



Installation & Administration Guide

TOTAL RECALL DESKTOP & RACK



Version 8.5.0

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For more information visit Total Recall on the Web at www.totalrecallvr.com.



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About this Manual

1. Introduction

This manual is intended for technical and/or network administrators who will be installing and configuring **Total Recall** and the associated PC client software.

Refer to the **Total Recall User Guide** for information about using **Total Recall's** recording features and functionality.

2. Conventions and Terminology

2.1. Conventions

2.1.1. References

References to other manuals or other parts of this manual are indented, formatted in blue text, and marked with a hand symbol:

 [Reference example](#)


2.1.2. Notes

Notes are indented, formatted in blue text with light grey borders, and marked with a note symbol:

 [Note example](#)

2.1.3. Warnings

Warnings are indented, formatted in blue text with light grey borders, and marked with a warning symbol:

 [Warning example](#)

2.1.4. Procedures

Descriptions of procedures for performing certain tasks are marked with a 'cogs' icon, and the purpose of the procedure is formatted in bold italic text:

 ***Procedure Description Example***

1. Procedural step example



2.1.5. Screen Navigation

Screen navigation (indicating the navigation required to reach the relevant screen or dialog) is formatted in blue text and marked with a menu icon:

 [Options Menu > General Settings](#)

2.2. Terminology

The following table lists some writing style conventions used in this manual and their associated meanings.

Example	Meaning
‘Select OK to save your settings’	Highlight (position the cursor over) the OK screen button, and press the [SELECT] key on the control panel
‘Select a date from the list...’	Highlight the relevant data field, and press the [SELECT] key repeatedly to cycle through the available options, until you reach the required value
‘Check the Recording Period check box’	Highlight the relevant check box, and press the [SELECT] key to populate it with a check mark
‘Enter the IP address...’	Highlight the relevant data field, and enter the IP address using the numeric keypad on the control panel



See the *Total Recall User Guide* for information on using the menu system.



Total Recall

3. Overview of Total Recall

3.1. What is Total Recall?

Total Recall is a range of compact, cost-effective and self-contained digital voice loggers and recorders that provide secure audio capture and storage for your most recent 350,000 records or 60,000 recording hours of calls and/or other audio signals.

Total Recall is easily operated via a simple control panel and intuitive menu system, or remotely via a network using the **Remote Manager** Client software that is included with unlimited licenses as part of your solution.

Record on Demand software (also supplied with unlimited licenses) may be installed onto users' PCs to allow configurable control over the calls that are recorded on their channel.

Depending on network type and configuration, **Total Recall** can also record the telephone numbers of incoming and outgoing calls, the time and date of the call, the duration of the call, and reference to a specific channel number or extension. All of this information can be used to search and retrieve calls from the internal hard drive database or from archive media.

3.2. Standard Features

- Compact, self-contained, easy to install and operate.
- Record analogue telephone conversations.
- Record other analogue audio signals, such as two-way or broadcast radio.
- Onboard storage for the most recent 350,000 records or 60,000 hours of calls.
- Archive recordings to DVD+RW, CD-R, CD-RW or (optional) BD-RE.
- Secure and tamper proof recording format.
- Export to MP3, WAV or secure TRC format.
- Policy based recording control.
- One-click real-time monitoring of calls.
- Email and copy calls directly from **Remote Manager** on your Windows 2000/XP/Vista32/Vista64 PC. Supplied free-of-charge and license free.
- Powerful search capability.
- Feature-rich call player.
- All remote access, monitoring and management software included.

3.3. Optional Features

- Blu-Ray (BD-RE) Archive Device (optional on both **Desktop** and **Rack** models).
- Dual Hot-Swap Power Supplies (optional on **Total Recall Rack** model only).



- Channel Upgrades: **Total Recall Desktop** can accommodate two Digital Signal Processor (DSP) cards, and **Total Recall Rack** can accommodate six DSP cards. Systems may be upgraded with 4, 8 or 12 channel cards.
- Software Upgrades (optional on **Total Recall Rack** model only):
 - TCP/IP Network Call Archiving.
 - Simple Network Messaging Protocol (SNMP) Alarm Interface Support.
 - Station Messaging Detail Record (SMDR) Support.



Contact your supplier for more information on obtaining upgrades for your **Total Recall** system, or see www.totalrecallvr.com

4. Compliance Statement

4.1. European Model

The equipment has been approved in accordance with Council Decision 98/482/EC for pan-European single terminal connection to the public switched telephone network (PSTN). However, due to differences between the individual PSTNs provided in different countries, the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN network termination point.

In the event of problems, you should contact your equipment supplier in the first instance.

This device is designed to work on any network. This device is not dependent on physical and software switch settings. If this device is to be used outside of your area or different network, contact your vendor.

This device complies with Class A of EN55022: 1995 incl. Amendments 1 & 2.

Warning

This is a Class A product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

4.2. New Zealand Model

This device complies with Class A of AS/NZS3548:1995, incl. Amendments 1 & 2.

Warning

This is a Class A product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

8.1.8 Call logging (automatic set-up).

(b) “The call log incorporated in this equipment does not record all answered calls. The call log, therefore, may not agree with the Telecom account which may include calls not shown on the log.”

8.5 Recording functions.

(c) “All persons using this device for recording telephone conversations shall comply with New Zealand law. This requires that at least one party to the conversation is to be aware that it is being recorded. In addition, the Principles enumerated in the Privacy Act



1993 shall be complied with in respect to the nature of the personal information collected, the purpose for its collection, how it is used and what is disclosed to any other party.”

4.3. USA Model

FCC Rules, Part 15

Total Recall has been tested and complies with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, can cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at the user's expense.

CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY **Comsec TR Pty Ltd** COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

1. **FCC Part 68 Registration**

Total Recall complies with FCC Rules, Part 68, and the requirements adopted by ACTA. On this equipment is a label that contains, among other information, the FCC Part 68 registration number. If requested, this number must be provided to the telephone company.

2. **REN**

The ringer equivalence number (REN) is used to determine the quality of devices, which may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all, areas the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company.

NOTE: RENs are associated with loop-start and ground-start ports. It is not used for E&M and digital ports. The REN assigned to **Total Recall** is 1.5B. If requested, this information must be given to the telephone company.

3. **Service**

In the event of equipment malfunction, all repairs should be performed by **Comsec TR Pty Ltd** or an authorized agent. It is the responsibility of users requiring service to report the need for service to **Comsec TR Pty Ltd** or to one of our authorised agents. Service can be facilitated through our Factory office at:

Comsec TR Pty Ltd

Unit 5, 7 Millennium Court

Silverwater, NSW 2128, Australia

Email: totalrecall@totalrecallvr.com

The telephone company can ask you to disconnect the equipment from the network until the problem is corrected or until you are sure that the equipment is not malfunctioning.

4. **Facility Interface Information**



In order to connect registered terminal equipment to the telephone company lines, the terminal equipment must utilize an FCC registered jack. Standardised jacks are used for this equipment. The following table contains Facility Interface Code (FIC), Ringer Equivalence Number (REN), Service Order Code (SOC) and network jack information for the equipment.

Port Identifier	FIC	REN	Network Jack
Line 1 to 72	N/A	1.5B	RJ11C
Link 1 to 4	N/A	N/A	RJ48C

The **Total Recall interface** connects to the Public Switched Telephone Network through a FCC registered NCTE that specifies the type of network jack to be used.

5. Disruption to the Network

If the **Total Recall** *disrupts* the telephone network, the telephone company can discontinue your service temporarily. If possible, the telephone company will notify you in advance. If advance notice is not practical, they will notify you as soon as possible. You are also informed of your right to file a complaint with the FCC.

6. Telephone Company Facility Changes

The telephone company can make changes in its facilities, equipment, operations, or procedures that can affect the operation of your equipment. If they do, you should be notified in advance so you have an opportunity to maintain uninterrupted telephone service.

7. Electrical Safety Advisory

While **Total Recall** is fully compliant with FCC rules and regulations, it is recommended that an alternating current (AC) surge arrestor of the form and capability suitable for the model purchased be installed in the AC outlet to which the **Comsec TR Pty Ltd** products are connected. Consult with your distributor as to the surge protector requirements for your equipment.

Notes:

- a) If a ruling is required on the legality of recording in your country, please seek legal advice.*
- b) This product must not be used for illegal or unauthorised recording purposes.*

5. Safety Information



WARNING: Potential electrical shock hazard.

Always follow basic safety precautions when using this product to reduce the risk of injury from fire or electrical shock. The **Total Recall** must be installed by qualified service personnel. Observe the following:

1. Read and understand all instructions in the user manuals.
2. Observe all warnings and instructions marked on the product.



3. Use only a grounded electrical outlet when connecting **Total Recall** to a power source. If you are unsure the outlet is grounded, have a qualified electrician check this.
4. First connect the **Total Recall** to grounded electrical outlet, and only then connect the appropriate interface lines.
5. Do not touch the contacts on the ends of any of the cables used with **Total Recall**. If any cable becomes damaged, have it repaired immediately.
6. Shut down and unplug **Total Recall** from power outlets and telephone jacks prior to cleaning.
7. Do not open **Total Recall**. There are no user serviceable parts inside **Total Recall**. Refer all servicing to qualified personnel.

6. Power

Total Recall Desktop:

- Single Mini-ATX auto sensing 100-240 VAC, 50-60 Hz 180W PSU.

Total Recall Rack:

- Standard Single Mini-ATX auto sensing 100-240 VAC, 50-60 Hz 180W PSU.
- Optional Hot-Swap 300+300W PSU.

The maximum power draw for **Total Recall Desktop** and **Rack** is 80W.

7. Preventative Maintenance

The **Total Recall** recorder needs regular maintenance to ensure maximum performance at all times.

As with most computing devices, **Total Recall** has a fan that provides airflow across the processor to keep it cool, and a filter to ensure that the air is clean.

Every 3 months a message will appear on the **Total Recall** screen to indicate that filter maintenance is required.

The filter should be washed in warm soapy water, and then rinsed thoroughly and allowed to dry completely prior to being replaced.

New filters are available from your supplier. After maintenance is complete, select **OK** to remove the message.

8. Channel Upgrades

8.1. Analog Channel Upgrades

Total Recall analog channel upgrades require additional interface cards, which are available in 4, 8 or 12 channel capacities per card. **TR Desktop** can accommodate 2 analog interface cards (for a maximum of 24 channels), while **TR Rack** can accommodate 6 analog interface cards (for a maximum of 72 channels).



Contact your dealer for more information on obtaining channel upgrades, or visit us as www.totalrecallvr.com.

9. Unpacking

Total Recall is supplied with the following items:

- **Total Recall** unit.
- On / Off Key.
- **Remote Manager** CD (PC client software).
- **Record On Demand** CD (PC client software).
- Power cable.
- A blank CD-R.
- This **Total Recall** Installation and Administration Guide.
- **Total Recall** User Guide.
- A crossover network cable for connecting directly to a PC.
- 4 x 19” rack mounting screws & nuts (**Rack** unit only).

Telephone line cables are not supplied with **Total Recall**, as individual installations may require differing lengths of cable.

If connection is required to the MDF or distribution frame, it is advisable to have a certified telecom technician install the telephone cabling required for the recorder.



To prevent loss of power and interruptions to recordings, it is very important to connect **Total Recall** to a UPS power system. Due to the nature of **Total Recall**'s database, power disruption during recording may cause damage to open files, and the recordings may be lost entirely.

10. Getting to Know Total Recall

Total Recall is simple to operate, is fully self-contained and can be operated using the built-in controls and display panel.

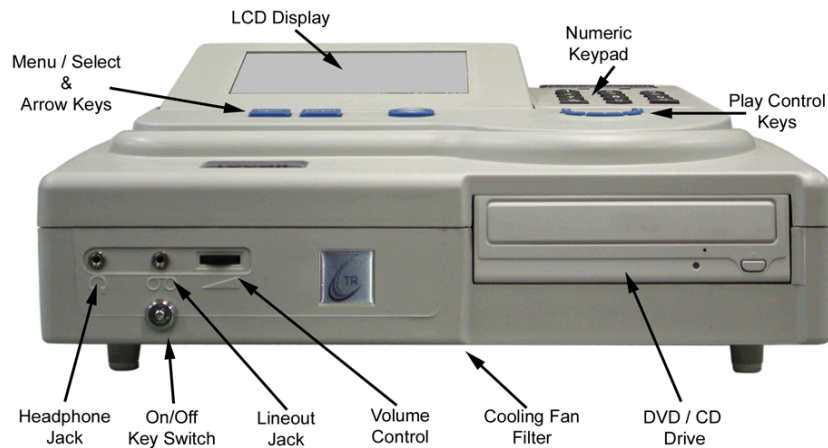
It is not necessary to attach a PC and monitor as a management console for the recorder. However you may configure and operate your **Total Recall** via a networked PC and the included **Remote Manager** software if you wish.



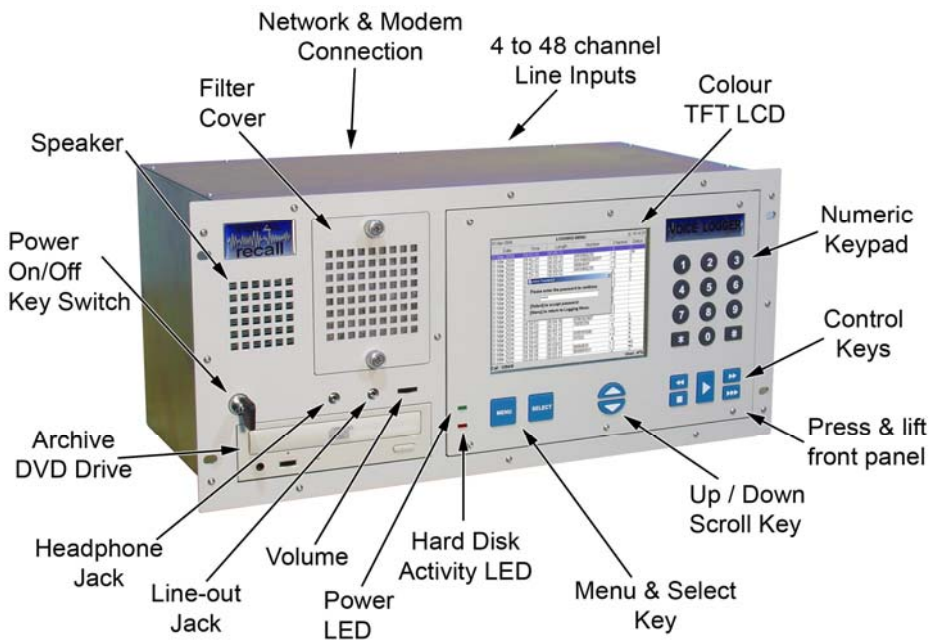
See *Total Recall Remote Manager* on page 62 for more information on using & configuring your **Total Recall** via a network or dialup connection.



10.1. Unit Layout – Front



Total Recall – Desktop Model



Total Recall – Rack Model

10.1.1. Headphone Jack

This is a standard 3.5mm three conductor stereo audio jack for connection of headphones or external speaker, volume controlled via the thumb wheel.

10.1.2. Line Output Jack

This is a standard 3.5mm three conductor stereo audio jack for connection to a tape recorder or the line input of a PC. This output is not volume controlled.



10.1.3. Volume Control Thumb Wheel

A thumb wheel to adjust internal speaker volume.

10.1.4. DVD/CD or Optional BD Writer

A standard DVD/CD or optional Blu-Ray read/write unit with standard DVD player/recorder controls.

10.1.5. Speaker Grill

This is a grill that is located on the left side of the unit. It protects the in-built speaker.

10.1.6. Cooling Fan Vent

This is an opening that is located at the base of the unit (Desktop unit), or the top left-hand corner of the front panel (Rack unit). It is protected by a grill, and acts as an air intake for the unit. The grill is removable to allow access to the filter media for cleaning or replacement.

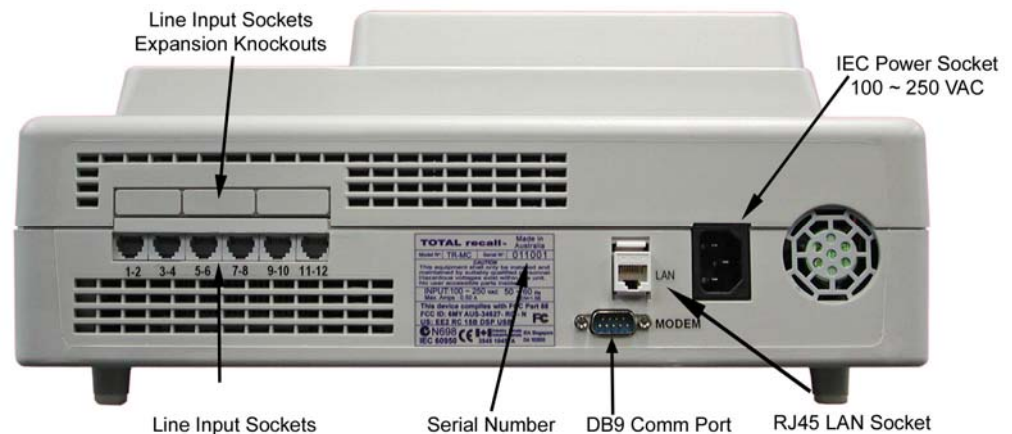
10.1.7. Front Panel On/Off Switch

The Key Switch is located on the left side of the front panel for both **Desktop** and **Rack** units. This is used to power off/on the unit after a Software Upgrade for example.

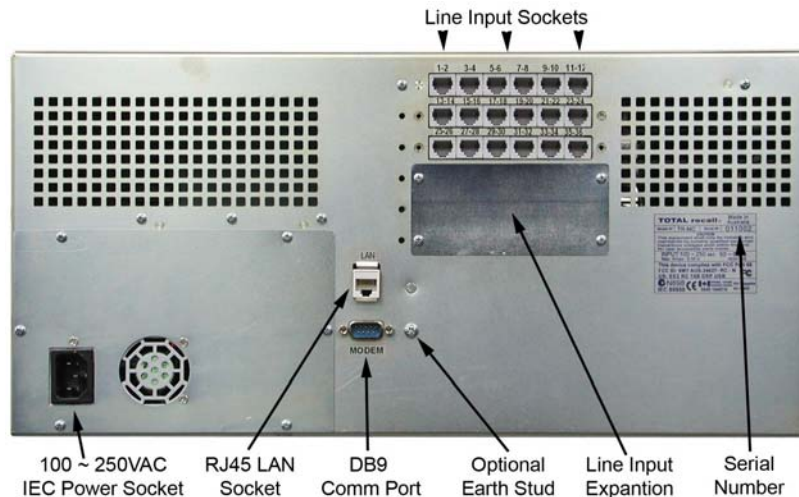


It is recommended that the On/Off Switch Key is not left in the switch to prevent accidental powering off the unit.

10.2. Rear Panel



Total Recall – Desktop Model



Total Recall – Rack Model

10.2.1. Remote Connection Ports

One standard RJ45 port (8P8C) is available for TCP/IP network connection.

The Modem (RS232) port is a standard male DB9 socket.

10.2.2. Line Interface Connectors

Total Recall has 4, 8, 12, 16, 20, or 24 channel inputs for the **Desktop** Unit, and 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48, 52, 56, 60, 64, 68 or 72 channel inputs for the **Rack** Unit. The connectors for the telephone line interface are standard RJ11C/RJ12/RJ14 (6P4C plug).

10.2.3. Power Cable Socket

IEC 90V - 260VAC power cable socket.

10.2.4. Power Supply (Standard: Desktop & Rack)

Total Recall Rack and **Desktop** are supplied as standard with a Mini-ATX auto sensing 100-240 VAC, 50-60 Hz 180W maximum.

10.2.5. Power Supply (Optional Hot-Swap: Rack only)

Total Recall Rack is available with an optional **Dual Hot Swap** power supply, auto-sensing 100-240 VAC, 50-60Hz 300 watts total.



To remove a hot-swap power supply module, simultaneously push the two black tabs inwards and pull the flip-up handle. A power supply module can be removed while the



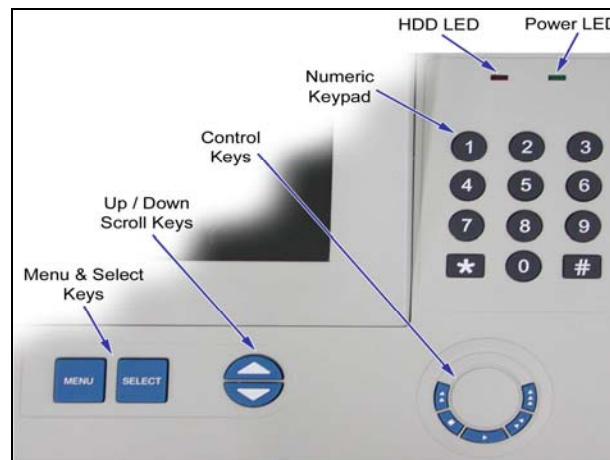
unit is powered up and running, assuming the other module is operational. Removing a power supply module will cause an alarm to sound until it is replaced.

To replace a hot-swap power supply module, remove the faulty module according to the above instructions, and slide a new module into the vacant opening, pushing firmly until the module locks into place.

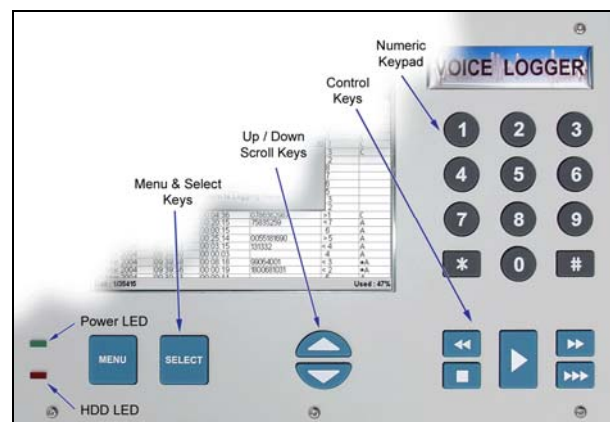
11. Total Recall – Onboard Controls

Total Recall is simple to operate, and features a built-in control and LCD display panel for convenient configuration and operation.

11.1. Control Panel



Total Recall – Desktop Control Panel



Total Recall – Rack Control Panel

The colour TFT LCD displays the various screens, menus and dialogs. After five minutes of keypad inactivity, the LCD backlight automatically switches off, to extend the life of the backlight (the recorder continues to function normally).

Pressing any key illuminates the LCD backlight.



11.1.1. Playback and Navigation Keys

The playback and navigation keys are used to control the playback of recorded calls, and to navigate the screen menus.

[Menu] Key

The [Menu] key is used to navigate between the three main menus; Logging, Search, and Options. When [Menu] is pressed with the cursor at the top of one of the three main menus, the cursor moves to the top of the next main menu. The system will “beep” each time the [Menu] key is pressed.

When [Menu] is pressed and the cursor is in the body of a main menu, the cursor will go straight to either the OK or Cancel button, saving keystrokes.

[Select] Key

Use the [Select] key to start an operation associated with a highlighted button or item, and to confirm a request.

[Up] and [Down] Scroll Keys

The [Up] and [Down] arrow keys are used to navigate within a menu. With each [Up] or [Down] key press, the cursor highlights a different button or item within the menu. As you press the [Up] or [Down] arrow keys, the system will “beep”.

Use the [Down] key to highlight items across the screen from left to right as well as down. Use the [Up] arrow key to move in the reverse direction.

Call Playback Keys

During the playing of a call, the “Control Keys” can be used to navigate through the call. The “Control Keys” operate in the same way as the keys on a CD or tape player. They can be used to Stop, Play, Fast Forward and Fast Rewind through a call. Pressing the “Play” key during playback will cause the playback to Pause. Pressing the “Play” key again will continue the call.

Pressing the “Stop” key whilst not playing a call locks the User Interface (the padlock icon on the LCD ‘closes’) when in the *Options*, *Logging* and *Search* Menus. This negates the normal 120-second timeout required for the User Interface to lock.

11.1.2. Power and Hard Drive Activity LEDs

- Green is the ‘Power On’ indicator.
- Red indicates hard drive activity.

If the LCD backlight has switched off due to inactivity, the green LED flashes continuously every two seconds. Pressing any key illuminates the LCD backlight and the green LED stops flashing.



Your Total Recall system will continue to record normally while the LCD is turned off.



Quick Start Guide

12. Introduction

This section includes a basic example process for configuring your **Total Recall Desktop** or **Rack** with an analog network.

The processes do not cover all system settings (just those that are usually essential for proper operation) and do not take into account individual network characteristics.

13. Quick Start Guide – Total Recall Desktop and Rack

This is an example process for configuring **Total Recall** for recording from analog signal sources, with **Remote Manager** access via the LAN if desired.

This process assumes that the recorder has already been physically connected to the analog lines, and to your LAN if desired.

1. Remove your **Total Recall** from its packaging, and check the contents of the box to make sure everything is there.
2. Connect **Total Recall** to the analog input lines, and to the power cord.
3. Power up your **Total Recall** system by inserting the key in the front of the unit and turning it to the right. Your system may take up to three minutes to fully boot.
4. Enter the Administrator Password (default password is 0000).
5. Go to the Options Menu by pressing the [Menu] key twice.
6. Select [General Settings](#) by pressing the [Select] key.



Navigate the menus by using the [Up] and [Down] arrow keys, and [Select] to enter the Menu of choice. Press the <OK> or <Cancel> key to return to the General Settings Menu.

