three-way conversation.

General Call

The General Call feature allows you ring all Stations connected to the **Commander Vision**. The first Station to answer is connected and the call continues as a normal call. You can also programme Stations so that they are not rung when a General Call is placed.


To ring all Stations connected to the system:

- From the Idle Menu, select 'General call' on the Display.

From a standard telephone, the code is 65.

System Speed Dial

To dial a System Speed Dial number

- Press the DIRECTORY Key .
- Select 'System speed dial'.
- Select 'Select by name' or 'Select by location'.
 - If the list has names programmed, you can choose 'Select by name'. Entries are sorted in alphabetical order. Enter the first letter of the name you want. The first three entries starting with that letter are displayed. Use the Scroll Keys to locate the name you want and select it.
 - If names are not programmed on all of the entries, you can choose 'Select by location'. All entries, with or without names, are displayed in the location order. Locations with no numbers entered, will not be displayed. Use the Scroll Keys to locate the name you want and select it.
- When you have selected the number or name you want, a free Line is automatically selected and the number dialled.

From a standard telephone, dial one of the System Speed Dial location codes (7001 - 7200).

Display Messages

This feature enables you to leave a Display Message that will be seen by any Keystation calling your Station. You can also set a Display Message on a standard telephone, but you cannot check the content.

To set a message to be displayed to internal callers:

- Press the MESSAGE Key. ☒
- Select 'Display messaging'.
- Select the message to be displayed from the message menu.
- The message menu offers you the choice of eight pre-programmed messages. You can add extra text to all messages by selecting the 'Enter data' option. Message 9 is blank so you can enter your own message.

The message menu is:

1	(Return at)	6	(At home)
2	(Call back at)	7	(On holidays)
3	(Call me at)	8	(Call)
4	(At a meeting)	9	-----
5	(At lunch)		

Press the Hands-free Key to finish programming.

Note: See page 19 on how to enter text using the Keypad. Also, if you wish to enter a time or a date, press * for : and press # for -.

Note: Only Keystations can display messages. A standard telephone will not receive any indication that a message has been set on the Station it is calling.

From a standard telephone, the code is 39. When you have dialled 39, dial digits 1-8 to select the required message, and hang up.

To cancel a Display Message:

- From a Keystation select 'Cancel the message'.

From a standard telephone dial 39 and hang up.

Caller Number Display / Routing

The Caller Number Display (CND) service is a PSTN service available from your PSTN Network Provider. If you subscribe to this service, your network sends the telephone number of persons calling in on PSTN Lines to the **Commander Vision**, (provided the caller has not elected to restrict the network from presenting their number). You then have the choice of displaying, or not displaying, this information on your Keystation Display.

Note: Your telephone number will also be presented to persons you call on PSTN Lines, unless you restrict your number from being presented. Please contact your Network Provider for further information.

Calling Line Identity (CLI) services are ISDN services available from your ISDN Network Provider. If you subscribe to this service, your network sends the telephone number of persons calling in on ISDN Lines to the **Commander Vision**, (provided the caller has not elected to restrict the network from presenting their number). This number, (or name, if a name has been associated with the number), is displayed on all Keystations programmed to ring.

Note: Your number will also be presented to persons you call on ISDN Lines, unless you restrict your number from being presented. Refer to page 51 for information on how to restrict your number being displayed to the person you are calling, for calls made over ISDN Lines.

As well as displaying the numbers of callers, your **Commander Vision** allows you to associate names with caller numbers, and display associated names in place of caller numbers. You may also store up to sixty-five caller numbers, which you can later examine and redial.

How a caller number is displayed at your Station:

- The caller's number will appear on the Display of all Keystations programmed to ring for incoming calls.
- If a name has been programmed through system programming for association with the external number, the name will appear on the Display.
- A caller may have chosen to withhold their identity. In this case, the Display will show 'Number withheld' instead of the caller's number or name.
- If the number information is not available, the Display will show 'Number unavailable' instead of the caller's number or name.
- If more than one call is calling at any one time, the number displayed will be that of the first call in the queue. When this call is answered by one of the ringing Keystations, the number of the next call in the queue will be displayed on the Displays of the other ringing Keystations.
- If your Keystation is not ringing for the call, you may examine the incoming call ID by selecting 'Examine I/C call'. The same information shown on the ringing Keystations is then displayed.

Caller Number Store (CLI Store)

The CLI Store automatically stores information about the last sixty-five unanswered calls to the system, (unless you change the programming to store both answered and unanswered calls). The information stored is the caller telephone number, and the date and time of the call. Information is not stored for calls with withheld or unavailable numbers. When the memory is full, the oldest record is discarded from memory when a new record is received.

The CLI Store can be allocated as one central store, which stores the data on calls ringing the incoming groups. This store alerts Station 20, (regardless of whether it is the Programming Station), by means of a display prompt, that new calls have been stored. You can also programme up to twelve Stations to store up to five numbers each. Each of these Stations will have a separate record of calls that ring on exchange Lines programmed to ring their Station only. (Note that a maximum of sixty-five numbers can be stored in the central and individual stores).

To examine and redial stored caller numbers:

- Select 'Examine CLI store' to examine the numbers in the personal store of your Keystation.
- Select 'Examine sys. CLI store' to examine the system store. This can be selected from any Station.
- You will see the following information:
 - The number and time of the last three calls received are displayed.
 - If the call was answered, the Display will show an 'A' on the right-hand side of the record. If the call was not answered, the 'A' will not be displayed.
- If you press the right Keypad Edit Key (▶), the date information for that call is shown for a few seconds, instead of the time.
- You may scroll through the stored numbers and names, using the Scroll Up (▲) and Scroll Down Key (▼) situated below the Display.
- If you press the Display Key beside a particular record, the system automatically seizes a free Line and dials the displayed number. If the Station is restricted from dialling, or if there is no Line available, you will hear a busy tone.
- If an 'R' is displayed on the right-hand side of a record, this indicates that the number has been redialled and answered.

Paging

You can connect a Public Address amplifier to any Station on your **Commander Vision**. Users can then make announcements over the PA. A PA Answer feature allows a user respond directly to the paging Station, without having to know the Station number. The system also allows users to make announcements over the speakers of all Keystations, and to make Voice Calls to other users via the speakers of their Keystations. You can programme the system to protect users' Keystations against both announcements and Voice Calls.

To make an announcement over a Public Address system:

If there is a Public Address (PA) system connected to your **Commander Vision**, any Station can make an announcement over the PA system.

- From the Idle Menu, press the Scroll Down Key (▼) until 'Paging' is displayed.
- Select 'Paging'.
- Select 'Public address' and make your announcement. The announcement can last a maximum of fifteen seconds.

Note: Do not hang up if you want the paged party to be able to respond directly to your page.

From a standard telephone, the code is 47.

To respond to a page over the PA system:

If you have been paged over the PA, the PA Answer feature puts you in direct contact with the paging Station, provided that the person who paged you has not replaced the handset.

- When you are paged, select 'Answer page' on the nearest Keystation and you will be connected to the paging Station.

From a standard telephone, the code is 45.

To make an announcement over the speakers of all Keystations:

The Internal Paging feature allows any Station to make an announcement over the speakers of all Keystations. Only Keystations that are page-protected will not be paged.

- From the Idle Menu, press the Scroll Down Key (▼) until 'Paging' is displayed.
- Select 'Paging'.
- Select 'Page all Keystations'.
- Make your announcement.

From a standard telephone, the code is 44.

To make a call over the speaker of another Keystation:

The Voice Call feature allows you to speak over the speaker of an individual Keystation. If the Keystation is page-protected the voice call will fail.

- From the Idle Menu, press the Scroll Down Key (▼) until 'Voice call' is displayed.
- Select 'Voice call'.
- Select the Station you wish to page.
- Make your announcement.

From a standard telephone, the code is 43.

To answer a Voice Call at your Station:

- Press the Mute Key and speak in Hands-free Mode, or pick up the handset.

Manager / Secretary

The Manager/Secretary feature is a set of programming options used to maximise the efficiency with which two people work together. It is typically used for a manager/secretary partnership.

To activate the Manager/Secretary feature, it is necessary to first combine the Manager and Secretary Stations. When the Manager/Secretary combinations are programmed, the Secretary may answer calls ringing on the Manager's Station by pressing a key on which the number is programmed.

Other standard features that can be used in the Manager/Secretary partnership include programming a Dedicated Line for the Manager, so that no other Station may make or receive calls on that Line, programming the Manager's Station with a key for paging or calling the Secretary's Station, and programming the Manager's Station to divert all calls to the Secretary.

To programme a key to answer the Manager's calls:

With this feature set, the Secretary can answer calls ringing on the Manager's Station by pressing a key. The Manger / Secretary combination must be programmed for this to operate. The key will also offer the standard features available when a Programmable Key is programmed to ring a Station. That is, the Secretary can call the Manager, while the Manager's Station is idle, by pressing the key. Also, the Secretary can see the status of the Manager's Station from the key light – lit if the Station is busy, and flashing if ringing.

- From the Secretary's telephone, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'Key Programming' is displayed
- Select 'Key programming'.
- Select the Programmable Key you want to programme.
- Select 'Stations'.
- Enter the Manger's Station number
- Select 'Confirm'.

Press the Hands-free Key to finish programming.

Alternative Call Routing

You may use this feature to have users' calls routed over specific Lines, or over a specific Network Provider. To set the feature up you associate input codes with the Lines over which calls should be routed, and with whatever network codes are necessary to route the call. To use the feature, the user dials the input code before dialling a telephone number. The call is then automatically routed over the selected Lines, and the network code is sent to the Line before the telephone number.

Your system also includes the code to access the Telstra network as a pre-programmed menu option.

To route a call using the Alternative Call Routing feature:

- Select a Line Key, or dial a code for a Line (51-58), and select 'send digits'.
- Dial a valid input code.
- When a Line is seized, dial the telephone number you wish to reach.

Your call will then be connected with the output code being dialled before the telephone number.

To dial a telephone number via the Telstra preset carrier code:

- Press the NETWORK Key **N**.
- Select 'Telstra'. When 'Telstra' is selected, an external PSTN or ISDN Line is selected, as if '0' was dialled, and the digits '1411' are sent to the Line. This is the code necessary to access the Telstra network, if the customer normally uses another carrier network.
- Dial the telephone number you wish to call.

Forward Recall

A Forward Recall signal may be required if you are using certain network services on standard PSTN exchange Lines, or if your **Commander Vision** is connected to another telephone system (PABX) via one of the Line interfaces.

The Forward Recall feature allows you to send a timed loop break (TLB) on the Line to the exchange or PABX. To send a TLB signal, you must be on a call or have dialled at least one digit of the number you are calling.

To send a Forward Recall signal to an exchange or a PABX:

- From a Keystation, select 'Forward recall' on the Display.

From a standard telephone, the code is R87.

Do Not Disturb

If your Station is set to 'Do Not Disturb', anyone trying to call you will receive a busy (engaged) tone. If the person trying to contact you has a Keystation, 'Do-not-disturb enabled' will appear on its Display. Call Back and Reminder Call are the only incoming ringing that will be accepted when this feature is set.

To set Do Not Disturb on your Station:

- From the Idle Menu, press the Scroll Down Key (▼) until 'Do Not Disturb' is displayed.
- Select 'Do Not Disturb'.

To cancel Do Not Disturb on your Station:

- From the Idle Menu, Select 'Cancel do-not-disturb'. This option is displayed only when the feature is set.

Note: When 'Do Not Disturb' is set, you will hear a broken dial tone when you lift the handset.

From a standard telephone, the code 150 is used to set and cancel this feature.

Station Lock

This feature allows you to lock your Station to prevent unauthorised users from making external calls. You use a Lock Password to lock, unlock, or to make calls from a locked Station. The default Lock Password for all Stations is 123, but each Station may change its password. Station Lock Passwords can be examined from the Programming Station.

To lock your Station

- From the Idle Menu, Press the Scroll Down Key (▼) until 'Station Lock' is displayed.
- Select 'Station Lock'.
- Select 'Lock the Station'.
- Dial your 3-digit Lock Password. (The default Lock Password is 123).

Press the Hands-free Key to finish programming.

From a standard telephone, the code is 41.

To unlock your Station:

- Select 'Unlock the station'. This Display option only appears when the Station is locked.
- Dial your 3-digit Lock Password. (The default Lock Password is 123).

Press the Hands-free Key to finish programming.

From a standard telephone, the code is 41.

To make a call from a Locked Station:

- Dial 0, or press a Line Key, or dial the code for a Line (51 - 58), as if to select a Line.
- Dial your 3-digit Lock Password. (The default Lock Password is 123).
- Lift the handset or press 'Send digits' or press the Hands-free Key.
- A Line will be seized.
- Dial the number you require.

To change your Station Lock Password:

- From the Idle Menu, press the Scroll Down Key (▼) until 'Station Lock' is displayed.
- Select 'Station Lock'.
- Select 'Change the lock code'.
- Dial the existing 3-digit Lock Password. The default password is 123.
- Dial your new 3-digit Lock Password. The new Lock Password will not be displayed when entered.

Press the Hands-free Key to finish programming.

From a standard telephone, the code is 42.

To examine Station Lock Passwords:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Select 'Examine passwords'.
- Select 'Stn. lock password'.
- Select the Station. The Lock Password is briefly displayed on the top line of the Display.

Press the Hands-free Key to finish programming.

Tone Protect

As described on page 27, Stations may present a busy Station with a Call Waiting tone, provided the busy Station is not protected against receiving Call Waiting tones. By default, all Stations are protected against receiving Call Waiting tones. However, you may programme Stations to receive Call Waiting tones.

To protect an individual call from Call Waiting tones:

If your Station can receive Call Waiting tones, you may protect each call on an individual basis from interruption.

- When you are on a call, select 'Tone protect' on the Display.

From a standard telephone, the code is R66.

Room Monitor

This allows you to call a Station that has this feature set and listen through its handset receiver.

To monitor a room:

- From the Idle Menu of the Keystation in the room you wish to monitor, press the Scroll Down Key (▼) until 'Room Monitor' is displayed.
- Select 'Room monitor'.
- Lift the handset and leave off-hook.
- Go to the Station from where you want to monitor and dial the number of the Station that has the feature set.

Note: The Station that has the feature set must be either Station 20 or 21.

From a standard telephone, the code is 48.

To cancel room monitoring:

- To cancel room monitoring, replace the handset at both Stations.

Reminder Call

This feature enables you to set your Station to ring at a given time.

To set your Station to give you a Reminder Call at a given time:

- From the Idle Menu, press the Scroll Down Key (▼) until 'Reminder Call' is displayed.
- Select 'Reminder call'.
- Enter the time in the 24-hour clock format, for example, 0930 for 9.30 am.

At the programmed time, the Station will give ten rings. If not answered, it will ring twice more at two-minute intervals and will then cancel.

Note: Alarm calls must be set daily and therefore cannot be set more than 24hrs ahead.

To review and cancel a Reminder Call:

- To review a Reminder Call, select 'Reminder call' and the time set will be displayed. Select 'Confirm' to retain the programmed time. If you wish to change the time, select 'Change' and enter a new time.
- To cancel the reminder call, select 'Change' followed by 'Confirm'.

From a standard telephone, the code 46 is used to set a Reminder Call, and the code 46* is used to cancel it. A standard telephone cannot query the Reminder Call time.

Station Reset

You can reset your Station to cancel all the following features if they have been set:

- Do Not Disturb
- Call Divert
- Call Back
- Display Messaging
- Reminder Call

To reset your Keystation:

- From the Idle Menu, press the Scroll Down Key (▼) to scroll downwards until 'Reset the telephone' is displayed.
- Select 'Reset the telephone'. The Display shows 'Station reset' momentarily before returning to the Idle Menu.

If you are using a standard telephone, dial 157 and wait for the acknowledgement tone (internal dial tone).

Incoming Ringing

By default, all exchange Lines will ring Stations 20 to 27. Each exchange Line may be programmed to ring up to eighteen Stations and a Central Bell. The Door Station may be programmed to ring up to eighteen Stations. Each exchange Line may also be programmed to ring different Stations for Day Service and Night Service.

Outgoing Groups

Exchange Lines can be grouped together into up to four Outgoing Groups. Each Outgoing Group is associated with a code. These codes are 0, 81, 82, and 83, with Group 1 being associated with 0, etc. Dialling a code seizes a Line from the associated Outgoing Group.

Hunt Groups

Hunt Groups allow you to have groups of Stations answering different Lines. The calls to the Hunt Group are presented in cyclical order to the Stations in the Group. The first call is presented to the first available Station, the next to the second available Station, and so on.

To divert Hunt Group calls:

Station 20, (irrespective of where the Programming Station is), can programme diversions for calls presented to Hunt Groups.

- At Station 20, from the Idle Menu, press the Scroll Down Key (▼) until 'Hunt Group Divert' is displayed.
- Select 'Hunt group divert'.
- Select the Hunt Group. If selecting 'Group 4', press the Scroll down key (▼) and select 'Group 4'
- Select the type of diversion.
- Enter the Station to which the calls are to be diverted

Press the Hands-free Key to finish programming.

Note: Individual Stations in a Hunt Group cannot divert calls presented to the Hunt Group.

Note: If you are diverting to an external number first dial a Line access code, (0, 51, 81, etc), and then the number.

Note: When 'Hunt group divert' is enabled, there is no indication given on Keystation displays.

Station Naming

You may assign names to Stations. When a Station receives an internal call, its Display will show the calling Station name in the place of the calling Station number.

Day Service / Night service

The Day Service / Night Service feature allows you to change the Stations which ring on incoming calls, change the Class of Service at each Station, and change the voice greeting heard by callers, (if you have voicemail installed). These changes can take place each day automatically at pre-programmed times, or can be invoked manually. Furthermore, the system can be programmed to remain in Night Service over the weekend.

To manually turn on Night Service:

The Manual Night Service feature enables you to turn Night Service on or off manually. When you turn Night Service on, the Night Service ringing and Class of Service come into operation.

- At Station 20, select 'Night Service'.

Hot Line

Stations can be programmed so that they automatically dial a number when they go off-hook. The number dialled can be a Station or an external number.

Fax Line / Station

If your **Commander Vision** is equipped with standard PSTN Lines, and you wish to employ a fax machine, it is recommended that one of the PSTN Lines be allocated as a fax line with the number being publicised accordingly. With the Fax Line/Station feature you can programme the unit to route all calls received on this Line directly to a Station equipped with your fax machine. The Line will also be available to make outgoing calls as normal. You can restrict the number of Stations that have access to this Line for making calls to ensure that the Line is generally available to receive faxes.

Fax Detection

If you wish to receive ordinary calls and fax calls on the same Line, a Fax Detect feature is provided in the system.

When a Line is programmed for 'Fax Detect', a voice message is provided to callers on the Line. When a call rings in it is answered by the system, the following message is returned to the caller: *'If you are sending a fax, please press the send key. If not, please hold.'* This message is followed by silence, while the system looks for fax tones. If fax tones are detected, the call will be sent to the Station programmed as having a fax machine connected. If fax tones are not detected, the call will be presented as a normal incoming call.

This service is available as standard on all systems and does not require a Voice Module. However, it can only be programmed for one PSTN exchange Line and cannot be programmed for ISDN Lines.

You can use this service when you have a limited number of PSTN Lines and do not have a dedicated fax number.

Station Line Access

This feature lets you decide which exchange Lines each Station can access for outgoing calls. By default, all Stations have access to all Lines.

Call Restrictions

Each Station may be programmed for a Class of Service. This determines the type of call the Station is allowed to dial. Four tables, which can be programmed with up to fifty codes, are used to implement six Classes of Service.

- By default, all Stations are in Class 1, that is, they have no restriction placed on them.
- A Station placed in Class 2 is restricted from dialling the codes programmed in Table 2. (Table 2 would typically be programmed with the international access code 00).
- A Station placed in Class 3 is restricted from dialling the codes programmed in Tables 2 and 3. (Table 3 would typically be programmed with non-local national access codes).
- A Station placed in Class 4 is only able to dial internal and emergency, (000 and 11444), calls only.
- A Station can be placed in Class 5 in addition to being in Class 2 or 3. In this case the codes programmed in Table 5 are allowed.
- A Station can be placed in Class 6 in addition to being in Class 1, 2 or 3. In this case the codes programmed in Table 6 are restricted.

The following table shows the types of restriction for the different Classes of Service available:

Type of restriction	Table	Class
No restriction	-	1
Restrict codes in Table 2	Table 2	2
Restrict codes in Table 2 and 3	Table 3	3
Internal and emergency calls only	-	4
Allowed codes that can be combined with Class 2 or 3	Table 5	5
Restricted codes that can be combined Class 1, 2 or 3	Table 6	6

Note: The emergency codes are 000 and 11444. They cannot be barred.

Note: Both Classes 5 and 6 can be associated with the same Station.

Note: Class 5 cannot be associated with Class 4 Stations.

Courtesy Service

This service is available, with a standard greeting, on all systems. If the system is equipped with a Voice Module, you can customise the greeting.

When the Courtesy Service feature is activated on an exchange Line, callers to the system are answered automatically with a greeting.

If a call rings in during Day Service and is not answered manually within a programmed time, (30 seconds by default), the call is automatically answered with the following message: *'Thank you. Your call will be dealt with. Please hold.'*

If a call rings in during Night Service and is not answered manually within a programmed time, (30 seconds by default), the call is automatically answered with the following message: *'Thank you. There is no one here at the moment. Please call back again during office hours.'*

Whilst the message is being returned, the call continues to ring as an incoming call until a Station answers it, or the call is automatically cleared down by the system.

A programming choice is given to select the source for the message, the internal source, or the Voice Module source (if you have a Voice Module fitted). The Voice Module source should only be chosen if you wish to customise the messages.

This service can be used where there can be delays in answering calls, and you want to ensure that callers do not hang up before someone answers their call.

Note: On standard PSTN Lines, if a caller hangs up the call will be held by the system until it is either picked up internally or the system times out after one minute. You can avoid this by equipping your PSTN Lines with the Reversal-on-Idle service. See page 144.

Voicemail

This service is only available when a Voice Module is fitted. Stations can be provided with Voice Mailboxes. When these are turned on, the Voice Mailbox answers calls to the Station. The calls answered are all internal calls and external calls directed solely to the Station. Examples of external calls directed solely to the Station are DDI calls and Auto-attendant calls.


A Station must be allocated a Voice Mailbox before it can use voicemail. The default programming is that Stations are not allocated a Voice Mailbox.

All messages, which have been retrieved or played, are permanently deleted after eight days. Messages that are not retrieved are deleted after fifteen days.

To turn on your Voice Mailbox:

- You turn on your Voice Mailbox by diverting calls to the number 38.
- If 'Divert all calls' is activated to 38, all calls will be answered by the Voice Mailbox (by default).
- If 'Divert on no answer' is activated to 38, calls unanswered after four rings will be answered by the Voice Mailbox.
- If 'Divert on busy' is activated to 38 calls received when your Station is busy will be answered by the Voice Mailbox.
- For information on how to divert calls, see page 23.

To access your Voice Mailbox:

- Press the MESSAGE Key .
- Select 'Voice messaging'.
- Enter your Station number, (which is your Voice Mailbox number).
- Enter your Voicemail Password, (1111 by default), followed by #.
- You are presented with the Voice Messaging Control Menu. The options displayed are 'Play', 'Erase all messages', 'Greeting', 'Change Password', 'Monitor' and 'Cancel'.
- Select the Display option you require.

To retrieve messages left in your Voice Mailbox:

If new voice messages have been left in your Voice Mailbox, the Message Waiting Light, located on the top right-hand corner of your Keystation, will be on. In addition, the top line on your Keystation Display will show 'New voice messages'.

- Select 'New voice messages'.
- Enter your Station number.
- Enter your Voicemail Password, which is 1111 by default, followed by #.
- Select 'Play'. The new messages are played.

Note: Each message is preceded by a time stamp telling you when the message was received. When all new messages are played, you are informed of the total number of messages in your box. You may skip the time stamp by dialling 8, which jumps forward ten seconds.

To record your own Voice Mailbox greeting:

Each Station, which has been allocated a Voice Mailbox, can record its own greeting. This will be relayed to callers who are answered by the Voice Mailbox.

- At your Station, press the MESSAGE Key ☒.
- Select 'Voice messaging'.
- Enter your Station number when prompted.
- Enter your Voicemail Password, (1111 by default), followed by #.
- Select 'Greeting'.
- Select 'Record greeting'
- Speak to record a personalised greeting when prompted.
- Press 'Confirm'.

Press the Hands-free Key to finish programming

To replay the Voice Mailbox greeting:

- At your Station, press the MESSAGE Key ☒.
- Select 'Voice messaging'.
- Enter your Station number when prompted.
- Enter your Voicemail Password, (1111 by default), followed by #.
- Select 'Greeting'.
- Select 'Replay greeting'

The greeting will then be replayed for you.


To retrieve your Voice Mailbox messages remotely:

In order to access your Voice Mailbox remotely, you must have your calls diverted to your Voice Mailbox, and have either a Line programmed to ring directly at your Station, or have a Line programmed with the Auto-attendant service. (See page 45 for information on the Auto-attendant service).

- If a Line is programmed to ring directly at your Station and your Voice Mailbox is turned on, dial the Line number.
- If you do not have a Line ringing directly to your Station, dial in on an Auto-attendant Line, and when you receive the Auto-attendant message dial your Station number.
- When answered by your voicemail greeting, access your Voice Mailbox by dialling the code 88, followed by your Station number, Voicemail Password and #.
- Then dial the following numbers to access your messages:
 - Dial 1 Playback commences at the first message
 - Dial # Playback is paused
 - Dial 2 Save this message and move to the next message
 - Dial 3 Erase this message and move to the next message
 - Dial 4 Go back to the start of the message
 - Dial 5 Go back to the previous message
 - Dial 6 Erase all messages
 - Dial 7 Go back ten seconds
 - Dial 8 Go forward ten seconds / Skip the time stamp
 - Dial 91 Change the outgoing greeting
 - Dial 92 Check the outgoing greeting
 - Dial 93 Delete the outgoing greeting
 - Dial 0 Change Voicemail Password

To monitor/pick-up callers as they speak to your Voice Mailbox:

You can operate your voicemail in Voicemail Monitor Mode. In this mode, when calls are diverted to your Voice Mailbox and your Station is free, the call is relayed over the speaker of your Keystation. If you lift your handset, you can intercept the call, in which case no message is left in the Voice Mailbox.

- Press the MESSAGE Key .
- Select 'Voice messaging'.
- Enter your Station number when prompted.
- Enter your Voicemail Password, (1111 by default), followed by #.
- Press the Scroll Down Key (▼) until 'Monitor' is displayed.
- Select 'Monitor'.
- Select 'Monitor on' or 'Monitor off'.

Press the Hands-free Key to finish programming.

To change your Voicemail Password:

By default, each Station is allocated the same Voicemail Password, (1111). You can enter your own password, which can be up to eight digits long, as follows:

- Press the MESSAGE Key ☒.
- Select 'Voice messaging'.
- Enter your Station number when prompted.
- Enter your Voicemail Password, (1111 by default), followed by #.
- Select 'Change password'.
- Enter your new Voicemail Password, which can be up to eight digits long.
- Press 'Confirm'.

Press the Hands-free Key to finish programming.

Note: If you forget your Voicemail Password, you can check all Station Voicemail Passwords from the Programming Station.

To operate voicemail from a standard telephone:

Standard telephones can also be allocated Voice Mailboxes. As explained, you turn on the Voice Mailbox by diverting calls to 38. To do this dial the following codes, followed by the number 38:

- 151 for 'Divert all calls'
- 152 for 'Divert on busy'
- 153 for 'Divert on no answer'

If messages have been left for a standard telephone, there is no indication given to the telephone. You should regularly access the Voice Mailbox to check for messages.

To access the Voice Mailbox, dial the code 88, followed by your Station number, Voicemail Password and #. Then dial the following numbers to access your messages:

- Dial 1 Playback commences at the first message
- Dial # Playback is paused
- Dial 2 Save this message and move to the next message
- Dial 3 Erase this message and move to the next message
- Dial 4 Go back to the start of the message
- Dial 5 Go back to the previous message
- Dial 6 Erase all messages
- Dial 7 Go back ten seconds
- Dial 8 Go forward ten seconds / Skip the time stamp
- Dial 91 Change the outgoing greeting
- Dial 92 Check the outgoing greeting
- Dial 93 Delete the outgoing greeting
- Dial 0 Change the Voicemail Password

Answering Machine

This feature allows you to set up an Answering Machine to answer incoming calls. This service is only available when a Voice Module is installed. You can select which Lines are to be answered by the Answering Machine when it is turned on. It can be used on both ISDN and PSTN Lines. You can select how long a call rings before the Answering Machine answers.

All messages received are stored in a system Voice Mailbox, which is controlled by Station 20. Station 20 can also customise the greeting. You can turn the Answering Machine service on and off at any time at Station 20 and its operation is independent of Night Service.

This service replicates an Answering Machine. You can use it if you are not answering calls at lunch or at night, or simply want to record messages from callers. If desired, you can have this feature on permanently, so that calls, which are not answered for a programmable period, are answered by the Answering Machine. The greeting may ask callers to dial a Station number, in which case the call will be transferred through to that Station.

Note: If a call is received when the Voice Module storage is full, it will not be possible to store any further messages. In this case the following standard greeting will be given to the caller: *'There is no one available to deal with your call at the moment. If you wish to contact a particular Station, please dial the number.'*

To turn the Answering Machine on and off:

- At Station 20, press the Scroll Down Key (▼) until 'Answering machine' is displayed.
- Select 'Answering machine' to turn the Answering Machine on. Deselect 'Answering machine' to turn the Answering Machine off.

To change the greeting on the Answering Machine:

- Press the MESSAGE Key ☒.
- Select 'Voice messages'.
- Enter 9 as the Station number, (which is your Voice Mailbox number).
- Enter your Voicemail Password, (1111 by default), followed by #.
- You are presented with the Voice Messaging Control Menu. The options displayed are 'Play', 'Erase all messages', 'Greeting', 'Change Password', 'Monitor' and 'Cancel'.
- Select 'Greeting'.
- Select 'Record greeting'
- Speak to record a personalised greeting when prompted.
- Press 'Confirm'.

