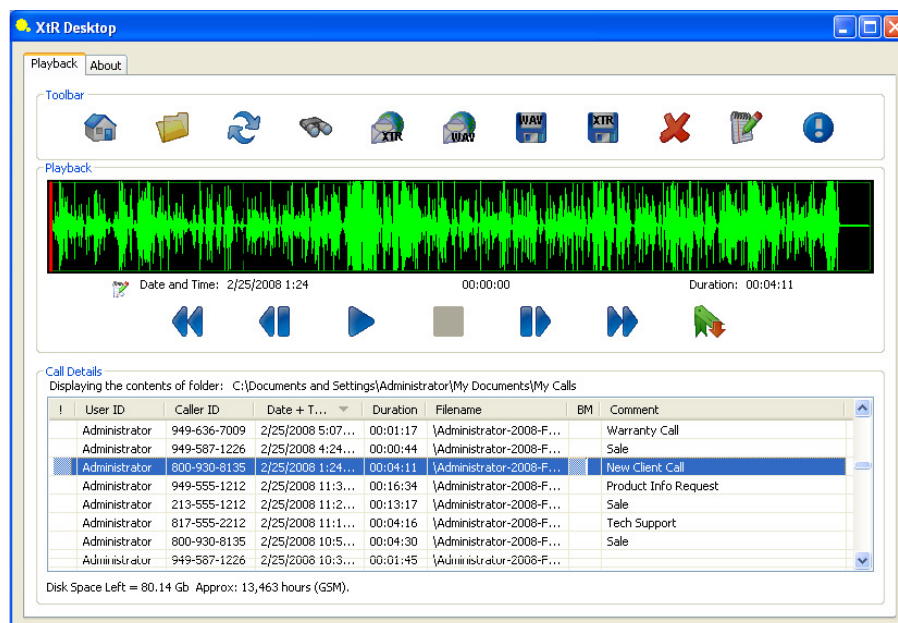


Xtension Recorder Digital 01 Desktop 3.0

General Description



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Introduction

This document describes the features and capabilities of the Desktop Digital 01 hardware and XTR Desktop software solution.

The Xtension Recorder Desktop Digital solution consists of a low-cost USB device that taps across the digital extension pair of a proprietary PBX telephone (such as Nortel Meridian or Avaya Definity) and Desktop Software that combines to deliver a professional recording solution for one user or hundreds.

PBX extension recording has traditionally been limited to:

- ❑ Expensive multi port devices installed at the PBX equipment
- ❑ Expensive single port digital devices (very few are available)
- ❑ Low cost analogue 'handset tap' devices

Our unique '*PBX-2-USB*' technology elegantly addresses the problems associated with low-cost desktop recording. The USB device provides all of the advantages of the expensive digital recording solutions, at a price in line with many 'handset tap' solutions while delivering much greater value and performance.

Advantages of Digital Recording

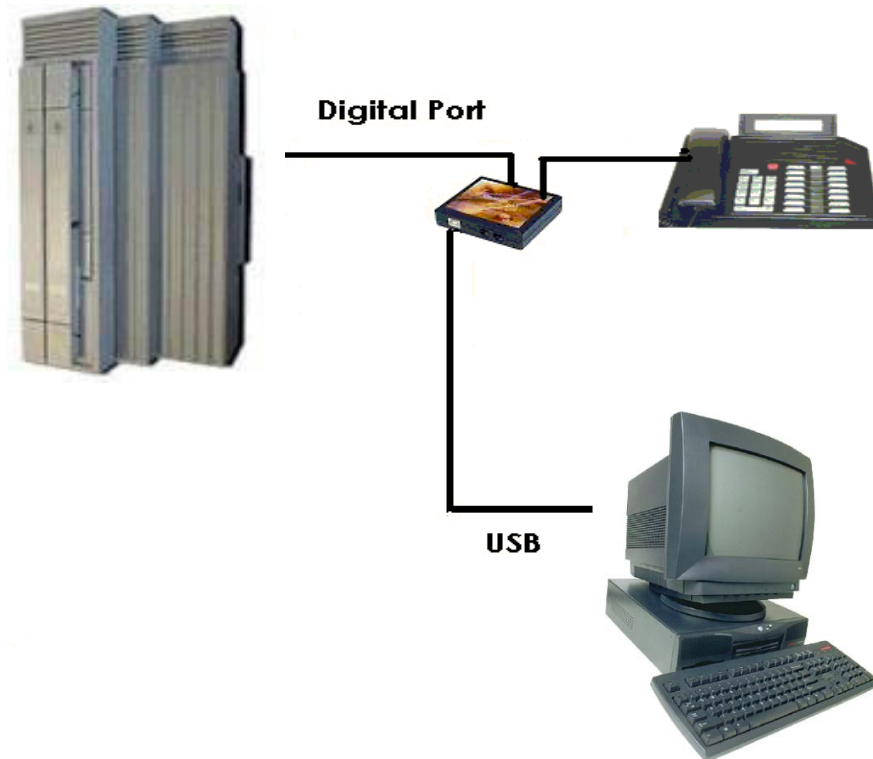
The advantages of Digital Recording over analogue 'handset tap' devices are clear:

- Higher quality recording
- Separate channel recording (send/receive) is possible
- Automatic start/stop of recording when phone is in use
- Association of caller ID or other call related information
- Doesn't tie up a PC sound card
- Easy plug n' play installation (via USB)
- Speakerphone conversations can be recorded
- Users cannot easily disconnect the recording device with a disconnect warning being given.

It is no wonder that a product, which has so many advantages over traditional handset tap devices, and is available at a small premium over handset tap devices, has been so successful around the world with thousands of users installed.

Connectivity

The diagram below shows the connection configuration of the Desktop Digital 01USB device and the local desktop PC.



The Xtension Recorder hardware simply connects in-line at the telephone users desktop. No power is required and because the in-line connection is simply a metallic wiring of the 'in' and 'out' connections, Xtension Recorder does not affect in any way the telephone operation with or without connection of the host PC via USB.