7. Set [Language](#) if required.
8. Does your network support Network Time Protocol (NTP)?
 - a. Yes: Add [NTP server IP address/es](#)
 - b. No: Manually set the [time, date and time zone](#)



The call database must be empty when you set the Time Zone

9. Assign an [Administrator Password](#).
10. Navigate to the [Analog Settings](#) menu.



11. Configure analog channels as appropriate, including assigning each channel an “Extension” value. This extension value simply assigns the channel a name, and is important in the later setup of your unit.



If you are not connecting your Total Recall unit to a TCP/IP network, there is no need to proceed beyond this point. LAN access is not essential for normal configuration, searching, monitoring, replay or CD/DVD/BD archive functionality, but is convenient for many users.

12. Navigate to the [Network Settings](#) menu.
13. Assign an [IP address](#) for LAN 1. Specify the netmask and gateway if appropriate.
14. Navigate to the [Remote Manager Settings](#) menu.
15. Select the [IP address](#) of LAN 1 for remote access.
16. Install **Remote Manager** on a networked PC.
17. Run **Remote Manager** on the PC.
18. Follow the on-screen prompts to create an Administrator account.
19. [Add a Total Recall](#) to your Remote Manager software (using IP address from step 13).
20. Go to the ‘TR Configuration’ tab on your Remote Manager software.
21. Do you want to use **ROD** from a remote PC?
 - a. Yes: Configure [ROD Agents](#).
 - b. No: You’re done!




Installation

14. Before You Install

14.1. Extensions

To maximise the functionality of your recording system, **Total Recall** needs to establish calling (CLI) and called (DTMF) numbers for recorded calls where possible, so that the direction of the call (incoming/outgoing) can be established. It is also preferable if the system is configured to determine which of these CLI/DTMF numbers are to be categorised as internal numbers, or ‘extensions’.

 Refer to pages 20 and 21 of the *Quick Start Guide* in this manual, or the *Extension* chapter on page 47 for information about configuring extensions via the **Total Recall** GUI.

Extensions are a **Total Recall** concept. Calling or called numbers are classed as internal extensions if they match the Internal Dial Plan, which is user-configured via the unit control panel or **Remote Manager**.

It doesn't matter if your Total Recall system is actually installed on the trunk side of your telephone system, or if the system is recording radios or another non-telephony signal source. Assigning an ‘extension’ value to each recording channel is just like giving the channel a unique name, which you can use later for convenient call searching and system configuration.

The Internal Dial Plan can be configured to identify any number as an extension, regardless of whether the signal source is actually located on your premises.

Extension information is used in various ways:

- On the recorder, calls can be searched by extension (which requires an extension name or number to be assigned to each recording channel).
- In **Remote Manager** (remote monitoring and administration software), monitoring is usually best done by extension, and again, calls can be searched by extension.
- **Record on Demand** (remote recording control software) is configured on an extension basis.

It is recommended that **Total Recall** is installed and configured so that calls can be linked to an extension wherever possible.

14.1.1. How Extensions are Identified from Call Signalling

When a call comes in to **Total Recall**, the following process is followed:

1. The calling (CLI) and called (DTMF) numbers are identified from the call signalling (wherever possible).
2. The numbers are matched against a set of user-configurable ‘Signalling Mapping’ rules, which convert the CLI/DTMF numbers to more convenient values if required. For example, a telephone number could be mapped to a user name, or a ‘direct line’



number for an internal extension could be mapped to a 3-digit internal extension number, for ease of reference and to simplify searching.

 See *Signalling Mapping* on page 93 for further information.

If no matches are made, the number is left in its raw state.

3. The mapped values, and any unmapped numbers, are then matched against the user-configurable Internal Dial Plan.

 See *Internal Dial Plan* on page 95 for further information.

If any raw number or mapped value matches the Internal Dial Plan, the number is classified as an internal extension by the recorder.



Remote Manager must be used to configure the Signalling Mapping and the Internal Dial Plan.

14.1.2. Capturing the Analog Signal

Extension-Side Analog Recording

For extension-side (enterprise-side) analog recording, audio from each analog phone line or extension is physically connected to a channel – so if extension information is not present in the signalling, each analog channel can be manually assigned an extension value instead.

This can be done directly on the recorder.



Any analog signal source (for example, a radio station) can be configured as an extension, to allow extension-based searching and monitoring.

Trunk-Side Analog Recording

For trunk-side (network-side) analog recording where all calls are routed internally by a PBX, but come in to and go out from one central office number, extension information is not present in the signalling. If extension information is required, it must be obtained from the PBX itself.

In this situation, **Total Recall Rack** may (optionally) analyse SMDRs obtained from the PBX, and link calls to extensions using that data.



For more information about purchasing SMDR integration for your **Total Recall Rack**, contact your dealer or visit www.totalrecallvr.com

14.2. Networking

Total Recall can be configured for IP communication by assigning a static IP address and a default network gateway to the network port.



The **Total Recall** is not a routing device for IP traffic. It can connect to multiple networks, however, it will not route traffic between the networks.

The LAN 1 port should always be configured for IP communication and should be used for remote access (using **Remote Manager**) and system monitoring.

14.2.1. Virtual LAN Support

The LAN 1 port can be connected to a network that is using VLANs (IEEE 802.1Q). However, the switch should remove (un-tag) and add (tag) the VLAN tag from/to the MAC headers.

14.2.2. QoS Support

The LAN 1 port can be connected to a network that uses IEEE 802.1p tags for QoS. However, it is not possible to configure the 802.1p priority for packets from the **Total Recall**.

14.3. Network Shares (Optional – TR Rack only)

Total Recall Rack can optionally archive to Shared Network Storage. You can use your **Total Recall Rack** and **Remote Manager** PC client software to search archives on Network Shares. In addition, you may use **Remote Manager** to update the information in archives on Network Shares.

A Network Share is either a file system that is part of a Network File System (NFS), or a Windows shared folder. In both cases the Network Share is storage space that physically exists on a machine that is remote to the **Total Recall Rack**.



Use the **Total Recall** to create archives and either the **Total Recall** or the **Remote Manager** to modify the content of the archives. All manual (back-door) changes to an archive will render the archive unusable.

Archiving to Network Shares requires a working network between the machine that provides the storage space, the **Total Recall Rack** and the PC that is used to run your **Remote Manager** client.

Use the LAN 1 port, and the network connected to the LAN 1 port, for IP communication between the **Total Recall Rack** and the machine that provides the network storage space.

14.3.1. NFS Network Share

The **Total Recall Rack** has an in-built NFS Client that uses the user-id and group-id of the UNIX 'root' user (user-id of 0 and group-id of 0) to access NFS Network Shares.

Consult your NFS documentation on how to map the user-id and group-id to different values, if required. For example,

```
/local/archives 192.168.1.0/24(rw,all_squash,anonuid=150,anongid=100)
```

The **Total Recall Rack** requires read and write access to create, and add to, archives on a NFS Network Share. However, read access is sufficient to search archives on a NFS Network Share.



Unlike **Total Recall**, the **Remote Manager** requires the services of a 3rd party NFS Client to access archives on NFS Shares. The NFS Client software needs to be installed separately from the **Remote Manager**.

The **Remote Manager** CD does not contain NFS Client software. However, there are a number of free as well as commercial NFS Clients. Microsoft's "Windows Services for Unix" product contains a suitable NFS Client and is free to download.

<http://www.microsoft.com/downloads/details.aspx?FamilyID=896c9688-601b-44f1-81a4-02878ff11778&displaylang=en>

The **Remote Manager** requires read and write access to modify archives on a NFS Network Share. However, read access is sufficient to search archives on a NFS Network Share.



Incorrect configuration (especially access rights) of the NFS Client and the NFS Network Share is the most common problem when archiving to NFS Network Shares.

14.3.2. Windows Network Share

The **Total Recall Rack** has an in-built SAMBA Client to access Windows Network Shares.

The SAMBA Client uses the user and group that are specified during configuration to access archives on Windows Network Shares.

The **Total Recall Rack** requires read and write access to create, and add to, archives on a Windows Network Share. However, read access is sufficient to search archives on a Windows Network Share.

Unlike **Total Recall**, the **Remote Manager** depends on Windows to access Windows Network Shares, which are Windows shared folders.



Some versions of Windows, such as Windows XP Home, do not contain the required software to access Windows shared folders.

The **Remote Manager** requires read and write access to modify archives on a Windows Network Share. However, read access is sufficient to search archives on a Windows Network Share.



Incorrect configuration (especially access rights) of the Windows Network Share is the most common problem when archiving to Windows Network Shares.



15. Connecting to Analog Signal Lines

15.1. Connection



When installing **Total Recall** for analog recording, care must be taken to capture call signalling wherever possible, to maximise the information that is recorded with each call.

15.1.1. Signal Sources

Total Recall requires 2-wire inputs for analog recording. A digital line signal will first need to be converted to analog before it can be recorded.

Total Recall can be installed to record from almost any line level audio signal source:

- An analog trunk (exchange) line.
- An analog extension line.
- A telephone handset, either analog or digital (via handset splitter / logger patch).
- A digital extension line, using D/A converters.
- A digital trunk line, using D/A converters.
- A radio or other audio signal presented as a two-wire analog interface.

15.1.2. DSP Cards

The **Total Recall Desktop** recorder can accommodate up to 2 DSP cards (maximum 24 channels), while the **Total Recall Rack** recorder can accommodate up to 6 DSP cards (maximum 72 channels).

Each DSP card supports either 4, 8 or 12 input channels, via RJ11C/RJ12/RJ14 (6P6C) line interface connectors. The connectors support 2 input lines each. As a result, 4-channel boards have 2 connectors; 8-channel boards have 4 connectors; and 12-channel boards have 6 connectors.

On each connector, line 1 must be wired to pins 3 and 4 of the connector, and line 2 must be wired to pins 2 and 5 of the connector (as in Figure 1 below).

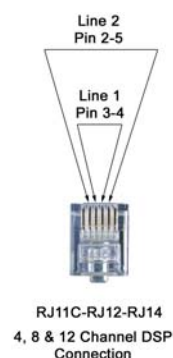


Figure 1 - RJ connector wiring

Analog recorder channel numbering starts with the lines on the left-most connector, where line 1 maps to analog recorder channel 1 and line 2 maps to analog recorder



channel 2. The numbering then continues in lots of 2 channels to the right-most connector.

15.2. Analog Telephone Networking

15.2.1. Connecting to the Telephone Network

The analog line interface on the **Total Recall** recorder is a bridging point and not a pass-through point. Therefore, it is not possible to connect the recorder in series with a telephone line or telephone handset/headset.

The analog line interface connection from the recorder must be run back to a termination point. Depending on the application, this termination point is normally a parallel tap to an extension line, a trunk line, or a digital handset/headset.

Most PBX installations have an MDF (Main Distribution Frame) fitted between the incoming trunk lines and the premise equipment. The trunk lines are terminated to the MDF, and then connected through to the PBX.

Similarly, there is normally a distribution frame on the extension (office) side of the PBX. From this frame, the telephone cabling is routed through the office/work area to individual telephones, or telephone connection points.

15.2.2. Location of the Recorder

The recorder can be located near the PBX and distribution frame, or near the designated users in the office area. Care should be taken when planning the installation to ensure that telephone cable runs and ease of access to the recorder are considered.

The area should be dust free and the room temperature should be kept down to an acceptable level.

15.2.3. Connecting to Analog Lines

Total Recall can be connected to the trunk side or the extension side of the PBX, depending on user preferences and operational requirements.

The main difference is that an extension side connection will enable the recording of internal (extension to extension) calls. In this case, the extension number dialled may be recorded as a search field, provided the handset generates a DTMF dialling tone.

If the number of extensions exceeds the number of trunks, and the requirement is only to record external calls, then the recorder can be connected to the MDF or distribution frame on the trunk side.

Connecting on the trunk side will ensure calling number capture, if CLI is activated.

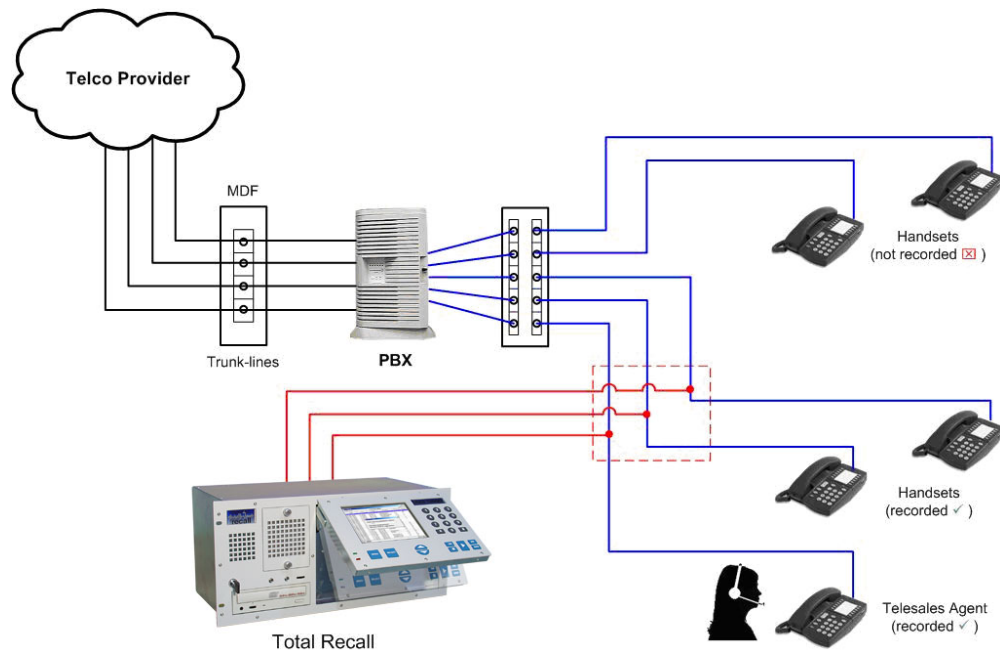


Figure 2 – Example Total Recall Installation (2-wire analog extensions)

In Figure 2 above, the recorder is patched onto a distribution frame within the communications or PBX room. This assumes that the lines between the PBX and the Phones are 2-wire analog. Only three of the five available extensions will be recorded. If required, the recorder could be located out in the office area and wired back to the distribution frame.

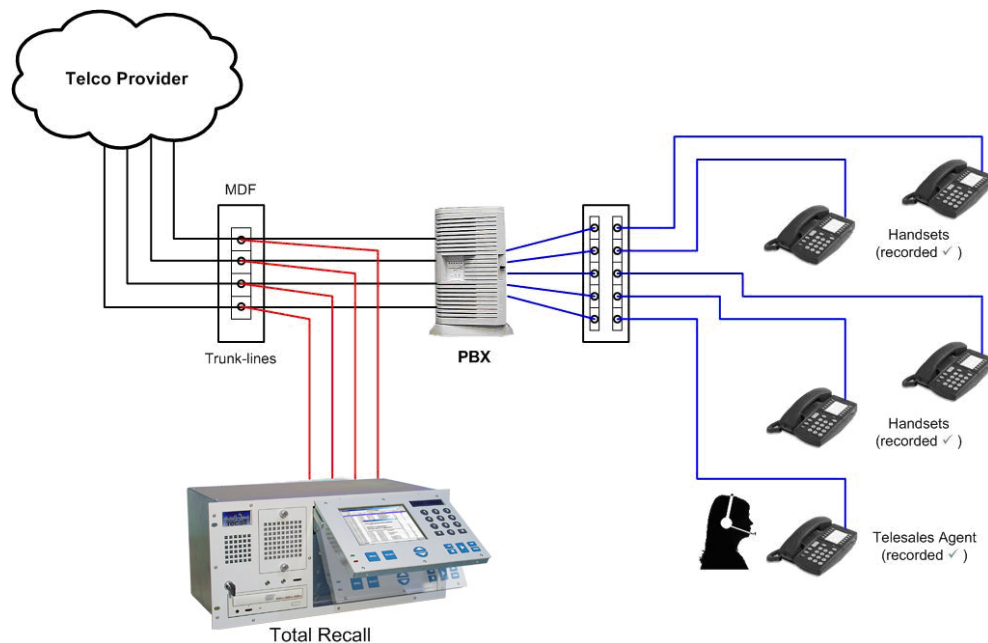


Figure 3 - Example Total Recall Installation (2-wire analog direct to trunk lines)

In Figure 3 above, the recorder is patched directly to analog trunk lines. All incoming and outgoing (but not internal) call activity will be recorded. The recorder can be located in the Communication (or PBX) room, or in the front office.



15.2.4. Connecting to Digital Phones

Many PBX installations use digital phones. It is common to have digital signalling on the extension side, with analog trunk lines installed.

It is important to know the configuration of your PBX system before installing **Total Recall**.

Total Recall will not record a digital line signal directly, so digital to analog (D/A) conversion must occur before the signal reaches the line interface on the recorder.



Total Recall does not provide D/A conversion. A third party product would be required for this function.

Unlike standard two-wire analog, most digital PBXs generate their own signalling protocol, and therefore recording from digital lines or handsets can be different for each application.

Most digital phones have audio signalling in the handpiece, with the speaker (earpiece) and microphone (mouthpiece) channels being connected to the recorder. A Logger Patch can be used to parallel tap this audio signal from the handset, and wire directly back to the recorder.

It is sometimes the case that there is a signal level difference between the speaker and microphone, and therefore, in a recorded conversation, one party may be heard more clearly than the other. (This is a limitation of recording via handset adapters, and not a recorder limitation.)

Combinations of PBX and digital handsets can produce varying signal levels.



It is not possible to capture incoming call (CLI) data on the recorder when using handset adapters, as the recorder connection is to the handset, rather than to the incoming line. With some handsets, standard DTMF signalling tones are not transmitted and thus will not be captured by the recorder.

Logger Patches are available from **Total Recall**. Your supplier should be able to advise on a suitable Logger Patch which is compatible with the line signalling and wiring of the handsets installed.

The diagram on the following page shows a representation of how Logger Patches may be used to enable recording direct from digital handsets.

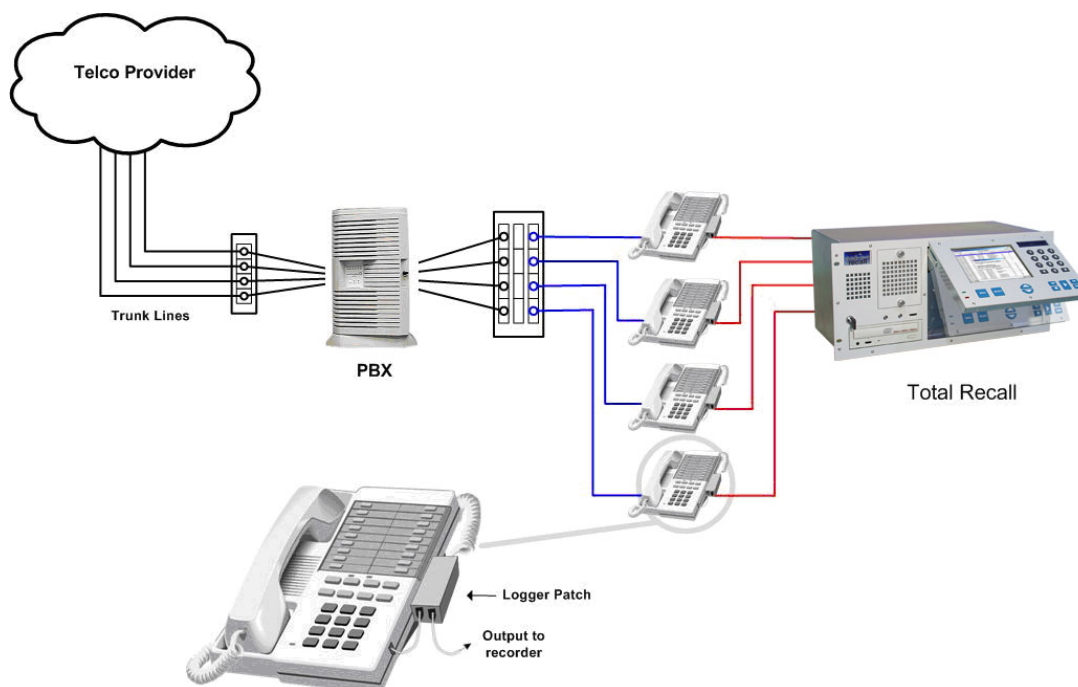


Figure 4 – Example Total Recall Installation (recording digital phones from handset interface)

Your **Total Recall** supplier or the Digital phone manufacturer, should be able to advise on a suitable Recorder Adapter, compatible with the **Total Recall** analog interface.

15.2.5. DTMF/CLI/Extension Capture

For extension side recording, each line is dedicated to a specific channel, and will always record the same channel unless the line is disconnected or physically changed to another port. For trunk side recording, the next call in or out will generally pick up the next available phone line and will be recorded on the channel dedicated to that line, so agent calls are not channel specific.

If the recorder is connected trunk side on an analog line and set to VOX activation, and an operator/receptionist answers the incoming call, the recorder will record the operator's comments, and also the continuing conversation of the call if it is transferred. However, in this scenario, the recorder will not capture the agent's extension number.

In this situation with a **Total Recall Rack**, you could also take advantage of the (optional) Station Messaging Detail Record (SMDR) processing capability to extract extension information for each call.

CLI data will only be captured if it is embedded in the incoming call data. The recorder is designed to detect DTMF tones on dialling and display the "Dialed Number" in the Number Field of the call record. If DTMF is not present at the point of recording, then the DTMF number will not be displayed.



Due to differences in international standards for CLI and off hook, CLI captured for an *unanswered call* will be held for five seconds after the last ring detect. If a new call comes in without CLI within that five second period the previous CLI



may be displayed. If CLI is critical then VOX trigger settings may be better suited to your application.

If CLI signalling is not available, then you should specify an extension name (or number) as part of the analog channel configuration, to provide the **Total Recall** with more information about where the call originated.



See *Analog Settings* on page 44, and *Extension* on page 99 for further information.

16. Switching On and Getting Started

16.1. Starting Up

Once the line interface and network cables have been connected, connect the power cable and switch ON the recorder. The power ON/OFF key switch is located at the front of the unit.



Total Recall must always be shut down properly using the System Shutdown function, found in the administrator-only Options Menu. If **Total Recall** is powered off without following the proper procedure, open database records can be permanently damaged.



It is strongly recommended that **Total Recall** is connected to an Uninterruptable AC Power Supply (UPS), to avoid improper system shutdown due to unexpected power events.

Initially, you will see the green power LED illuminate, the red LED will flash to show hard drive activity and you will hear a short beep. Text relating to the Linux boot process will appear on the LCD screen, and then the Total Recall logo will be displayed. A screen will then appear giving you essential recorder information, and a few seconds later the **Logging Menu** will be displayed with the padlock icon “locked”. This Menu is the “default” Menu that the system will revert to after 120 seconds of inactivity.

Before commencing to navigate the menu structure, enter the password [default 0000] at the Logging Menu and then press [Select]. The padlock icon in the top right corner of the LCD will display as “unlocked”, and you may begin to use the system.

16.2. Using the Control Panel

16.2.1. MENU Key

Use the [Menu] key to move between the three main screens, the Logging Screen, the Search Screen, and the Options Menu.



To move between main screens:

- Press the [Menu] key whilst at ‘root level’ of any of the main screens (that is, with no dialogs open).

When [Menu] is pressed with a dialog open, the cursor either moves straight to either **OK** or **Cancel**, or simply closes the dialog, depending on the contents of the dialog.



The system beeps each time the [Menu] key is pressed.

16.2.2. SELECT Key

Use the [Select] key to start an operation associated with a highlighted option or menu item, and to confirm requests.

16.2.3. Up and Down Arrow Keys

Use the ▲ [Up] and ▼ [Down] arrow keys to navigate sequentially within a menu or dialog. With each ▲ or ▼ key press, the cursor moves to the next option or menu item.

Press ▼ [Down] to highlight items across the screen from left to right, as well as down.

Press ▲ [Up] to move right to left, as well as up.

The system beeps each time arrow keys are pressed.

16.2.4. Numeric Keypad

Use the numeric keypad to enter numerals, and the * key to tag calls.



See the *Total Recall User Guide* for further information on tagging calls.

16.2.5. Playback Control Keys

Use the playback control keys to navigate through a call during playback.

The control keys operate in the same way as the buttons on a CD player. They can be used to play, pause, stop, fast-forward and rewind a call.



See the *Total Recall User Guide* for further information about using the playback control keys to play calls.

The ■ (stop) key can also be used to lock the user interface.

To lock the user interface, press ■ (stop) in either of the three 3 main screens (Options, Logging or Search), whilst not listening to a call.

This overrides the normal 2 minute timeout required for the user interface to lock automatically.



The padlock icon, which appears in the top right hand corner on the LCD screen, displays in the closed position (🔒) when the user interface is locked, and the open position (🔓) when it is unlocked.

16.3. Using the Graphical User Interface

16.3.1. Using the GUI

The **Total Recall** Graphical User Interface (GUI) features a cursor that is moved around the screen using the ▲ (Up) and ▼ (Down) keys.



When the cursor is positioned on an interactive screen item (such as a screen button or a check box), the object becomes highlighted. Pressing [Select] then executes the function that is associated with that screen item.

Various methods are used to indicate that screen items are currently highlighted.

Buttons

Screen buttons (for example, menu buttons and **OK** and **Cancel** buttons) ‘pop up’ when they are highlighted, and the button text is shown surrounded by a blue border.

Standard screen button:



Highlighted screen button:



Press the [Select] key to ‘press’ highlighted screen buttons.

Calls

Calls are shown **highlighted** when selected. Press [Select] or ► to play highlighted calls.

Data Fields

Data fields are shown in **highlighted** when selected and can be edited.

Use the numeric keypad to enter values for numeric data fields. If you enter the wrong value, simply enter another value and it will overwrite the existing value.



