

# Call Recorder Quad Manual

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# 1 Introduction

The **Call Recorder Quad** (hereafter "CRQ") is a digital audio recorder that can record 4 analog telephone lines simultaneously. The CRQ is designed for continuous unattended recording of telephone calls. Recording is started and stopped automatically for each individual call. The quality of recordings is ensured by the Automatic Gain Control, which evens the recording levels of the local and remote voice.

The CRQ has an internal hard disk. All recordings are stored digitally on the internal hard disk. The large storage capacity of the hard disk ensures the CRQ's ability of long term unattended recording. Other advantages are that recordings are randomly accessible and that there is no risk of wiping out existing recordings by new recordings. The CRQ issues a warning when the hard disk is full. If the warning is ignored the oldest recordings will be overwritten by the newest. Stored recordings can alternatively be archived using the optional Call Recorder Archiving System software.

The digital format of the recordings is determined by the use of speech compression. The CRQ compresses recordings according to the Digitalk format. Digitalk compression has a good balance between audio quality and recording size and was specially developed for speech compression. Compressed recordings take up 1/8th of the size of standard recordings. Therefore the compression has a profound effect on the storage capacity of the CRQ in terms of recording time.

The Call Recorder Quad features an Ethernet interface. The CRQ can be connected to a Pc or Computer Network through the Ethernet interface. With its own IP address the Call Recorder Quad acts as an Ftp-server from which recordings can be downloaded. The Call Recorder Archiving System software can be used to connect to the CRQ over the network to retrieve recordings from the CRQ and archive them on the Pc. The Call Recorder Archiving System software has extensive archiving capabilities including the creation of special archives suited for backup on CD. The Call Recorder Archiving System also allows for fax image recovery of recorded fax transmissions. The Ethernet connection also allows for RTR Call monitoring over the network. RTR Call Monitoring stands for Real Time Remote Call Monitoring. The optional RTR Call Monitor software can be used to monitor all connected telephone lines over the network.

The CRQ has its own menu driven search function to find specific recordings. Recordings can be searched for according to date, caller ID and line number. The CRQ has an internal speaker for playback of recordings.

All telephone and microphone recordings can be encrypted. The CRQ uses the CryptoCard option for this feature. Playback of encrypted recordings is

impossible without the CryptoCard. Playback of encrypted recordings on a Pc is possible only with the optional CryptoCard reader in conjunction with the original or a matching CryptoCard.

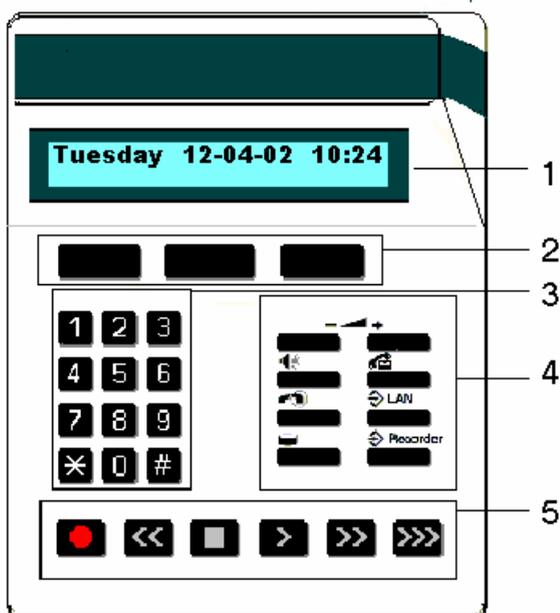
## **1.1 Configuration**

The CRQ is connected in parallel to the four telephone lines. Therefore the CRQ can only record and listen in to calls. The CRQ cannot interfere in the conversations itself or act as a telephone. Recording is started and stopped for each separate conversation. Recording is started when a telephone becomes Off Hook, recording continuous until the telephone returns to On Hook. On and Off Hook of the telephone lines is detected automatically. Automatic Gain Control, speech compression, notification tone and Caller ID can be configured separately for each separate line. The individual lines can alternatively be configured to make voice activated recordings. Voice activated recording is predominantly used to record other conversations than telephone conversations.

Individual lines can also be configured for the recording of fax traffic. The configuration for fax recording differs from the recording of telephone conversations in several ways. The recordings of fax traffic are not compressed, Automatic Gain Control is disabled and the notification tone is omitted. The original fax images of fax recordings can be recovered and viewed with the Call Recorder Archiving System software.

The CRQ allows the user to listen in to ongoing calls through the internal speaker, this is called the Monitor function. The volume of the internal speaker can easily be adjusted. The CRQ also allows for the connection of a headset. The headset can be used to listen to recordings or make microphone recordings.

## 2 The Call Recorder Quad



1. The display.
2. The soft-keys.
3. The numerical keys.
4. The 8 function keys. See § 2.3.
5. The recorder keys.

The eight function keys (L/R):

<b>Volume +/-</b>	-  +	Volume adjustment key
<b>Speaker</b>		Speaker On/Off key
<b>Playback</b>		Playback function key
<b>Monitor</b>		Monitor telephone lines key
<b>LAN</b>	 LAN	Network settings menu key
<b>Disk</b>		Hard disk information key
<b>Recorder</b>	 Recorder	Recorder settings menu key

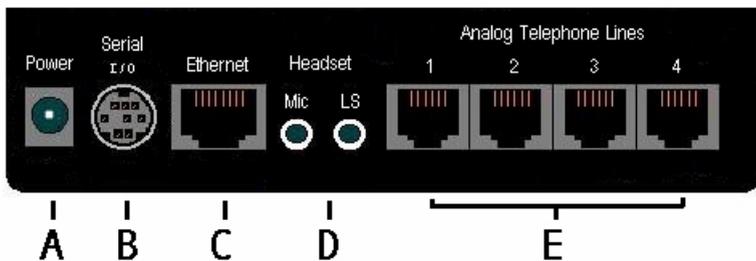
## 2.1 What's in the box

The Call Recorder Quad comes supplied with the following parts:

- Mains power supply adapter.
- 4 Telephone line splitters.
- 4 Long telephone cables with 2 jack RJ11 plugs.
- 4 Short telephone cables with 2 jack RJ11 plugs.
- This manual.

## 2.2 Connecting the Call Recorder Quad

The back plate of the Call Recorder Quad has the following connections.