Press the Hands-free Key to finish programming.

To retrieve messages left on the Answering Machine:

Messages stored on the Answering Machine can be retrieved from Station 20 only. When messages have been left, the Message Waiting Light on Station 20 will be lit and the 'Voice messages' will appear on the top line of the Display.

- Select 'Voice messages'.
- Enter 9 as the Station number.
- Enter the Voicemail Password and select the option you require.

Note: Station 20 can have its own Voice Mailbox, accessed by using Station number 20. The Answering Machine has its own Voice Mailbox, accessed by using Station number 9. Both can have their own Voicemail Passwords.

To retrieve Answering Machine messages remotely:

- Dial in on an Auto-attendant Line. (See page 45 for information on the Auto-attendant feature).
- When you receive the Auto-attendant greeting, dial 88, followed by Station number 9, the Answering Machine Voicemail Password and #.
- Then dial any of the following numbers to access your messages:
 - Dial 1 Playback commences at the first message
 - Dial # Playback is paused
 - Dial 2 Save this message and move to the next message
 - Dial 3 Erase this message and move to the next message
 - Dial 4 Go back to the start of the message
 - Dial 5 Go back to the previous message
 - Dial 6 Erase all messages
 - Dial 7 Go back ten seconds
 - Dial 8 Go forward ten seconds / Skip the time stamp
 - Dial 91 Change the outgoing greeting
 - Dial 92 Check the outgoing greeting
 - Dial 93 Delete the outgoing greeting
 - Dial 0 Change password

Auto-attendant

The Auto-attendant feature allows callers to ring directly through to a Station provided that they know the Station number of the person they wish to contact. A Voice Module must be installed for this feature to operate. The service is available on both PSTN and ISDN Lines.

When the caller telephones in on a Line programmed for Auto-attendant, the call will be answered by the system within a programmed time - ten seconds by default.

When the system is in Day Service, the caller will hear the following pre-recorded greeting: *'Thank you for calling. If you know the Station number you wish to contact, please dial the number. If you require assistance, please wait or dial 9.'* When the system is in Night Service, the caller will hear the following pre-recorded greeting: *'Thank you. There is no one available to handle your call at the moment. If you wish to contact a particular Station, please dial the number.'* You can customise these greetings.

The caller then dials the Station number required. (The caller's telephone must be in tone dialling mode).

The system will wait ten seconds for the caller to dial the first digit and a further four seconds for the second digit. If the digits are not received within that time, or an incorrect Station number is dialled, the call will ring in as a normal incoming call.

When the caller enters the Station number correctly, the Station will ring. If it is not answered within thirty seconds, the call will be presented as a normal incoming call. If the Station is busy the call will be presented as a normal incoming call.

If a call is received on an Auto-attendant Line when the voicemail system is busy, the call will ring as a normal call. If the voicemail system becomes free before the call is answered, the Auto-attendant feature is activated and the call is automatically answered and the Auto-attendant message is returned.

You may use this service to allow callers dial Stations directly, if you are not availing of the ISDN MSN/DDI service.

Door Station

You can equip your **Commander Vision** with a Door Station. The Door Station has a button which, when pressed, rings at programmed Stations, and has a microphone/speaker for communication. With a Door Station fitted in your reception area, anyone visiting your premises can call when they arrive and you can speak to them before you let them in.

Your **Commander Vision** also features a Doorstrike relay output, which can be used to operate a Doorstrike mechanism, to allow you open the door from your Station. You must purchase the Doorstrike mechanism yourself and arrange for a qualified electrician to install it.

Answering a Door Station call:

You can answer a Door Station call if your Station is programmed to ring when someone calls at the Door Station.

- To answer a Door Station call, lift the handset and speak. There is no code to dial.

Note: A Station cannot make a call to a Door Station

To open a door using the Doorstrike:

- When your Station is ringing with a Door Station call, and you have a Doorstrike mechanism installed, the option 'Open the door' will be displayed.
- Select 'Open the Door'. The Doorstrike relay will operate and the call to the Door Station will be disconnected.

From a standard telephone, the code is R36 if you are on a call, and 36 if you are not on a call.

Call Manager

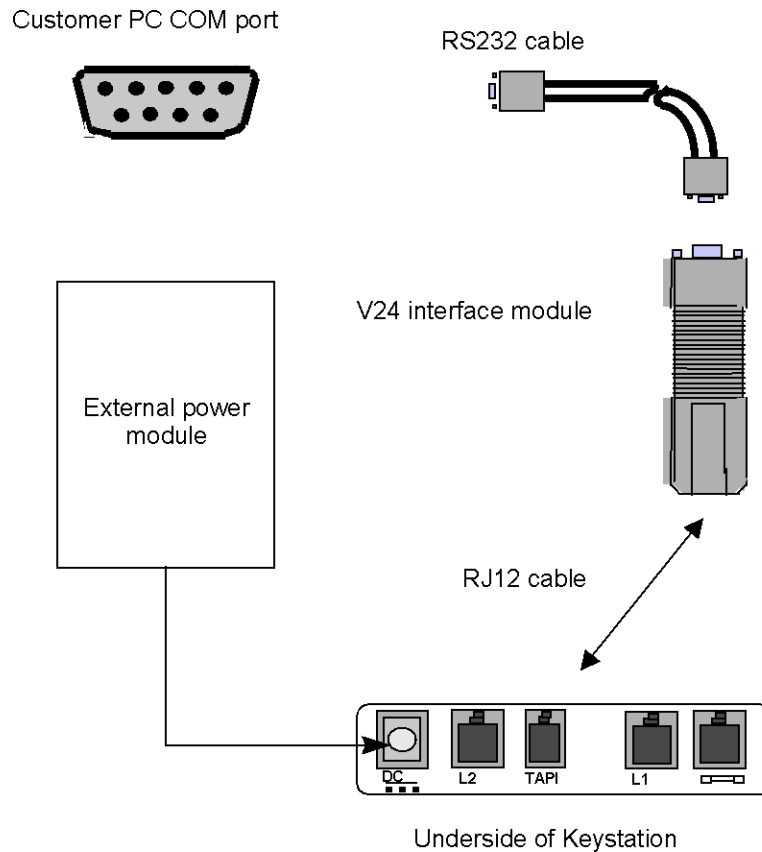
To control your Keystation from your PC:

You can equip each of your Keystations with a Call Manager. This allows the Keystation to be controlled from a Personal Computer (PC), with calls being placed and answered using the PC. The Call Manager package consists of the software programme, which runs on Windows 95/98, a connection cable and V24 interface module to connect the Keystation to the PC, a power adapter for the Keystation, and a user guide.

One Call Manager package must be purchased for each Keystation that is to be controlled by a PC. There is no limit to the number of Keystations that can be equipped with Call Manager.

Note: Call Manager is only compatible with Windows 95/98.

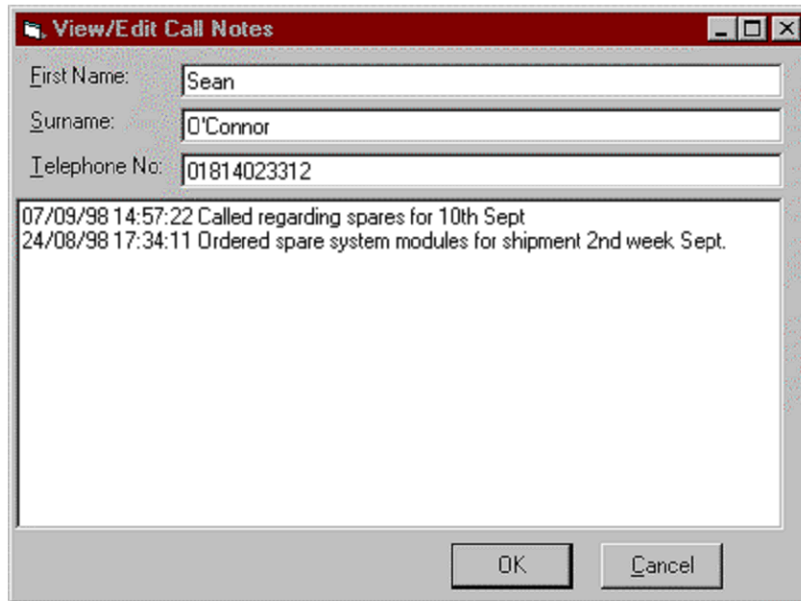
Call Manager set up is illustrated below:



To use the Extended Call Log, Phone Book and Call Notes:

Call Manager provides additional services in addition to placing and answering calls via your PC:

- Extended Call Log: A log is maintained on the PC of all incoming calls to the Station.
- Phone Book: A PC-based telephone book is provided which can store a large number of entries. Phone numbers can be imported from other applications.
- Call Notes: A call history can be maintained by inserting text notes for each call received from a particular person. When recalled, notes for all the calls received from that person are displayed. An example of a call notes screen is illustrated below:



Call Logging

If your system is equipped with a Call Logging Interface Module, a printer or PC may be connected to your **Commander Vision** system, which will maintain a record of incoming and outgoing calls made on the system. Details are printed as the calls are completed.

The interface to the printer or PC should be serial V24 / RS232-C and should meet the following specifications: Speed - 4800, 9600 or 19200 bps. Data - 8 bits, no parity, 1 stop bit.

Calls are printed out in the following format as they are completed:

1	2	3	4	5	6	7	8	9
O/G	10/01/99	12.00:01	00:00:30	L01	S21	S21	:000.00	1234567
O/G	10/02/99	12.00:10	00:01:56	L02	S25	S25	:000.00	567890
I/C	10/13/99	12.01:13	00:06:32	L03	S22	S24	:000.00	

The explanation of the data output is as follows:

Column Number	Data Output Explanation
1	Incoming (I/C) or Outgoing (O/G) call
2	Date (day/month/year)
3	Start time
4	Duration of the call
5	Line used
6	Initiating Station
7	Terminating Station
8	Cost. (Only available if the ISDN service, AOC, is enabled on the network)
9	Digits entered (outgoing calls only)

Power Fail

To provide battery backup:

Your **Commander Vision** can be equipped with an optional Battery Backup Unit (BBU). When equipped, full operation of the **Commander Vision** is provided for at least one hour in the event of a power failure. If your system is equipped with ISDN access, it is recommended that this BBU be installed as calls can be received and made on the ISDN Lines if power fails.

Note: If you require back up batteries please contact **Commander Service** on 1 300 138899.

To make outgoing calls following a power failure:

In the event of a mains power failure, (with the system not equipped with a BBU), PSTN exchange Lines are switched automatically to particular Stations and calls can be made and received on these Lines until the power is restored. The Keystation will not work when power has failed, so these Stations must be connected to standard telephones in order for calls to be made.

- Line 1 is switched to Station 24
- Line 2 is switched to Station 25
- Line 5 is switched to Station 31
- Line 7 is switched to Station 37

Note: ISDN Lines are not switched. A Battery Backup Unit must be provided if ISDN service is required during a power failure.

Operation with a parent PABX

You can connect the **Commander Vision** to a parent PABX via its Line interfaces.

You can programme any of the four Outgoing Groups to work with a parent PABX. When programming the Outgoing Groups as PABX groups, PABX access digits and the number of digits in a PABX Station number are entered. The PABX access digits are the digits that must be dialled to select an exchange Line in the parent PABX. (You can have a maximum of two PABX access digits).

If you wish to make an external call via the parent PABX, you must seize a Line connected to the PABX and dial the access digit(s) before the external number you require. If you wish to make a call to a parent PABX Station, you must seize a Line connected to the PABX and dial the Station number without any access digit(s).

Note: The system will take the access digits into account in deciding whether the Station is restricted from making the call according to its Class of Service, that is, a Station prevented from making external calls will be also prevented from making external calls through the parent PABX.

Both external numbers and PABX Station numbers may be entered into Personal and System Speed Dial lists. When a speed dial number is selected for dialling, the system checks whether the number is a PABX Station by checking the number of digits against the programmed Station number length. If it is a PABX Station the system selects a PABX Group and if a Line is free dials the digits. If the selected number is an external number, the system attempts to seize an exchange Line. If one is available, it dials the number without inserting the access digits. If an exchange Line is not available a free PABX Line is seized and the access digits are automatically inserted.

If Redial is activated the number is redialled on the same group on which the original call was made.

ISDN - Multiple Subscriber Numbering (MSN) / Direct Dialling In (DDI)

Your ISDN Network Provider can allocate more than one number to each of your ISDN Accesses. This ISDN supplementary service is called either Multiple Subscriber Numbering (MSN) or Direct Dialling In (DDI).

These numbers may be programmed to ring individual Stations allowing callers to dial through directly. You may also choose to allocate a number to a group of Stations, so that a caller may dial through to that particular group.

A typical way of using this facility is to publicise one of these numbers as a fax number and then route calls received on this number through to a fax machine connected to a Station. Another typical use is to have users publicise their individual numbers and have callers ring directly through to their Stations, but retain at least one number to ring on a Line that can be provided with call services such as Auto-attendant, Answering Machine and Courtesy Service.

MSN/DDI numbers are also sent to the network as the Calling Line ID (CLI) for presentation to the called party.

You may associate names with your MSN/DDI numbers and use the Tele-secretary feature to have the name displayed for incoming calls.

You can programme your system to recognise up to forty MSN/DDI numbers. Each is given an MSN Index from 01 to 40. If your ISDN Accesses are P-P then the forty MSN Index's can be shared across all ISDN Accesses. If your ISDN Accesses are P-MP mode, each Access can be allocated up to ten MSNs Index's.

- For ISDN Access 1, these are MSN Index's 01 - 10
- For ISDN Access 2, these are MSN Index's 11 - 20
- For ISDN Access 4, these are MSN Index's 21 - 30
- For ISDN Access 5, these are MSN Index's 31 - 40

ISDN - Calling Line Identity (CLI) services

Calling Line Identity (CLI) services are ISDN services available from your ISDN Network Provider. You must contact your Network Provider and subscribe to these services before their functionality is available to the **Commander Vision**.

The Calling Line Identity Presentation (CLIP) service provides that, when you receive an incoming call on your ISDN Lines, the caller's number is presented to the **Commander Vision**. This number, (or name, if a name has been associated with the number), is displayed on all Keystations programmed to ring. In addition, you can store caller numbers, dial stored numbers, and route incoming calls to Stations based on the caller number provided. For information on using these features, see page 29.

Your number will also be presented to the person you are calling on an ISDN line, if they subscribe to the CLIP service. The Calling Line Identification Restriction (CLIR) service allows you to restrict the network from presenting your number.

The Connected Line Identification Restriction (COLR) service prevents the transmission of your number to the caller when you answer a call. Contact your Network provider for further information.

To prevent your number being sent on an individual call:

MSN/DDI numbers are also sent to the network as the Calling Line Identity for presentation to the called party. You can prevent your number being presented to the called party as follows:

- Press the NETWORK Key **N**.
- Select 'ISDN Services'.
- Select 'Set CLIR'.
- Enter the number you wish to call and select 'Send to line'. The call is placed with the CLIR service activated.

ISDN - Multiple Call Handling

You can programme more than one MSN/DDI number to ring at a Station. If a call is presented to your Station whilst you are on another call you will hear a Call Waiting tone, provided your Station is programmed to receive Call Waiting tones. (See page 35).

ISDN - Malicious Call Trace (MCT)

Malicious Call Trace (MCT) is an ISDN service that may be obtainable from your ISDN Network Provider. If you subscribe to this service, you can request your provider to store the telephone number of a caller incoming on an ISDN Line. You can make the request to the network during a call, or within thirty seconds of call completion. This service is typically used when you are receiving malicious calls and the caller has restricted the network from displaying their number. For detail on how the service operates please contact your Network Provider.

To request the network to make a Malicious Call Trace (MCT):

- During an incoming call, or within thirty seconds of the caller hanging up, press the NETWORK Key **N**.
- Select 'Malicious call trace'.
 - If your request is confirmed your Display shows 'Confirmed' for two seconds and then the Display reverts to the In Call menu.
 - If your request is rejected the Display shows 'Not activated' for two seconds and the Display reverts to the In Call menu.
 - If you have not subscribed to the service the Display shows 'Not subscribed' for two seconds and reverts to the in Call menu.

Note: A call in progress is in no way affected by the MCT request.

ISDN - Advice of Charge (AOC)

Advice of Charge (AOC) is an ISDN service that may be obtainable from your ISDN Network Provider. If you subscribe to this service, your Keystation will automatically display the cost of your outgoing calls over ISDN Lines. The cost will be displayed in Australian Dollars and will be updated constantly during your call. When the call is completed the total cost of the call will appear on the display momentarily.

To display the cost of your call on your Keystation:

- Contact your Network Provider and enable the ISDN service, AOC.

Note: Cost will only be displayed for outgoing calls on ISDN Lines.

ISDN - Network Divert

Network Divert is an ISDN service available from your ISDN Network Provider, which allows you to divert calls from an incoming ISDN Line.

Note: Note that Network Divert differs from the divert options described in 'Call Divert' on page 23. With network divert, the call never rings in to your Commander Vision. Rather, it is diverted by the network to the number you specify.

To have the network divert calls on your ISDN Lines:

- Press the NETWORK Key **N**.
- Select 'Network divert'.
- Select 'Divert all calls', or 'Divert when busy', or 'Divert on no answer' as required.
- Select 'Activate' to activate the facility, or 'Deactivate' to deactivate the facility, or 'Interrogate' to check the current status of the divert.
- If you select 'Activate' you will be promoted to 'Enter destination number'. Dial the desired destination for your calls and select 'Send to line'.

Note: For ISDN Lines in P-MP mode, a Station must be programmed with an MSN number in order to activate the Network Divert facility. If a Station, which has not been provided with an MSN, attempts to activate the feature, it will be presented with the prompt 'Invalid'.

Note: For ISDN Lines in P-P mode, the Network Divert applies to all ISDN Lines, that is, all Lines will be diverted. To protect unforeseen diverts, the user is prompted to enter the System Programming Password upon selecting 'Activation' above.

ISDN - Tele-secretary

The Tele-secretary feature allows you to use the names you have associated with the MSN/DDI numbers of your ISDN Lines, to have ringing Stations display 'Call for XYZ', where XYZ is the name

associated with the MSN/DDI number being called. When the call is answered and transferred, the Display of the Station, to which the call is being transferred, will see the CLI number, (or name if programmed), as normal.

A typical application is to have different MSN/DDI numbers published as belonging to different partners in a professional partnership and to programme the numbers to ring on a secretary's Station. With the Tele-secretary feature, the secretary can see from the display to whom the call is directed and can answer the call with "Hello, XYZ's office". If the call is transferred to XYZ, XYZ will see the caller number, or name if programmed.

ISDN - To the desktop

The **Commander Vision** can be equipped with an interface to an internal ISDN bus, which allows ISDN devices to use your system ISDN Lines. When the **Commander Vision** is equipped with twelve or more Stations, two internal ISDN buses can be provided.

Each of the ISDN buses can be equipped with up to eight ISDN devices. Four of these can be powered from the **Commander Vision**; the remaining four, if equipped, must be independently powered.

Eight Station numbers are allocated to each ISDN internal bus interface. The first interface is allocated Stations 120 - 127, and the second is allocated Stations 130 - 137, or 140 - 147, depending upon the position of the ISDN Access Card in the **Commander Vision**.

Incoming data calls are presented to an internal ISDN bus when one its ISDN Station numbers is programmed in the ringing group. If an appropriate device is connected to the internal bus, the call will be presented to it. For example, if you connect an ISDN fax machine to the first S-bus interface of your system and programme an MSN number to ring Station 120 directly, then callers can use this MSN number to send you ISDN faxes.

Using a standard telephone

Feature access codes list

You may access the wide range of **Commander Vision** features with a standard telephone. To use a feature, dial the appropriate code from the list given below. (In the table, R means the Recall Key).

If your telephone is equipped with memory keys, you may programme feature codes onto the keys - refer to your telephone user guide for instructions.

Feature	Code	Feature	Code
Display Messages	39 (1 - 8)	Operator/Station 20	9
Answering Machine on/off	158	Page - Keystations	44
Ring Back	R5	PA - answer	45
Call Pick-up (incoming calls only)	67	PA announcement	47
Call Pick-up Group (all calls)	68	Park	R40
Call Waiting Tone Protection	66 (R66)	Pick up parked call	40
CLIR activation	64	Recorded messages - retrieving	88
Conference	R3	Redial	60
Divert on Busy	152 xx	Reminder Call	46
Divert on No Answer	153 xx	Reminder Call cancel	46*
Divert All	151 xx	Reset telephone	157
Do Not Disturb - set/cancel	150	Return and release in Two Call handling	R1
Door Open	86	Return and hold in Two Call handling	R2
External Call Hold	R	Room Monitor	48
Follow Me	154 (Password) xx	Speed Dial - accessing personal numbers	61 (0 - 9)
Forced Call Waiting	R8	Speed Dial - accessing system numbers	7001- 7200
Forward Recall	R87	Speed Dial - programming personal numbers	62 (0 - 9)
General Call	65		
Keypad protocol	84	Stations	20 - 37
Line Access - Group 1	0	Station Lock - change code	42 xxx
Line Access - 1-8	51-58	Station Lock - lock/unlock	41 xxx
Line Access - Groups 2-4	81-83	Voice Mailbox number	38
Night Service - on/off (Station 20 only)	156	Voice call (to page an individual Keystation)	43

Note: To activate a Voice Mailbox, you invoke a divert facility to Station 38.

Making and answering calls

To make an external call:

- Lift the handset, or use a Hands-free Key, if available on your telephone.
- Obtain a free Line in one of the following ways:
 - Dial 0, (to select a Line from Outgoing Group 1).
 - Dial 81, 82 or 83, (to select a Line from Outgoing Groups 2, 3 or 4 respectively).
 - Dial 51, 52, 53, 54, 55, 56, 57 or 58, to select Line 1, 2, 3, 4, 5, 6, 7 or 8 respectively.
- Dial the number you require.

To make an internal call:

- Lift the handset, or use a Hands-free Key, if available on your telephone.
- Dial the desired Station number (20 - 37).

To answer a call:

- When the telephone rings, lift the handset, or use a Hands-free Key if available on your telephone.

Holding and transferring calls

To place a call on hold:

- Press the Recall Key (R) on your telephone.

If you replace the handset, you can continue to use your telephone. The held call will call back within thirty seconds, provided your telephone is idle. If you are busy on the telephone after the thirty seconds, the call will ring as soon as you replace the handset.

To transfer a call:

- Press the Recall Key (R) on your telephone.
- Dial the Station number and replace the handset.

To make an external consultation call:

While on an external call, you can contact another Station to make an enquiry, as follows:

- While on an external call, press the Recall Key (R) on your telephone.
- Dial the Station number.
 - To return to the external call and place the Station on hold, press R and dial 2.
 - To return to the external call and release the Station, press R and wait, or press R and dial 1.
 - To transfer the external call to the Station, replace the handset when talking to the Station with the external call on hold.

Programming and dialling speed dial numbers

If you have a standard telephone, you can programme up to ten Personal Speed Dial numbers.

To programme a Personal Speed Dial number:

- Go off-hook.
- Dial the code 62.
- Enter the location (0 - 9) where you want to store the number.
- Dial the number you want to store.
- Go on-hook.

To dial a Personal Speed Dial number:

- Dial the code 61.
- Dial the location (0 - 9) of the number you wish to access. The number is automatically dialled.

To dial a System Speed Dial number:

- Dial the location code (7001 - 7200) of the number you wish to access. The number is automatically dialled.

Technical specification

Feature	Specification
Type of system	Hybrid Key/PABX
ISDN Line signalling	ISDN Basic Rate Access
ISDN capacity	4 Basic Rate Accesses (i.e. 8 B-channels)
Terminals	Keystation or standard telephone
Internal speech paths	4
Station capacity	18
Keystation capacity	18
Standard telephone capacity	18
Station loop resistance	100 Ohms (0.5 km) 4-wire Keystations 336 Ohms (2 km) Station 22 only
System REN	20
Station REN	2 (see above for system maximum)
Station cabling	Standard 4 wire Twisted pair 0.5 mm ² copper
Main Equipment	Height 450 mm Width 304.5 mm Depth 71.6 mm Weight 2.5 kg
Battery Backup Unit	Height 250 mm Width 304.5 mm Depth 21.6 mm Weight less than 1 kg
Battery	12 V / 7.2 Ahr
Mains supply voltage	220-240 V, 50 Hz
Maximum power consumption	75 Watts
Standard telephone signalling	MF
Standard telephone recall signal	Timed break
Call logger interface	V24 port Programmable: 4800, 9600, 19200 (default) bps 8 bit, no parity, 1 stop bit
Music-on-hold	External calls only
Tone on hold	200ms on, 200ms off, 200ms on, 3.4s off
Central bell	Separate port. Ringing applied
System speed dials	Maximum 200
Station current and voltage feed	Voice: 40 V / 25 mA constant current Data: 40 V / 10 mA constant current
Dial tone duration	20s
System Programming	Programming Keystation (default Station 20)
Remote access	Yes
Ringing voltage / frequency	70 V RMS, 25 Hz
Ringing cadences	External call: 400ms on, 200ms off, 400ms on, 2.0s off Internal call: 1s on, 2s off Door Station call: 400ms on, 2600ms off Reminder call: 1s on, 500ms off, 400ms on, 1.1s off Call recalling: 1s on, 400ms off, 400ms on, 1.2s off
Tone frequencies	440 Hz \pm 5 Hz, unless otherwise stated

Feature	Specification
Tone cadences	Dial tone: Continuous tone of 440Hz \pm 5% and 350Hz \pm 5% Special dial tone: 800ms on, 800ms off of dial tone Ringback tone: 400ms on, 200ms off, 400ms on, 2s off Busy tone: 400ms on, 400ms off Congestion tone: 100 ms on, 100 ms off Hold tone: 200ms on, 200ms off, 200ms on, 3.4s off Conference tone: One burst of 400ms Number Unobtainable tone: Continuous tone Call waiting tone: 100ms on, 4.9s off
Environmental requirements	Normal working temperature: 0°C to +45°C Working humidity (non-condensing): 10% to 80% Storage temperature: -20°C to +70°C Storage humidity: 10% to 90%
Doorstrike relay contact	Max rating: 24 V DC / 2 A
Safety and protection	ASNZS 3260
System software EPROM	Flash 4MB EPROM; access time <120 ns

Table 1: Technical Specification

Mains voltage supply	240 V \pm 10%
Power consumption	75 watts
Normal working temperature range	0°C to +40°C
Extreme working conditions	-15°C to +55°C
Working humidity (non-condensing)	10% to 80%
Storage temperature range	-20°C to +70°C
Storage humidity	10% to 90%
Main Equipment housing clearance	100 mm
Battery backup clearance	310 mm

Table 2: Power and environmental requirements

CHAPTER TWO

Hardware Installation

Installation checklist

Refer to the Table of Contents on page 11. Carry out the following steps to install the system:

FIRST, read the safety and precaution information on page 12 carefully.

SECOND, mount the Main Equipment as detailed in the section 'Installing the Main Equipment' on page 60.

THIRD, install whatever system expansion cards are necessary to provide the required functionality. The functionality associated with each expansion card and their installation is described in the section 'Installing system expansion cards'. A summary is as follows:

- At least one PSTN Line Card must be installed to access the PSTN network.
- At least one ISDN Access Card and an ISDN Upgrade Card must be installed to access the ISDN network.
- By selecting jumper settings, an ISDN Access Card can be configured to provide an ISDN S-bus to the desktop. Jumper settings must also be selected to provide appropriate resistor termination on the ISDN interfaces. (See the section 'Configuring the System for ISDN' on page 73).
- A Station Card must be installed if more than six Stations, or more than four PSTN Lines, or more than two ISDN Basic Rate Accesses, or more than one ISDN S-bus, is required.
- A Voicemail Card must be installed to provide voicemail or Answering Machine functionality.

FOURTH, cable the Stations to the Main Equipment and install the system Keystations and standard telephones as detailed in the section 'Installing system cabling'.

This section also covers installation of a Long-line Station, a Door Station, a Doorstrike, a Central Bell, external Music-on-Hold, a Public Address, a V24 Interface to provide Call Logging and a Call Manager for Keystation control.

FIFTH, cable the PSTN and ISDN Line connections as detailed in the section 'Connecting to the public network'.

SIXTH, mount and connect a Battery Backup Unit, if desired, as detailed in the section 'Installing the Battery Backup Unit'.

SEVENTH, commission the system and provide customer training as detailed in 'Commissioning the system'.

EIGHT, refer to the **Commander Vision Owner's Handbook**, if necessary, for details on system programming.

Installing the Main Equipment

Choosing a location for the Main Equipment

The Main Equipment is intended for installation in a residential or office-type environment. It must be mounted on a dry, flat wall. The normal mounting height is one metre from the floor to the bottom of the Main Equipment case.

- Do not locate the Main Equipment where it will be subjected to excessive levels of heat, dust, damp or high humidity.
- Do not locate the Main Equipment near sources of electromagnetic radiation, such as large electrical systems, electric motors, lift machinery, electric arc welders, etc.

Allow at least 100 mm of free space all around the Main Equipment for ventilation and 310 mm to the right or underneath the Main Equipment for the addition of the Battery Backup Unit.

The Main Equipment must be located within approximately two metres of a dedicated mains power supply outlet. The Main Equipment must not share the same mains supply socket with any other electrical appliance.

Mounting the Main Equipment

When a suitable location has been found, mark the screw locations on the mounting surface, using the mounting bracket provided. Drill four holes in the wall at the marked locations. The holes should be deep enough to accept a 25mm screw. If the Main Equipment is being mounted on masonry or plasterboard, suitable wall plugs must be used.

Figure 1 shows the mounting bracket and the necessary top and side clearances. (Add 210mm underneath or to the right if a Battery Backup Unit is to be installed). Figure 2 shows how the Main Equipment is mounted onto the mounting bracket.

