U S E R ' S M A N U A L

AQ and AK Series

VOICE LOGGER

ARTECH

Version 18082015

INDEX

AQ and AK SERIES VOICE LOGGER

USER'S MANUAL

Introduction

The AQ and AK Series have their own individual embedded hardware, features and appearance, both models can record Standard SLT Extensions, PSTN CO Lines, Voice Trigger Application such as Room Microphone or Radio Telephone circuits. With the addition of "Licensing" the AQ and AK series is able to record SIP VoIP Extensions and SIP VoIP Lines.

Both the AQ and AK Series can be standalone operation using the LCD Touch Panel to search and play calls or use the ARTECH Black Box PC Client Program to connect via LAN Locally to remotely to Manage and Administrator your Voice Logger / Loggers.

AQ and AK Overview

AQ and AK Series Systems

The AQ and AK Voice Loggers has a 667MHz CPU, Samsung ARM chip and innovative hardware frame and specific call recording software.

The AQ Series voice logger starts from 4 analogue channels and can be expanded with an additional 4 Analogue channels for a total of 8 channels, through Licensing the AQ can also be run as a standalone SIP Voice recorder or a combination of SIP and Analogue Channels.

The AK Series voice logger starts from 8 analogue channels and can be expanded with an additional 24 Analogue channels. , through Licensing the AQ can also be run as a standalone SIP Voice recorder or a combination of SIP and Analogue Channels.

Both the AQ and AK series voice logger are a simple yet fully functional standalone call recording device with touch screen, speaker for play back, and a network connection. Through the LCD touch screen operation the voice logger allows playback of recording files, instant monitoring and search function for call details.

No PC required for standalone operating of the voice logger, but there is a fully functional Client Software for PC's called "Black Box" when installed this allows access for multiple users to connect to the Voice Logger and use it to its full potential.

,AK Features

1. System boots up in 20 sec
2. Support high capacity SATA HDD 500G/1T/2T
3. Expandable from 8 to 16, 24 and 32 channels, licensing for SIP recording
4. Touch screen operation
5. Remote control by network
6. Instant playback through speaker
7. Removable & hot swappable recording card
8. Removable HDD
9. Fully embedded device, no PC required
10. Lower power dissipation supports 7x24x365 running

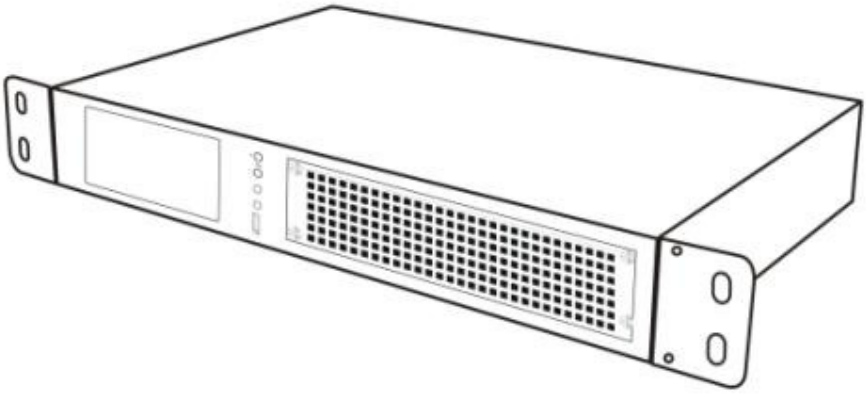
AQ Features

1. System boots up in 20 sec
2. Support SD cards up to 64GB
3. Expandable from 4 to 8 standard channels, licensing for SIP recording
4. Touch screen operation
5. Optional model without touch screen
6. Remote control by network
7. Instant playback through speaker
8. Full embedded device, no PC required
9. Lower power dissipation supports 7x24x365 running

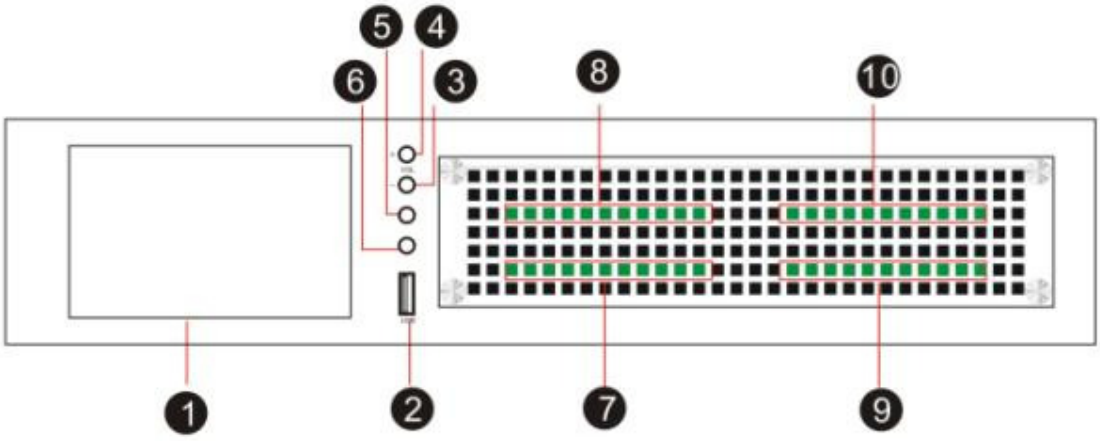
Recording Hour SD and HD Size

1.	500GB	36,000	Hour
2.	1000GB(1T)	72000	Hour
3.	2000GB(2T)	144000	Hour
4.	8GB	560	Hour (SD Card)
5.	32GB	2240	Hour (SD Card)
6.	64GB	4480	Hour (SD Card)

AK Series Appearance

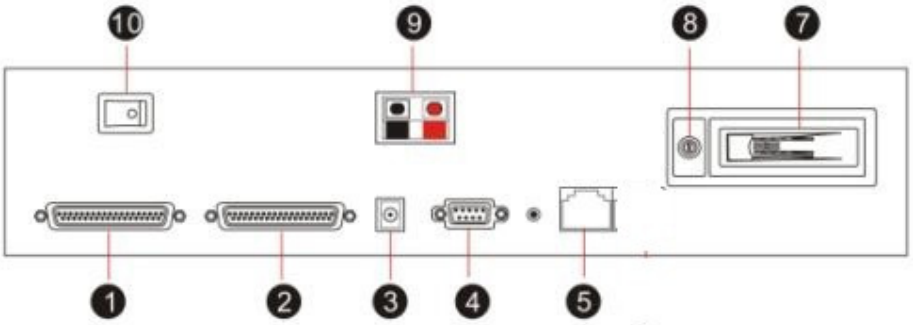


AK Front



1. 5” touch screen, 800 * 480
2. USB Host for upgrade or backup HDD
3. Volume -
4. Volume +
5. Earphone (Main)
6. Earphone (Sub)
7. Card 1 (Channel 01-08)
8. Card 2 (Channel 09-16)
9. Card 3 (Channel 17-24)
10. Card 4 (Channel 25-32)

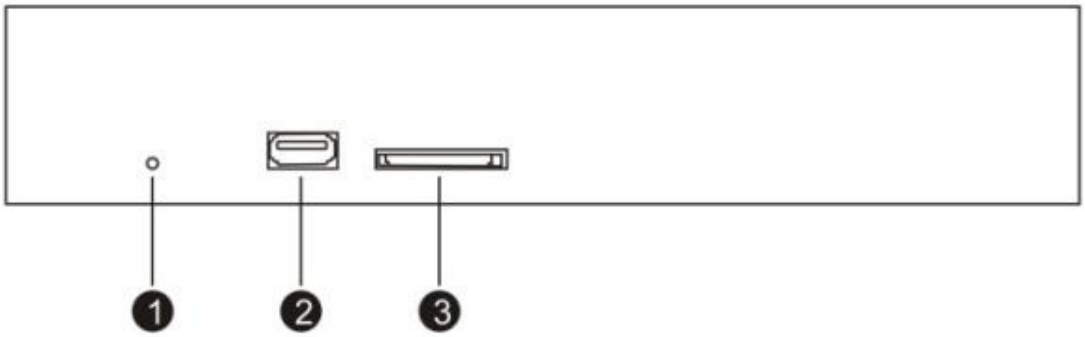
AK Rear



1. DB37 for Channel 17-32
2. DB37 for Channel 1-16
3. Power input : DC-19V
4. RS232 for SMDR
5. RJ45 for LAN (100) (SIP record)
7. SATA HDD
8. HDD lock
9. External power
10. Power switch

