VOYAGER

USER′S MANUAL

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INDEX

SAFETY RULES

DEVICE IN CLASS I
Always connect to an outlet with ground.

The change from cold to hot environments can cause the formation of condensate inside the device. To avoid malfunctioning, wait at least 2 hours before connecting the device to the supply mains.

WARNING: RISK OF ELECTRIC SHOCK
The power supply used by this device involves lethal voltage levels.

Do not access internal parts of the device (and/or of the power supply unit).

If objects or liquids penetrate inside the device, immediately disconnect the power supply cable. Before using the device again, have it checked by specialized staff.

Refer to qualified staff for service.

In case of intervention, always check that the power supply has been completely and successfully disconnected.

In case of fire, absolutely avoid using water to extinguish it.

WARNINGS

CAUTION:
Many of the components used in this device are sensitive to electrostatic charge.

In case of manipulation of the connection cables, disconnect the power supply and avoid direct contacts with the connector terminals.

When handling electronic components, to eliminate any statical electricity touch a grounded surface. If possible, wear a grounding arm band.

Failure to comply with these warnings could cause permanent damage to device.

CLEANING

To clean the device use a soft cloth either dry or soaked with little detergent. Never use any type of solvents, such as alcohol or gasoline, to avoid damaging the finish.

ABOUT THIS MANUAL

This manual provides you with the information required to install and operate the VOYAGER.

This manual consists of the following parts:

þ   chapter one describes functions and components of the videophone

þ   chapter two provides basic instruction to install the videophone

þ   chapter three introduces the structure of menus and commands

þ   chapter four describes operating procedures

þ   chapter five and six describe the configuration options and the help system of the videophone

þ   chapter seven lists the technical specifications of the equipment.

> **!** For a correct installation and use, follow the instructions contained in this manual in the given order.Carefully read this manual before carrying out any operation.

1. INTRODUCING THE VOYAGER

Voyager is the first portable videcommunication system designed for professionals in movement (journalists, consultants, businessmen, and managers).

It enables high quality videocommunication sessions over ISDN with bit rates up to 384 Kbps. All necessary devices are contained in the briefcase.

The main characteristics of the Voyager unit are:

þ   reduced size

þ   easy to use

þ   camera provided with support for static or moving images

þ   audio/video interfaces for connection to additional devices, such as monitor, microphone, document camera and videorecorder

þ   possible connection to a PC for data transfer

2. A FIRST LOOK

the Videotelephone Unit Voyager is contained in a briefcase that includes:
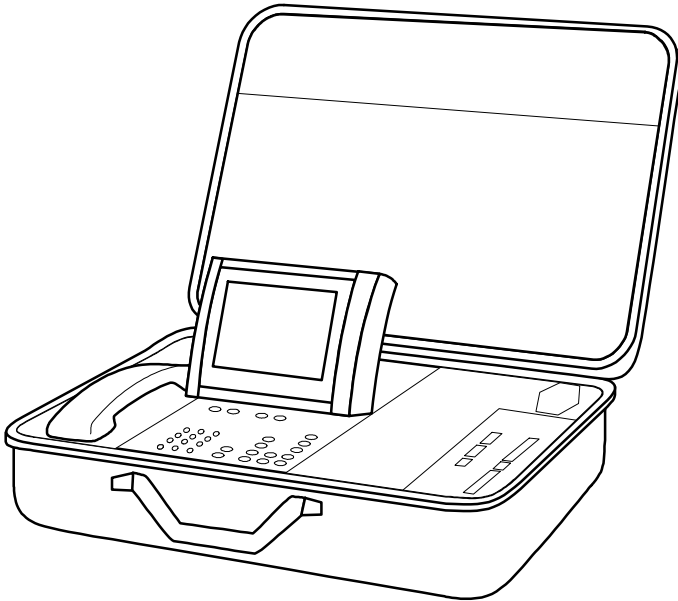
Fig. 2-1

1. no. 1 6″ active matrix display

2. no. 1 microtelephone

3. no. 1 integrated keypad

4. no. 1 codec unit H320

5. no. 1 channel aggregation unit for bit-rates up to 384 kbps with 3 ISDN basic accesses

6. no. 1 camera unit

7. Connection interfaces

8. On/off switch.

The Videphone is supplied with:

þ   3 RJ-45- RJ-45 cables for connection to the ISDN network

þ   Camera video cable

þ   Camera power supply cable

þ   AC/DC adapter with power supply cable

The following optional devices are available:

þ   Camera CC2074 used to shoot documents and objects

þ   Portable document camera ST2050, provided with microcamera TC1291, powered optics, autofocus and lighting system, for documents and objects

2.1. The camera

Voyager color camera is provided with automatic setting according to light conditions.
The buttons shown in the following figure are used to adjust focus and zoom:
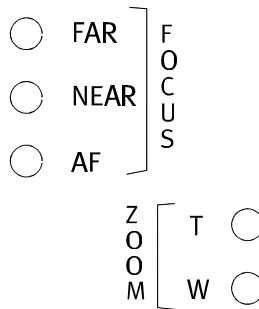
Press the 'AF' button to set automatic focus. Press the same button again to enable the 'FAR' and 'NEAR' features.
Use the T (tele) and W (wide) buttons to zoom images in and out.
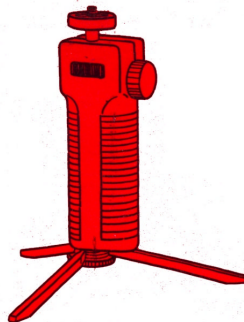
The camera is also provided with a versatile support for manual orientation. It improves camera handling for moving images and

gives more stability for fixed images.

The top of the support features an articulated joint, which can be screwed onto the camera. A tripod comes out from the bottom part.

2.2. The LCD screen

The VOYAGER display is a color, active matrix, full video resolution Liquid Crystal Display.

It provides crisp and brilliant colors and a wide horizontal viewing angle. A manually adjustable tilt can be used to optimize the vertical viewing angle and the contrast.

An advanced graphical On-Screen-Display (OSD) overlaid to the video image provides the main interaction with the user.

The OSD is divided into three main areas (Windows):
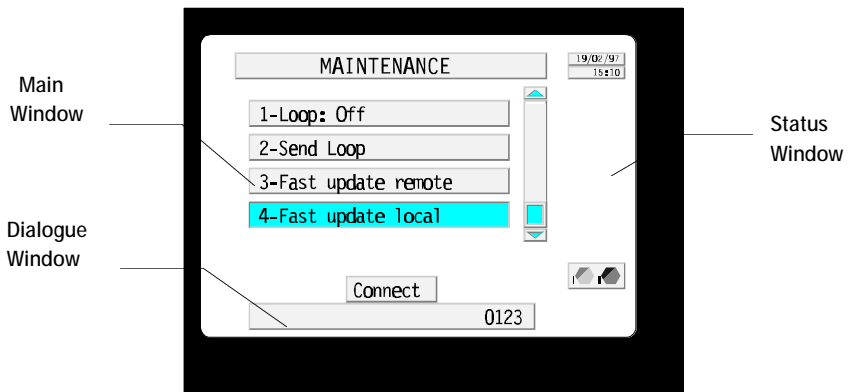
Fig. 2-2

The Main Window is used to display menu pages and help information.

A Status Window shows information such as status of the equipment, current date and time, charge units (awailable only the ISDN Supplementary Service has been requested by the user), etc. The status window can be activated by the user.

A Dialogue Window is located in the bottom part of the display and shows network supplied information about the status of the call.

2.3. The keypad

The integrated keypad, as shown in Fig. 2-3, provide full control over all the functions of the VOYAGER:
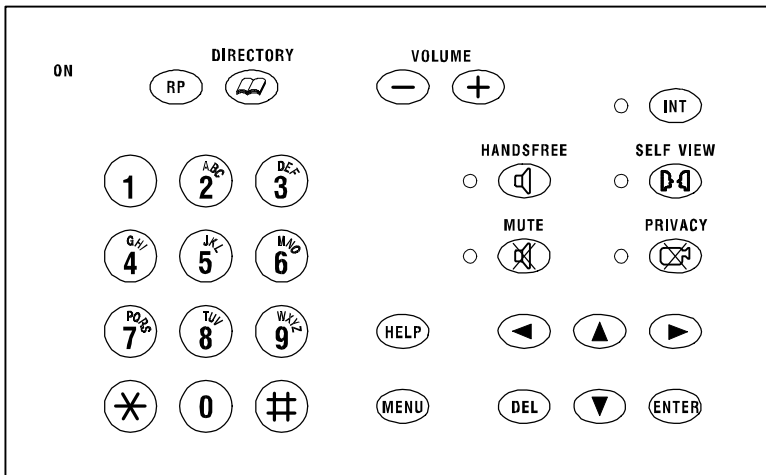
Fig. 2-3
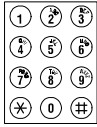
The numeric keypad is used to:
- dial digits
- enter phone numbers and directory entries
- activate menu items

RP Redials the last number entered

Cancel current operation

To send or view a 4CIF image during the connection

opens the phone directory

adjusts the value of parameters, such as volume, contrast, brightness, audio delay, etc.

INT To activate the control of the remote camera

activates the hands-free mode

displays the local image

mutes audio during the call

disables transmission of local video

provides access to the additional menu items (if any) [1]

returns to the higher level of the menu [1]

scrolls up and down the menu list [1]

[1] The same buttons are used to pan&tilt the remote camera

DEL   deletes the last entered digit when dialing en-bloc
NOTE: This key is also used to select the active
camera (internal/external)

MENU   activates or exits the Main menu

ENTER   enters new items or modifies existing ones

HELP   activates or exits the Help menu

2.4. Interfaces

A panel houses the interfaces used to connect the various
components of the system.
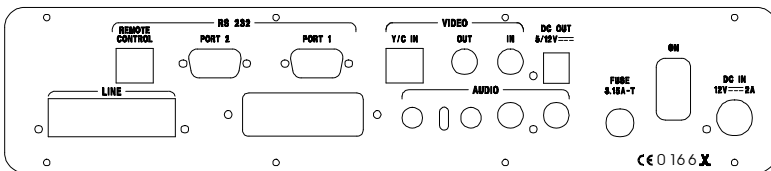
Fig. 2-4

þ   3 LINE connectors used to connect the Videotelephone to the
ISDN (3 basic accesses)

þ   RS 232 - PORT 1 : serial port used to connect a PC for
diagnostic purposes

þ   RS 232 - PORT 2 : transparent serial port used to connect a
PC for data transfer operations
(transmission rate can be selected using the "Data Channel"
menu)

þ   RS 232 - REMOTE CONTROL : for future implementations

þ   **VIDEO Y/C IN** : Y/C video input, which can be selected in the "Camera" menu

C crominanza — Y luminanza
C ground — Y ground
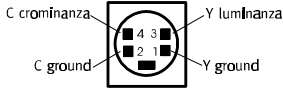
If the signal is composite, luminance input must be used (pin 3-1)

þ   **VIDEO OUT**: auxiliary video output (used to connect a TV, etc.)

þ   **VIDEO IN**: used to connect the Videotelephone camera

þ   **AV** : scart connector for a VCR or a TV

þ   **AUDIO LS OUT** : low impedance audio output used to control either headphones or loudspeakers with impedance $\geq$ 8 Ohm

þ   **AUDIO MIC IN** : balanced microphone input with PHANTOM ON-OFF switch to enable the microphone phantom power supply (12 V)

þ   **AUDIO LINE OUT** : high level line audio output

þ   **AUDIO LINE IN** : high level line audio input

þ   **DC OUT 5/12V**: for camera power supply.