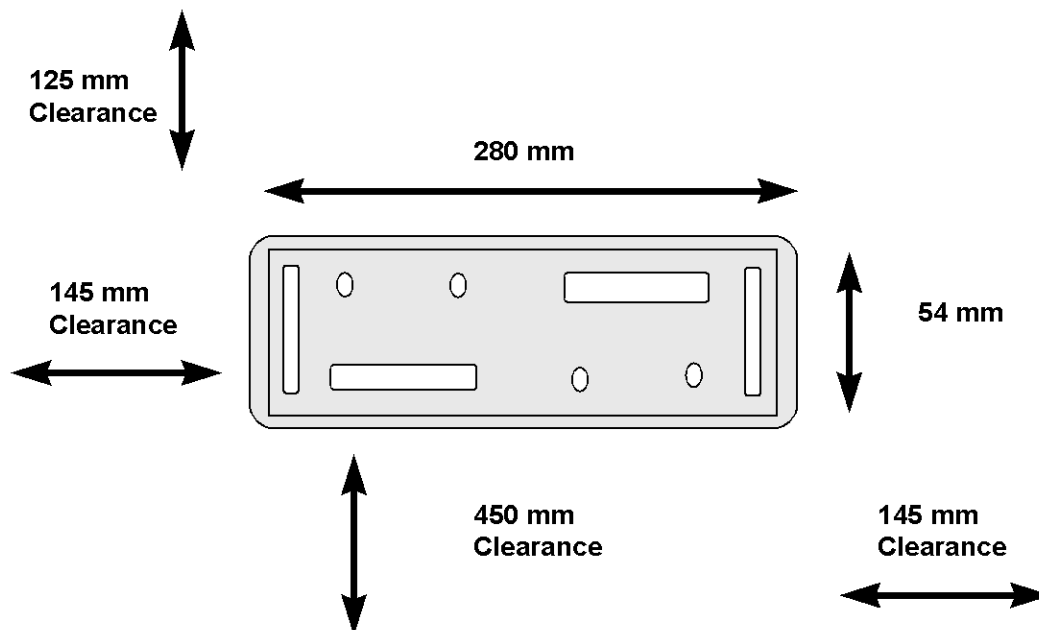


Figure 1: Main Equipment mounting bracket

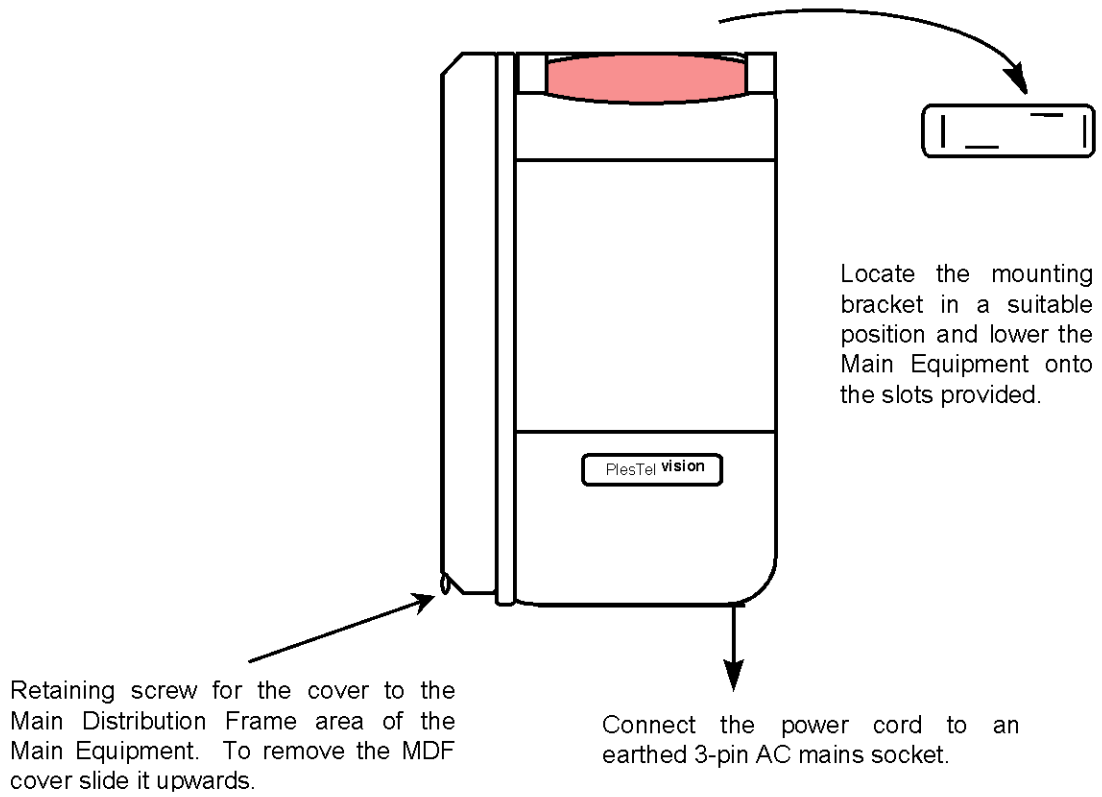


Figure 2: Mounting the Main Equipment

Securing the Main Equipment to the wall

Locate and mark the position of the two fixing screws at the top and bottom of the Main Distribution Frame area as shown in Figure 3. Remove the unit. Drill and plug the screw holes, deep enough to accept a 25 mm (one inch) No. 8 round-head screw. Relocate the unit on the bracket and screw home the fixing screws. Ensure that there is sufficient space around the Main Equipment as shown to allow adequate ventilation.

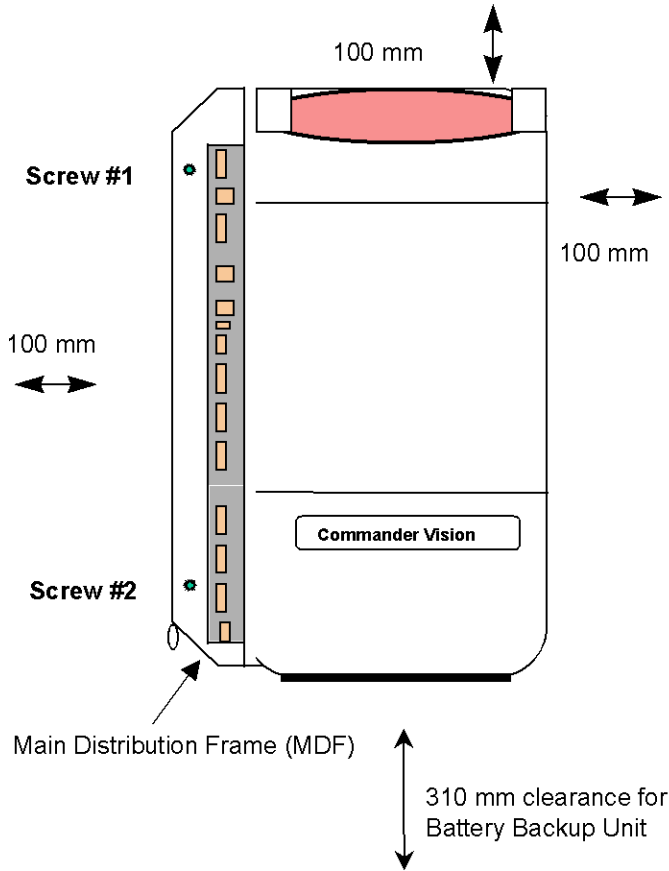


Figure 3: Screw locations for securing the Main Equipment

Installing system expansion cards and components

This section describes the functionality associated with each expansion card, and how to install them.

Base Motherboard

A diagram of the Base Motherboard is shown in Figure 4 below. The Base Motherboard implements the microcontroller, main memory and other system circuitry. It also includes slots to add expansion cards, and connection points for Station and network cabling. Table 3 details the Base Motherboard connector definitions.

WARNING: To protect the system against high voltage surges on incoming PSTN exchange Lines, (for example, caused by lightning), the Functional Earth connector on the Base Motherboard must be connected to a protective earth.

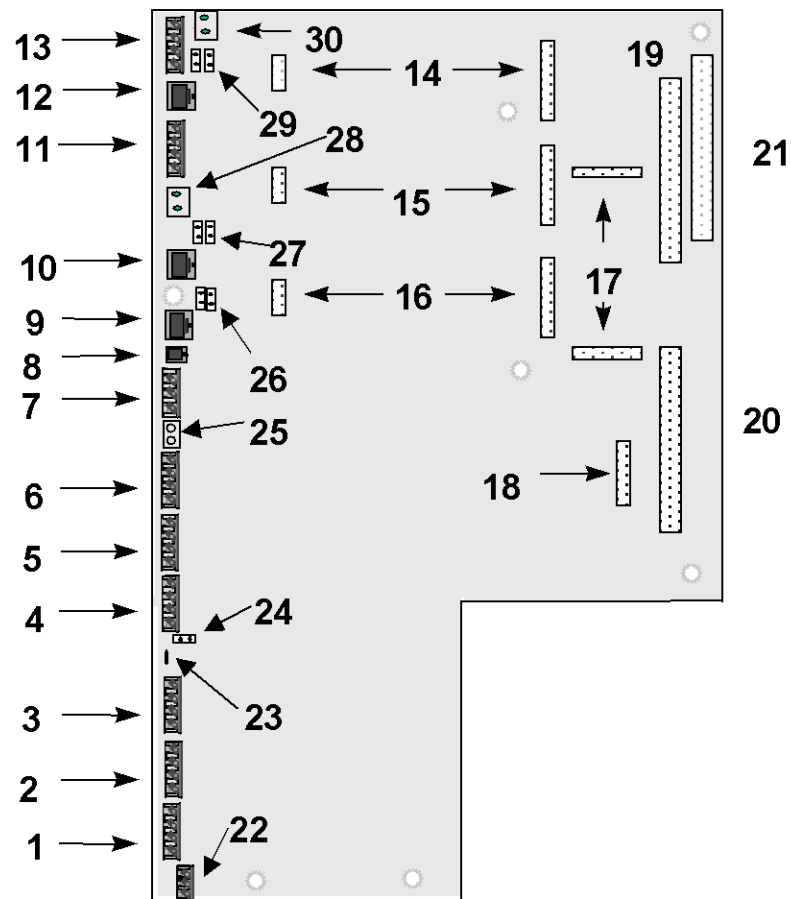


Figure 4: Base Motherboard diagram

1. Krone IDC connector	Station 20 connection
2. Krone IDC connector	Station 21 connection
3. Krone IDC connector	Station 22 / Long-line Station connection
4. Krone IDC connector	Station 23 / Door Station connection
5. Krone IDC connector	Station 24 connection
6. Krone IDC connector	Station 25 connection
7. Krone IDC connector	Central Bell connection
8. RJ11 connector	External V24 interface connection (for Call Logging)
9. RJ45 connector	ISDN S-bus 1 connection
10. RJ45 connector	ISDN Access 2 connection
11. Krone IDC connector	PSTN Lines 3&4 connection
12. RJ45 connector	ISDN Access 1 connection
13. Krone IDC connector	PSTN Lines 1&2 connection
14. Board connector	PSTN Line Card / ISDN Access Card connection
15. Board connector	PSTN Line Card / ISDN Access Card connection
16. Board connector	ISDN Access Card connection (for S-bus access only)
17. Board connector	ISDN Upgrade Card connection
18. Board connector	Voicemail Card connection
19 & 20. Main board connector	Station Card connection
21. Board connector	Connection reserved for future use
22. Krone IDC connector	Doorstrike relay connection
23. ESD protection pillar	Used to connect ESD straps
24. Jumper link	Not used
25. 2-way screw terminal connector	Music-on-Hold connection
26. 2 x Jumper links	ISDN S-bus (connector 9) options selection
27. 2 x Jumper links	ISDN Access 2 (connector 10) options selection
28. Krone IDC connector	Not used
29. 2 x Jumper links	ISDN Access 1 (connector 12) options selection
27. Screw terminal connector	Functional earth connection

Table 3: Base Motherboard connector definition table

Replacing the Base Motherboard

- Record the system configuration and administration programming.
- Disconnect power from the system, including the Battery Backup Unit if fitted.
- Disconnect the Power Supply and Battery Backup Unit (if fitted) connections.
- Tag all Keystation and ISDN Access cabling.
- Disconnect the Keystation and ISDN Access cables.
- Unplug the Station Cards, if fitted.
- Unscrew the retaining screws and remove the Base Motherboard
- Insert the replacement Base Motherboard and the retaining screws.
- Reinsert any Station Cards.
- Reconnect the Keystation and ISDN Access cabling, as tagged.
- Reconnect the power, including the Battery Backup Unit if present.
- Reprogram the system as required.

Station Card

The Station Card contains connectors for six Stations and also a connector for either a PSTN Line Card or an ISDN Access Card.

Up to two Station Cards can be installed. To install, insert the Station Card into either connectors 19 and 20 on the Base Motherboard as shown in Figure 8 on page 68. The Station Card must be fitted with the supplied column support located under the line termination points as shown in Figure 6.

WARNING: To protect the system against high voltage surges on incoming PSTN exchange Lines, (for example, caused by lightning), the Functional Earth connector on the Station Cards must be connected to a protective earth.

Table 4 lists the lists the Station Card connectors. The six Stations are numbered 26 through 31 for the card in connector 19, and 32 through 37 for the card in connector 20.

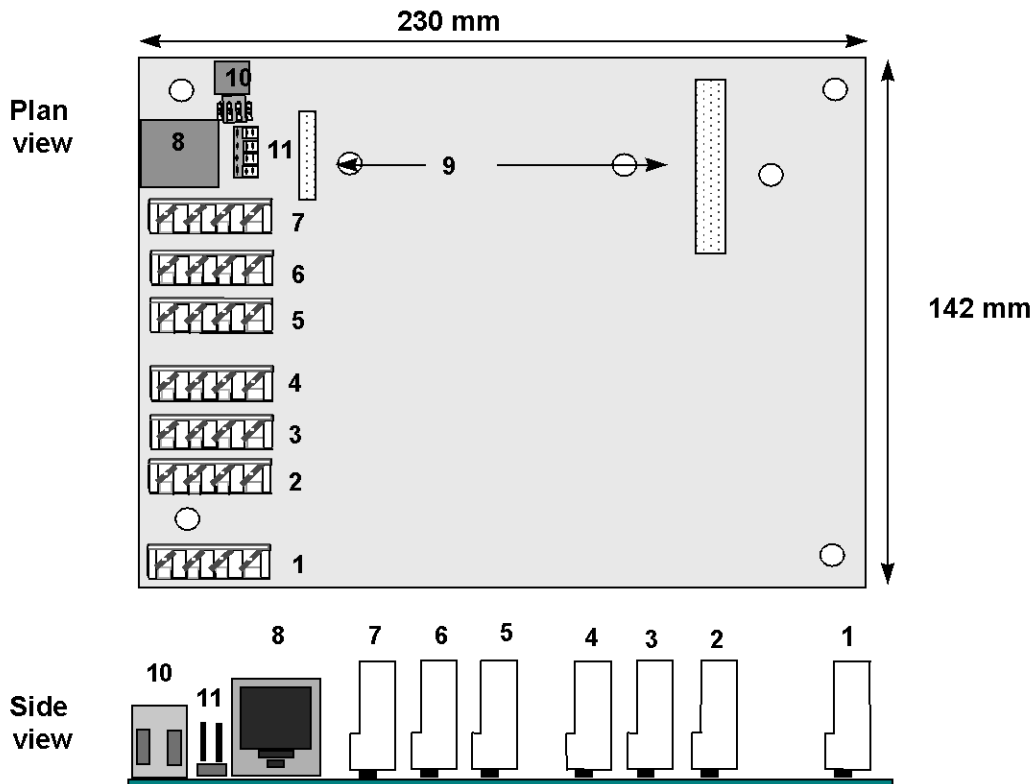


Figure 5: Station Card diagram

1. Krone IDC connector	Station 26, or 32, connection
2. Krone IDC connector	Station 27, or 33, connection
3. Krone IDC connector	Station 28, or 34, connection
4. Krone IDC connector	Station 29, or 35, connection
5. Krone IDC connector	Station 30, or 36, connection
6. Krone IDC connector	Station 31, or 37, connection
7. Krone IDC connector	PSTN Lines 5&6, or 7&8, connection
8. RJ45 connector	ISDN Access 3, or 4, or S-bus 2 connection
9. Board connector	PSTN Line Card / ISDN Access Card connection
10. Screw terminal connector	Functional Earth connection
11. 2 x Jumper links	ISDN options selection

Table 4: Station Card connector description table

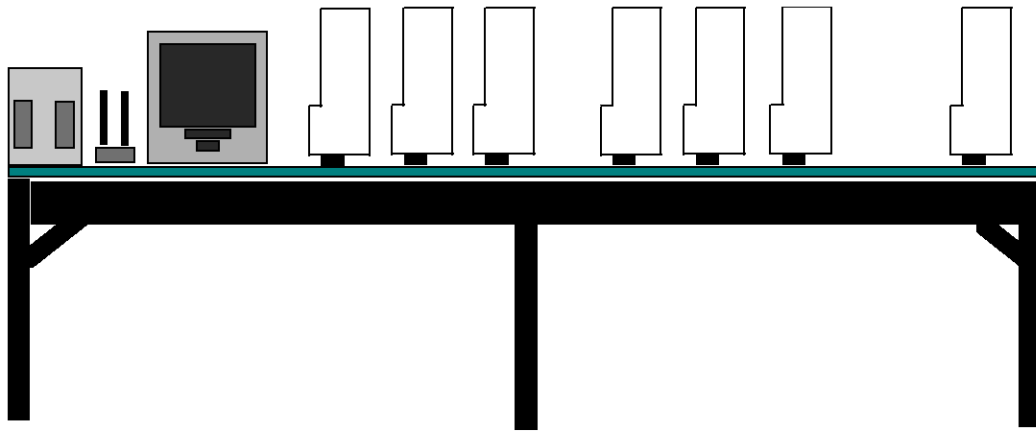


Figure 6: Station Card column supports

PSTN Line Card

This card allows the **Commander Vision** to access two PSTN exchange Lines. Unless this card is fitted, no PSTN Line access is possible. When only one exchange Line is in use, the second Line must be disabled using system programming.

To install, insert the PSTN Line Card into either connectors 14 and 15 on the Base Motherboard or connector 9 on a Station Card as shown in Figure 8.

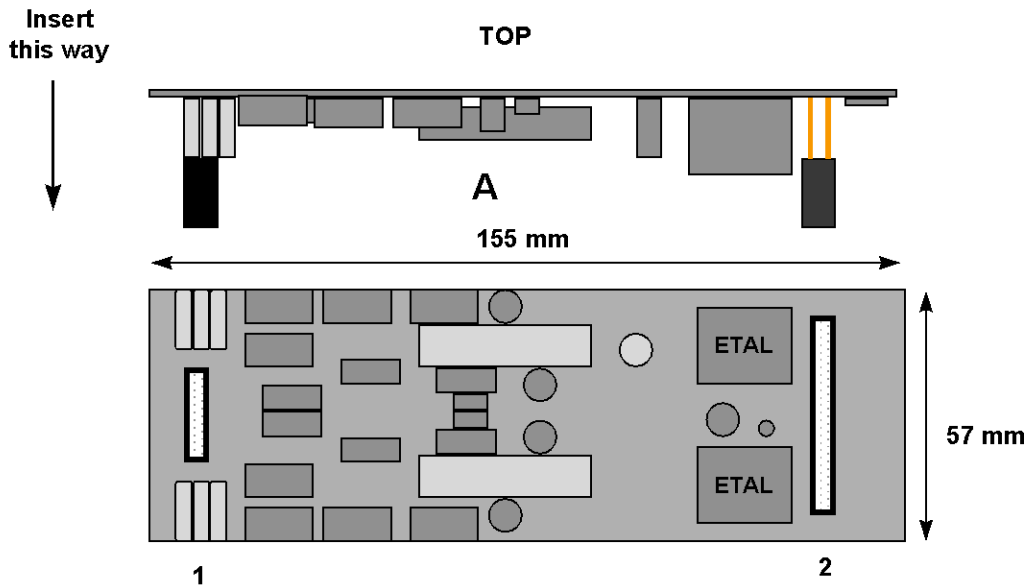


Figure 7: PSTN Line Card diagram

WARNING: To maintain safety clearance between the PSTN and ISDN networks ensure, wherever you have a PSTN Line Card installed, that the associated ISDN connector is empty, i.e. does not have an ISDN cable connected.

- If there is a PSTN Line Card in board connector 14 on the Base Motherboard, then ensure RJ45 connector 12 on the Base Motherboard is empty.
- If there is a PSTN Line Card in board connector 15 on the Base Motherboard, then ensure RJ45 connector 10 on the Base Motherboard is empty.
- If there is a PSTN Line Card in board connector 9 on the Station Card, then ensure RJ45 connector 8 on the Station Card is empty.

Allowed locations of the Station and PSTN Line Cards

Up to two Station Cards and four PSTN Cards can be installed as shown in Figure 8. Note that PSTN Line Cards cannot be inserted on the slot denoted by X in Figure 8.

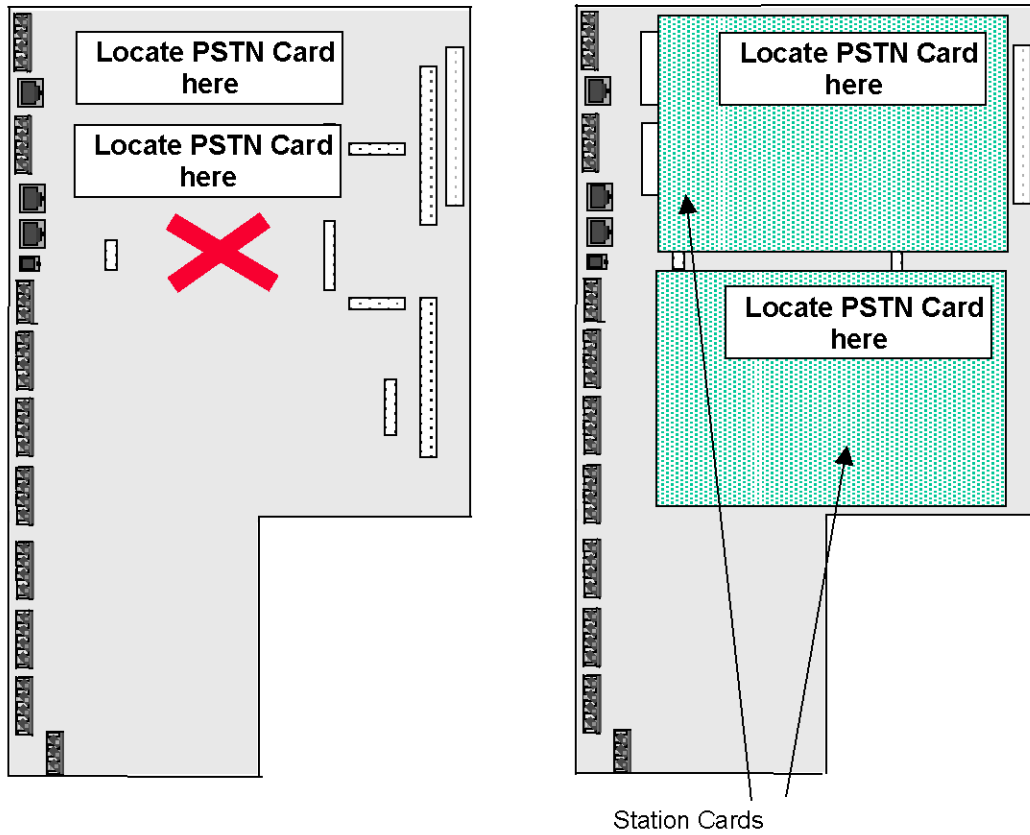


Figure 8: Allowed locations of Station Cards and PSTN Cards

ISDN Upgrade Card

An ISDN Upgrade Card is required to allow usage of ISDN on the system. It has no effect on PSTN operation. The ISDN Upgrade Card is installed in slot 17 on the Base Motherboard as shown in Figure 9 and Figure 10.

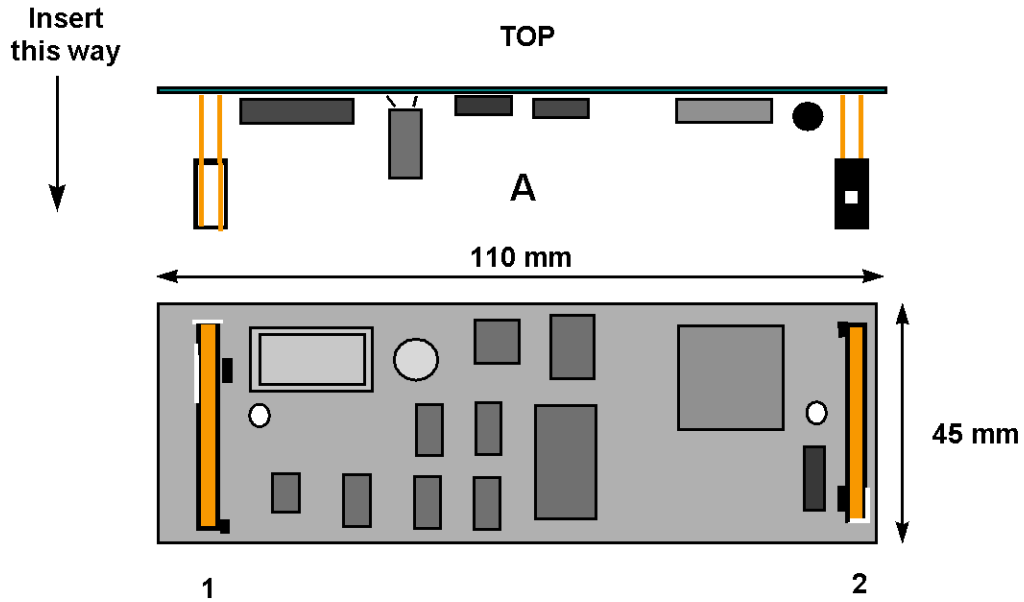


Figure 9: ISDN Upgrade Card diagram

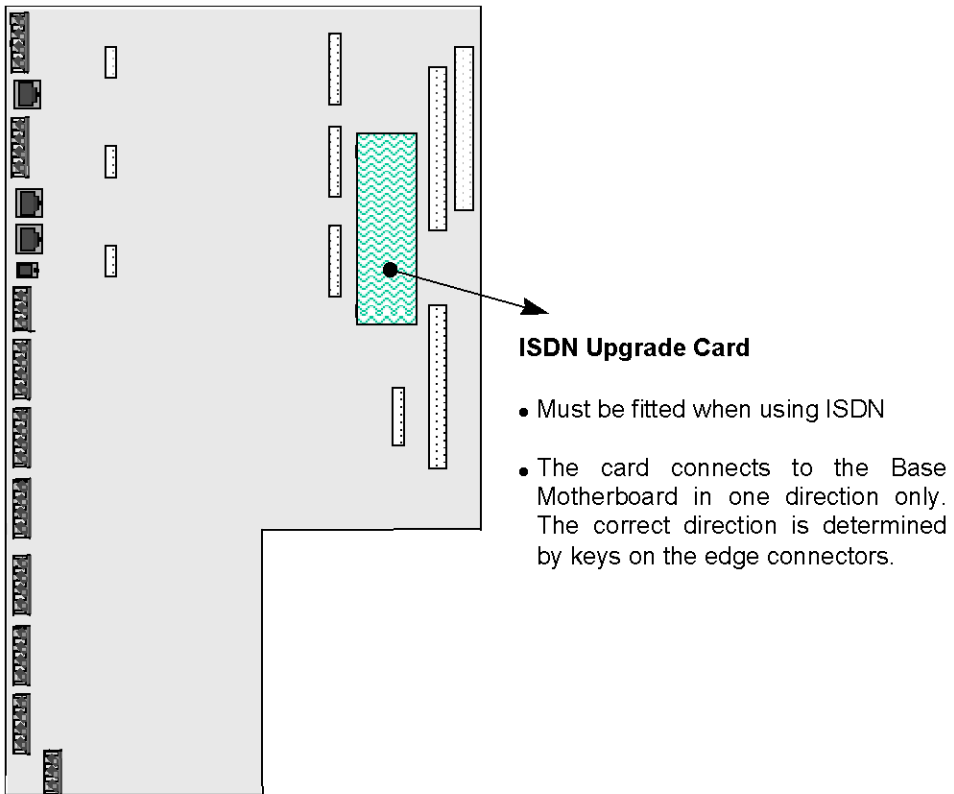


Figure 10: ISDN Upgrade Card location

ISDN Access Card

The ISDN Access Card provides either one ISDN Basic Rate Access to the public ISDN network, or access to an internal ISDN S-bus. Up to five ISDN Access Cards can be installed. To install, insert the ISDN Access Card into connectors 14, 15 and 16 on the Base Motherboard or connector 9 on a Station Card, as shown in Figure 12.