The CRQ back plate

- A. Power socket.
- B. Serial connection socket for a serial PC connection.
- C. Ethernet connection socket.
- D. Headset / microphone/external speaker sockets.
- E. Telephone line connections 1-4.

Connect the CRQ as follows:

- Place the mains supply adapter in the wall socket and connect the power supply to the power socket (A) at the back of the CRQ.
- Use the supplied telephone line splitters to create a tap on the lines that need to be recorded. Then connect the taps to the Analog Telephone Lines connections 1 through 4 (E) using the supplied telephone cables with RJ11 plugs.
- If applicable connect the CRQ to a network or Pc using a UTP cable and connect it to the Ethernet port (C).

The CRQ does not have an On/Off switch, by connecting the CRQ to the power supply the CRQ is turned on. Once the CRQ is turned on the factory settings are applied for operation. The Serial connection and Headset connection are optional. The Serial connection is used to establish a serial connection with a Pc. The Headset connection is optional for listening to recordings or making microphone recordings. A separate microphone or speaker may be connected to the Microphone (Mic) or Loudspeaker (LS) headset connections. Contact your supplier for the necessary specifications.

## 2.3 Operating the Call Recorder Quad

The operation of the Call Recorder Quad is done with the various keys on the keyboard. There are four different groups of keys on the keyboard:

**Recorder keys:** The recorder keys have the usual indicated recorder functions. The recorder keys are mainly used during recording or playback.

**Numerical keys:** The numerical keys are used to select telephone lines 1-4 or enter numerical values.

**Function keys:** The eight function keys perform the common functions of the CRQ:

- **Volume keys:** The + and - keys are used to adjust the volume.
- **Speaker key:** The Speaker key is used to mute and un-mute the speaker.
- **Playback key:** The Playback key opens the playback menu.
- **Monitor key:** The Monitor key lets you choose to listen in to one of the four lines.
- **LAN settings key:** the LAN settings key opens the network settings menu.
- **Disk key:** The Disk key gives information on free disk space, oldest recording and the number of recordings.
- **Recorder settings key:** The Recorder menu key opens the recorder settings menu.

**Soft-keys:** The soft-keys are used for settings and more specific menu-driven operations. The function of the soft-keys is determined by the text in the display. The top line of the display always reflects the operation or state of the Call Recorder Quad. The text in the second line of the display will always indicate the function of the three soft-keys right below the text. See the example below.

Call Recorder settings		
NEXT	MENU	STOP

Example.

The three soft-keys in this example have the functions **NEXT**, **MENU** and **STOP**. These functions relate to the menu of the Call Recorder settings as displayed in the upper line:

- Press the soft-key below the text **NEXT** to move on to the next menu.
- Press the soft-key below the text **MENU** to enter the Call Recorder settings menu.
- Press the soft-key below the text **STOP** to exit the current menu.

If there is no text displayed above the soft-key the key has no function at that time.

### 3 General settings

General settings of the CRQ consist of the default settings of the Speaker and Volume, setting of the Clock, optionally protect the CRQ with a password and setting the Language. Finally the **Reset all values** operation is described. The Reset all Values operation is used to return to the original factory settings of the CRQ. All general settings are made in the Recorder settings menu. Press the  **Recorder** (hereafter "Recorder function key") to enter the Recorder settings menu. The Recorder settings menu starts with the configuration of the four independent telephone lines. The configuration of the telephone lines is skipped here and described in Chapter 5.

#### 3.1 Speaker On/Off

The Speaker ON/Off setting controls the standard speaker status when the monitor function is started. I.e. if a specific line is monitored and the line becomes active the call can be heard directly through the speaker.

- Press the **Recorder** function key.
- Press **NEXT** four times.

The display will show:

Speaker :	On
NEXT	CHANGE STOP

The Speaker setting

- Press **CHANGE** to disable or enable.

Speaker :	Off
NEXT	CHANGE STOP

The Speaker setting

- Press **NEXT** to continue in the menu with the Volume setting or press **STOP** to exit the **configuration** menu.

#### 3.2 Volume

The Volume setting determines the volume when the monitor function is started.

- Press the **Recorder** function key.

- Press **NEXT** five times.

The display will show:

Volume:	9	
NEXT	CHANGE	STOP

The Volume setting

- Press **CHANGE** to increase volume by one step, after 15 is reached the cycle starts at 1 again.

Select a value between 1 and 15.

Volume:	10	
NEXT	CHANGE	STOP

The Volume setting

- Press **NEXT** to continue in the menu with the CryptoCard setting or press **STOP** to exit the **configuration** menu.

### 3.3 Use CryptoCard

The CryptoCard is used for encrypting recordings. See chapter 10 for a detailed description. In the standard configuration the Use CryptoCard function is disabled. With the Use CryptoCard function enabled all recordings will be encrypted and is it no longer possible to make recordings without a CryptoCard.

- Press the **Recorder** function key.
- Press **NEXT** six times.

The display will show:

Use CryptoCard:	Off	
NEXT	CHANGE	STOP

The CryptoCard setting

- Press **CHANGE** to enable or disable.

```
Use CryptoCard:      On
NEXT      CHANGE      STOP
```

The CryptoCard setting.

When the Use CryptoCard function is enabled and there is no card inserted the CRQ will display and sound a warning:

```
Monday 22-04-02 11:03
Please insert card.
```

Use CryptoCard enabled warning.

The warning will disappear when a valid card is inserted. When Use CryptoCard has been enabled the CRQ's next menu item will be the changing of the Cryptocard card PIN code. See § 10.1 for a detailed description.

- Press **NEXT** to continue in the menu with the Clock setting or press **STOP** to exit the **configuration** menu.

### 3.4 Set the Clock

- Press the **Recorder** function key.
- Press **NEXT** seven times.

The display will show:

```
Clock: Mo 22-04-02 11:03
NEXT      CHANGE      STOP
```

The Clock.

- Press **CHANGE** to change the setting of the clock.

```
Clock: Mo 22-04-02 11:03
STORE      CANCEL
```

Setting the clock.

- Press key's 1-7 to set the day of the week starting with 1 for Sunday.

The default date and time format is DD-MM-YY and MM:HH (when American has been set as language the format is changed to MM-DD-YY). Use the arrowed keys to move the blinking character left or right.

- Press soft-key **STORE** to store the changes or press soft-key **CANCEL** to return to previous values.
- Press **NEXT** to continue in the menu with the Password protection of the CRQ or press **STOP** to exit the **configuration** menu.