2.4.1. Connecting the camera

Use the two cables supplied with the unit to connect:

1. the camera VIDEO OUT connector to the Voyager VIDEO IN connector

2. the camera POWER 12Vdc connector to the Voyager DC OUT 5/12V connector

2.4.2. Connection to ISDN

When connecting the ISDN accesses to the 3 Voyager connectors, make sure to write down the telephone number that corresponds to each basic access.

! This information will be necessary during configuration to enable each access (§ 6.6.2.3)

Insert one end of the cable ending with RJ-45 connectors into the LINE connector and the other end of the cable into the ISDN socket for each access.

2.4.3. Connecting the AC/DC Adapter

1. Position the on/off switch on OFF.

2. Make sure that the mains power supply characteristics are as indicated in the bottom of the AC/CD adapter.

3. Connect the AC/DC adapter to the Voyager DC IN 12V connector.

4. Connect the adapter to the power supply.

3. USING THE MENU COMMANDS

The Menu Window is used to provide the user with a configuration menu, a help menu together with context sensitive, on-line help information.

3.1. Entering the menu

(MENU)   to enter the configuration and management menu

(HELP)   to enter the help system or to display context sensitive help information

When the (MENU) or (HELP) key are first pressed, the main configuration or help menu pages are displayed.

3.2. Navigating the Menu Pages

When a menu page appears on the display you shall select one of the entries. The selected entry is highlighted with a light-blue color.

To select a menu entry in a menu page you may use:

to directly access a menu entry by pressing the numeric key indicated in the entry title e.g.: when in the MAIN MENU page, press ① to open the PREFERENCES menu page

to scan the menu list

Some the menu entries are followed by periods (such as PREFERENCES...) to indicate that they provide access to lower

level menu page(s).

Use the (▶) button to open the lower level menu page.

Use the (◀) button to return the higher level menu page.

Other menu entries (such as enabled: yes) are used to directly select configuration and operation parameters.

With this entries, use the (ENTER) key to scan the list.

When the selected option is displayed, press (◀) or (MENU) to confirm any modifications made and to return to the higher level page, otherwise press the (RP) key to escape to the main menu level without saving the modifications.

Pressing the (◀) key returns to a higher menu level and finally exits the menu structure.

(MENU)   exit the configuration and management menu

(HELP)   exit the Help menu

3.3. Using the HELP system

The VOYAGER videphone provides you with a powerful help system, with a fully comprehensive on-line manual for the mostly used operating procedures.

When the videophone is idle, press (HELP) page, then select 1-USER GUIDE... and press (▶) to access the help pages.

You can navigate through help pages using the same commands and shortcuts explained in §3.2.

Please refer to §6.1 for other details about using the help system.

4. OPERATING PROCEDURES

This chapter describes the procedures that are commonly used during the regular operation of the videophone, such as placing and answering audio and video calls.

It is assumed that the videophone has been properly installed and configured, and that the network connection is operational.

4.1. Placing and answering video calls

Before making a call, the user must choose the type of call and select the desired configuration in the first item of the Preferences submenu (paragraph 6.2.1).

When the first call is answered and the first connection made, the two terminals exchange information about their characteristics and capabilities (type of audio/video coding they support, usable band, etc.). As a result of this information exchange, other calls can be made.

When the first call is received by a standard telephone (without video) or if the called telephone is connected to an analogue network, the fallback function converts the video call into a «call with no video».

> **!** Automatic fallback is enabled by default. If the remote terminal is not reached in a few seconds, the original call is interrupted and the terminal attempts a standard telephone call.

! When calling a standard telephone, select the Basic
Telephone option in the first item of the Preferences
menu.

Calls can be sent in various ways, as described in the next
paragraphs.

! Whatever mode is used to make the connection, hook
on the handset or press 🔊 when the hand-free
function is enabled to interrupt it.

4.1.1. Manually dialing a video call

As with most ISDN phones, en-bloc or overlap dialing modes are
possible.

Overlap dialing resembles usual phone dialing: lift the handset (or
press the 🔊 key for hands-free operation), get the dial tone and
then dial the 1st number.

En-bloc dialing permits the number to be dialed before lifting the
handset. This allows the number to be edited while you dial.

When the first connection is made, the next calls are automatically
sent if the remote videotelephone is provided with a channel
aggregation unit.

If the videotelephone is configured as to operate without channel
aggregation unit (mode Transparent – paragraph 6.6.2.2), if
there is only one access or if the remote terminal is not able to
aggregate the various calls, one of the following situations can

occur for the second connection, according to the settings of the Call/Answer Mode submenu (paragraph 6.2.3):

1. if you have selected "VIDEO CALL: AUTO" and "VIDEO NUMBER = AUDIO", the second call proceeds automatically

2. if you have selected "VIDEO CALL: AUTO" and "VIDEO NUMBER < > AUDIO" then you will be required to enter the 2nd number to be dialed after the first call has completed.

3. if you have selected "VIDEO CALL: NORM" " and "VIDEO NUMBER = AUDIO" then you will be prompted to press (ENTER) to start the 2nd call, that will use the same number as in the 1st call.

4. if you have selected "VIDEO CALL: NORM" " and "VIDEO NUMBER <> AUDIO" then you will be first prompted to press (ENTER) to start the 2nd call, and then required to enter the 2nd number to be dialed.

4.1.2. Using subaddresses

To place a call to a phone at a specified subaddress (see § 5.6.2), dial the required remote party number, then press by the (✳) key as a separator before entering subaddress digits.

! Calls with subaddress extensions can only be placed using the en-bloc mode (i.e. dialing before going off-hook)

4.1.3. Calling from the directory

Use (📖) to show the directory, as shown in Fig. 4-1.

Select a phone entry, using scroll keys until the entry is
highlighted. You may also press the key with the initial letter of
the name to skip directly to the first record in the list with that
initial.
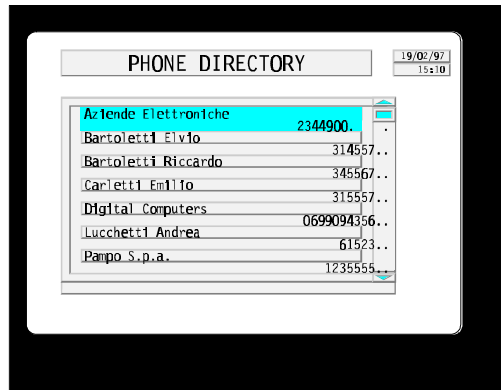
Fig. 4-1

To start the call lift the handset or press ⧄ .
The second call is automatically handled by the videophone using
the second number stored in the directory.

4.1.4. Calling from re-dial list

Press (RP) to show the list of the ten most recent calls.

To select a number, use the scroll keys until the number is
highlighted, then press ⧄ or lift the handset to start the call.

The last called number appears at the first position on the list,
just press (RP) and lift the handset or press ⧄ to redial the last
called number.

! | To delete a number from the redial list, select it and press (DEL).

4.2. Placing an audio-only call

To place an audio-only call, you have to choose "PHONE" in the PREFERENCES... menu page. En-bloc and Overlap dialing can be used.

Path: Main menu ▶ Preferences ▶ Phone

4.3. Answering a call

The way a call is answered depends on the settings in the CALL/ANSWER MODE menu page.

Path: Main menu ▶ Preferences ▶ Call/Answer Mode ▶

▶ Audio Response

If you have selected AUDIO RESPONSE: AUTO, then the call is automatically answered in hands-free mode and the LED close to the (◁)) is lit.

If you have selected AUDIO RESPONSE: NORM, then the videophone rings and a message appears in the status window. To answer the call, pick up the handset or press the (◁)) key.

The 2nd call is automatically answered, if the videophone is configured in the VIDEO RESP.: AUTO.

If you have selected VIDEO RESP.: NORM then press ⓔⓃⓉⓔⓡ to answer the 2nd call when prompted by a message in the status window.

Path: Main menu ▶ Preferences ▶ Call/Answer Mode ▶

▶ Video Response

> **!** In the bonding mode, the next calls are automatically made and the user intervention is requested.

4.4. Managing the Phone Directory

The phone directory provides a convenient way to place calls without having to dial or remember numbers.

The phone directory is alphabetized by name and it can store up to 100 names with associated directory numbers. One or two numbers can be stored in each position.

4.4.1. Adding entries

Press 📖 to open the phone directory. The list of currently available names is shown.

Use scroll keys to highlight the entry marked with NEW NAME, then press ⓔⓃⓉⓔⓡ.

A dialog box is shown, where you can enter the new name. A blinking cursor indicates the current position where a letter will be inserted. Press a key in the dial pad to cycle through the letter printed on the key cap.

To move to the next position press a different key or use (▶) if the new letter belongs to the same key. Also use (▶) to insert a blank space.

As an example, suppose you want to insert the name "BILL T". When the cursor is in the leftmost position, press (2) to get A, then press again (2) to get B.
Press the (4) key three times: the cursor moves to the right and the letters G, H and I appear.
Press (5) three times to get the first L.
Now move to the right using (▶) and press (5) three more times to get the second L.
Press (▶) to blank the next position, then press (8) to get the final T.

When you are finished with the name press (ENTER).
At this point you can introduce the 1st number.
Press (ENTER) when done.
Now you can introduce the 2nd number and then press (ENTER). The 2nd number can be empty.

You can indicate that the number(s) entered have a subaddress extension (see § 5.6.2), by using the (✱) key as a separator between directory number(s) and subaddress digits.

4.4.2. Removing an entry

Use (▱) to open the directory. Select the record to delete, then press (DEL).

Confirm with (ENTER) or use (RP) to cancel the operation.

4.4.3. Selecting an entry

Use ⌨ to open the directory. To select a phone entry, use scroll keys until the entry is highlighted.
You may also press the key with the initial letter of the name to jump directly to the first record in the list with that initial.

4.5. Tracing the status of a call

During call establishment, the status windows in the bottom area of the screen displays information about the status of the calls.

DIALING...	the videophone is dialing or has completed dialing, and is waiting for further messages from the switch
CALL PROCEDING	the network has informed the videophone that the call is proceeding. Further digits will be ignored
ALERTING	the call has reached the remote phone; this message is usually accompanied with an alerting tone
CONNECT	the call has been answered. If made available, the number of the remote phone is presented

WAIT...   this message indicates that the
                                      videophone is trying to set-up a
                                      link to the switch.
                                      Please check the line connector
                                      and the cabling to the network
                                      termination.

DISCONNECTED, PLEASE HANG   the call has been disconnected
UP...   by the network or by the
                                      remote user.

4.6. Managing other call related features

4.6.1. Using the hands-free mode

The hands-free mode is activated by pressing the ⟨◁⟩ key. When
in hands-free mode, the microphone and the loudspeaker are
active, while the earpiece and the mouthpiece in the handset are
deactivated. You can activate the hands-free mode either during a
call or when the videophone is idle.
In the latter case, pressing the ⟨◁⟩ key is equivalent to going off-
hook.
To adjust volume, use the ⊖ and ⊕ keys.

When using the hands-free mode, it is recommended to keep a
maximum distance of 50 cm (20 in) from the built-in microphone.

4.6.2. Muting audio

By pressing ⓧ during a connection, no audio is transmitted to the remote party. When the mute is active, the LED close to the ⓧ key is lit.

An icon appears on the screen to remind you that your voice is not being received by the remote party.

To exit audio muting, press ⓧ again.

4.6.3. Video Privacy

By pressing ⓧ during a connection, no video is transmitted to the remote party. When video privacy is set, the LED close to the ⓧ key is lit.

An icon also appears on the screen to remind you that your image is not being received by the remote party.

To remove the video privacy, press ⓧ again.

4.6.4. Controlling and adjusting the image

The quality of the video image taken by the camera can be displayed on the LCD screen by pressing the ⓟ key.

When the local image is displayed, tilt camera orientation to choose the image that is being sent.