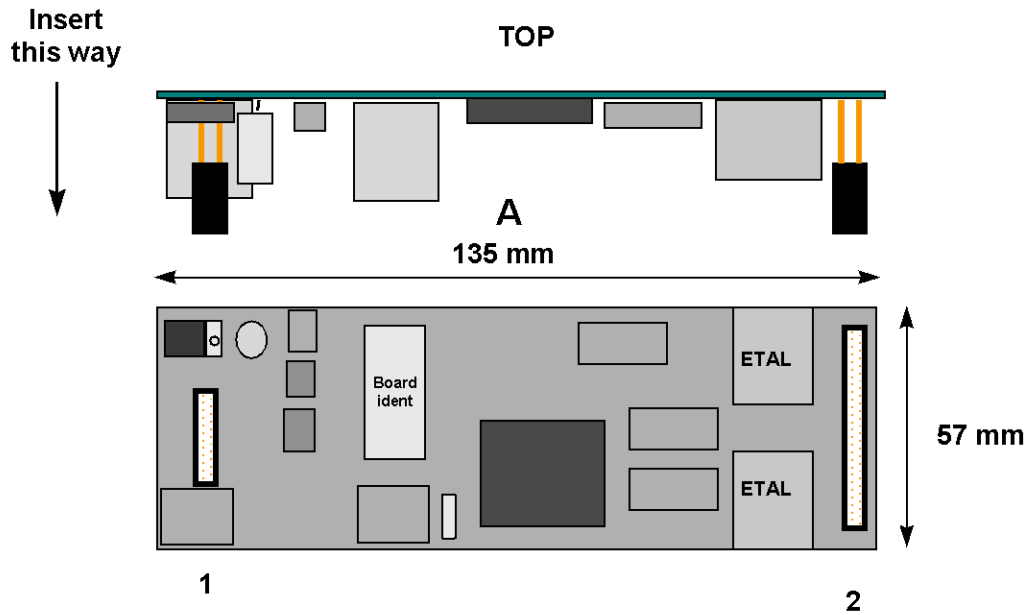


Figure 11: ISDN Access Card diagram

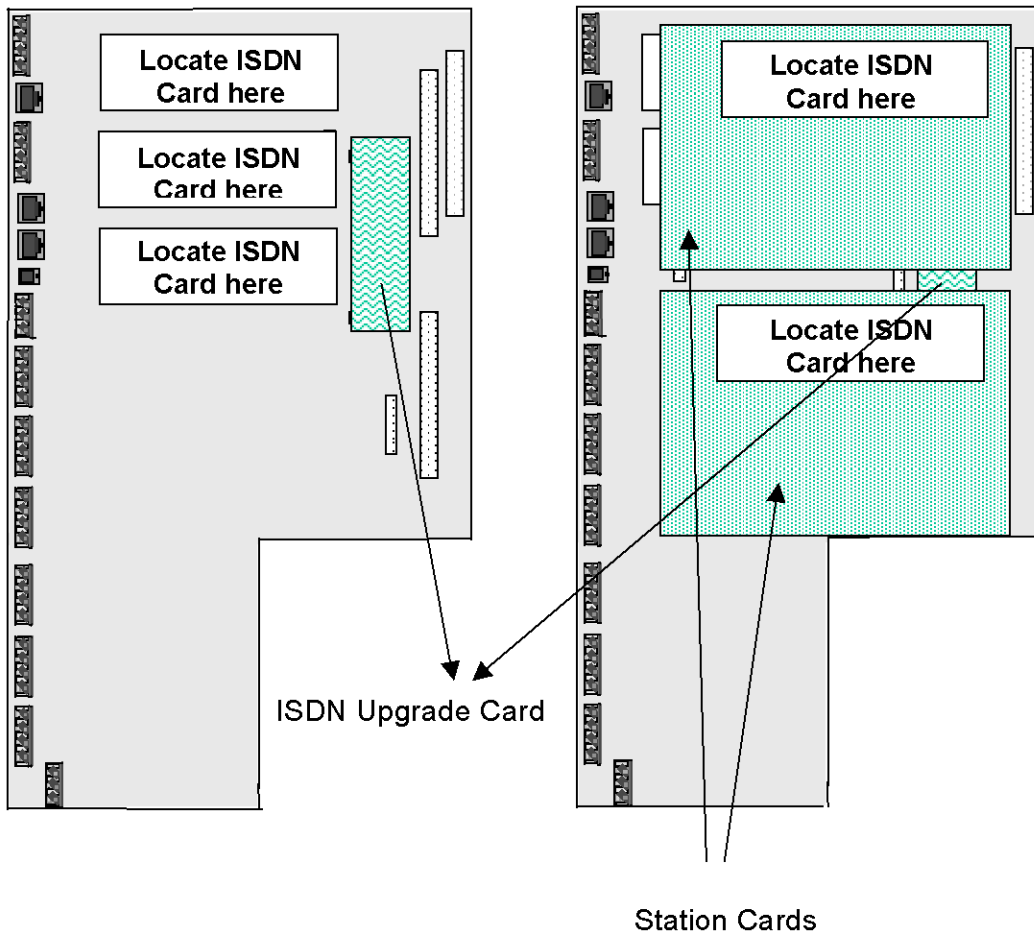


Figure 12: Allowed locations for the ISDN Access Card

Configuring the System for ISDN

T₀ and S₀ interfaces

The system can be configured with up to five ISDN interfaces. Up to four can be T₀ network interfaces and up to two can be S₀ internal S-bus interfaces. A T₀ interface provides a Basic Rate Access to the public ISDN network. Each Basic Rate Access provides two B-channels that can be accessed by Keystations to make external calls. The S₀ interfaces provide an ISDN S-bus to-the-desk, allowing users to connect up to eight ISDN-approved apparatus together, including ISDN telephones. The devices connected to the S-bus can access the public ISDN network via a T₀ interface, if provided.

Cabling distances for S ₀ devices: P-MP	-	100 metres
P-P	-	800 metres

Connector 16 on the Base Motherboard, (see diagram on page 63), provides access only to an internal S-bus, and does not allow network access. The second S₀ can be provided by connecting an ISDN Access Card to either of the Station Cards and configuring the jumper links appropriately. Note that only one of the two possible Station Cards can be set for S₀ operation.

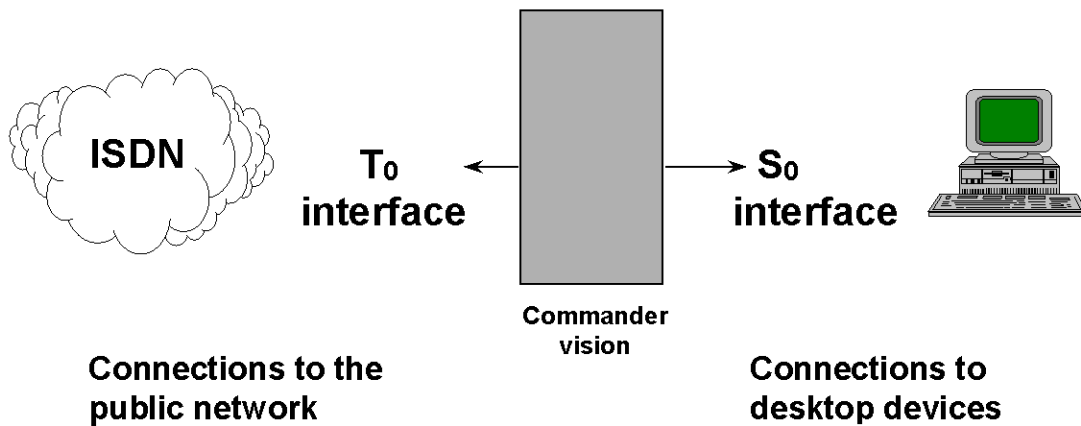


Figure 13: T₀ and S₀ interfaces

ISDN connections and terminating resistors on the Base Motherboard

The RJ45 connectors 10 and 12, (as shown in Figure 14 below), are for T₀ network interfaces and the RJ45 connector 9 is for an S₀ interface. Each interface has two sets of jumper pins on the left-hand side of its RJ45 connector. Inserting jumper links across both sets of pins terminates that particular interface with 100 Ohms. The unit is delivered with jumper links connected across all pins, (that is, with 100 Ohm termination provided on all interfaces).

T₀ interface termination

An ISDN bus must be terminated twice, once at the start and once at the end of the bus. The Network Terminating Equipment (NTE) will provide the termination at the start of the bus. The end termination may also be provided by the NTE if the **Commander Vision** is directly connected to the NTE. The end termination may also be provided by a type-2 line jack that incorporates a terminating resistor. In these cases the T₀ interface does not require the terminating resistor to be connected and the associated jumper links, (JP-A1 and JP-A2 or JP-B1 and JP-B2 in Figure 14 below), may be removed. It is recommended that unused jumper links be left on one of the pins rather than being removed entirely to ensure they are not lost.

S₀ interface termination

An ISDN S-bus must be terminated twice, once at the start and once at the end of the bus. The **Commander Vision** S₀ interface emulates an ISDN Network Terminating Equipment and consequently must always be terminated with jumper links across the pins of the associated jumper connectors (JP-C1 and JP-C2 below).

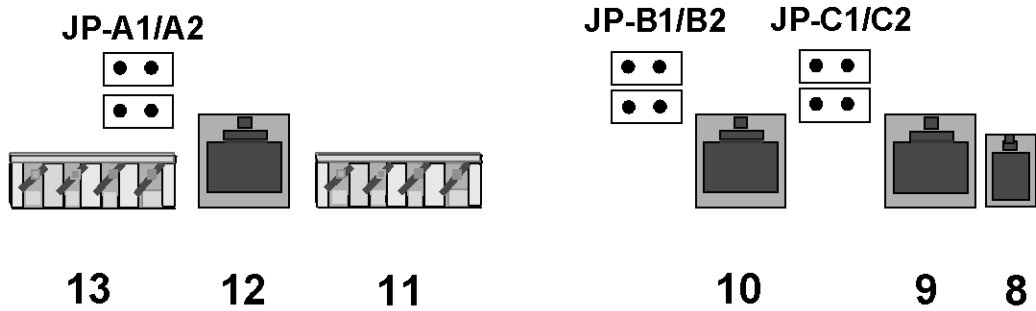


Figure 14: ISDN connections on the Base Motherboard

ISDN connections and terminating resistors on the Station Card

There are two sets of four jumpers on the Station Card, which provide T₀ / S-Bus set-up options when an ISDN Access Card is connected into slot 9 of the Station Card.

The four jumpers at the back of the RJ45 connector, (J1, J2, J3 and J4 in Figure 15 below), must be moved to the S position for S₀ operation. By default the jumpers are set in the T position for T₀ operation. When changing the jumper settings from the default position, the system must also be programmed from T to S operation. Refer to the *User Guide* for details on how this is done.

There are four jumpers beside the RJ45 connector. Jumpers JP-1 and JP-2 allow a 100 Ohm terminating resistor to be inserted or removed. Connecting both jumper links in the A position as shown in Figure 15 removes the terminating resistor. Conversely, connecting both jumper links in the B position inserts the terminating resistor. By default the terminating resistor is connected. Refer to the paragraph 'ISDN connections and terminating resistors on the Base Motherboard' on page 74 for details on when to remove the termination.

The Station Card can provide a 40 Volt supply to devices connected to the S-bus. Up to a maximum of four devices on each S-bus can be powered by this 40 Volt supply. The option to provide this voltage supply is available on the Station Card by connecting the jumper links of JP-3 and JP-4 in position A and the power supply is not provided to the S-bus. (See Figure 15 and Table 5).

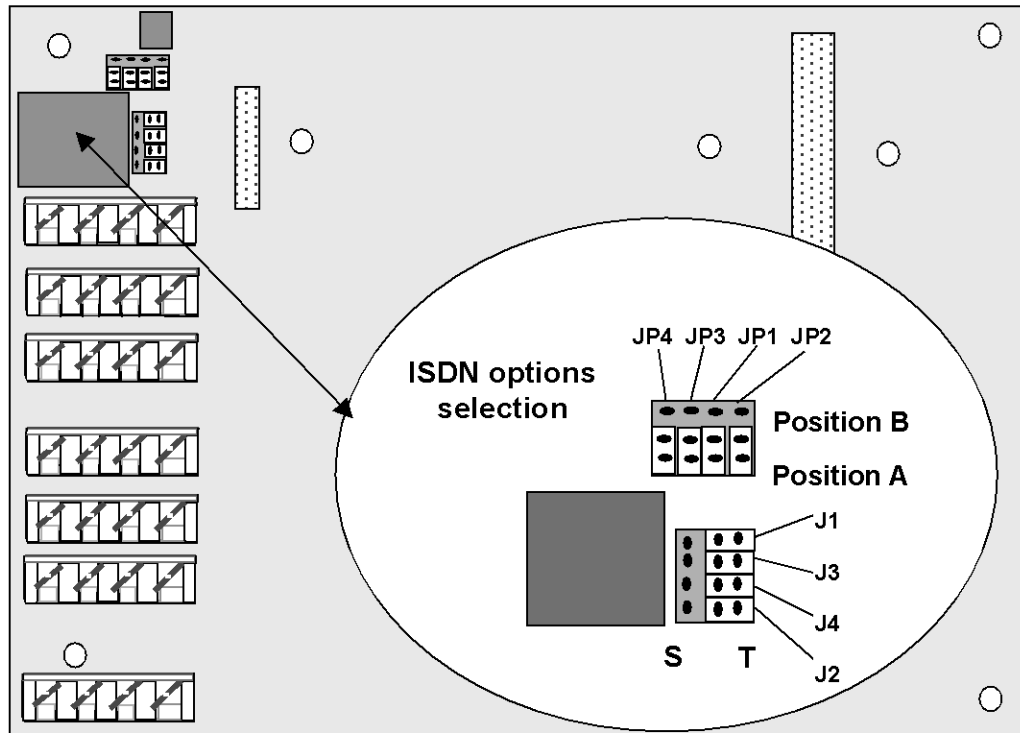


Figure 15: ISDN connections on the Station Card

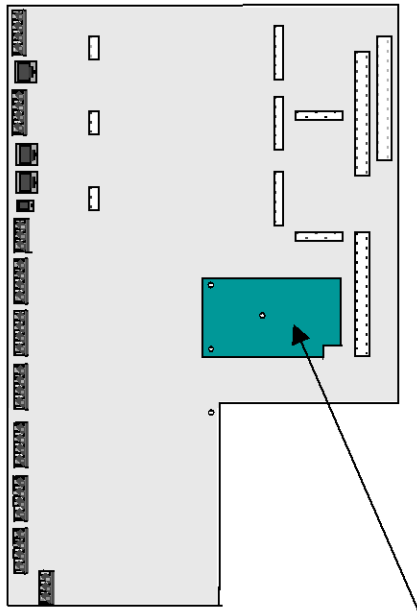
	JP-1 and JP-2 Terminating Resistor	JP-3 and JP-4 S ₀ 40V supply
Position A	100 Ohm out	No 40V supply (default)
Position B	100 Ohm in (default)	40 V supplied

Table 5: ISDN jumper links on the Station Card

Voicemail Card

This card provides up to 80 minutes voice storage. When installed a system Answering Machine can be enabled and each Station can be provided with a voice box. A minimum of two minutes storage is allocated automatically to each programmed Station. The remaining capacity is dynamically allocated. The Voicemail Card is also required to provide a personalised greeting in either the Courtesy or Auto Attendant services.

The Voicemail Card is inserted in slot 18 on the Base Motherboard as shown below.



Locate the Voicemail Card in slot 18 on the Base Motherboard. Ensure column supports are inserted when fitting the card

Figure 16: Installing the Voicemail Card

Installing system cabling

Wiring technique

The Station, PSTN and ISDN Access cables enter the Main Equipment at the bottom left-hand side of the Main Equipment when viewed from the front of the case. (See Figure 17 below). Remove the punch-out and pass the cables through the cable entry hole in the Main Equipment case. Cable-retaining straps should be passed through the hooks provided and the cables should then be passed through the cable-retaining straps until adjacent to the relevant connectors. The cables should be neatly guided into the channel space between the connectors and the Main Equipment case side, ensuring that there is sufficient clearance between the cables and the Main Equipment case lid. The cables should remain sheathed inside the Main Equipment housing to within reach of the appropriate connector. There are punch-outs directly opposite the ISDN and V24 connectors to allow easier cable access to these connectors.

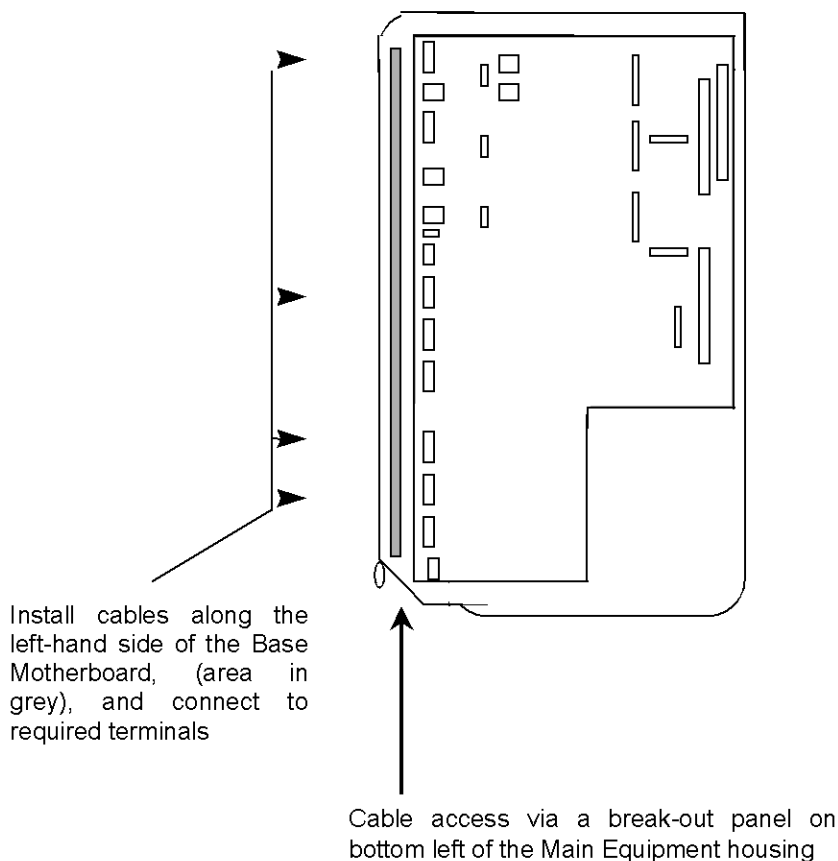


Figure 17: Wiring technique

Station cabling

Stations are numbered 20 to 37. The location and numbering of the Station connectors is detailed in Table 3 and Table 4.

Do not exceed the following resistance or distance limits when connecting Stations to the Main Equipment. (The distances listed assume 0.5mm tinned copper conductor is used).

- 100 Ohms, or 500 metres, for system Keystations or standard telephones.
- 336 Ohms, or 2 kilometres, for a standard telephone connected to Station position 22.

The Station and ISDN Access cables must be of twisted-pair construction, using insulated tinned copper wires of nominal 0.5 mm cross-sectional area. It is important that this size and type of wire is used since incorrect types can result in unreliable connections. Care should be taken to ensure that the cabling complies with all relevant cabling requirements.

Run cable from each Station location to the Main Equipment. Pass the cable through the cable entry hole in the Main Equipment and terminate the Station wiring at the appropriate connector in accordance with Table 6 below. Only four wires per Station are connected at the Main Equipment. Spare wires must be neatly laid back away from the connectors. To prevent cross talk or interference, cable pairs should not be split or the spare wire of cable pairs used.

WARNING: All Stations should connect into standard line jack units. Station cabling should not be exposed to high voltage surges, (for example, surges induced by lightning or neighbouring high current-carrying cables). If this is a possibility, external protection of the Main Equipment and Stations using earthed line surge protectors is essential.

Connector pin-out	Function	RJ 12 pin-out
A	Speech	Pin 3
B	Speech	Pin 4
C	Data	Pin 2
D	Data	Pin 5

Table 6: Station connectors pin-out

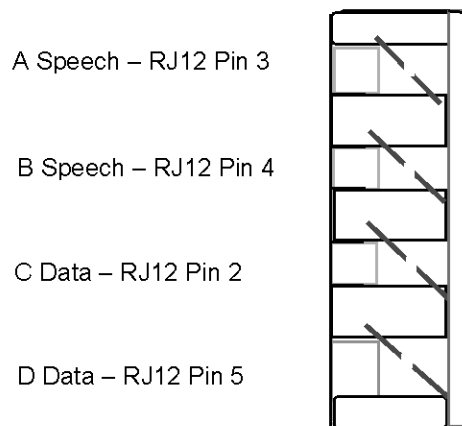


Figure 18: Standard 4-wire IDC Krone connector

Long-line Station

Station 22 is designed to work with a standard telephone up to a distance of two kilometres away from the Main Equipment.

WARNING: Station cabling should not be exposed to high voltage surges, (for example, surges induced by lightning or neighbouring high current-carrying cables). If this is a possibility, external protection of the Main Equipment and Stations using earthed line surge protectors is essential.

- If Station 22 is used as a Long-line Station, a standard telephone Station must be used.
- The maximum cabling distance is two kilometres, or 3 dB at 1600 Hz. (Distance assumes 0.5mm diameter copper cabling).

Door Station

An external Door Station is available that can be programmed to ring and talk to any Station. The Door Station can be mounted using the bracket supplied as shown in Figure 19 below. To install the Door Station connect the single pair from the Door Station to the AB connections of connector 4 on the Base Motherboard. Note that the Door Station must connect to the Station 23 position, which is connector 4 on the Base Motherboard. (See Base Motherboard diagram on page 63).

The system must be programmed for the Door Station to operate. Refer to the *Owner's Handbook* for programming details.

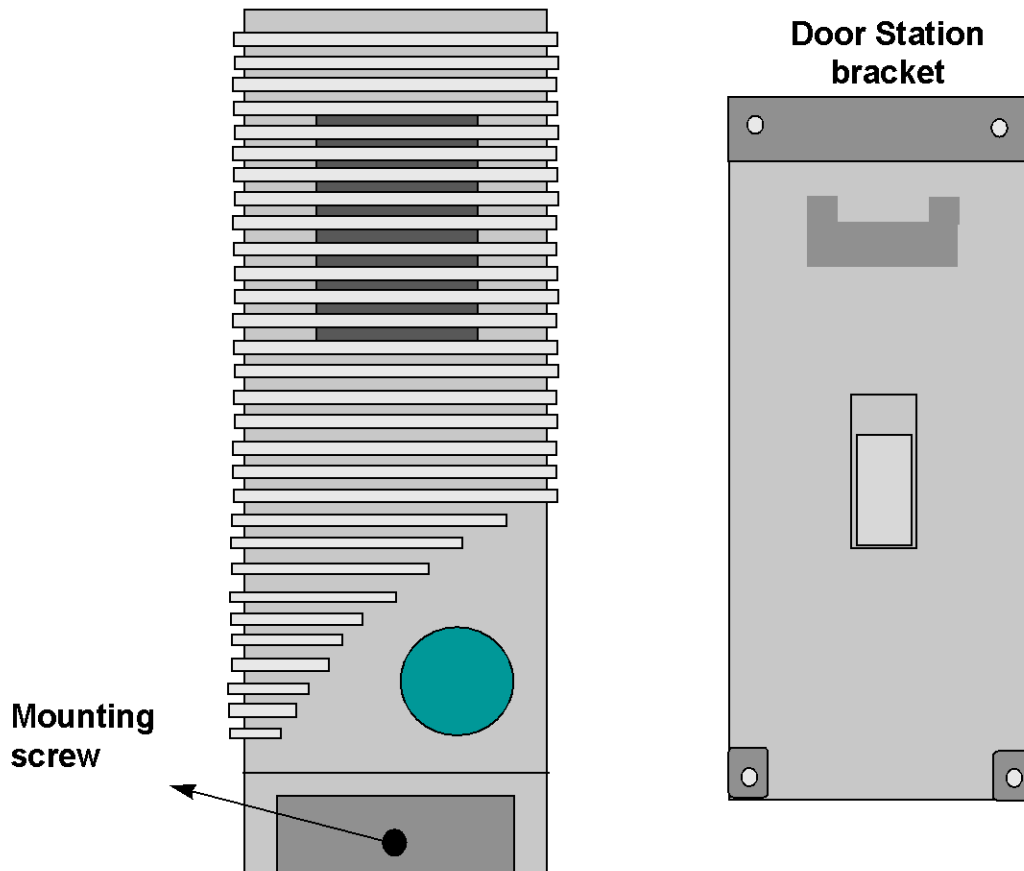


Figure 19: Mounting the Door Station

Connection to a PABX

A connection to a functional earth is advised where the **Commander Vision** is connected via a Line interface to a PABX that requires a forward earth recall signal. The earth is connected to the Functional Earth connector on the Base Motherboard. (Connector 30 on Figure 4). If Station Cards are fitted the earth must be connected to the Functional Earth connector on each card. (Connector 10 on Figure 5).

Doorstrike

The Doorstrike two-way connector provides a closed relay contact when in the operated condition. The relay contact is suited only for use with low voltage DC equipment. (Rating: 24VDC, 2 Amps).

Note: The doorstrike is only a relay contact connected to the main equipment for opening the door. The main equipment itself should have its own isolation transformer fitted.

Central Bell

Connector 7 on the Base Motherboard is a two-pin Krone IDC connector that supplies a ringing signal. A bell or tone caller may be connected to this connector. The system must be programmed for the Central Bell to operate. Refer to the *Owner's Handbook* for programming details.

External Music-on-Hold

Connector 25 on the Base Motherboard is a two-pin screw terminal to which an external music source may be connected. The external music source, if connected, can be programmed to replace the internal music as music-on-hold.

Public Address

The Commander Vision can be configured to operate with Public Address (PA) system. Connect the Public Address to any Station position and programme the Public Address feature, as detailed on page 31 .

Call Logging Interface

The Call Logging Interface is a V24 interface that allows connection to a Call Logging serial printer or to a PC running Call Logging software.

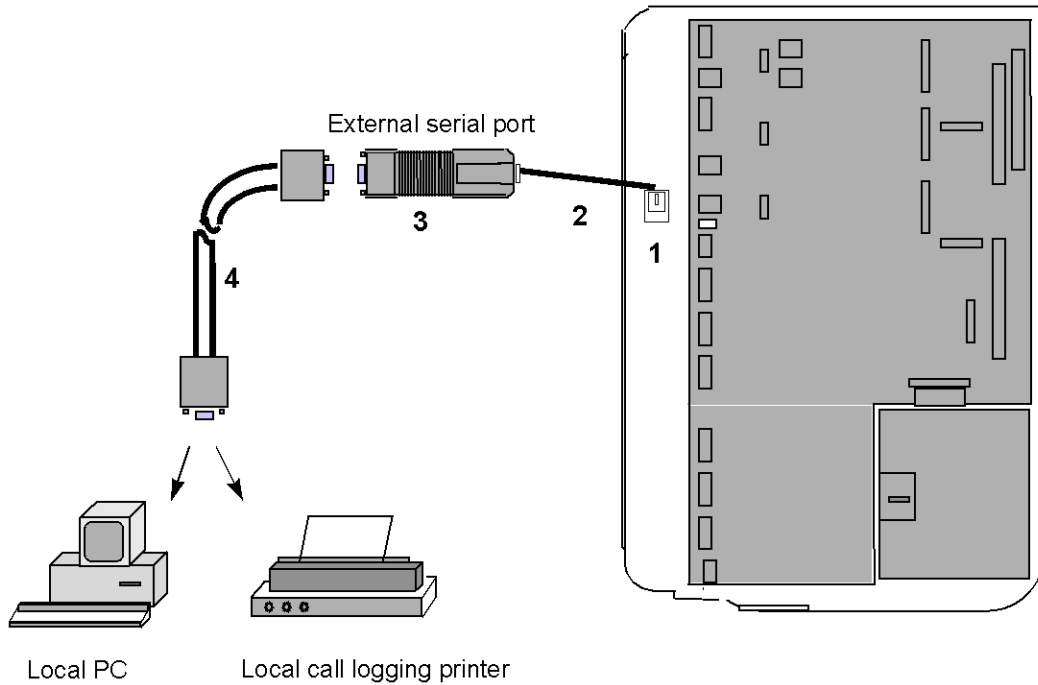
The following items are listed on the call log:

- Incoming or Outgoing call
- Date (DD MTH YR)
- Time
- Duration of call
- Line used
- Initiating extension
- Terminating extension
- Outside number called (max 18 digits), or Calling number if CLI operating
- Call cost, if ISDN Advice of Charge (AOC) service is operational.

The Call Logging Interface has the following specification:

Interface type:	V24
Bit Rate:	Programmable: 4800 / 9600 / 19200 (default) bps
Data:	8 bit; no parity; 1 stop bit

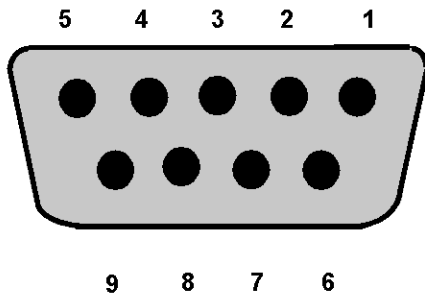
Table 7: Call Logging Interface specification



1. System connector 8 (RJ11)	V24 interface on the Base Motherboard
2. External serial module connection	One meter RJ11 to RJ11 cable
3. External serial module	External RS-232 port with 9-way male connector
4. Cable connection to terminal device	9-way male to female connector

Figure 20: Implementing Call Logging

Female 9-way connector which plugs into a local printer or PC



Note: A standard DB-9 to DB-25 converter connector can be used to connect the external serial port to equipment that is not fitted with a DB-9 connector.