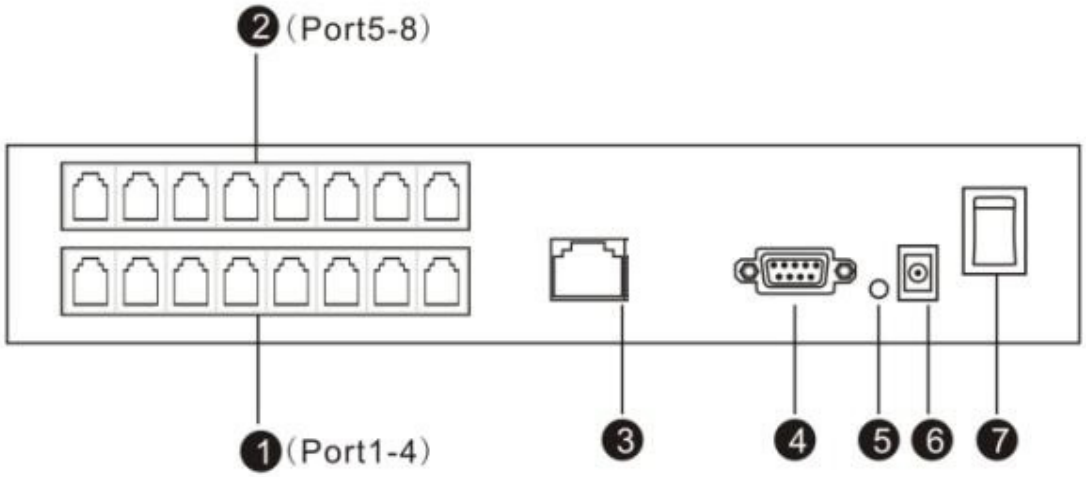
AQ Series Appearance

AQ Front



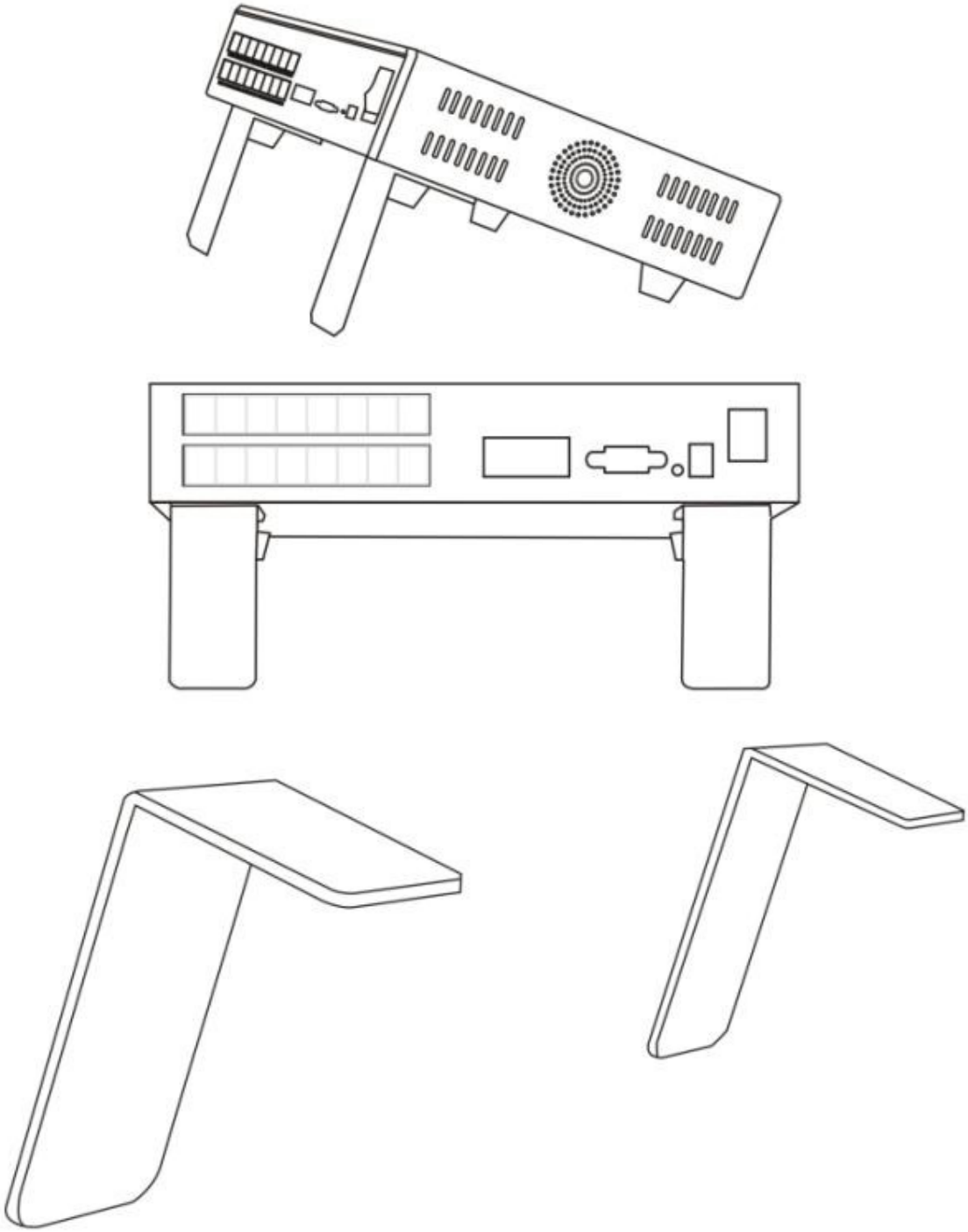
1. Power LED
2. USB Host for backup or system upgrade
3. SD Slot for optional SD card model. No use for HDD model

AQ Rear

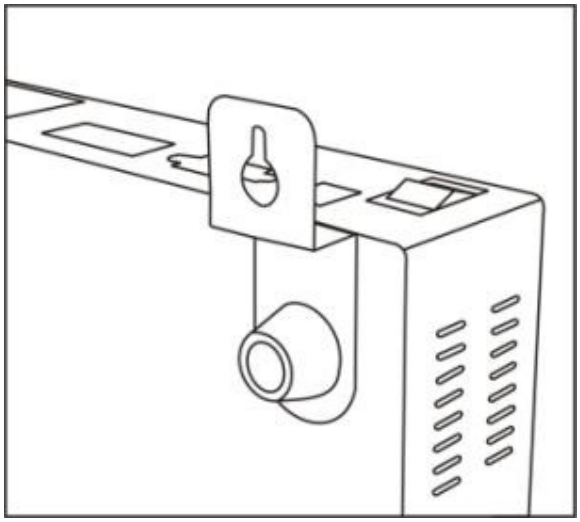


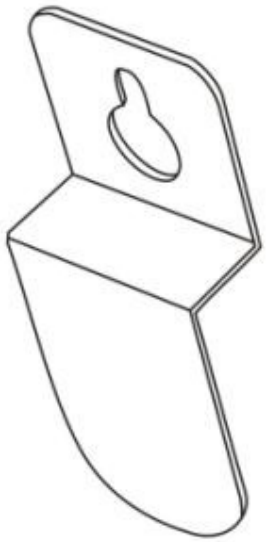
1 Card 1, Channel 1-4 (RJ11)
2 Card 2, Channel 5-8 (RJ11)
3 RJ45 Port x 1 (100) (SIP Record)
4 RS232 Port for SMDR data
5 RS232 data indicator
6 Power input : DC-19V
7 Power switch

AQ Rack (Remove AQ rubber stand first and screw it with rack mounts)



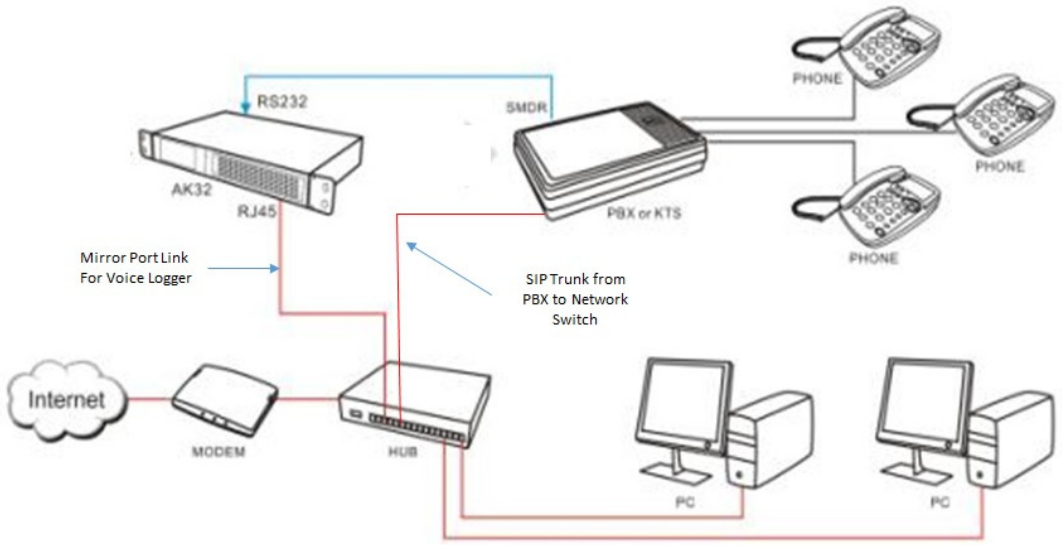
AQ Wall mount (Remove rubber stand and screw on wall mount)



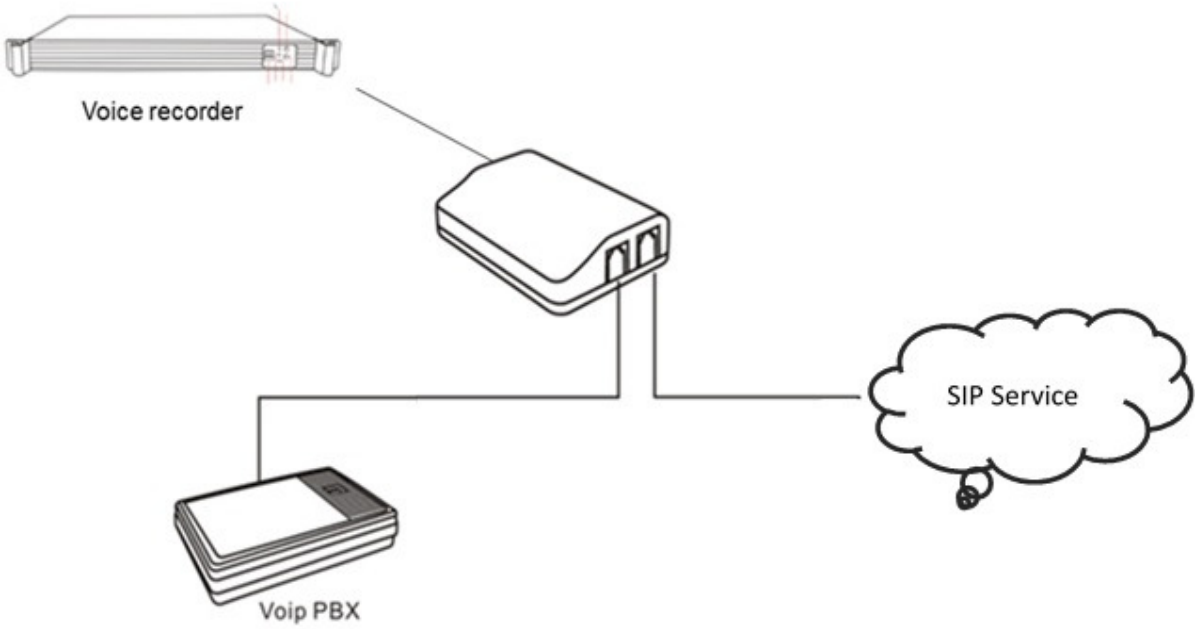


AQ and AK Connections for Recording:

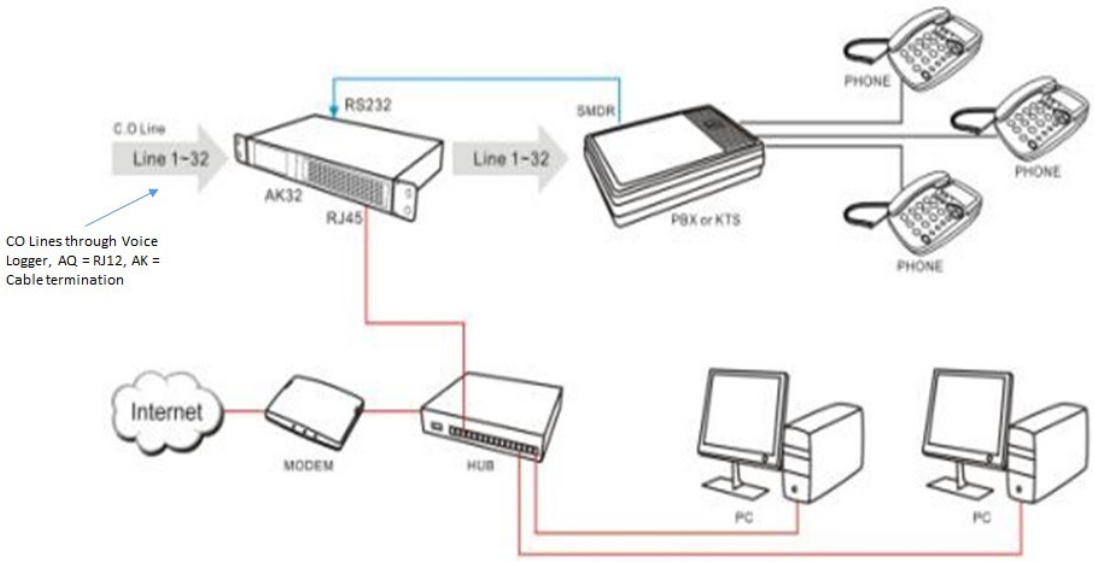
Connection for SIP Trunk Recording PBX



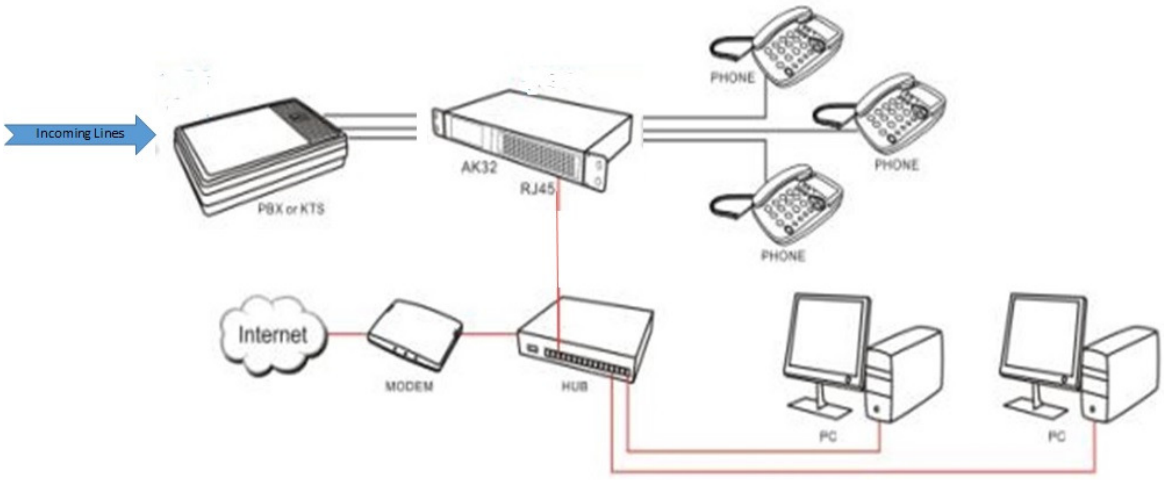
Connection for SIP Trunk Recording PBX using "TAP Box" (VH100)



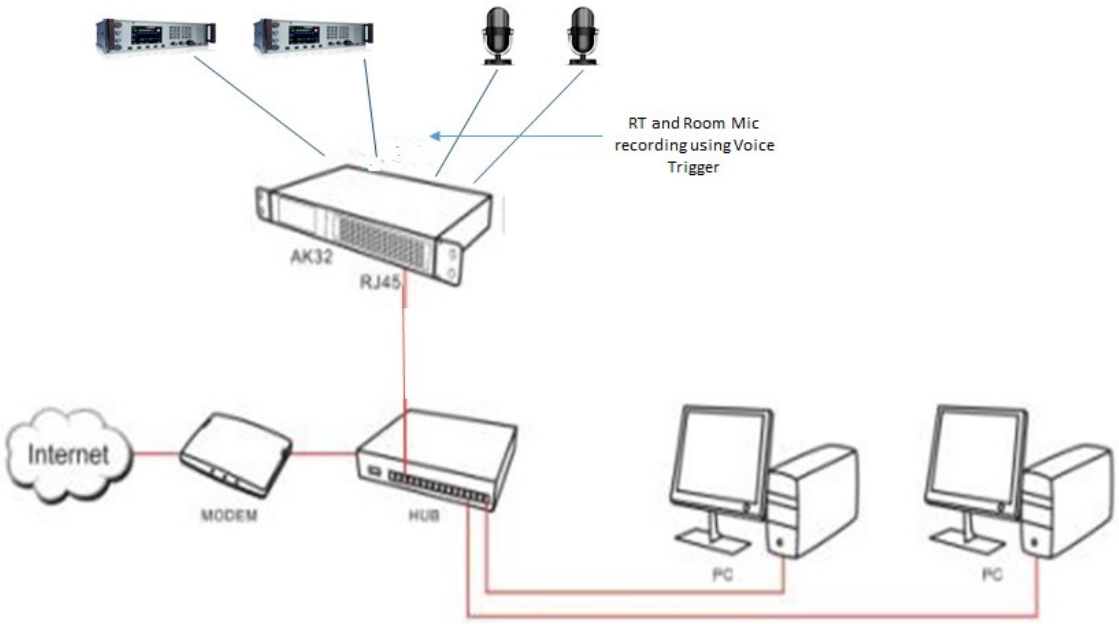
Connection for CO Line Recording PBX



Connection for SLT Phone Recording on PBX

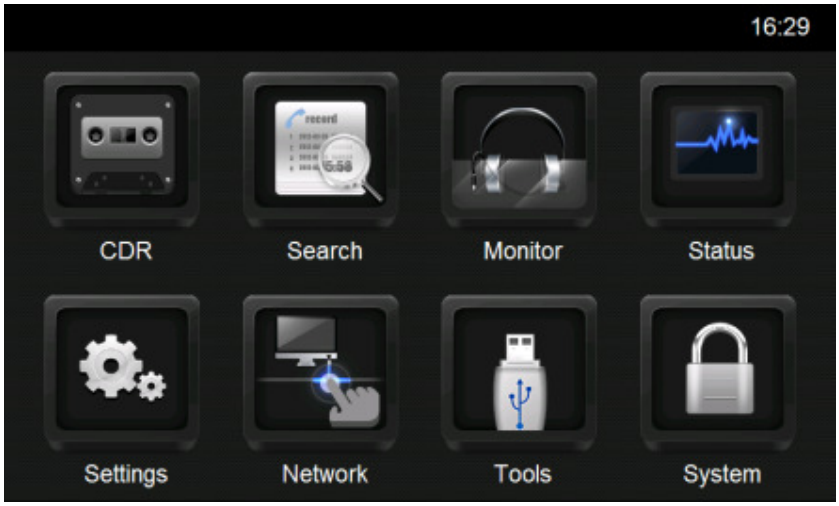


Connection for Voice Trigger on RT or Room Microphone

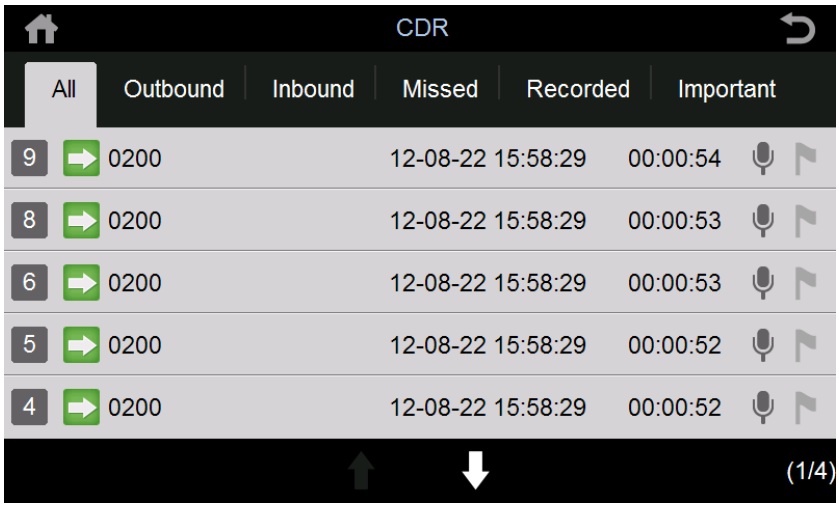


AQ and AK Touch screen

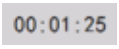
There are 8 function divisions on touch screen, including CDR, Search, Channel Monitor, Status, Settings, Network, Tools and System. .