Pressing ⓟ again to remove the local image from the screen.

4.7. Controlling and adjusting the remote image

When connected with a system that supports the remote control of the local camera, Voyager allows for adjusting the framing of the connected site.

This function may not be available if the remote control is not enabled in the connected station.

When no menu is displayed:

(INT)   Activates the control of the remote camera

The display shows the message "Far Cam" to indicate that the control is active.

(▶)

(◀)

(▲)   Use these buttons to adjust the remote framing

(▼)

(INT)   Ends the control of the remote camera

4.8. Using menu services during a call

As described in the previous paragraph, most configuration parameters cannot be altered when a connection is in progress. Nevertheless, a few parameters can be modified at any time.

A slightly modified main menu page is displayed when you press the (MENU) key to enter the configuration menu during a connection.

Adjusting audio delay, contrast, brightness, and saturation and selecting the active camera follow the same procedures described above.
The following parameters can be modified by using the main menu

þ   tone signaling

þ   call suspend and resume

þ   INVIEW feature.

4.8.1. Using tone signaling

Pressing a dial key when a connection is active generates DTMF tones that are transmitted to the called party.

These tones can be used to issue commands to equipment connected to the line at the receiving end (e.g. a remotely controlled device, an audio or audio-visual information retrieval system or a security system).

This feature is enabled by selecting DTMF: YES in the main menu page. Alternatively these keys can be used to generate signaling

messages to the ISDN switch. In this case, select the DTMF: NO option.

4.8.2. Suspending and resuming calls

A speech call can be suspended and resumed using this procedure.

4.8.2.1. Suspending the call

During an active speech call:
Press (MENU) to display the MAIN MENU page as shown in Fig. 4-2.

Fig. 4-2

Path: Main menu ▶ Services ▶ Suspend/Resume

When the main menu page is displayed, use the (▼) key to scan the Services... menu and press the (▶) key to open the menu page.

Press the (ENTER) key to suspend the call.

The display shows the dialog box "SUSPEND REQUEST".

Use [keypad] to enters the two digits which identify the suspended call.

Press (ENTER) to confirm and exit menu.

4.8.2.2. Resuming the suspended call

Path: Main menu ▶ Services ▶ Suspend/Resume

Press (MENU) to display the MAIN MENU page as shown in Fig. 4-2:
When the main menu page is displayed, use the (▼) key to scan
the Services... menu and press the (▶) key to open the menu
page.

Press the (ENTER) key to resume the call.
The display shows the dialog box "RESUME REQUEST".

Use [keypad] to enters the two digits which identify the call to be
resume.

Press (ENTER) to confirm and resume the call.

4.8.3. Selecting the INVIEW

This option is used to superimpose (SELFVIEW: YES) or remove
(SELFVIEW: NO) a smaller frame containing (Picture in Picture,
PiP) the image taken by the local camera in the upper left area of
the screen.

Path: Main menu ▶ Services ▶ Display Phone ▶ Selfview

! The PiP Selfview only appears during a video connection, when the remote video is displayed

This parameter can be modified by using the main menu as well.

4.9. Sending a fixed high resolution image

This function is very useful when the Voyager is connected to a document camera to send a high resolution image in 4CIF format (707x576 pixel).

! This function is only available when the video coding is set at H.261 (see paragraph 6.2.1.2)

During the connection, to select the document camera:

(MENU) Opens the Main Menu

(▼) Selects the Camera menu

(▶) Opens the Camera menu

(▼) Select Camera

(ENTER) Select the Y/C video input

(MENU) Press MENU twice

To send the 4CIF image:

(**RP**)   the image is sent and the display shows the message
          "Snapshot sent"

To send the video image from the main camera of the Voyager:

(**MENU**) Opens the Main Menu

(▼)   Selects the Camera menu

(▶)   Opens the Camera menu

(▼)   Select Camera

(**ENTER**) Select the Internal camera

(**MENU**) Press menu twice

4.10. Displaying the received 4CIF image

When a 4CIF image is received, the display shows the message
"Snapshot: RP to exit".

(**RP**)   Displays the moving remote video

Press (**RP**) to display again the 4CIF received image.

5. MODEM EMULATION

Using the serial port available, the unit can be connected to a PC and configured as modem to use MS-NetMeeting or access Internet.

5.1. Unit-PC connection

Connect the serial port RS-232 of the PC to the RS232 PORT_2 connector of the unit.

5.2. Unit configuration

The configuration refers to some parameters of the Data Channel menu.
The user must enable the channel, set the rate of the RS-232 port, enable the modem function and select the T120 protocol (for NetMeeting) or Internet (to access the Internet).

Path: Main Menu ▶ Services ▶ Data Channel
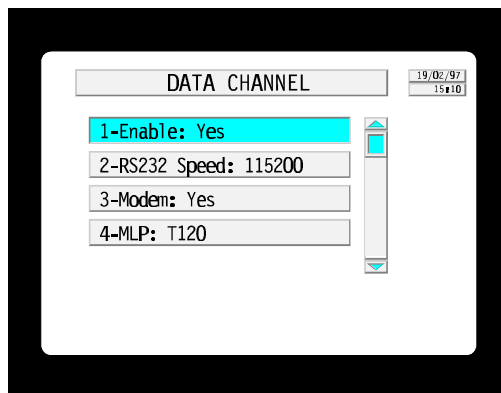
Fig. 5-1

Fig. 5-1 show the typical configuration for use with MS-NetMeeting.

Select the menu items and press (ENTER) until the parameters shown in the figure are displayed (115200 Kbps rate is recommended).

Press (MENU) to save the settings.

5.3. Modem to be installed in Windows95

Once unit has been configured as modem, follow this procedure:

1. Select Settings in the Start menu, then Control Panel

2. Double-click on the Modem icon

3. Select 'Add'

4. Follow the instructions given to install a Standard 28800bps modem and select the communication port (COM) to which unit is connected

At the end, the configured modem will be included in the list contained in the 'Properties: Modem' window.

5.4. Using NetMeeting

5.4.1. Configuration

1. Select Settings in the Start menu, then Control Panel

2. Double-click on the System icon

3. Select the Device Manager directory

4. Select the communication port (COM) to which Unit is connected

5. Click on 'Properties', and select the Port Settings directory

6. Select the same rate (Bits per second) chosen in the unit menu. The other settings are fixed (8 bits, no parity, 1 stop bit and HW flow control). For an example, see the following figure:
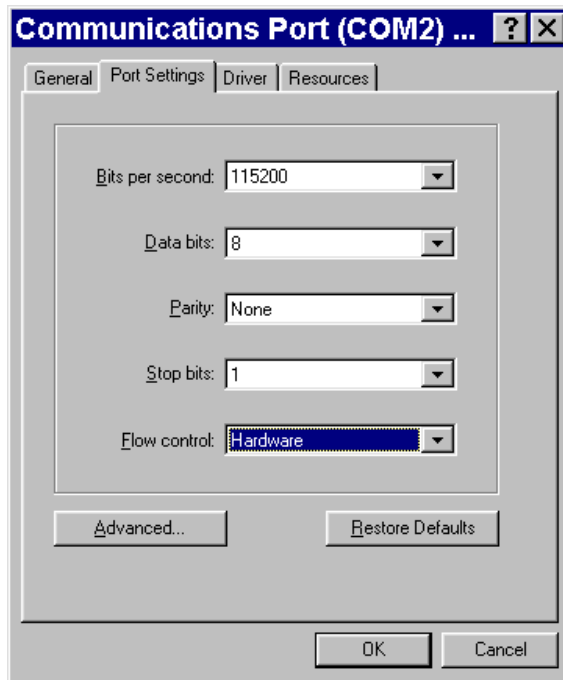
Fig. 5-2

To configure the NetMeeting software:

7. Select Start, Programs and Microsoft NetMeeting

8. In the NetMeeting presentation window, select Options in the
    Tools menu

9. Select the Protocols directory and <u>enable</u> the Modem check
    box

10. Click on 'Properties' to display the Modem protocol properties
    window:
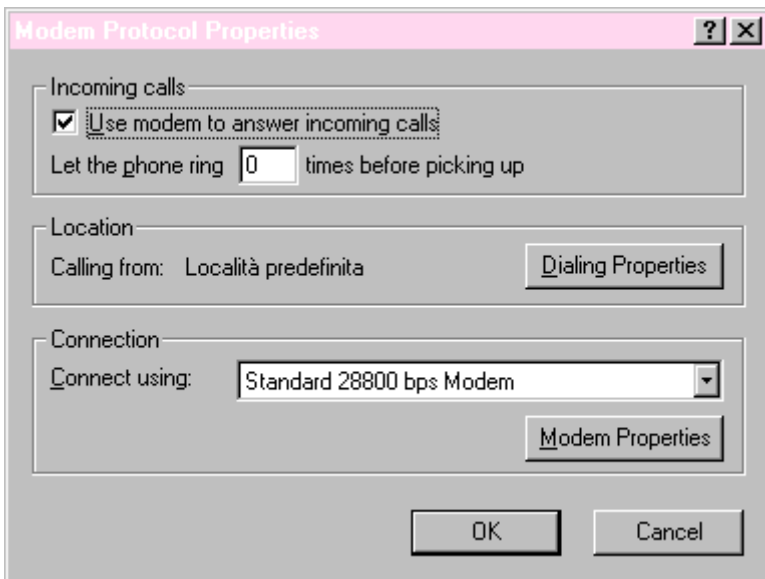
Fig. 5-3

11. As shown in Fig. 5-3 in the 'Incoming calls' pane <u>check</u> the
    'Use modem to answer incoming calls' and leave 0 as number
    of rings

12. Select Standard 28800bps Modem in the 'Connection' pane

13. Select 'OK' to confirm.

5.4.2. Making a call

NetMeeting can be either used before starting communication or during the connection.

In both cases, a call to the remote terminal must be made.

5.4.2.1. Before starting communication

If NetMeeting is used during the connection, follow this procedure (and not unit's) to send the call.

1. In NetMeeting, click on the call button to display the New Call window:
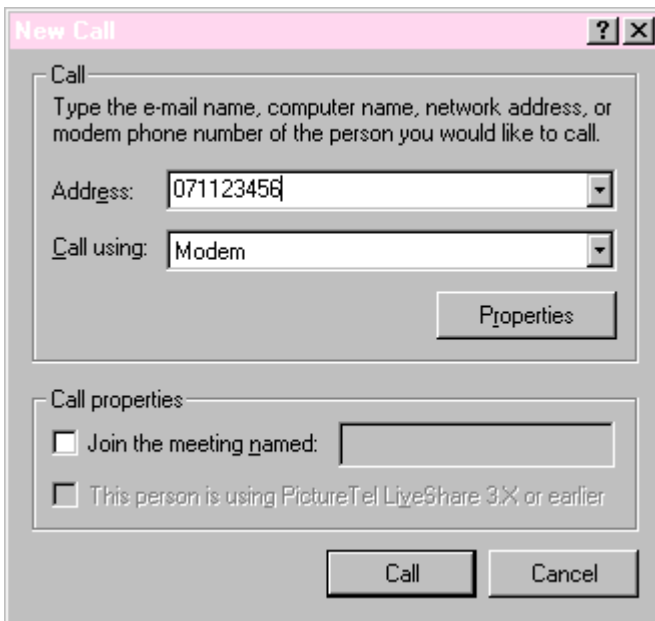
Fig. 5-4

2. Enter the number to call in the Address box

3. Select Modem in the Call using box

4. Click on the 'Call' button to send the call to the remote terminal

5.4.2.2. During connection

To use NetMeeting once the videocommunication has been started, the user must make a call to exchange data.
To send the call, follow the instructions given in items 1-4 of the paragraph above.

