



CRU2

USER GUIDE



**For Technical Assistance
Please Phone: (07) 5596 5128**

National Communications (Aust.) Pty Ltd.
Units 11-12, 39 Lawrence Dr NERANG QLD 4211
www.natcomm.com.au

REGULATORY INFORMATION

About Telephone Call Recording

It is an offence, under the Telecommunications (Interception) Act 1979, to record a telephone call without both parties knowledge.

There is also State and Territory legislation relating to the recording of communications over the Telecommunications network which should be adhered to by the user of this equipment.

A document entitled 'Telephone Recording Guidelines', written by the Australian Communications Industry Forum (ACIF) is saved to the enclosed CD. This document provides information and recommendations regarding telephone call recording and the acceptable methods of advising the other party. You should read this document to ensure that you comply with appropriate state and federal regulations. This document also provides contact details (Appendix A) for Federal, State and Territory departments responsible for Telephone Call Recording, should you require further clarification or assistance.

ACIF recommend that you provide ORAL notification by automatic or manual means BEFORE you commence recording. ACIF also advise that you should cease recording if requested by the other party.

CRU-2 does not have the ability to provide Automatic ORAL notification. You must do so manually before commencing your Call Recording.

Our alternative Model CRU-4 has the ability to provide Automatic ORAL notification. Should you wish to change your product for the CRU-4 model, please contact your supplier or National Communications prior to installation.

CRU-2 can inject 'recording tones' into the telephone call, as per the Australian Communications and Media Authority technical standards requirements (See page 18). ACIF advise that this method of advising that a call is being recorded is now considered obsolete. If you wish to inject recording tones into the telephone call during recording you should leave Dip Switch 4 set to the OFF position.

INDEX

Packing List	Page 3
Installation Instructions	Pages 6-10
Installation Diagram	Page 7
Using the CRS Recording Software	Pages 11-15
Single Line Installation for Non-PC Recording	Page 16
Commander or PABX System Installation	Page 17
Dip Switch Settings	Page 18
Troubleshooting	Page 19
Specification & Warranty	Page 20

PACKING LIST

Before commencing installation, please ensure the following items have been provided with your unit.

DESCRIPTION	QTY
CRU-2 CALL RECORD Line Sharing Unit	1
12VAC Plug Pack (Power supply)	1
CRS Voice Record Software CD	1
Telephone Line Cord, fitted with a male plug	1
Double Telephone Adaptor - modular style	1
PC Connection Cable (This cable connects CRU-2 to a PC Com Port)	1
Serial to USB Adaptor (This accessory connects CRU-2 to a USB Port)	1
AUDIO Connection Cable with LIU This cable connects CRU-2 to the LINE IN port of your Sound Card	1

DESCRIPTION

This CALL RECORD UNIT (Model CRU-2 is designed to automatically connect any or all of your Telephone calls direct to ANY attached RECORDING DEVICE.

A PC (running Windows 95 or later) is IDEAL for use as your RECORDING DEVICE and PC software is provided for this purpose.

If you intend to use a PC as your RECORDING DEVICE, it must be fitted with a Sound Card and also a spare USB or COM port.

If a spare COM port is not available, you should use the supplied USB to SERIAL (COM) Port adaptor, which will convert an existing USB port to a Serial COM port. You will need to load the appropriate device driver from the supplied CD to suit your operating system.

CRU-2 can be set to automatically connect all of your incoming calls AND/OR all of your outgoing calls to your recording device.

It will also allow you to RECORD telephone calls on an as required basis by simply pressing 3 to START RECORDING and by pressing 4 to STOP RECORDING, from any telephone connected to the same line.

CRU-2 is designed for user installation direct on to an ordinary SINGLE TELEPHONE LINE (known as PSTN or POTS) and can be connected to ANY telephone socket on this line.

When a PC with the supplied software is used, Recorded Calls are automatically converted to MP3 format and stored in a nominated folder located on a local or networked drive.

These file recordings can be viewed, retrieved or played by navigating to the folder they are stored in, using My Computer or Windows Explorer. You can 'play' a previous recorded file by 'double clicking' it.

You can also use most other Telephone Call recording devices with this CALL RECORD UNIT. Your dealer will be able to recommend a suitable device for your requirements.

You should INSTALL your CRU-2 unit FIRST, as detailed on page 6, BEFORE installing the supplied PC software.