### 3.5 Protect the Call Recorder Quad with a Password

The Call Recorder Quad can be protected with a password against unauthorized use. When password protection has been enabled all actions that change the operation of the Call Recorder Quad are blocked before the correct password has been entered.

- Press the **Recorder** function key.
- Press **NEXT** eight times.

The display will show:

Password active:	No
NEXT	CHANGE STOP

Setting the Password.

- Press **CHANGE** to enter a password.

Password:	000
STORE	CANCEL

Enter a password.

- Press **STORE** to enable the entered password.
- Press **NEXT** to continue in the menu with the Language setting of the CRQ or press **STOP** to exit the configuration menu.

If the Password has been set you will be prompted for the password before entering the menus.

### 3.6 Remove Password protection

- Press the **Recorder** function key.
- Enter the password and press **CONTINUE**.
- Press **NEXT** eight times.

Password active:	Yes	
NEXT	CHANGE	STOP

Disable the Password.

- Press **CHANGE** to disable the password.

The password protection has now been disabled.

- Press **NEXT** to continue in the menu with the Language setting of the CRQ or press **STOP** to exit the configuration menu.

### 3.7 Set the Language

- Press the **Recorder** function key.
- Press **NEXT** nine times.

The display will show:

Language:	English	
NEXT	CHANGE	STOP

Setting the Language.

- Press **CHANGE** multiple times to select the preferred language.
- Press **NEXT** to continue in the menu with the **Reset all values** operation or press **STOP** to exit the configuration menu.

### 3.8 Reset all values

Use **Reset all values** to reset all system values. LAN settings are also affected by the Reset all values operation.

- Press the **Recorder** function key.
- Press **NEXT** ten times.

The display will show:

Reset all values:	No
CHANGE	STOP

Reset all values.

- Press **CHANGE** to enable the Reset all values operation.

Reset all values:	Yes
CHANGE	STOP

Reset all values enabled.

- Press **STOP** to execute the **Reset all values** operation.

**Attention:** Reset all values operation will disable the password protection.

## 4 Recording and Monitoring

The recording and monitoring of telephone conversations are the two main functions of the CRQ. Recording of the connected telephone lines takes place simultaneously. While the CRQ is recording it is still possible to play stored recordings. Monitoring or listening in to one of the connected telephone lines is also possible while recording takes place.

### 4.1 Recording

The recording of the telephone conversations takes place automatically. For every single conversation a separate recording is made. The CRQ monitors the status of the connected telephones. As soon as a connected telephone line becomes Off Hook recording is started. Recording continues during the call until the telephone is put back On Hook again. Then the recording is stopped and stored.

During recording the display will show:

```
Monday 22-04-02 11:03
L1← L2→ L3← L4→
```

The CRQ status display.

Day, date and time are displayed in the upper line of the display. The symbols L1 through L4 represent the connected telephone lines and appear when the recording of the line is started. The left- and right-pointing arrows indicate incoming and outgoing calls respectively.

More information like remote number, recording status and recording time for each individual line is displayed in the Line status display.

- Press key **1-4** to view the Line status display of the selected line.

The display will show:

```
Line1 ← (0793617181)
Recording 0:00:45
```

Line status display of Line 1.

Between brackets the remote number is displayed. Below that is the status of the indicated line. This could be Free, Busy or Recording. To the right the ongoing recording time is indicated.

- Press key's **2,3** or **4** to switch between the Line status display of the respective lines or press **1** again to return to the CRQ status display. (The number key of the current Line status displayed will toggle between the Line status display and the CRQ status display)

The CRQ has five recording properties that can be configured for each individual line. They are: Start method, Automatic Gain Control, Speech compression, Notification tone, Fax recording and Caller ID. Read on to find out more about these properties. Configuration of these properties is described in Chapter 5.

The standard Start method for recording is the Off Hook detection of the line. Off and On Hook detection of the line can be disabled in favor of Voice activated recording for each line. For Voice activated recording specific start and stop levels can be configured for the CRQ to know when to start and stop recording. Voice activated recording is predominantly used for recording from other sources than the telephone. See § 5.2 for a detailed explanation.

All recordings feature Automatic Gain Control (AGC). The AGC equalizes the recording levels of the local and remote voice. This results in similar volume for both the local and remote voices during playback of the recording. The AGC can be disabled for each separate line.

Standard all recordings are compressed to the Digitalk standard. Digitalk has been developed for speech compression. Compressed recordings are up to eight times smaller than uncompressed recordings. Compressed recordings can be played on a Pc with the Call Recorder Archiving System software or with the CRF-player software. The compression of the recordings can be disabled for each separate line.

In some countries or regions notification of at least one, and occasionally both of the recorded parties is compulsory. In that regard the CRQ can sound a notification tone audible to both calling parties during recording. The notification tone is sounded at regular intervals. The interval, duration and frequency of the notification tone can be altered if desired. Contact your supplier for details. Check the legal recording regulations in your area.

The CRQ has an option for configuring a separate line for the recording of fax traffic. Recordings of fax traffic are not compressed, AGC is disabled and the notification tone is omitted. The optional Call Recorder Archiving System can be used to recover the original fax image from the recording.

The CRQ supports Caller ID. The method of Caller ID (DTMF or FSK) can be set for each individual line. The CRQ can be configured to store Caller ID with the recordings as the number of the recording. This way the search for a particular recording can be facilitated. See Chapter 6 for search of recordings

according to remote number. Caller ID has to be supported by your service provider. Contact your service provider for details.

## 4.2 Monitoring

Monitoring of the telephone lines is a separate feature of the CRQ that allows the user to listen in on the recording of the telephone conversations.

- Press the **Monitor** function key to open the monitor function.

The display will show:

```
Line Monitor
(press 1-4)      STOP
```

The Monitor function.

- Press key **1-4** to select the line to monitor.

The display will show:

```
Monday      22-04-02  11:03
Monitor on line 1
```

Monitoring Line 1.

Now when a call takes place on line 1 the call will sound through the speaker.

Change lines by pressing key **1-4** to select another line to monitor.

Stop the monitor by pressing soft-key **STOP** or pressing the  key.

When the CRQ is in the Line status display the Monitor function key toggles the monitor **On** and **Off** for the selected line.

Pressing keys **1-4** will change the monitor and the Line status display to the selected line.