> **!** The call must be made from the same terminal used to send the call for the connection in progress

5.5. PC configuration for access to internet

As regards the access to the Internet, the configuration mode depends on the software used for navigation. Like for MS-NetMeeting, suitable parameters for the unit serial port must be set (8N1, HW flow control, data transfer rate = RS232 Rate).

6. CONFIGURING THE VOYAGER

This chapter describes the procedures used to configure the VOYAGER. As a general remark, please note that some configuration operations are not permitted when a call is in progress and that some menu pages can vary slightly depending on a call being in progress or not.

! To save any modifications made, press (MENU) or (◄)

6.1. The Main menu page

Press (MENU) to display the MAIN MENU page as shown in Fig. 6-1:
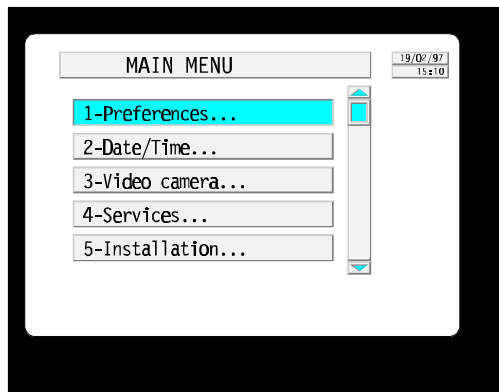
Fig. 6-1

6.2. Preferences

This entry provides a fast access to the most commonly used settings. The following block diagrams indicate the configuration entries contained in the Preferences Menu:
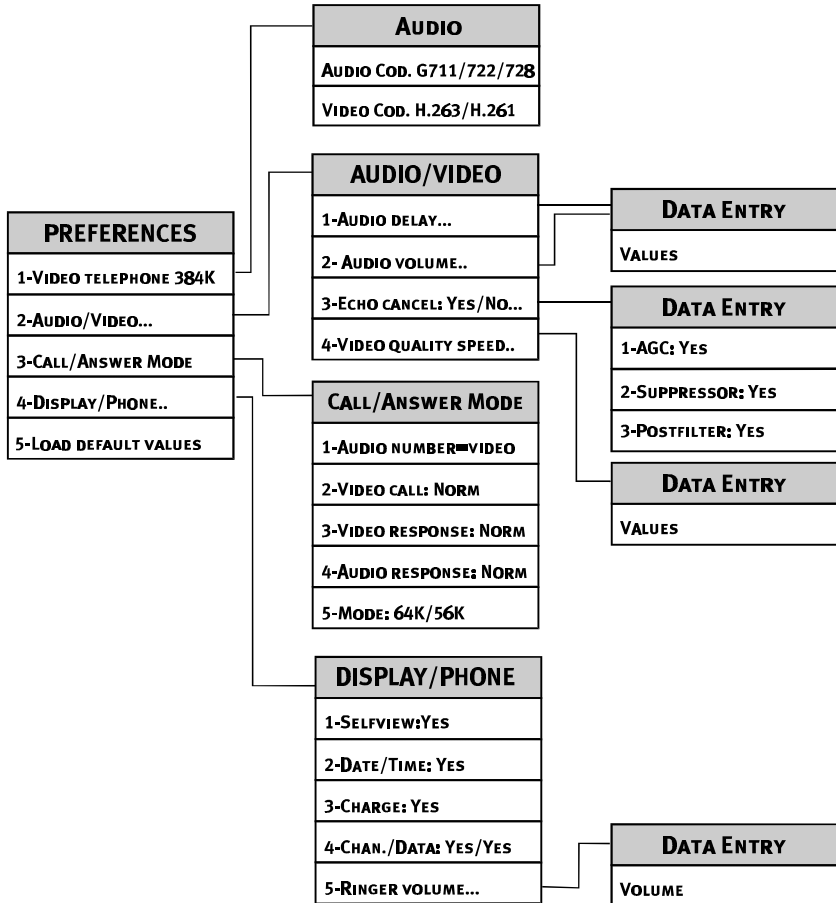
When the main menu page is displayed, use the ⬆️ and ⬇️ keys to scan the menu list.

When the 1-PREFERENCES... entry is highlighted, press the ⏵ key to open the menu page.
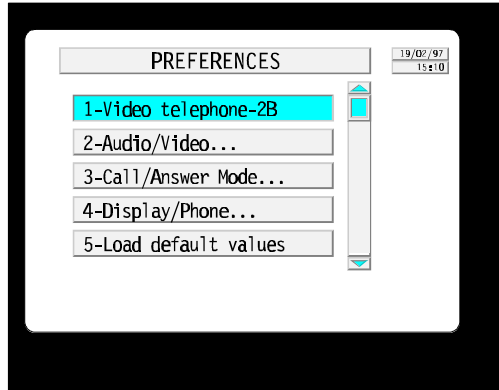
Fig. 6-2

The Preferences menu is used to:

þ   configure the terminal and the type of call

þ   set the audio delay

þ   set the audio volume

þ   activate/deactivate the echo canceller

þ   fine tune the video quality

þ   make calls using a single two different directory numbers

þ   set the unit to automatic or manual answer mode

þ   adjust the ring volume for incoming calls

þ   activate/deactivate information in the status window.

6.2.1. Call Modes

Use the (ENTER) key to scan the operating modes to be used for placing outgoing calls:

1. Phone (regular voice calls with no video)

2. Video telephone 1B (uses a single channel for lower cost, lower quality video calls)

3. Video telephone 2B (uses two channels for the best video quality)

4. HO 128K (2 channels call)

5. HO 192K (3 channels call)

6. HO 256K (4 channels call)

7. HO 320K (5 channels call)

8. HO 384K (6 channels call)

> **!** This mode allows for a quick configuration of the type of call to be made. The selection of 4...8 modes requests the correct configuration of the user accesses in the Network menu.

Path: Main menu ▶ Preferences

> **!** Calls placed through the auxiliary phone use the same call mode selected for the videophone

6.2.1.1. Audio Coding

This option is used to select the audio coding from G728, G722 or G711.

Path: Main Menu ▶ Preferences ▶ 1st menu item
▶ Audio Coding

6.2.1.2. Video coding

This option allows for choosing the video coding between H.263 and H.261.
The H.263 coding was specifically developed for connections at low bit rates. It is the default value and allows for connections with very good video quality even at low rates.

Path: Main Menu ▶ Preferences ▶ 1^ menu item ▶ Video coding

(ENTER) Selects the desired coding

6.2.2. Audio/Video

This menu is used to:

Audio Delay...   set the audio delay

Audio Volume...   set the audio volume

Echo Cancel: Yes   activate/deactivate the echo suppressor

Video Quality-Speed...   tradeoff the video quality

Path: Main menu ▶ Preferences ▶ Audio/Video

When the Audio/Video... entry is highlighted, press the (▶) key to open a lower level menu page.

6.2.2.1. Audio delay

Audio delay is necessary to synchronize the lip movements of the remote user with the received audio and is expressed in milliseconds (msec). The value of the audio delay can be set from 0 to 999 msec.

Path: Main menu ▶ Preferences ▶ Audio/Video ▶

▶ Audio Delay

When the Audio/Video menu page is active, and the AUDIO DELAY... entry is highlighted, press the (▶) key to display the control shown in Fig. 6-3.
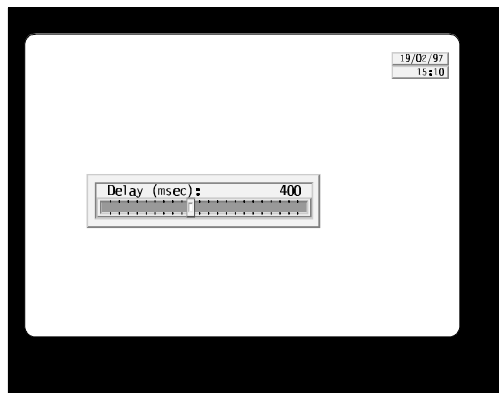
Fig. 6-3

Fig. 6-3 use the (+) and (−) keys to adjust the cursor to the desired value, then press (ENTER) or (◀) to confirm and exit.

> **!** when a connection is in progress the audio delay
> **•** control can be directly accessed from within the
>   main menu page

6.2.2.2. Audio volume

This control only affects the default audio volume in hands-free mode. Volume adjustment is not provided when using the handset.

Path: Main menu ▶ Preferences ▶ Audio/Video ▶

▶ Audio Volume

When the Audio/Video menu page is displayed, and the AUDIO VOLUME... entry is highlighted, press the (▶) key to display the control box shown in Fig. 6-4.
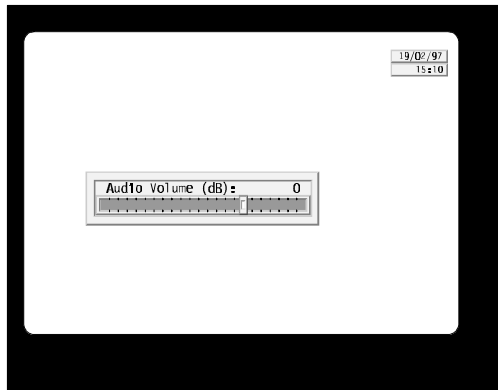
Fig. 6-4

Use the (+) and (−) keys to adjust the cursor to the desired value, then press (ENTER) or (◀) to confirm and exit. Volume levels range from -44 to +19 dB.

6.2.2.3. Echo canceller

Use the (ENTER) key to enable (Echo Cancel: Yes) or disable (Echo Cancel : No) the echo suppressor or the echo canceller if the echo cancellation option is installed.

> **!** Usually keep the echo canceller/suppressor enabled, to avoid that the remote party receives an annoying echo of its own voice.

6.2.2.3.1. Audio Gain Control

This option is used to activate or deactivate the automatic gain control function of the echo suppressor on the active audio input.

Select AGC: Yes, when using a microphone together with a non-adjustable audio preamplification device. Select AGC: No, if the microphone is associated with a manual audio device (such as a mixer).

When AGC is active:

(ENTER)   Selects the desired option

6.2.2.3.2. Suppressor

This function is enabled by default to guarantee a good audio quality, allowing the echo suppressor to work at its best.
In some cases, it can be disabled (Suppressor: No) to make conversation easier, i.e. during small meetings with several persons, when it is important to send the speaker's audio quickly, although this can cause a slight "echo effect".

Path: Main Menu ▶ Preferences ▶ Audio/Video ▶ Echo Cancel.

▶ Suppressor

(ENTER) To enable/disable the echo suppressor function

6.2.2.3.3. Postfilter

This function is enabled by default to improve the audio performance of unit even in noisy rooms, by filtering background noises.

Path: Main Menu ▶ Preferences ▶ Audio/Video ▶ Echo Cancel.

▶ Postfilter

(ENTER) To enable/disable the postfilter function

6.2.2.4. Video quality speed

This control only affects the trade-off between movement and quality. Better movement is given by a higher frame rate, whilst better quality gives a clearer image.

Therefore, settings in the lower range produce less frames per second with better image quality and settings in the higher range produce more frames per second with lower quality.

Path: Main menu ▶ Preferences ▶ Audio/Video ▶

▶ Video Quality Speed

When the Audio/Video menu page is displayed, and the Video Quality-Speed... entry is highlighted, press the (▶) key to display the control box
Use the (+) and (−) keys to adjust the cursor to the desired value, then press (ENTER) or (◀) to confirm and exit. Video quality ranges from 32 to 64.

6.2.3. Call/Answer Mode

This option is used to select the mode to place or answer calls.