WINDOWS 7 USERS

If you are using Windows 7, then you will need to CHANGE the folder that your call recordings are stored to after installation of the CRS2 software. Failure to do so will cause files to not be saved.

The default installation folder for your CRS2 software is :
c:\Program Files\RecordSoftware

The default destination folder for your recordings is:
c:\Program Files\RecordSoftware\MP3Store

Please change your destination folder for your recordings to any folder outside of the "Program Files" folder (see page 15).

e.g., c:\CRU2 Recordings

If your recordings are of an important nature, we suggest that you make your destination folder on your server to guarantee that your files are backed up during your normal backup process.

PABX TYPE SYSTEM USERS

This CRU-2 can also be fitted to a SINGLE SPECIFIC LINE of a Commander or PABX system (providing you are not using ISDN lines), to allow for Recording of telephone calls on this specific line only.

Note - Commander and PABX system users can also use our alternative Model CRU-3 or CRU-4 devices, which are specifically designed for connection to a ANY telephone handset and provide for PERSONAL call recording for the user of the handset.

INSTALLATION PROCEDURE

SINGLE LINE INSTALLATION

for PC Based Recording

1. Connect the LINE IN port of the Call Record Unit to any convenient position on your telephone line, using the supplied telephone cable fitted with a male plug. It does not matter where it is connected. If you wish to operate a telephone or other telephone device on the same telephone socket, then fit both items to the same socket using a double telephone adaptor (supplied).

2. Connect the supplied 12V power pack direct to your CRU and switch the power on at your wall plug.

3. Four Micro Dip Switches are located on the underside of the CRU and are used to program the unit with your recording requirements. Set the position of these switches to suit your recording requirements (see information detailed on page 18).

4. Connect the supplied cable (with a 9 pin D type connector) direct a spare COM (Serial) port of your PC. Connect the other end of the cable direct to the RELAY OUTPUT port of the CRU. This cable is necessary to start and stop the recording to your PC.

If you do not have a Serial Com port available, use the supplied USB to Serial Port adaptor. Please Note - You will need to load the appropriate device driver for your Windows version, from the supplied CD.

5. A black device known as a Line Isolation Unit (LIU) is supplied to connect the LINE port of your PC's Sound Card to your CRU.

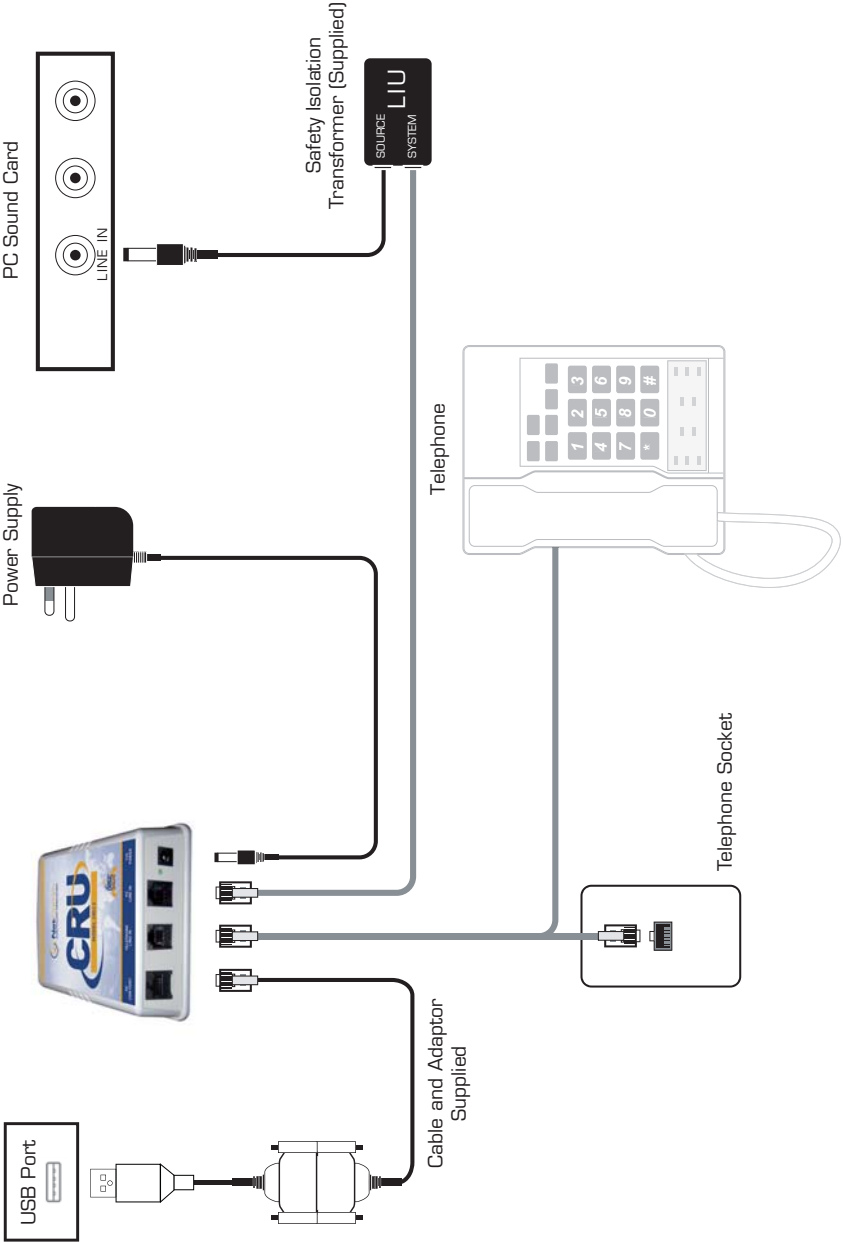
The LIU has both a cable with a telephone plug and a cable with a 3.5mm round audio plug connected to it