The USB Device

This section describes the Intelligent Recording low-cost USB device hardware specification.

The device is constructed in a UL94 V-0 black polymer and measures 84mm x 72mm x 25mm (or 3 1/3" x 2 3/4" x 1").



Device Connections

The USB recording device has 3 connectors:

- ❑ One PC USB connector, from which the device derives its power and streams all speech and control channel information up to the host PC and the Xtension Recorder application.
- ❑ Two Digital Phone line connectors that passively 'tap' across the PBX/Keyset digital connection and 'listen' in high impedance mode to the signalling on the line.

Device Performance

The device does not interfere with the communication between the PBX and the Digital telephone. The device does not require USB power or a connection to the PC to maintain the functionality of the telephone in its normal manner.

The device meets the appropriate FCC, CE and UL requirements required for this type of communications device.

Device Firmware

The device is 'soft up-loadable' i.e. its firmware and FPGA low-level protocol decryption is uploaded from the PC driver and Xtension Recorder application at runtime. This allows easy upgrade and enhancement of the product in the field as required.

Device Contents & Packaging

Xtension Recorder is supplied in suitable packaging including:

- ❑ Xtension Recorder hardware device
- ❑ Software CD
- ❑ USB cable
- ❑ Telephone connection lead
- ❑ This document

PBX Compatibility

The device is compatible with the following PBX's and digital telephones:

- Avaya Definity
- Avaya Magix
- Avaya IP office
- Toshiba DK & CTX
- Nortel Norstar & BCM
- Nortel Meridian
- Vodavi/LG
- Inter-Tel
- Siemens Hicom/HiPath
- NEC Electra Elite/IPK
- NEC NEAX 2000/2400
- Panasonic KXTD/KXTD-A/DBS
- Samsung DCS
- Telrad
- Tadiran Coral

Other protocols will be provided as and when developed. For specific requests, please contact Intelligent Recording LTD.

Basic Installation

The installation of the Digital 01 Desktop Recorder is very simple:

- 1) Insert USB Cable into an available and working USB port on the Host PC.
- 2) Windows should respond with 'Found New Hardware' Wizard
 - a. If not, go to Device Manager under Control Panel> System>Hardware
 - b. Browse to Universal Serial Bus controllers and locate 'unknown device'
 - c. Click on device and select 'Update Driver'-this will launch Wizard
- 3) Insert provided CD
- 4) Load Driver from Driver folder located on provided CD
- 5) Choose 'continue anyway' if warning regarding Driver Signing appears.

Next,

- 6) Browse on CD and click on Setup file
- 7) Follow installation instructions on CD
- 8) Please be sure to choose correct Telephone System Type as well as US(Mu-law) or UK/Euro(A-law) location, as choosing wrong location will greatly affect the recording quality.
- 9) Connect Telephone with leads provided, one side from the 'wall' the other to the phone. Note it does not make any difference which port is 'in' or 'out'.
- 10) You are now ready to record!

Advanced Program Settings & Restriction of Feature Use

Please see page 18 and 19 of this document in order to further customize your installation. Options include the ability to prevent users from Stopping, Pausing, Deleting Recordings and many more.

Xtension Recorder Desktop Software

The Xtension Recorder Desktop software is delivered on a Compact Disk delivered with the Digital 01 device.

The CD contains all the appropriate files and installation procedures to operate to this specification, including USB device drivers, software application and help files.

PC Compatibility

The Xtension Recorder application supports Microsoft operating systems that support USB devices. The list of existing operating systems, which meet this requirement, are:

- WIN 98SE (version 2.43 or less)
- WIN Millennium Edition (ME) (version 2.43 or less)
- WIN 2000 (all versions)
- WIN XP (all versions)
- Windows Vista (all versions)
- Windows 7 (all versions)

Xtension Recorder Desktop Software User Interface

The Xtension Recorder application software when loaded is accessible through a desktop shortcut as well as by right-clicking on the icon that is loaded in the system tray of the PC. This system tray icon will also flash yellow and red to indicate an active call being recorded.

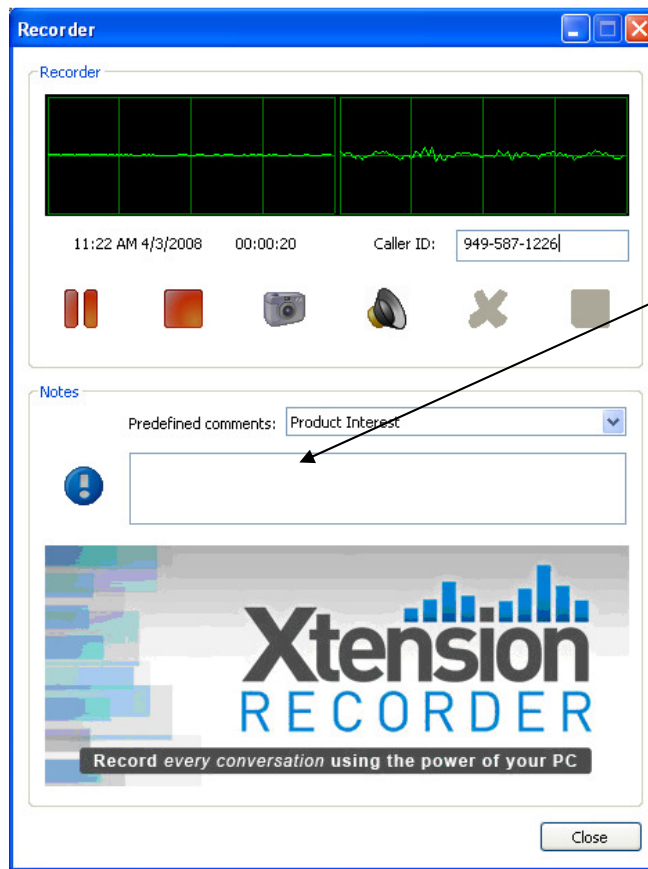
View Recorder

View Room Recorder
View Player
View Options

About

Exit

View Recorder



This view allows the user to interact with the live recording if desired. The user can pause or



stop



the

recording (if enabled) as well as add notes about the call either by typing in as desired or selecting from a list of predefined comments that can be customized by each user- see page 18 of this document.