## 5 Recorder settings

The CRQ features five recording options to be set for each separate line. They are the Start Method, Fax Recording, Automatic Gain Control, Speech Compression, Notification tone and Caller ID. These options are in the Recorder settings menu. Enter the Recorder settings menu by pressing the **Recorder** function key.

The display will show:

```
Install Line 1
NEXT          MENU          STOP
```

The Recorder settings menu.

### 5.1 The 4 telephone line menu's

The configuration options are the same for all four lines.

- Press key **1-4** to select the line number that needs to be configured.

In the Recorder settings menu it is possible to switch between the recording options of the different lines by pressing the number key of the desired line.

- Press **MENU** to start configuring Line 1.

The display will show:

```
Start method:   Off Hook
NEXT - 1       CHANGE    BACK
```

Line installation menu of line 1.

Notice that the text **NEXT** is followed by **-1** as an indication of the line 1 installation menu. Press key **1-4** to move to the installation menu's of the corresponding lines.

- Press **NEXT** repeatedly to scroll through the menu items.

The following menu items will pass.

#### 5.1.1 Start Method

The Start method refers to the conditions the CRQ uses to determine how and when to start recording. When recording from a telephone line the Off-Hook

method should be used. The CRQ detects when the connected telephone becomes Off-Hook and starts recording.

- Press **CHANGE** to switch between Off-Hook and Voice activated.

In the Voice activated mode the CRQ monitors the line for audio signal and recordings are started accordingly. Select Voice activated and press **NEXT** to enter the Signal setting menu. See § 5.2 for a detailed explanation of the signal settings. Voice activated recording is predominantly used to record from other sources than the telephone.

- Press **NEXT-1** to move on to the next menu item or press key **1-4** to move to the Start method setting of the corresponding line.

### 5.1.2 Fax Recording

Fax Recording configures the line for the recording of fax traffic. Following the Start method setting as described above the display will show:

<b>Fax Recording:</b>	<b>Off</b>
<b>NEXT-1</b>	<b>CHANGE</b> <b>BACK</b>

Fax recording disabled.

- Press **CHANGE** to enable or disable Fax Recording.

When Fax Recording is enabled the Automatic Gain Control, Speech Compression and Notification tone are omitted because of interference with the fax transmission audio.

- Press **NEXT-1** to move on to the next menu item or press key **1-4** to move to the Fax Recording setting of the corresponding line.

Pressing **NEXT** when Fax Recording is enabled will skip the following options and move straight on to the Caller ID of § 5.1.6.

### 5.1.3 Automatic Gain Control

Automatic Gain Control adjusts the recording level of the local and remote voice to attain similar audio levels during playback of the recording. Following the Fax Recording setting as described above the display will show:

Auto Gain Control:	On	
NEXT-1	CHANGE	BACK

Automatic Gain Control enabled.

- Press **CHANGE** to disable or enable Automatic Gain Control.

The audio levels of the local and remote voice may differ substantially for consecutive calls. Therefore the Automatic Gain Control is enabled as a standard factory setting.

- Press **NEXT-1** to move on to the next menu item or press key **1-4** to move to the Automatic Gain Control setting of the corresponding line.

### 5.1.4 Speech compression

Speech Compression uses the Digitalk speech compression standard to compress the digital data of the recording. Following the Automatic Gain Control setting as described above the display will show:

Speech Compression:	On	
NEXT-1	CHANGE	BACK

Speech Compression enabled.

- Press **CHANGE** to disable or enable Speech Compression.

Speech compression reduces the uncompressed data to 1/8th of the size. Therefore the compression has a profound effect on the storage capacity of the CRQ in terms of recording time.

- Press **NEXT-1** to move on to the next menu item or press key **1-4** to move to the Speech compression setting of the corresponding line.

### 5.1.5 Notification tone

The Notification tone is a regular repeated beep sounded to both the local and remote telephones. In some countries or regions the notification tone is compulsory while recording telephone conversations. Following the Automatic Gain Control setting as described above the display will show:

Notification tone:	Off	
NEXT-1	CHANGE	BACK

Notification tone disabled.

- Press **CHANGE** to enable or disable Notification tone.

The notification tone is standard disabled. Check local regulations and obligations.

- Press **NEXT-1** to move on to the next menu item or press key **1-4** to move to the Notification tone setting of the corresponding line.

### 5.1.6 Caller ID

Caller ID will show the telephone number of the remote telephone. Following the Notification tone setting as described above the display will show:

Caller ID:	Off	
1	CHANGE	BACK

Caller ID disabled.

- Press **CHANGE** to select Caller ID method or disable Caller ID.

Caller ID has two basic methods; DTMF and FSK. Caller ID must be supported by you service provider. Contact your service provider for details. The Caller ID setting is the last option in the Line installation menu.

- Press **BACK** to return to the configuration menu.

The display will then show the first configuration screen, where we started this section:

Install Line 1		
NEXT	MENU	STOP

The configuration menu.

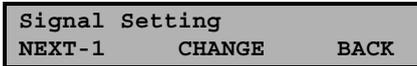
- Press **NEXT** multiple times to select the Installation menus of lines 2-4 or press **STOP** to exit the configuration menu.

The following paragraph gives a description of the setting of the signal levels for Voice activated recording.

## 5.2 Signal settings

If you have selected Voice activated recording as Start method pressing **NEXT** will display the Signal Setting.

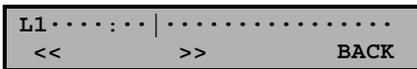
The display will show:



The Signal Setting

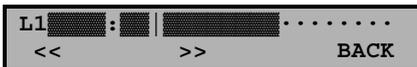
- Press **CHANGE** to alter the signal settings.

The display will show:



The pipeline and semicolon.

The pipeline (vertical bar "|") indicates the start level for recording, the colon (":") indicates the stop level to stop recording. Pick up the connected telephone and the signal of the dial tone will be displayed as a black bar.



The Signal Setting.

For the CRQ to start recording the displayed audio level needs to exceed the pipeline as is the case in the example above. Adjust the start level by pressing the soft-keys below the << and >> in the display. It is advised to set the start level approximately three units below the actual audio level of the dial tone.

To stop the recording the audio level needs to fall below the colon. Adjust the stop level with the  and  recorder keys. It is advised to keep the stop level approximately three units above the actual audio level the CRQ is supposed to stop on. For the CRQ to actually stop recording the audio level needs to fall below the set stop level for a certain amount of time. This amount of time is called the Silence Period.

- Press **BACK** when the start and stop levels have been set.