9-way D-type connector pin description	Equivalent 25-way D-type pin number
Pin 1 - DCD Data Carrier Detect pin	Pin 8
Pin 2 - Receive data pin	Pin 3
Pin 3 - Transmit data pin	Pin 2
Pin 4 - DTR Data Terminal Ready	Pin 20
Pin 5 - Signal ground	Pin 7
Pin 6 - DSR Data Set Ready	Pin 6
Pin 7 - RTS Request To Send	Pin 4
Pin 8 - CTS Clear To Send	Pin 5
Pin 9 - RI Ring Indicate	Pin 22

Table 8: V24 connector pin-outs

System Keystations

Keystation description

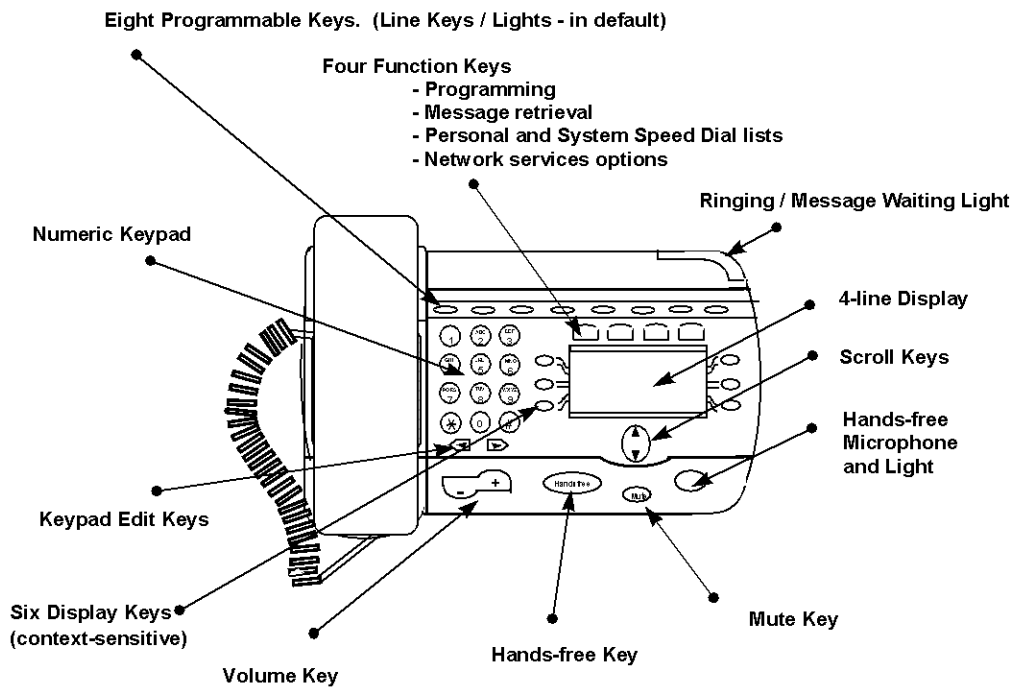


Figure 21: Keystation features

Connecting the Keystation

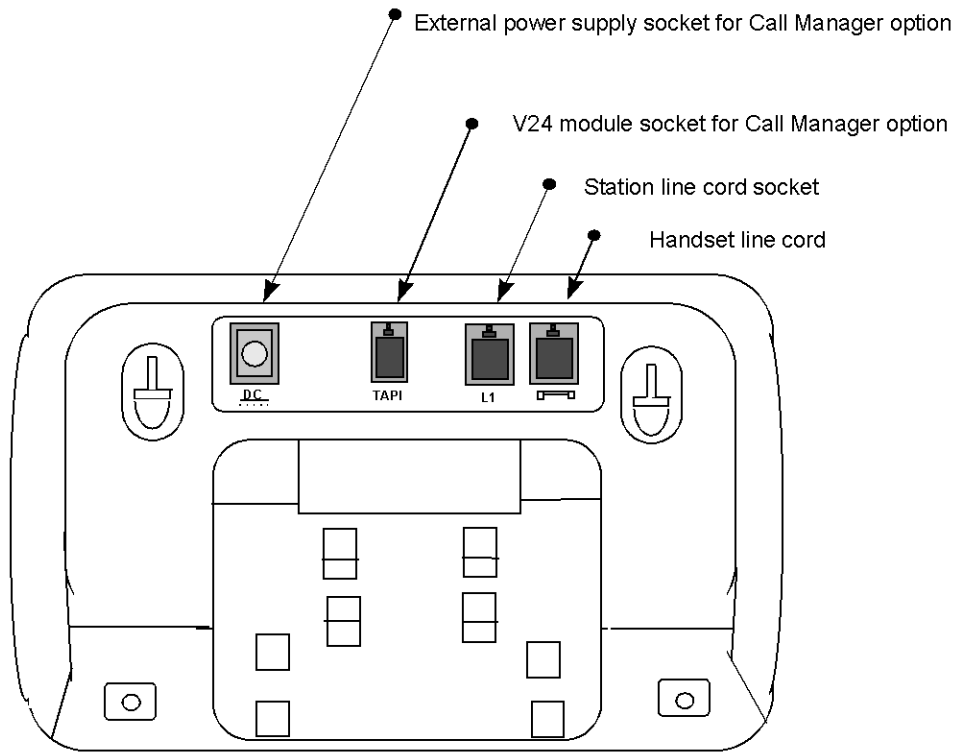
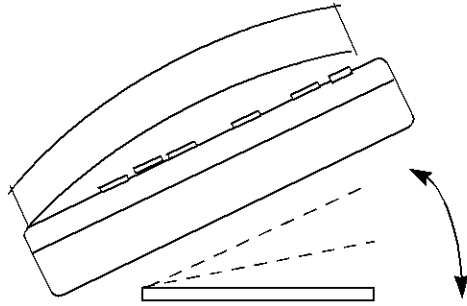
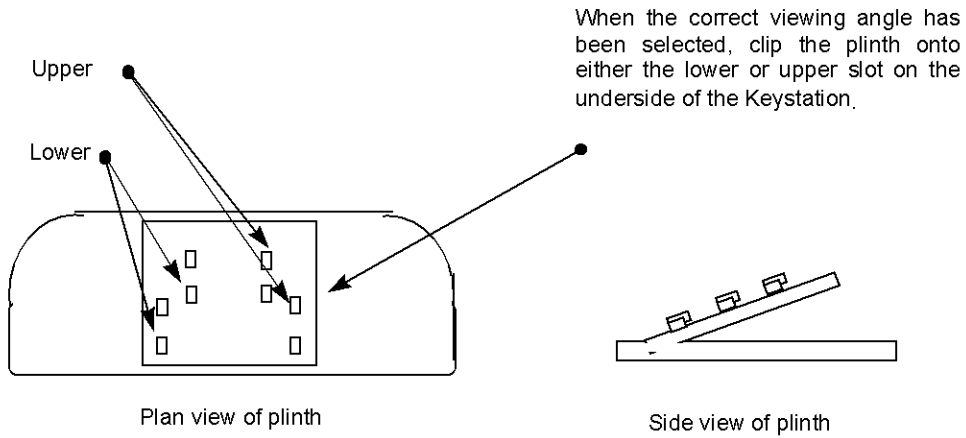


Figure 22: Keystation underside connections

Attaching the Keystation desk plinth



There are retaining clips on the desk plinth which allow the plinth to be set at two angles.



When the correct viewing angle has been selected, clip the plinth onto either the lower or upper slot on the underside of the Keystation.

Figure 23: Attaching a Keystation plinth

Wall-mounting a Keystation

Locate, drill and plug the two screw locations as shown below. The holes should be deep enough to accept a 25 mm screw. Screw in the two screws, leaving 3 or 4 mm protruding. Remove the plinth from the base of the phone and locate the two keyhole slots on the base of the Keystation over the two screws. The plinth is not used.

Locate the two mounting screws 152 mm apart and slide the Keystation down onto them by aligning the screw head retaining holes correctly.



Figure 24: Keystation wall mounting screw locations

The handset retaining clip, located directly below the hook switch, must be reversed so that the handset is secure when the phone is wall-mounted.

Keystation operation during power fail conditions

When planning the Station wiring for the system, consideration should be given to the use of Keystations and standard telephones in power-fail situations.

PSTN

Each board with PSTN exchange Line capability is equipped with a power-fail circuit path. In the event of a total system power failure, at least 50% of the equipped Lines are switched to Stations. Lines 1 and 2 are power-failed to Stations 24 and 25, the last two Stations on the Base Motherboard. Line 5 is power-failed to Station 31 and Line 7 to Station 37, the last Stations on each of the Station Cards. These Line positions are summarised in the table below.

Note: If Lines are power-failed to Station positions equipped with Keystations, the user must replace the Keystation with a standard telephone to answer or make calls.

WARNING: Keystations cannot be used during a power fail situation.

PSTN Line	Power-fail Station
Line 1	Station 24
Line 2	Station 25
Line 5	Station 31
Line 7	Station 37

Table 9: PSTN Line power fail Stations

ISDN

In the event of a power failure, the ISDN Lines will not operate. ISDN devices can be connected directly to the ISDN NTE or an external S-bus, and work independently of the system.

Call Manager

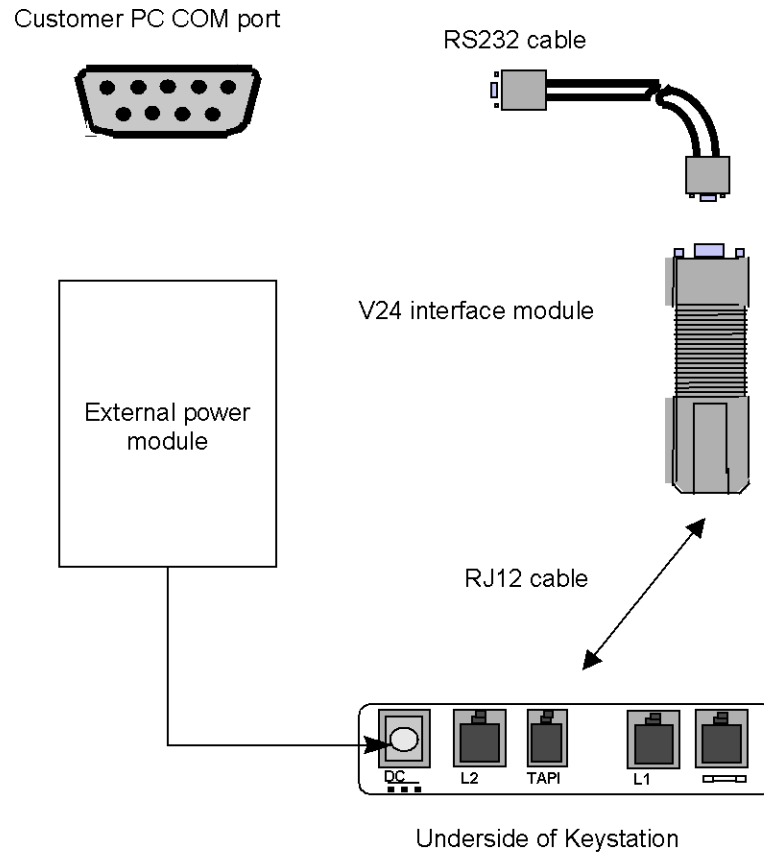


Figure 25: Call Manager installation

Call Manager is a PC-based TAPI application that allows the customer to control their Keystation from a PC. The application is customer-configurable and is loaded from several application disks which the customer receives with their Call Manager equipment.

Note: The local Keystation must be within 3 metres of a mains supply socket in order to operate Call Manager. The Keystation must also be within 3 metres of the local PC in order to connect the communications cables.

The Call Manager kit is composed of:

- A RS-232 serial cable with 9-way connectors (PC to V24 interface module)
- The Call Manager V24 interface module
- A cable equipped with RJ11 connectors (V24 interface module to Keystation)
- Power pack with connector to Keystation
- Disks containing the Call Manager software
- A user guide

The software will run on Windows 95. The minimum recommended hardware on which the application runs is a Pentium P75 with an 8MB PC.

Bit rate:	4800 bit/s full duplex
Flow control:	No Flow Control
Bits:	8 bits/no parity , 1 stop bit
Interface pins:	Transmit, receive, ground

Table 10: Call Manager V24 interface specification

Connecting to the public network

PSTN Lines

The same IDC Krone connector type is used to terminate the exchange Lines as is used to terminate the Stations. The first A&B pair is used to terminate one Line and the second C&D pair is used to terminate a second Line.

PSTN Lines 1 to 4 are terminated in the Main Distribution Frame area of the Base Motherboard as shown in Figure 26 and Lines 5 to 8 are terminated on the two Station Cards as shown in Figure 27.

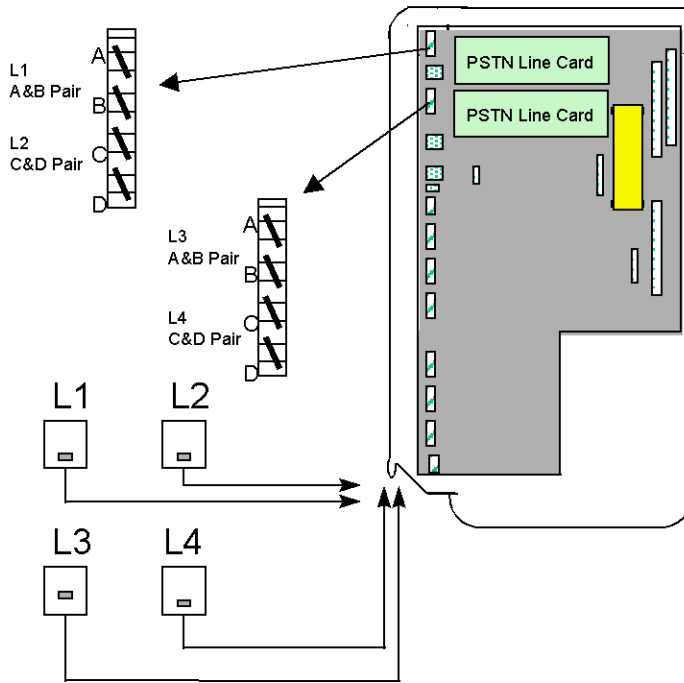


Figure 26: PSTN Lines 1 to 4 termination

The first Station Card provides an IDC Krone connector for Lines 5 & 6 and the second Station Card provides a connector for Lines 7 & 8. The IDC Krone connector on the Station Card is located at position 7. See the Station Card layout in Figure 5 on page 65.

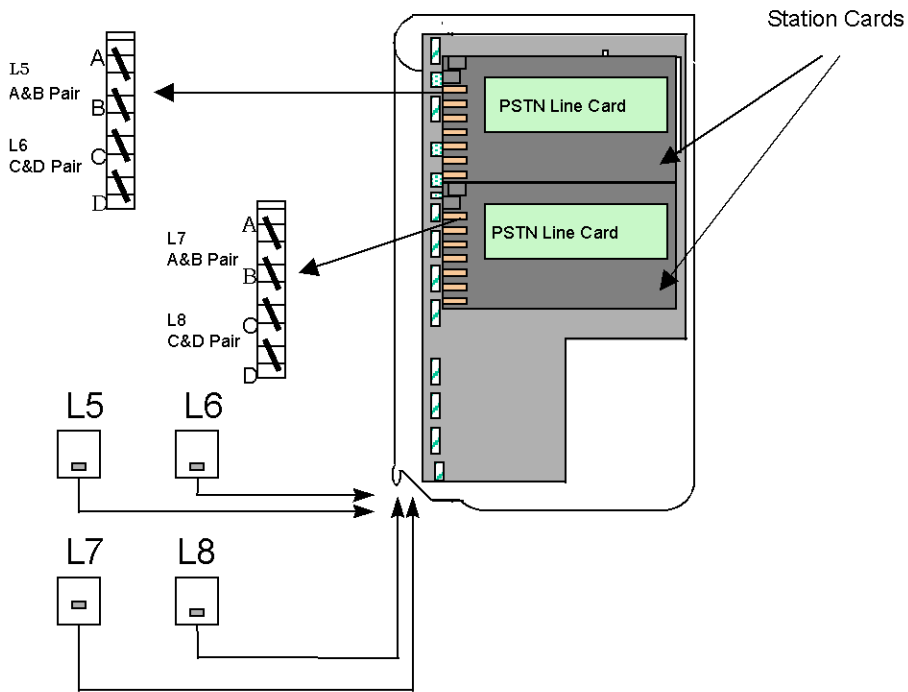
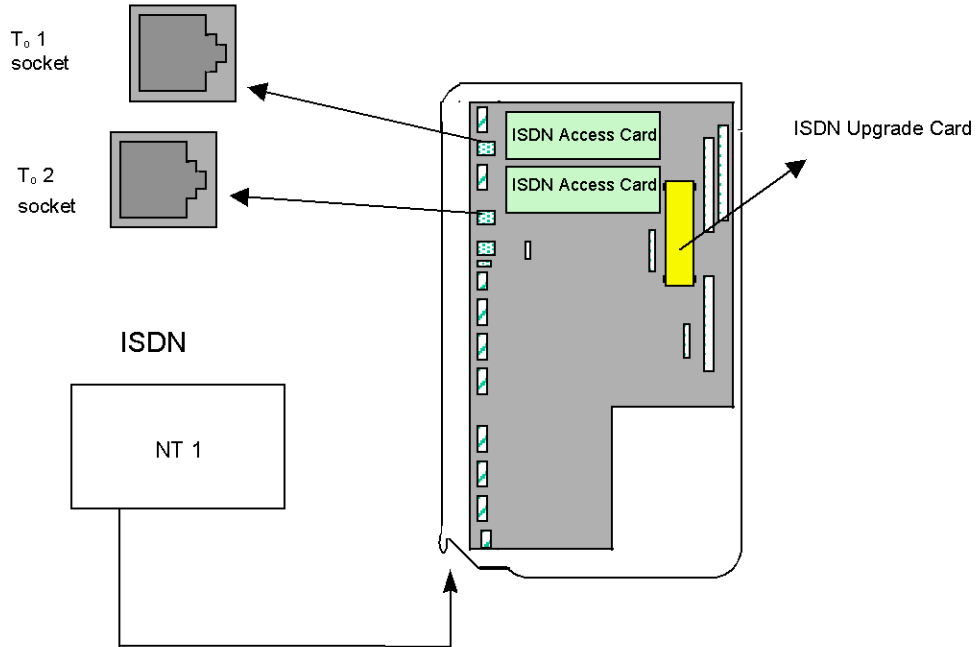


Figure 27: PSTN Lines 5 to 8 termination

ISDN Lines

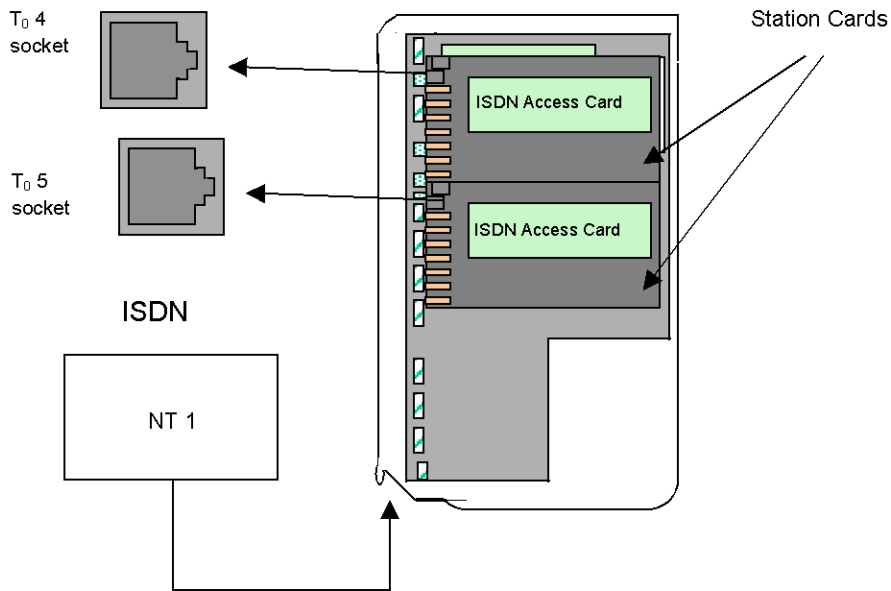
RJ45 connectors are provided on the Base Motherboard and on the Station Cards to terminate ISDN Basic Rate Accesses. Access 1 & 2 must be connected as network T₀ interfaces and are connected to connectors 14 and 15 on the Base Motherboard as shown in Figure 28.



Connect an RJ45 patch cord from the Network Terminator, NT1, to the RJ45 socket on the Base Motherboard

Figure 28: ISDN Access 1 & 2 termination (T₀)

Access 4 & 5 are connected to connector 9 on the two Station Cards as shown in Figure 29. They can be connected as an T_0 interface as in Figure 29 or as an S_0 interface as discussed in the next section.



Connect an ISDN cable from the Network Terminator, NT1, to the RJ45 socket on the Station Card

Figure 29: ISDN Access 4 & 5 termination (T_0)

ISDN S-Bus connection

Up to two S-bus circuits may be connected to the **Commander Vision**. The first S₀ interface must be located in connector 16 on the Base Motherboard, as shown in Figure 30.

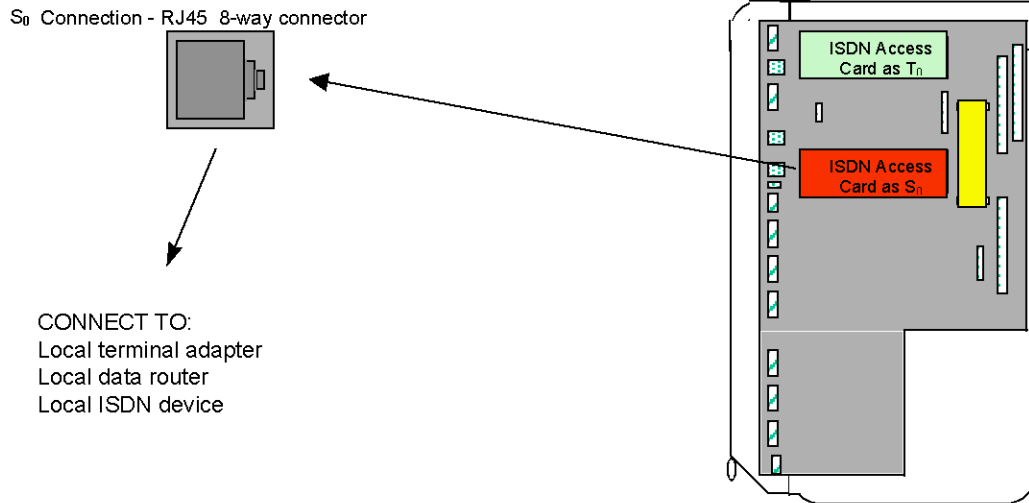


Figure 30: ISDN Access 3 termination (S₀)

Station numbering for up to eight devices connected to the above S₀ interface ranges from 120 to 127.

Cabling:

In Point to Point (P-P) mode , the maximum cabling distance for devices from the S₀ is 800 metres . In Point to MultiPoint mode, the maximum cabling distance for devices is 100 metres.

Terminating:

Both ends of the connection between the device and the S₀ interface show have a terminating resistance of 100 ohms. The S₀ by default has the resistance set.

The second S-bus circuit may be connected to either the first or second Station Card as shown in Figure 31 and Figure 32.

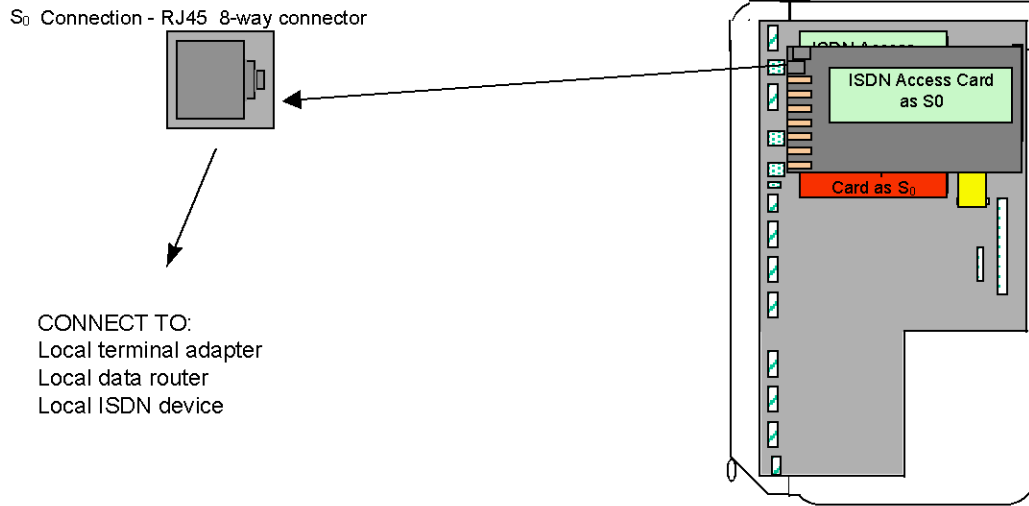


Figure 31: ISDN Access 4 termination (S₀)

Station numbering for up to eight devices connected to the S₀ interface on the first Station Card ranges from 130 to 137.

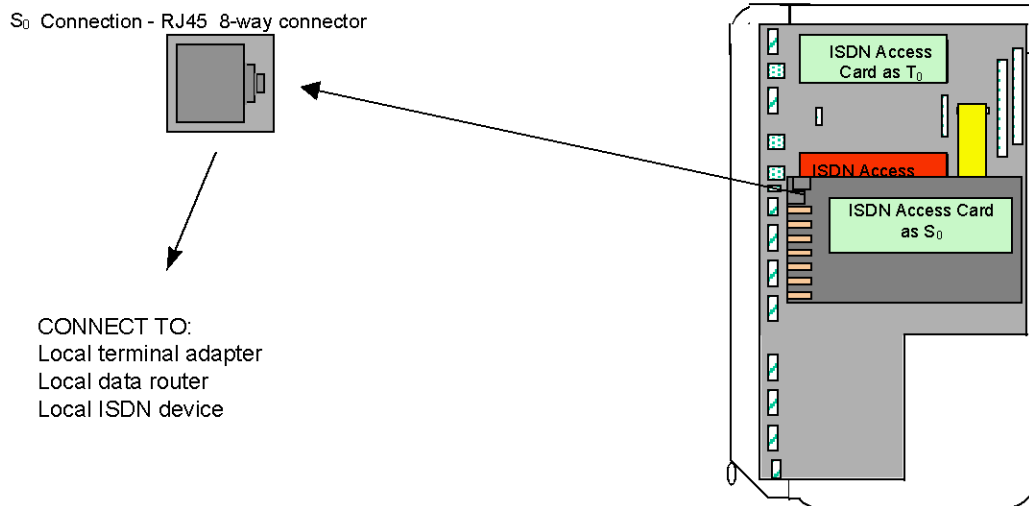


Figure 32: ISDN Access 5 termination

Station numbering for up to eight devices connected to the S₀ interface on the second Station Card ranges from 140 to 147.

Installing the Battery Backup Unit

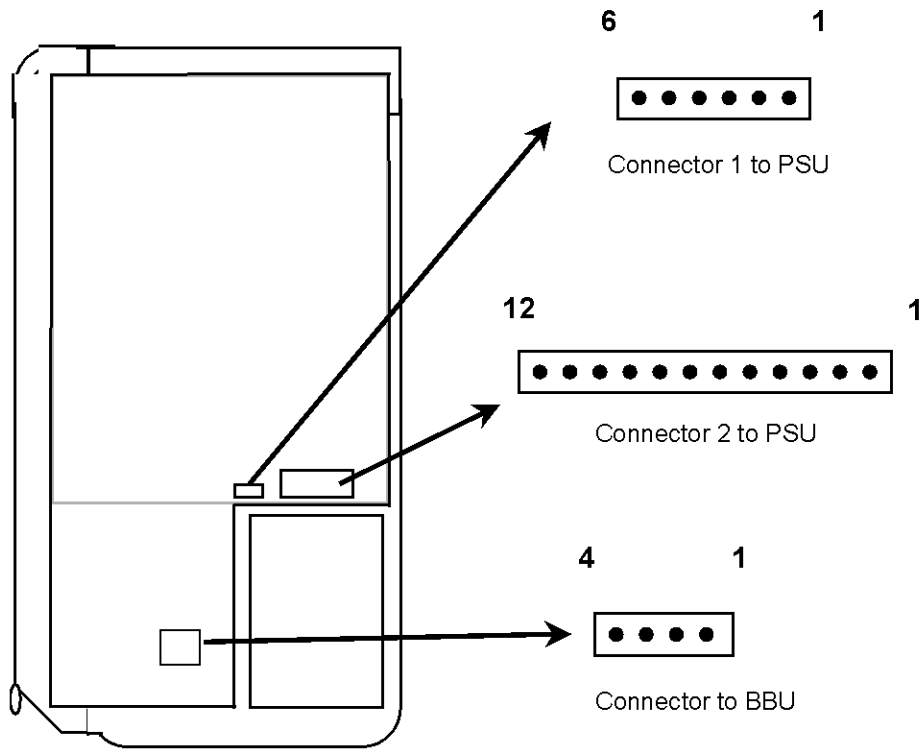


Figure 33: Base Motherboard connectors to the PSU

Power Supply Unit connector 2

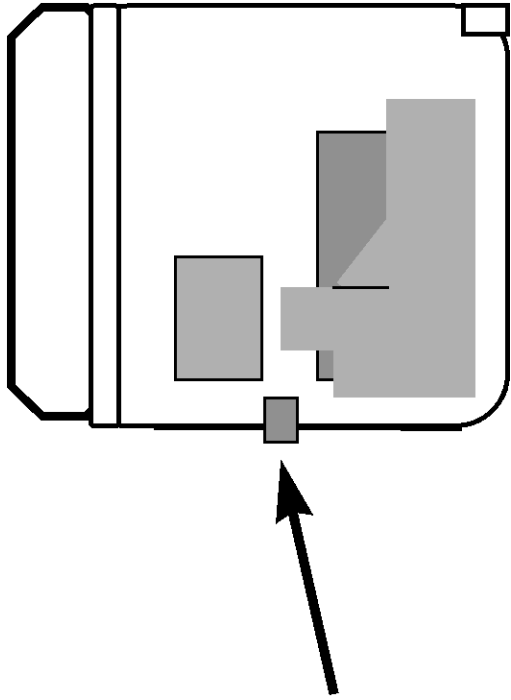
Pin 1	0 Volts
Pin 2	-31 Volts analogue
Pin 3	-40 Volts digital
Pin 4	-35 Volts
Pin 5	-45 Volts
Pin 6	0 Volts protect
Pin 7	Protective earth
Pin 8	-40 Volts analogue
Pin 9	Ringing source
Pin 10	Not connected
Pin 11	-40 Volts protect
Pin 12	0 Volts protect

Battery Backup Unit connector

Pin 1	+43 Volts
Pin 2	Not used
Pin 3	0 Volts
Pin 4	Not used

Table 11: PSU and BBU Connector pin-outs

The Battery Backup Unit fuse



Before connecting or disconnecting the BBU cable remove the fuse (10 Amp 250V) at the bottom of the unit. Replace the fuse ONLY when the BBU cable has been connected or disconnected to/from the Base Motherboard

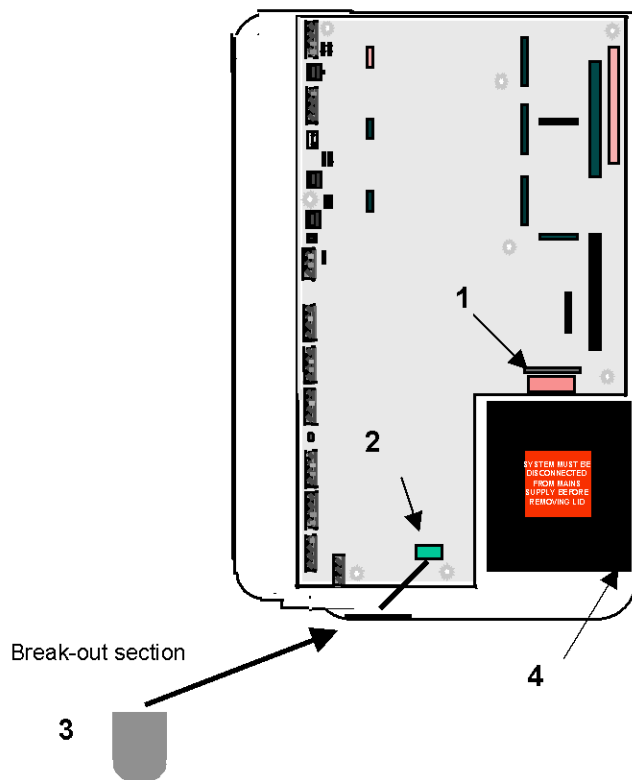
Figure 34: Battery Backup Unit fuse

Connecting the Battery Backup Unit

The Battery Backup Unit connects directly to the Base Motherboard. It is installed as follows:

WARNING: Mains power must be disconnected before removing or installing the Battery Backup Unit.