Path: Main menu ▶ Preferences ▶ Call/Answer Mode

When the MAIN MENU page is displayed, and the CALL/ANSWER MODE mode entry is highlighted, press the (▶) key to display the page shown in Fig. 6-5.
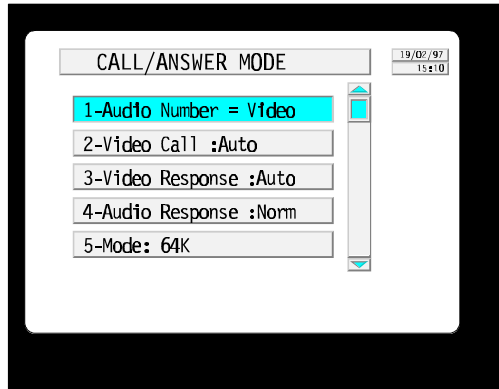
Fig. 6-5

6.2.3.1. Audio/video number

If the "Videophone 2B" mode has been selected (see § 5.2.1), then two separate calls to the same directory number (DN) are usually made.

This is the case of most European ISDNs, which support multiple calls to the same DN.

Path: Main menu ▶ Preferences ▶ Call/Answer Mode ▶
▶ Audio Number

If you are placing a video call to a remote party connected to an ISDN that supports this feature, press (ENTER) to choose

1 - AUDIO NUMBER = VIDEO NUMBER

The alternative 2 - AUDIO NUMBER ⟡ VIDEO NUMBER should be used when the called user has two different directory numbers.

This is often the case when the remote party connects to a non-ISDN network or to some ISDN switches in the U.S.

Calls using two different directory numbers can also be automatically placed from the Phone Directory.

6.2.3.2. Video call

The 2nd (video) call can be established either manually or automatically (provided that the second directory number is known in advance).

Path: Main menu ▶ Preferences ▶ Call/Answer Mode ▶

▶ Video Call

Three alternatives are given:

þ   VIDEO CALL: NORM, the 2nd call is placed manually by pressing ⒺⓃⓉⒺⓡ when solicited by the terminal

þ   VIDEO CALL: AUTO, the 2nd call is automatically placed without any user intervention

þ   VIDEO CALL: IMME, both the 1st and the 2nd calls are placed at once. This mode is used to guarantee compatibility with some non- standard terminals.

! This configuration is not active in the bonding mode.

6.2.3.3. Audio response

 This option is used to select the answering mode to an audio (1st) call:

þ   AUDIO RESPONSE: NORM, the audio (1st) call is manually answered by lifting the handset or pressing

þ   AUDIO RESPONSE: AUTO, the audio (1st) call is automatically answered and the videophone is placed in the hands-free mode

Path: Main menu ▶ Preferences ▶ Call/Answer Mode ▶

▶ Audio Response

6.2.3.4. Video response

This option is used to select the answering mode to a video (2nd) call:

þ   VIDEO RESPONSE: NORM, the 2nd call is manually answered by pressing (ENTER) when solicited by the terminal

þ   VIDEO RESPONSE: AUTO, the 2nd call is automatically answered without any user intervention

Path: Main menu ▶ Preferences ▶ Call/Answer Mode ▶

▶ Video Response

!   This configuration is not active in the bonding mode.

6.2.3.5. Mode

This option allows you to set the 56k or 64k call mode.

The 64k is default call mode; the 56k may be useful to connect with terminal using network at 56k.

Path: Main menu ▶ Preferences ▶ Call/Answer Mode ▶

▶ Mode

! | The value return to default at power on.

6.2.4. **Display/Phone**

This menu page is used to activate the SELFVIEW function, to activate/deactivate the information in the status window (current date and time, taxation, channel status) and to adjust the ringer volume.

Path: Main menu ▶ Preferences ▶ Display/Phone

When on the MAIN MENU page, select the DISPLAY/PHONE... entry and press the ⊙▶ key to display the page shown in Fig. 6-6

Fig. 6-6

When finished, press ⒺⓃⓉⒺⓇ or ◀ to return to the previous menu.

6.2.4.1. Selfview

This option is used to superimpose (SELFVIEW: YES) or remove (SELFVIEW: NO) a smaller frame containing (Picture in Picture, PiP) the image taken by the local camera in the upper left area of the screen.

Path: Main menu ▶ Preferences ▶ Display/Phone ▶
▶ Selfview

! | The PiP Selfview only appears during a video
  | connection, when the remote video is displayed

6.2.4.2. Date/time

This entry allows to display (DATE/TIME: YES) or remove (DATE/TIME: NO) the indication of the current date and time in the Status Window.

Path: Main menu ▶ Preferences ▶ Display/Phone ▶
▶ Date/Time

6.2.4.3. Charge units

This entry allows to display (CHARGE:YES) or remove (CHARGE: NO) the indication of the charge units for the current call(s) in the Status Window.

Path: Main menu ▶ Preferences ▶ Display/Phone ▶
▶ Charge

! This features may be not available in your network, or your network may use a proprietary signaling scheme to provide charging information.

6.2.4.4. Channels/Data

This entry allows to display (CHANNELS/DATA: YES) or remove (CHANNELS/DATA: NO) the indication of the status of the current call(s) in the Status Window. The channel status indication uses two separate buttons (one for each call) to indicate:

þ Black: disconnected

þ Yellow: a network connection has been made, and the system is searching for synchronization

þ Green: synchronization has been achieved on that channel

In bonding 3 mode (Bonding 3) the yellow colour indicates the supplementary channel used by the channel aggregation unit to obtain the requested band.

An icon with a computer is displayed to indicate when a data channel is open.

Path: Main menu ▶ Preferences ▶ Display/Phone ▶
▶ Channel Status

6.2.4.5. Ringer volume

This menu is used to set the ringer volume for incoming calls.

Path: Main menu ▶ Preferences ▶ Display/Phone ▶
▶ Ringer Volume

When the DISPLAY/PHONE menu page is active, and the RINGER
VOLUME... entry is highlighted, press the ⊙▶ key to display the
control box shown in Fig. 6-7.
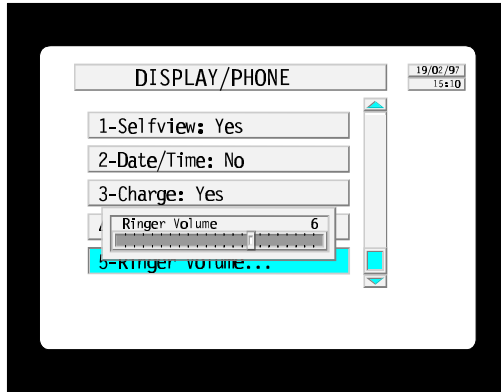
Fig. 6-7

Use the ⊕ and ⊖ keys to adjust the cursor to the desired
value, then press ⟨ENTER⟩ to confirm.

! to adjust the ring volume also press ⊕ or ⊖
when the videophone rings

6.2.5. Load Default Values

This menu is used to restore the default values of the Preferences
menu.

Path: Main menu ▶ Preferences ▶ Load Default Values

When the DISPLAY/PHONE menu page is active, and the LOAD

DEFAULT VALUES entry is highlighted, press (ENTER) to load default values for the PREFERENCES... menu

6.3. Date/Time

This menu is used to set current date and time.

Path: Main menu ▶ Date/Time

When in the MAIN MENU page, select the DATE/TIME... entry and press the (▶) key to display the page shown in Fig. 6-8.
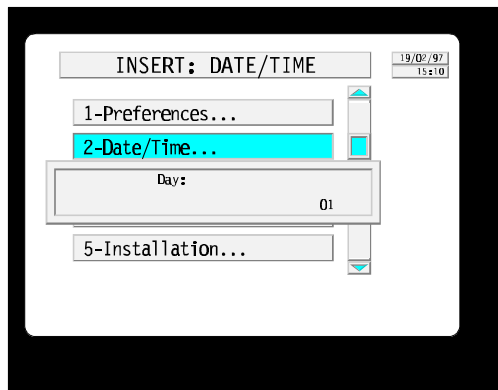
Fig. 6-8

A dialog box is shown to allow current values for the day to be entered. Additional dialog boxes are then shown for month, year, hours, minutes and seconds in the order.

Use:

To introduce new values

To cancel the least significant digit of the number shown

(ENTER)   To move to the next field

When the last value has been entered, a further dialog box requests the user to press (ENTER) to confirm and exit the whole operation.

If incorrect values have been supplied, then an error message is displayed and the current date/time values are left unaltered.

6.4. Video Camera

This menu is used to select the active camera (internal or external) and to adjust video parameters.

Path: Main menu ▶ Video Camera
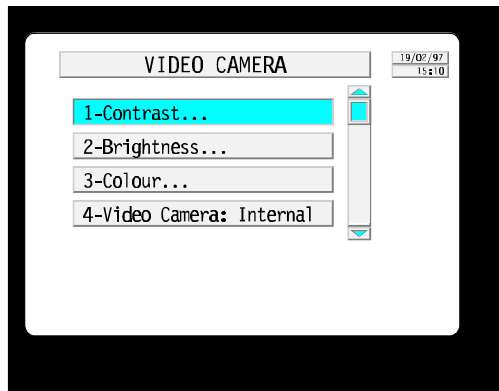
Fig. 6-9

6.4.1. Adjusting camera parameters

When the VIDEO CAMERA page is displayed as in Fig. 6-9, and the Contrast... or Brightness... or Colour... entries are highlighted, press the ⏵ key to display the relevant control box, then use the ⊕ and ⊖ keys to adjust the cursor to the desired value, then press ⒺⓃⓉⒺⓇ to confirm.
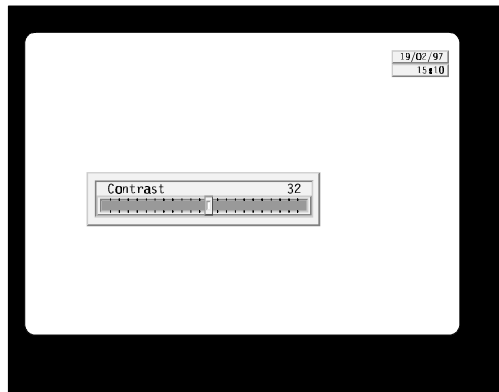
Fig. 6-10

When finished, press ⓂⒺⓃⓊ or ◀ to return to the previous menu.

6.4.2. selecting the active camera

This option is used to activate the internal or the external camera.

Use ⒺⓃⓉⒺⓇ to select the internal or external camera, then press ⓂⒺⓃⓊ to confirm and exit.

6.5. Services

The Services menu allows for the quick activation of some videotelephone functions during the connection.

Path: Main menu ▶ Services

This menu page provides access to several auxiliary functions, such as:

þ   Suspend/Resume

þ   Inter-phone

þ   Conference Management

þ   Data Channel

þ   Audio Input/Output

The Suspend/Resume function allows an ISDN call to be temporarily suspended and later resumed. Please refer to Chapter 4 (Operating Procedures) for details on how to use the Suspend/Resume function.

! Conference Management functions are under development and are to be released in future versions of the software.

6.5.1. Suspend/Resume

The Suspend/Resume menu is used to suspend an incoming telephone call and resume it.

For more explanations, see paragraph 4.8.2 Suspending and resuming a call.

6.5.2. Interphone

The Interphone option activates some services used to manage the VIP® function.

6.5.3. Conference Management

The Conference Management menu is not active in this version of VOYAGER.

6.5.4. Data Channel

The Data Channel item is used to access the menu described in paragraph 6.6.3.2

6.5.5. Audio input/output

This menu allows the setting source input and destinat output of audio signal.
The input audio signal can to come from internal microphone or from external source.
The output audio signal can to be sent to internal loud-speaker or to external.