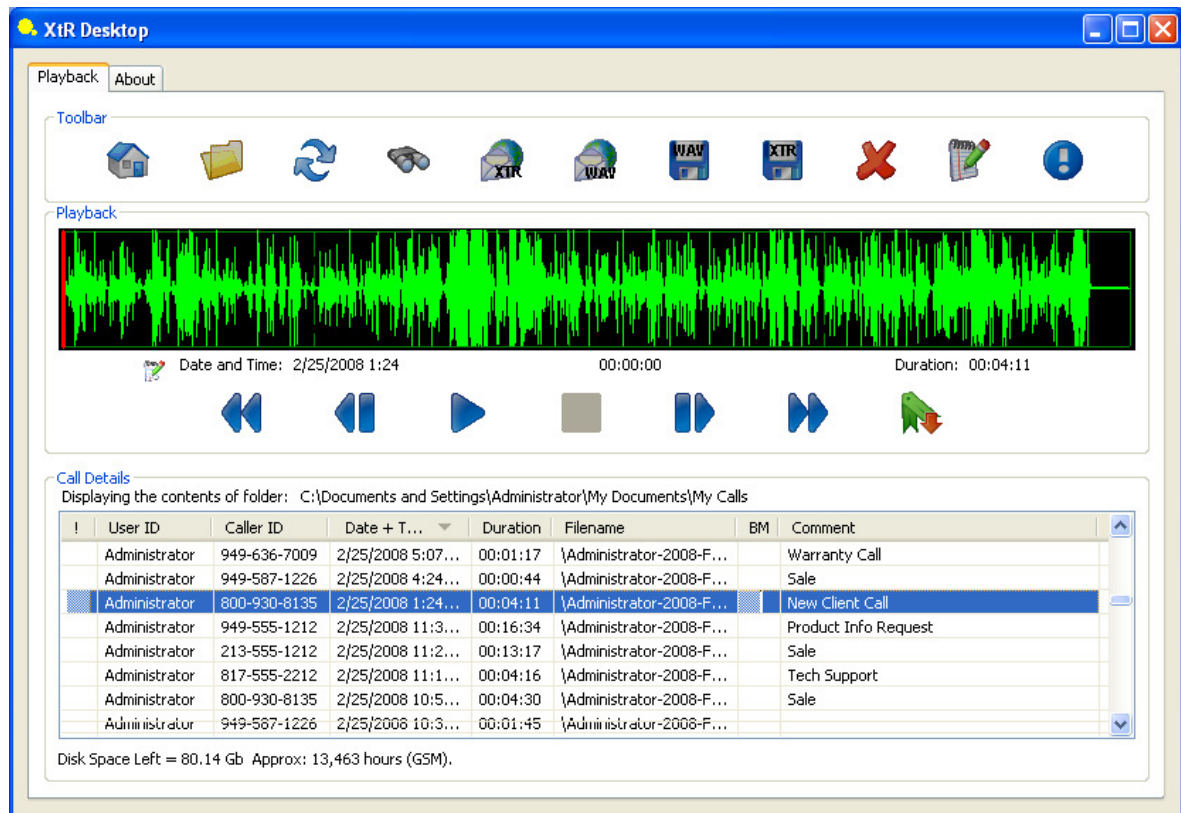



By clicking on the Snapshot Icon, the current call is placed into the Player for immediate playback while continuing to record.




The Speaker icon routes the audio from both sides of the recording through the PC Speakers. (Note: there is a slight delay as this is not the 'live' call, but a recording of what has just occurred).


View Player

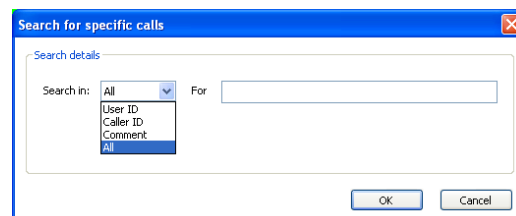


The **Basics of the Player** are quite simple. In default, the player will be directed to your storage folder that is set up in the Options Area under File Management. By selecting the **Home**  icon the Player will return to view calls from this location.



While this view is displayed, new calls will appear as they are generated. You can view calls from other locations by selecting the **Browse**  function and selecting the location from which to view calls, either on your local PC or network location.

The **Refresh**  option will perform a new scan of the folder in view.

Select  **Search** to enable searching for calls in view by User ID, Caller ID/Number Dialed-, Comment or All. The search will then bring into view results from the current view that matches your criteria. To return to previous view, select the Refresh option.







E-Mailing Recordings

E-Mailing recordings couldn't be easier. To email as a proprietary and secured formatted recording select the first email icon option.  This will attach the recording to an outbound email message; an auto-text  will be generated with a link to where the recipient of the email can download a free player.

The other E-Mail option is to select the **E-Mail as WAV** icon , this first converts the recording to a wav file, then attaches to an outbound e-mail message.

Save Files to Other Locations / Convert Direct to WAV Format


It is often desirable to **Save and Move** important calls from one storage location to another. This is done quickly and easily by selecting the recording in the Player then clicking on the Save icon.  This XTR option will save the recording to another location in the native '.xtr'  file format. By selecting the **WAV**  option, it will convert the file to a WAV format and then allow the recording to  be saved in the desired location.

Deleting Recordings

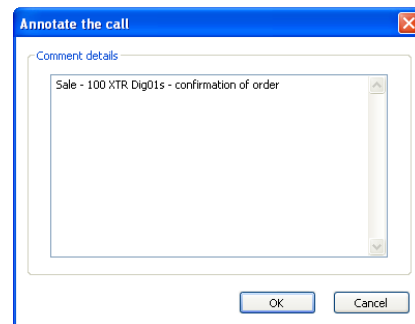
To delete an unwanted call, simply select the call or calls and then press the Delete icon

Note: The ability for a user to Stop, Pause, Email, Delete, and Convert Recordings as well as view the player and sys tray icon can be restricted on a per user basis. This is explained in the Advanced Set-Up Options located within this document.