The display will show:

Signal Setting		
NEXT-1	CHANGE	BACK

The Signal Setting

- Press **NEXT** to continue with the Silence Period setting.

The display will show:

Silence Period	10s	
NEXT-1	CHANGE	BACK

The Silence Period setting.

- Press **CHANGE** multiple times to alter the Silence Period, after 120 is reached it returns to 1.

Select a value between 1 and 120 seconds. Keep in mind that when a call is put on hold the audio level drops and the recording is possibly stopped, when the call resumes a new recording may start again. In order to keep the call in one recording a larger Silence Period is suggested. For the recording of radio communication it is preferred to keep the Silence period small to prevent consecutive communications in one recording.

## 6 Search and playback of recordings

All stored recordings can be played back on the CRQ. To play a certain recording it has to be found and selected first. To find a recording the CRQ has a search function. The search function is described in § 6.2.

The CRQ also has a simpler and faster way to play the last recorded call. Playback of a selected recording is the same as playback of the last recording as described in the following paragraph.

### 6.1 Playing the last recorded call

- Press the  Playback key to open the playback menu.

The display will show:

```
Playback Calls
SEARCH      LAST      STOP
```

The Playback Calls menu.

- Press **LAST** to play the last recording.

The display will show:

```
(remote number) ◀ 0:01:14
14-7-02 18:46 2 0:00:01
```

Display during playback.

The display shows the remote number between brackets. Next to that is the duration of the call, the arrow indicating incoming or outgoing call. Below that is the date and time of the call, the line number and the current playback position.

During playback the recorder keys have the usual recorder functions. The  and  recorder keys are used to move the playback position 60 seconds backward or forward. The  key is used to stop playback.

For playback of older stored recordings it is required to select the recording first. Read on for an explanation how to search for the desired recording.

## 6.2 Search stored recordings

The CRQ has a search function to find stored recordings. The search function starts with prompting for the date. The search can be further refined by a search according to remote number and line number. The entered search string for the date will always be preceded by the remote number, which in turn precedes the line number. Wildcards can be used to search for remote number or line number only.

- Press the  Playback key to open the playback menu.

The display will show:

```
Playback Calls
SEARCH      LAST      STOP
```

The Playback Calls menu.

- Press **SEARCH** to open the search menu.

The display will show:

```
Calls from █4-7-02
SEARCH      NUMBER    STOP
```

The search menu.

- Use the numerical keys to enter a date.

Entering the date or code to search for you can use the \* key as wildcard. For example enter \*\* :05:02 to search for all messages from May 2002. The  and  are used to move the blinking character left or right. It is also possible to refine the search according to remote telephone number or line number. In that case continue to read on § 6.2.1.

- Press **SEARCH** to search for recordings by the entered date.

The display will show:

14-07-02	12:11	1/24
SEARCH	NUMBER	STOP

Search according to date.

For the entered date 14-07-02 there were 24 recordings found. The first of the 24 recordings is selected for playback, the date and time of the call is displayed to the left. Use the  and  keys to move the selected recording one up or down.

- Press the  key to start playback of the selected recording.

The display will show:

(remote number)	←	0:01:14
14-7-02	18:46	2 0:00:01

Display during playback.

The display shows the remote number between brackets. Next to that is the duration of the call, the arrow indicating incoming or outgoing call. Below that is the date and time of the call, the line number and the current playback position.

During playback the recorder keys have the usual recorder functions. The  and  recorder keys are used to move the playback position 60 seconds backward or forward. The  key is used to stop playback.

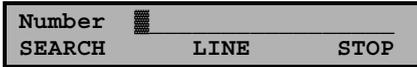
The next section describes how to refine your search to look for a specific number.

## 6.2.1 Refined search according to remote number

Open the search menu as described in § 6.2. Enter the date of the recording that you want to search for or enter wildcards to search for all recordings with the same remote number. Remember that the entered date will always be incorporated in the search.

- Press **NUMBER** to enter a number to search for.

The display will show:



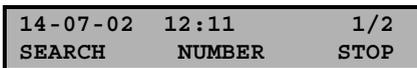
Search according to remote number.

- Use the numerical keys to enter a remote number.

Entering the remote number to search for you can use the \* key as wildcard. For example enter 03520\* to search for all recordings which start with the number 03520. The ⏪ and ⏩ are used to move the blinking character left or right. It is also possible to refine the search even further according to line number. In that case continue to read on § 6.2.2.

- Press **SEARCH** to search for recordings with the entered number.

The display will show:



Search according to date.

For the entered number 03520\* there were 2 recordings found. The first of the two recordings is selected for playback, the date and time of the call is displayed to the left. Use the ⏪ and ⏩ keys to move the selected recording one up or down.

- Press the ⏩ key to start playback of the selected recording.

The display will show:



Display during playback.

The display shows the remote number between brackets. Next to that is the duration of the call, the arrow indicating incoming or outgoing call. Below that is the date and time of the call, the line number and the current playback position.

During playback the recorder keys have the usual recorder functions. The  and  recorder keys are used to move the playback position 60 seconds backward or forward. The  key is used to stop playback.

The next section describes how to refine the search even further to restrict it to a date range, phone number, and on which phone line the call took place.

## 6.2.2 Refined search according to line number

It is possible to refine your search even further according to Line number. This is done by performing the search described in the paragraphs above. Remember that the entered date and remote number will always be incorporated in the search. Use wildcards as described to widen your search. After entering the remote number to search for the display will show:

Number	03520*	
SEARCH	LINE	STOP

Search according to date and remote number.

- Press **LINE** to refine your search according to line number.

The display will show:

Line number =		
SEARCH	DATE	STOP

Search according to line number.

- Enter the number of the line (1-4) that you want to search.
- Press **SEARCH** to execute the search.

The display will show:

14-07-02	12:11	1/2
SEARCH	NUMBER	STOP

Search according to date, remote number and line number.

The search has resulted in two recordings found. The first of the two recordings is selected for playback, the date and time of the call is displayed to the left. Use the  and  keys to move the selected recording one up or down.

- Press the  key to start playback of the selected recording.