Connect the cable with the telephone plug direct to the RECORDER port of the Call Record Unit.

Connect the 3.5mm audio plug to the LINE port of your sound card. If there is no LINE port (usually a Blue connector), use the MIC (Microphone) port.

6. Install your supplied PC Software (Go to page 8).

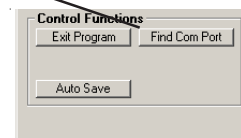
INSTALLATION DIAGRAM



CRS SOFTWARE INSTALLATION

1. Insert the supplied CD into your CD drive.
2. Open windows explorer and select your CD drive.
3. Double Click the file 'CallRecorderInstall CRU2.exe'.
4. The CRS program will begin to load.
5. Follow the prompts until the installation is complete.
6. You will need to accept the licence agreement to continue.
7. The CRS program will be automatically loaded into your Start Up menu so that the program will be active every time you turn on your PC.
8. With the software program loaded, and the supplied serial cable connected to both CRU-2 and a PC Serial COM port, your CRS program should open and the COM port used to connect CRU-2 should have been automatically detected and displayed.

If a COM port number is not displayed click, **Find Com Port**. If a COM port number is still not displayed, Go to page 19.



9. You must now advise the CRS software where the telephone call input is connected.

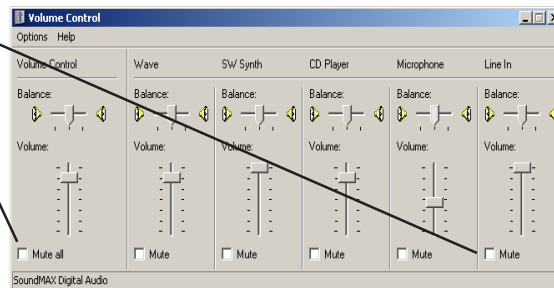
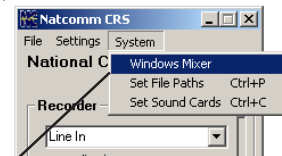
Select **Line In** from the drop down box
or
Select **Mic** (if the Microphone Input has been used)



10. Disable audio feed to your speakers while recording calls.

Some Sound Cards may play your telephone conversation back through the PC speakers. If this is occurring on your setup, you can prevent this by loading Windows Mixer and then selecting :

- a) Mute on **Line In**
- or
- b) Mute on **Volume**



If possible you should use Mute on **Line In**.

If you use Mute on **Volume**, then you may have to DESELECT Mute whenever playing Audio files through your speakers.

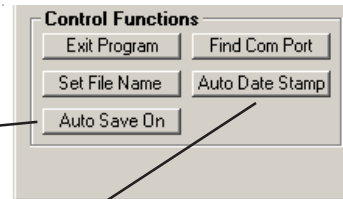
Regretfully, not all PC and PC sound cards interact with Windows Mixer as described above and some experimentation may be required to meet your needs.