Adding Notes to a Recording

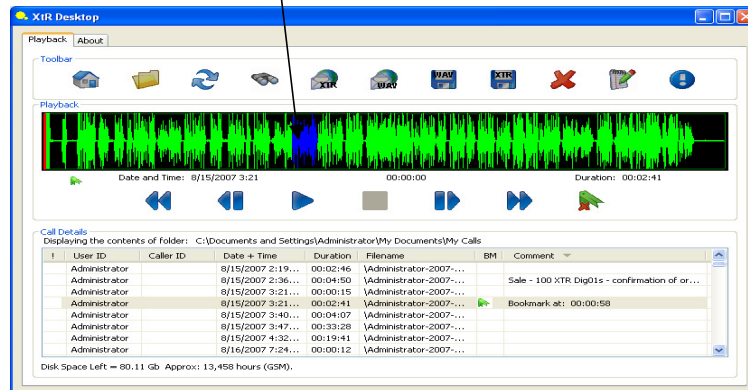
By selecting the **Notes** icon , the user can add notes to be stored as part of the call record.

Any item in the notes filed can then be used later to find the particular call.




Bookmark

A Book-Mark can be added to a Recording at any place. This can be used to highlight an important part of the call making it easy to find in the future. To Bookmark a part of the recording simply select Bookmark icon  at the point desired and the graphic will display area book-marked in blue as shown below:

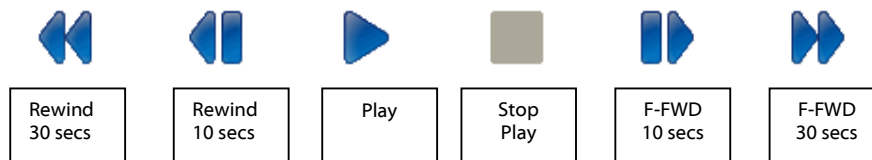


Important Calls

Calls can be marked as **Important** by selecting the call and simply clicking on the Important icon.  This will highlight the call in the list as well as remove it from any auto-delete routine established in the Options Area.

Playing Calls

Click on the desired recording in the Play Back List and the call select will be loaded into the Player. You can simply 'click' on the wave form in the player to move from one point in the recorder to another or use options shown below:



Sorting Calls in View

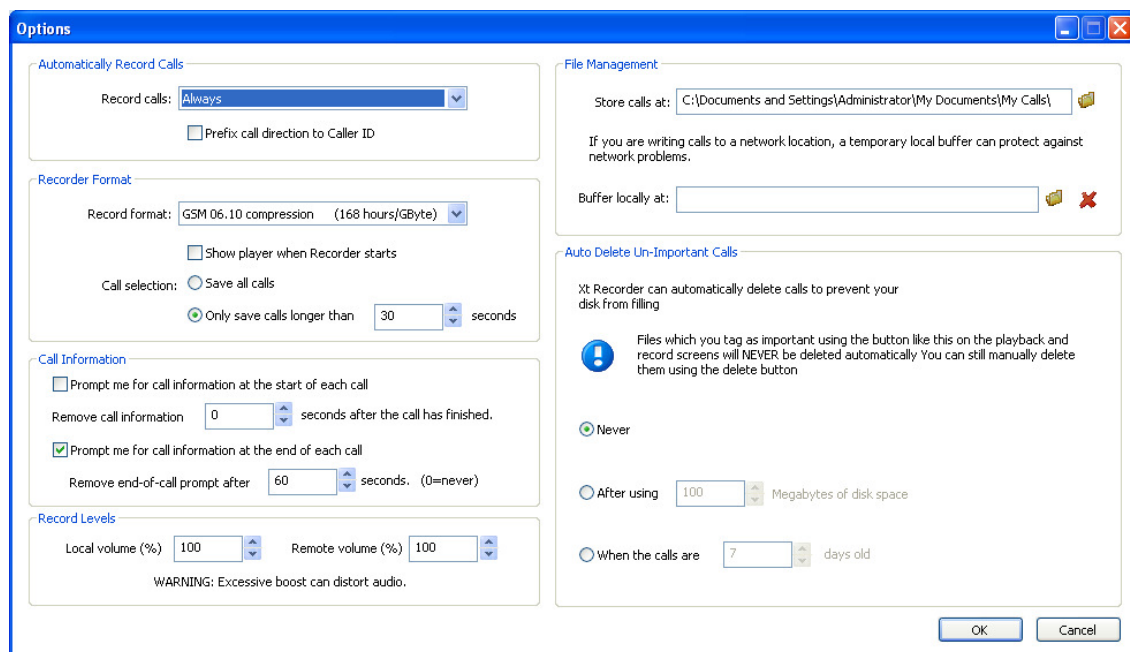
Calls loaded into View in the Player can be sorted by each individual column by clicking on the column header. For example, sort for all 'important' calls, or perhaps all calls that have comments associated with them. To return to the previous view, simply hit the Refresh icon.

Call Details
 Displaying the contents of folder: C:\Documents and Settings\Administrator\My Documents\My Calls

User ID	Caller ID	Date + T...	Duration	Filename	BM	Comment
Administrator	949-636-7009	2/25/2008 5:07...	00:01:17	\Administrator-2008-F...		Warranty Call
Administrator	949-587-1226	2/25/2008 4:24...	00:00:44	\Administrator-2008-F...		Sale

Options

The View Options tab enables the installer and or user to set up the options available for that user. Once set, this view can be eliminated to the user, thereby making it impossible for them to change (see Advanced Setup Options).