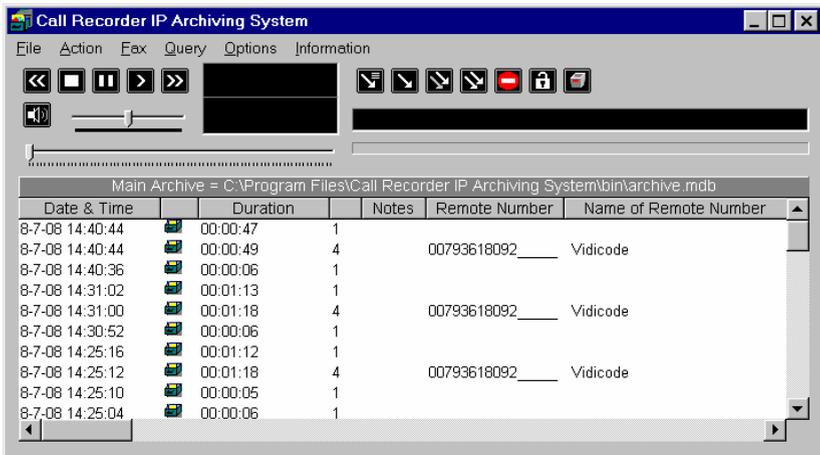
During playback the recorder keys have the usual recorder functions. The  and  recorder keys are used to move the playback position 60 seconds backward or forward. The  key is used to stop playback.

# 7 The Archiving and Monitor software

The CRQ is equipped with an Ethernet interface that can be used for two main applications. With the Call Recorder Archiving System it is possible to connect to the CRQ over the network and download stored recordings for archiving purposes. With the RTR Call Monitor software it is possible to connect to the CRQ over the network and listen in to ongoing. For the communication between the Call Recorder Archiving System and the CRQ it is essential that the network settings of the CRQ have been properly configured. See Chapter 8 for details.

## 7.1 The Call Recorder Archiving System software

The Call Recorder Archiving System software is a versatile system that allows for the manipulation and archiving of stored recordings. The Call Recorder Archiving System holds a list of recorders it can connect to. The Call Recorder Archiving System can connect to the CRQ over the network and retrieve a listing of all the recordings in the CRQ. Recordings can then be selected and downloaded from the CRQ. Downloaded recordings can be listened to or archived.



The Call Recorder IP Archiving System

### 7.1.1 Playing recordings

The Call Recorder Archiving System receives a listing of recordings first. To play a recording the actual recording will need to be downloaded. A downloaded recording can be played using the incorporated recorder keys.

Select a recording in the database and click on the  button to start playback. The  and  keys are used to skip 60 seconds forward or backward. The lower slider is used to move playback to a particular point in the recording.

### **7.1.2 Queries**

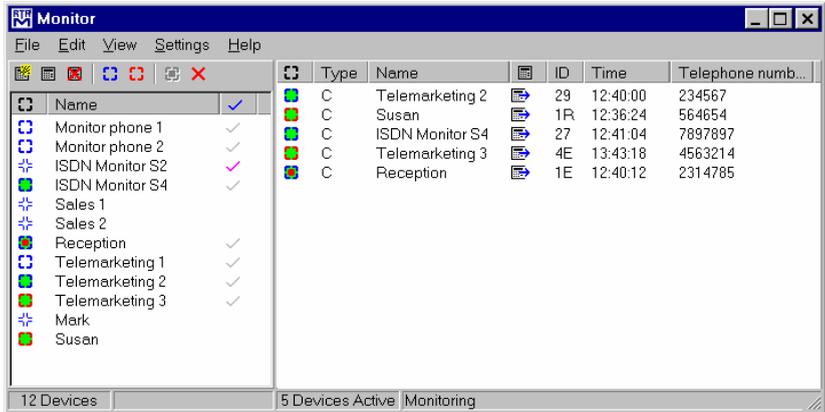
The Call Recorder Archiving System has the ability to make a selection of recordings according to date, time or other call properties. A query can be performed for a certain a range of dates and times or duration. The entire database can also be sorted according to date and time or duration. Recordings can be assigned a name according to Caller ID or Remote number. Once a particular recording with a certain Caller ID or remote number has been assigned a name all recordings with the same Caller ID or remote number will be assigned the same name. A query can be performed to search the database for recordings with the same name or number.

### **7.1.3 Fax viewing**

As described in § 5.1.2 the CRQ can be configured to record fax transmissions. The Call Recorder Archiving System has the ability to differentiate between a fax transmission recording and a normal recording. Furthermore the Call Recorder Archiving System can reconvert the recorded fax transmission to the original image. A build in viewer is used to view the original fax image.

## **7.2 The RTR Call Monitor software**

RTR Call Monitoring stands for Real Time Remote Call Monitoring. The CRQ features the RTR Call monitoring option. The optional RTR Call Monitor software keeps track of the status of all four lines of the CRQ. Once a call is started on a particular line the RTR Call Monitor application can connect to the CRQ over the network. The CRQ then transmits the call over the network to the RTR Call Monitor application. This way it is possible to listen in on all lines of the CRQ with only a couple of seconds delay. The RTR Call Monitor application can be used to listen in on calls on all the Call Recorders connected to the network.



The RTR Call Monitor

For the communication between the RTR Call Monitor application and the CRQ it is essential that the network settings of the CRQ have been properly configured. See Chapter 8 for details.



## 8 The Ethernet interface

The Call Recorder Quad has mature Ethernet capabilities. When the network configurations have been made the Call Recorder Quad can be accessed over the network using the Archive software. Messages can be downloaded and played with this software. The network configuration is also necessary for the E-mail function to work. See the following section for instructions.

### 8.1 Network settings

- Press the **configuration** function key to enter the settings.
- Press **NEXT** three times.

The display will show:

Network Settings		
NEXT	MENU	STOP

Entering the Network settings

- Press **MENU** to enter the Network settings menu.

The network settings generally have three possible choices to select. They are:

- Press **NEXT** to move on to the next menu item.
- Press **CHANGE** to enter or change the value or property of the menu item presented.
- Press **BACK** to exit the menu.

Press **NEXT** repeatedly to scroll through the menu items. The following sequence of menu items will appear:

### 8.2 Network active

When you enter the Network settings menu the display will show:

Network active:		No
NEXT	CHANGE	BACK

Enabling the Network

- Press **CHANGE** to enable the network.
- Press **NEXT** to save and move on to the next menu item.

### 8.3 FTP active

FTP stands for File Transfer Protocol. This is the protocol used by the Call Recorder Quad to communicate over the network. This is a widely used protocol that is also being used for the Internet.