CDR (Call Detail Recording)



1. Back
2. Back to main menu
3. Recording of Channel
4. Outbound call
5. Inbound call
6. Missed call

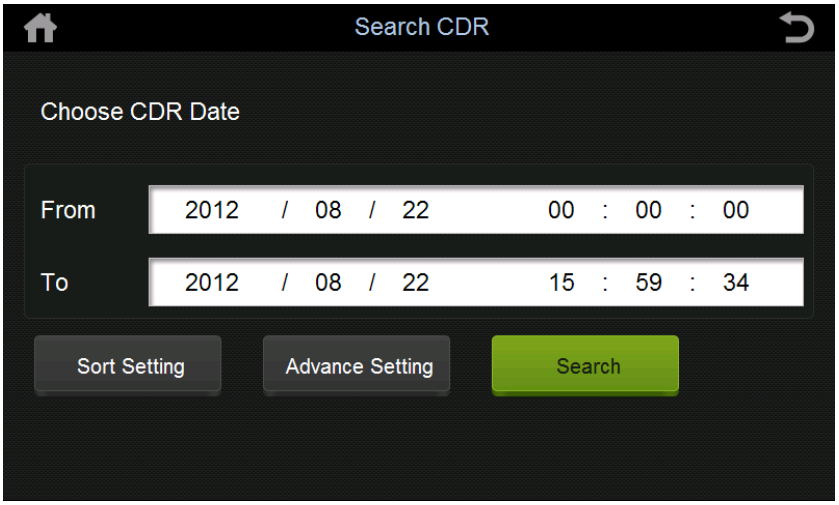
7.  Telephone number 0200
8.  Start time and date
9.  Recording elapse HH:MM:SS
10.  Audio file
11.  Flag symbol for important call. Red: flagged Grey: None
12.  Page Down & Page Up. (Effective on bright one)
13.  Current page/Total page

Search CDR

Search the records by various conditions.

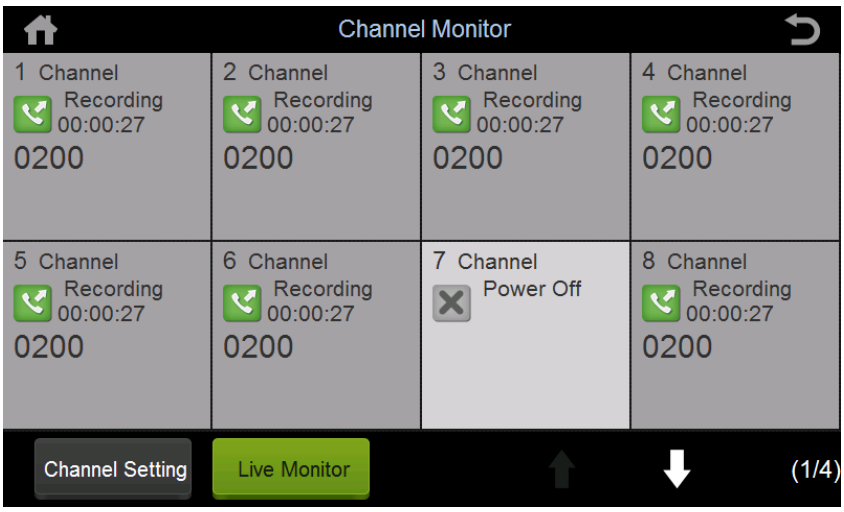
Recommend: Database is saved daily. Search speed depends on time span.

AK32 supports SQL searching as well.



Channel Monitor

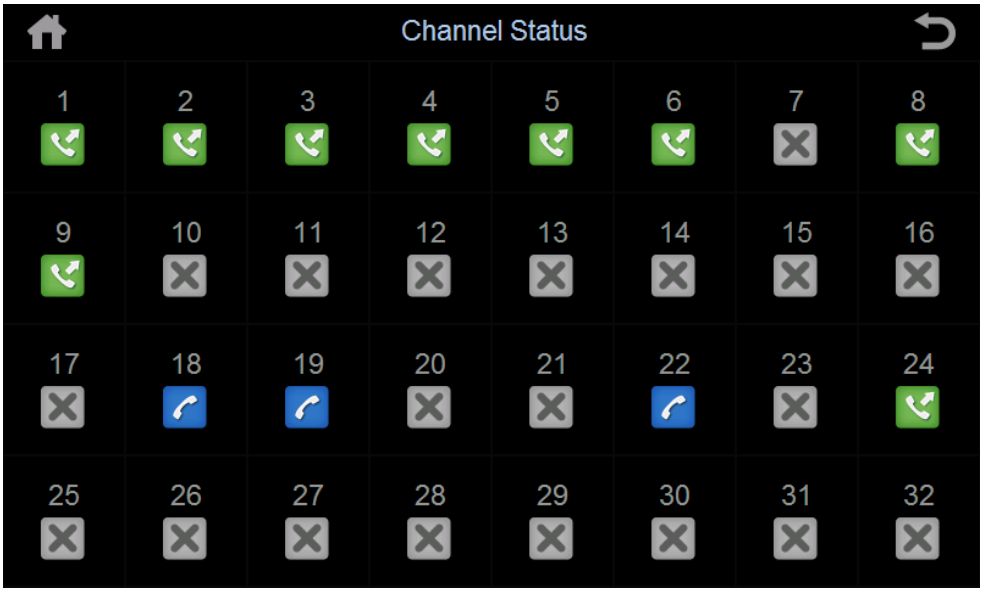
You can check one card (8 channels) in one page. It shows Channel number, status telephone number, recording time and status. (Not for use with SIP)



Channel Status

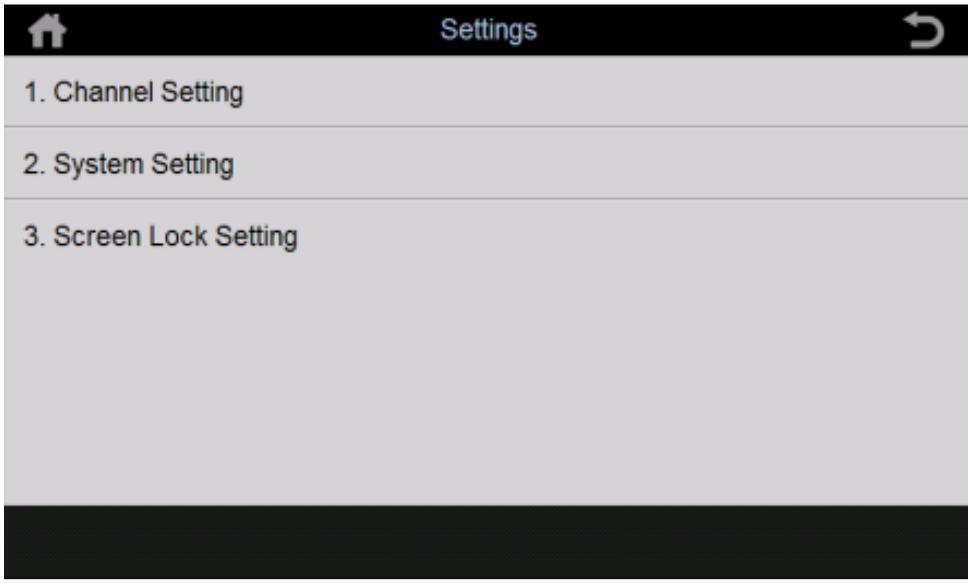
It shows instant status of 32 Channels. Symbol only.