The Options dialog box is divided into several sections:

- Automatically Record Calls:** Record calls: Always (dropdown). Prefix call direction to Caller ID.
- Recorder Format:** Record format: GSM 06.10 compression (168 hours/GByte) (dropdown). Show player when Recorder starts. Call selection: Save all calls, Only save calls longer than 30 seconds.
- Call Information:** Prompt me for call information at the start of each call. Remove call information: 0 seconds after the call has finished. Prompt me for call information at the end of each call. Remove end-of-call prompt after: 60 seconds. (0=never).
- Record Levels:** Local volume (%): 100, Remote volume (%): 100. WARNING: Excessive boost can distort audio.
- File Management:** Store calls at: C:\Documents and Settings\Administrator\My Documents\My Calls. Buffer locally at: (empty field).
- Auto Delete Un-Important Calls:** Xt Recorder can automatically delete calls to prevent your disk from filling. Files which you tag as important using the button like this on the playback and record screens will NEVER be deleted automatically. You can still manually delete them using the delete button. Never, After using 100 Megabytes of disk space, When the calls are 7 days old.

Buttons: OK, Cancel

Automatically Record Calls

Record calls:

Prefix call direction to Caller ID

This setting determines whether all calls are automatically recorded or if the recorder is intended for Manual Start/Stop only. Other options to record only incoming or outgoing calls are not available on all PBX types. For those PBX systems that can identify incoming versus outgoing calls, these options are available. By selecting the 'Prefix' option, a '<' sign will be placed in front of the Caller ID to identify an incoming call and a '>' sign designates an outgoing call. In the case where the software cannot distinguish between incoming or outgoing it will be identified as 'unrecognized' and a '?' will be placed as a prefix.

Recorder Format

Record format:

Show player when Recorder starts

Call selection: Save all calls

Only save calls longer than seconds

Record Format - allows the user to select the recording format.

'Perfect Digital Recording' stores the recording in the PCM format taken directly from the digital line. This is the highest quality possible but can use a significant amount of space on the PC disk (35 Hours per GByte).

'GSM 06.10' (recommended) uses a compression technique to store the recording more efficiently (168 Hours per GByte). In practice, the difference in discernable quality is negligible so the default is for this format to be selected.

Call Selection

This setting determines the minimum length of a call that is saved. All calls are recording from the very beginning of the call, but unless the call lasts longer than the period set, it will not be saved. This prevents short calls, miss-dials, internal pages etc from being saved.

Call Information

Prompt me for call information at the start of each call

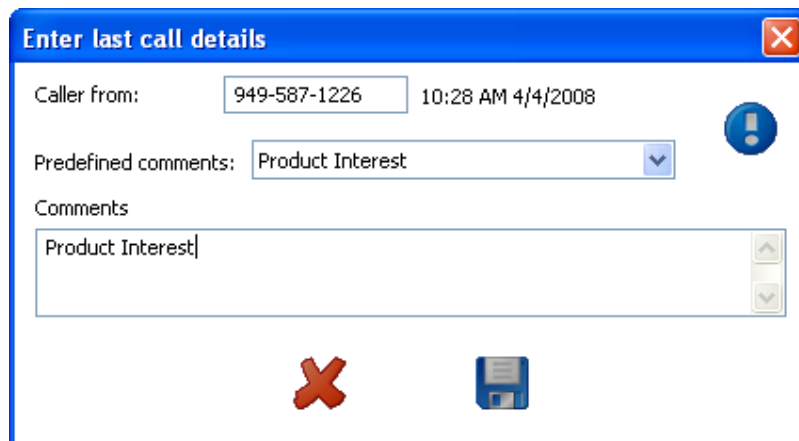
Remove call information seconds after the call has finished.

Prompt me for call information at the end of each call

Remove end-of-call prompt after seconds. (0=never)

Prompt at Start of Call option will pop forward the Recorder View window. Note, this will occur any time the Recorder is active, even on very short calls.

Prompt at End of Call option is often preferred, as this will pop a box that allows the user to Save or Delete the call (if enabled) and also to add notes about each call if desired (shown below). This screen pop will only occur if the call has lasted the minimum period as defined in previous option.





Enter last call details

Caller from: 10:28 AM 4/4/2008

Predefined comments:

Comments

Record Levels

Record Levels


Local volume (%) Remote volume (%)

WARNING: Excessive boost can distort audio.



Each user can adjust the Recording Levels of either side of the conversation. The Local Volume is the recording level of the user; the Remote volume is that of the outside caller. If left at the default of 100% and 100%, no adjustment is made to the recording. Often the outside party is more difficult to hear in the recording due to level loss on the line; in that case an adjustment can be made to boost the level to the desired level, perhaps 150%, on Remote. Note it is also possible, and often desirable, to decrease the volume if the Local side is too loud in the resultant recording.

Call Storage Settings

File Management

Store calls at: 

If you are writing calls to a network location, a temporary local buffer can protect against network problems.

Buffer locally at:  

If the local user desires to manage their own calls, then using the default storage location created is often preferred, a My Calls folder is created under My Documents.

If however, the calls are to be stored on a Network Drive for **Centralized Call Management**, then it is recommended that a local Buffer location be created on the Local PC. When a Local Buffer is created, the live call is buffered in the folder created (i.e. C:\Buffer) as an '.xtr.tmp' file. Once the call is completed, the recorder checks if the network location is available and if so, sends the call to the network storage location. If the network is not available, calls will continue to be recorded in the Buffer location. When one call is successfully sent to the network location, the entire buffer will also be transferred with no user intervention required.

Auto-Delete

Auto Delete Un-Important Calls

Xt Recorder can automatically delete calls to prevent your disk from filling



Files which you tag as important using the button like this on the playback and record screens will NEVER be deleted automatically. You can still manually delete them using the delete button.