Path: Main menu ▶ Services ▶ Audio Input/Output
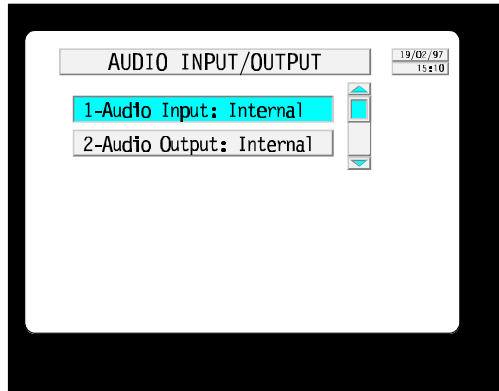
Fig. 6-11

Use the (ENTER) key to set input audio signal for microphone or output audio signal for speaker.

Use the (ENTER) key to set Internal or Extern.

6.6. Installation

This menu permits configuration of several ISDN related issues.

! Proper settings for these entries are essential for the videophone to operate correctly. Access to these parameters is therefore password protected to avoid unintentional access.

Path: Main menu ▶ Installation

When the main menu page (see Figure 5-2) is displayed, use the (▲) and (▼) keys to scan the menu list. When the INSTALLATION... entry is highlighted, press the (▶) key to open the menu page.

A password has to be entered in the dialog box as shown in
Fig. 6-12.
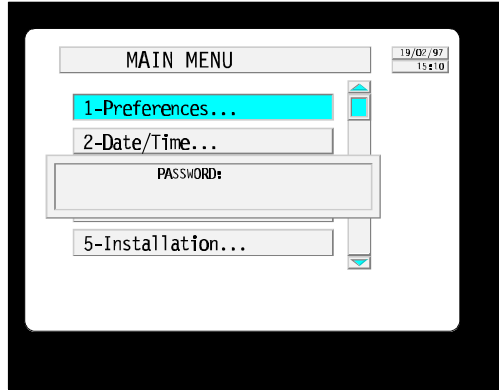
Fig. 6-12

The password value is as follows: **1234**

The following diagram shows the pages contained under the
INSTALLATION... Menus:

LOCATION

1-Audio coding: Euro/USA

2-Video Standard:PAL/NTSC

3-Terminal Name

4-Dial Tone: Normal/Cont.

Data Entry

Name

CAU CONFIGURE

1-Rate: 2X56K...384K.

2-Mode: Transp/Bonding

3-Access (1/2/3)

ACCESS (n)

1-Mono/Multinum...

2-Subaddress...

3-TEI Auto/Man.

4-CLIR COLR

5-Fallback: Yes/No

INSTALLATION

1-Location

2-Network

3-Others

4-Delete Directory

5-Load default values

OTHERS

1-Line control: Yes

2-Operator: 1[SEG]

3-Data channel...

4-H.320/Broadcast...

DATA CHANNEL

1-Enable: Yes/No

2-RS232 Speed: 2400/..

BROADCAST

1-Audio: G.711..

2-Rate: 64/2X64

3-Video: On/Off

4-Lsd: 6,4/8..

After entering the password, the page shown in Fig. 6-13 is displayed.
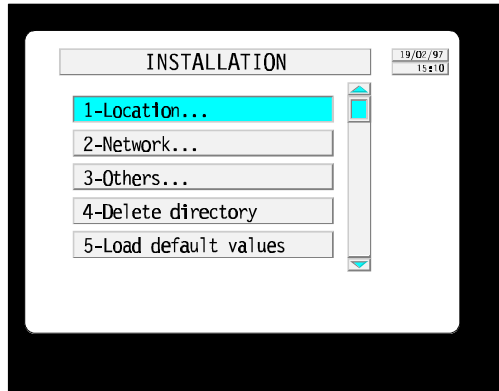
Fig. 6-13

6.6.1. Location Submenu

Path: Main menu ▶ Installation ▶ Location

The LOCATION page is shown in Fig. 6-14.
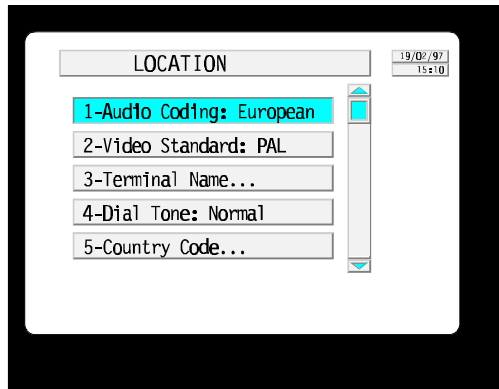
Fig. 6-14

6.6.1.1. Audio coding

This option is used to select the default audio coding (PCM A-law in Europe and m-law in the U.S.A.) used by the videophone either during speech calls or during video calls before the remote terminal has declared its capabilities.

Path: Main menu ▶ Installation ▶ Location ▶ Audio Coding

Use (ENTER) until required coding standard (EUROPEAN or U.S.), appears then press (MENU) to confirm and exit.

6.6.1.2. Video standard

This option is used to select between PAL or NTSC video standard.

Path: Main menu ▶ Installation ▶ Location ▶ Video Standard

6.6.1.3. Terminal name

Name of terminal may be useful during connections with 3 or more terminals (multipoint conference) to identify own terminal. List of terminals connected can be displayed selecting Conference Management option in Services menu.

Path: Main menu ▶ Installation ▶ Location ▶ Terminal Name

6.6.1.4. Dial tone

The dial tone can be either normal or continuous forced.

Path: Main menu ▶ Installation ▶ Location ▶ Dial Tone

When the Dial tone menu item is active use (ENTER) to selects the desired option.

6.6.1.5. `Country` code

This option allows the selection of a specific country code (i.e. Italy 39, Germany 49). This will enable the videophone to adjust and respond according to the caracteristics of the local ISDN access to which it is connected.

Path: Main menu ▶ Installation ▶ Location ▶ Country Code

When the Country Code entry is active:

(ENTER) To activate the dialog box in which to insert the local country code

[keypad] To introduce values

(ENTER) To confirm

6.6.2. Network

This menu is used to:

þ   select the desired rate

þ   set the operation mode of the channel aggregation unit (Bonding 1-3, Transparent)

þ   configure each access according to the following parameters:

    – Multinumber

    – Subaddress

    – TEI

− CLIR and COLR

− FALLBACK

In order to configure the parameters of this menu the user must know the data of the ISDN accesses where the terminal is connected. For this information refer to the network provider. The default values are:

− ACCESS: MONONUMBER

− SUBADDRESS: NOT PRESENT

− TEI: AUTOMATIC

− CLIR AND COLR: NOT REQUESTED

Path: Main Menu ▶ Installation ▶ Network

Select **Network** in the **Installation** menu to display the page shown in Fig. 6-15.

```
            CAU CONFIGURE          19/02/97
                                    15:10

    1-Rate: 2x64K
    2-Mode: Transp
    3-Access (1)...
```
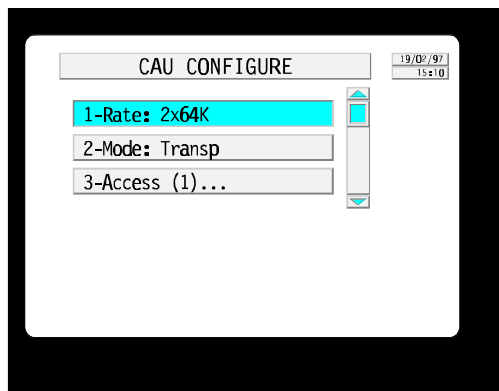
Fig. 6-15

Example: Configuration of a terminal with 256K rate, having 2 mononumber accesses with telephone numbers 1234 (access 1) and 1235 (access 2)

In the Configure CAU menu select:

Rate=256K

Mode=Bonding 1 (Channel aggregation)

Access (1)   Access (2)

Mononumber (1234)   Mononumber (1235)
Subaddress: None   Subaddress: None
TEI: Auto   TEI: Auto
CLIR: No COLR: No   CLIR: No COLR: No
Fallback: Yes   Fallback: Yes

6.6.2.1. Rate

The user must select the rate according to the number of accesses used.

The maximum rate is 128k with 1 access, 256k with 2 accesses, and 384k with 3 accesses. The higher the rate, the better the video quality (both static and moving images).

Path: Main menu ▶ Installation ▶ Network ▶ Rate

6.6.2.2. Mode

When the terminal operates with 128...384K rate and either Bonding 1 or 3 mode is selected, the data channels (Nx64 or

Nx56 Kbit/s)obtained by making N ISDN calls are aggregated into a single data channel.

Select TRANSP to deactivate aggregation.

Path: Main menu ▶ Installation ▶ Network ▶ Mode

In Bonding 3 mode an additional call is made to obtain the requested rate, when the terminal is connected to a 56K network.

The following examples show how to configure the channel aggregation unit when connecting two terminals, TE1 and TE2.

More configuration examples are given in the appendix.

Ex. 1 :

TE1	Mode Bonding 1	Rate 256K	Network 64K
TE2	Mode Bonding 1	Rate 256K	Network 64K

4 calls are necessary to obtain 256K rate (4x64=256Kbit/s).

Ex. 2 :

TE1	Mode Bonding 3	Rate 256k	Network 64k
TE2	Mode Bonding 3	Rate 256k	Network 56k

When Mode Bonding 3 is selected, 5 calls are made (5x56=280Kbit/s) in order for TE2 to obtain the requested 256Kbit/s rate.

The excess rate (280-256) is 'rejected'.

6.6.2.3. Access: Mononumber/Multinumber

The terminal can be connected to either Mono or Multinumber
ISDN basic accesses.
A maximum of 8 terminals can be connected to the Multinumber
access and each terminal can answer to a different number.

The user must select the type of access and insert the number the
terminal will answer to.

! | Inserting an access number means to enable it.

Path: Main menu ▶ Installation ▶ Network ▶ Access ▶

▶ Mono/ Multinumber

In the Access (n) menu, when the Mono/Multinum. item is
selected, use ⊙ to display one of the pages shown in Fig. 6-16
used to insert the number

```
                 ACCESS (n)            19/02/97
                                        15:10
         ┌──────────────────────┐
         │ 1-Mononumber...       │
         │ 2-Subaddress...       │
         ┌──────────────────────┐
         │        Insert         │
         │          _            │
         │          _            │
         │ 5-Fallback: Yes       │
         └──────────────────────┘
```
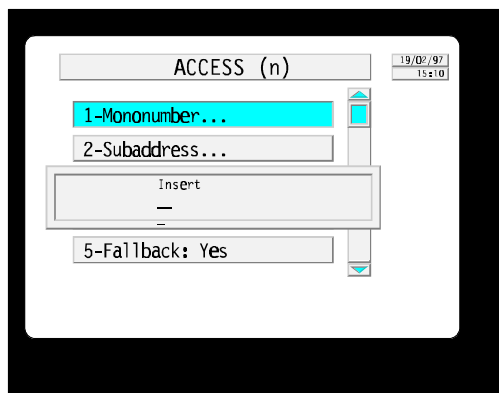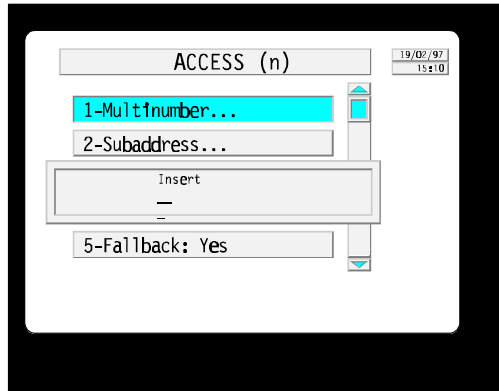
Fig. 6-16

! The number must be inserted with the area code
without the first zero

6.6.2.4. Access: Subaddress

The subaddress is an address extension to a directory number
and it may be used to select one or more terminals connected to
the same access under the same directory number.
Subaddressing information, opposite to the MSN supplementary
service, is completely transparent to the network.