Some data fields will clear the current value on the first key press.

Use the [Select] key to cycle through available values for data fields with pre-populated options.

Check Boxes

Check box text is shown with a **border** when selected.

Press the [Select] key to place a check in the check box (referred to in this manual as ‘checking’ the check box).

Data fields associated with check boxes cannot be populated or edited unless the check box is checked.

16.3.2. Cancelling

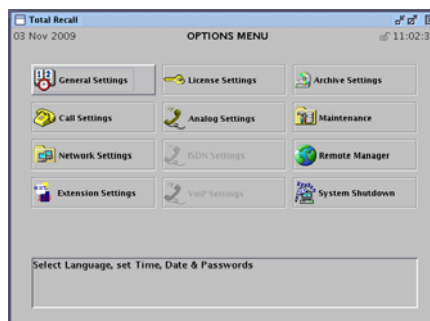
Where it appears, you can select the **Cancel** button to return to the previous screen or dialog without executing the current function.



16.4. Total Recall GUI Menus

16.4.1. Options Menu

Used for system configuration, system maintenance and system shutdown.



16.4.2. Search Menu

Used to set search parameters and to search the database or an archived DVD/CD for call replay. Your **Total Recall** can search and replay archive DVD/CDs created by other Total Recall units, or even archive DVD/CDs from old generation **Total Recall** systems. Calls found through the search can be tagged for archiving. The *Search Menu* is also used to manually archive calls to DVD or CD.

Date	Time	Length	From	To	Ch.
4 Oct 2009	07:30:15	00:04:30	0297482304	Reception	48
4 Oct 2009	07:35:00	00:10:21	Head Office	Nicks Phone	32
4 Oct 2009	08:14:43	00:11:54	0419214432	0297482304	12
4 Oct 2009	08:59:12	00:01:32	0297482304	Dales Phone	1
4 Oct 2009	09:30:02	00:03:17	Nick (Cellular)	Reception	48
4 Oct 2009	09:34:33	00:08:43	0297482604	Warehouse	8
4 Oct 2009	09:48:24	00:15:59	00114372460	0297482304	12
4 Oct 2009	09:59:59	00:07:12	Sud-Ouest Bu.	Dales Phone	1
4 Oct 2009	10:27:28	00:26:31	フーネン 警備署	Almaden Field	36
4 Oct 2009	11:11:52	00:00:31	Amsterdam Of.	Nicks Phone	32
4 Oct 2009	11:34:20	00:10:54	Head Office	0297482304	12
4 Oct 2009	12:43:15	00:05:42	Dale (Cellular)	Reception	48
4 Oct 2009	13:03:54	00:12:32	0297482304	Penerimaan	5
4 Oct 2009	13:30:38	00:04:01	Sydney Office	Reception	48
4 Oct 2009	14:02:03	00:20:45	0436531256	Dales Phone	1
4 Oct 2009	14:23:10	00:12:38	Aplicia de Lis.	0297482304	12
4 Oct 2009	15:00:48	00:35:58	立川 三井 UO	Nicks Phone	48
4 Oct 2009	15:04:22	00:03:27	Servet de Corr.	Warehouse	8
4 Oct 2009	15:35:20	00:21:31	Geschäftstelle	Dales Phone	1

16.4.3. Logging Menu

The *Logging Menu* is the default Menu and is used to view current call data, call activity, call status and playback selected calls. Calls can be tagged and Live Monitoring of calls is enabled from the *Logging Menu*.

Date	Time	Length	From	To	Ch.
03 Nov 2009	10:00:10	00:15:30	Head Office	0297482304	>1 C
03 Nov 2009	10:00:58	00:14:02	Nicks Phone	0297462604	<3 C
03 Nov 2009	10:31:50	00:39:12		Radio 1	12 C
03 Nov 2009	10:32:48	00:38:24	0413423201	Engineering 1	>8 C
03 Nov 2009	10:33:36	00:37:10	エンジニアリング	Marketing	>9 C
03 Nov 2009	10:35:40	00:36:30	07453114	Warehouse	>5 C
03 Nov 2009	10:36:33	00:35:13	Dales Phone	00113842345...	<12 C
03 Nov 2009	10:37:01	00:34:59		Radio 2	116 C
03 Nov 2009	10:38:17	00:24:43	Engineering 2	Engineering 3	<13 C
03 Nov 2009	10:39:59	00:33:01	Telemarketing	0432464622	>14 C
03 Nov 2009	10:40:05	00:32:55	Telemarketing...	0432246423	>15 C
03 Nov 2009	10:40:10	00:32:50	Telemarketing...	0432246424	>16 C
03 Nov 2009	10:41:29	00:31:40	Telemarketing...	0432246425	>17 C
03 Nov 2009	10:42:47	00:30:13	974625391	Reception 1	>23 C
03 Nov 2009	10:43:25	00:29:35	Reception 2	Lisbon Office	<26 C
03 Nov 2009	10:43:50	00:29:10	Telemarketing...	San Xuat Len	<31 C
03 Nov 2009	10:45:18	00:26:42		Radio Monitori...	732 C
03 Nov 2009	10:46:37	00:25:23		Radio Monitori...	733 C
03 Nov 2009	10:47:45	00:23:15	Andrews Phone	Geoffs Phone	<37 C
03 Nov 2009	10:48:00	00:17:00	大工場	Sales Office 1	>40 C
03 Nov 2009	10:55:05	00:15:55	04543322556	Sales Office 2	<45 C
03 Nov 2009	11:00:28	00:10:32	Board Room	Amsterdão	<46 C
03 Nov 2009	11:10:59	00:00:01	96274821	Informatica	<48 C



Configuration

17. Menu Site Map & Default Parameters

Listed below are the user selectable/definable options on the **Total Recall** system, and their default values. Default values are listed in **bold**. Parameters such as language, date, time and time zone may have already been pre-configured by your Total Recall dealer, and as such will vary from the values listed here.

Logging Menu

Search Menu

Recent Calls (On/Off)

Search

Date

Time

Number

Extension

Tag

Tagged Only

Untagged Only

Direction

Incoming

Outgoing

Internal

Unknown

Channel

Search Archive

Search DVD/CD

Search Network Archive (*Will only appear if optioned on TR Rack*)

Tag All

Untag All

Archive

All Calls

Found Calls

Unarchived Calls

Tagged Calls

Archive Device

DVD/CD

Network Share (*Will only appear if optioned on TR Rack*)

Options Menu

General Settings

Language

English

Spanish

French

Portuguese

Afrikaans

Chinese

Korean

Japanese

Arabic (Islamic Calendar)

Arabic (Gregorian Calendar)

Time and Date



Use NTP (Yes/**No**)
 NTP Address 1
 NTP Address 2
 Date
 (**Current AEST**)
 Time
 (**Current AEST**)
 Time Zone Area
 Australia
 Time Zone City
 Sydney

User Session
 Enable Timeout (**On**/Off)
 Idle Timeout (1-10 Mins, default = **2 mins**)
 Recent Calls
 Update Period (5-60 secs, default = **20 secs**)
 Records to Show (1-999, default = **20 records**)
 User Password
 0000
 Administrator Password
 0000

Call Settings

Min Call Length
 Ignore
 1-19 Seconds
 Max Call Length
 1-**60** Minutes
 Max Call Lifetime
 Ignore
 1-24 Months
 VOX Timeout
 2-**15** Seconds
 Recording Period (On/**Off**)
 08:30 – 19:00

Network Settings

LAN 1 (Recommended for Remote Manager/PC connection)
 IP Address
 Netmask
 Gateway

Extension Settings

Enable Monitoring (**On**/Off)
 ROD Mode
 Record by Default
 Don't Record by Default
 Add Notes Only
 Record Partial Calls
 Allow ROD Phone Key (On/**Off**)
 Add (Custom Extension Settings)
 Extension
 Enable Monitoring (**On**/Off)
 ROD Mode
 Record by Default
 Don't Record by Default
 Add Notes Only
 Record Partial Calls
 Allow ROD Phone Key (On/**Off**)

License Settings (Total Recall Rack only)

Hardware Key (*Read Only*)
 VoIP & ISDN License Key (*Not Utilised on Total Recall Rack or Desktop*)
 Feature License Key



Licensed Features (*Read Only*)

Analog Settings

Trigger

VOX 1, 2, 3, **4**, 5, 6
Off Hook 1, 2, 3, 4, 5, 6
Manual
Off

Beep

Off
Low
Mid
High

Detect DTMF

On
Off

Extension (User Configurable)

Archive Settings

Reminder (On/**Off**)

50% Full
75% Full
90% Full

Auto Archive Every (On/**Off**)

Days/Weeks

Archive Device

DVD/CD

Network Share (*Will only appear if optioned on TR Rack*)

Maintenance

System Information

Recorder ID (**001**)

Rebuild Call Database

Load Settings From DVD/CD

Save Settings to DVD/CD

Erase DVD

Remote Manager

Use Dial-Up (Yes/**No**)

IP Address

Base Port

Maximum Sessions (**05**)

Session Duration (**2 hours**)



18. Configuring Total Recall

18.1. Licensed Features (Rack Model Only)

The following application features require a Feature License Key to configure and use:

- SMDR Parsing.
- SNMP Alarm Interface.
- Network Archiving.

Your **Total Recall Rack** system will not support and you will not be able to configure the above features without a valid Feature License Key.



For more information on activating Licensed Features, contact your dealer or visit www.totalrecallvr.com.

18.2. About the Options Menu

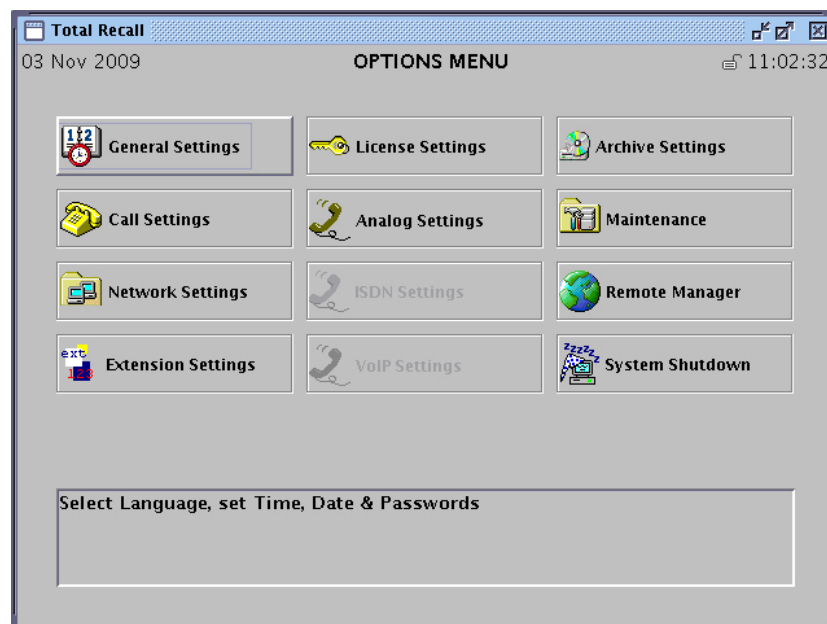


Figure 5 - Options Menu (Rack Model Shown)

The Options Menu provides access to the **Total Recall** system settings and administrative functions. To view the Options Menu, press [Menu] twice from the Logging Screen.

Options that are not available on your recorder will be greyed out and cannot be selected.



The Options Menu can only be accessed by users who have logged in with an administrator password.

The various settings and functions are split out into the following groups, each of which has an associated button in the Options Menu:



- General Settings.
- Call Settings.
- Network Settings.
- Extension Settings.
- License Settings (**Total Recall Rack** only).
- Analog Settings.
- Archive Settings.
- Maintenance.
- Remote Manager.
- System Shutdown.

For new installations, we recommend that you configure **Total Recall** in the order that the buttons appear in the Options Menu (from top to bottom, then left to right).

18.3. General Settings

 **Options Menu > General Settings**



Use the **General Settings** screen to set the preferred display language, time and date, passwords, system timeout and recent call replay settings.

18.3.1. Language

 **Options Menu > General Settings > Language**



Select your preferred display language from the list using the down arrow key, and confirm your selection by pressing the [Select] key.



The **Language** setting defaults to **English**.



It is recommended that you restart **Total Recall** after changing the display language.

18.3.2. Time & Date



Options Menu > General Settings > Time & Date

Use the Time & Date menu to set your **Total Recall** to the local time and date, as well as to configure your local Time Zone area and city. Time Zone settings are especially important if users in different regions are connecting to your system via **Remote Manager**.



Time Zone area and city must be configured prior to recording calls. Time zone data is saved with the call, and is used to calculate daylight savings changes or by Remote Manager if a call is being replayed in a different time zone.

Set the local time and date via synchronisation with an NTP server (recommended), or manually.



To use NTP to set Total Recall's internal clock:

1. First, ensure that the system IP address and gateway are correctly configured. See **Section 18.6** for more information.
2. Check the **Use NTP** check box by highlighting the check box and pressing the [Select] key.
3. Enter the IP address for at least one NTP server with the numeric keypad.
4. Select your **Time Zone Area** by highlighting the Area field and pressing [Select] to scroll through the available options. When you have selected your area, press the [Down] button to select your nearest Time Zone City.
5. Select your **Time Zone City** by scrolling through the available options with the [Select] key. Press the [Down] button when complete.
6. Select **OK**.



If you enter IP addresses for 2 NTP servers, the top one in the list becomes the 'preferred' server, and **Total Recall** will synchronise with the second server if the preferred server is unavailable.



To set the time and date manually:

1. Enter the current **Date** by highlighting each field and pressing the [Select] key to scroll through the available options. Numeric fields can be manually entered with the numeric keypad if desired.
2. Enter the current **Time** (in 24-hour format) by highlighting the Time fields and pressing [Select] to scroll through the available options, or by entering the values on the numeric keypad.
3. Select your **Time Zone Area** by highlighting the Area field and pressing [Select] to scroll through the available options. When you have selected your area, press the [Down] button to select your nearest Time Zone City.
4. Select your **Time Zone City** by scrolling through the available options with the [Select] key. Press the [Down] button when complete.
5. Select **OK**.

18.3.3. User Session



Options Menu > General Settings > User Session



The **User Session** menu allows an administrator to enable or disable automatic system timeout, and to configure the amount of time that **Total Recall** will wait without user interaction before timing out. 'Timing out' means that the **Total Recall** locks access to all control panel menus, and will require the entry of an administrator or user password to make system functions accessible to users again.



Total Recall continues to record normally while the control panel is 'timed out'.



To enable or disable the System Timeout function:

1. Ensure **Enable Timeout** is highlighted.
2. Press the [Select] key to toggle between enabled (checked) and disabled (unchecked).



To modify the System Timeout period:

1. Ensure **Enable Timeout** is enabled (checked).
2. Highlight the Idle Timeout period by pressing the [Down] arrow key.



- Press the [Select] key to modify the system timeout period (1 to 10 minutes).



Disabling the System Timeout function will prevent Total Recall from locking automatically. **This means that all system functions will remain available until the system is manually locked, according to the permissions of the last password used to log in.**



The system may be manually locked by pressing the [Stop] key on the unit when no calls are being monitored or replayed.

18.3.4. Recent Calls

 Options Menu > General Settings > Recent Calls



The **Recent Calls** menu provides configuration options for quick recall functionality in the Search menu.



See the *Total Recall User Guide* for more information on using the Search Menu

The **Update Period** refers to the frequency that **Total Recall** will update the search screen with the most recent calls when the **Recent Calls** toggle button is selected. **Records to Show** refers to the number of call records that will be displayed in the search menu when the **Recent Calls** button is selected.



To configure the Update Period:

- Highlight the **Update Period** field.
- Press [Select] to cycle through the available options (5 to 60 seconds).



To configure the number of records shown:

- Highlight the **Records to Show** field by pressing the [Down] arrow key.
- Use the numeric keypad on your **Total Recall** to enter the number of records that you would like displayed in the Search menu when using the Recent Calls functionality [0-999].

18.3.5. User Password

 Options Menu > General Settings > User Password



Total Recall supports two password levels – the **User Password** and the **Administrator Password**.

The **Total Recall** user interface automatically locks after 120 seconds of inactivity (default setting), and can only be unlocked by entering a password.

The User Password allows access to all functionality, *unless* an Administrator Password has been assigned – in which case, the User Password does not allow access to the Options Menu, or the option to delete calls from the hard drive during a manual archive.



To assign a user password:

1. Enter the new password in the **New Password** field. The password must be numeric characters only, and may be up to 8 characters long.

You may also enter a null password, allowing the unit to be unlocked without a password. To enter a null password, simply press the [Select] key in the **New Password** field.



Please ensure that your user and administrator password settings comply with your internal data security policies.

2. Re-enter the password in the **Confirm New Password** field.
3. Select **OK**.

18.3.6. Administrator Password

 **Options Menu > General Settings > Administrator Password**



If an **Administrator Password** is assigned, only the Administrator Password allows access to the Options Menu and the option to delete calls during a manual archive. By default, this password is **0000**.



To assign an administrator password:

1. Enter the new password in the **New Password** field. The password must be numeric characters only, 0 to 8 characters long.



2. Re-enter the password in the **Confirm New Password** field.
3. Select **OK**.

18.4. Analog Settings

Options Menu > Analog Settings

Channel	Trigger	Beep	DTMF	Extension
1	VOX 4	Off	On	120
2	VOX 5	Off	On	121
3	VOX 4	Off	On	122
4	VOX 4	Off	On	123
5	VOX 4	Off	On	124
6	VOX 4	Off	On	125
7	VOX 4	Off	On	126
8	VOX 4	Off	On	127
9	VOX 4	Off	On	128
10	VOX 4	Off	On	129
11	VOX 4	Off	On	130
12	VOX 4	Off	On	131
13	VOX 4	Off	On	132
14	VOX 4	Off	On	133
15	VOX 4	Off	On	134

OK

Use the **Analog Settings** screen to configure the interface between your **Total Recall** unit and the analog signal interface. Also, use this menu to assign **Extension** names or numbers for each channel.



To set Analog Channel Settings:

1. Highlight the channel and press [Select].
The Add Channel Settings dialog appears:

Channel : 1

Trigger : VOX 4

Beep : Off

Detect DTMF On

Extension 120

2. Use the [Down] arrow key to highlight the field which you wish to configure.
3. Press [Select] to scroll through the available options. Use the numeric keypad to input a numeric extension value for the channel if desired.
4. When you have finished configuring the channel, press the [Down] arrow to highlight **Apply**, and then press [Select]. Alternatively, if you would like to apply the current settings to all channels, highlight **Apply All** and then press [Select].

18.4.1. Trigger Type

The **Trigger Type** determines what type of event will trigger recording on that channel.

The available options are **VOX (1-6)**, **Off-Hook (1-6)**, **Manual** and **Off**.



VOX (1 - 6)

VOX is a voice or audio signal trigger. Recording will automatically start when noise is detected on a channel, and will automatically stop when silence is detected (as configured via the **VOX Timeout**).

The default setting, **VOX 4**, corresponds to a -28dBm signal (anything over this level triggers recording).

The highest setting, **VOX 6** (high signal / low sensitivity), corresponds to a -20dBm signal. Channels set to VOX 6 will be triggered by loud conversations or signals, but quieter conversations may fail to trigger recording.

The lowest setting, **VOX 1** (low signal / high sensitivity), corresponds to a -40dBm signal. Channels set to VOX 1 will be triggered by soft conversations or signals, but noisy lines may also trigger recording.

In most cases the default setting (VOX 4) is adequate.

Off-Hook (1 - 6)

This is the recommended setting for normal recording on PSTN telephone lines. It will cause a call recording to be automatically triggered when the phone handset is taken Off-Hook, and ended when the handset put back On-Hook. If you are recording telephone calls from analog phone lines (POTS circuits), we recommend that you use this as default trigger setting during the initial set-up.

The **Off-Hook** function is triggered by a voltage change on the line. A drop in voltage (On-Hook voltage is typically 48V DC, Off-Hook voltage is typically 8V DC), will normally provide sufficient voltage change to be detected by the recorder, and activate recording. Replacing the receiver would normally stop the recording.

Different Off-Hook settings are available to provide triggering at different voltages.

The Off-Hook voltage ranges and their corresponding Off-Hook Settings are:

- Off-Hook #1: Recording Trigger with Off-Hook voltage below approximately 5 volts and On-Hook is above 7 volts.
- Off-Hook #2: Recording Trigger with Off-Hook voltage below approximately 10 volts and On-Hook is above 12 volts.
- Off-Hook #3: Recording Trigger with Off-Hook voltage below approximately 14 volts and On-Hook is above 16 volts.
- Off-Hook #4: Recording Trigger with Off-Hook voltage below approximately 17 volts and On-Hook is above 19 volts.
- Off-Hook #5: Recording Trigger with Off-Hook voltage below approximately 20 volts and On-Hook is above 22 volts.
- Off-Hook #6: Recording Trigger with Off-Hook voltage below approximately 25 volts and On-Hook is above 27 volts.

Example 1: If the On-Hook voltage is 48volts and the Off-Hook voltage is lower than 15 volts use setting Off-Hook #4.

Example 2: If the On-Hook voltage is 24volts and the Off-Hook voltage is lower than 3 volts use setting Off-Hook #1. If the On-Hook voltage is above the range that is set the channel will start to record.



The Off-Hook voltage ranges may vary slightly due to phone line conditions and component tolerance. Off-Hook #4 would be the recommend setting for most standard phone line recording applications. If the phone line does not have DC voltages that can be sensed by the recorder for start/stop recording so that an off-hook setting does not work satisfactorily, the **VOX** trigger should be used instead. Each channel can be individually set as is best for its source of conversations. If the Off-Hook setting does not work satisfactorily, the **VOX** trigger should be used instead.



If a channel is set to Off-Hook and no line is connected to the channel, the channel will commence recording, which can only be stopped by setting the channel to OFF or VOX. Caller ID data (inbound number information - CID) will only be available to the recorder on channels recording directly from phone lines and with the CID data provided by your phone service provider in the Belcore standard format. Caller ID data is not available for channels recording from handset/headset audio.

Manual

This setting prepares the channel to receive manual recording instructions from an external third party applications developed in conjunction with **Total Recall**. Most installations do not use this setting.

Off

A channel that is set to **Off** is effectively deactivated and no recording is possible on that channel. It is recommended that all unused analog channels be set to **Off**.

18.4.2. Beep

Beep (*'pip tone'*) is a beep sound generated every 15 seconds to indicate to both parties that the call is being recorded.

In some countries, it may be mandatory to play a beep tone when recording. For some users, it is a matter of preference or company policy.



Total Recall does not transmit a recorded message to advise that recording is taking place. This would be as part of a phone system auto-attendant message if desired.

The **Beep** setting determines the volume of the beep. The available options are **Hi**, **Mid**, **Low** or **Off**.

The default setting is **Off**.

18.4.3. Detect DTMF

Total Recall detects DTMF tones during calls on all channels. However, analog channels may be used for recording analog signals other than telephone calls, such as radios or intercoms. Such signals may not carry DTMF tones. However, such signals may contain audio frequencies that resemble DTMF tones, which **Total Recall** will incorrectly interpret as DTMF.



Set **Detect DTMF** to **On** to enable DTMF detections on channels used to record telephone calls, and to **Off** for channels that are used for signal sources that do not contain DTMF.

18.4.4. Extension

It is advisable to set an extension value for each connected channel in order to take full advantage of the features on your Total Recall system.

Setting an **Extension** value for a channel means that:

- Calls (or other recordings) on that channel can be searched for by extension value.
- Extension specific recording policies can be created.
- Extension specific event policies can be created.
- Features such as **Record on Demand** can be used.



Where an analog channel is used for recording telephone calls, any extension information in the call signalling on the line will override the extension value set for that channel.

18.5. Call Settings

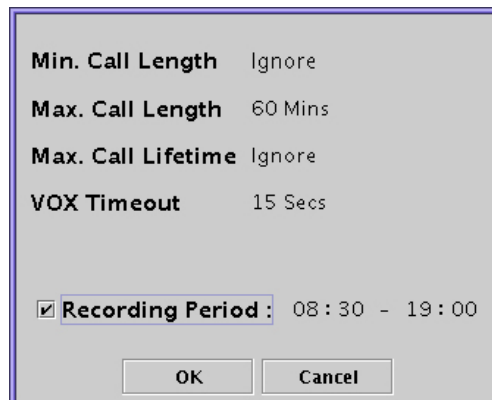
Options Menu > Call Settings

The Call Settings menu allows users to configure certain recording policies for their **Total Recall** system. Call settings apply to every recording channel on your **Total Recall**.



To set Call Settings:

1. Highlight the parameter that you wish to change.
2. Press the [Select] key to cycle through the available options.
3. For numeric values, you can also enter the required value on the numeric keypad. For example, entering '05' on the numeric keypad with **VOX Timeout** highlighted will result in a VOX timeout of 5 seconds being displayed.
4. Select OK.



The screenshot shows a dialog box titled 'Call Settings' with the following parameters and values:

Min. Call Length	Ignore
Max. Call Length	60 Mins
Max. Call Lifetime	Ignore
VOX Timeout	15 Secs
<input checked="" type="checkbox"/> Recording Period :	08 : 30 - 19 : 00

At the bottom of the dialog box are two buttons: 'OK' and 'Cancel'.



18.5.1. Min. (Minimum) Call Length

Total Recall will automatically discard calls with duration that is less than the **Min. Call Length**.

Min. Call Length can be set to **Ignore**, which instructs the **Total Recall** to ignore this parameter, or to a value between 1 and 19 seconds, in increments of one second.

The default setting is **Ignore**.