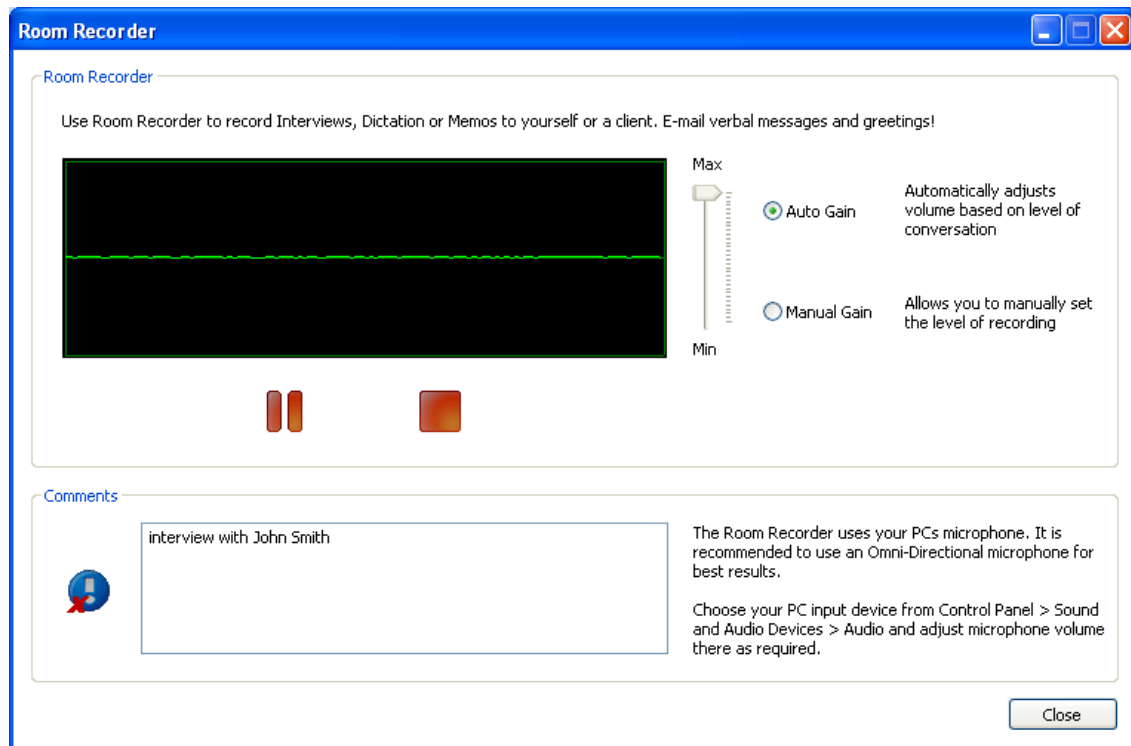
Never

After using Megabytes of disk space

When the calls are days old

This option automates the task of deleting calls after a predefined time or after a certain amount of space has been consumed. Note, any calls marked as Important will not be Auto-Deleted by this routine.

Room Recorder



Room Recorder, when activated, switches the Recording Source from the Telephone to the user's mic on their PC. This allows for Live Interview recordings, Dictation and many other uses. It is recommended that an Omni-directional mic be used in this case. The auto gain control provides consistent recording results in most cases.

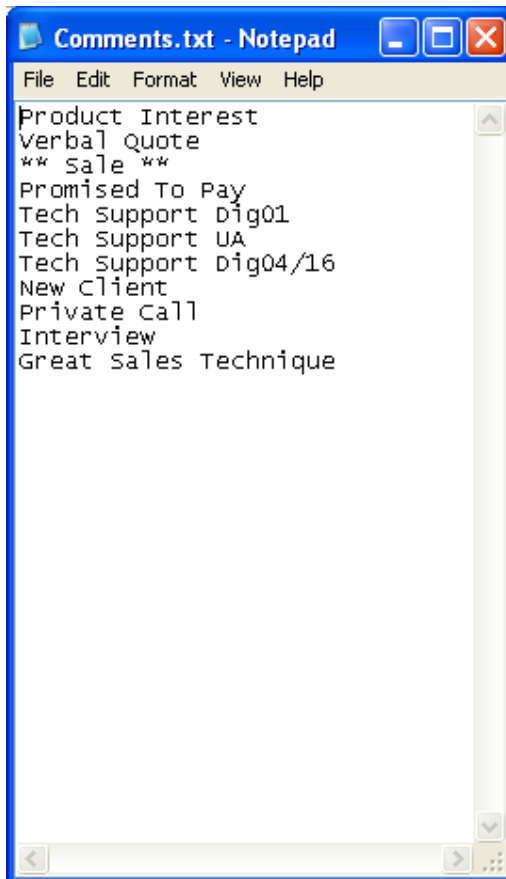
Note- this function can be eliminated if desired, see advanced set-up options.

Advanced Program Settings

Comvurgent has also provided the dealer or user the option of making additional adjustments to the use and functionality of the user interface.

Customize Pre-Defined Comments

Located in the Program directory, which is loaded in default to C:\Program Files\Comvurgent\XT Recorder, you will find a file called Comments.txt. To edit this file, click on the file and it will display the content as shown below:



Simply type in a column any number of comments and how you would like them to appear.

Once completed, select File>Save and replace the existing Comments.txt file.

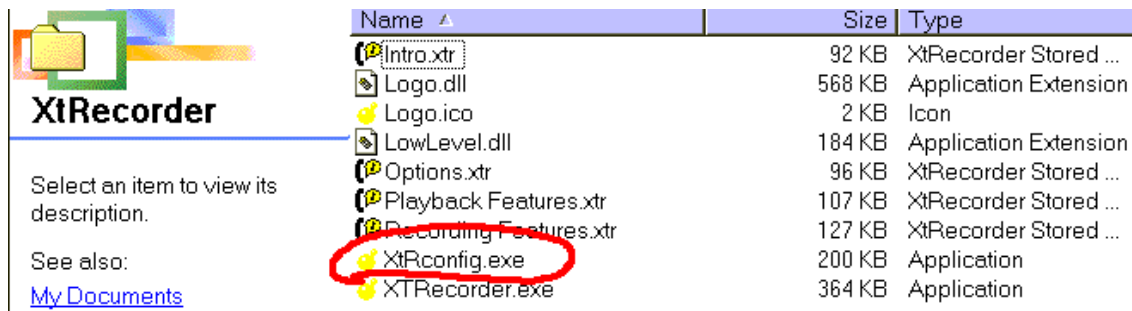
The new list will then appear in your drop-down menus.