1. Dialing Idle Inbound call Outbound call
2. Power off (Landline disconnected) Ringing
3.



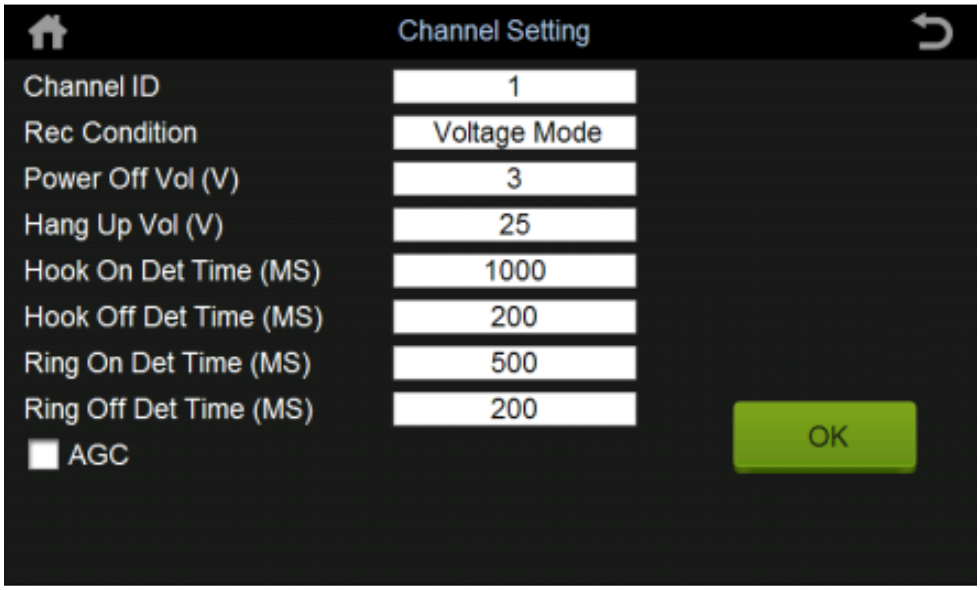
Setting

Touch screen supports Channel Setting, System Setting, and Screen Lock Setting



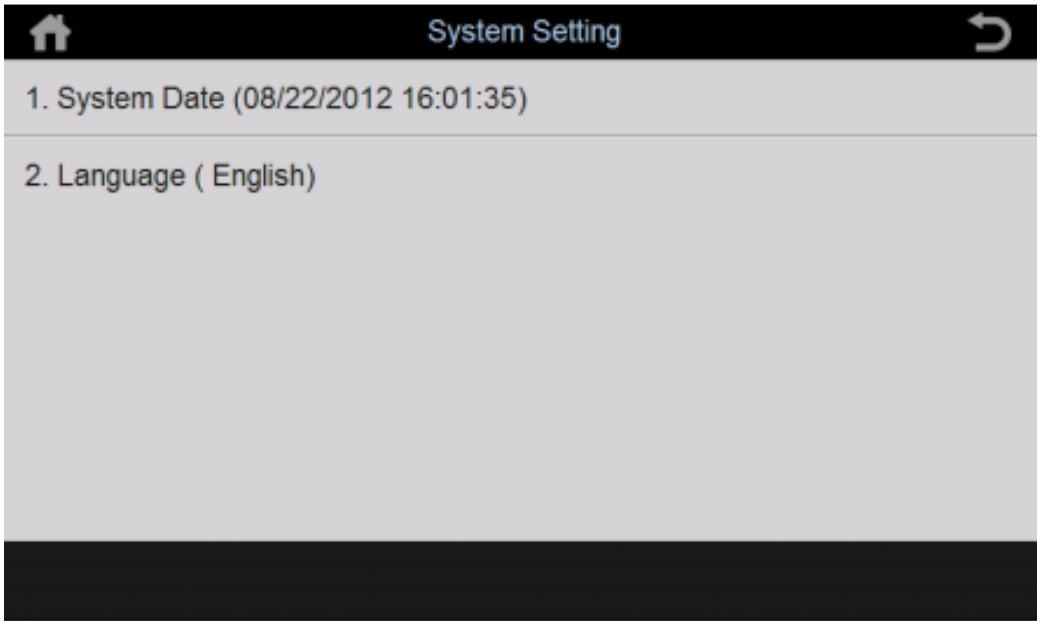
Channel Setting

Set up Channel 01-32 parameter (See PC program setting)



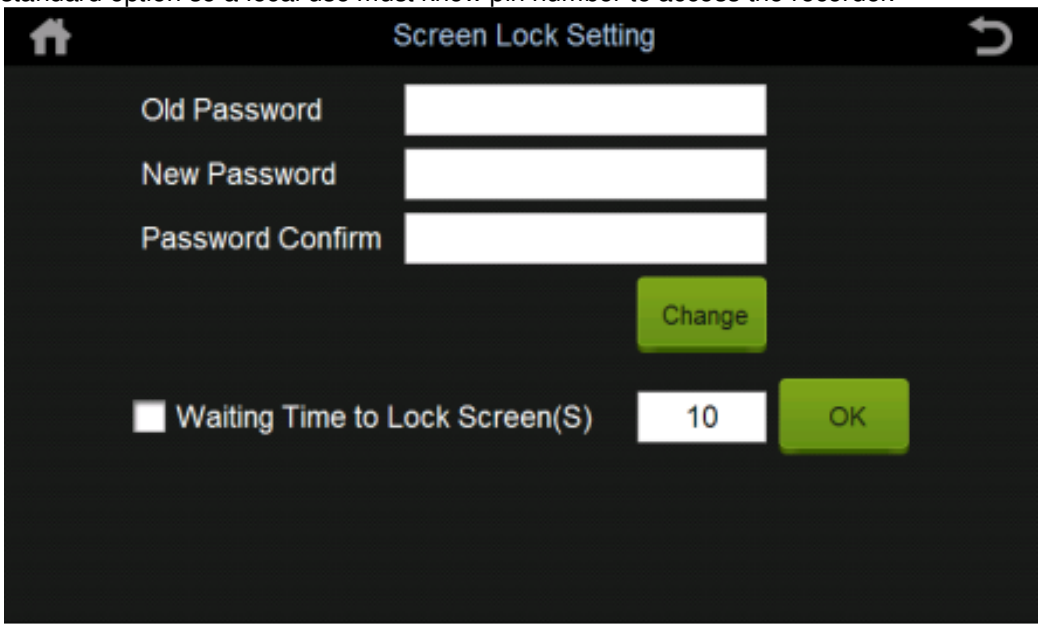
System Setting

Touch screen supports date and language setting only.



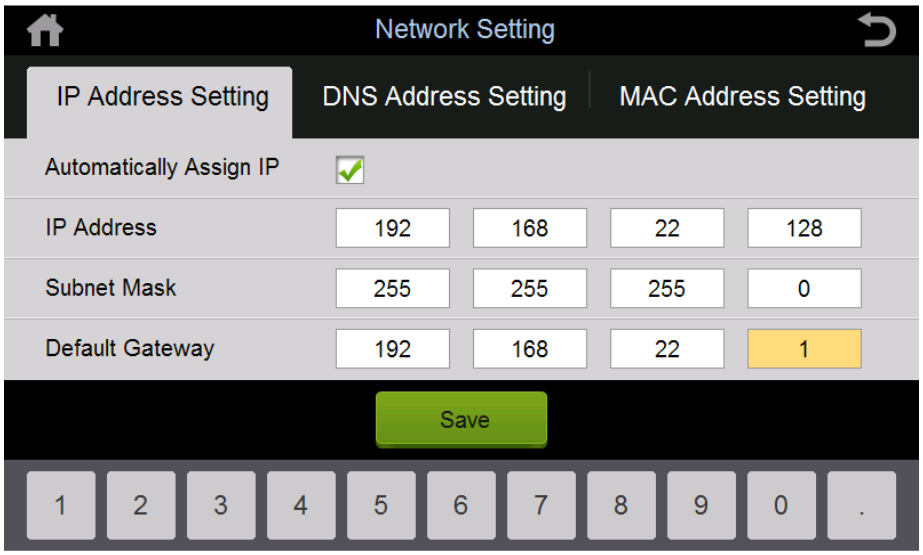
Screen Lock Setting

The screen on the AQ and AK can be locked using a pin number, this setting can be set by manual means or as a standard option so a local use must know pin number to access the recorder.



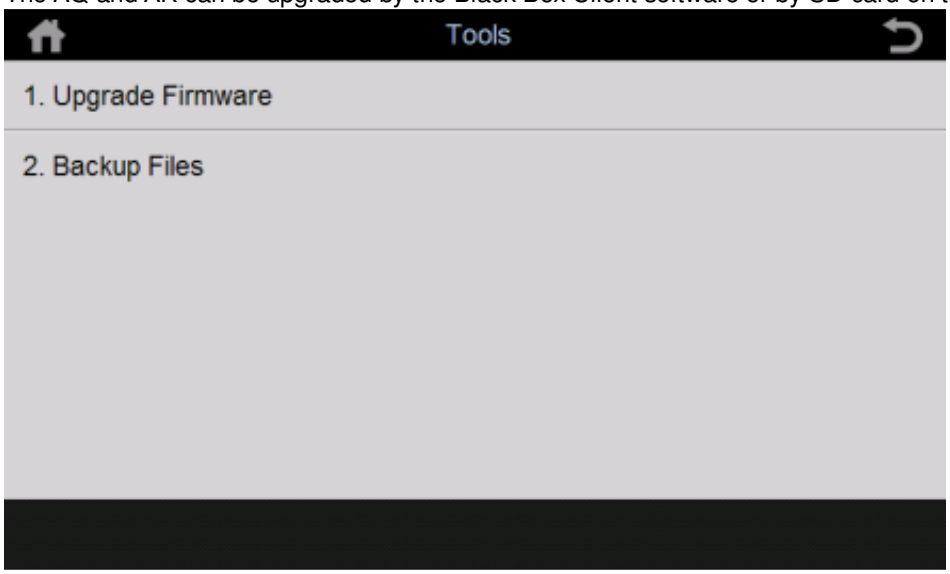
Network Configuration

Configure AQ / AK network detail to have DHCP or a “fixed” IP address. Restart Voice logger after configuration.



Tools

The AQ and AK can be upgraded by the Black Box Client software or by SD card on the AQ or USB on the AK Logger.



Copy upgrade file to SD or USB card under folder name: FW_UPDATE (files supplied from Artech)

Plug in SD or USB into Voice Logger, select Upgrade Firmware / Backup, after upgrade /Backup restart device and check firmware on device is correct upgraded version. (See system screen)

System

Display system default information and program firmware version.

Black Box PC Program

Introduction

The Black Box PC program is a Windows based Client that comes as standard with your Artech voice logger, it is designed to work across a customer LAN or WAN to connect to the AQ and AK series Voice Loggers.

It allows up to 10 users to be connected to the voice logger at any one time, it is a simple to use yet powerful tool for you to search for and manage their Artech Voice Loggers.