- Disconnect mains power from the system.
- Remove the breakout section as shown in Figure 35.
- Insert the cable from the BBU through the breakout section and connect to the connector on the Base Motherboard.
- Reconnect mains power to the system.



1. Ribbon cable to Base Motherboard	Connects PSU to the Base Motherboard
2. BBU cable socket	Keyed connector for BBU cable
3. Break-out section for BBU cable	Removable plastic moulding
4. PSU safety cover	Removable when mains supply is disconnected

Figure 35: Connecting the Battery Backup Unit

Mounting the Battery Backup Unit

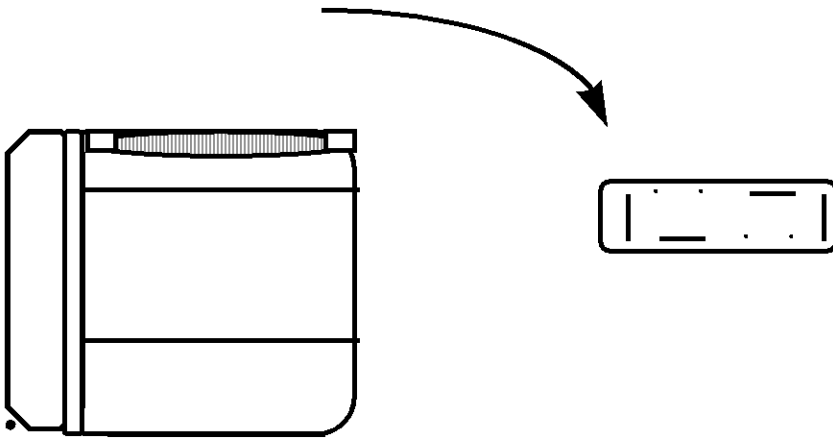


Figure 36: Mounting the Battery Backup Unit

The Battery Backup Unit is mounted on a similar bracket to that as the Main Equipment. (See page 60). There are two screw holes similar to those on the Main Equipment, located on the left-hand side of the Battery Backup Unit base. These screw holes are used to secure the Battery Backup Unit to the wall when it has been positioned correctly on the wall-mounting bracket.

Connecting/disconnecting the battery

The Battery Backup Unit contains a 7.2 AHr rechargeable battery. This battery sits in a bracket within the Battery Backup Unit case.

Insert the battery, bottom-first, into the mounting bracket using clockwise motion. The cable connecting the positive terminal of the battery to the Battery Backup Unit circuit board is attached via the fused keyed connector. Unplug the connector from the circuit board before inserting or removing the battery and then connect/disconnect the battery terminals. When the battery is inserted or removed, reconnect the cable to the circuit board, replace the cover and then replace the fuse in the Battery Backup Unit housing as shown in Figure 34.

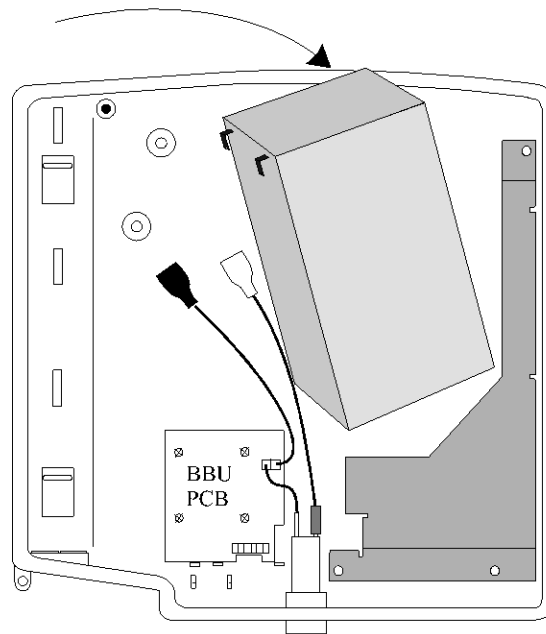


Figure 37: Inserting a battery

Commissioning the system

When the installation is complete, please carry out the following procedures:

Wiring and expansion card insertions

- Using suitable precautions against Electrostatic Discharge, ensure that all system expansion cards are secured correctly and that all column supports are fitted to their relevant positions.
- Visually verify all Krone IDC punch-down terminations on positions fitted with Keystations and standard telephones.
- Ensure there are no screws or metal objects loose within the Main Equipment housing since these may cause damage on power up.
- Refit the Main Equipment cover.

Refitting the Main Equipment cover

Break out sections on the Main Equipment cover allow space for Station Cards to be fitted to the Base Motherboard

When upgrading or refitting modules onto the Base Motherboard, ensure the relevant break out panel has been removed prior to refitting the Main Equipment cover.

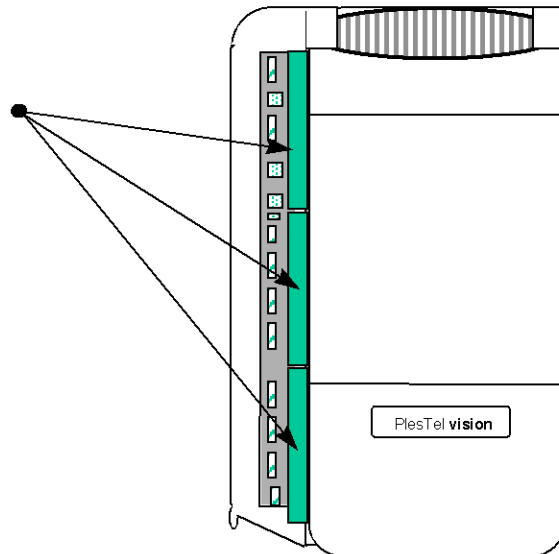


Figure 38: Refitting the Main Equipment cover

Power up and test

- Ensure there is a reliable mains earth in the supply socket outlet.
- Power up the system by inserting the mains plug.
- Wait 8-10 seconds for the system power up routine to be complete. During this period, you will hear several clicks as relays are energised.
- Check that the Vital Activity LED on the Base Motherboard is flashing. (See Figure 39 below).
- The system Keystations display the product name and software revision for about 1.5 seconds.

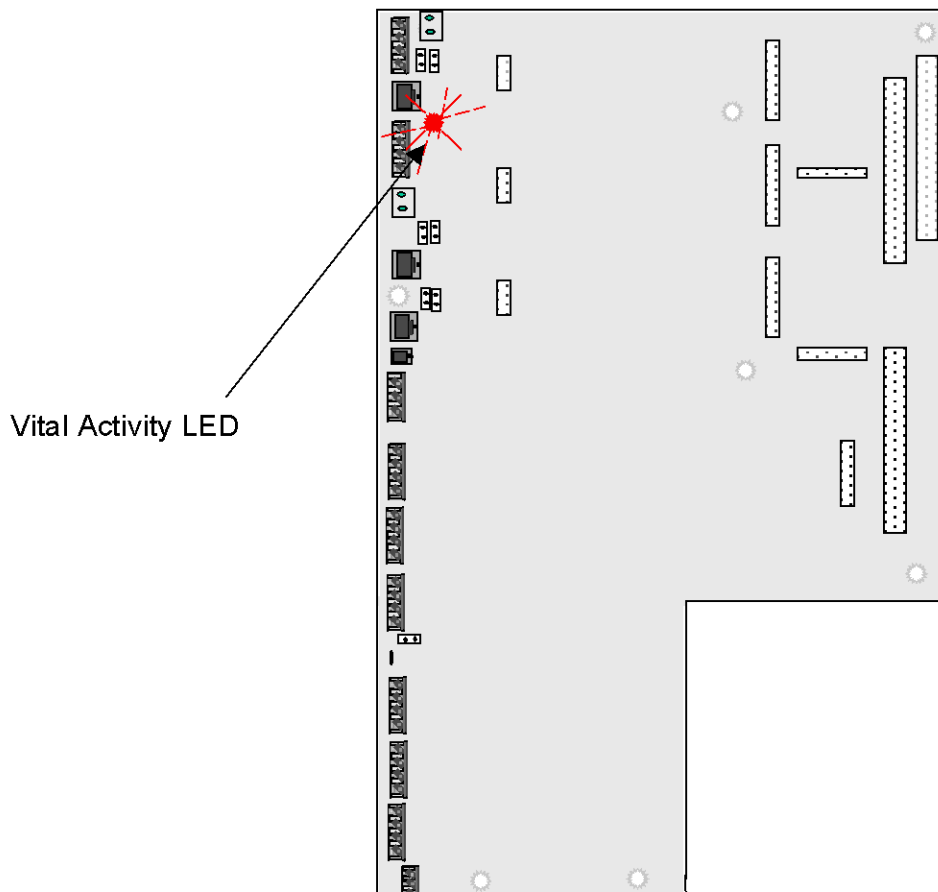


Figure 39: Vital Activity LED

Commissioning

- Remove any anti-scratch protective film from all Keystation displays.
- Label all Keystations.
- Reset the system. (See page 120).
- Ensure that all Keystations provide dialling tone, ringing and hands-free (loud-speaking) facilities. Check that the display is not showing corrupt information.
- Check that all standard telephones are providing dialling tone and ringing facilities.
- Disconnect Line interfaces that have no exchange Lines connected

The system assumes that all PSTN Line Cards have exchange Lines connected to them. If an exchange Line are not connected to a Line interface, disconnect that Line interface in system programming, as follows:

- From the System Programming Station, press the PROGRAMMING Function Key (P) and select 'System programming'.
 - Enter the System Programming Password, (default is 1111), and select 'Lines'.
 - Select 'Equipped lines'.
 - Equipped Lines are denoted by a ◆. Unequipped Lines are denoted by a ◇. Select/deselect as appropriate.
 - Press the Hands-free Key to finish programming.
- Disconnect unused Station positions

The system assumes that all Station positions have devices connected to them. If devices are not connected, disconnect these Stations in system programming, as follows:

- From the Programming Station, press the PROGRAMMING Function Key (P) and select 'System programming'.
 - Enter the System Programming Password, (default is 1111), and select 'Stations'.
 - Select 'Station disconnect'.
 - Connected Stations are denoted by a ◇. Disconnected Stations are denoted by a ◆. Select/deselect as appropriate.
 - Press the Hands-free Key to finish programming.
- Refer to the *Owner's Handbook* for programming information and make essential programming changes from the default as required:
 - Programme incoming ringing and Line access
 - Set up fax machine
 - Set up Voicemail, Answering Machine
 - Program Door Station
 - Program Public Address position
 - Configure ISDN interfaces as P to P or P to MP, and as T₀ or S₀ interfaces
 - Programme ISDN Directory MSN and MSN/DDI index numbers
 - Programme Forward Recall or set up ISDN PABX access

CHAPTER THREE

System Programming

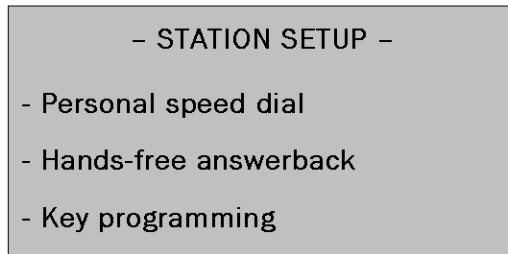
Individual Station programming

All Stations have access to a set of options that can be programmed to suit the individual user's requirements. You access these programming options via the PROGRAMME Key (P) on the Keystation.

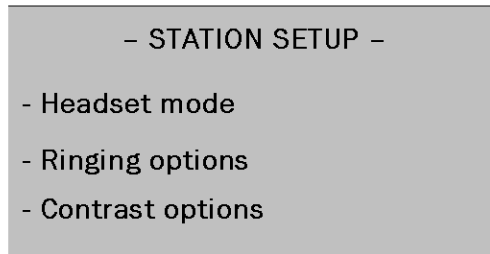
- From the Station you wish to customise, press the PROGRAMME Key P.

The following screens show what appears when the Key is pressed. The menu options displayed, apart from 'System programming', can be accessed and programmed from any Station and are used to configure the individual Station.

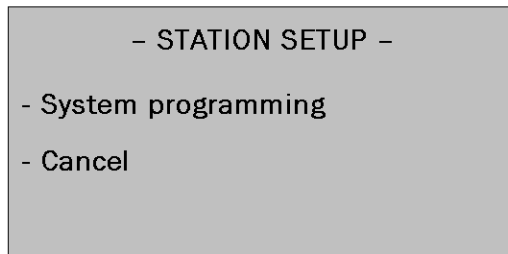
1.



2.



3.



Feature	Default	Notes
Personal speed dial	Not programmed	See page 105.
Hands-free answerback <ul style="list-style-type: none"> • Set h/free answerback • Cancel h/free answerback 	Hands-free answerback off	See page 105.
Key programming	Keys select Lines (if Lines connected)	See page 105.
Headset mode <ul style="list-style-type: none"> • Headset on • Headset off 	Headset mode off	See page 106.
Ringing options <ul style="list-style-type: none"> • Tone 1 • Tone 2 • Tone 3 	Tone 1	See page 106.
Contrast options <ul style="list-style-type: none"> • Level 1 • Level 2 • Level 3 • Level 4 	Level 3	See page 106.

Personal Speed Dial

To make a new entry in your Personal Speed Dial list:

This feature allows you to set up your own Personal Speed dial list of numbers and names. You may programme up to twelve numbers, each with or without a name.

- From your Keystation, press the PROGRAMME Key P.
- Select 'Personal speed dial'. The first three locations will be displayed.
- Select the location you want to programme. Use the Scroll Down Key (▼) to scroll down the locations as required.
- Select 'New entry'.
- Enter the number.
- When the number is entered, select 'Confirm'.
- You are then prompted to enter a name. If you want to do so, follow the instructions on page 19. If you want the number only, press 'Cancel'.

Press the Hands-free Key to finish programming.

Note: When programming a speed dial number, you may insert a pause of 1.5 seconds between digits by selecting 'Pause' on the Display.

Note: A maximum of ten characters per name, including spaces, may be entered.

Handsfree answerback

To turn on Hands-free answerback mode:

You may programme your Keystation to work in Hands-free answerback mode. In this mode the Hands-free Key light flashes red, and when you receive an internal call, you hear a burst of tone and the call is connected automatically. You can speak to the caller without touching the Keystation.

- From your Keystation, press the PROGRAMME Key P.
- Select 'Hands-free answerback'.
- Select the required option - 'Set h/free answerback' or 'Cancel h/f answerback', to set and cancel the Hands-free answerback mode respectively.

Press the Hands-free Key to finish programming.

Key programming

To program a feature onto a Programmable Key on your Station:

You may re-programme any or all of the eight Programmable Keys, located along the top of the Keystation. You can programme these keys to select Lines, Stations, features or speed dial numbers.

- From your Keystation, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'Key Programming' is displayed.
- Select 'Key programming'.
- Press the Programmable Key to be programmed. A list of options appears on the Display.
- Select the required feature to be programmed onto the key. Use the Scroll Down Key (▼) to scroll down to view the list of available features. For example, to programme the key with a speed dial number, select the 'Individual digits' option.

Press the Hands-free Key to finish programming.

Note: If you are programming the key to call an external number remember to precede the number with a 0, or an Outgoing Group code, 81 - 83, or a Line code, 51 - 58, to seize an exchange Line.

Headset Mode

To turn on Headset Mode:

This feature allows you to put your Keystation into Headset Mode, which allows your system to operate with a headset. The Keystation must be equipped with a headset to operate correctly and the headset has to be plugged in instead of the handset. The Hands-free Key is used to answer and make calls.

- From your Keystation, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'Headset Mode' is displayed.
- Select 'Headset mode'.
- Select the required option - 'Headset on' or 'Headset off'. Once selected, the Display will show 'Headset on' or 'Headset off' and then revert to the Idle Menu.

Press the Hands-free Key to finish programming.

Note: The handset does not operate in Headset Mode.

Ringling options

To set a ringing tone on your Keystation:

You can select one of three ringing tones.

- From your Keystation, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'Ringling options' is displayed.
- Select 'Ringling options'.
- Select 'Tone 1', 'Tone 2' or 'Tone 3', which will cause the selected tone to sound.
- Select 'Confirm' to use the chosen tone. On the Display 'Ring type set' will appear and then the Display will revert to the Idle Menu.

Press the Hands-free Key to finish programming.

Contrast options

To set the Display contrast on your Keystation:

You may choose from four levels of display contrast.

- From your Keystation, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'Contrast options' is displayed.
- Select 'Contrast options'.
- Select 'Level 1', 'Level 2', 'Level 3' or 'Level 4' to set a contrast option. The prompt 'Contrast set' appears on the Display.

Press the Hands-free Key to finish programming.

System programming

To enter system programming:

If your Station is the Programming Station, you have access to the system programming options. If you select this option, you will be prompted to enter the System Programming Password. If this option is selected from any other Station, the Display will show 'Programming refused'.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password to access system programming. For more information about system programming, see page 104.

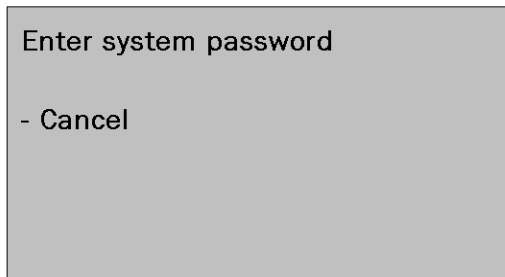
System programming

System programming options can also be programmed via a standard system Keystation. However, the Keystation must be connected to the Station that is programmed to be the Programming Station. By default, the Programming Station is Station 20.

You access all system programming options via the PROGRAMME Key (P) on the Keystation connected to Programming Station .

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed. (The Scroll Up (▲) and Scroll Down (▼) Keys may be used to scroll between the various screens).
- Select 'System programming'. Selecting 'System programming' from any Station other than the programming Station will result in the prompt 'Programming refused' being displayed.

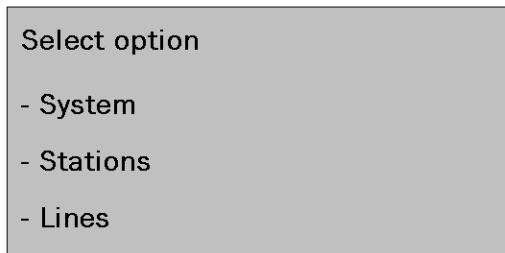
The following screen is displayed:



- Enter the System Programming Password, which is 1111 by default.

Note: You can also enter system programming by dialling ##1111 at the Programming Station and selecting 'Send digits'.

The following screen appears offering options to configure the overall system, the Stations, or the Lines.



- Under 'System', you will find the programming options that affect the system as a whole.
- Under 'Stations', you will find the programming options that affect the Stations.
- Under 'Lines', you will find the programming options that affect the incoming Lines.

System settings

If 'System' is selected the following screens appear:

1.

Select option

- Time and date
- Change password
- Programming position

2.

Select option

- System speed dial
- Night service
- Music on hold

3.

Select option

- Line key light
- Change greetings
- Call logging

4.

Select option

- Timers
- Door station
- PA amplifier

5.

Select option

- CLI store
- Class codes
- Reset options

6.

Select option

- Voice box ports
- Set v24 baud rate
- Cancel

Note: 'Voice box ports' only appears if the Voice Module is installed and the neither Auto-attendant nor Customised Courtesy Service is enabled.

The following table lists the available 'System' options, with their defaults, if applicable.

Feature	Default	Notes
Time and date	12:00 01.01.99	See page 111.
Change password	1111	See page 112.
Programming position	Station 20	See page 113.
System speed dial	None programmed	See page 28.
Night service <ul style="list-style-type: none"> Automatic service Weekend service 	Not programmed	See page 114
Music on hold <ul style="list-style-type: none"> Internal source External source Tone on hold Silence 	Internal source	See page 115
Line key light <ul style="list-style-type: none"> Light flashing on hold Light steady on hold 	Light flashing on hold	See page 115.
Change greetings <ul style="list-style-type: none"> Auto attendant day Auto attendant night Courtesy service day Courtesy service night 	Default messages	See page 116. See page 116.
Call logging <ul style="list-style-type: none"> Call logging off On for all phones 	Call logging off	See page 116.
Timers <ul style="list-style-type: none"> Recall on hold Recall on transfer Divert on no answer Courtesy delay Open the door Door station ring dur. Call park Ringback time duration Ans. machine/AA delay 	30 seconds 30 seconds 10 seconds 30 seconds 5 seconds 30 seconds 180 seconds 30 seconds 10 seconds	See page 117.
Door station <ul style="list-style-type: none"> Door station equipped Door station unequip. 	Door station unequip	See page 119.
PA amplifier <ul style="list-style-type: none"> PA equipped PA not equipped 	PA not equipped	See page 119.
CLI store <ul style="list-style-type: none"> Store all calls Store unanswered calls 	Stores unanswered calls	See page 119.
Class codes <ul style="list-style-type: none"> Table 2 Table 3 Table 5 Table 6 	Not programmed	See page 120.
Reset options <ul style="list-style-type: none"> Reset! Reset to default!! 	Not applicable	See page 120.
Voice box ports <ul style="list-style-type: none"> Port1 Port2 	Even numbered Stations assigned to port 1 Odd numbered stations assigned to port 2 (All on port 2 if Auto-attendant or Customised Courtesy Service programmed)	See page 121.
Se v24 baud rate <ul style="list-style-type: none"> 4800 baud 9600 baud 19200 baud 	19200 baud	See page 121.

Time and date

To set the time and date on the system:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed
- Select 'System programming'.
- Enter the System Programming Password and select 'System'.
- Select 'Time and date'.
- Enter the correct time in 24-hour format, (e.g. 2pm as 1400). The Display will prompt for a date.
 - If you only wish to set the time select 'Confirm' and the Display will revert to the Idle Menu.
 - Enter the date in ddmmyy format, (e.g. 10 December 1999 as 101299). When the date has been entered the Display will revert to the Idle Menu.

Press the Hands-free Key to finish programming.

Note: Following a system reset, the time shown will be 12:00 and the date shown will be 01-01-99.

Note: In the event of a power failure, you will need to reset the time and date.

Note: If the Network Provider supplies the Caller Number Display service (CND) the system time will be updated:

- When the system is reset.
- Following the first incoming call after 03:00 AM daily.

Change Password

To change the System Programming Password:

The default System Programming Password (1111) can be changed to any 4-digit number.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'System'.
- Select 'Change password'.
- Select 'Change' and enter the 4-digit number you require.
- Select 'Confirm'.

Press the Hands-free Key to finish programming.

CAUTION: If you forget the System Programming Password you must call **Commander Service** on 1 300 138899.

Programming options

To change the Programming Station:

System programming can only be carried out at one Keystation, that is, the Keystation connected to the Programming Station. By default, Station 20 is the Programming Station. The Programming Station can be changed to any other Station if required.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'System'.
- Select 'Programming position'.
- Select the Station you wish to have as the Programming Station. The selected Programming Station is denoted by a ◆.

Press the Hands-free Key to finish programming.

System speed dial

To add or delete a System Speed Dial number:

You can programme two hundred system speed dial numbers and names. Users of the system may then access these numbers, provided they are not restricted from dialling the number because of their Class of Service.

For a description of the Class of Service Override facility, see the Call Restrictions section on page 127. This facility allows a Station to access all system speed dial numbers, even though the Station may be restricted from directly dialling a number because of their Class of Service.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'System'.
- Press the Scroll Down Key (▼) until 'System speed dial' is displayed.
- Select 'System dial'.
- Select 'New entry'.
- Enter the index number 001 - 200 and enter the number.
- When the number is entered, select 'Confirm'.
- You are then prompted to enter a name. Do one of the following:
 - Press 'Cancel' if you do not wish to enter a name.
 - Enter a name as described on page 19.

Press the Hands-free Key to finish programming.

Note: Up to twenty-four digits may be stored in any location. A name of up to ten characters, including spaces, can be used for each entry.

Night service

To set the automatic start and end time for Night Service:

The Automatic Night Service feature allows you to set the times at which the system automatically enters Night Service and reverts to Day Service.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'System'.
- Press the Scroll Down Key (▼) until 'Night Service' is displayed.
- Select 'Night Service'.
- Select 'Automatic service'.
- Enter the automatic on and off times in 24-hour clock format, e.g. 2pm is entered as 1400.

Press the Hands-free Key to finish programming.

Note: When ◆ is displayed next to 'Automatic on time' and/or 'Automatic off time', the times have been set.

To cancel the automatic start and end time for Night Service:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'System'.
- Press the Scroll Down Key (▼) until 'Night Service' is displayed.
- Select 'Night Service'.
- Select 'Automatic service'.
- Select 'Automatic on time' to cancel the start time, and 'Automatic off time' to cancel the end time.
- Select 'Change'.
- Select 'Confirm'.

Weekend Night service

To have Night Service remain on over weekends:

The Weekend Service feature ensures that if Night Service is invoked on a Friday evening, the switch remains in Night Service until Monday morning.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'System'.
- Press the Scroll Down Key (▼) until 'Night Service' is displayed.
- Select 'Night Service'.
- Select 'Weekend service'.
- Select 'Weekend service on'.

Press the Hands-free Key to finish programming

Note: To cancel Weekend service, repeat as above, selecting 'Weekend service off' as the last step.

Music on hold

To supply music, tone or silence to callers on hold:

When an external call is placed on hold, you can choose between supplying music, a tone or silence to the caller: The music source can be internal, in which case it is integrated in the system and cannot be changed, or external, in which case an external source must be connected to your system.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'System'.
- Press the Scroll Down Key (▼) until 'Music on Hold' is displayed.
- Select 'Music on hold'.
- Select the option ('Internal Source', 'External Source', 'Tone on Hold' or 'Silence') that you want. The default is 'Internal Source' and the ♦ indicates the current programming setting. Internal callers are always returned 'Tone on Hold'.

Press the Hands-free Key to finish programming.

Note: While the system is in Day Service, if both Music on Hold and Courtesy Service are programmed, the Courtesy Service message and music will be played in rotation to callers on hold. In Night Service, the Courtesy Service message and Tone on Hold will be returned.

Line Key light

To configure Line Key Lights:

When a call is placed on System Hold, you can decide if the associated Line Key Light is to flash or remain steady on all other Keystations. The default setting is that the light flashes.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'System'.
- Press the Scroll Down Key (▼) until 'Line key light' is displayed.
- Select 'Line key light'
- Choose either 'Light flashing on hold' or 'Light steady on hold'.

Press the Hands-free Key to finish programming.

Change greetings

To customise the Auto-attendant message:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'System'.
- Select 'Change greetings'
- Select 'Auto attendant day' or 'Auto attendant night' to record the Day Service and Night Service greetings respectively.
- Select 'Record greeting'.
- When prompted, speak to record the new greeting.

Press the Hands-free Key to finish programming.

To record a customised Courtesy greeting:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'System'.
- Press the Scroll Down Key (▼) until 'Change greetings' is displayed.
- Select 'Change greetings'
- Select 'Courtesy service day' or 'Courtesy service night' to record the Day Service and Night Service greetings respectively.
- Select 'Record greeting'.
- When prompted, speak and record the new greeting.

Press the Hands-free Key to finish programming.

Call logging

To enable/disable Call Logging:

Call Logging is disabled by default on power up. If a Call Logging Interface Module is installed, you should enable Call Logging.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'System'.
- Press the Scroll Down Key (▼) until 'Call logging' is displayed.
- Select 'Call logging'.
- Select either 'On for all phones' or 'Call logging off'.

Press the Hands-free Key to finish programming.

Timers

To set system timers:

You can set various timers from the Programming Station to suit your requirements.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'System'.
- Press the Scroll Down Key (▼) until 'Timers' is displayed.
- Select 'Timers'.
- Select the required timer to be changed and enter the duration. (See table below).
- Confirm the new time.

Press the Hands-free Key to finish programming.

Timers	Range	Default setting
Recall on hold	001 - 180	30 seconds
Recall on transfer	001 - 180	30 seconds
Divert on no answer	01 - 30	11 seconds
Courtesy delay	01 - 30	30 seconds
Open the door	01 - 30	5 seconds
Door Station ring duration	01 - 30	30 seconds
Call park	001 - 600	180 seconds
Ringback time duration	01 - 30	30 seconds
Answer machine / Auto-attendant delay	01 - 30	10 seconds

Recall on Hold

This is the time that elapses before a call, which has been placed on hold, rings back the Station that put the call on hold.

Recall on transfer

This is the time that elapses before a call, which has been transferred and not answered, rings back the Station that attempted the transfer.

Divert on no answer

This is the time that elapses before a call ringing at a Station, with Divert on No Answer set, is diverted.

Courtesy delay

This is the time that elapses before an unanswered incoming call is presented the courtesy message.

Open the door

This is the time that the Doorstrike relay will remain open following activation.

Door Station ring duration

This is the time that Stations will ring when the Door Station is pressed.

Call Park

This is the time that elapses before a call, which has been placed on 'Call park', rings back the Station that parked the call.

Ringback time duration

This is the time a Station will ring when Ringback has been invoked.

Ans. Machine/AA delay

This is the time that elapses before an unanswered incoming call is presented with the answering machine or auto-attendant greeting.

To change the ringing time before calls receive the Courtesy greeting:

You can change the time that a call will ring before being automatically answered by the Courtesy Service, as follows:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'System'.
- Press the Scroll Down Key (▼) until 'Timers' is displayed.
- Select 'Timers'.
- Press the Scroll Down Key (▼) until 'Courtesy Delay' is displayed.
- Select 'Courtesy delay'
- Enter the time required in seconds, (01 - 30).
- Press 'Confirm'.