This will place the selected text in the comments field; more text can be appended to the notes if desired.

Restricting Access to Features and Functions

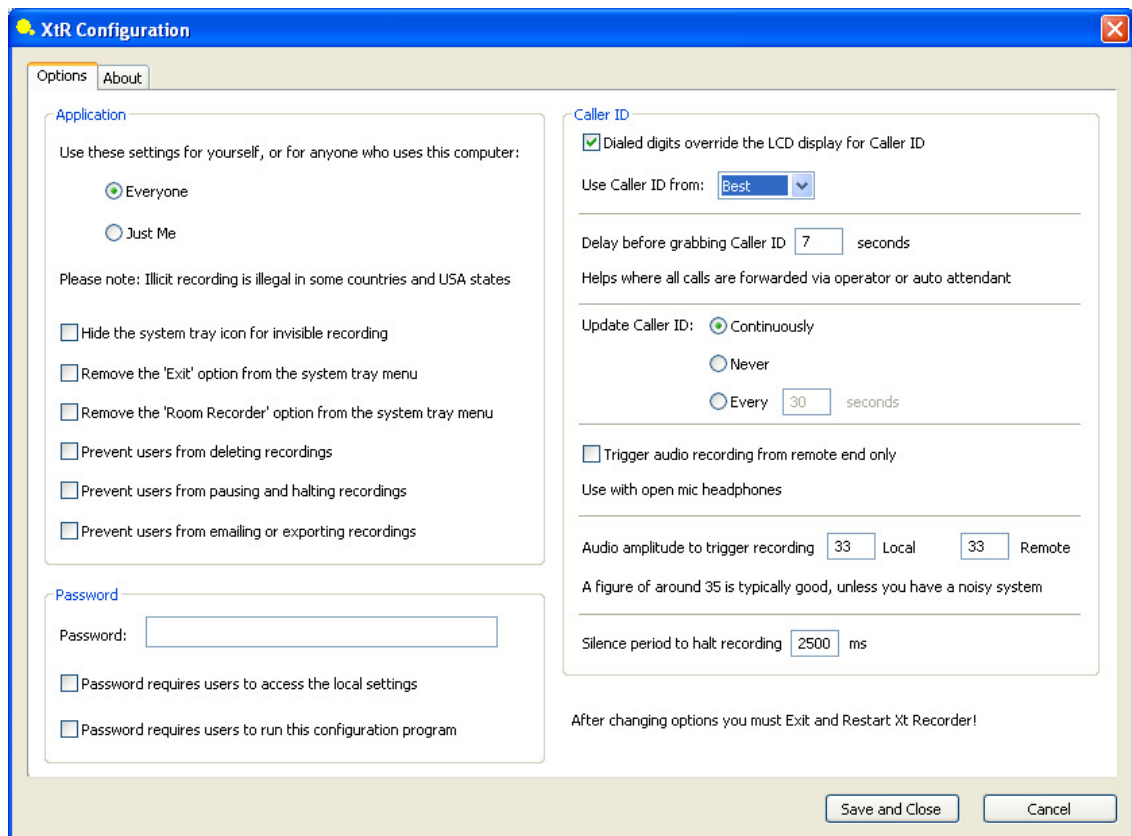
This special configuration program can only be accessed by browsing to the installation location (default C:\Program Files\Comvurgent\XtRecorder) and then clicking on the file circled below:

Note: The customer takes all responsibility to ensure they are meeting legal requirements. Comvurgent provides the user option settings in order to meet customer demands and cannot be responsible for the miss-application of the product.



Name	Size	Type
Intro.xtr	92 KB	XtRecorder Stored ...
Logo.dll	568 KB	Application Extension
Logo.ico	2 KB	Icon
LowLevel.dll	184 KB	Application Extension
Options.xtr	96 KB	XtRecorder Stored ...
Playback Features.xtr	107 KB	XtRecorder Stored ...
Recording Features.xtr	127 KB	XtRecorder Stored ...
XtRconfig.exe	200 KB	Application
XtRecorder.exe	364 KB	Application

This opens the following program:



Installing on Shared PC

Use these settings for yourself, or for anyone who uses this computer:

Everyone

Just Me

Please note: Illicit recording is illegal in some countries and USA states

This first setting is used when installing on a PC that has multiple user log-on Ids. If it is preferred that all calls, regardless of the user that is logged in, are stored in the same folder and have all the same settings- then select the 'Everyone' option.

Note- the User ID Header on each recording is taken from the PC User Log-in ID, so if each user logs into the PC with a unique login the recordings will be searchable and sort-able by the various User Ids.

It is also possible to have each user have their own settings, i.e. different storage folders etc. If this is desired select the 'Just Me' option. It will then be necessary to install the application under each user log-in on the PC.

Restricting Features and Functions

The following features can be restricted on a per user basis:

- Hide the system tray icon for invisible recording
- Remove the 'Exit' option from the system tray menu
- Remove the 'Room Recorder' option from the system tray menu
- Prevent users from deleting recordings
- Prevent users from pausing and halting recordings
- Prevent users from emailing or exporting recordings

Caller ID and Trigger Options

It is sometimes necessary to adjust how the recorder reads the Caller- ID information delivered to the telephone. (Note- not all versions capture Caller-ID info, please check with your re-seller).

Caller ID

Dialed digits override the LCD display for Caller ID

Use Caller ID from:

Delay before grabbing Caller ID seconds
Helps where all calls are forwarded via operator or auto attendant

Update Caller ID: Continuously
 Never
 Every seconds

The Recorder software reads the data for Caller-ID from one of the lines on the display. You can vary which line by selecting the option above. If you find that you are capturing other information that appears on the telephone, i.e. a timer, or extension number, you may want to extend the delay timer and perhaps change the option from update continuously to update 'Never'.

Dealing with Headsets or 'Hot Mics'

Trigger audio recording from remote end only
Use with open mic headphones

Check this option if you find the recorder is either not stopping recording consistently, or triggers with background office noise while not on the telephone.