The Black Box offers the following functionality:

- Manages AQ and AK Voice Logger
- Easy Use
- Unlimited user registration
- Multi User authorization Levels
- Multi Language
- Live Call Monitoring
- Fuzzy Search
- Statistic Chart

Minimum PC requirements

- CPU: Intel Pentium D or AMD Athlon 64 (K8) 2.6 GHz.
- RAM: 2GB.
- GPU (Integrated): Intel HD Graphics or AMD (formerly ATI) Radeon HD Graphics with OpenGL 2.1.
- GPU (Discrete): Nvidia GeForce 9600 GT or AMD Radeon HD 2400 with OpenGL 3.1.
- HDD: At least 500MB for Operating Files and recording files

Supported Operating Systems

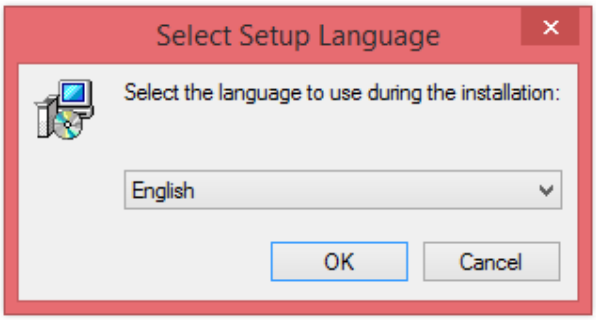
- Windows XP Pro
- Windows 7
- Window 8.1
- Windows 10

Installing Black Box PC Program

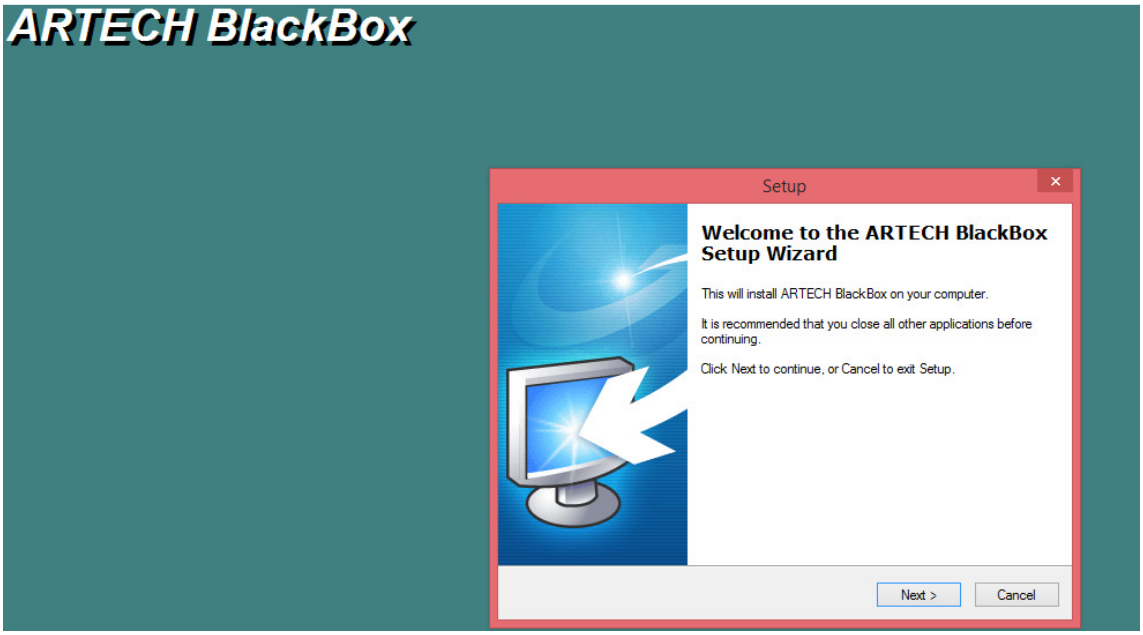
The Black Box PC program is an executable installation program that is install on any PC that requires access to the Voice Logger. Be aware you may need “Administrators” Level Privilege to install on some PC networks. Ensure you have the latest version “Black Box” Client Software. Please follow the below steps to install / Upgrade the Black Box software.

1/ Double click on the Black Box installation file

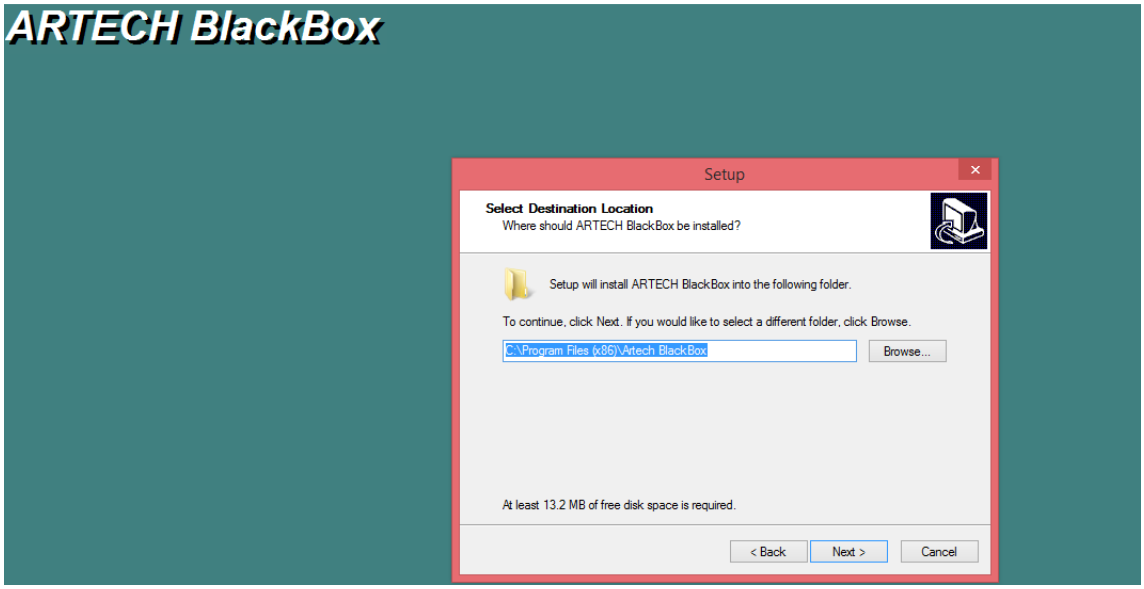
2/ Select Language you require and click OK



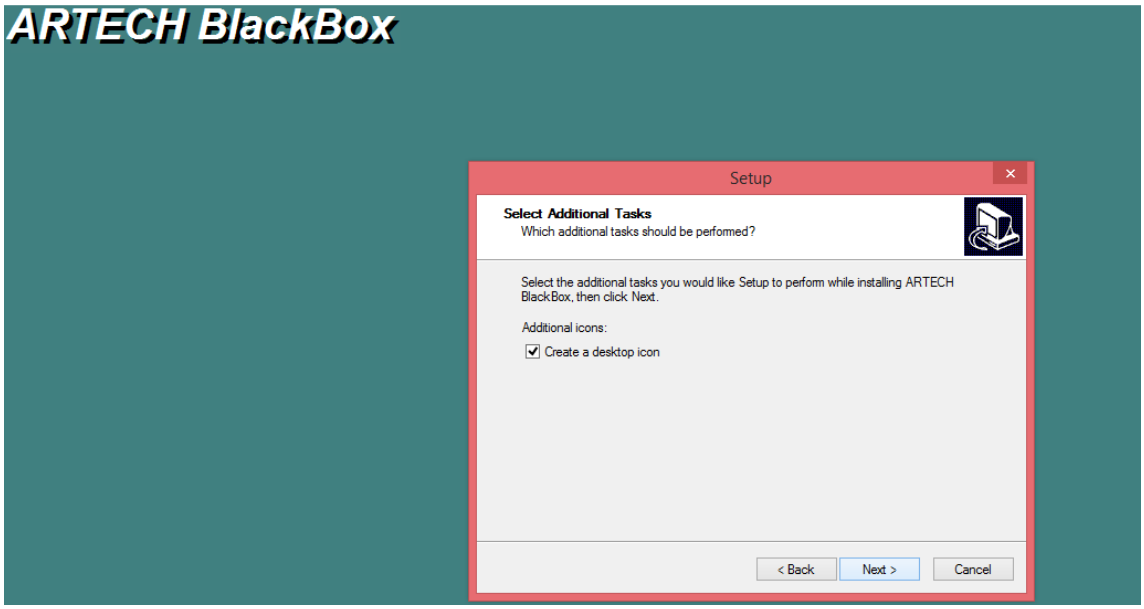
3/ The Black Box wizard will open, please click “Next”