11. You are ready to **TEST** your Call Recording Software :

a) Set Dip Switch 2 to the ON position (see page 18).

b) Click **Auto Save**

c) Click **Auto Date Stamp**

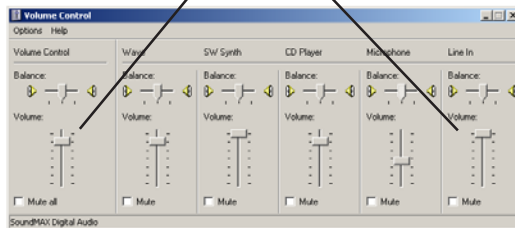
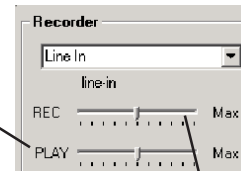


d) Pick up any telephone receiver on your line. Your software should start recording as soon as you pick up.

e) Talk for a short period of time and then hang up.

f) Using Windows Explorer or My Computer, navigate to :
C:\Program Files\Record Software\MP3 Store\
you will see a single MP3 file in this folder. Double Click this file and your recorded call should play back through your speakers.

g) You can adjust the playback volume by using the slide bar on either the CRS program or in Windows Mixer.



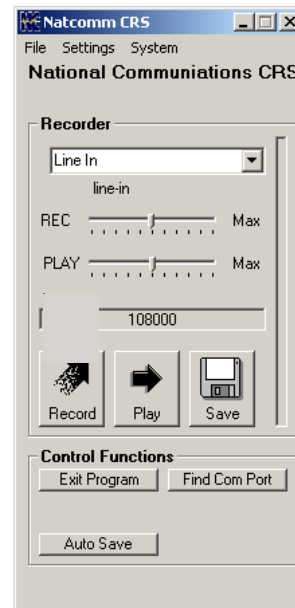
You can increase or decrease the volume of the recording here.

If you are not able to RECORD or PLAYBACK a recording, check that you have correctly followed all instructions from **1)** to **10)**. In the event you are continuing to experience problems, refer to page 19.

USING CRS SOFTWARE

Recording of your telephone calls is triggered by your CRU-2 device, (via the serial port connection) to START and STOP recording.

You can set CRU-2 to record ALL CALLS, or just INCOMING CALLS or just OUTGOING CALLS by setting Dip Switches located on the underside of CRU-2 (see page 18).



You can alternatively set CRU-2 to operate in Manual Mode where you will ONLY record calls manually by pressing 3 to START RECORDING and by pressing 4 to STOP RECORDING, from any telephone on your line.

Your recorded telephone calls are automatically converted to MP3 format.

A selection of MP3 conversion sampling rates are provided, which will allow you to select the most appropriate balance between recording quality and memory used, for your application (see pages 14-15 for further details).

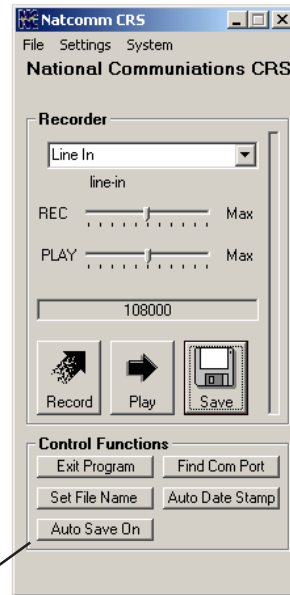
MP3 format is used, as this provides you with maximum flexibility and convenience when PLAYING files or FORWARDING files to other parties.

Your recorded calls are AUTOMATICALLY SAVED in the directory:

C:\Program Files\Record Software\MP3 Store\

which was set up on your PC's hard drive during installation of this software.

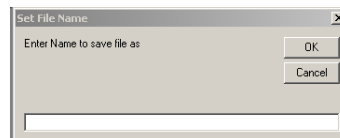
You can change this directory or you can select a Network hard drive for recorded file storage (see page 15).



When selecting the **Auto Save** Facility, you then have a choice of :

1) Using **Set File Name**

Once a file name is entered, your subsequent stored files will increment by 1.