Path: Main menu ▶ Installation ▶ Network ▶ Subaddress
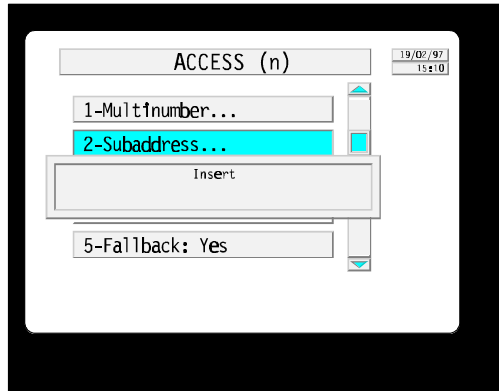
Fig. 6-17

6.6.2.5. Access: Tei (Terminal endpoint identifier)

A Terminal Endpoint Identifier (TEI) is used by the ISDN switch to distinguish among different terminals connected to the same access.

A terminal can be assigned a fixed TEI value or it may use a procedure to dynamically request and obtain TEI values from the switch.

Path: Main menu ▶ Installation ▶ Network ▶ TEI

Therefore you should select between automatic or fixed TEI values, by using the ⊞ENTER⊞ key.

If you have chosen AUTO TEI, no additional procedures are required.

If you have chosen FIXED TEI, you are required to enter the correct value for the TEI to be used by the videophone.
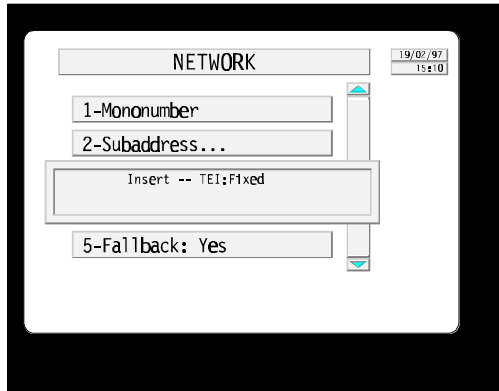
Fig. 6-18

! Please consider that an incorrect TEI setting may
prevent the possibility to establish calls. if your
access is configured for point-to-multipoint
operation, then usually set the TEI value to DYNAMIC

6.6.2.6. Access: Clir/Colr

These functions allow to restrict presentation of your local
Directory Number when placing or answering a call.

Path: Main menu ▶ Installation ▶ Network ▶ CLIR/COLR

If the CLIR:Y value is selected, then the called party will not be
presented the calling number.

If the COLR:Y value is selected, then the calling party will not be
presented the connected number .

6.6.2.7. Access: Fallback

Unless when configured for speech calls, the videophone places
"data calls" that are not usually answered by basic ISDN phones.

Furthermore data calls to phones connected to the analog network cannot be delivered and are immediately disconnected by the switch.

Path: Main menu ▶ Installation ▶ Network ▶ Fallback

When the FALLBACK function is selected (Fallback: YES), the videophone automatically places a speech call to the same DN, if the original data call is not answered or is disconnected by the network.

6.6.3. Others

This menu is used to:

þ   Check the connection to the line

þ   Enable or disable the data channel and set the transmission rate

þ   Set the mode (H320/Broadcast)

Path: Main menu ▶ Installation ▶ Others

When in the INSTALLATION menu page, select the OTHERS... entry and press ⭕▶ key to open the menu page shown in Fig. 6-19.
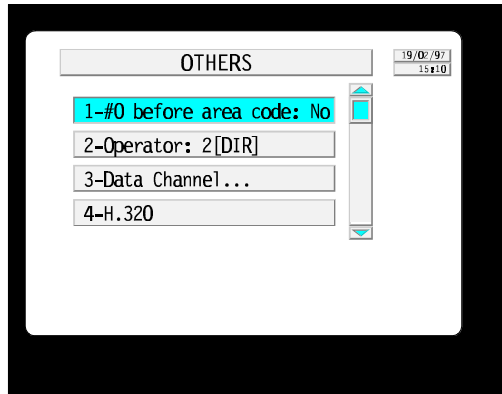
Fig. 6-19

6.6.3.1. Calling area code

The calling number is displayed when calls are received, if this option is enabled in the remote terminal.

The system adds a zero at the beginning of the number in case of national calls (i.e. 06 instead of 6 for calls from Rome).

Path: Main Menu ▶ Installation ▶ others ▶

▶ #0 before area code
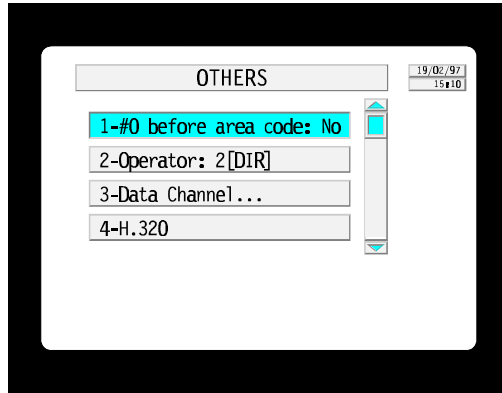
Fig. 6-20

When the first menu item is active:

ENTER   To select '#0 before area code: No' (the initial 0 is
not displayed), or '#0 before area code: Yes' (the
initial 0 is displayed).

6.6.3.2. Operator

The OPERATOR menu is not active in this version of
videotelephone.

6.6.3.3. Data Channel

When the Data Channel is enabled, data can be transferred from a
PC towards the ISDN network, using the SERIAL PORT serial port
located in the back of unit.

Path: Main Menu▶Installation▶ Others ▶ Data Channel

6.6.3.3.1. DATA CHANNEL ACTIVATION

Open the DATA CHANNEL menu. Press (ENTER) to enable the data channel. The following page is displayed:
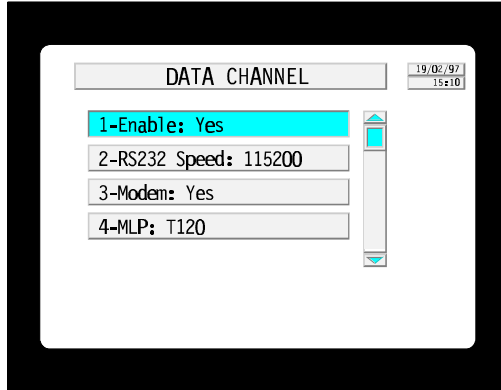
Fig. 6-21

6.6.3.3.2. SETTING RS232 SPEED

This menu is used to set the bit rate of the serial port. Data format is fixed at 8 bit, no parity, with 1 start-stop bit (8N1).

The bit rates values available are: 2400, 4800, 9600, 19200, 38400, 56000, 57600, 115200 and 230400 bit/sec.

When the Rs232 Speed item is active:

(ENTER)   Allows for the desired selection from the options shown in sequence

! For a correct data transfer, unit and PC must have the same parameters (format and rate)

6.6.3.3.3. MODEM

Unit can interpret the "AT" commands typically used for the communication between PC and modem.

Path: Main menu ▶ Installation ▶ Data channel ▶ Modem

When the Modem item is active:

(ENTER) Select Modem: Yes to accept "AT" commands from the DTE.

6.6.3.3.4. MLP

This function is used for data transfers between two Aethra terminals.

Path: Main menu ▶ Installation ▶ Data channel ▶ MLP

When the MIp item is active:

(ENTER) To select Proprietary MLP or T.120

6.6.3.4. H320/Broadcast

H320 is the normal working mode of the terminal.
In connections with only one direction (Tx or Rx), i.e. one terminal transmits an one or more terminals receive, you can select BROADCAST and than set the Tx mode of the terminal.

Path: Main menu ▶ Installation ▶ Others ▶

▶ H320/Broadcast

Use the (ENTER) key to set the desired option, then press (MENU) key to confirm.

6.6.4. clearing the directory

This menu is used to clear the Phone Directory.

Path: Main menu ▶ Installation ▶ Delete Directory

6.6.5. Load Default Values Submenu

This menu is used to restore default values for all parameters in the INSTALLATION menus.

Path: Main menu ▶ Installation ▶ Load Default Values

The following tables summarize the default values and configuration of the system:

MENU ITEM	SUBMENU	DEFAULT VALUES
Preference	Videotelephone Audio Code Video Coding	2B G728 H.263
	Audio/Video	Audio Delay: 400 Audio Volume: 0 dB Echo Cancel: Yes Video Quality Speed: 48 Audio Input/Output: Inter.
	Call/Answer Mode	Audio Number = Video Video Call: Auto Video Response: Auto Audio Response: Norm Mode: 64K
	Display/Phone	SelfView: Yes Date/Time: Yes Charge: Yes Channel Status: Yes Ringer Volume: 6

Camera	Contrast	32
	Brightness	32
	Color	32
	Camera	Room
Installation	LOCATION	Audio Coding:Euro Video Standard: Pal Terminal Name Dialing Tone: Normal Country Code: 39

	Network/Access(n)	Rate: 2x64k
		Mode: Transp
		Access (1,2,3)
		    Mononumber
		    Tei: Auto
		    Clir: No Colr: No
		    Fallback: Yes

	Others Line Control
	           Monouser
	           Data Channel
	
	           H320
		Yes
		Enable: No
		RS232 Speed: 9600

7. DIAGNOSTICS AND MAINTENANCE

The VOYAGERintegrates diagnostic and maintenance function tools into the help system, that gives a guided access to functions and to information about the system configuration.

7.1. Using the HELP system

Pressing the (HELP) key when no configuration menu page is displayed results in the following page to appear on the screen:
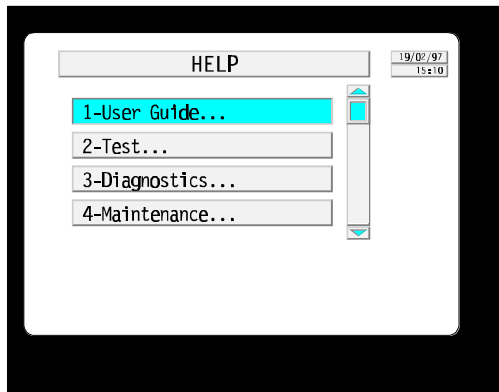
Fig. 7-1

| Pressing (HELP) when a configuration and management operation is in progress, displays a help page with on-line information about the current operation and does not activate the help system

7.2. User guide

When in the HELP menu page, press select USER GUIDE... and press ⓢ to access the help pages. Please refer to § 3.3. for more details.

7.3. Using the TEST facilities

In the HELP MENU page, select the TEST... entry and press ⓢ to enter the TEST menu page, as shown in Fig. 7-2.
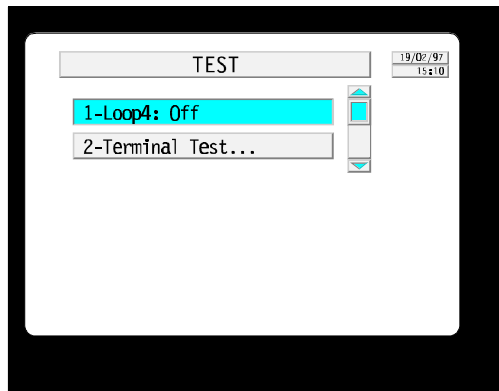
Fig. 7-2

! This page is only displayed when no call is active

7.3.1. Using the Loop 4 commands

This function is usually reserved to conformance and operation testing on the ISDN interface.

Path: Help menu ▶ Test ▶ Loop 4

When the loop4 is established, any data received from the line is transmitted back to the remote party.

The loop can be established on either channel (LOOP 4: B1 and LOOP 4: B2) or on both channels (LOOP 4: B1B2) of the ISDN access.

In the Test menu page select the TEST entry and use the (ENTER) key to select the preferred LOOP4 option.