Sensitivity Adjustments

Audio amplitude to trigger recording Local Remote

A figure of around 35 is typically good, unless you have a noisy system

Silence period to halt recording ms

In the vast majority of cases no adjustments are needed here. With some PBXs a start/stop trigger for recording is based on a digital signal level, to make these triggers more sensitive lower the values above, less sensitive raise them.

Password

Password

Password:

Password requires users to access the local settings

Password requires users to run this configuration program

The above option for accessing Local Settings eliminates the ability for the user to access the Options View of the software. This prevents them from changing any and all options that are preconfigured.

The second option requires the Password in order to access the XTRconfig Program.

Important! For any changes made in the XTRconfig Program to take effect, the application must be Exited (choose exit from sys tray menu) and restarted.

Some Application Ideas:

In most cases, the customer will already know the key reason why they need to record their calls. However, because Xtension Recorder is so cost effective, we've added a few application ideas that are applicable to most businesses:

- ❑ **Message Taking** – Many businesses don't like putting callers through to Voice Mail. Xtension Recorder is the perfect mini unified messaging solution. Simply ask the caller what message detail they would like to leave and instead of writing it down, record the call and e-mail it to the recipient.
- ❑ **Supervisor Monitoring** – Many PBX systems have a Silent Monitor feature. Use this feature in conjunction with Xtension Recorder to listen in and record agent activity.
- ❑ **Shared Use In A Call Center** – Many companies want to occasionally record an Agent's calls, especially new employees or for new campaigns. Xtension Recorder's plug n' play compatibility is ideal to move around different extensions when required.
- ❑ **Attendant Monitoring** – Place an Xtension Recorder on the customer's main answering position to see how callers are being answered and transferred.
- ❑ **Conference Calls** – Xtension Recorder is the perfect way to record conference calls, especially where a speakerphone is used.
- ❑ **Dictation** – Xtension Recorder is a great way to use the telephone handset to dictate letters or notes for retrieval later or for an assistant to type. Simply allocate a spare trunk port (not connected) to allow distant end silence.
- ❑ **Order Placement & Credit Control**– Use Xtension Recorder in a procurement department or credit control to ensure verbal transactions or commitments and promises are recorded.

Vertical Market Applications:

The need for call recording can be found in virtually any business. Any business that deals with customers over the phone or takes orders over the phone could benefit from Xtension recorder and the increased customer service and quality control it provides. However, below are a few key vertical markets to keep in mind when launching this product as a reseller:

Brokers – legally required to record all transactions, many small brokers cannot afford high-end Call Logger solutions, now rely upon tape recorders etc. Xtension Recorder offers a solution to a known problem. The problem is that they don't know about our solution! Propose on new sales and go back to your existing base for add-on opportunities.

Legal – the ability to track and monitor all correspondence related to proceedings is critical to the legal profession. Xtension recorder provides a cost-effective solution that works whether utilizing the handset of a telephone or in a conference room on a speakerphone. Conversations can be immediately e-mailed to associates for review as well.

Leasing Agencies – the accuracy of communication can be critical when it comes to lease terms and the many options available today. Recording calls with the Xtension Recorder ensures accuracy of transactions and can be used to clear up miss-understandings after the fact.

Insurance Agencies – timing and accuracy is critical in the insurance field. Additionally, many insurance agencies are now diversifying and providing financial services as well. This need for accuracy and the diversification into the financial field may place a requirement of call recording to meet regulations. The traditional problem has been the expense associated with these implementations; Xtension Recorder fits the small and large agencies needs.

Schools – security is a growing concern in all areas of industry, but no more so than in our schools. By placing an Xtension Recorder in a few key answering points within the school, calls of a security nature can immediately be forwarded to alert security via e-mail, even before the conversation is complete (using our snapshot feature). If caller-id is delivered we can also capture that information (check version for support) and deliver the recorded conversation with important notes about the call or the circumstances.

Public Safety – 911 Centers are all equipped with very sophisticated Call Logging equipment, however, often local police and fire department offices are poorly equipped to record incoming calls. Xtension recorder solves this and has added the important ability to listen back to a live call, while still recording (snapshot) - often critical to verify name/address of caller.

Collection Agencies – often used to verify fair practices are indeed in place and in use. Collection Agencies are often targets of un-fair law suits and threats, recording collection agent calls protects interest of all parties in the collection process.

Installation Limitations

While Xtension Recorder is a groundbreaking product, it cannot be used in every single application. Here are a few rules to help you decide if Xtension Recorder is suitable:

- ❑ **Compatible Versions Of Windows:** Xtension Recorder 3.0+ is compatible with Windows 2000 , XP and Vista. Note ONLY 32 bit operating system support at this time. Only Xtension Recorder Desktop versions below 2.43 are compatible with Windows 98SE and ME.
- ❑ **Non-Compatible Operating Systems:** Xtension Recorder 3.0 + cannot be used on Microsoft 95 or NT desktops (these operating systems do not support USB) or Win98 and ME; (note : for Win98SE and ME use version 2.43 or less). Xtension Recorder cannot be installed on Apple Macintosh.
- ❑ **PC Requirements:** Xtension Recorder Desktop requires each extension user to have a PC . BackOffice installations are possible using our Dig04 or Dig16 products, up to 48 ports per PC using these hardware platforms.
- ❑ **PC Specification:** The Xtension Recorder can operate under any PC successfully operating supported Windows operating systems and other applications. Please follow the minimum specs issued by Microsoft for the various operating systems. Suitable hard disk space to store recordings (net 168 hours per Gb). It is not necessary for the PC to be networked unless it is desired to have calls stored on a network drive or accessible from a network location. The PC must have at least one spare USB connector (1.1 or 2.0 USB Port).
- ❑ **Telephone System Compatibility:** Check our compatibility matrix to be sure the telephone system phones are supported. Note that Xtension Recorder is designed to work with the most popular Digital telephones. If not, you can use the same Desktop software connecting off the handset of the telephone using our Universal Adapter product.