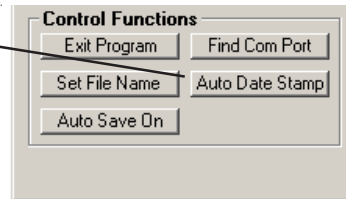
ie:

- C:\....Recorded Telephone Calls/Jane Smith1.Mp3
- C:\....Recorded Telephone Calls/Jan Smith2.Mp3
- C:\....Recorded Telephone Calls/Jan Smith3.Mp3
- etc

OR Filenames can also be stored by **DATE and TIME** by using

Auto Date Stamp

The Time and Date file name relates to the time that the call was SAVED.



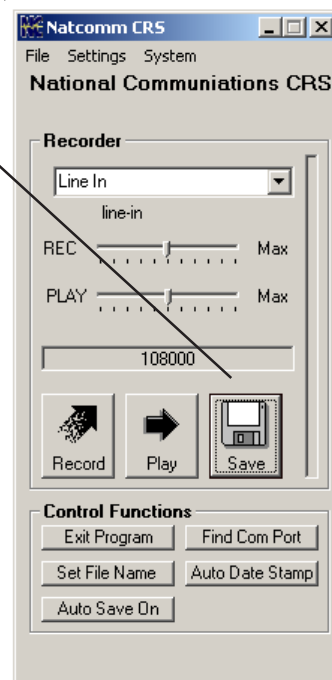
C:\...Recorded Telephone Calls/5_08_2005_12_16_55_PM.Mp3
C:\...Recorded Telephone Calls/5_08_2005_12_22_03_PM.Mp3
C:\...Recorded Telephone Calls/5_08_2005_12_31_18_PM.Mp3

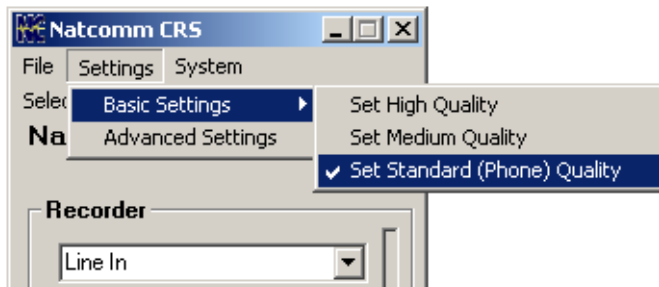
If you do not use the **Auto Save** facility, then files will ONLY be saved by 'clicking' the **Save Icon** displayed within the CRS menu.

You will then be prompted to save the file in a directory of your choice, which will be used for future Manual File Saves.

Files saved in this manner can be saved in .mp3 format or .wav format.

Note : In this mode, the current call is held in temporary memory and if you do not manually save a file, it will be overwritten by the next call and cannot be recovered.





You are provided with a choice of 3 pre-configured 'Sampling and Save' settings, for saving your recorded call.

High Quality samples and saves files with high audio quality, (not necessary for phone calls) and uses the most memory.

Medium Quality samples and saves files with good quality, using a moderate amount of memory (usually not necessary for phone use)

Standard Quality samples and saves files with a sampling rate which produces GOOD quality for most TELEPHONE LINE applications, and uses the least amount of memory.

'Sampling Rate' is a term which describes the frequency that a sampling of audio is taken during the record period and saved. The more frequently this is done, the higher the quality of the recording, but the more memory used.

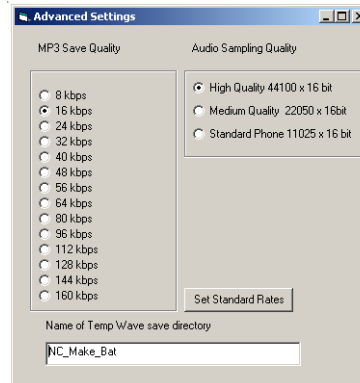
The DEFAULT SETTING for CRS is STANDARD QUALITY.

You will only need to change this setting, if the quality of the recorded file when played back is not adequate for your use.

You can change this setting by selecting :
Settings
Basic Settings
and then 'clicking' your required choice

For Advanced Users, provision is provided for separate selection of the actual AUDIO SAMPLING RATE of the telephone conversation and also the MP3 BIT RATE SAVE QUALITY that you wish to apply to the sampling.