Use caution with this setting – it is usual to record all calls, and only under very specific circumstances (for example, noise spikes external to the recorder causing frequent and unwanted false recordings) that this setting should be changed from the default.

18.5.2. Max. (Maximum) Call Length

Total Recall can record calls of virtually any length, but longer calls are broken up into separate records according to the **Max Call Length** setting.

This allows lengthy recordings (for example, AM/FM radio monitoring) to be presented as a series of recordings in manageable lengths.

If a call reaches the **Max Call Length** setting, the record is rolled over to a new record. Rolled-over records are marked with (CONT) after the number in the 'To' field on the **Logging** screen.

The **Max Call Length** setting can be between 1 and 60 minutes in increments of one minute, and applies equally to all channels.

The default setting is **60 minutes**.

18.5.3. Max. Call Lifetime

The **Max Call Lifetime** is the maximum time a call record is kept before it is automatically deleted.

Max Call Lifetime can be set to **Ignore**, which instructs the **Total Recall** to ignore this parameter, or to a value between 1 and 24 months, in increments of 1 month.

The default setting is **Ignore**.



With **Max Call Lifetime** set to **Ignore**, call records may still be automatically deleted as part of the automatic cleanup process. See *Deleting Calls* on page 56 for more information.

18.5.4. VOX Timeout

If VOX is set as the recording trigger for a channel, the **VOX Timeout** determines the maximum length of 'quiet time' that is permitted before a recording on that channel is terminated.

This ensures that if a call has ended and the phone is not hung up properly, the recorder will not continue to record silence indefinitely.



VOX Timeout settings can be between 2-15 secs, and applies to all channels that have VOX as their Trigger setting.

The default setting is 15 seconds.



In the event that an active call is put on hold, and there is no (or very quiet) 'music on hold' being played, the recording will terminate according to the **VOX Timeout** setting. When the call recommences, the VOX trigger will immediately open a new record, and the complete conversation will be captured across two recordings.



For channels set to VOX trigger, the interval between calls must exceed the **VOX Timeout** setting. If a fresh call starts within the **VOX Timeout** of the previous call, **Total Recall** assumes it is a continuation of the first call, and both calls will appear as one call record.

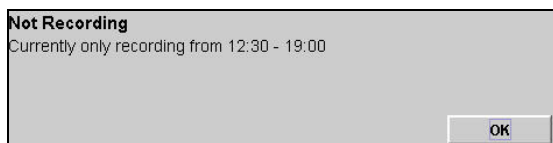
18.5.5. Recording Period

Set a **Recording Period** if you want the system to record only between specific times, for example from 8:00 to 18:00 to record only during business hours.

During non-recording times, the following message is displayed on the control panel LCD screen to indicate that no recording is taking place.



The recording period cannot span midnight.



To set a Recording Period:

1. Check the Recording Period check box by pressing the [Select] key.
2. Press the [Down] arrow to highlight the Hour and Minute fields. Enter start and end times (in 24 hour format).
3. Arrow down and highlight 'OK'.
4. Press [Select] to confirm your configuration.

18.6. Network Settings



Options Menu > Network Settings

Connector	IP Address	Netmask	Gateway
LAN 1	192.168.3.193	255.255.255.0	
LAN 2	192.168.2.100	255.255.255.0	

OK



Use the **Network Settings** screen to configure the available Ethernet port(s) for IP communication between Total Recall and your network.



Total Recall Desktop and **Rack** only have one TCP/IP ethernet port. Therefore, you will only configure LAN 1. The LAN 2 setting is irrelevant for your TRL or TRR system.

18.6.1. Configuring Network Interfaces



To configure a Network interface:

1. Highlight LAN1 in the Network Settings screen by pressing the [Down] arrow button.
2. Press [Select] to open the configuration screen for the LAN1 Ethernet port.
3. Press the [Down] arrow to highlight the **IP Address** field. Enter a valid static IP address for your Total Recall unit.
4. Press the [Down] arrow to highlight the **Netmask**, and **Default Gateway** fields. Enter the required values for your network (if appropriate).
5. Press the [Down] arrow to highlight **OK**. Press [Select] to confirm your configuration.

18.7. Extension Settings



Options Menu > Extension Settings

Extension	Description	Monitoring	ROD Mode	ROD Key
120		Enabled	Record by ...	None
121		Enabled	Record by ...	None
122		Enabled	Don't Rec...	None
123		Enabled	Don't Rec...	None
124		Enabled	Don't Rec...	None

Use the **Extension Settings** screen to configure default (system-wide) or extension specific recording policies. Extension-specific recording policies apply only to calls to or from a specified extension. The default recording policy applies to calls from or to any extensions which do not have a specific recording policy.

To apply the settings in this menu, you should first assign an 'Extension' name or numeric value to each of your recording channels. This is set up in the **Analog Settings** screen, accessed from the **Options Menu**.



Extension specific recording policies have priority over the default recording policy.



Calls between numbers that are not extensions, and calls between unknown numbers, are treated with default Extension Settings.

18.7.1. Default (System-Wide) Recording Policies

Enable Monitoring

With **Enable Monitoring** checked, calls may be monitored in real-time while recording, either directly from the unit, or remotely using **Remote Manager**.

To enable or disable live monitoring on the whole system, highlighting the **Enable Monitoring** check box, and press the [Select] key to toggle between checked (monitoring enabled) and unchecked (monitoring disabled).

ROD (Record on Demand) Mode

ROD Mode determines whether the **Total Recall** system will retain or discard recorded calls by default. Thus, this setting not only determines the behaviour of the optional **ROD** software client, but rather how the whole system handles call record storage.

The available options may be set by highlighting the ROD Mode field, and pressing the [Select] key to scroll through the available options. The options are:

- **Record by Default**

Total Recall records all calls and stores the recording on disk by default.

However, if enabled, parties on the call can use a DTMF key sequence or **Record on Demand** to toggle between “discarding” and “keeping” the recording of the whole call.

- **Don’t Record by Default**

Total Recall records all calls, but automatically deletes the recording at the end of each call.

However, if enabled, parties on the call can use a DTMF key sequence or **Record on Demand** to toggle between “keeping” and “discarding” the recording of the whole call.

- **Add Notes Only**

Total Recall records all calls and stores the recording on disk by default.

The parties on the call can not use a DTMF key sequence or **Record on Demand** to control recording. However, they can use **Record on Demand** to add notes to the call while the call is in progress.

- **Record Partial Calls**

Total Recall does not record calls by default.

However, parties on the call can use a DTMF key sequence or **Record on Demand** to toggle between “pausing” and “continuing” recording during the call as many times as they wish.

Total Recall will store only the parts of the call when recording was active.

- **Disallowed**

Total Recall records all calls and stores the recording on disk by default.

The parties on the call can not use a DTMF key sequence or **Record on Demand** to control recording, nor can they use **Record on Demand** to add notes to the call while the call is in progress.



Allow ROD Key / ROD Phone Key

The **ROD Phone Key** parameter allows you to specify a two-digit code that, when entered, will allow users to keep or discard a current call (depending on their **ROD Mode** settings).

To activate **ROD Phone Key**, highlight the Allow ROD Key check box and press [Select] to activate. This will then open a field where you can customise your two-digit DTMF phone key code.

Users can choose to keep or discard a current call, or stop and start a recording (dependant on the ROD Mode settings) by pressing *, then their code on the phone keypad while a call is in progress.



For **ROD Key** recording control, it is not necessary to install **Record on Demand** on your PC or to create **ROD Agent** user accounts in **Remote Manager**.



ROD Key functionality relies on the presence of DTMF tones.

18.7.2. Conflicting Extension Policies

In the event of a call between 2 extensions with conflicting extension policies, the settings for the extension with **ROD Mode** *other than* 'Record Partial Calls' will take precedence over the settings for the extension set to 'Record Partial Calls'.

For example, for a call between extensions A and B, where extension A is set to 'Record By Default' with monitoring disabled, and extension B is set to 'Record Partial Calls' with monitoring enabled, the policy for extension A applies to the call – the entire call is recorded by default, and monitoring is disabled.

If **ROD Mode** is identical for both extensions, the policy for the extension with monitoring enabled take precedence over the policy for the extension with monitoring disabled.

For example, if extension A is set to 'Record By Default' with monitoring disabled, and extension B is also set to 'Record By Default' but with monitoring *enabled*, the policy for extension B applies to the call – the call is recorded by default, and monitoring is enabled.



If anyone in your organisation specifically does not want any of their calls to be monitored, they must be made aware of the above rules.

18.7.3. Extension-Specific Recording Policies

Monitoring activity, ROD mode and ROD Phone Key can also be configured on a per-extension basis.



To set extension specific policy:

1. Use the [Down] arrow button to highlight **Add**, and then press [Select].
The Extension Recording Policy dialog appears:



Extension: 120
Description:
☒ Enable Monitoring
ROD Mode: Record by Default
☐ Allow ROD Key
ROD Phone Key: 11
OK Cancel

2. Enter the **Extension** number you wish to create a specific policy for. This needs to be pre-configured in **Analog Settings** screen, accessed via the **Options Menu**.



Alpha-Numeric **Extensions** can only be entered using **Remote Manager**. Numeric-only **Extensions** may be entered with the numeric keypad on your unit.

3. Check or uncheck **Enable Monitoring** to activate or deactivate monitoring on that extension.
4. Set the **ROD Mode** for the specific extension.
5. Check or uncheck **Allow ROD Key** and enter a **ROD Phone Key** as appropriate.

When the required extension-specific policies have been defined, use the [Down] arrow key to highlight **OK**, and press the [Select] Key to apply your changes.

The extension policy will now appear in the Extension Settings box. Repeat the above process for further extensions as necessary.



In some cases the extension information (which originates at the PBX) may arrive slightly after the recorder has started to record a call. In this event, the default recording policy will be applied to the call until the extension information is available, at which point it will then be treated with the appropriate extension recording policy, if any have been created for that extension. The rules for conflicting extension settings also apply.



To remove an extension policy:

1. Highlight the specialised extension in the Extension Settings dialog and press [Select].
2. Select **Remove**.

The extension policy is removed from the Extension Settings dialog.



18.8. License Settings (Rack Model Only)

 Options Menu > License Settings



Use the **License Settings** screen to enter new and renewed license keys.

18.8.1. Hardware Key

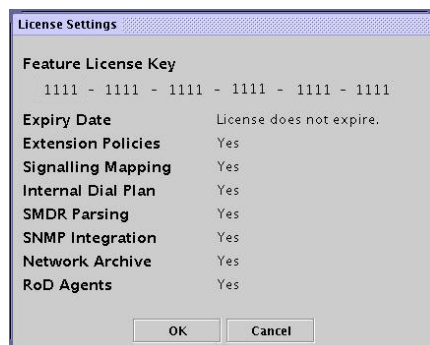


The hardware key for the **Total Recall** recorder is displayed as read-only field for reference. You will need to quote this key when ordering optional software upgrades for your **Total Recall Rack**.

18.8.2. VoIP & ISDN License Key

The **VoIP & ISDN License Key** is not relevant to the operation of your **Total Recall**. Please note that your **Total Recall Desktop** or **Rack** cannot be upgraded to VoIP or ISDN connectivity. If you are upgrading your telephony system to either of these protocols please contact your **Total Recall** dealer for information on a suitable replacement system.

18.8.3. Feature License Key



A **Feature License Key** is required to enable optional functionality on your **Total Recall** system. The features that may be activated by license key are:

- SMDR Parsing.
- SNMP Alarm Integration.
- Network Archive.



The other listed features will have been activated by default on your **Total Recall Rack** system.



Contact your local dealer for information on how to purchase a license key for activating additional features, or visit www.totalrecallvr.com.

18.9. Archive Settings

Options Menu > Archive Settings



☒ **Reminder** When 50% full

☒ **Auto Archive Every** 01 Days

Archive Device : DVD/CD

Type: WIN

Path: 192.168.3.186:/var/archiver

User: linux

Password: *****

(Next archive: Midnight on 23 May 2007)

OK Cancel

Use the **Archive Settings** screen to enable and configure automatic archiving.

Total Recall can be configured to archive automatically at specified intervals, and/or to display a reminder when the hard drive reaches a specified percentage of capacity.

When using DVD/CD (or optional BD-RE) as the primary auto-archive device, you should ensure that you have a blank DVD/CD/BD, or one with sufficient space on it, in the **Total Recall** DVD/CD/BD drive.

If there is insufficient space on the DVD/CD/BD to complete the archive, **Total Recall** will archive as much as it can. However, the system will not prompt you to insert additional disks.



The Auto Archive function archives all calls that have not been archived to a DVD/CD (or a Network Share, if this feature has been optioned). **Calls that you have previously manually archived will not be included in the Auto Archive.**

Archive Reminder

Archive Reminder is a visual and audible reminder of actual disk space used on your system. This reminder will continue to appear even after an automatic archive, as no calls have been removed.

To set the Archive Reminder feature, highlight the Reminder check box with the [Up] and [Down] arrows, and press the [Select] to check the box. Highlight the reminder options field by pressing the [Down] arrow key, and press [Select] to configure the Reminder to begin when the hard drive capacity is at 50%, 75% or 90% used.



Auto Archive

Auto Archive configures your **Total Recall** to archive to a specified device (by default the DVD/CD drive) at a regular period, without manual intervention.

To set the **Total Recall** to automatically archive, navigate to the Auto Archive check box [Up] and [Down] arrow keys, and press [Select] key to check the box. The archive time interval will now be available for configuration.

Press the [Down] arrow key to highlight the 'Auto Archive Number' box and use the [Select] key to cycle through the available options. When complete, press the [Down] arrow key again to highlight the weeks/days options box and press the [Select] key to cycle through the options and make your selection. When complete, use the [Down] arrow to highlight **OK** and press [Select] to confirm your configuration.

Within this screen, **Total Recall** indicates when the next Automatic Archive session will occur based on the present time and the selected time interval. After setting up the Automatic Archive parameters, the first archive will always occur at the following midnight and then the Automatic Archive interval setting will regulate the frequency of subsequent Automatic Archives.



If your **Total Recall** system is unlocked, AND a menu other than the main **Logging**, **Search** or **Options** screens is open at the scheduled auto-archive time, the Total Recall system will assume that you are currently using the unit. Auto-Archive will be delayed until you navigate back to one of the main screens.

Archive Device

Total Recall Desktop may only archive to its built-in DVD/CD device, or optionally to a Blu-Ray device if this has been optioned and installed on the system. As no other archiving options are available on the **Desktop** model, you will have no further options in the Archive Device field.

Total Recall Rack may archive to its built in DVD/CD drive, or optionally to a Blu-Ray device (if installed), or optionally to Network Share storage (if optioned). To select the default location for Auto Archiving, highlight the Archive Device field and press [Select] to scroll through the available options. When finished, press the [Down] arrow to highlight **OK** and press [Select] to confirm your configuration.



Network Shares must be pre-configured with **Remote Manager** before they may be set as an Auto Archive location. Configuration on the host that is managing the Network Share as well **Total Recall** may be required. Your network administrator will supply the **Type**, **Path**, **User** and **Password** parameters for the network share.

18.10. Deleting Calls



Administrators may choose to delete calls from the hard disk during manual archiving.

Also, calls are automatically deleted when:

- A set period of time has passed since they were recorded (for example, 3 months). This option (**Max. Call Lifetime**) can only be activated by a user with administrator privileges.



- The number of calls on the hard disk reaches 350,000, or 60,000 recording hours. When this happens, the oldest 50,000 calls are automatically deleted, until the number of calls on the hard drive is reduced to 300,000.



Auto-deletion occurs according to the 3 conditions above in the priority that they are listed. To avoid losing calls that have not been archived as a result of automatic deletion, it is important to be aware of recorder capacity and to ensure important calls are archived or saved regularly.

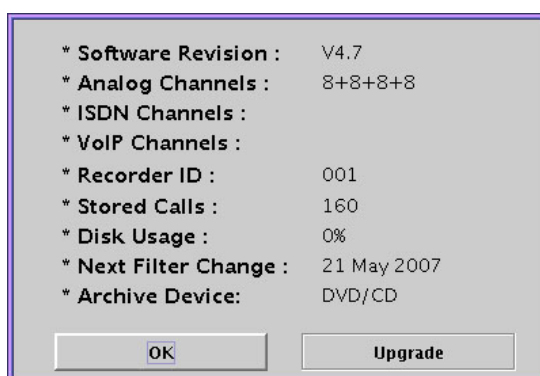
18.11. Maintenance

 **Options Menu > Maintenance**



The **Maintenance** screen provides access to a range of system information and utilities, including access to upgrade the system software.

18.11.1. System Information



The **System Information** screen displays useful system information and provides a facility to upgrade the **Total Recall** software.

The **System Information** screen includes one editable field, **Recorder ID**. The **Upgrade** button initiates the software upgrade procedure.

Recorder ID

For installations that include multiple recorders, it may be useful to be able to identify from which recorder a particular call originated. The **Recorder ID** value permits this identification (000 to 999).



The call list in the **Remote Manager** playback screen can be configured to display the Recorder ID against each call.

Upgrade

Use the **Upgrade** button to upgrade the system software. Note that the system will automatically re-boot itself during the upgrade process. Recording does not continue during the upgrade process which may take up to 5 minutes to complete.



The **Upgrade** function only affects system files. However, it is recommended that you back up all important calls from the call database before you perform an upgrade.



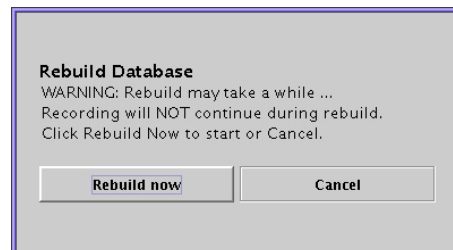
Your passwords and system settings are not affected by updating the system software.



To upgrade the software version:

1. Backup the call database as necessary (either save calls using **Remote Manager**, or archive calls as appropriate).
2. Insert the upgrade CD into the **Total Recall** DVD/CD drive.
3. Use the [Down] arrow key to highlight **Upgrade**, then press [Select]. Follow the on-screen prompts to complete your software upgrade.

18.11.2. Rebuild Call Database



If the call database has been corrupted in any way, it may be necessary to rebuild the database.

Select **Rebuild now** to begin the database rebuild process.



No new recording takes place during the rebuild process, which may take from 1 to 5 hours for a database with 350,000 records.

18.11.3. Save Settings to DVD/CD





Save Settings from DVD/CD saves the current **Total Recall** system settings to DVD or CD.

It is advisable to save the system settings after the initial configuration, and also after any major changes to the configuration, so you can roll-back to your initial settings if necessary. To save settings, insert a blank DVD/CD into the DVD/CD drive of your **Total Recall** system, select **Save Settings** in the maintenance menu, and then press [Select].

18.11.4. Load Settings from DVD/CD

To load previously saved system settings, select **Load Settings from DVD/CD** in the maintenance menu. The following screen will appear:

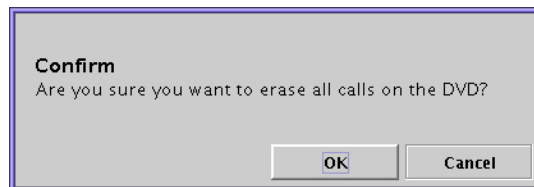


Highlight **OK** by pressing the [Down] arrow, then press [Select] to confirm that you will restart the system to apply the new settings.



Now insert a DVD/CD that contains the saved settings into the drive and select **OK** to load the settings.

18.11.5. Erase DVD



To erase a currently inserted DVD+RW, select **Erase DVD** in the maintenance menu. Press the [Down] arrow key to highlight **OK**, then press [Select] to confirm your selection.

18.12. Remote Manager

 **Options Menu > Remote Manager**



The screenshot shows a configuration window with a title bar. Inside, there is a checkbox labeled 'Use Dial-up' which is currently unchecked. Below it are four fields: 'IP Address' with the value '192.168.3.193', 'Base Port' with the value '10010', 'Host Name' which is empty, 'Maximum Sessions' with the value '05', and 'Session Duration' with the value '2 hours'. At the bottom of the window are two buttons: 'OK' and 'Cancel'.

Use the **Remote Manager** screen to configure access for the **Remote Manager** PC software to your **Total Recall** via your network or a dial up connection.

18.12.1. Configuring Total Recall LAN Access

To configure **Total Recall** for LAN access, highlight the **IP Address** field by pressing the [Down] arrow. Press [Select] to toggle between the available IP addresses that your unit may use to communicate with **Remote Manager**. This should be the IP address assigned to the LAN 1 Ethernet port.

Press the [Down] button to enter a value for the **Base Port** if required.



The **Base Port** value can be left at the default value (10010) unless you have a specific reason to change it (for example a port conflict on the administration PC).

18.12.2. Configuring Total Recall Dialup Access

To configure **Total Recall** for communication with Remote Manager via a 56k dialup connection, press the down arrow to highlight the **Use Dialup** check box, and press [Select] to activate this option.

All other fields will become read only. The IP address is set to 10.0.1.205, and cannot be changed.

18.12.3. Configuring Remote Manager Options

Press the [Down] button to highlight the **Maximum Sessions** option. **Maximum Sessions** is the maximum number of simultaneous monitoring and playback connections from **Remote Manager** PCs that **Total Recall** will allow.

If this limit is reached, any further connections are blocked by the recorder, and the **Remote Manager** displays a message to the user informing them that the limit has been reached.



The default setting is **5**. It is not recommended that you increase this setting unless you are confident that the recorder is running well below capacity at all times. Allowing too many simultaneous sessions may jeopardise the integrity of your recordings.

Press the [Down] button to highlight the **Session Duration** field. The **Session Duration** is the maximum length of time that a **Remote Manager** monitoring or playback session will be allowed to run for.



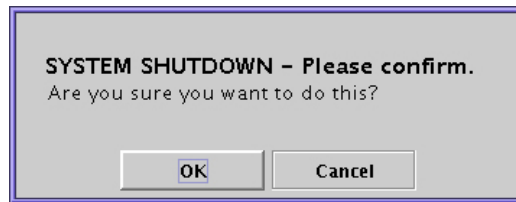
This setting is a safeguard to prevent network congestion from ‘infinite’ session times if (for whatever reason) a session is not closed properly. If this limit is reached, the session closes – i.e. the audio stream stops. The **Remote Manager** user is able to reconnect immediately upon initiating some other **Remote Manager** activity.



The **Host Name** value can only be set using **Remote Manager**. If you plan to connect from **Remote Manager** to the recorder via a firewall, you will first need to assign a host name using **Remote Manager** via a LAN or direct connection.

18.13. System Shutdown

Options Menu > System Shutdown



If **Total Recall** is powered off without following the proper procedure, open database records can potentially be damaged.

For this reason, **Total Recall** should always be shut down properly using the **System Shutdown** function.



To shut the recorder down:

1. Select **System Shutdown** in the maintenance menu.
2. Press the [Down] arrow to highlight **OK**.
3. Press [Select] to confirm the system shutdown.
4. Wait until the system displays the message “System Halted”. This means that the system has completely shut down and it is safe to turn the power off.
5. Insert the key supplied with your system into the on/off switch at the front of the unit. Turn it left to power off the system. Alternatively, you may remove the power cord from the back of the system to disconnect power from the system.



Remote Manager

19. Introduction

Remote Manager is Microsoft Windows® compatible software that allows remote access from a PC to one or more **Total Recall** units, via LAN or dialup. Remote Manager is supplied on CD free-of-charge with all Total Recall systems, for installation and use on as many PCs as required.

Remote Manager can be used to:

- Configure the recorder (Administrator Users Only).
- Play recorded calls from the system or archive media – including archive media from older generation **Total Recall** systems.
- Monitor current calls in real-time.
- Search the call database.
- Archive recorded calls to CD/DVD or optional BD/Network storage.
- Tag and notate calls on the database.
- Download calls to the local hard drive.
- Email downloaded calls.
- Play and save calls from Total Recall archive discs.
- Generate reports.
- Export calls to .wav, .mp3 or secure .trc formats.

20. System Requirements

Minimum system requirements for **Remote Manager** are:

- Multimedia PC running Windows 2000/XP/Vista32/Vista64.
- 100Mb free HDD space.
- 256Mb RAM.
- Display resolution 800x600, 256 colours.
- Sound device and speakers.
- LAN device or modem.

Calls that are archived onto DVD, CD or (optional) BD are compressed and stored in a secure proprietary data format (.trc) that cannot be played on a PC unless **Remote Manager** is installed.

Calls in .trc format can be converted using **Remote Manager** into .wav or .mp3 files for compatibility with standard media players.



A **Remote Manager** playback or monitoring session adds 1 Mbps to the network payload. Regardless of your network capacity, we recommend that no



more than 20 **Remote Manager** sessions connect to a **Total Recall** at any one time to ensure optimal system performance.

21. Compatibility Between Remote Manager and Total Recall

It is very important to ensure that the software version number of your **Total Recall** unit matches the software version number of **Remote Manager**. Incompatible software versions may cause **Remote Manager** to fail to connect to your **Total Recall** system, or may exhibit intermittent problems.

Please note that the current generation **Remote Manager** cannot connect to old generation **Total Recall** units and vice versa. However you can replay and copy calls from archive discs made with old generation systems.

If your **Total Recall** system software is upgraded, you will be required to upgrade your **Remote Manager** program as well. At the time this manual was prepared, the current **Total Recall** software version was **8.5.0**, with the corresponding **Remote Manager** version being **8.5.0**.



Contact your Total Recall dealer to ensure that you are running the latest software version.

22. Installation



When running Remote Manager for the first time, you will be prompted to set up the Administrator account for that PC. Therefore it is very important that installation is carried out by the Administrator themselves or properly authorised personnel.