FTP active:	No	
NEXT	CHANGE	BACK

Enabling FTP

- Press **CHANGE** to enable FTP.
- Press **NEXT** to save and move on to the next menu item.

### 8.4 FTP user

The Ftp user is user name of the Call Recorder Quad. It is used by the Archive software to log on to the Call Recorder Quad.

FTP user: 0000		
NEXT	CHANGE	BACK

Set the Ftp user name

- Press **CHANGE** to change the Ftp user name.

FTP user:	█	CANCEL
-----------	---	--------

Enter the Ftp user name

Use the numerical keys to enter the Ftp user name. Use the  to switch between upper case and lower case characters.

- Press **STORE** to save the Ftp user name.
- Press **NEXT** to save and move on to the next menu item.

### 8.5 FTP password

The Ftp password of the Call Recorder Quad is the password that goes with the FTP user name of the Call Recorder Quad. It is used by the Archive software to log on to the Call Recorder Quad.

FTP pwd: 0000
NEXT            CHANGE            BACK

Set the Ftp password

- Press **CHANGE** to change the Ftp password.

FTP pwd: █
CANCEL

Enter the Ftp password

Use the numerical keys to enter the Ftp password.

- Press **STORE** to save the Ftp password.
- Press **NEXT** to save and move on to the next menu item.

## 8.6 FTP server port

Ftp server port is the port number through which the Archive software can log on to the Call Recorder Quad. The Ftp server port is default set to 21, as is the setting of the port number in the Archive software. If there is no direct reason to change the Ftp server port it is best left unchanged.

FTP server port: 21
NEXT            CHANGE            BACK

Set the Ftp -server port number

- Press **CHANGE** to change the Ftp server port number.

FTP-server port: █
CANCEL

Enter the Ftp server port number.

Use the numerical keys to enter the Ftp server port number.

- Press **STORE** to save the Ftp server port number.
- Press **NEXT** to save and move on to the next menu item.

## 8.7 DHCP server

In case a DHCP server is used on the network the Use DHCP server option must be enabled. In case a DHCP server is not used on the network the Use DHCP server option must be disabled.

Use DHCP server:	No	
NEXT	CHANGE	BACK

Enable DHCP server

- Press **CHANGE** to enable DHCP server.

Use DHCP server:	Yes	
NEXT	CHANGE	BACK

DHCP server enabled

- Press **NEXT** to save and move on to the next menu item.

When a DHCP server is used, the IP and Gateway addresses are automatically assigned. Without DHCP server you must manually enter IP address, as indicated in section 8.8.

## 8.8 IP address

As part of the network the Call Recorder Quad needs an IP address. In case a DHCP server is used (see previous item) the DHCP server will assign the Call Recorder Quad an IP address. In case a DHCP server is not used a static IP address must be assigned to the Call Recorder Quad.

IP addr: 0:0:0:0		
NEXT	CHANGE	BACK

Set the IP address of the Call Recorder Quad

- Press **CHANGE** to enter the IP address of the Call Recorder Quad.

IP addr: 00:000:000:000	
STORE	CANCEL

Enter the IP address of the Call Recorder Quad

Use the numerical keys to enter the IP address of the Call Recorder Quad.

- Press **STORE** to save the IP address of the Call Recorder Quad.
- Press **NEXT** to save and move on to the next menu item.

## 8.9 IP subnet mask

The IP subnet mask is used by the Call Recorder Quad if access from outside the network is required. In this case the Gateway will need to be entered as well. In case the used SMTP server is not on the local network the IP mask and gateway need to be entered.

```

IP mask: 255:255:255:000
NEXT      CHANGE      BACK
  
```

Set the IP subnet mask of the Call Recorder Quad

- Press **CHANGE** to change the IP subnet mask of the Call Recorder Quad.

```

IP mask: █55:255:255:000
STORE      CANCEL
  
```

Enter the IP subnet mask of the Call Recorder Quad

Use the numerical keys to enter the IP subnet mask of the Call Recorder Quad.

- Press **STORE** to save the IP subnet mask of the Call Recorder Quad.
- Press **NEXT** to save and move on to the next menu item.

## 8.10 Gateway

The Gateway is used by the Call Recorder Quad if access from outside the network is required. If so the Gateway and the IP subnet mask will need to be entered. For instance, if the used SMTP server is not on the local network the IP mask and gateway are required.

```

Gateway: 0:0:0:0
NEXT      CHANGE      BACK
  
```

Set the Gateway of the Call Recorder Quad

- Press **CHANGE** to enter the Gateway of the Call Recorder Quad.

Gateway: 00:000:000:000
STORE CANCEL

Enter the Gateway of the Call Recorder Quad

Use the numerical keys to enter the Gateway of the Call Recorder Quad.

- Press **STORE** to save the Gateway of the Call Recorder Quad.
- Press **NEXT** to save and move on to the next menu item.

## 8.11 IP name

Aside from the IP address the Call Recorder Quad can also be addressed by an IP name if your DNS server supports this function.

IP name: AM3-00041
NEXT CHANGE BACK

Set an IP name for the Call Recorder Quad

- Press **CHANGE** to enter an IP name for the Call Recorder Quad.

IP name: █
STORE CANCEL

Enter an IP name for the Call Recorder Quad

Use the numerical keys to enter an IP name for the Call Recorder Quad.

- Press **STORE** to save an IP name for the Call Recorder Quad.
- Press **NEXT** to save and move on to the next menu item.

## 8.12 Monitor active

The monitor function allows you to listen in to the conversations that take place with the Call Recorder Quad. This is done with the RTR Call Monitor software, which connects with the Call Recorder Quad over the network. This option enables this recorder to be accessible to the RTR Call Monitor software.

Monitor active:	No	
NEXT	CHANGE	BACK

Enabling Monitor

- Press **CHANGE** to enable the Monitor.
- Press **NEXT** to move on to the setting of the Monitor password.

The monitor password is a special password that is used to log on to the Call Recorder Quad. This password is also set in the RTR Call Monitor software.

Monitor pwd: 0000	
CHANGE	BACK

Enabling Monitor

- Press **CHANGE** to enter a password
- Press **BACK** to exit the network setting menu



## 9 The Call Recorder Quad as microphone recorder

The Call Recorder Quad can also be used as call recorder or as memo recorder. It is possible to configure the Call Recorder Quad to give the option to store or delete the recording when the recording has been stopped. You don't need to worry about enough space on your cassette, nor is there a risk of recording over a previous recording.