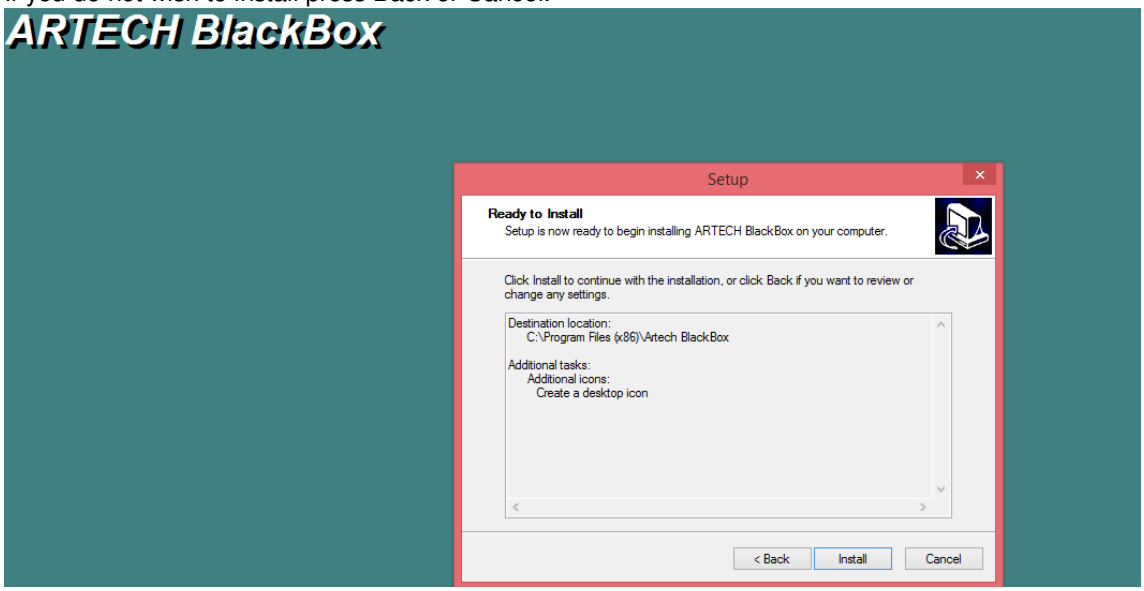
4/ The destination “Directory” will appear, this tells you what “directory” the Black Box will be install in, un-less you have a special setup we recommend you leave and default and click NEXT



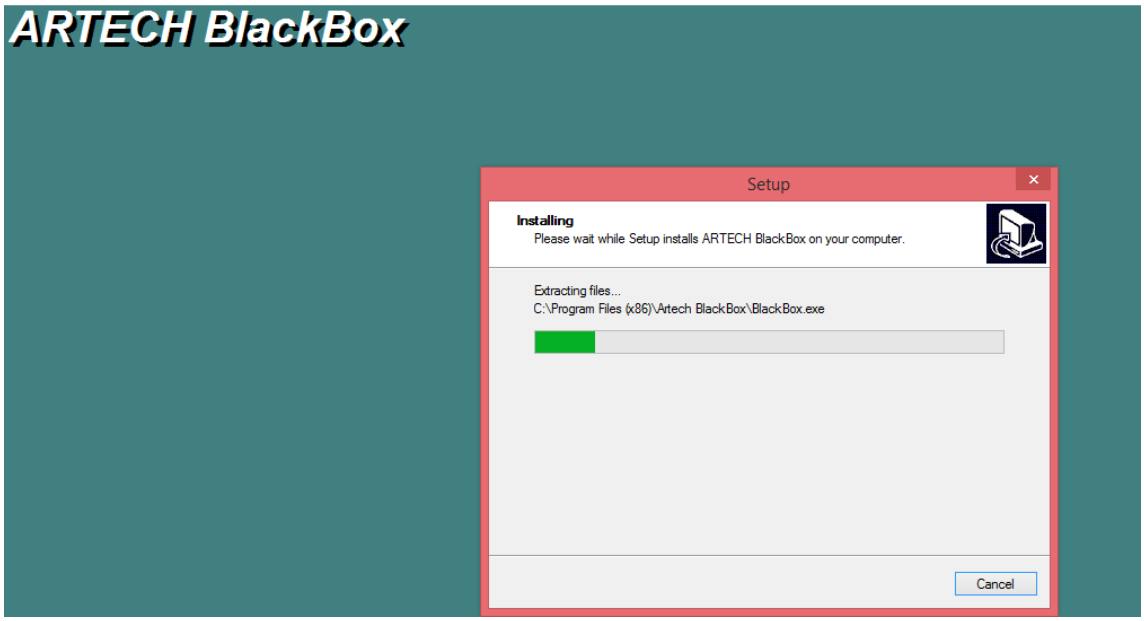
5/ Option to create a Black Box “ICON” on your Desk Top, by default the installation wizard will place an ICON on your desk top, so just click NEXT. If you do not wish to have an ICON un-tick option and press NEXT.



6/ Black Box wizard now ready to start installation, please press install to complete installation
If you do not wish to install press Back or Cancel.

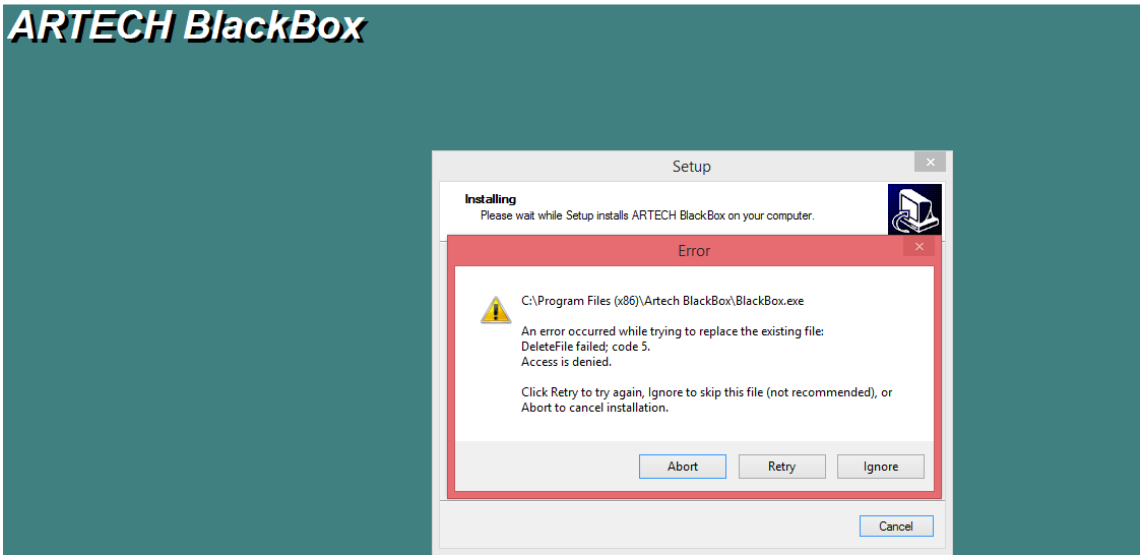


7/ Black Box will now install, you will see a progress bar like example screen shot below

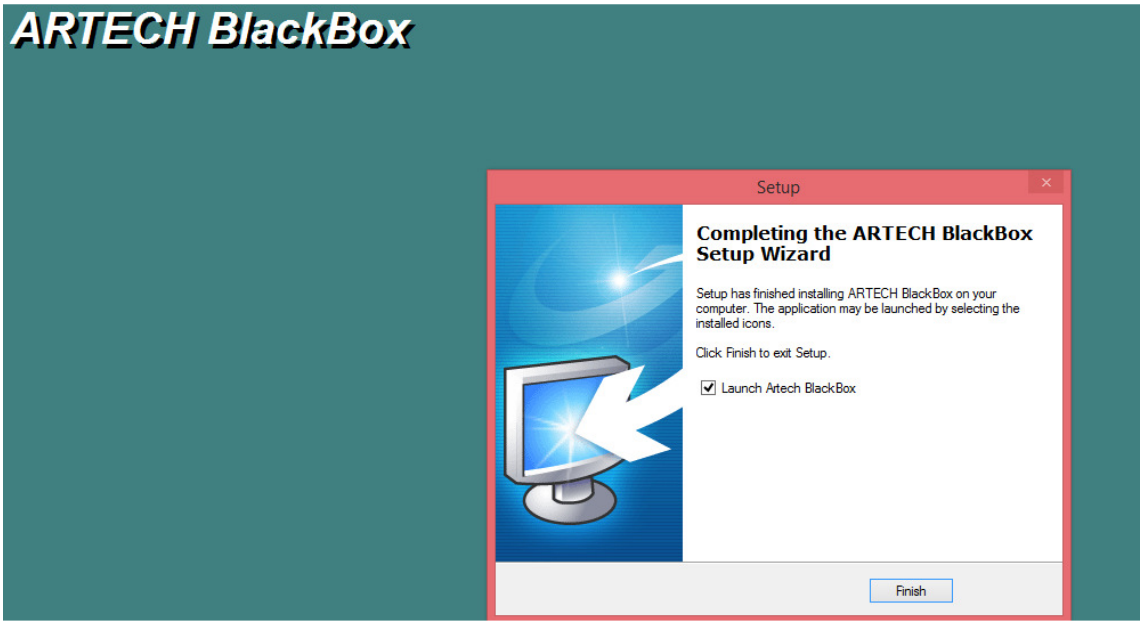


NOTE: If you receive and ERROR BOX regarding the installation of the software like bellows example it means there could be a program session of “Black Box” already running on your PC.

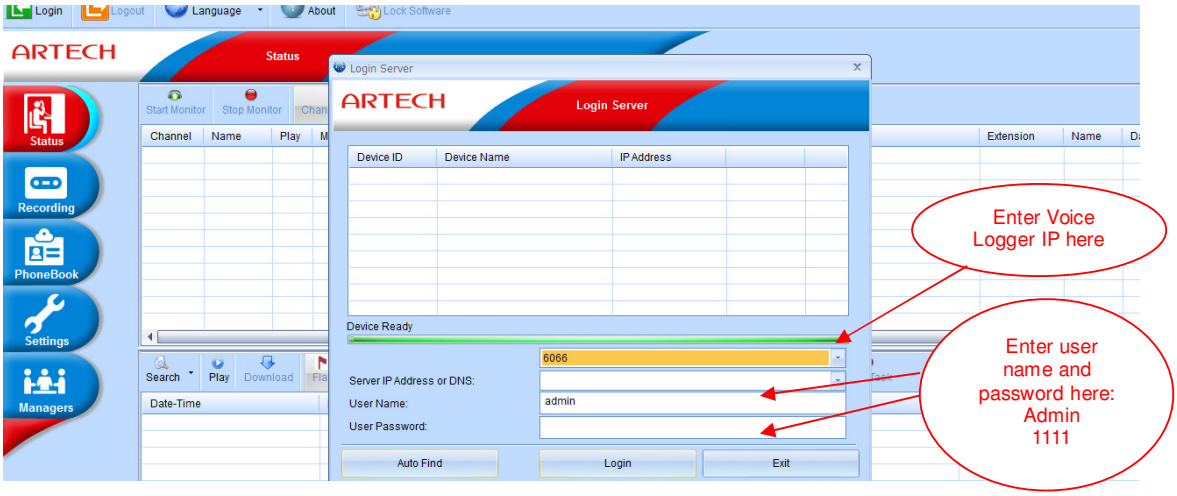
Please cancel installation and close the session of Black Box on your PC and then restart the installation. You generally will only get this error if you are upgrading an existing installation.