Note - Files can also be saved in .wav format, when the Auto-Save facility is disabled (see p13).



CHANGE FILE SAVE PATH

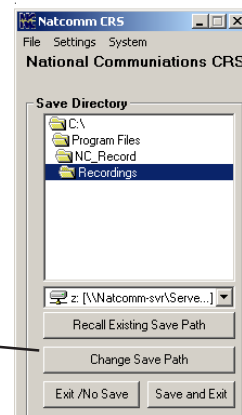
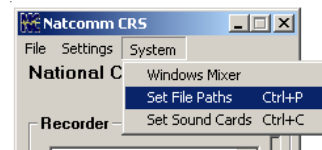
Your recorded calls are AUTOMATICALLY SAVED in the directory:

C:\Program Files\Record Software\MP3 Store\

This directory has been set up on your PC's hard drive, during installation of this software.

You can change this directory or you can select a Network hard drive for recorded file storage, by navigating through to the required directory and then clicking :

'Change Save Path'



If you are using WINDOWS 7, you must change this directory - see page 5 for special requirements.

SINGLE LINE INSTALLATION

for Non PC Recording

1. Connect the LINE port of the Call Record Unit to any convenient position on your telephone line, using the supplied telephone cable fitted with a male plug. It does not matter where it is connected. If you wish to operate a telephone or other telephone device on the same telephone socket, then fit both items to the same socket using a double telephone adaptor (supplied).

2. A Line Isolation Unit (LIU) is supplied to connect your Recording Device to your CRU. This is an ACMA safety requirement. Connect the LIU fitted with an RJ11 plug, direct to the RECORDER port of the Call Record Unit. Connect the other end of your LIU fitted with a 3.5mm plug to the LINE or INPUT port of your recording device.

3. If your Recording Device has a VOX facility which means that it can start recording automatically when it detects noise and stops recording automatically when there is no noise, then you can ignore this step.

If your recording device does not have a VOX facility, then you will need to connect the supplied cable (with Audio connector) direct to the PC COM port of the CRU and then connect the other end of the cable to the external START or TRIGGER connector of your recording device.

4. Connect the supplied 12V power pack direct to your CRU and switch the power on at your wall plug.

5. Four Micro Dip Switches are located on the underside of the CRU and are used to program the unit with your recording requirements. Set the position of these switches to suit your recording requirements (see information detailed on page 18).

6. Read the instructions supplied with your recording device and set the system up as per the manufacturers recommendations.

7. Your RECORD device will be connected and activated automatically when a call is to be recorded. The RECORD device will stop recording when the call is complete.

PABX SYSTEM INSTALLATION

CRU-2 can be installed onto a single telephone line of your PABX or other Multi-Line telephone system. Installation details are provided below.

Alternatively, other products in the CRU Family, (Models CRU-3 and CRU-4 are designed to connect direct to the HANDSET of ANY PABX or COMMANDER type telephone. These products provide PERSONAL CALL RECORDING for individual staff, direct to an individuals PC (or server).

For further details on these alternative products, contact your dealer or National Communications.

SINGLE LINE PABX INSTALLATION

Please Note : Requires Installation by a Technician

In this situation, a technician will need to connect the CRU-2 device in parallel with the appropriate telephone line at the main telephone line distribution frame (MDF).

Once the appropriate telephone line has been fitted to the CRU-2 device, you can then proceed to install your PC or other recorder device.

NOTE - DO NOT CONNECT THIS UNIT to a DIGITAL extension socket.

NOTE - DO NOT CONNECT THIS UNIT to an ISDN telephone line.

DIP SWITCH SETTINGS

Four Micro Dip Switches are located on the underside of CRU2. These switches are used to set your recording requirements.