Remote Manager Software is supplied on a CD together with the **Total Recall** recorder.

To install, insert the CD into the PC drive, and follow the onscreen instructions from the Installation Wizard. If the install does not start automatically, manually run **setup.exe** from the disc.

Please check with your system administrator before installing **Remote Manager**.



Do not insert the CD into the **Total Recall** DVD/CD drive – **Remote Manager** is PC software only.



During installation, you will be prompted to specify an install directory and a data directory. The data directory must be accessible for all Remote Manager users on that PC: convenient locations may include *C:\Documents and Settings\All Users* for Windows XP, or *C:\Users\Public* for Windows Vista.



23. Configuring Total Recall for Remote Manager Access

A **Total Recall** recorder must be configured to support LAN or dialup access before you can connect to it using **Remote Manager**.



To configure your Total Recall unit for Remote Manager access:

1. Configure the Recorder ID (if you do not wish to use the default value of 1) via the **Options > Maintenance > System Information** menus. This can be important for call search and replay functionality.
2. Navigate to the **Options > Network Settings** menu via the built-in LCD and keypad. Configure the LAN 1 network port as required.
3. Navigate to the **Options > Remote Manager** menu. Select the IP address that you would like to use for the Remote Manager connection (this will be IP address you set for LAN 1). To connect via a 56k dialup modem, check the 'Use Dialup' box at the top of the menu.

24. Administrator Quick-Start Setup

1. Start the **Remote Manager** application (double-click the desktop shortcut, or select **TR Remote Manager** from the Windows Start menu).

The **Add User** dialog displays. Upon first start-up, you will be directed to create an Administrator account.

2. Enter an Administrator username and password.



The first user account defaults to an administrator account. Only administrators can add standard user accounts, define the **Total Recall** recorder that these accounts may connect to, and specify the software privileges of those users.

3. Select your preferred display language.
4. Click **OK**.
The **Remote Manager** main application opens.
5. 'Add' one or more **Total Recall** units, if appropriate.



[See Add TR on page 69 for further information.](#)

6. Create 'standard' user accounts as necessary, and configure their access privileges.



[See User Management on page 75 for further information.](#)

7. Add one or more **Total Recall** units for each standard user as appropriate, and configure their channel/extension access as required.



25. User Interface

Remote Manager is a 'tabbed' application, including a Main Menu bar, a Button bar, and 4 tabs:

- Monitor.
- Playback Calls.
- TR Configuration.
- Event Log.

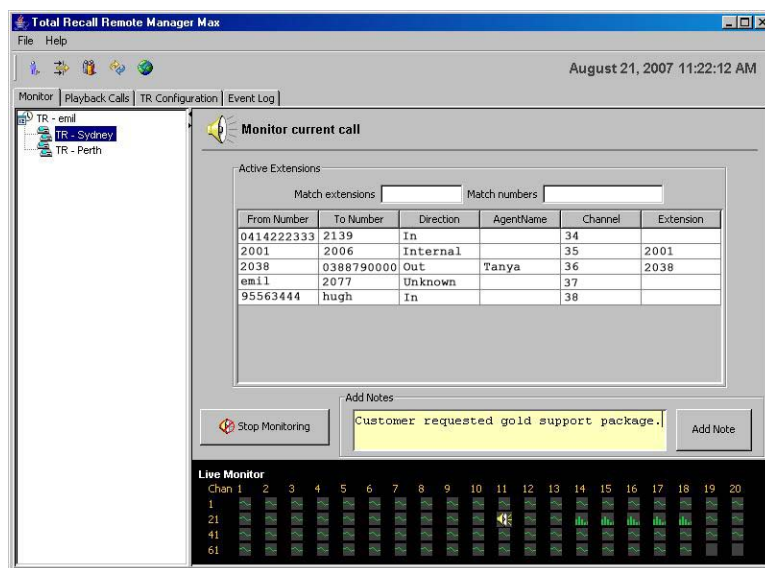
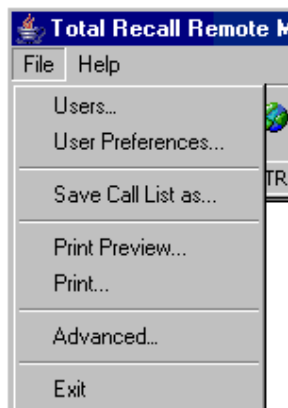


Figure 6 - the Remote Manager User Interface

26. Main Menu Bar



The **Remote Manager** main menu bar includes 2 menus – the **File** menu and the **Help** menu.

26.1. File Menu



The File menu includes the following options:



- **Users**
Opens the Users dialog (administrators only).
 See *User Management* on page 75 for more information.
- **User Preferences**
Opens the User Preferences dialog.
 See *User Preferences* on page 67 for more information.
- **Save Call List as**
Saves the call list displayed in the Playback Calls tab as a .txt or .csv file. The data included reflects the current call list column configuration.
- **Print Preview**
Opens a print preview of the Call Report.
The Call Report is a print-formatted version of the call list displayed in the Playback Calls tab. The data included reflects the current call list column configuration.
- **Print**
Prints the Call Report via the standard Windows print dialog.
- **Advanced**
Opens the Advanced Settings dialog.
Use the Advanced Settings dialog to set the local IP address for the PC, and the Manager Base Port.
- **Exit**
Closes **Remote Manager**.

26.2. Help Menu

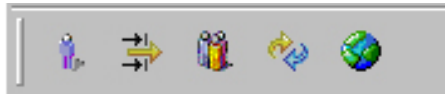


The Help Menu provides access to:

- **Total Recall** FAQs on the web.
- The **Total Recall** website.
- ‘About’ information (including the **Remote Manager** version number).








27. Button Bar



The button bar provides access to most of the **Remote Manager** administrative dialogs and functions.

The following table lists the buttons and their uses:

Button		Use
	User Preferences	Opens the User Preferences dialog. Use the User Preferences dialog to edit general user preferences and Total Recall connections for <i>the current user</i> .
	Add TR (administrator users only)	Opens the Add Total Recall dialog. Use the Add Total Recall dialog to 'add' Total Recall recorders to the Remote Manager settings for the <i>current administrative user</i> .
	Update Users (administrator users only)	Opens the Update Users dialog. Use the Update Users dialog to add and remove user accounts, to modify user permissions and preferences, and to add or remove Total Recall units associated with user accounts.
	Refresh Views	Refreshes the Device Tree and the Local Folders pane to reflect the latest changes.
	Change Language Settings	Opens the Choose Language Settings dialog. Use the Choose Language Settings Dialog to specify the Remote Manager display language.

See below for further information on each button's function.

27.1. User Preferences



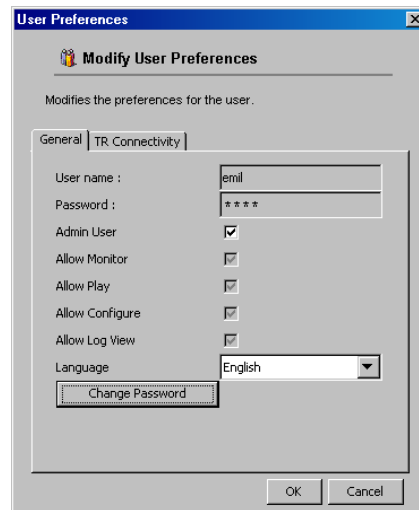
Click the  button to open the **User Preferences** dialog. The User Preferences dialog is also available from the **File** menu (**File > User Preferences**).

Use the **User Preferences** dialog to edit general user *preferences for the user who is currently logged in*.

For Administrator users, the dialog includes 2 tabs, **General** and **TR Connectivity**. For standard user accounts, only **General** will be available.



27.1.1. General Tab



Use the **General** tab to change the display language and password for the current user. The current software privileges for the logged in account will be displayed as read-only fields.



To change your Remote Manager display language:

1. Click the drop-down arrow to the right of the **Language** field and select your preferred language from the list.
2. Click **OK**.

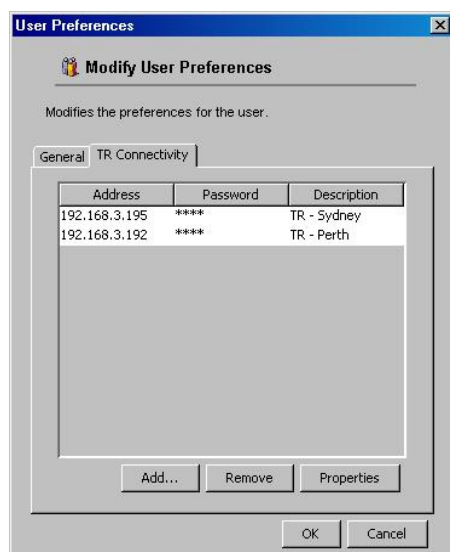


To change your Remote Manager login password:

1. Click **Change Password**.
2. Enter the new password in the Password field.
3. Re-enter the password in the **Confirm Password** field.
4. Click **OK**.



27.1.2. TR Connectivity Tab



Use the **TR Connectivity** tab to add and remove **Total Recall** recorders (for the currently logged in user), or to modify the connection settings for Total Recall recorders that have previously been added.

When you add a **Total Recall** recorder to **Remote Manager**, it will appear in your **Remote Manager** program, and can be searched, monitored and configured.

The settings are preserved when **Remote Manager** is closed, so there is no need to repeat the process.

27.1.3. Add TR

Click the **Add** button to begin the process of adding a **Total Recall** unit to your **Remote Manager** program. You can also access this menu by clicking the “Add TR” button on the main **Remote Manager** screen.



A similar dialog (titled **Modify Total Recall Settings**) is used to edit connectivity settings for recorders that have already been added. When modifying existing settings, the relevant fields are already populated.

The Add TR screen includes 3 tabs; **LAN**, **Dialup** and **Cascaded**. There is also a field to configure **Authorised Extensions**.



27.1.4. LAN

Use the **LAN** tab to add a **Total Recall** that is connected to an internal or external local area network.



To add a **Total Recall** to a LAN that is behind a firewall, or if the **Remote Manager** client PC is behind a firewall, see *Connecting Through Firewalls* on page 111.



To add a LAN Total Recall that is on the same LAN as the Remote Manager client PC:

1. Click the **LAN** tab if necessary.
2. Click in the **IP Address** field, and enter the IP address that you configured on the **Total Recall** recorder for remote administration.



If your network supports Domain Name System (DNS), you can select **Host Name** and enter the host name instead.

3. Enter the **Password** for the **Total Recall** system that you wish to add. This will be the same password that you use to access the recorder via the built-in control panel.



If you wish to use **Remote Manager** to configure the recorder, the password you enter here must carry administrator privileges.

4. Enter a description for the recorder.



This description is used to identify the recorder in the **Remote Manager** program.

5. The **Base Port** value can be left at its default setting (10010) unless you have a specific reason to change it.
6. If required, click the check box to set an external firewall IP address. This setting is only necessary when **Remote Manager** is behind a firewall, on an internal IP address, and the **Total Recall** needs to access **Remote Manager** via that external firewall IP address.
7. Click **Set** to apply the settings.



To add further Total Recall systems via LAN:

1. Click the **Add TR** button.
2. Repeat the previously detailed process.

27.1.5. Dialup

Use the **Dialup** tab to add a **Total Recall** to your **Remote Manager** PC software via a 56k dialup modem connection.



To add a Total Recall that is connected via dialup modem:

1. Click the **Dialup** tab if necessary.
2. Enter the phone number to the modem in the **Dialup Number** field.
3. Select the **Modem** you want to use from the drop-down list (if only one is configured on your PC, only one option will be available).



- Enter the **Password** (this is the PIN code for the **Total Recall** that you wish to connect to).



If you want to use **Remote Manager** to configure the recorder, the PIN you enter here must carry administrator privileges.

- Enter a suitable description for the recorder.



This description is used to identify the recorder in the **Remote Manager** program.

- Click **Set** to apply the settings. Remote Manager will dial the recorder before adding it to the software, to verify that the dialup settings are correct.



To add further Total Recall units via dialup:

- Click the **Add TR** button.
- Repeat the previously detailed process.

27.1.6. Cascaded

Cascaded recorders are connected via LAN to a *previously added* dialup **Total Recall** recorder. The remote dialup **Total Recall** acts like a central gateway to all the other cascaded units.

To add a cascaded recorder:

- Click the **Cascaded** tab if necessary.
- Select the **Dialup Host** (the dialup recorder to which the cascaded recorder is connected) using the drop-down menu.



3. Enter the **IP Address** of the cascaded recorder.
4. Enter the **Password** (the PIN for the **Total Recall**).



If you want to use **Remote Manager** to configure the recorder, the PIN you enter here must carry administrator privileges.

5. Enter a suitable description for the cascaded recorder.



This description is used to identify the recorder in the **Remote Manager** program.

6. Click **Set** to apply the settings. **Remote Manager** will dial the **Dialup Host** in order to verify the connection with the attached cascade unit.



To add further cascaded Total Recall units:

1. Click the **Add TR** button.
2. Repeat the previously detailed process.

27.1.7. Authorised Extensions

The Authorised Extensions are those extensions on the **Total Recall** that the selected user is able to monitor, search and play back calls from. To configure the authorised extensions for the selected user, click **modify** in the **Add TR** screen.

Before configuring authorised extensions, you will need to create 'extension' values for your channels. See especially **Section 28.9** and **Section 28.10** of this manual for more information on setting up extensions.



Regular Expressions: Some **Remote Manager** functionality (including Authorised Extensions) supports the use of regular expressions. Detailed information about regular expression construction can be found [here](#):



<http://java.sun.com/j2se/1.4.2/docs/api/java/util/regex/Pattern.html>

(The 1.4.2 entry in the above URL may require updating if a new Java 2 platform has been released since the printing of this manual.)



To modify authorised extensions:

1. In the Authorised Extensions section, click the **Modify** button.
2. Select the appropriate option:
 - **Authorise all extensions**
The user is able to monitor, search and play back calls from all extensions.
 - **Authorise only these extensions**
The user is able to search and play back calls from only those extensions listed in the associated **Extensions** list.
 - **Authorise all extensions apart from the following**
The user is able to monitor, search and play back calls from all extensions except those listed in the associated **Extensions** list.
3. Populate the **Extensions** lists as appropriate (see below).



To add extensions or extension ranges to the Extensions lists:

1. Select the appropriate extension selection option.
2. In the **Add extension or extension range** text field, enter either:
 - An individual extension value
 - A list of comma-separated extension values
 - An extension range
 - A regular expression



See Regular Expressions on page 73 for further information.

3. Click **Add**.
The values are added to the Extensions list.
4. Click **OK**.

The following table demonstrates some examples of Extensions list entries, and the extensions that would be covered by those entries.

Entry Type	Entry	Will Match	Examples
Individual extension	100	Extension 100 only	100
Multiple extensions	100, 105, 106	Extensions 100, 105 and 106 only	100, 105, 106



Extension range	100-150	All extensions from 100 to 150	100, 101, 102... 150
Specific names	John Smith Helen Jones	John Smith and Helen Jones only	John Smith, Helen Jones
Any names	[^0-9]	Any non-numeric characters	Dave, John Smith



To remove extensions or extension ranges from the Extensions lists:

1. Select the value in the Extensions list.
2. Click **Remove**.
3. Click **OK**.

27.1.8. Removing a Configured Total Recall



To remove a Total Recall recorder from your Remote Manager program:

1. Select the recorder that you want to remove.
2. Click **Remove**.
3. Click **OK**.

27.1.9. Editing the Connection Settings for an Added Total Recall



To edit connection settings for a recorder:

1. Select the recorder that you want to edit.
2. Click **Properties**.
3. Edit the connection settings as appropriate.




See *Add TR* on page 69 for further information.

4. Click **Set**.
5. Click **OK**.

27.2. User Management



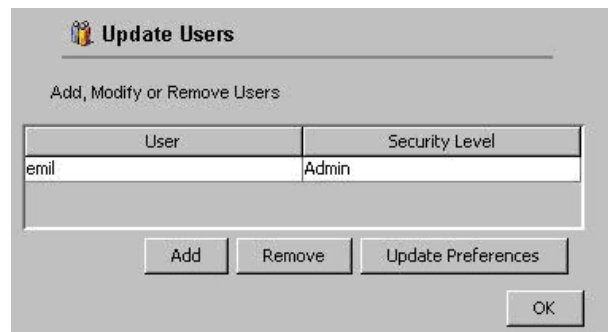
On the main Remote Manager screen, click  to opens the **Users** dialog. Use the **Users** dialog to add and remove **Remote Manager** users, and to configure the Total Recall connections and permissions for these users. The Users dialog is also available from the **File** menu (**File > Users**).



The user list is specific to the PC upon which **Remote Manager** is installed.

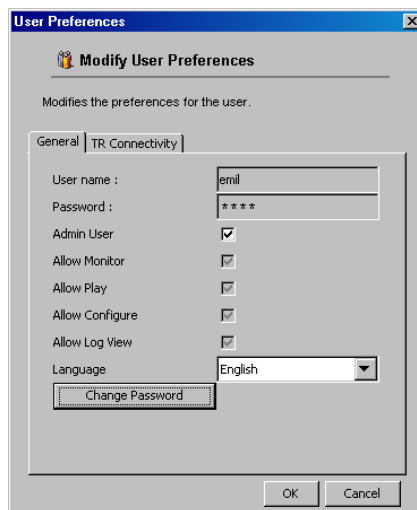


The user management dialog is only available to **Remote Manager** Administrator accounts.



27.2.1. Adding Remote Manager User Accounts

1. Click the **Add** button. The **User Preferences** dialog opens:



2. Enter a **User name** for the new user.
3. Set the software permissions for the new user.

Clicking the check box **Set as Admin user** will give the new user access to all software functions, and the ability to modify the configuration of all **Remote Manager** users on that PC.

Otherwise, un-check the **Admin User** check-box, and then:

Check the **Allow Monitor** check box to give the user access to the Monitor tab of the application.

Check the **Allow Play** check box to give the user access to the Playback Call tab of the application.

Check the **Allow Configure** check box to give the user access to the TR Configuration tab of the application.

Check the **Allow Log View** check box to give the user access to the Event Log tab of the application.

4. Select the preferred display **Language** for the new user from the drop-down menu.
5. Click **Change Password** to set the password for the new user account.
6. Click **OK**.



27.2.2. Modifying Existing Remote Manager User Accounts

1. Select a user from the table in the **Users** menu.
2. Click the **Update Preferences** button.
The **User Preferences** dialog opens.
3. Edit the user properties as appropriate.

 See *User Preferences* on page 67 for more information.

4. Click **OK**.



To remove an existing user:

1. Select the user from the table in the **Users** menu.
2. Click **Remove**.



The remove action is immediate. You will not be asked to confirm the action.

27.3. Refresh Views



Updates the Device Tree and the Modify Local Folders pane to reflect any changes made to recorder connections or local folders made outside of **Remote Manager**.

27.4. Choose Language Settings



Opens the **Choose Language Settings** dialog.



Use the Choose Language Settings Dialog to specify the **Remote Manager** program display language.

To change the language setting:

1. Select the preferred display language from the drop-down list.
2. Click **OK**.



28. TR Configuration Tab

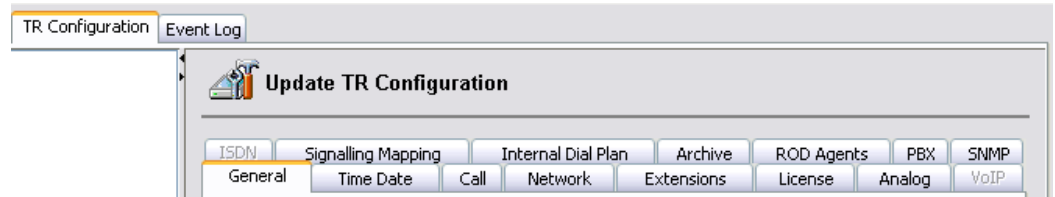


Figure 7 – Total Recall Rack Configuration tab, all options activated

Use the **TR Configuration** tab to remotely configure your **Total Recall** unit(s). **Remote Manager** will allow full configuration of each **Total Recall** unit that has been added to your **Remote Manager** system, assuming that you have administrator rights, or have been given permission to access the unit configuration by the **Remote Manager** administrator.

All parameters that can be set using the **Remote Manager** configuration are saved to the **Total Recall** unit. To begin configuring a **Total Recall**, click on the TR Configuration Tab and the **Total Recall** you wish to configure.



Ensure the correct recorder is selected in the Device Tree before making changes to the configuration.

For all configuration tabs, click **Apply** to save your changes or **Restore Previous** to cancel your changes.

On **Total Recall Rack**, the following application features require a Feature License Key to configure and use:

- SMDR Parsing.
- SNMP Alarms.
- Network Archive.

Your **Total Recall Rack** system will not support and you will not be able to configure the above features without a valid Feature License Key.

If you are using **Remote Manager** to connect to a **Total Recall Desktop** system, you will only be able to see and select tabs for the functions available on that system:

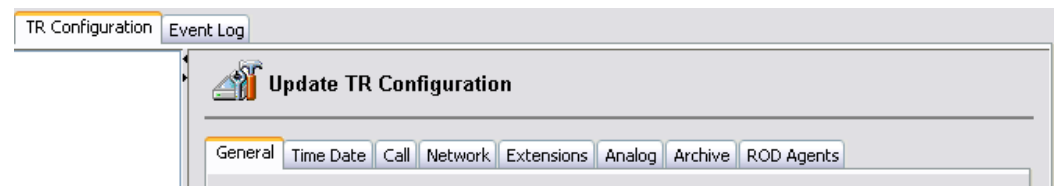


Figure 8 - Total Recall Desktop Configuration tab

28.1. Extensions

The **Extensions** tab lets you configure recording and event policies for extensions. The **Extensions** tab contains the following configuration tabs:

- Recording Policies.
- Event Policies.



28.1.1. Recording Policies

Update TR Configuration

ISDN | Signalling Mapping | Internal Dial Plan | Archive | ROD Agents | PBX | SNMP

General | Time Date | Call | Network | Extensions | License | Analog | VoIP

Recording Policies | Event Policies

Default Recording Policy

Enable Monitoring ☒

ROD Mode: Record by Default

Allow ROD Phone Key ☐

ROD Phone Key: 11

Extension Recording Policies

Extension	Description	Monitoring	ROD Mode	ROD Key
2000	CEO	Disabled	Don't Record by ...	33
2062	Emil	Enabled	Record by Default	None
2193	Tanya	Enabled	Record by Default	55

Add Edit Remove

Restore Previous Apply

Use the **Recording Policies** tab to configure default (system-wide) and extension-specific recording policies. Default recording policies apply to calls to/from extensions which do not have a specific recording policy, while extension specific recording policies apply only to calls to/from specific extensions.

Extension specific recording policies have priority over the default recording policy.

Each recording policy comprises of the following information:

- Whether real-time call monitoring is possible, or not, while recording.
- The method of recording (keep recordings by default, discard recordings by default, only record on ROD software or phone-key command...)
- If parties on the call can use a DTMF key sequence to control (pause, re-start, keep, discard ...) recording, and if so, the sequence of DTMF digits that users will use to control recording.

Enable Monitoring

With **Enable Monitoring** checked, real-time monitoring of calls is possible while recording, either directly from the recorder, or remotely using **Remote Manager**.

ROD Mode

The **ROD Mode** setting determines the method of recording.

The available options from the drop-down menu are:

- **Record by Default**

Total Recall records all calls and stores the recording on disk by default.

However, if enabled, parties on the call can use a DTMF key sequence or **Record on Demand** to toggle between “discard” and “keep” the recording of the whole call.



- **Don't Record by Default**

Total Recall records all calls, but automatically deletes the recording at the end of each call.

However, if enabled, parties on the call can use a DTMF key sequence or **Record on Demand** to toggle between “discard” and “keep” the recording of the whole call.

- **Add Notes Only**

Total Recall records all calls and stores the recording on disk by default.

The parties on the call can not use a DTMF key sequence or **Record on Demand** to control recording. However, they can use **Record on Demand** to add notes to the call while the call is in progress.

- **Record Partial Calls**

Total Recall does not record calls by default.

However, parties on the call can use a DTMF key sequence or **Record on Demand** to toggle between “pause” and “continue” recording during the call as many times as they wish.

Total Recall will store only the parts of the call when recording was active.

- **Disallowed**

Total Recall records all calls and stores the recording on disk by default.

The parties on the call can not use a DTMF key sequence or **Record on Demand** to control recording, nor can they use **Record on Demand** to add notes to the call while the call is in progress.

Allow ROD Key / ROD Phone Key

With **Allow ROD Key** checked, parties on the call can use a DTMF key sequence to control (pause, re-start, keep, discard ...) recording. The **ROD Phone Key** parameter specifies the DTMF key sequence.



For ROD Key recording control, it is not necessary to install **Record on Demand** or to assign ROD Agents in Remote Manager.



ROD Key functionality relies on the presence of DTMF tones.

Conflicting Extension Policies

In the event of a call between 2 extensions with conflicting extension policies, the settings for the extension with **ROD Mode** *other than* ‘Record Partial Calls’ will take precedence over the settings for the extension set to ‘Record Partial Calls’.

For example, for a call between extensions A and B, where extension A is set to ‘Record By Default’ with monitoring disabled, and extension B is set to ‘Record Partial Calls’ with monitoring enabled, the policy for extension A applies to the call – the entire call is recorded by default, and monitoring is disabled.

If **ROD Mode** is identical for both extensions, the policy for the extension with monitoring enabled takes precedence over the policy for the extension with monitoring disabled.

For example, if extension A is set to ‘Record By Default’ with monitoring disabled, and extension B is also set to ‘Record By Default’ but with monitoring *enabled*, the policy for



extension B applies to the call – the call is recorded by default, and monitoring is enabled.