Press the Hands-free Key to finish programming.

To set the time a call will ring before the Answering Machine answers:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'System'.
- Press the Scroll Down Key (▼) until 'Timers' is displayed.
- Select 'Timers'.
- Select 'Ans. machine/AA delay'
- Enter the time. The default is 010 seconds.

Press the Hands-free Key to finish programming.

Door Station

To set up a Door Station on your System:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'System'.
- Select 'Door station'.
- Select 'Door station equipped'.

Press the Hands-free Key to finish programming.

PA amplifier

To programme a Station for use with a Public Address amplifier:

A Station with a Public Address amplifier connected must first be programmed for use with a PA amplifier.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'System'.
- Press the Scroll Down Key (▼) until 'PA amplifier' is displayed.
- Select 'PA amplifier'.
- Select 'PA equipped'.
- Select the Station to which PA system is connected.

Press the Hands-free Key to finish programming.

CLI store

To programme the CLI Store to store all calls or unanswered calls only:

The system CLI Store can store either all calls or unanswered calls only.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'System'.
- Press the Scroll Down Key (▼) until 'CLI store' is displayed.
- Select 'CLI store'.
- Select 'Store all calls' or 'Store unanswered calls'.

Press the Hands-free Key to finish programming.

Class Codes

To set up Class of Service access tables:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'System'.
- Press the Scroll Down Key (▼) until 'Class codes' is displayed.
- Select 'Class codes'.
- Select the 'Table' to which you want to assign codes. (Table 2, 3, 5, or 6).
- Select an 'index number' and enter the code.
- Select 'Confirm' when the code is entered.

Press the Hands-free Key to finish programming.

Reset options

To reset your system:

There are two system reset options available – a warm and a cold reset. These should be used with extreme care, preferably only as directed by your **Commander** consultant.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'System'.
- Press the Scroll Down Key (▼) until 'Reset options' is displayed.
- Select 'Reset!' or 'Reset to default!'.

CAUTION: These are complete system resets, not individual Station resets.

Selecting 'Reset!' (warm reset) will reset the system and cut off all established calls.

Selecting 'Reset to default!' (cold reset) will reset the system, cut off all established calls *and* remove all programming from the system.

Voice box ports

To swap Station voicemail ports:

The **Commander Vision** Voice Module has two ports for accessing voicemail services. Each Station is assigned to a port, and only one assigned Station can access that port at any one time. The default setting is that Stations with *even* numbers are assigned to port 1, and Stations with *odd* numbers are assigned to port 2. The port to which a Station is assigned may be changed as follows:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'System'.
- Press the Scroll Down Key (▼) until 'Voice box ports' is displayed.
- Select 'Voice box ports'.
- Select 'Port 1' or 'Port 2'.
- Enter the Stations to be assigned to this port.

Press the Hands-free Key to finish programming.

Note: Enabling either Courtesy Service or Auto-attendant dedicates port 1 to this feature alone. All Voice Mailboxes are automatically assigned to port 2 and **all stored mail messages are automatically deleted**, even if all Stations are already assigned to port 2.

Set V24 baud rate

To set the call logging interface speed for connecting a Printer or PC:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'System'.
- Press the Scroll Down Key (▼) until 'Set v24 baud rate' is displayed.
- Select 'Set v24 baud rate'.
- Select which speed you require - 4800, 9600 or 19200 baud.

Press the Hands-free Key to finish programming.

Stations settings

If 'Stations' is selected the following screens appear:

1.

- Select option
- Name programming
 - Restriction classes
 - Tone protect

2.

- Select option
- Page protection
 - General-call protection
 - Open door restriction

3.

- Select option
- Pickup groups
 - 3.1khz stations
 - Individual CLI stores

4.

- Select option
- Sys. speed no. override
 - Voice boxes
 - Station disconnect

5.

- Select option
- Allocating MSN/DDI
 - Permanent CLIR
 - Permanent COLR

6.

- Select option
- No call logging
 - No trunk-to-trunk calls
 - Examine passwords

7.

- Select option
- Restrict use of PA
 - Port swapping
 - Hot line

8.

- Select option
- Manager/secretary
 - Tele-secretary
 - Cancel

The following table lists the available 'Stations' options, with their defaults, if applicable.

Feature	Default	
Name programming	None programmed	See page 124.
Restriction classes <ul style="list-style-type: none"> Day class of service Night class of service 	All Stations in Class 1.	See page 124.
Tone protect	Stations do not accept tone	See page 125.
Page protection	Stations accept paging	See page 136.
General-call protection	Stations accept General calls	See page 136.
Open door restriction	All Stations enabled	See page 126.
Pickup groups <ul style="list-style-type: none"> Pickup group 1 Pickup group 2 Pickup group 3 Pickup group 4 	All Stations in group 1	See page 136.
3.1khz stations	Not programmed	See page 126.
Individual CLI stores	No stores programmed	See page 127.
Sys. speed no. override	No override programmed	See page 127.
Voice boxes	Not programmed	See page 136.
Station disconnect	All Stations connected	See page 128.
Allocating MSN/DDI	Not programmed	See page 129.
Permanent CLIR	Not programmed	See page 129.
Permanent COLR	Not programmed	See page 130.
No call logging	Not programmed	See page 116.
No trunk-to-trunk calls	Not programmed	See page 130.
Examine passwords <ul style="list-style-type: none"> Station lock password Voice mail password Answering machine 	Default 123 Default 1111 Default 1111	See page 131.
Restrict use of PA	All Stations can make announcements	See page 131.
Port swapping	Not programmed	See page 132.
Hot line	Not programmed	See page 132.
Manager/secretary	Not programmed	See page 136.
Tele-secretary <ul style="list-style-type: none"> Tele-secretary on Tele-secretary off 	Tele-secretary off	See page 52.

Name programming

To assign a name to a Station:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Select 'Name programming'.
- From the Station Menu, select the Station you want to name and enter the name as described on page 19. Up to ten characters (including spaces) can be entered for each name.
- When the name is entered, select 'Confirm'. You will be presented with the Station Menu and can continue programming other names.

Press the Hands-free Key to finish programming.

Restriction classes

To restrict Station outgoing calls during the day:

With this feature, you can assign the Stations to a Class of Service that will operate when the system is in Day Service. On power-up, all Stations are in Class 1.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Select 'Restriction classes'.
- Select 'Day Class of Service'.
- Select the Class you want to assign to the Stations, (Class 1 - Class 6).
- Select the Stations to be entered in this Class.

Press the Hands-free Key to finish programming.

To restrict Station outgoing calls during the night:

With this feature, you can assign the Stations to a Class of Service that will operate when the system is in Night Service. On power-up, all Stations are in Class 1.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (□) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Select 'Restriction classes'.
- Select 'Night Class of Service'.
- Select the Class you want to assign to the Stations, (Class 1 - Class 6).
- Enter the Stations to be entered in this Class.

Press the Hands-free Key to finish programming.

Tone protect

To programme a Station to receive Call Waiting tones:

- From the Programming Station, select the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Press the Scroll Down Key (▼) until 'Tone protect' is displayed.
- Select 'Tone protect'
- Select the Stations you wish to allow receive Call Waiting tones. A ◇ is displayed beside those Stations allowed to receive Call Waiting tones, and a ◆ is displayed beside those Stations protected against receiving Call Waiting tones. (By default, all stations will have a ◆ displayed).

Press the Hands-free Key to finish programming.

Page protection

To protect Keystations against Announcements and Voice Calls:

By default, all Keystations may be paged. You can page-protect each Keystation to prevent it from being paged from either Announcements or Voice Calls.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Select 'Page protection'
- Select the Stations you wish to protect. A ◆ will be displayed beside protected Stations.

Press the Hands-free Key to finish programming.

General call protection

To exclude Stations from being dialled by a General Call:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Press the Scroll Down Key (▼) until 'General call protection' is displayed.
- Select 'General call protection'.
- From the Station Menu, select those Stations that are to be protected from a General Call. The Stations that are protected will have a ◆ displayed beside them.

Press the Hands-free Key to finish programming.

Open door restriction

To programme which Stations can operate the Doorstrike:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Press the Scroll Down Key (▼) until 'Open door restriction' is displayed.
- Select 'Open door restriction'.
- Select which Stations are restricted from opening the door. The Stations restricted from operating the Doorstrike will be indicated with a ◆.

Press the Hands-free Key to finish programming.

Pick-up groups

To set up Pick-up Groups:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Press the Scroll Down Key (▼) until 'Pick-up groups' is displayed.
- Select 'Pick-up groups'.
- Select the Pick-up Group you wish to set up.
- From the Station Menu, allocate Stations to the group by selecting the appropriate Stations on the Display. The Stations allocated to the group will have a ◆ displayed beside them.

Press the Hands-free Key to finish programming.

Note: You can programme up to four Pick-up Groups. A Station can be placed into only one Pick-up Group.

3.1 Khz station

To programme Stations to have a minimum 3.1kHz bandwidth:

This feature allows Stations to be programmed to have a minimum speech bandwidth of 3.1kHz. This is used when a modem or fax machine is connected to a Station and the unit is equipped with ISDN Lines.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Press the Scroll Down Key (▼) until '3.1kHz stations' is displayed.
- Select '3.1kHz stations'.
- Select the Stations on which you wish to enable the feature. The Stations with the feature enabled are indicated by a ♦.

Press the Hands-free Key to finish programming.

Individual CLI store

To set up Stations with an individual CLI Store:

You can programme up to twelve Stations to store five numbers each. Each of these Stations will have a separate record of calls that ring on exchange Lines programmed to ring their Stations only.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Press the Scroll Down Key (▼) until 'Individual CLI stores' is displayed.
- Select 'Individual CLI stores'.
- Select the Stations that you wish to have an individual CLI Store. The Stations that will have a CLI Store will have a ♦ displayed beside them.

Press the Hands-free Key to finish programming.

System speed dial number override

To allow Stations use System Speed Dials overriding call restrictions:

You may wish to allow Stations to dial numbers, entered in the System Speed Dial list, which they are restricted from dialling directly. For example, these could be numbers that Stations in Classes 2, 3 or 4 cannot dial directly. Entering these numbers into the System Speed Dial list and activating this feature on the Stations, allows the restricted Stations to access these numbers.

By default, this feature is not activated on any Station.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Press the Scroll Down Key (▼) until 'Sys. Speed no. override' is displayed.
- Select 'Sys. speed no. override'.
- Select the Stations on which you wish to activate the feature. Those Stations allowed to dial System Speed Dial numbers not normally appropriate to their Class of Service are indicated by a ♦.

Press the Hands-free Key to finish programming.

Note: Numbers on a Station's Personal Speed Dial list cannot override the Class of Service restriction of the Station.

Voice boxes

To allocate a Voice Mailbox to a Station:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Press the Scroll Down Key (▼) until 'Voice boxes' is displayed.
- Select 'Voice boxes'
- Enter the Stations to be allocated a Voice Mailbox. Those Stations allocated a box will be indicated by a ◆.

Press the Hands-free Key to finish programming.

Station disconnect

To configure disconnected Stations:

The system assumes that all available Station interfaces have devices connected to them. If a Station interface does not have a device connected, ensure correct system operation by disconnecting the Station interface in system programming, as follows

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Press the Scroll Down Key (▼) until 'Station disconnect' is displayed.
- Select 'Station disconnect'.
- Select the Stations you wish to connect or disconnect. Disconnected Stations are denoted by a ◆.

Press the Hands-free Key to finish programming.

Note: When a Keystation is connected to a Station interface that is programmed as disconnected, the Keystation's Display may appear as if the Keystation is connected. However, when the handset is lifted a busy tone is heard and no options will be displayed.

Allocating MSN/DDI

To programme an MSN/DDI number with a name and have it ring a Station:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Press the Scroll Down Key (▼) until 'Allocating MSN/DDI' is displayed.
- Select 'Allocating MSN/DDI'.
- Enter the MSN Index (01 - 40) you wish to programme.
- Enter the MSN/DDI telephone number (as supplied by your Network Provider). A total of fifteen digits can be entered.
- Select 'Confirm'.
- Select the Station(s) to ring for this number. Stations selected to ring will be indicated by a ◆. Select 'Confirm' when you have selected the Station(s).
- You will receive the prompt 'Enter name' and the menu options 'Confirm', and 'Cancel'.
 - Press 'Confirm' to proceed to programming the next MSN Index without entering a name.
 - If you wish to associate a name with the MSN/DDI number you may enter a name as described on page 19. Press 'Confirm' when finished entering the name to move to the next MSN Index. Press 'Cancel' to proceed to programming the next MSN Index without entering a name.

Press the Hands-free Key to finish programming.

Note: Up to eighteen Stations can be associated with each MSN/DDI number. Station 20 is allocated by default to each MSN/DDI number. If you not wish Station 20 to ring, Station 20 must be removed. If an attempt is made to remove Station 20 without programming another Station, the prompt 'Minimum reached' will be displayed and Station 20 will remain programmed. Similarly, if an attempt is made to remove a single Station, the same prompt will be given.

Note: CLI Store routing will take precedence over MSN/DDI routing or normal call routing. Refer to page 30 for information on CLI Store.

Permanent CLIR

To prevent numbers being sent on all Station calls :

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Press the Scroll Down Key (▼) until 'Permanent CLIR' is displayed.
- Select 'Permanent CLIR'.
- Select the Stations whose numbers you do not wish to send to the network. The Stations that will not have their numbers presented are indicated with a ◆.

Press the Hands-free Key to finish programming.

Permanent CLOR

To prevent numbers being sent when answering a call on all Stations:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System Programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Press the Scroll Down Key (▼) until 'Permanent COLR' is displayed.
- Select 'Permanent COLR'.
- Select the Stations whose numbers you do not wish to send to the network. The Stations that are selected are indicated with a ◆.

Press the Hands-free Key to finish programming.

Note: This service is currently not available on the Australian network.

No Call logging

To prevent calls from individual Stations being logged:

If Call Logging is enabled, then by default all calls from all Stations will be logged. However individual Stations can be programmed to prevent their calls being logged.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Press the Scroll Down Key (▼) until 'No call logging' is displayed.
- Select 'No call logging'.
- Select the Stations whose calls are not to be logged. The selected Stations will be indicated with a ◆.

Press the Hands-free Key to finish programming.

No trunk-to-trunk calls

To prohibit trunk-to-trunk calls on a Station:

You may prohibit individual Stations from activating External Divert, External Transfer and External Conference. (These features set up so-called trunk-to-trunk calls).

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Press the Scroll Down Key (▼) until 'No trunk-to-trunk calls' is displayed.
- Select 'No trunk-to-trunk calls'.
- Select the Stations to be denied this feature. Those Stations denied the feature are indicated by a ◆.

Press the Hands-free Key to finish programming.

Examine passwords

To examine system passwords:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Press the Scroll Down Key (▼) until 'Examine passwords' is displayed.
- Select 'Examine passwords'.
- Select either 'Station lock password', or 'Voice mail password', or 'Answering machine'.
 - If you selected 'Station lock password', the Station menu will appear. Select a Station and its Station Lock Password will appear on the Display.
 - If you selected 'Voice mail password', the Station menu will appear. Select a Station and its Voicemail Password will appear on the Display.
 - If you selected 'Answering machine', the Answering Machine Password appears on the display.

Press the Hands-free Key to finish programming.

To check all Voicemail Passwords:

All Station Voicemail Passwords can be examined from the Programming Station.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Select 'Examine passwords'.
- Select 'Voice mail password'.
- Select the Station whose password you wish to examine. The Voicemail Password of that Station is briefly displayed on the top line of the Display.

Press the Hands-free Key to finish programming.

Restrict use of PA

To prevent Stations from using the Public Address system:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Press the Scroll Down Key (▼) until 'Restrict use of PA' is displayed.
- Select 'Restrict use of PA'.
- Select the Stations you wish to prevent from using the PA system. A ♦ is displayed beside the Stations which are restricted.

Press the Hands-free Key to finish programming.

Port swapping

To move a faulty Station:

If a Station interface becomes faulty, you can swap its Station programming to a different Station. Calls for the faulty Station will be routed to the new Station.

- From the Programming Station, press the PROGRAMME Key P.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Press the Scroll Down Key (▼) until 'Port Swapping' is displayed.
- Select 'Port swapping'.
- Select the faulty Station from the Station list.
- Select the new Station from the Station list.

Press the Hands-free Key to finish programming.

Hot line

To have a Station dial a number automatically, when the handset is lifted:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Press the Scroll Down Key (▼) until 'Hot line' is displayed.
- Select 'Hot line'.
- Select the Station from the Station Menu.
- Enter the number to be dialled. If you wish to dial an external number, enter 0, or another Line access code, before the external telephone number, to seize a Line.

Press the Hands-free Key to finish programming.

Note: When a Keystation is programmed as a Hot Line, no other facilities can be invoked after it is programmed. As soon as you go off-hook on the Keystation, the number is dialled.

Note: A common application for the Hot Line feature is for a fax or modem. The Station can be set to automatically seize an exchange Line so the fax or modem does not have to dial 0.

Manager/secretary

To set up Manager/Secretary combinations:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Press the Scroll Down Key (▼) until 'Manager/secretary' is displayed.
- Select 'Manager/secretary'.
- Select the Secretary Station. When selected, the menu changes to allow you to select the Manager Station(s).
- Select the Manager Station(s). Manager Stations will be indicated by a ♦ alongside. (If the Station has been combined previously with a Secretary, the existing Manager Stations will be indicated with a ♦. Selecting a Station with a ♦ will remove that Station as a Manager of that Secretary.)

Press the Hands-free Key to finish programming.

Tele secretary

To allow a Station see who an incoming call is for:

You must first associate names with MSN/DDI numbers and then enable the Tele-secretary feature in system programming.

- Associate names with the MSN/DDI numbers you want to recognise and programme the Station to ring for these numbers, as described on page 129.
- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Stations'.
- Press the Scroll Down Key (▼) until 'Tele-secretary' is displayed.
- Select 'Tele-secretary on' or 'Tele-secretary off' to activate and deactivate the feature respectively.

Press the Hands-free Key to finish programming.

Lines settings

If 'Lines' is selected the following screens appear:

1.

Select option

- Day ringing stations
- Night ringing stations
- Day central bell

2.

Select option

- Night central bell
- Outgoing restriction
- Equipped lines

3.

Select option

- Incoming calls only
- Outgoing groups
- PABX group

4.

Select option

- Hunt groups
- Answering machine
- Courtesy service

5.

Select option

- Program CLI no.
- Alternative routing
- Auto attendant

6.

Select option

- PSTN programming
- ISDN programming
- Cancel

The following table lists the available 'Lines' options, with their defaults, if applicable.

Feature	Default	Notes
Day ringing stations	20 - 25 programmed	See page 136.
Night ringing stations	20 - 25 programmed	See page 136.
Day central bell	Not programmed	See page 136.
Night central bell	Not programmed	See page 136.
Outgoing restriction	No restrictions	See page 137.
Equipped lines	All Lines equipped	See page 137.
Incoming calls only	No restrictions	See page 136.
Outgoing groups Outgoing group 1 (0) Outgoing group 2 (81) Outgoing group 3 (82) Outgoing group 4 (83)	All Lines in group 1	See page 138.
PABX group	Not programmed	See page 50.
Hunt groups	No hunt groups	See page 140.
Answering machine	Not programmed	See page 136.
Courtesy service Voice module source Internal source	Not programmed	See page 141.
Programme CLI no.	Not programmed	See page 129.
Alternative routing Alternative routing on Alternative routing off	Alternative routing off	See page 142.
Auto attendant Auto attendant day Auto attendant night	Auto-attendant not enabled	See page 143.
PSTN programming Timed break Loop calling Reversal on Idle CND Detection Fax detection	All timed break None None None None	See page 143. See page 144. See page 144. See page 144. See page 136. See page 146.
ISDN programming P->P or P->MP T or S interface Directory MSNs ISDN PABX	P->P is set All set as T interfaces Not programmed Not programmed	See page 146.

Day and Night ringing stations

To programme which Stations ring for incoming calls:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Lines'.
- Select 'Day ringing stations' or 'Night ringing stations' to configure the system for day and night operation respectively.
- The Line Menu is presented. Select the first Line you want to programme.
 - The Station Menu is presented. Select the Stations that are to ring for calls on that Line. Stations that will ring are indicated with a ◆. When you have selected the Stations, scroll to the end of the Station list and press 'Cancel' or press the Scroll Up Key (▲) for two seconds.
- The Line Menu is presented again. Select the next Line and repeat the programming until all the Lines are programmed.
- If the system is equipped with a Door Station, you may select 'Door station' and then select the Stations that the Door Station will ring.

Press the Hands-free Key to finish programming.

To allocate a Line and a Station to a fax machine:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Lines'.
- Select 'Day ringing station'.
- From the Line Menu, select the Line to be allocated as a fax line.
- From the Station Menu, select the Station with the fax machine. Ensure that the Station with the fax machine is the only Station with a ◆ displayed alongside.
- Press the Scroll Up (▲) Key for two seconds, or scroll down to the end of the menus and select 'Cancel'. This returns you to the Line Menu. Press the Scroll Up (▲) Key again for two seconds, or scroll to the end of the menus and select 'Cancel'.

Press the Hands-free Key to finish programming.

To set up which Stations the Door Station will ring:

You can choose which Stations will ring upon calling from the Door Station, for either Day or Night Service.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Lines'.
- Press the Scroll Down Key (▼) until 'Day ringing Stations' or 'Night ringing Stations' is displayed.
- Select 'Day ringing Stations' or 'Night ringing Stations' to programme the Stations that will ring during Day Service and Night service respectively.
- Select 'Door Station'.
- Select the Stations that will ring when a visitor calls from the Door Station.

Press the Hands-free Key to finish programming.

Day and Night central bell

To programme which Lines ring the Central Bell:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Lines'.
- Select 'Day central bell' or 'Night central bell' to configure the Central Bell for day and night operation respectively.
- The Line Menu is presented. Select the Lines you wish to ring the Central Bell. The Lines that will ring the Central Bell are indicated with a ◆. If the system is equipped with a Door Station, you may also select 'Door station' from this menu. The Door Station will then ring the Central Bell.

Press the Hands-free Key to finish programming.

Outgoing restriction

To restrict a Station from accessing a particular exchange Line:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Lines'.
- Press the Scroll Down Key (▼) until 'Outgoing restriction' is displayed.
- Select 'Outgoing restriction'.
- Select the Line.
- Select the Stations to be prevented from accessing that Line. A ◆ is displayed alongside those Stations that are restricted from accessing the Line, and a ◇ is displayed alongside those Stations that have access to the Line.

Press the Hands-free Key to finish programming.

Equipped lines

To configure unequipped Line interfaces:

The system assumes that available Line interfaces have exchange lines connected to them. If a Line interface does not have an exchange line connected, ensure correct system operation by unequipping the Line interface in system programming, as follows:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Lines'.
- Press the Scroll Down Key (▼) until 'Equipped Lines' is displayed.
- Select 'Equipped lines'.
- Select the Lines you wish to equip or unequip. Equipped Lines are denoted by a ◆. Unequipped Lines are denoted by a ◇.

Press the Hands-free Key to finish programming.

Incoming calls only

To programme exchange Lines to be used for incoming calls only:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Lines'.
- Press the Scroll Down Key (▼) until 'Incoming calls only'.
- Select 'Incoming calls only'.
- Select the Lines that are to be used for incoming calls only. Lines programmed for incoming calls only will be indicated by a ◆ alongside.

Press the Hands-free Key to finish programming.

Outgoing groups

To programme Lines into groups for access using the codes 0, 81, 82, 83:

Exchange Lines can be grouped together into up to four Outgoing Groups. Each Outgoing Group is associated with a code. These codes are 0, 81, 82, and 83, with Group 1 being associated with 0, etc. Dialling a code seizes a Line from the associated Outgoing Group.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Lines'.
- Press the Scroll Down Key (▼) until 'Outgoing groups' is displayed.
- Select 'Outgoing groups'.
- Select the Group you wish to set up. Up to four Groups can be set up, each with a corresponding access code – 0, 81, 82 or 83.
- Select the Lines to be in the Group. The Lines in the Group are indicated by a ◆.

Press the Hands-free Key to finish programming.

Note: Lines can be in one Outgoing Group only. Selecting a Line to be a member of a Group automatically removes it from all other Groups.

PABX group

To programme PABX Access digits:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System Programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Lines'.
- Press the Scroll Down Key (▼) until 'PABX group' is displayed.
- Select 'PABX group'.
- Select which Outgoing Group you wish to use. You are then presented another menu with which to programme the parent PABX Access digits.
 - Select 'Set/clear PABX status' to set or clear the selected Outgoing Group as a PABX Group. A confirmation prompt appear momentarily on the top line of the Display
 - Select 'Access digits'. Enter the 'Access digits' for an external Line on the parent PABX and select 'Confirm'.
 - Select 'Stn. num. length'. Enter the number of digits in the Station numbers on the parent PABX.

Press the Hands-free Key to finish programming.

Hunt groups

To set up a Hunt Group:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Lines'.
- Press the Scroll Down Key (▼) until 'Hunt Groups' is displayed.
- Select 'Hunt groups'
- Select the Hunt Group you wish to set up. Up to four Hunt Groups can be set up. (To select Hunt Group 4, press the Scroll Down Key (▼) and select 'Hunt group 4').
- Select the Stations to be in the group. When completed, press the Scroll Down Key (▼) until 'Cancel' is displayed, and press 'Cancel' to quit the Station Menu.
- Select the Lines that are to be used with the Hunt Group.

Press the Hands-free Key to finish programming.

Note: The Lines and Stations programmed in a Hunt Group are exclusive to that Hunt Group and cannot be placed in another Hunt Group.

Note: Calls can be transferred to an individual Station in a Hunt Group from a Station outside the Hunt Group, but not to the Hunt Group as a whole.

Answering Machine

To programme Lines to be answered by the Answering Machine:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Lines'.
- Press the Scroll Down Key (▼) until 'Answering Machine' is displayed.
- Select 'Answering Machine'
- Select the Lines to be answered by the Answering Machine. The Lines that will be answered are indicated by a ◆.

Press the Hands-free Key to finish programming.

Courtesy service

To have callers automatically receive a Courtesy greeting:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Lines'.
- Press the Scroll Down Key (▼) until 'Courtesy Service' is displayed.
- Select 'Courtesy Service'
- Select the source for the message. 'Internal source' is the default.
- Select 'Courtesy Service day' or 'Courtesy Service night'.
- Select the Lines that are to be answered by the Courtesy Service. The Lines that are programmed to be answered are indicated by a ◆.

Press the Hands-free Key to finish programming.

Note: The 'Voice module source' is only available when a Voice Module is installed. (See page76).

To have callers receive a customised Courtesy greeting:

When a Voice Module is installed, you can program the Courtesy Service feature to select the Voice Module as the source of the message. This allows you to customise the Courtesy Service by recording the message you wish returned to the caller.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Lines'.
- Press the Scroll Down Key (▼) until 'Courtesy Service' is displayed.
- Select 'Courtesy Service'
- Select 'Voice module source' as the source for the message.
- Select 'Courtesy Service day' or 'Courtesy Service night'. (You can set up the customised Courtesy Service on either, or both Day and Night Service).
- Select the Lines that are to be answered by the Courtesy Service. The Lines programmed to be answered will be indicated by a ◆.

Press the Hands-free Key to finish programming.

Note: Customised Courtesy Service may only be set up if the Auto-attendant feature has not already been invoked.

Note: Enabling Courtesy Service will cause **all stored Voice Mailbox messages to be automatically deleted.**

Program CLI number

To associate a caller number with a name, and route its calls to a Station:

Up to thirty names, each a maximum of ten characters, (including spaces), may be associated with caller telephone numbers. When a number with an associated name is received, the name rather than the number is displayed.

Furthermore a Station number may also be associated with a telephone number. In this case an incoming call from that number will ring at only that Station. If the Station is busy, the call rings in as normal in the case of PSTN Lines and returns a busy signal in the case of ISDN Lines.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Lines'.
- Press the Scroll Down Key (▼) until 'Programme CLI no' is displayed.
- Select 'Programme CLI no.'.
- Select an Index Number (01 - 30).
- Enter the caller telephone number.
- Press 'Confirm'.
- Select 'Programme CLI stn.' and select a Station, if you wish to route calls from that number to a Station.
- Select 'Programme CLI name' and enter the name to be associated with the number. Refer to page 19 for help on how to enter names.

Note: CLI Store routing will take precedence over MSN/DDI routing or normal call routing.

Alternative routing

To set up codes to allow calls to be routed on specific Lines or networks:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Lines'.
- Scroll Down until 'Alternative routing' is displayed.
- Select 'Alternative routing on'.
- Enter in a code index (01-50).
- Enter an input code. This is the code dialled by the user.
- Select 'Confirm'
- Enter in an output code (if required). This is the code that will be inserted before the telephone number that the user dials. This code can be used to select a specific Network Provider.
- Select 'Confirm'.
- Select the option 'preferred' or 'exclusive'.
If 'exclusive' is selected the calls can only be sent on the Lines selected below.
If 'preferred' is selected the calls will be routed on any available Line, if none of the selected Lines are available. In this case the output code is not dialled.
- Select the Lines over which calls will be routed.

Press the Hands-free Key to finish programming.

Auto Attendant

To have an Auto-attendant answer calls and allow Station access:

You can programme individual Lines to be answered with the Auto-attendant. You can also programme different Lines for the feature for Day and Night Service.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Lines'.
- Press the Scroll Down Key (▼) until 'Auto-attendant' is displayed.
- Select 'Auto-attendant'.
- Select 'Confirm' when prompted.
- Select 'Auto-attendant day' or 'Auto-attendant night'.
- Select the Lines that are to have the Auto-attendant service. The Lines programmed for this service will be indicated with a ◆.

Press the Hands-free Key to finish programming.

Note: Auto-attendant may only be set up if Customised Courtesy Service has not already been invoked.

Note: Enabling Auto-attendant will cause all stored Voice Mailbox messages to be automatically deleted.