DIP SWITCH 1 is used to control recording of INCOMING CALLS

- If Dip Switch 1 is ON - Auto Record All Incoming Calls
- If Dip Switch 1 is OFF - DO NOT Auto Record Incoming Calls

DIP SWITCH 2 is used to control recording of OUTGOING CALLS

- If Dip Switch 2 is ON - Auto Record All Outgoing Calls
- If Dip Switch 2 is OFF - DO NOT Auto Record Outgoing Calls

DIP SWITCH 3 is used to control Manual Call Recording (see below)

- If Dip Switch 3 is ON - Prevent DTMF Override
- If Dip Switch 3 is OFF - Allow DTMF Override

DIP SWITCH 4 is used to control the Recording Tone (see below)

- If Dip Switch 4 is ON - Disable Recording Tone
- If Dip Switch 4 is OFF - Allow Recording Tone

MANUAL CALL RECORDING CONTROL

If Dip Switch 3 is set to the OFF Position, the CRU unit will allow you to START and STOP Call Recording AT ANY TIME, direct from your telephone. YOU CAN START RECORDING telephone calls on an as required basis by simply pressing 3, from any telephone connected to the same line. YOU CAN STOP RECORDING telephone calls on an as required basis by simply pressing 4, from any telephone connected to the same line. With OUTGOING CALLS only, there is a 6 second delay before the 3 or 4 command is executed. The delay is required in order to prevent the possibility of this unit responding whenever DTMF Tone Dial digits are dialled out for phone banking or other similar requirements.

RECORDING TONE

A Recording Tone can be injected into your telephone line at intervals of 15 seconds, whenever calls are being recorded. To enable the injection of call recording tones when recording calls, set Dip Switch 4 to the OFF position. To disable the injection of call recording tones when recording calls, set Dip Switch 4 to the ON position.

Disabling the Recording Tones should only be done after full consideration of the applicable State and Commonwealth legislation relating to the recording of communications over the Telecommunications network.

TROUBLESHOOTING

ENSURE YOUR SOUND CARD AND SPEAKERS ARE WORKING CORRECTLY BY TESTING WITH ANOTHER SOUND APPLICATION

The vast majority of PC based Recording installations take place without problem. On rare occasions, due to the wide range of sound cards available, problems can be experienced due to incompatible software settings within the sound card control software.

Some sound cards have features that are switched by pressing buttons (DTMF codes) on your telephone. This feature needs to be switched OFF if you are using the Manual Call Recording option of the CRU.

If you experience other problems with your sound card, that you are unable to rectify, we would recommend that you replace your sound card.

The Soundblaster range of sound cards from Creative Labs are recommended as they are inexpensive and commonly available.

CRS SOFTWARE FAILS TO START RECORDING

* Ensure that your serial cable is correctly connected to your PC's COM port and also to the PC COM port of CRU-2.

* Ensure that your CRS software has detected the correct COM port and that it is displayed on your CRS menu (see page 8).

FILES ARE RECORDED BUT ARE SILENT

* Ensure that you have correctly selected LINE IN or MIC as your input source (see page 9).

* Move the REC slide bar on the CRS menu towards MAX until the required record level is obtained (see page 10).

FILES WILL NOT PLAY BACK THROUGH MY SPEAKERS

* Ensure that MUTE IS NOT TICKED in Windows Mixer (see p 9).

* Increase the Volume Slide Bar for VOLUME and LINE IN or MIC.

* Increase the PLAY Slide Bar towards MAX on the CRS Menu.

* Experiment with Windows Mixer settings.

SPECIFICATIONS

Dimensions(all in mm)	:	106 (W) x 106 (D) x 43 (H)
Weight	:	220g
Power Supply	:	12VAC/500mA
Power Consumption	:	Idle - 0.5 Watts
Power Consumption	:	Call - 0.75 Watts
Telephone LINE IN Connector	:	RJ 6 pin (2 centre)
PC COM Port Connector	:	RJ 4 pin (2 centre)
PC LINE IN Connector	:	RJ 6 pin (2 centre)
Power Connector	:	2.5mm barrel connector
ACMA COMPLIANT	:	Supplier Number N 782

WARRANTY

This device is guaranteed against defects from workmanship for a period of two years (24 months) from the date of purchase. In the event of failure, you should return the product, along with proof of purchase date, and a written statement about the nature of the problem.

This Warranty shall not apply to any unit which has been subject to alteration, modification, abuse, negligence, accident, external voltage/ lightning surge or used in any manner contrary to these instructions.

The obligation is solely to repair or replace the product. The warrantor is not liable for any incidental or consequential damages due to such defects.

The user is responsible for freight costs to the repair point. The warrantor will be responsible for freight costs in returning this unit back to the user.

Damage caused to this device or attached equipment, by lightning strikes or over voltage surge is not covered under this warranty.

**CASE SEALED AT FACTORY
OPENING THE CASE VOIDS THE WARRANTY**