### 9.1 Call Recorder Quad as microphone/memo recorder

The Call Recorder Quad can also be used as microphone or memo recorder. Connect a microphone to the microphone connector at the back of the Call Recorder Quad. See § 2.2 for more details.

- Press the Record button  to start the recording.
- Press the Stop button  to stop the recording.

Your Call Recorder Quad can be configured to automatically start recording when any activity is detected. Please contact your supplier for more details. Your supplier can also advise you on which microphone to use.



## 10 Encrypted recording

Encrypting recordings is done to prevent unauthorized playback of and listening to recordings. The CRQ uses a CryptoCard to encrypt recordings. The CryptoCard is a chip card that holds the key to the encryption and decryption. Encrypted recordings can only be played back together with the original or a matching CryptoCard.

The CRQ is equipped with a card reader specifically for this purpose, it is located on the right side of the device. CryptoCards can be obtained from your CRQ supplier. The use of the CryptoCard encryption function is enabled in the Recorder settings menu. See § 3.3 to enable the use of a CryptoCard.

### 10.1 The CryptoCard and its PIN and PUC code

The CryptoCard is supplied with a PUC code and a PIN code. The PIN code is a four-digit code and is requested by the CRQ to enable playback of recordings. The PUC code is a twelve-digit code and is used only when the card has been disabled. The PIN code can be changed with the CRQ. This can be done only when the Use CryptoCard function has been enabled. See § 3.3 to enable the use of a CryptoCard.

- Press the **Recorder** function key.
- Press **NEXT** seven times.

The display will show:



Changing the card code

- Press **CHANGE** to change the card code.
- First enter the original card code.
- Press **CONTINUE**.
- Enter the new card code.
- Press **CONTINUE**.
- Repeat the new card code for confirmation.
- Press **CONTINUE**.

The display will show:

New Card Code accepted.  
STOP

The new card code accepted.

A CryptoCard allows for two invalid PIN code entries. After the third invalid Pin code entry the CryptoCard is disabled. The next time the CRQ will ask for the PUC code to enable the card again. The CryptoCard allows for four invalid PUC code entries. After the fifth invalid PUC code entry the CRQ will disable the card definitively. It is advised to keep the PUC code in a safe place.

## 10.2 Making an encrypted recording

To make an encrypted recording it is essential that the Use CryptoCard function is enabled in the Recorder settings menu. Enable the Use CryptoCard function as described in § 3.3. With Use CryptoCard enabled it is no longer possible to make normal, unencrypted recordings without disabling the Use CryptoCard function again.

Insert the CryptoCard in the card reader of the CRQ. The display will show:

Monday 22-04-02 11:03  
card inserted.

CryptoCard inserted.

When a valid CryptoCard has been inserted all recordings made thereafter will be encrypted as long as the card remains inserted. Removing the card disables recording automatically.

Encrypted recordings are stored as such and can be played only with a matching CryptoCard inserted. Encrypted recordings can also be downloaded to a Pc with the Call Recorder Archiving System software, however, they cannot be played on the Pc without a CryptoCard matching the card used when the recording was made. See the following section for a detailed explanation.

## 10.3 Playing an encrypted recording

Encrypted recordings can only be played back with the original or a matching CryptoCard. For playback of an encrypted recording on the CRQ this works quite simply. Search and select the desired recording as described in Chapter 6. If playback of the encrypted recording is started the CRQ will automatically ask for the Card code.

The display will show:



Enter your card code.

After entering your PIN code the soft-key function **CONTINUE** is added in the display.

- Press **CONTINUE** to start playback of the selected recording.

It is not necessary to enter your card code every time.

Recordings can also be downloaded to the Pc with the Call Recorder Archiving System application. Encrypted recordings cannot be played on the Pc without the original or a matching CryptoCard. Your supplier of the CRQ can supply you with a Card reader for your Pc together with the necessary drivers. The Call Recorder Archiving System application will show whether recordings are encrypted or not in the "Use of CryptoCard" column. When an encrypted recording is played the Call Recorder Archiving System application will prompt you for the insertion of a matching card and the belonging code. After that the recording will play. The Call Recorder Archiving System has the ability to remove the encryption. Encrypted recordings can be exchanged with other Pc's just as any other recording. Encrypted recordings can be played on any Pc with Call Recorder Archiving System on it and with the original or matching CryptoCard.



# 11 Acknowledgements

## 11.1 Privacy

When recording telephone conversations the privacy of your conversation partner must be considered.

In some countries there is an obligation to notify your conversation partner of the recording. Check your national legal obligations on this and other issues concerning the use of the Soft Call Recorder.

In the United States, the Federal government requires that only one person involved in a conversation must know the call is being recorded. However, each state has its own legislation. The vast majority of states have laws complying with the Federal “one party” requirement. A few states, such as Florida and others, do require both parties to be aware the call is being recorded.

The CRQ can comply both with the one party or two party requirements. One party simply means the person with the CRQ knows the call is being recorded. Compliance is made with two party requirements by sounding a notification tone during the call.

## 11.2 Guarantee

Your Call Recorder Quad has a 12-month factory guarantee. The guarantee is effective for normal use only. We would like to emphasize that the guarantee is not valid under exceptional environmental conditions, such as extreme temperatures or humidity levels, nor in the unlikely event of a lightning strike. The guarantee is not valid if the machine has not been handled properly, for example when it has been dropped, or bumped into. In order to qualify for guarantee, you should contact your supplier, and show the receipt. If your supplier cannot help you, you should contact the manufacturer. The manufacturer reserves the right to determine the final date of the guarantee period on the basis of the date of production. Costs of transport to and from the supplier or the manufacturer are for the buyer's account. Guarantee is for parts only and does not cover any costs resulting from the breakdown of the Call Recorder Quad.

The Call Recorder Quad has various extra features that have not been described in this manual. Additional information about this is given in a technical information bulletin. Subjects discussed in this technical documentation are further configuration options, remote configuring, and how to update the firmware in the Call Recorder Quad. The further configuration options concern all aspects of operation. In our experience most people are interested in configurations related to user's access.

## **11.3 Liability**

Correct functioning of the Quad Call recorder cannot be guaranteed under all conditions and thus we do not accept any liability for loss of information or other damages due to the use of the Call Recorder Quad.

Vidicode assumes no liability regarding incorrect notification of call recording.

Vidicode is not a source of official interpretation of laws of any country or state and shall not be construed as a source for making decisions.

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