PSTN programming

To configure PSTN Lines:

There are various options to configure the PSTN Line interfaces on your system. It is recommended that these settings should only be altered from the original settings if there has been a change in the network connection.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Lines'.
- Press the Scroll Down Key (▼) until 'PSTN Programming' is displayed.
- Select 'PSTN programming'.
- Select the desired option as detailed in the table below. The options are either explained in the following pages or in the referenced pages

Press the Hands-free Key to finish programming.

PSTN Programming Option	Default setting	Alternate setting
Time break	Time break set	Earth recall set
Loop calling	Loop calling not set	Loop calling set
Reversal on Idle	ROI is not enabled	ROI is enabled
CND Detection	CND not set	CND set
	See page 29.	
Fax Detection	Fax detection not set	Fax detection set
	See page 38.	

Timed break

To programme PSTN Lines to use either timed break or earth recall signals:

PSTN Lines communicates with a parent PABX system, for example to tell it to hold or transfer a call, by sending either a timed break or an earth recall signal. By default, all PSTN Lines are set to send a timed break.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Lines'.
- Press the Scroll Down Key (▼) until 'PSTN programming' is displayed.
- Select 'PSTN programming'.
- Select 'Timed break'.
- A menu showing the PSTN Lines will be presented. The Lines using a timed break signal are indicated by a ◆. Those using an earth recall signal are indicated by a ◇. Select the Lines to use a timed break signal as required.

Press the Hands-free Key to finish programming.

Loop calling

To programme Loop Calling on PSTN system Lines:

All PSTN Lines are programmed by default to use standard PSTN signalling. You can programme your PSTN Lines to use Loop Calling if required. The benefit of having Lines programmed for Loop Calling is that the dial tone on the Line will stay active until the network, (not the system), releases the Line.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Lines'.
- Press the Scroll Down Key (▼) until 'PSTN programming' is displayed.
- Select 'PSTN programming'.
- Select 'Loop calling'.
- A menu showing the PSTN Lines will be presented. The Lines using Loop Calling are indicated by a ◆. Those using the standard signalling are indicated by a ◇. Select the Lines as required.

Press the Hands-free Key to finish programming.

Reversal-on-Idle

To programme your PSTN Lines to use Reversal-on-Idle:

On a standard PSTN Line the **Commander Vision** has no way of telling whether the other party has hung up, and thus will not automatically release the Line. Therefore, the system requires the user to manually hang up or otherwise clear calls. On trunk-to-trunk calls, such as external divert and transfer, no **Commander Vision** user is involved and therefore the system cannot tell if calls have ended and whether it should release the Lines. Your Network Provider offers a solution by providing supervised PSTN Lines. These are Lines that signal to the user that the other party has cleared the call. The signal provided is a so-called Reversal-on-Idle (ROI) signal. If you have this

service enabled, or you have ISDN Lines, (which are always supervised), your **Commander Vision** is better equipped to handle trunk-to-trunk calls.

To make trunk-trunk calls without any restriction the incoming Line must be supervised. If you receive a call on an unsupervised Line, you can also make a trunk-to-trunk call without restriction if the outgoing Line is supervised, by putting the incoming call on hold before dialling the outgoing number. If neither the incoming nor outgoing Lines are supervised then external divert and transfer calls will time out after five minutes, and conference calls with two external parties will clear down on all parties when the **Commander Vision** caller hangs up.

As well as enabling the Reversal-on-Idle service with your Network Provider, you must also programme the PSTN Lines to activate the service.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Lines'.
- Press the Scroll Down Key (▼) until 'PSTN programming' is displayed.
- Select 'PSTN programming'.
- Press the Scroll Down Key (▼) until 'Reversal on Idle' is displayed.
- Select 'Reversal on Idle'.
- Select the Lines which have Reversal-on-Idle enabled by your Network Provider. The Lines you have selected will have a ◆ displayed beside them.

CND detection

To set up your system to display PSTN caller numbers (CND service):

If you subscribe to the Caller Number Display service from your Network Provider then you can programme the system to display PSTN caller numbers.

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Lines'.
- Press the Scroll Down Key (▼) until 'PSTN Programming' is displayed.
- Select 'PSTN Programming'.
- Press the Scroll Down Key (▼) until 'CND Detection' is displayed.
- Select 'CND detection'.
- Select the Lines that have the CND service enabled by your Network Provider. The Lines you select will have a ◆ displayed beside them.

Press the Hands-free Key to finish programming.

Fax detection

To set up a Line for both fax and voice calls:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Lines'.
- Press the Scroll Down Key (▼) until 'PSTN Programming' is displayed.
- Select 'PSTN programming'.
- Select 'Fax Detection'.
- Select the Line.
- Select the Station with the fax machine.

Press the Hands-free Key to finish programming.

Note: This facility is available on PSTN Lines only. This facility is not available on ISDN Lines.

ISDN programming

To access ISDN configuration options:

- From the Programming Station, press the PROGRAMME Key P.
- Press the Scroll Down Key (▼) until 'System programming' is displayed.
- Select 'System programming'.
- Enter the System Programming Password and select 'Lines'.
- Press the Scroll Down Key (▼) until 'ISDN Programming' is displayed.
- Select 'ISDN programming'

Follow on with the procedures below, as required.

Point-to-Point or Point-to-Multipoint

To configure ISDN Accesses as Point-to-Point or Point-to-Multipoint:

- Select 'P->P' or P->MP' (Point to Point or Point to Multi-Point).
- The ISDN Access menu will be presented. Point-to-Point Accesses are denoted by a ◆. Point-to-Multipoint accesses are denoted by a ◇. Select an Access to change its setting.

Press the Hands-free Key to finish programming.

Note: Changing this setting will cause the system to reset (warm reset). This will cause all calls to be disconnected.

Note: Your **Commander** technician will ensure your ISDN Accesses are correctly configured as P-P or P-MP. If the setting does not match the ISDN network setting you will be unable to receive and make calls.

T or S interfaces

To configure ISDN Accesses as T or S interfaces:

- Select 'T or S interface'.
- The ISDN Access menu will be presented. Accesses configured as a T interface are denoted by a ◆. Those configured as an S interface are denoted by a ◇. Select an Access to change its setting.

Press the Hands-free Key to finish programming.

Directory MSN's

To configure ISDN Accesses with a Directory MSN:

- Select 'Directory MSNs'.
- Select the required Access.
- Enter the required MSN.
- Select 'Confirm'.

Press the Hands-free Key to finish programming.

ISDN PABX

To configure an ISDN Access to work with a PABX:

- Select 'ISDN PABX'.
- Select the required Access.

Press the Hands-free Key to finish programming.

CHAPTER FOUR

Maintenance Procedures

Power Supply

The Power Supply Unit is supplied in the Main Equipment of the Basic 206 and 1T06 systems. It connects directly to the Base Motherboard. Should it be necessary to replace the Power Supply Unit the procedure is as follows:

WARNING: Mains power must be disconnected before removing or installing the Power Supply Unit.

- Disconnect mains power from the system.
- Disconnect the Battery Backup Unit (if fitted). (See page 97).
- Remove the Power Supply Unit cover.
- Disconnect the mains lead from the Power Supply Unit.
- Disconnect the two Power Supply Unit connections from the Base Motherboard.
- Unscrew the 2 retaining screws and lift out the Power Supply Unit.
- Insert the new Power Supply Unit.
- Insert the 2 retaining screws.
- Reconnect the two Power Supply Unit connections to the Base Motherboard.
- Reconnect the mains lead to the Power Supply Unit.
- Replace the Power Supply Unit cover.
- Reconnect the Battery Backup Unit (if fitted). (See page 97).
- Reconnect mains power to the system.

Troubleshooting

No incoming external calls are being received:

- Check that the Keystation is programmed to ring and has not been programmed for 'Do Not Disturb'.
- Check the Keystation is plugged in to the telephone socket.
- Check the Keystation is using the correct Station number

Cannot obtain an outside Line on a standard telephone:

- Move a Keystation to the Station. If it shows the Station has been locked, unlock the telephone.

Feature not working:

- Check the system programming, and ensure the relevant feature is activated.
- Reset the Station and system and retry the feature. (Reset information below).

ISDN supplementary services problems:

- If any of the ISDN supplementary services do not work, please check with your Network Provider.

No ISDN exchange line dial tone:

- This could be due to the configuration of the system and type of ISDN connection. If this is the case, outgoing calls can still be made without dial tone being presented.
- Check that all ISDN devices work correctly. If they do not, report the problem to your Network Provider.

Keystation shows "Waiting for SYNC"

- Station not properly terminated at the system IDC connector.

No dial tone

- Check that the Station has not been disconnected through programming.

Telephone not getting outgoing access

- If you cannot get outgoing access on a standard telephone, replace the telephone with a Keystation. If it shows 'Stn lock', the Station has been locked and you will need the lock code to unlock it. (Refer to the Owner's Handbook for information on locking and unlocking Stations).

A Line not being accessed for outgoing calls

- Check if the Line has been programmed for incoming calls only.
- Check if the Line has been disconnected in programming.
- If using a Line Key to access the Line, check the key is programmed for Line access.

No incoming calls

- Check that all Stations programmed to ring are not programmed for Do Not Disturb or divert.

Keystation reset

- The reset code 157, dialled from a Station, resets that Keystation.

System, Line, Station failure

- Check that the system is plugged in
- Remove the Main Equipment cover and see if the Vital Activity LED is flashing.
- Check that all system expansion cards are properly installed in their connectors
- Check all Base Motherboard cabling connections.
- If the problem is with Line access, substitute the PSTN or ISDN Card, reset and retry.
- If the problem is with a Line access or Station connection from a Station card, substitute the Station Card, reset and retry

Only the faulty cards should be returned for repair. Full systems must not be returned, except in the case of a system that fails installation. A fault report must be completed describing the fault in detail and attached to the card sent back for repair.

Customer training

As part of the installation, the customer is entitled to a 30-minute tutorial on the system. This should cover the following:

- Use of the Keystation menus and associated keys
- Taking, making and transferring calls on Keystations and standard phones
- Accessing system programming

The customer may wish to use the 30 minutes to have a selection of other features explained, such as:

- Call transferring capabilities
- Programming Keystation keys
- Time and date programming
- System and/or personal speed dial programming
- Incoming call handling
- Call restriction, class of service parameters
- Station reset facilities
- Connecting modems, fax machines, etc.
- Use of voicemail features

The features should be explained by using the **Commander Vision Owner's Handbook** and *Quick Reference Guide*.

Ensure the customer has a copy of the *Owner's Handbook*, and a copy of the *Quick Reference Guide* for each Station.

APPENDIX A - Programming Record

Line telephone numbers

	Number	Group 1 (0)	Group 2 (81)	Group 3 (82)	Group 4 (83)
Line 1					
Line 2					
Line 3					
Line 4					
Line 5					
Line 6					
Line 7					
Line 8					

Incoming Ringing - Day Service

	Ctl Bell	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	
Line 1																				
Line 2																				
Line 3																				
Line 4																				
Line 5																				
Line 6																				
Line 7																				
Line 8																				

Incoming Ringing - Night Service

	Ctl Bell	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	
Line 1																				
Line 2																				
Line 3																				
Line 4																				
Line 5																				
Line 6																				
Line 7																				
Line 8																				

Class of Service / Pick up Groups / Voice Mailbox

		20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	
Class of Service Day	1-4																			
Class of Service Night	1-4																			
Table 5 - Day	<input type="checkbox"/>																			
Table 5 - Night	<input type="checkbox"/>																			
Table 6 - Day	<input type="checkbox"/>																			
Table 5 - Night	<input type="checkbox"/>																			
Pick up Groups	1-4																			
Voice Mailbox	<input type="checkbox"/>																			

Outgoing Line Access

	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
Line 1																		
Line 2																		
Line 3																		
Line 4																		
Line 5																		
Line 6																		
Line 7																		
Line 8																		

Class of Service Table 2

1.	11.	21.	31.	41.
2.	12.	22.	32.	42.
3.	13.	23.	33.	43.
4.	14.	24.	34.	44.
5.	15.	25.	35.	45.
6.	16.	26.	36.	46.
7.	17.	27.	37.	47.
8.	18.	28.	38.	48.
9.	19.	29.	39.	49.
10.	20.	30.	40.	50.

Class of Service Table 3

1.	11.	21.	31.	41.
2.	12.	22.	32.	42.
3.	13.	23.	33.	43.
4.	14.	24.	34.	44.
5.	15.	25.	35.	45.
6.	16.	26.	36.	46.
7.	17.	27.	37.	47.
8.	18.	28.	38.	48.
9.	19.	29.	39.	49.
10.	20.	30.	40.	50.

Class of Service Table 5

1.	11.	21.	31.	41.
2.	12.	22.	32.	42.
3.	13.	23.	33.	43.
4.	14.	24.	34.	44.
5.	15.	25.	35.	45.
6.	16.	26.	36.	46.
7.	17.	27.	37.	47.
8.	18.	28.	38.	48.
9.	19.	29.	39.	49.
10.	20.	30.	40.	50.

Class of Service Table 6

1.	11.	21.	31.	41.
2.	12.	22.	32.	42.
3.	13.	23.	33.	43.
4.	14.	24.	34.	44.
5.	15.	25.	35.	45.
6.	16.	26.	36.	46.
7.	17.	27.	37.	47.
8.	18.	28.	38.	48.
9.	10.	11.	12.	13.
14.	19.	29.	39.	49.

MSN Programming

	MSN Number	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	
1.																				
2.																				
3.																				
4.																				
5.																				
6.																				
7.																				
8.																				
9.																				
10.																				
11.																				
12.																				
13.																				
14.																				
15.																				
16.																				
17.																				
18.																				
19.																				
20.																				
21.																				
22.																				
23.																				
24.																				
25.																				
26.																				
27.																				
28.																				
29.																				
30.																				

System Speed Dial numbers

Dial	Number	Name	Dial	Number	Name	Dial	Number	Name	Dial	Number	Name	Dial	Number	Name
7001			7041			7081			7121			7161		
7002			7042			7082			7122			7162		
7003			7043			7083			7123			7163		
7004			7044			7084			7124			7164		
7005			7045			7085			7125			7165		
7006			7046			7086			7126			7166		
7007			7047			7087			7127			7167		
7008			7048			7088			7128			7168		
7009			7049			7089			7129			7169		
7010			7050			7090			7130			7170		
7011			7051			7091			7131			7171		
7012			7052			7092			7132			7172		
7013			7053			7093			7133			7173		
7014			7054			7094			7134			7174		
7015			7055			7095			7135			7175		
7016			7056			7096			7136			7176		
7017			7057			7097			7137			7177		
7018			7058			7098			7138			7178		
7019			7059			7099			7139			7179		
7020			7060			7100			7140			7180		
7021			7061			7101			7141			7181		
7022			7062			7102			7142			7182		
7023			7063			7103			7143			7183		
7024			7064			7104			7144			7184		
7025			7065			7105			7145			7185		
7026			7066			7106			7146			7186		
7027			7067			7107			7147			7187		
7028			7068			7108			7148			7188		
7029			7069			7109			7149			7189		
7030			7070			7110			7150			7190		
7031			7071			7111			7151			7191		
7032			7072			7112			7152			7192		
7033			7073			7113			7153			7193		
7034			7074			7114			7154			7194		
7035			7075			7115			7155			7195		
7036			7076			7116			7156			7196		
7037			7077			7117			7157			7197		
7038			7078			7118			7158			7198		
7039			7079			7119			7159			7199		
7040			7080			7120			7160			7200		

APPENDIX B – Serial Item List

The following table lists all system components, including spares, with their item codes and a brief description of each:

Item	Max. per system	Item code	Description
Basic 006 System	1	759/22	The 006 Main Equipment contains a Base Motherboard and a Power Supply Unit.
Basic 206 System	1	759/1	The 206 system includes one PSTN Line Card in addition to the Base Motherboard and PSU.
Basic 1T06 System	1	759/2	The 1T06 system includes one ISDN Access Card, an ISDN Upgrade Card, and an RJ45 patch cord in addition to the Base Motherboard and PSU.
Base Motherboard	1	759/55	Main system card. Includes six Station interfaces, slots to add expansion cards, and connection points for Station and network cabling.
Power Supply Unit	1	759/82	Integrated in the Main Equipment. Connects to a standard mains socket via a power cord.
Station Card	2	759/52	Upgrade card with six Station interfaces and slots to add a PSTN Line Card or ISDN Access Card.
PSTN Line Card	4	759/50	PSTN line interface card providing two PSTN Line interfaces.
ISDN Access Card	5	759/51	ISDN interface card providing one ISDN Basic Rate Access interface or one internal S-bus interface.
ISDN Upgrade Card	1	759/54	System card necessary if ISDN Access Cards are used.
Voicemail Card	1	759/101	Voice storage card that provides voicemail functionality.
Keystation	18	759/20	Charcoal grey system Keystation with menu-driven interface.
External V24 Interface	1	759/53	External V24 interface to a printer or PC, which provides Call Logging.
Battery Backup Unit (Battery not included)	1	759/81	Battery Backup Unit that houses a battery to provide operation for at least one hour following power failure.
Call Manager	18	759/100	Software and hardware to allow a Keystation be controlled from a PC.
Door Station	1	759/46	A Door Station that rings at a Station position.
Handset	1 per Station	759/45	Spare charcoal grey handset for a system Keystation.
Handset cord		759/41	Spare Handset connection cord for a system Keystation.
Keystation cord		759/40	Spare Keystation connection cord.
Keystation plinth		759/47	Spare charcoal grey desk plinth to mount Keystation.
Handset hook		759/48	Spare charcoal grey hook to hold Keystation handset.
Quick Reference Guide		759/802	System quick reference user guide.
Cord patch, RJ45, 0.5m	1 per ISDN interface	537/126	RJ45 0.5m Cat 5 patch cord for ISDN interfaces.
Cord patch, RJ45, 1.0m		537/128	RJ45 0.5m Cat 5 patch cord for ISDN interfaces.
Cord patch, RJ45, 2.0m		537/129	RJ45 0.5m Cat 5 patch cord for ISDN interfaces.
Cord patch, RJ45, 3.0m		537/131	RJ45 0.5m Cat 5 patch cord for ISDN interfaces.
Owner's Handbook	1	759/801	System user guide and programming reference.
Installation Manual	-	759/803	System installation and maintenance manual.
Brochure	-	759/810	Commander Vision brochure

Table 12: System components and item codes

APPENDIX C – Quick Reference Guide

Introduction to your Commander Vision

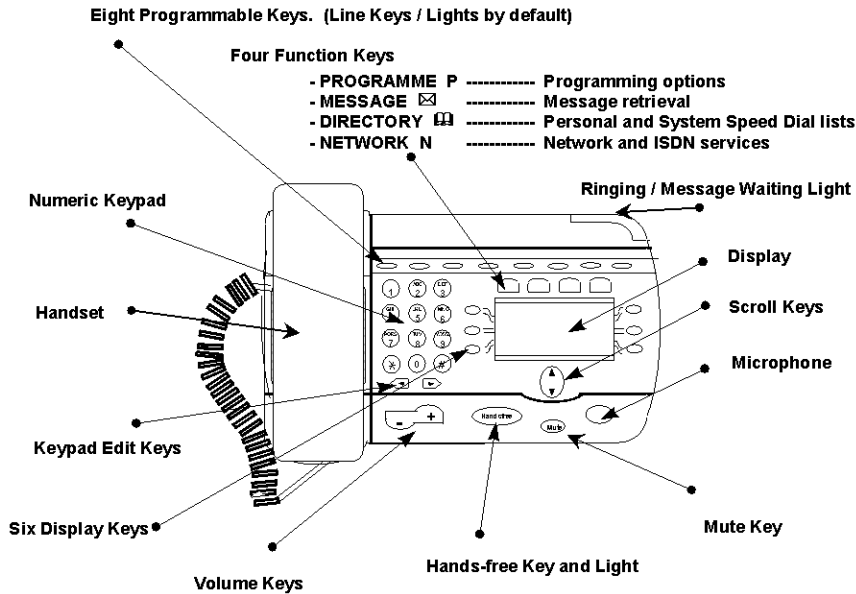
Thank you for choosing the Commander Vision phone system.

This Quick Reference Guide takes you through the features that you will be using on a regular basis. It is divided into two sections, covering operation with the system Keystation and operation with a standard telephone.

In the section on Keystation operation, the instructions assume that the Keystation starts out showing the Idle Menu, unless stated otherwise. If you wish to return to the Idle Menu at any time from within other menus, press the Hands-free Key. Also, 'Select => Answer the call', means to press the Display Key (=>) opposite the menu option 'Answer call' on the Display. Please note that all menu options may not all be displayed at one time on the Keystation Display. In this case, to display the desired menu option, press the Scroll Down (▼) Key, or the Scroll Up (▲) Key, until the menu option appears.

Commander Vision Keystation

To get the most from your *Commander Vision*, we recommend that you use the dedicated *Commander Vision* Keystation. To order more Keystations, please contact your account manager or call 1800 809 882 for information.



Answering and making calls

Answer a call that is ringing on the Keystation using the handset

Select ⇒ **Answer the call** and/or pick up the handset.

Answer a call that is ringing on the Keystation using hands-free

Select ⇒ **Answer the call**.

Make an external call

Select ⇒ **External call** and dial the number.

Note: **◆** = busy line.

Make an internal call

Select ⇒ **Internal call** and then

Select ⇒ **Stn no.**, or

Dial the Station number (20 - 37), and

Pick up handset, or press **HANDSFREE**

Transferring calls

Note: The following instructions assume you are on a call.

Transfer a call to an internal number

Select ⇒ **Internal transfer** and then

Select ⇒ **Stn no.** and when the call is answered

Select ⇒ **Transfer**.

Transfer an external call to an external number

Select ⇒ **External transfer** and then

Select an available Line as indicated by "◆" and then

Dial the external number and when the call is answered

Select ⇒ **Transfer**.

Make an external consultation call

Press the Scroll Down Key (▼) until 'External Consultation' is displayed.

Select ⇒ **External consultation** and then

Select an available Line as indicated by "◆" and

Dial the external number and wait until the call is answered.

To switch between the calls

Select ⇒ **Return and hold**.

Put an external call on hold

Select ⇒ **System hold**.

To retrieve the call

Select ⇒ **Return to line**.

Deflecting calls

Note: The following instructions assume that your Station is ringing.

Deflect a call to another Station

Select → **Deflect the call** and then
Select → **Stn. no.**

Deflect a call to your voicemail box

Select → **Deflect the call** and
Dial 38.

Diverting calls

Divert calls when your Station is busy

Press the Scroll Down Key (▼) until "Divert" is displayed.
Select → **Divert** and then
Select → **Divert when busy** and
Dial the target Station number, or
Dial 0 and the target external number, (for incoming external calls only).

Cancel divert a call on busy

Press the Scroll Down Key (▼) until "Divert" is displayed.
Select → **Divert** and then
Select → **Divert when busy** and the diversion is cancelled.

Divert calls when your Station does not answer after four rings

Press the Scroll Down Key (▼) until "Divert" is displayed.
Select → **Divert** and then
Select → **Divert on no answer** and
Dial the target Station number, or
Dial 0 and the target external number, (for incoming external calls only).

Cancel divert a call on no answer

Press the Scroll Down Key (▼) until "Divert" is displayed.
Select → **Divert** and then
Select → **Divert on no answer** and the diversion is cancelled.

Divert all calls

Press the Scroll Down Key (▼) until "Divert" is displayed.
Select → **Divert** and then
Select → **Divert all calls** and
Dial the internal Station number, or
Dial 0 and the target external number, (for incoming external calls only).

Cancel divert all calls

Select → **Cancel divert**.

Voicemail

Note: Voicemail services require the Voicemail Module to be installed.

Enter a personal greeting

Press **☒**, and
Select ⇒ **Voice messaging** and
Enter your Voice Mailbox Password followed by #. Then
Select ⇒ **Greetings** and
Follow the text and voice prompts to enter and check your greeting.

Turn on your voicemail

Press the Scroll Down Key (▼) until "Divert" is displayed.
Select ⇒ **Divert** and
Select ⇒ **Divert when busy** or
Select ⇒ **Divert on no answer** or
Select ⇒ **Divert all calls** and
Dial 38.

Retrieve messages from your voice mailbox

Select ⇒ **New voice messages** and
Enter your Station number. You will be prompted to
Enter your Voice Mailbox Password, followed by #. Then
Select ⇒ **Play**.

Retrieve messages remotely from your voicemail box

Dial your Station and wait until your voicemail answers, then
Dial 38 and
Dial your Station number, then
Dial your Voice Mailbox Password followed by #. Then
Press 1 To play back messages
Press # To pause playback
Press 2 To save message and move to the next message
Press 3 To erase message and move to the next message
Press 4 To go back to start of message
Press 5 To go back to start of previous message
Press 6 To erase all messages
Press 7 To go back 10 seconds
Press 8 To go forward 10 seconds/skip the time stamp
Press 91 To change the outgoing greeting
Press 92 To check the outgoing greeting
Press 93 To delete the outgoing greeting
Press 0 To change your password

Change your Voice Mailbox Password

Press **☒**, then
Select ⇒ **Voice messaging** and enter your Station number.
Enter your existing password, (default is 1111), followed by #. Then
Select ⇒ **Change password** and
Enter your new password (up to 8 digits long - e.g. 12341234).

Paging

Make an announcement over Public Address (PA)

Press the Scroll Down Key (▼) until "Paging" is displayed.

Select ⇒ **Paging** and then

Select ⇒ **Public address** and

Make your announcement (maximum 15 seconds).

Note: Do not hang up if you want the PA answer feature to be available.

Answer a Public Address announcement

Select ⇒ **Answer page** and

Respond to the Station that made the page.

Page a single Keystation

Press the Scroll Down Key (▼) until "Voice Call" is displayed.

Select ⇒ **Voice call**, and

Select the Station you wish to page and

Make your announcement.

Answering machine

Turn on the answering machine (from Station 20 only)

Press the Scroll Down Key (▼) until "Answering Machine" is displayed.

Select ⇒ **Answering machine**.

Turn off the answering machine (from Station 20 only)

Select ⇒ **Answering machine**.

Speed dialling

Programme your personal speed dial list – numbers only

Press **P**, then
Select → **Personal speed dial** and then
Select the location you want to program, and
Enter the number, and then
Select → **Confirm**. When prompted for a name
Select → **Cancel**.
Press **HANDSFREE** to finish programming.

Programme your personal speed dial list – numbers and names

Press **P**, then
Select → **Personal speed dial** and then
Select the location you want to program, and
Enter the number, and then
Select → **Confirm**. When prompted to enter a name.
Press **2** once for A, twice for B, three times for C; press **3** once for D, twice for E, three times for F; and so on.
Wait two seconds for the screen cursor to move on before entering the next letter. A maximum of ten characters per name (including spaces) is allowed. On completion of the name
Select → **Confirm**.
Press **HANDSFREE** to finish programming.

Dial a number from your personal speed dial list

Press **☎**, then
Select → **Personal speed dial** and then
Select the desired location and the number will be dialled.

Conference calls

Note: The following instructions assume you are on a call.

Internal conference – up to three people

Select → **Internal conference** and then
Select the Station to be conferenced. When the Station answers
Select → **Conference**.

External conference – up to three people

Press the Scroll Down Key (▼) until "External Conference" is displayed.
Select → **External conference**, then
Select a free Line and dial the external number. When the call is answered
Select → **Conference**.

Using a standard telephone

Answering and making calls

Answer a call using the handset

When the phone rings, lift the handset.

Answer a call using hands-free

Use hands-free if available on your telephone.

Make an external call

Lift handset or use hands-free if available.

Obtain a free Line by dialling 0, or dialling 51 - 56 or 81 - 83.

Make an internal call

Lift handset or use hands-free if available.

Dial the Station number (20, 37), or

Dial 9 for the operator.

Transfer external call to an internal Station

Press the RECALL key (R), and

Dial the Station number and

Replace handset.

Put an external call on hold

Press the RECALL key (R).

Replace handset to continue to use phone.

Note: Call is held for thirty seconds when the telephone is idle. If the telephone is busy, it will ring when the handset is replaced.

Diverting calls

Divert calls when your telephone is busy

Dial 152 and then
Dial the Station number, or
Dial the external number, (including Line access code, e.g. 0).

Cancel divert a call on busy

Dial 152.

Divert calls when your telephone is not answered after four rings

Dial 153 and then
Dial the Station number, or
Dial the external phone number (including Line access code, e.g. 0).

Cancel a divert a call on no answer

Dial 153.

Divert all calls

Dial 151 and then
Dial the Station number, or
Dial the external phone number (including Line access code, e.g. 0).

Cancel divert all calls

Dial 151.

Voicemail

Note: Voicemail services require the Voicemail Module to be installed.

Turn on your voicemail

Dial 151, 152 or 153 and then
Dial 38.

Enter a personal greeting

Dial 88 to access a Voice Mailbox, and
Dial your Station number, Voice Mailbox password and #, and then
Press 91 to enter greeting, or
Press 92 to check greeting, or
Press 93 to delete greeting.

Retrieve messages from your Voice Mailbox

Dial 88 to access a Voice Mailbox, and
Dial your Station number, Voice Mailbox password and #, and then
Press 1 to playback messages.

Note: Standard telephones do not indicate received messages, so check your Voice Mailbox often.

Change your Voice Mailbox Password

Dial 88 to access a Voice Mailbox, and
Dial your Station number, Voice Mailbox password and #, and then
Press 0 followed by your new password (up to eight digits long).

Paging

Make a Public Address (PA) announcement

Press 47.

Answer a Public Address announcement

Press 45.

Page a single Keystation

Press 43 followed by Keystation Station number.

Speed dialling

Programme your personal speed dial list

Dial 62, then
Enter the location (0-9) where you want to store the number, and
Dial the number to store, and
Replace the handset.

Dial a number from your personal speed dial list

Dial 61, then
Enter the location (0-9) of the number required, and the number is automatically dialled.

Dial a number from the system speed dial list

Dial a system speed number – 7001 to 7200.

Conference calls

Note: The following instructions assume you are on a call.

Internal conference – up to three people

Press RECALL (R), then
Dial the number of the third party, and when answered,
Press RECALL (R) and dial 3.

External conference – up to three people

Press RECALL (R), then
Dial the number of the third party, and when answered,
Press RECALL (R) and dial 3.

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