If anyone in your organisation specifically does not want any of their calls to be monitored, they must be made aware of the above rules.



To set default recording policy:

1. In the Default Recording Policy pane, check or uncheck **Enable Monitoring** as appropriate.
2. Select the **ROD Mode**.
3. Check or uncheck Allow **ROD Key** and enter **ROD Phone Key** as appropriate.
4. Click **Apply**.



To set extension specific recording policy:

1. In the Extension Recording Policies pane, click **Add**.

The **Add Extension Settings** dialog appears.

The screenshot shows a dialog box titled "Add Extension Recording Policy". It contains the following fields and controls:

- Extension:** A text input field.
- Description:** A text input field.
- Enable Monitoring:** A checkbox that is checked.
- ROD Mode:** A dropdown menu currently showing "Record by Default".
- Allow ROD Phone Key:** A checkbox that is unchecked.
- ROD Phone Key:** A text input field containing the number "11".
- Buttons:** "OK" and "Cancel" buttons at the bottom.

2. Enter the extension name or number that you wish to create a specific recording policy for.
3. Enter a **Description** for the extension if desired.
4. Uncheck **Enable Monitoring** to disable monitoring for the extension if required.
5. Select the required **ROD Mode** for that extension.
6. Check **Allow ROD Key** and enter a **ROD Phone Key** if required.
7. Click **OK**.
The extension recording policy appears in the Extension Recording Policies pane.
8. Repeat the above process for further extensions as necessary.
9. Click **Apply** when you have finished configuring extension recording policies to save your settings.



To remove an extension specific recording policy:

1. Select the extension in the Specialised Extensions pane.
2. Click **Remove**.



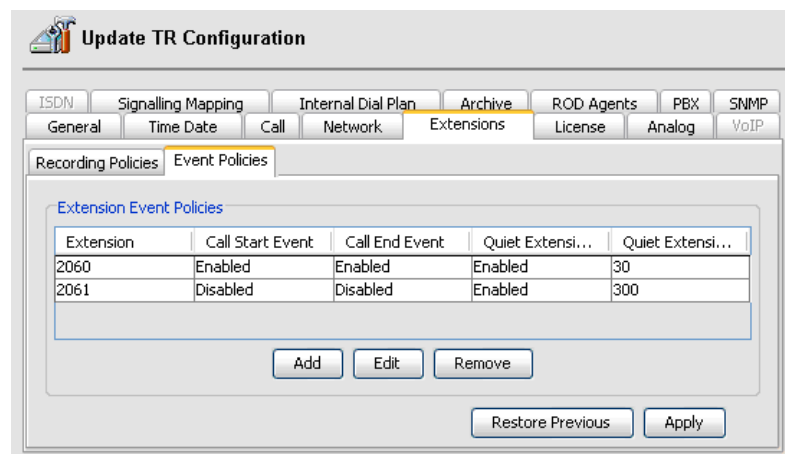
The extension recording policy disappears from the Extension Recording Policies pane.

3. Click **Apply**.



The remove action is immediate. You will not be asked to confirm the action.

28.1.2. Event Policies



‘**Events**’ are activities (or lack of) on a specific extension that **Total Recall** can generate an Event Log entry and an SNMP trap for when detected. The activities that can be configured to generate an ‘event’ are:

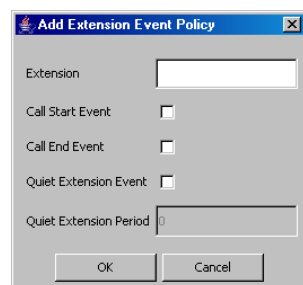
- **Call Start:** i.e. an event is generated every time a call starts on a specified extension.
- **Call End:** i.e. an event is generated every time a call ends on a specified extension.
- **Quiet Extension:** i.e. an event is generated when there is a lack of activity (new calls) on a specified extension for a specified period of time.



To set extension specific event policy:

1. In the Extension Event Policies pane, click **Add**.

The **Add Extension Event Policy** dialog appears.



2. Enter the extension number.
3. Check **Call Start Event** to generate an event every time when a call starts on the specified extension.



4. Check **Call End Event** to generate an event every time when a call ends on the specified extension.
5. Check **Quiet Extension Event** to generate an event if there is no activity (new calls) on the specified extension for a specified period of time, and then enter the period in hours in the **Quiet Extension Period** field.
6. Click **OK**.
The extension event policy appears in the Extension Event Policies pane.
7. Repeat the above process for further extensions as necessary.
8. Click **Apply**.



To remove an extension specific event policy:

1. Select the extension in the Extension Event Policies pane.
2. Click **Remove**.

The extension event policy disappears from the Extension Event Policies pane.

3. Click **Apply**.



The remove action is immediate. You will not be asked to confirm the action.

28.2. Archive

The **Archive** tab lets you configure automatic archiving, and also allows to configure network archiving (optional on **TR Rack**) parameters for manual archiving and searching. The **Archive** tab contains the configuration tabs for **Auto Archive**, **Manual Archive** and **Search Archive**.

28.2.1. Auto Archive

Use the **Auto Archive** tab to enable and configure automatic archiving.



Total Recall can be configured to archive automatically at specified intervals, and/or to display a reminder when the hard drive reaches a specified percentage of capacity.



The **Auto Archive** function archives all calls that have not been archived to a DVD/CD, or to optional BD media or a Network Share. Calls that have previously been manually archived will not be included in the **Auto Archive**.



Ensure that you have a blank DVD/CD/BD, or one with sufficient space on it, in the drive. If there is insufficient space on the DVD/CD/BD to complete the archive, **Total Recall** will archive as much as it can, however it will not prompt you to insert additional disks.



To Configure Automatic Archive:

1. Check the **Enable Auto Archive** check box.
2. Enter the **Archive Period** (this will refer to days or weeks, depending on your selection in point 3).
3. Select the **Archive Period Type** (days / weeks).
4. Select the **Archive Device Type**.

To archive to a DVD/CD/BD select DVD/CD and click **Apply**. However, to archive to a Network Share (optional on **TR Rack**), select Network Share and continue as follows:

5. Select the **Network Share Type**, which may be Windows (WIN) or Linux (NFS) type. Your system administrator will supply these details.
6. Enter the **Network Share Path, User and Password**. Your system administrator will supply these details.



In the **Network Share User** field, it can be advantageous to enter the credentials in the format DOMAIN\USERNAME, WORKGROUP\USERNAME or PC-NAME\USERNAME. Total Recall will attempt to authenticate your credentials with the network domain server by default, so specifying the domain, workgroup or PC name will be required, depending on the credentials you want TR to use.

7. Select **Apply**.



To enable Archive Reminder:

1. Check the **Archive Reminder** check box.
2. Select the capacity threshold at which the reminder will display (available options are 50% / 75% / 90%).
3. Select **Apply**.



28.2.2. Manual Archive

Use the **Manual Archive** tab to configure a Network Share (optional on **TR Rack**) for manual archiving. You must configure the Network Share parameters here if you wish to manually archive to a Network Share from the **Total Recall** Search Menu.

The configuration parameters are exactly the same as the **Auto Archive** menu in **Section 28.2.1**.



It is important to configure the access to the Network Share correctly. This requires configuration on the host that is managing the Network Share as well **Total Recall**.

28.2.3. Search Archive

Use the **Search Archive** tab to configure a network share for searching. You must enter the correct network share parameters here if you wish to search an archive on a network share from the **Total Recall** Search Menu.



28.3. Network

ISDN | Signalling Mapping | Internal Dial Plan | Archive | ROD Agents | PBX | SNMP
General | Time Date | Call | Network | Extensions | License | Analog | VoIP

Network Interfaces

Connector	IP Address	Netmask	Gateway	Usage
LAN 1	192.168.4.168	255.255.255.0		RemoteMana...
LAN 2	192.168.2.100	255.255.255.0		

Edit

Remote Manager Related Settings

IP Address: 192.168.4.168

Port Base: 10010

Host Name:

Max Session: 5

Session Duration (Hours): 2

Restore Previous Apply

Use the Network Settings tab to configure the **Total Recall** Ethernet port(s) for IP communication and to specify connection details for **Remote Manager** access to the **Total Recall**.

28.3.1. Network Interfaces

The **Network Interfaces** pane displays a list of all Ethernet ports on the recorder, along with their assigned IP address, netmask, default gateway and usage. Your **Total Recall** system has one TCP/IP ethernet port, so only **LAN 1** is relevant for your configuration.



To edit a network interface configuration:

1. Select the interface in the **Network Interfaces** pane.
2. Click **Edit**.
The **Edit Network Interface** dialog displays.
3. Enter the **IP Address**, **Netmask** and default **Gateway** as required.
4. Click **Apply**.

28.3.2. Remote Manager Related Settings Pane

Use the Remote Manager Related Settings pane to specify connection details for **Remote Manager** to the **Total Recall** recorder.

Select the IP address that will be used for communication between **Remote Manager** and **Total Recall** (**LAN 1**) from the drop-down menu, and configure the **Max Sessions** and **Session Duration** as required. Maximum Sessions refers to the maximum number of simultaneous **Remote Manager** connections to the Total Recall system, while Session Duration refers to the total amount of time that a **Remote Manager** session may remain connected to the unit before timing out.



28.4. General

The screenshot shows the 'General' tab of the configuration window. It includes tabs for TSDN, Signalling Mapping, Internal Dial Plan, Archive, ROD Agents, PBX, and SNMP. The 'General' sub-tab is active, showing fields for Recorder ID (7), User Credentials (Administrator Password and User Password), Session Settings (Enable Timeout checked, Idle Timeout 1 min), and Recent Calls Settings (Update Period 5 secs, Records to Show 10). Buttons for 'Restore Previous' and 'Apply' are at the bottom.

Use the **General** tab to set the administrator and user passwords and the recorder ID, as well as to configure the system timeout settings and the refresh rate for 'Recent Calls' functionality.

28.4.1. User and Administrator Passwords

Total Recall supports 2 passwords – the **User Password** and the **Administrator Password**.

By default the **Total Recall** user interface automatically locks after 120 seconds of inactivity, and can only be unlocked by entering a password.

The User Password allows access to all functionality, *unless* an Administrator Password has been assigned – in which case, the User Password does not allow access to the Options Menu, or the option to delete calls from the hard drive during a manual archive.

If an **Administrator Password** is assigned, only the Administrator Password allows access to the Options Menu and the option to delete calls during a manual archive.



To set the administrator or user password:

1. Click the **Administrator Password** or **User Password** button.
2. Enter the password in the **Password** field.
3. Re-enter the password in the **Confirm Password** field.
4. Click **Apply**.

28.4.2. Recorder ID

For installations that include multiple recorders, it may be useful to be able to identify which recorder a particular call originated from. Setting a unique recorder ID permits this function. The call list in the **Remote Manager** playback screen can be configured to display the recorder ID against each call.

**To set the Recorder ID:**

1. Enter the ID in the **Recorder ID** field.
2. Click **Apply**

28.4.3. Session Settings

Use the **Session Settings** menu to enable or disable the system timeout function. Disabling system timeout will prevent **Total Recall** from automatically locking after a designated time period. Care must be taken with this setting; if system timeout is disabled all unit functions will remain open *according to the permissions of the last password entered*.

**To configure your session settings:**

1. Click the **Enable Timeout** check box to enable or disable automatic system timeout.
2. Enter your desired Timeout Period, in minutes. This is the amount of time that must pass without user interaction until **Total Recall** will automatically lock itself.
3. Click **Apply** at the bottom of the menu to save your settings.

28.4.4. Recent Calls Settings

Use the **Recent Calls Settings** menu to configure the operation of the automatic “recent call recall” functionality in the search menu. The **Update Period** refers to how frequently **Total Recall** will refresh the search screen with the most recent calls, while **Records to Show** refers to how many call records will be displayed on the search screen when in “recent call recall” mode.

**To configure your Recent Calls settings:**

1. Specify the required **Update Period**, in seconds.
2. Specify the **Number of Records** to display in the search screen on your **Total Recall** system.
3. Click **Apply** at the bottom of the menu to save your settings.

28.5. Call

ISDN		Signalling Mapping		Internal Dial Plan		Archive		ROD Agents		PBX		SNMP	
General		Time Date		Call		Network		Extensions		License		Analog	
Min Recording Length(sec)				5									
Max Recording Length(min)				60									
Max Call Lifetime (months)				0									
VOX Timeout				6									
<input type="checkbox"/> Use Recording Period													
Start Time				08:30:00									
End Time				19:00:00									
<input type="button" value="Restore Previous"/> <input type="button" value="Apply"/>													

Use the **Call** menu to configure system-wide call handling settings.



28.5.1. Minimum Recording Length

Total Recall will automatically discard the record of calls with duration that is less than the **Minimum Recording Length**.

Minimum Recording Length can be set to **0**, which instructs the **Total Recall** to ignore this parameter, or to a value between 1 and 19 seconds, in increments of one second.

The default setting is **0**.



Care needs to be taken with this setting – it is usual to record all calls, and only under very specific circumstances (for example, noise spikes external to the recorder causing frequent and unwanted false recordings) that this setting should be changed from the default.

28.5.2. Max. Recording Length

Total Recall can record calls of virtually any length, but longer calls are broken up into separate records according to the **Max Recording Length** setting.

This allows lengthy recordings (for example, radio monitoring) to be presented as a series of recordings in manageable chunks.

If a call reaches the **Max Recording Length** setting, the record is rolled over to a new record. Rolled-over records are marked with (CONT) after the number in the 'To' field on the **Logging** screen.

The **Max Recording Length** setting can be between 1 and 60 minutes in increments of one minute, and applies equally to all channels.

The default setting is 60 minutes.

28.5.3. Max. Call Lifetime

The **Max Call Lifetime** is the maximum time a call record is kept before it is automatically deleted.

Max Call Lifetime can be set to **0**, which instructs the **Total Recall** to ignore this parameter, or to a value between 1 and 24 months, in increments of 1 month.

The default setting is **0**.



With **Max Call Lifetime** set to **0**, call records may still be automatically deleted as part of the automatic cleanup process. See *Deleting Calls* on page 56 for more information.

28.5.4. VOX Timeout

If VOX is set as the recording trigger for a channel, the **VOX Timeout** determines the maximum length of 'quiet time' that is permitted before a recording on that channel is terminated.

This ensures that if a call has ended and the phone is not hung up properly, the recorder will not continue to record silence indefinitely.



VOX Timeout settings can be between 2-15 secs, and applies to all channels that have VOX as their Trigger setting.

The default setting is 15 seconds.



In the event that an active call is put on hold, and there is no ‘music on hold’ being played, the recording will terminate according to the **VOX Timeout** setting. When the call recommences, the VOX trigger will immediately open a new record, and the complete conversation will be captured across two recordings.



For channels set to VOX trigger, the interval between calls must exceed the **VOX Timeout** setting. If a fresh call starts within the **VOX Timeout** of the previous call, **Total Recall** assumes it is a continuation of the first call, and both calls will appear as one call record.

28.5.5. Recording Period

Set a recording period if you want to record only between certain times.

During non-recording times, a message is displayed on the **Total Recall** LCD to indicate that no recording is taking place.



To set call handling settings:

1. Enter the **VOX Timeout**, in seconds.
2. Enter the **Min Recording Length**, in seconds.
3. Enter the **Max Recording Length**, in minutes.
4. Click **Apply**.



To set a recording period:

1. Check the **Use Recording Period** check box.
2. Click the **Start Time** or **End Time** button.
The **Set Time Range** dialog displays.
3. Set the required recording period using the sliders.
4. Click **Apply**.



28.6. Time Date

Use the **Time Date** tab to set the recorder time and date settings. The time and date on the recorder can be set manually, or automatically via an NTP server (recommended).



To set the time manually:

1. Click the **Set Time** check box.
2. Click the **Date** button.
3. Set the date using the **Calendar** dialog.
4. Set the **Time** (select hours, minutes or seconds, and enter values using the keyboard, or use the up and down arrows to change the values in increments of 1).
5. Select the **Time Zone Area**.
6. Select the **Time Zone City**.



The call database must be empty in order to set the Time Zone Area and City.

7. Click **Apply** to save your settings.



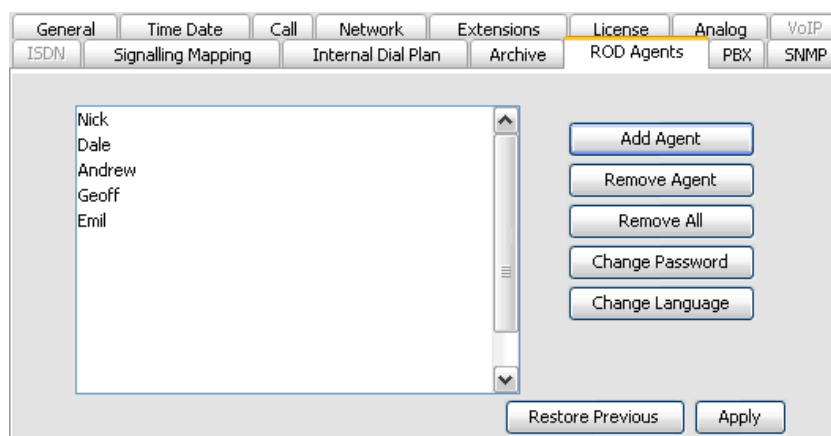
To use NTP (Network Time Protocol) to set the time and date automatically:

1. Ensure that the system IP address and Gateway are configured correctly – see **Section 18.6** for further details.
2. Select **Synchronise with Network Clock**.
3. Enter the IP address for at least one NTP server.



If you enter IP addresses for 2 NTP servers, the top one in the list becomes the 'preferred' server, and **Total Recall** will synchronise with the second server if the preferred server is unavailable.

28.7. ROD Agents



Use the **ROD Agents** tab to add user accounts (agents) for the **Record on Demand (ROD) Client** software, included with your **Total Recall** system. **ROD** gives users configurable control over recording on their extension via an easy-to-use PC taskbar application.

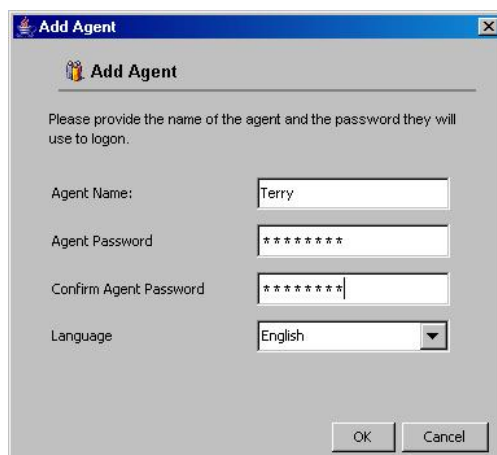
ROD users must be added as agents on this tab (and the changes applied) before they can log into the **ROD Client** from their PC.



To add a ROD agent:

1. Click **Add Agent**.

The Add Agent dialog displays.



2. Enter the **Agent Name**. The user must use this name to log into their **ROD Client**.
3. Enter the **Agent Password** (alpha/numeric, at least 1 character).
4. Re-enter the **Agent Password**.



5. Select the preferred display language. This is the language that will be used by the **ROD Client** when the user logs in.
6. Click **OK**.



To remove a ROD agent:

- Click the agent in the list and click **Remove Agent**.



The remove action is immediate. You will not be asked to confirm the action.



To remove all agents:

- Click **Remove All**.



The remove action is immediate. You will not be asked to confirm the action.



To change an agent's password or display language:

- Click the agent in the list and click **Change Password** or **Change Language**.

28.8. Signalling Mapping (TR Rack Only)

Match Expression	Replacement
0297482304	Nicks Mobile
0297482404	Andrews Mobile
0297482504	Dales Mobile
0299592490	Head Office

Test Mapping

Test Raw ID: 0297482304
Mapped ID: Nicks Mobile

Use the **Signalling Mapping** tab to configure the conversion of calling and called ('From' and 'To') numbers extracted from call signalling to alternative values. This may be configured to make call search and replay more convenient, or to expedite the configuration of extensions.

Where a From or To number for a current or recorded call matches a signalling map entry, the 'mapped' value will be displayed in its place, in all relevant locations (the **Total Recall** Logging and Search Screens, and the **Remote Manager** Monitor and Playback tabs). For example, if the phone number 123-456-789 was mapped to the value "Head Office", then "Head Office" would appear in all the relevant locations.

Mapped values can also be used as search criteria on the recorder and in **Remote Manager**.



Numbers that have Signalling Mapping entries can still be used in their raw form as search criteria, but the search results will display the mapped value instead.

Numbers that do not match the Signalling map are displayed in their raw form.

Signalling Mapping entries may be entered as specific one-to-one replacements, or as regular expressions.

 See *Regular Expressions* on page 73 for further information.

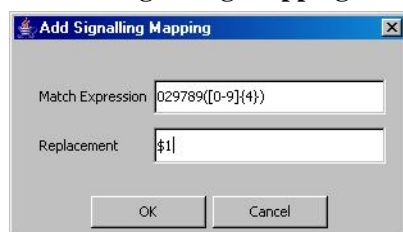
28.8.1. Creating Signalling Map Entries



To create a signalling map entry:

1. In the **Mapping** pane, click **Add**.

The **Add Signalling Mapping** dialog displays.



2. In the **Match Expression** field, enter a raw value or an expression that defines the matching criteria.
3. In the **Replacement** field, enter the appropriate replacement value or output variable.
4. Click **OK**.

The table below shows examples of signalling mapping of various types, plus example input values and the respective mapped output values.

Expression Type	Match Expression	Replacement	Example Input	Mapped Output
Number to extension	0125245678150	150	0125245678150	150
Number to user	0125245678150	dave	0125245678150	dave
Extension range	0125245678([0-9]{3})	\$1	0125245678250	250
			0125245678251	251



To test a signalling map entry:

1. In the **Test Mapping** pane, enter an example ID in the **Test Raw ID** field.
2. Click **Test**.

The mapped value is displayed in the **Mapped ID** field.



28.9. Internal Dial Plan (TR Rack Only)

Use the **Internal Dial Plan** tab to define the rules that identify calling or called numbers as ‘extensions’. An ‘extension’ in **Total Recall** is any **Total Recall** recording channel, or any DTMF/CLI number that is included in the **Internal Dial Plan**.



Some **Total Recall** and **Remote Manager** functionality relies on the identification of extensions. **ROD** must be configured on an extension basis. You must either configure the **Internal Dial Plan**, or assign extension values to your analog recording channels in the **Analog** menu.



See *Extensions* on page 22 for further information.

Any mapped values or unmapped numbers that match one or more rules in the Internal Dial Plan are considered to be extensions.

Rules can be entered as specific values, or as regular expressions.



See *Regular Expressions* on page 73 for further information.



To add a rule to the Internal Dial Plan:

1. In the Internal Dial Plan pane, click **Add**.
The **Add Rule** dialog displays.
2. Enter the extension name or CLI/DTMF number that is to be considered an ‘Extension’ for **Total Recall** (or a valid regular expression).
3. Click **Apply**.
The rule is added to the Internal Rule list.

The following table shows examples of Internal Dial Plan rules of various types, with example matches:



Rule	Will match	Example Matches
0125245678150	0125245678150 only	0125245678150
Dave	Dave only	Dave
0125245678[0-9]{3}	0125245678 followed by any 3-digit number	0125245678150 0125245678255
[0-9]{3}	Any 3-digit number	150 251
[^0-9]	Any characters except 0-9	Dave Helen Smith

28.10. Analog

Channel	Trigger Type	Beep Level	DTMF	Extension
1	VOX 4	Off	No	2Day FM
2	VOX 4	Off	No	CH 16 Emergency
3	Off-Hook	Off	Yes	Tanya
4	Off-Hook	Off	Yes	Igor
5	Off-Hook	Off	Yes	2045
6	Off-Hook	Off	Yes	2289
7	Off-Hook	Off	Yes	
8	Off-Hook	Off	Yes	
9	Off	Off	Yes	
10	Off	Off	Yes	
11	Off	Off	Yes	
12	Off	Off	Yes	
13	Off	Off	Yes	
14	Off	Off	Yes	
15	Off	Off	Yes	
16	Off	Off	Yes	

Use the **Analog** tab to set Trigger Type, Beep Level, as well as to set extension values and control DTMF detection for analog channels.

28.10.1. Trigger Type

The **Trigger Type** determines what event type triggers recording on that channel.

The available options are **VOX (1-6)**, **Off-Hook (1-6)** and **Off**.

VOX (1 - 6)

VOX is a voice or audio signal trigger. Recording is automatically triggered when the system detects noise on a channel, and terminated when silence is detected on a channel (according to the VOX timeout setting).

The default setting, VOX 4, corresponds to a -28dBm signal (anything over this level triggers recording).



The highest setting, VOX 6 (high signal / low sensitivity), corresponds to a -20dBm signal. Channels set to VOX 6 will be triggered by loud conversations or signals, but quieter conversations may fail to trigger recording.

The lowest setting, VOX 1 (low signal / high sensitivity), corresponds to a -40dBm signal. Channels set to VOX 1 will be triggered by soft conversations or signals, but noisy lines may also trigger recording.

In most cases the default setting (VOX 4) is adequate.

Off-Hook (1 - 6)

This is the recommended setting for normal recording on PSTN telephone lines. It will cause a call recording to be automatically triggered when the phone handset is taken Off-Hook, and ended when the handset put back On-Hook. If you are recording telephone calls from analog phone lines (POTS circuits), we recommend that you use this as default trigger setting during the initial set-up.

The **Off-Hook** function is triggered by a voltage change on the line. A drop in voltage (On-Hook voltage is typically 48V DC, Off-Hook voltage is typically 8V DC), will normally provide sufficient voltage change to be detected by the recorder, and activate recording. Replacing the receiver would normally stop the recording.