7.3.2. Using the Terminal Test facility

This function provides a mean to rapidly verify the operation of major videophone components, such as the camera, the display, the microphone, the loudspeaker, as well as the video and audio coding and decoding parts.

During the test, after a short check, the hands-free mode and the INVIEW are activated, then video and audio signals coming from the camera and the microphone are first digitized and encoded and then decoded and played back to the local display and speaker.

Path: Help menu ▶ Test ▶ Terminal Test

When the TERMINAL TEST... entry is selected, press the (▶) key to start the test. Press (HELP) to stop the terminal test and to return to the higher menu level.

7.4. Diagnostics menu

This option is used to provide a quick reference to the current configuration of the videophone.

Path: Help menu ▶ Diagnostic Menu

When in the Help menu page you select DIAGNOSTICS... and press (▶), a page with software and hardware configuration data is displayed. In Fig. 7-3 is shown an example of Diagnostics page.

```
                    DIAGNOSTICS

  VER: MAIAS 384 VX.XX
  NET: XY.YY
  Video telephone-2B
  Rate: 2X64k
  Echo Cancel.: Yes
  Operator: 2[DIR]
  Location: European PAL
```
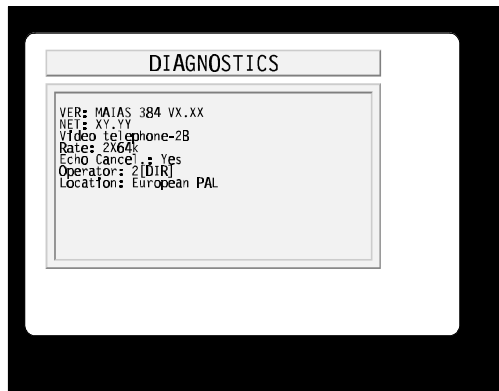
Fig. 7-3

This page contains:

þ   the release number of the software running in the main CPU

þ   the release number of the ISDN protocol software (also running in the main CPU)

þ   the current call configuration (1B, 2B or audio-only) and the network channel rate (56 or 64 kb/sec)

þ   if the line detect feature is enabled

þ   if the optional echo canceller board is installed

þ   if the videophone or the auxiliary phone set has been
     selected to answer incoming calls

Press (HELP) to return to the help menu page.

7.5. Using the maintenance services

Path: Help menu ▶ Maintenance

The MAINTENANCE page is shown in Fig. 7-4.
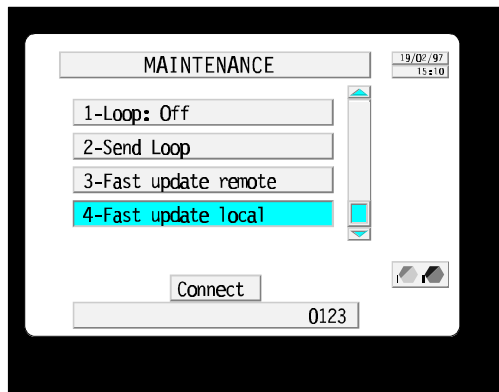
Fig. 7-4

!   This page is only displayed during the active phase of
     a call

7.5.1. Remote audio/video loops

Using these functions you can command a loop on the remote terminal, so that the audio and/or video that you are sending will be reflected back to your videophone.

> **!**
> the command sequences used by the videophone comply with the relevant international standards. Nevertheless, you may be connected to a videophone or to a videoconferencing equipment that does not support these commands. In this case, no loop will be activated.

You can command an audio only, a video only, an audio and video (digital) loop.

Path: Help menu ▶ Maintenance ▶ Loop/Send Loop

To operate the loop:

þ   select the LOOP: entry in the MAINTENANCE menu page, then use the (ENTER) key until the loop option you intend to set is displayed

þ   select the SEND LOOP entry and then press (ENTER) to send the selected loop command.

To clear the loop:

þ   select the LOOP: OFF option in the loop entry using the (ENTER) key

þ   select the SEND LOOP entry and then press (ENTER)

Use the (HELP) key to exit the menu.

! Exiting the menu without clearing a loop command lives the remote terminal in the loop state until a loop off command is sent or the connection is dropped.

7.5.2. Fast update

When sending compressed video, every frame is subdivided in small areas (called blocks) and usually only differences from the previous frame, due to changing or moving video, are encoded and transmitted.

Although complete information on every block is cyclically transmitted, several factors such as line errors or sudden changes in the video source (e.g. due to a camera switch) may lead to partially updated images.

With the remote and local fast update commands you request either the remote terminal or your videophone to send a "freshly" encoded image, so that complete static information about every video block is transmitted.

Path: Help menu ▶ Maintenance ▶ Fast Update Remote

Path: Help menu ▶ Maintenance ▶ Fast Update Local

In the MAINTENANCE menu page select the FAST UPDATE REMOTE or the FAST UPDATE LOCAL menu, then press (ENTER) to send the command.

8. TECHNICAL SPECIFICATIONS

Standards Compliance and line rate

MULTIPLEX	ITU-T H.221
FRAME SYNCHRONOUS CONTROL	ITU-T H.230
END-TO-END SIGNALLING	ITU-T H.242
NETWORK INTERFACE	ISDN BRI, RJ45, So
NETWORK SIGNALLING	Euro DSS1
VIDEO CODING	ITU-T H.261, H.263
CODING STANDARD	ITU-T G.711, G.728, G.722
LINE RATE	56 ÷ 384 Kbps

Video

DISPLAY	6″ LCD with active matrix and vertical orientation
CAMERA	1/3″ CCD inter-line
OPTICS	f = 5,4 mm F 1.8 - 2.7
MIN BRIGHTNESS	2,5 LUX
FRAME RATE (DECODER)	30 fps
FRAME RATE (ENCODER)	25 fps (PAL), 30 fps (NTSC)
RESOLUTION	CIF(352 x 288 pels, QCIF (176 x 144 pels) 4CIF (707x576 pels)
OUTPUT	Composite PAL/NTSC, 1Vpp, 75 Ohm, RCA Plug
Y/C INPUT	PAL/NTSC, 1Vpp, 75 Ohm, minidin 4 poli
VIDEO IN	Y/C, 1Vpp, 75 Ohm, RCA plug

Speech

VOICE BANDWIDTH	50 – 7000 Hz
MIC INPUT	> 10 Kohm, 775 µV, jack stereo
LS OUTPUT	16 Ohm, jack stereo
LINE INPUT	> 10 Kohm, 0.154 Vrms, RCA plug
LINE OUTPUT	< 1 KOhm, 0.154 Vrms, RCA plug

Asynchronous Data Channel

SPEED	up to 230.4 Kb/s
INTERFACE	V.24 (RS-232), DB9

Enviromental

OPERATING TEMPERATURE	0°C ÷ +45°C
OPERATING RELATIVE HUMIDITY	10% ÷ 93% (without condensation)
STORAGE TEMPERATURE	-25°C ÷ +55°C

Regulations

STORAGE	CEI 50-3 CEI EN 60068-2-1 IEC 68-2-2
TRANSPORT	CEI 50-6 IEC 68-2-32 IEC 68-2-36
OPERATING CONDITIONS	CEI 50-3 CEI EN 68068-2-1 IEC 68-2-2 IEC 68-2-3 IEC 68-2-14 CEI 50-6 IEC 68-2-31 IEC 68-2-32 IEC 68-2-36

CONDUCTED EMISSIONS	CEI EN 55022
IRRADIATED EMISSIONS	CEI EN 55022
IMMUNITY	CEI EN 50082-1
SAFETY	CEI EN 60950

Power Supply

POWER-LINE	230 Vac @ 50 Hz, 115 Vac @ 60 Hz

Mechanichal

DIMENSIONS (WXDXH)	49,5 x 40 x 16 cm
WEIGHT	ca. 7,5 kg

CE This product complies with EEC 89/336 directive on electromagnetic compatibility, EEC 73/23 directive (Low Voltage) on safety rules and EEC 91/263 directive on telecommunication devices, as amended by EEC 92/31 and 93/68 directives

APPENDIX

Appendix : Example of terminals set at 2x64K rate in TRANSPARENT mode or 256K in BONDING 1/3 modes

TERMINAL 1		TERMINAL 2						
Mode	Network	Mode	Net.	Result	Calls	Req. Rate	Obtained Rate	Mode
TRANSP.	64	TRANSP	64	OK	2	2x64	2x64	Not Aggr.
TRANSP.	64	TRANSP	56	OK	2	2x64	2x56	Not Aggr.
TRANSP.	64	BOND 1	64	OK	2	2x64	2x64	Not Aggr.
TRANSP.	64	BOND 1	56	OK	2	2x64	2x56	Not Aggr.
TRANSP.	64	BOND 3	64	OK	2	2x64	2x64	Not Aggr.
TRANSP.	64	BOND 3	56	OK	2	2x64	2x56	Not Aggr.
TRANSP.	56	TRANSP	64	OK	2	2x56	2x56	Not Aggr.
TRANSP.	56	TRANSP	56	OK	2	2x56	2x56	Not Aggr.
TRASP.	56	BOND 1	64	OK	2	2x56	2x56	Not Aggr.
TRANSP.	56	BOND 1	56	OK	2	2x56	2x56	Not Aggr.
TRANSP.	56	BOND 3	64	OK	2	2x56	2x56	Not Aggr.
TRANSP.	56	BOND 3	56	OK	2	2x56	2x56	Not Aggr.

TERMINAL 1		TERMINAL 2						
Mode	Network	Mode	Net.	Result	Calls	Req. Rate	Obtained Rate	Mode
BOND 1	64	TRANSP	64	OK	2	256	2x64	Not Aggr.
BOND 1	64	TRANSP	56	OK	2	256	2x56	Not Aggr.
BOND 1	64	BOND 1	64	OK	4	256	256 (4x64)	Aggr. (1)
BOND 1	64	BOND 1	56	NO		256		
BOND 1	64	BOND 3	64	OK	4	256	256 (4x64)	Aggr. (1)
BOND 1	64	BOND 3	56	NO		256		
BOND 1	56	TRANSP	64	OK	2	224	2x56	Aggr. (1)
BOND 1	56	TRANSP	56	OK	2	224	2x56	Not Aggr.
BOND 1	56	BOND 1	64	NO		224		
BOND 1	56	BOND 1	56	OK	4	224	224 (4x56)	Aggr. (1)
BOND 1	56	BOND 3	64	NO		224		
BOND 1	56	BOND 3	56	OK	4	224	224 (4x56)	Aggr. (1)

TERMINAL 1		TERMINAL 2						
Mode	Network	Mode	Net.	Result	Calls	Req. Rate	Obtained Rate	Mode
BOND 3	64	TRANSP	64	OK	2	256	2x64	Not Aggr.
BOND 3	64	TRANSP	56	OK	2	256	2x56	Not Aggr.
BOND 3	64	BOND 1	64	OK	4	256	256 (4x64)	Aggr. (1)
BOND 3	64	BOND 1	56	NO		256		
BOND 3	64	BOND 3	64	OK	5	256	256 (5X64-64)	Aggr. (3)
BOND 3	64	BOND 3	56	OK	5	256	256 (5X56-24)	Aggr. (3)
BOND 3	56	TRANSP	64	OK	2	256	2x56	Not Aggr.
BOND 3	56	TRANSP	56	OK	2	256	2x56	Not Aggr.
BOND 3	56	BOND 1	64	NO		256		
BOND 3	56	BOND 1	56	OK	4	256	224 (4x56)	Aggr. (1)
BOND 3	56	BOND 3	64	OK	5	256	256 (5x56-24)	Aggr. (3)
BOND 3	56	BOND 3	56	OK	5	256	256 (5x56-24)	Aggr. (3)