Different Off-Hook settings are available to provide triggering at different voltages.

The Off-Hook voltage ranges and their corresponding Off-Hook Settings are:

- Off-Hook #1: Recording Trigger with Off-Hook voltage below approximately 5 volts and On-Hook is above 7 volts.
- Off-Hook #2: Recording Trigger with Off-Hook voltage below approximately 10 volts and On-Hook is above 12 volts.
- Off-Hook #3: Recording Trigger with Off-Hook voltage below approximately 14 volts and On-Hook is above 16 volts.
- Off-Hook #4: Recording Trigger with Off-Hook voltage below approximately 17 volts and On-Hook is above 19 volts.
- Off-Hook #5: Recording Trigger with Off-Hook voltage below approximately 20 volts and On-Hook is above 22 volts.
- Off-Hook #6: Recording Trigger with Off-Hook voltage below approximately 25 volts and On-Hook is above 27 volts.

Example 1: If the On-Hook voltage is 48volts and the Off-Hook voltage is lower than 15 volts use setting Off-Hook #4.

Example 2: If the On-Hook voltage is 24volts and the Off-Hook voltage is lower than 3 volts use setting Off-Hook #1. If the On-Hook voltage is above the range that is set the channel will start to record.



The Off-Hook voltage ranges may vary slightly due to phone line conditions and component tolerance. Off-Hook #4 would be the recommend setting for most standard phone line recording applications. If the phone line does not have DC voltages that can be



sensed by the recorder for start/stop recording so that an off-hook setting does not work satisfactorily, the **VOX** trigger should be used instead. Each channel can be individually set as is best for its source of conversations. If the Off-Hook setting does not work satisfactorily, the **VOX** trigger should be used instead.



If a channel is set to Off-Hook and no line is connected to the channel, the channel will commence recording, which can only be stopped by setting the channel to OFF or VOX. Caller ID data (inbound number information - CID) will only be available to the recorder on channels recording directly from phone lines and with the CID data provided by your phone service provider in the Belcore standard format. Caller ID data is not available for channels recording from handset/headset audio.

Manual

This setting prepares the channel to receive manual recording instructions from an external third party applications developed in conjunction with **Total Recall**. Most installations do not use this setting.

Off

A channel that is set to Off is effectively deactivated and no recording is possible on that channel. It is recommended that all unused analog channels be set to Off.

28.10.2. Beep

Beep ('pip tone') is a beep sound generated every 15 seconds to indicate to both parties that the call is being recorded.

In some countries, it may be mandatory to play a beep tone when recording. For others, it is a matter of preference or company policy.



Total Recall does not transmit a recorded message to advise that recording is taking place.

The Beep setting determines the volume of the beep. The available options are Hi, Mid, Low or Off.

The default setting is Off.

28.10.3. Detect DTMF

Total Recall detects DTMF tones during calls on all channels. However, analog channels may be used for recoding analog signals other than telephone calls, such as radio. Such signals do not carry DTMF digits, however they may contain audio frequencies that resemble DTMF tones, which **Total Recall** will incorrectly interpret as DTMF.

Set **Detect DTMF** to **On** to enable DTMF detections on channels used to record telephone calls, and to **Off** for channels that are used for signal sources that do not contain DTMF.



28.10.4. Extension

For all analog recording where there is no calling or called number signalling on the line, it is advisable to set an extension value for each connected channel.

Setting an **Extension** value for a channel means that:

- Calls (or other recordings) on that channel can be searched for by extension value.
- Extension specific recording policies can be created.
- Extension specific venting policies can be created.

Where an analog channel is used for recording telephone calls, any extension information in the call signalling on the line will override the extension value set for that channel.



To set Analog Channel Settings:

1. Highlight the channel and click Edit.

The Edit Channel Settings dialog displays.

2. Select the Trigger Type for the channel.
3. Select Beep Level for the channel.
4. Set the DTMF control for the channel.
5. Set an Extension value for the channel.
6. Select OK.



Check the Apply All box to apply the Trigger Type, Beep and DTMF settings to all channels.

28.11. PBX (Optional – TR Rack Only)

Use the **PBX** tab to configure **Total Recall** to analyse SMDRs from the PBX, which is used to capture extension-side information. The **PBX** tab contains the following configuration tabs:

- CDR Collector.
- CDR Parser.



28.11.1. CDR Collector

General Time Date Call Network Extensions License Analog VoIP
ISDN Signalling Mapping Internal Dial Plan Archive ROD Agents PBX SNMP

CDR Collector CDR Parser

Collector Type UDP

UDP Socket Parameters

Port 6002

Address 192.168.4.168

Live Data

1	1220	7001	01/24	08:38:59	00:01:52	0	33878801	01	0.00
---	------	------	-------	----------	----------	---	----------	----	------

Get Collected Save As Email

Restore Previous Apply

Use the **CDR Collector** tab to configure the connection to the PBX.

28.11.2. Collector Type

The Collector Type is the method by which **Total Recall** is connected to the PBX.

Options are:

- UDP.
- TCP Server (PBX initiates connection).
- TCP Client (**Total Recall** initiates connection).

28.11.3. UDP/TCP

With UDP or TCP (client or server) selected, the following parameters must be supplied:

- **Port**

This is the UDP or TCP port that will be used for IP communication between the PBX and the **Total Recall**.

- **IP Address**

This is the IP address that will be used for IP communication between the PBX and the **Total Recall**.



28.11.4. Verifying the Connection



To verify that the connection has been configured correctly:



This procedure is best performed when there is minimal activity on the PBX.

1. Select the **Collector Type**.
2. Enter the appropriate **Port** and **IP Address** for the administration interface.
3. Click **Apply**.
A message displays to confirm that the settings are temporarily active on **Total Recall**.
4. Make a test call or calls. The test calls should reflect the type of calls that are normally made on your PBX, and should vary in direction (incoming / outgoing / internal).

5. Click **Get Collected**.

If the settings are correct, **Remote Manager** retrieves the last 10 SMDR strings from the recorder and displays them in the **Live Data** field. Inspect the data to verify that the correct data is being collected. You should be able to recognise calling and called numbers somewhere in the strings. If you can, see **Parsing the Data** below.

If the settings are incorrect, no data is displayed. Check your settings against the PBX configuration and try again.

28.11.5. CDR Parser

In order for **Total Recall** to make use of the SMDRs, it must be able to parse the SMDRs correctly. Use the **CDR Parser** tab to upload a parser.

The screenshot shows the 'CDR Parser' tab within the 'CDR Collector' section. The 'Parser' dropdown is set to 'AvayaIPOfficeParser.class'. Below this, the 'Test Parser' section displays a sample SMDR string: '1 1220 7001 01/24 08:38:59 00:01:52 0 33878801 01 0.00'. Below the string are buttons for 'Get Last String' and 'Parse'. At the bottom, a table shows the parsed attributes and their values.

Attribute	Value
Date Answered	24 Jan 2008
Time Answered	08:38:59
Call Type	OutgoingCall
Call Duration	112
Called Number	33878801

Buttons at the bottom include 'Restore Previous' and 'Apply'.



Parsers are not supplied with **Remote Manager**. However, custom parsers are available from your supplier.



To parse your data using a parser:

1. Click the **CDR Parser** tab.
2. In the **Select Parser** pane, select the appropriate parser for your CDR format from the drop-down **Parser** list.
3. In the **Test Parser** pane, click **Get Last String**.
The most recently collected data string is displayed in the text field.
4. Click **Parse**.
The table is populated with attributes and values from the data.
5. Inspect the table to confirm that the string has been parsed correctly for all attributes.
If the table is populated correctly, the parser is working and extension information will be available for recorded calls.
If the table is not populated correctly, you will require a custom parser.



To request a custom parser:

1. Click the **CDR Collector** tab.
2. Make a selection of test calls that reflect the type of calls that are normally made on your PBX, including:
 - An inbound call from an external number.
 - An outbound call from an internal number.
 - An internal call (extension > extension).
3. Click **Get Collected**.
4. Either:
 - Click **Save As** to create a text file, which you can email to Total Recall Support (at the pre-populated address).
A dialog is presented before the file is saved allowing you to supply information about the test calls made.
 - Click **Email** to attach the data as a text file to a pre-addressed email (using the system default email client).
The generated email also includes prompts to supply information about the test calls made.

On receipt of the data, Total Recall Support will endeavour to write a CDR data parser for your PBX.



28.12. License (TR Rack Only)

ISDN	Signalling Mapping	Internal Dial Plan	Archive	ROD Agents	PBX	SNMP
General	Time Date	Call	Network	Extensions	License	VoIP

Hardware Key

JCFT CARI FAAA

VoIP & ISDN License

License Key: 8888 - 6868 - 8888 - 8888 - 8888 - 8888

Status: Valid ISDN Channels: 0

Expiry Date: Never VoIP Channels: 0

Feature License

License Key: 9999 - 9999 - 9999 - 9999 - 9999 - 9999

Status: Valid Extension Policies: Yes SNMP Integration: Yes

Expiry Date: Never Signalling Mapping: Yes Network Archive: Yes

Internal Dial Plan: Yes RoD Agents: Yes

SMDR Parsing: Yes

Restore Previous Apply

Use the **License** tab to enter new and renewed channel and feature license keys on your **Total Recall Rack**.

The hardware key for the **Total Recall** recorder is displayed as a read-only field for reference.

The VoIP and ISDN license field is not relevant to your **Total Recall Rack**.

Please note that **Total Recall Rack** cannot support VoIP or ISDN recording. Analog channels do not require a channel license key. Analog channels become active automatically when you install analog boards in the system.

The feature license key enables the following application features:

- SMDR Parsing.
- SNMP Alarm Integration.
- Network Archive.

Your system will not support and you will not be able to configure the above features without a valid feature license key.



To enter a new Feature License Key:

1. Click the **License** tab.
2. Enter the **Feature** License as required.
3. Click **Apply**.



28.13. SNMP (Optional, TR Rack Only)

Use the **SNMP** tab to enable and configure the built-in SNMP Agent. This will allow your **TR Rack** to interface with a third party SNMP alarming package.

Traphost	Community	Trap Type
udp:192.168.3.186:162	totalrecall	SNMP V2c Inform

28.13.1. Agent Configuration

The **Agent Configuration** section contains parameters that control the operation of the built-in SNMP agent.

28.13.2. IP Address

This is the IP address that the agent will use for SNMP communication. This should be the IP address of the Ethernet port which is used for remote access.

28.13.3. UDP Port

This is the UDP port that the agent will use for SNMP communication.

28.13.4. Read-only Community

This is the SNMP v1 and v2c community string which allows read only access to the MIBs on the system.

28.13.5. Read-write Community

This is the SNMP v1 and v2c community string which allows read and write access to the MIBs on the system.



To enable the SNMP agent:

1. Check the **Enable SNMP** box.
2. Select the **IP address** from the drop down box.
3. Modify the **Port** if necessary.
4. Specify the **Read-only Community** if required.
5. Specify the **Read-write Community** if required.
6. Click on the **Apply** button.



28.14. Traphosts

The **Traphosts** section allows you to configure SNMP traphosts which will receive events from the **Total Recall**.

 See *Trap Table* on page 119 for a list of events that the traphosts will receive.

28.14.1. Traphost

This parameter specifies the remote traphost which will receive the events. The format of this parameter is:

[<transport>:]<ip address>[:<port>]

For example:

- 192.168.3.186
Specifies a traphost at IP address 192.168.3.186 which expects SNMP communication on port 162 via UDP.
- tcp:192.168.3.186
Specifies a traphost at IP address 192.168.3.186 which expects SNMP communication on port 162 via TCP.
- udp:192.168.3.186:162
Specifies a traphost at IP address 192.168.3.186 which expects SNMP communication on port 162 via UDP.

28.14.2. Community

Sets the SNMP community string for SNMP v1 and v2c transactions; in this case traps.

28.14.3. Trap Type

One of:

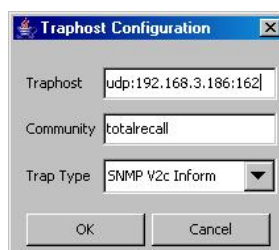
1. SNMP v1 Trap
2. SNMP v2c Trap
3. SNMP v2c Inform



To add a traphost:

1. Click on the **Add** button.

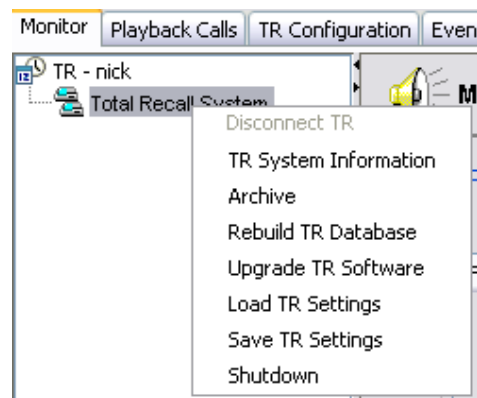
The **Traphost Configuration** dialog displays:





2. Enter the **Traphost** service access point for SNMP transactions.
3. Optionally, specify the **Community** for SNMP v1 and v2c transactions with the traphost.
4. Select the **Trap Type**.
5. Click on the **OK** button. This will take you back to the **SNMP** tab where you must click on the **Apply** button to add new traphost to the configuration of the SNMP agent.

29. System Maintenance



Right clicking on a connected unit in the TR Tree will open a menu allowing you to view important information about the unit, as well to perform authorised system functions.



System Maintenance options are only available when logged in to **Remote Manager** with an Administrator account.

29.1. System Maintenance Options

29.1.1. System Information



The **System Information** screen displays useful system information:

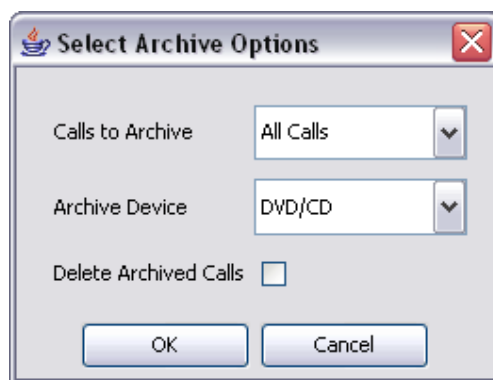
- **Software Revision** – The current software revision on the **Total Recall** unit.



- **Analog Channels** – The number of analog channels currently installed on the **Total Recall** unit.
- **VoIP & ISDN Channels** – This is not relevant to your **Total Recall Desktop** or **Rack** unit.
- **Recorder ID** – The currently assigned Recorder ID.
- **Stored Calls** – The number of individual calls currently on the call database.
- **Disk Space Used** – The percentage of **Total Recalls** onboard storage that is currently used.
- **Archive Device** – The current default archive device.

None of this information is user editable.

29.1.2. Archive



‘Archiving’ copies call files from the onboard system storage to another storage media, such as DVD/CD or (optionally on **TR Rack**) to a network location, for greater portability or long-term storage.

Calls may be archived according to certain parameters. These parameters are:

- **All Calls** – Every call on the internal database.
- **Found Calls** – The calls found in the most recent database search.
- **Unarchived Calls** – Calls that have not yet been archived to a location other than Total Recall’s onboard storage.
- **Tagged** – Calls that have been manually ‘tagged’ by users.



Please note that manually archived calls will not be included in any scheduled **Automatic Archives**.



To archive calls:

1. Select **Archive Calls** by right clicking on a current Total Recall unit in the left hand menu.
2. Select which calls to archive via the drop down menu. Choose to archive **All Calls, Found Calls, Unarchived Calls** or **Tagged Calls**.
3. Choose which location you would like to archive to. Select from **DVD/CD** media or **Network Location** (optional on **TR Rack**, if configured).
4. Select **OK**.

29.1.3. Rebuild TR Database

This option allows you to rebuild the call database on your **Total Recall** unit. A database rebuild is recommended where the system has been subjected to an improper shutdown.



Please note that recording will stop while the system is rebuilding the database.

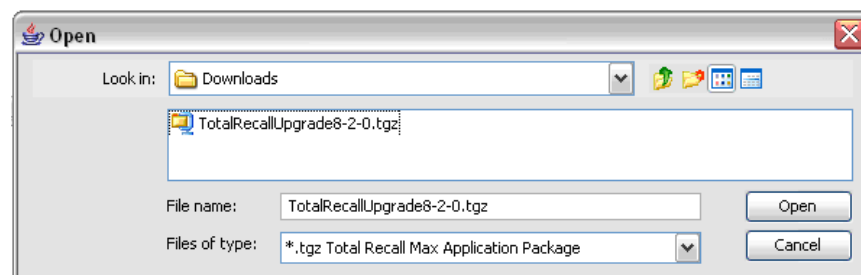
29.1.4. Update TR Software

This option allows you to install an updated version of **Total Recall** software on your system. You need a Total Recall Application CD to upgrade the software on the system.



To upgrade your Total Recall Software:

1. Insert the Total Recall Application CD in the CD/DVD drive on the PC which runs Remote Manager.
2. Select **Upgrade TR Software** via right clicking on a current Total Recall unit in the left hand menu.
3. Select the Total Recall Application package (**.tgz** format) on the application CD as shown on the following screen capture:



4. Click on the **Open** button, then follow the screen prompts to complete the upgrade.



Note that the **Total Recall** system will automatically reboot itself during the upgrade process. Recording does not continue during the upgrade process and while the system is rebooting, which may take up to 5 minutes to complete.



The upgrade function only affects application and operating system files. However as an extra precaution, it is recommended that you back up all important calls from the call database before you perform an upgrade.



Your passwords and system settings are not affected by updating the system software.

29.1.5. Load TR Settings

This option allows you to restore the **Total Recall** system configuration from a file that is stored on the hard drive of your **Remote Manager** PC.



To load TR Settings from a saved configuration file

1. Select **Load TR Settings** by right clicking the **Total Recall** unit in the Device Tree.
2. Navigate to a previously saved configuration file on your hard drive. Click on the file, and then click **Open**.
3. Follow the on-screen prompts to load the new settings.

29.1.6. Save TR Settings

This option allows you to backup the current system configuration to a file that can be stored on your PC hard drive. This saved configuration can be used to restore your system to a previous configuration if required.



To save TR Settings in a configuration file

1. Select **Save TR Settings** by right clicking the **Total Recall** unit in the Device Tree.
2. Navigate to the folder on your hard drive where you would like to save the configuration file. Define a name for your saved configuration, then click **Save**.

29.1.7. Shutdown

This option allows you to remotely shutdown the system.

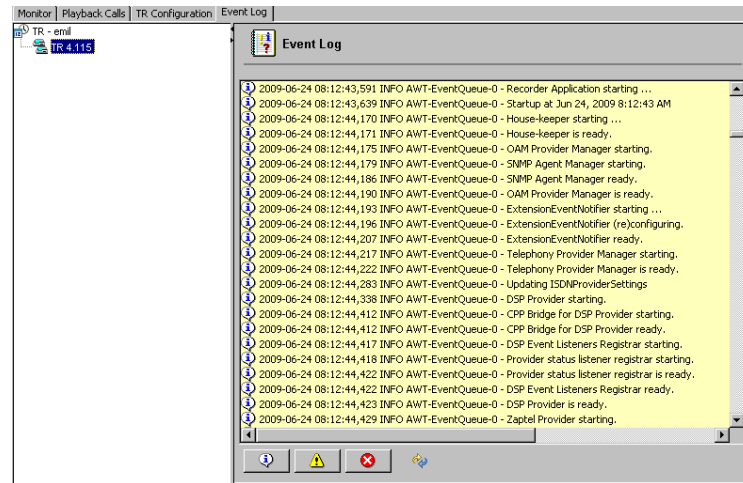


Note that the system will power off and recording will not continue until you restore power to the system.



30. Event Log Tab

Use the **Event Log** tab to view a record of system events for the selected recorder.



30.1. Event Types

The Event Log may contain 3 types of event:

Information

Information events are standard system events and do not require any further action.

Warnings


Warnings are events that may indicate possible future problems, and should be investigated – for example, failed database searches and power failures.

Errors

Errors are events that must be investigated immediately, such as database rebuild failures, auto-archive failures, and DSP card issues.

30.2. Using the Event Log

To filter the displayed entries in the Event Log, click the button for the event type that you wish to view.

To refresh the Event Log, click .

The Event Log can hold approximately 100,000 entries. When the Event Log is full, new entries automatically overwrite old entries.

The contents of the Event Log can be selected and copied out into a text editor to allow keyword searches.



31. Connecting Through Firewalls

Due to the virtually infinite number of possible network configurations it is impossible to document installation solutions for all eventualities.

However, the examples below should provide an idea of the principles behind configuring a **Total Recall** recorder for remote access via a firewall.

The main points to bear in mind are:

- The recorder must be assigned a hostname using **Remote Manager** via a direct connection *before* it can be accessed via a firewall.
- Port forwarding must be done at the firewall to allow audio data through.

31.1. Example 1: Internal Recorder, External PC

In the following example, the **Total Recall** recorder is installed on an internal network with an IP address range of 192.168.3.0/24.

The recorder has been assigned the address 192.168.3.109 to the LAN 1 Ethernet Port.

There is a firewall in place to provide secure access between the internal network and the internet.

The firewall's public (WAN) address is 203.10.10.10, and the internal (LAN) address is 192.168.3.252.

PCs on the internal network are able to access the recorder directly via its IP address across the LAN.

A client would like to be able to connect to the recorder over the internet and through the firewall from home.

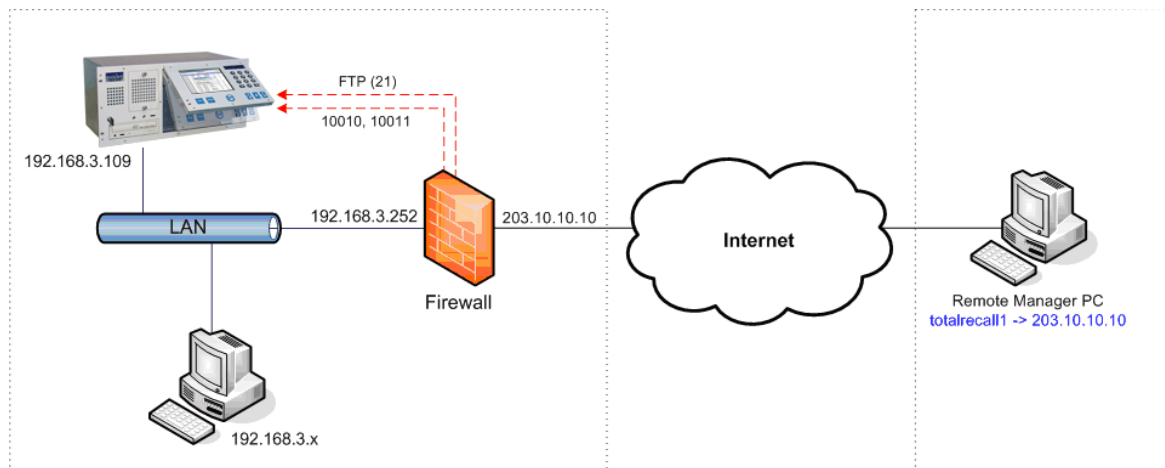


Figure 9 - Remote access - Total Recall behind firewall



To configure the above example network to allow remote access through the firewall:

1. On the **Total Recall** recorder, open **Network Settings** and set the **Default Gateway** for the LAN 1 Ethernet Port to the firewall's internal address (192.168.3.252).



2. Install **Remote Manager** on an internal network PC.
3. Add the **Total Recall** recorder to the **Remote Manager** settings.
4. Use **Remote Manager** to assign a host name to the recorder, for example **totalrecall1**.
5. On the firewall, forward ports **10010** and **10011** to the recorder's IP address (192.168.3.109), and port forward FTP (port 21) if you want to email calls or save calls to local folders.

The above assumes that the **IP Address** and **Base Port** in the Remote Manager settings have been set 192.168.3.109 and 10010.

6. Configure the external PC to resolve the hostname **totalrecall1** to the firewall's public IP address (203.10.10.10).

You can do this by editing the hosts file. For example, on Windows 2000 or XP, open the file: `c:\windows\system32\drivers\etc\hosts`, and add the following line:

```
203.10.10.10    totalrecall1
```

To verify that the hostname is being resolved properly, try pinging the recorder.

7. Install **Remote Manager** on the external PC.
8. Add the **Total Recall** recorder to the **Remote Manager**, using the hostname instead of the IP address.

The internal recorder should now be visible from the external PC.

31.2. Example 2: External Recorder, Internal PC

In the following example, the situation is reversed - the **Remote Manager** client PC is on an internal IP address, trying to access a **Total Recall** recorder which is external to the LAN.

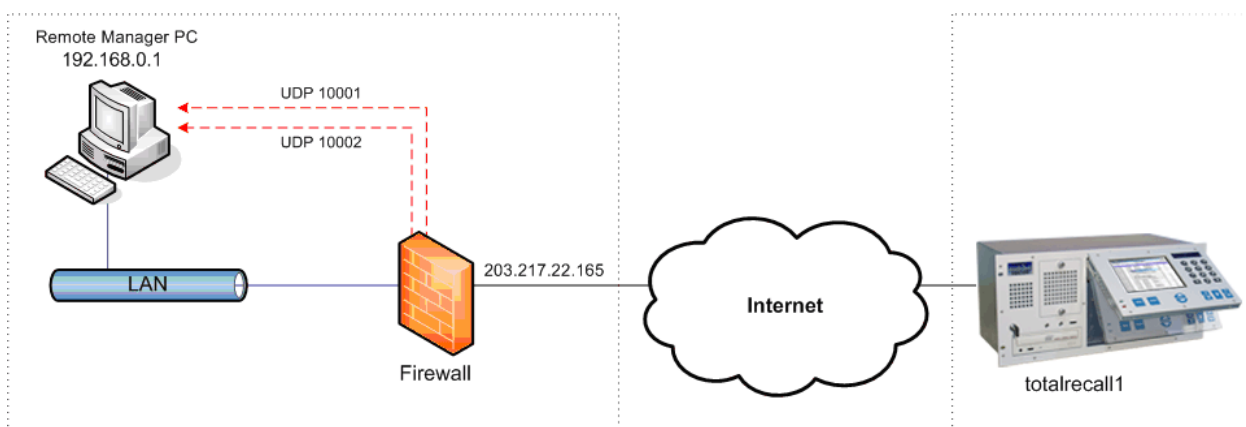


Figure 10 - Remote access - Remote Manager behind a firewall



To configure the above example network to allow remote access through the firewall:



This process assumes you have already assigned a hostname to the recorder. See Example 1.

1. On the firewall, port forward **UDP** from ports **10001** and **10002** to the IP address of the PC running **Remote Manager** (192.168.0.1).
2. Install **Remote Manager** on the PC.
3. Add the **Total Recall** recorder to the **Remote Manager** settings using the hostname instead of the IP address.
4. Check the **Manager Firewall** check box, and enter the external IP address of the firewall (203.217.22.165) in the associated field.

The external recorder should now be visible from the internal PC.

31.3. Example 3: Multiple Remote Manager Clients Behind a Firewall

The following example is similar to the previous one, but with two **Remote Manager** clients PCs behind a firewall, trying to access a **Total Recall** recorder which is external to the LAN.

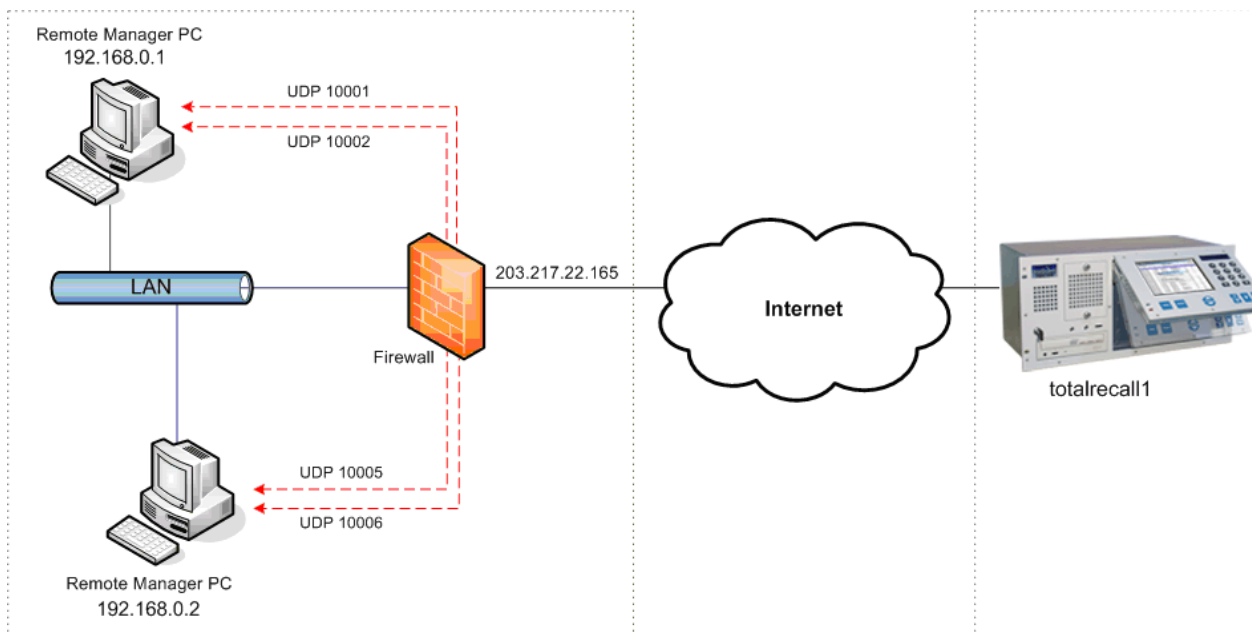


Figure 11 - Remote access - Total Recall behind a firewall, 2 Remote Manager PCs



To configure the above example network to allow remote access through the firewall:

1. Configure the first PC as in the above example:

On the firewall, port forward **UDP** from ports **10001** and **10002** to the IP address of the PC running Remote Manager (192.168.0.1).

2. Install **Remote Manager**, add the recorder (using the hostname instead of the IP address) with **Manager Firewall** checked, and the firewall's external IP address supplied.
3. Install and configure **Remote Manager** on the second PC identically to the first, but assign port **10005** as its base port (**File** menu > **Advanced**).
4. On the firewall, port forward **UDP** from ports **10005** and **10006** to the IP address of the second PC (192.168.0.2).
The external recorder should now be visible from both internal PCs.
5. Repeat the process for any further PCs, using different port pairs each time.

31.4. Limitations of Firewalled Connections

31.4.1. Transfer of Files

Transfer of files is done using the FTP protocol, on its default port (21). If two recorders are behind the same firewall, it is not possible to port forward FTP to both machines. The user will only be able to transfer files from the recorder which is receiving FTP.

If this limitation is unacceptable, alternatives are using a VPN, or screen-sharing technology (such as Microsoft's Remote Desktop Connection).



Record on Demand

32. Introduction

Record on Demand (ROD) is an optional Windows®-compatible client application that provides additional real-time recording control to **Total Recall** end users (usually agents). **Record on Demand** is supplied on CD free-of-charge with all Total Recall systems, for installation and use on as many PCs as required.

Utilising an existing LAN connection, users can start and stop the recording of current calls, control which calls on their line are recorded and which aren't, and add notes to current calls – all from a simple taskbar application on the user's PC.

If a user requires **ROD** functionality but does not have immediate access to a PC, recording can also be controlled by the use of configurable codes entered on a user's phone.

ROD functionality is configured (either as a 'global' setting across all extensions, or on an individual extension basis) on the **Total Recall** unit itself, or in **Remote Manager**.



See *ROD Agents* on page 92 for information about using **Remote Manager** to add and manage **ROD** users.

33. System Requirements

Minimum system requirements for **ROD** are:

- Multimedia PC running Windows 2000/XP/Vista32/Vista64
- 100Mb free HDD space
- 256Mb RAM
- Display resolution 800x600, 256 colours
- LAN device or modem



ROD agents are added and managed using **Remote Manager**, which must be installed and operational before **ROD** can be used.

34. Installation

It is recommended that the system administrator perform the initial installation and configuration.

ROD Software is supplied on a CD together with **Total Recall**.



To install, insert the CD into the user's PC DVD/CD drive, and follow the onscreen instructions. If the install does not start automatically, manually run **setup.exe** from the disc.

Please check with your system administrator before installing **ROD**.



Do not insert the CD into the **Total Recall** DVD/CD drive – **ROD** is Windows PC software only.

35. Configuration

35.1. Running ROD for the First Time

To start **ROD**, double-click the desktop shortcut, or select **TR Record on Demand** from the **Start** menu.

The first time **ROD** is run, the **Configuration** dialog displays.

35.1.1. Configuration Dialog

The Configuration dialog box is shown with the following fields and values:

Field	Value
Total Recall IPAddress:	192 . 168 . 4 . 168
Total Recall Extension	Nick
Total Recall Password:	****
Total Recall Port Base	10010
Version:	8.2.0

Use the **Configuration** dialog to supply **Total Recall** connection details, and to set the extension on which the user will have recording control.

35.1.2. IP Address

Enter the IP address of the recorder on which the user will have recording control. The IP address used for ROD communication is usually that of LAN 1.

35.1.3. Total Recall Extension

Enter the extension on which you want the user to have recording control.

This could be their own extension, or someone else's extension (for example, if they are monitoring calls using **Remote Manager**).

You may use a mapped value or a raw (unmapped) value when defining the extension over which ROD will have control; however you must ensure that



Extension values and the Internal Dial plan have first been configured on the Total Recall unit.



See especially sections **28.9** and **28.10.4** of this manual for further information.

35.1.4. Total Recall Password

Enter a user or administrator password for the **Total Recall** recorder. This is not the user (agent) password, but rather the password that you would use to access the Total Recall system via the control panel.

35.1.5. Total Recall Port Base

Enter the port base for the recorder. This can be left at the default value (**10010**) unless it has been changed on the recorder.

35.1.6. Version

This is the **ROD** software version (read-only).

This must match the **Remote Manager** software version in order for **ROD** to function properly.



These settings can be modified at any time by the user, by clicking the **Configuration** button on the **ROD** main dialog.

When you have supplied the necessary information, click **OK**.

35.2. ROD Agents

ROD agents must be configured via **Remote Manager** settings before they can use **ROD** to connect to a **Total Recall** and control recording on their extension.



See **ROD Agents** on page 92 for further information.

35.3. Recording Control

The level of recording control that the user has on the configured extension is determined by the **ROD Mode** Extension Settings on the recorder, which can be set either directly, or remotely from **Remote Manager**.



See **Extensions** on page 78 for information about setting **ROD Mode** options using **Remote Manager**.



Total Recall Record on Demand will only operate in scenarios where the direction of the call can be established, generally by the presence of dial tone, DTMF or CLI signals.



SNMP Traps

36. Event Types

The **Total Recall** can generate 3 types of events as SNMP v1 and v2c traps to SNMP traphosts:



Information

Information events are standard system events and do not require any further action.



Warnings

Warnings are events that may indicate possible future problems, and should be investigated – for example, failure to archive and power failures.



Errors

Errors are events that must be investigated immediately, such as database rebuild failures and hardware issues.

The TOTALRECALL-MIB contains the SNMP object identifiers (OIDs) for all traps. In general the root of all trap OIDs is “TOTALRECALL-MIB::trNotifications” or .1.3.6.1.4.1.29585.1.1.0















In addition to the traps that are defined in the TOTALRECALL-MIB, the **Total Recall** SNMP Agent generates a SNMPv2-MIB::coldStart trap on start-up and a NET-SNMP-AGENT-MIB:nsNotifyShutdown on shutdown.



See *SNMP* on page 104 for further information.



37. Trap Table

Trap	Type	Description	Suggested Action
RECORDER_INIT		The system is initialising and preparing for normal operation.	
RECORDER_FINI		The system is shutting down. Recording ceased and the system is preparing to power down.	
START_RECORDING		The system is now recording calls.	
STOP_RECORDING		The system stopped recording. This can be due a recovery operation (such as database rebuilding) or due to recording period configuration.	
PURGING_STALE		The system is removing recordings, which are older than the lifetime specified in the configuration, to free disk and/or database space.	
PURGING_ARCHIVED		The system is removing recordings, which have been archived in the past, to free disk and/or database space.	
PURGING_UNARCHIVED		The system is removing recordings, which have NOT been archived in the past, to free disk and/or database space.	If necessary, review your archiving strategy and adjust the archiving time period.
QUICK_REBUILD		The system is performing a quick check of the database after a dirty shutdown.	Wait for the activity to complete. If normal activity does not commence after the check, attempt a full rebuild of the database.
FULL_REBUILD		The system is rebuilding its database. This activity may take some time. Recording is not possible while the activity is in progress.	Wait for the activity to complete. If normal operation does not commence after the rebuild, you may need to replace the hard disk.
DB_CORRUPT		The system database is corrupt or in a state which prevents normal operation.	Attempt a full rebuild of the database. If that fails, you may need to service the system.
START_ARCHIVE		The system started a new archiving session.	
STOP_ARCHIVE		The system completed an archiving session.	
ARCHIVE_REMINDER		The hard disk occupancy has reached a level (set in the system configuration) which triggers a reminder to archive recordings.	Perform a manual archive.
MEDIA_FULL		The system attempted to archive recordings onto a DVD/CD, however the DVD/CD in the drive is full.	Insert a new DVD/CD in the drive.



Trap	Type	Description	Suggested Action
MEDIA_BAD		The system attempted to archive recordings onto a DVD/CD; however, it detected an unsupported media or media that has problems.	Replace the DVD/CD with a new one.
SHARE_FULL		The system attempted to archive recordings onto a Network Share; however, it found that there is no free disk space on the share.	Free up space on the share, or configure a new share.
SHARE_ACCESS		The system attempted to archive recordings onto a Network Share; however, it found that can not connect to the share, or it can not write to the share.	Check the configuration on the system and the share. Make sure that the share allows the system write access.
FILTER_REMINDER		It is time to clean or replace the air intake filter.	Clean or replace the air filter to prevent overheating.
LICENSE_EXPIRED		The channel license has expired.	Renew your channel license.
NO_CHANNEL		The system is not able to record a call because all recorder channels are busy.	Review the channel capacity and/or purchase a license for more channels.
LONG_CALL		The system stopped recording a call because it exceeded the maximum call duration specified in the configuration.	Increase the maximum call duration and/or make sure that there are no networking problems which prevent the recorder from “seeing” all signalling messages.
CALL_START		Call started on the specified extension. The trap carries the extension number in the TOTALRECALL-MIB::trObject::trNoticeArgs element.	
CALL_END		Call ended on the specified extension. The trap carries the extension number in the TOTALRECALL-MIB::trObject::trNoticeArgs element.	
QUIET_EXTENSION		The system detected lack of activity (new calls) on the specified extension for a configured period of time. The trap carries the extension number in the TOTALRECALL-MIB::trObject::trNoticeArgs element.	Investigate the reasons for the quiet extension, as required by your internal dialling policies.



Glossary

CLI: Calling Line Identification

A telephony intelligent network service that transmits the caller's telephone number and in some places the caller's name to the called party's telephone equipment during the ringing signal or when the call is being set up but before the call is answered.

CDR: Call Detail Record

Also called Call Detail Recording or SMDR (Station Message Detail Recording), CDR is a record containing information about recent system usage, including the identities of sources (points of origin), the identities of destinations (endpoints), and the duration of each call.

D/A: Digital to Analog

A digital-to-analog converter (DAC or D-to-A) is a device for converting a digital (usually binary) code to an analog signal (current, voltage or electric charge).

DSP: Digital Signal Processor

A specialized microprocessor designed specifically for digital signal processing, generally in real-time computing.

DTMF: Dual-Tone Multi-Frequency

Used for telephone signalling over the line in the voice-frequency band to the call switching centre. The version of DTMF used for telephone tone dialling is known by the trademarked term Touch-Tone, and is standardised by ITU-T Recommendation Q.23. Other multi-frequency systems are used for signalling internal to the telephone network.

FTP: File Transfer Protocol

A commonly used protocol for exchanging files over any network that supports the TCP/IP protocol (such as the Internet or an intranet).

IDF: Intermediate Distribution Frame

A frame that (a) cross-connects the user cable media to individual user line circuits and (b) may serve as a distribution point for multi-pair cables from the main distribution frame (MDF) or combined distribution frame (CDF) to individual cables connected to equipment in areas remote from these frames.

IP: Internet Protocol

A data-oriented protocol used for communicating data across a packet-switched internetwork.

IP is a network layer protocol in the internet protocol suite and is encapsulated in a data link layer protocol (e.g., Ethernet). As a lower layer



protocol, IP provides the service of communicable unique global addressing amongst computers.

LAN: Local Area Network

A computer network covering a small geographic area, like a home, office, or group of buildings.

LCD: Liquid Crystal Display

A thin, flat display device made up of any number of colour or monochrome pixels arrayed in front of a light source or reflector.

MDF: Main Distribution Frame

A signal distribution frame for connecting equipment (inside plant) to cables and subscriber carrier equipment (outside plant).

NTP: Network Time Protocol

A protocol for synchronizing the clocks of computer systems over packet-switched, variable-latency data networks. NTP uses UDP port 123 as its transport layer. It is designed particularly to resist the effects of variable latency (Jitter).

PBX: Private Branch Exchange

Also called Private Business eXchange, or PABX (Private Automatic Branch eXchange), a PBX is a telephone exchange that serves a particular business or office, as opposed to one a common carrier or telephone company operates for many businesses or for the general public.

PSTN: Public Switched Telephone Network

The network of the world's public circuit-switched telephone networks.

QoS: Quality of Service

Control mechanisms that can provide different priority to different users or data flows, or guarantee a certain level of performance to a data flow in accordance with requests from the application program.

SMDR: Station Message Detail Record

SMDR is a record containing information about recent system usage, including the identities of sources (points of origin), the identities of destinations (endpoints), and the duration of each call.

TCP: Transmission Control Protocol

One of the core protocols of the Internet protocol suite, often simply referred to as TCP/IP. Using TCP, applications on networked hosts can create connections to one another, over which they can exchange streams of data using Stream Sockets.



UDP: User Datagram Protocol

User Datagram Protocol (UDP) is one of the core protocols of the Internet protocol suite. Using UDP, programs on networked computers can send short messages sometimes known as datagrams (using Datagram Sockets) to one another. UDP is sometimes called the Universal Datagram Protocol.

UPS: Uninterruptible Power Supply

A device which maintains a continuous supply of electric power to connected equipment by supplying power from a separate source when utility power is not available.

VLAN: Virtual LAN

A method of creating independent logical networks within a physical network.

VOX: Voice Operated Switch

A vox or voice operated switch is a switch that operates when sound over a certain threshold is detected.

WAN: Wide Area Network

A computer network that covers a broad area (i.e., any network whose communications links cross metropolitan, regional, or national boundaries). Or, informally, a network that uses routers and public communications links.



Definitions courtesy of Wikipedia



Specifications

Physical Specifications

6 Kg, 175 (H) x 370 (W) x 365 (D) mm (**Desktop**).

10 Kg, 220 (H) x 450 (W) x 230 (D) mm, 5 RU (**Rack**).

0 °C - 60 °C Operating & storage temperature, non-condensing.

Power

Single auto-sensing 100-240 VAC, 60-50 Hz, 180W Max PSU (**Desktop & Rack**).

Optional Dual Hot-Swap 110-240VAC, 50-60Hz 300W Max PSU (**Rack**).

Maximum power draw for **Total Recall Desktop & Rack** is 80W.

Telephony Interface

Analog 2-Wire POTS, FSKR, DTMF.

Voice Processing

HQVQ (8:1) Compression. WAV (16 bit, 8 KHz) & MP3 Export.

Onboard Storage Capacity

Most recent 350,000 calls, or 60,000 hours of recordings, whichever is reached first.

Channel Capacity

24 Simultaneous Channels (**Desktop**).

72 Simultaneous Channels (**Rack**).

Recording Trigger

Off-Hook (6 different voltage levels), VOX (6 different volume levels), On-Demand (via DTMF code or PC Software).

Call Monitoring

Real-time monitoring via onboard speaker & control panel, or via Remote Manager and LAN/WAN/VPN/56k Dialup connection.

Search & Replay Controls

Via onboard speaker & control panel, or via Remote Manager embedded player & PC speakers. Start, stop, fast-forward, rewind & pause controls.

Archive Media

CD-R, DVD+RW standard. Optional Blu-Ray (BD-RE) archiving on **TR Desktop** and **TR Rack**.

Network Attached Storage (NFS v2/3, CIFS/SMB) optional on **TR Rack** only.

Networking

One 100Mb Ethernet port, Single RS232 port (for modem connection). Network Time Synchronization via NTP.

Optional TCP/IP Alarms via SNMP, and Call Detail Record interface (**TR Rack**).



Limited Products Warranty

38. ComsecTR Limited Products Warranty

38.1. Our Standard Limited Warranty Period

ComsecTR warrants that Total Recall (the “Products”) conforms in all material respects to the end user documentation provided with the Products, and that the hardware components of the Products will be free from defects in materials and workmanship for a period of **13 months after the system has been shipped from the ComsecTR manufacturing facility.**

38.2. Exception for Sales Arising From Stock-Carrying Distributors/Dealers

On average, Total Recall systems are installed within 1 month of being shipped from the factory, providing end users with a minimum of 12 months warranty coverage. However, as some ComsecTR resellers carry stock this may not always be the case.

In situations where a Total Recall system has been purchased from a stock-carrying Reseller or Distributor, ComsecTR warrants that Total Recall (the “Products”) conforms in all material respects to the end user documentation provided with the Products, and that the hardware components of the Products will be free from defects in materials and workmanship for a period of **12 months after the system has been shipped from the stock-carrying Reseller or Distributor.**

Please confirm your applicable limited warranty period with the company from which you purchased the Total Recall system. ComsecTR will assume that the period set out in **section 38.1** of this limited product warranty applies unless demonstrated otherwise.

38.3. Limitations of This Warranty

This limited warranty does not cover the results of accidents (including unusual physical or electrical stress), abuse, neglect, vandalism, acts of God, usage contrary to handling or operating instructions supplied by ComsecTR or repair or modification by anyone other than ComsecTR or an expressly authorized Total Recall service agent.

38.4. Handling of Faulty Parts

Please note that any faulty components replaced under the terms of this product warranty must be kept by the authorized servicing agent for verification, up to a maximum period of 12 months. If the servicing agent is unable to provide the faulty parts for which warranty replacements have been



provided, then the servicing agent will be required to pay to ComsecTR the value of the replacement parts, as determined by ComsecTR.

38.5. ComsecTR Record Keeping

Please note that all Total Recall serial numbers, and the serial numbers of internal components will be logged by ComsecTR, effective the date of shipment. The serial numbers of any replacement parts will also be logged by ComsecTR.

39. Warranty Claims and Procedure

39.1. Who to Contact

If there is reason to believe that Products do not conform to the warranty set forth in Section 38.1, the affected party should notify **the company from which the Product was purchased**¹ in writing of such non-conformance, no later than ten (10) days after the end of the Warranty Period for those Products, and shall provide the following details:

1. The serial number of the affected unit(s), and;
2. Details of the non-conformance, with as much specific detail as possible.

Additional details of the non-conformance may be required as the authorized service agent or ComsecTR reasonably requests.

39.2. What Procedure Will Be Followed?

The company that you purchased the system from will, if authorized, provide the required service and/or organize the required replacement parts. If not authorized to provide this service, the company that you purchased the system from will elevate your service request to an authorized service agent. The authorized service agent may elect to further elevate the problem to ComsecTR if required. This will occur in accordance with ComsecTR's standard procedures.

The user will be required to pay for the freight to an authorized servicing agent or ComsecTR if the Products need to be returned for servicing. The authorized servicing agent or ComsecTR will pay for the freight back to the customer if the goods are deemed to fail to conform to this warranty.

39.3. What Services Will Be Performed?

If Products are deemed to **fail to conform** to this warranty by an authorized servicing agent or ComsecTR, the sole remedy shall be, at the authorized servicing agent's or ComsecTR's option and expense:

1. The repair or replacement of the faulty component(s), and;

¹ If the product(s) were purchased from ComsecTR directly, then ComsecTR would be the first point of contact. However, if the product(s) were purchased via an intermediary company, then your first point of contact would be that intermediary company.



2. Return of the Products within fourteen (14) days after the authorized servicing agent receives the non-conforming Total Recall system. If the system needs to be returned to ComsecTR, an additional period of 14 days from the receipt of the unit at ComsecTR will be applicable.

*Please Note: If ComsecTR or the Authorized Servicing Agent determines that returned Products **do** conform to this warranty, then the Products will be returned at the requesting party's expense and risk.*

39.4. Important Notice: Sole & Exclusive Remedy

NOTWITHSTANDING ANYTHING IN THIS AGREEMENT TO THE CONTRARY, THE FOREGOING IS THE SOLE AND EXCLUSIVE REMEDY FOR BREACH OF WARRANTY BY COMSEC TR WITH RESPECT TO THE PRODUCTS.

39.5. Disclaimer of Warranties

39.5.1. Important Notice: Disclaimer of Warranties

EXCEPT FOR THE LIMITED WARRANTY FOR THE PRODUCTS CONTAINED IN SECTION 38.1, COMSEC TR AND ITS SUPPLIERS AND SERVICING AGENTS DISCLAIM ALL WARRANTIES WITH RESPECT TO THE PRODUCTS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING AS TO PERFORMANCE, NON-INFRINGEMENT OF THIRD PARTY RIGHTS, MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE.



Legal

Total Recall requires Linux kernel and modules to operate. These come from the CentOS distribution and may be covered by the GNU General Public License (GPL) which is enclosed here for your review (as obtained from <http://www.gnu.org/copyleft/gpl.html>).

All **Total Recall** software is distributed under the Comsec TR Software License.

40. ComsecTR Software Licence

End-User Licence Agreement for ComsecTR Software.

IMPORTANT - READ CAREFULLY:

This ComsecTR Software Licence Agreement (“CSLA”) is a legal agreement between you (either an individual or a single entity) and ComsecTR Pty Ltd for the ComsecTR software product identified above, which includes computer software and associated media and printed materials, and may include “online” or electronic documentation (“SOFTWARE PRODUCT” or “SOFTWARE”). By installing, copying, or otherwise using the SOFTWARE PRODUCT, you agree to be bound by the terms of this CSLA. If you do not agree to the terms of this CSLA, promptly return the unused SOFTWARE PRODUCT to the place from which you obtained it.

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MISCELLANEOUS

The developer, ComsecTR Pty Ltd has adopted a policy to continue the development of *Total Recall*, *Remote Manager* and *Record on Demand* and therefore there may be variations between the documentation and the operating system at any one time.

Should you have any questions concerning this CSLA, or if you desire to contact ComsecTR for any reason, please contact the ComsecTR reseller serving your country, or write to:

ComsecTR Pty Ltd
PO Box 572
Milsons Point, NSW 1565
Australia



41. GNU Public License

GNU GENERAL PUBLIC LICENSE

Version 3, 29 June 2007

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PREAMBLE

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