8/ When the installation is successful you will see the below screen, the Black Box Program will open when you click “Finish”

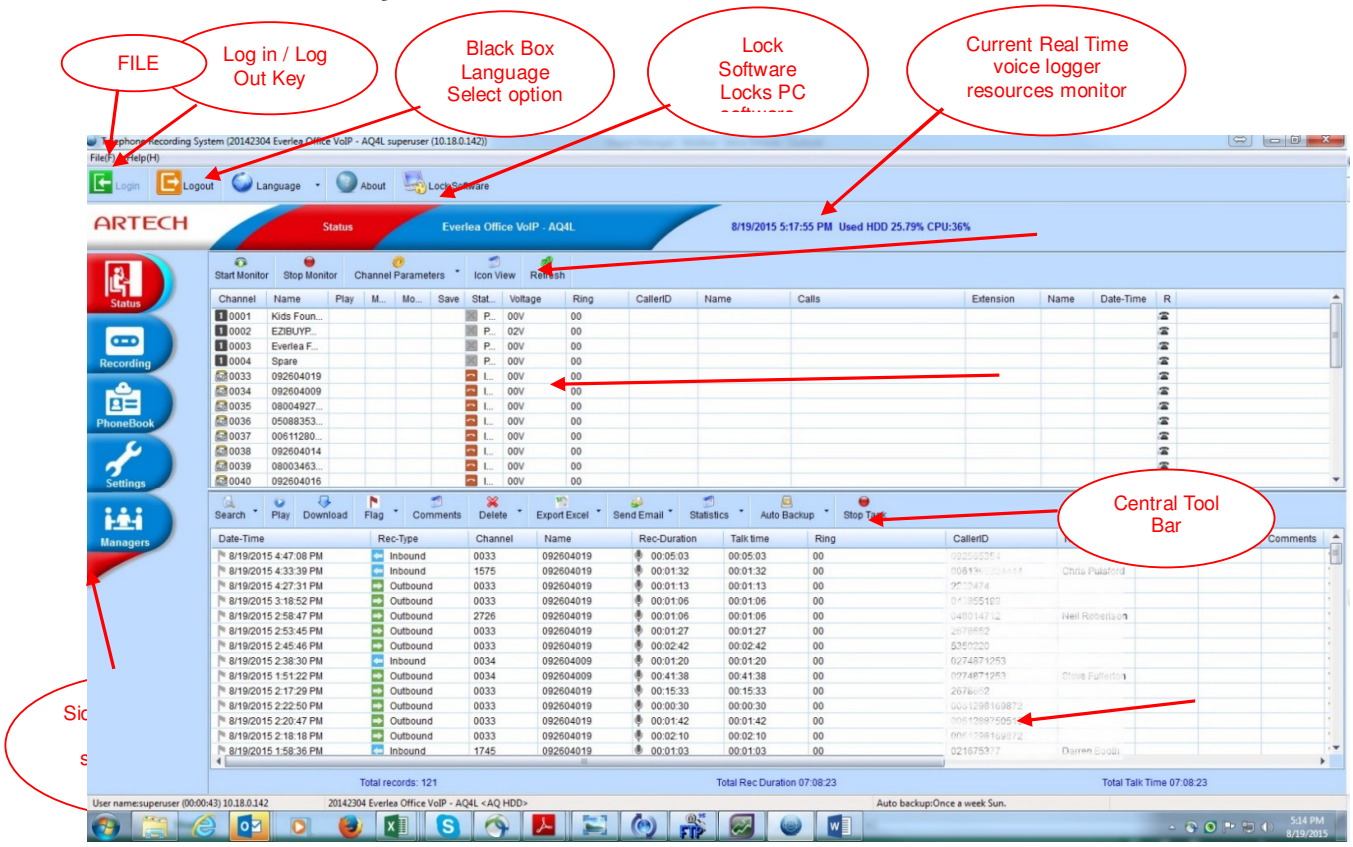


9/ On opening of the Black box the program will open and the Log In window will open, please see “Login Server” section under “Using Black Box” in Manual for further details on logging into Voice Logger.

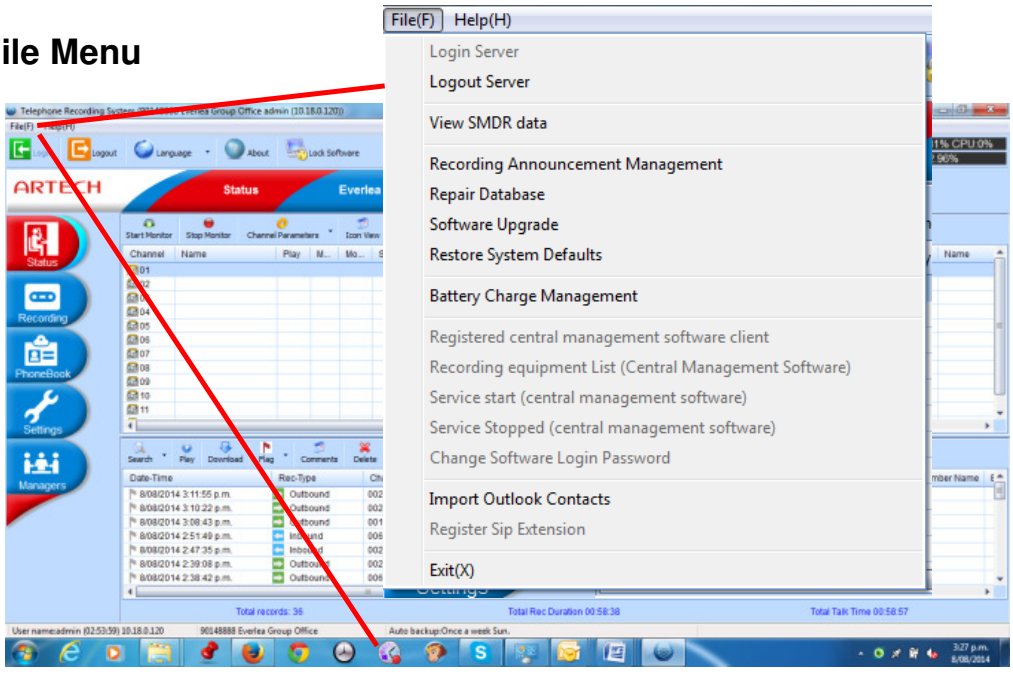


Using Black Box PC Program

Main Screen Layout / Tool Bars

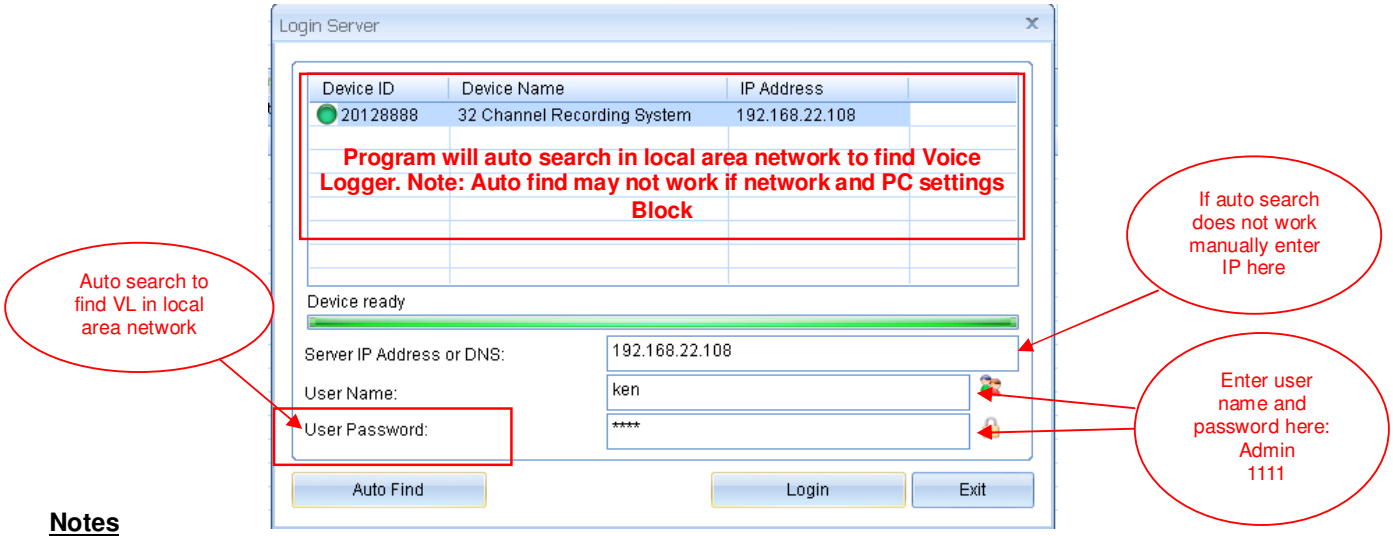


File Menu



Login Voice Logger

After opening Black Box program, select file and select Login Server
Login Server window will appear, enter user name and password, in the case of your first login please use administrators login and password as below



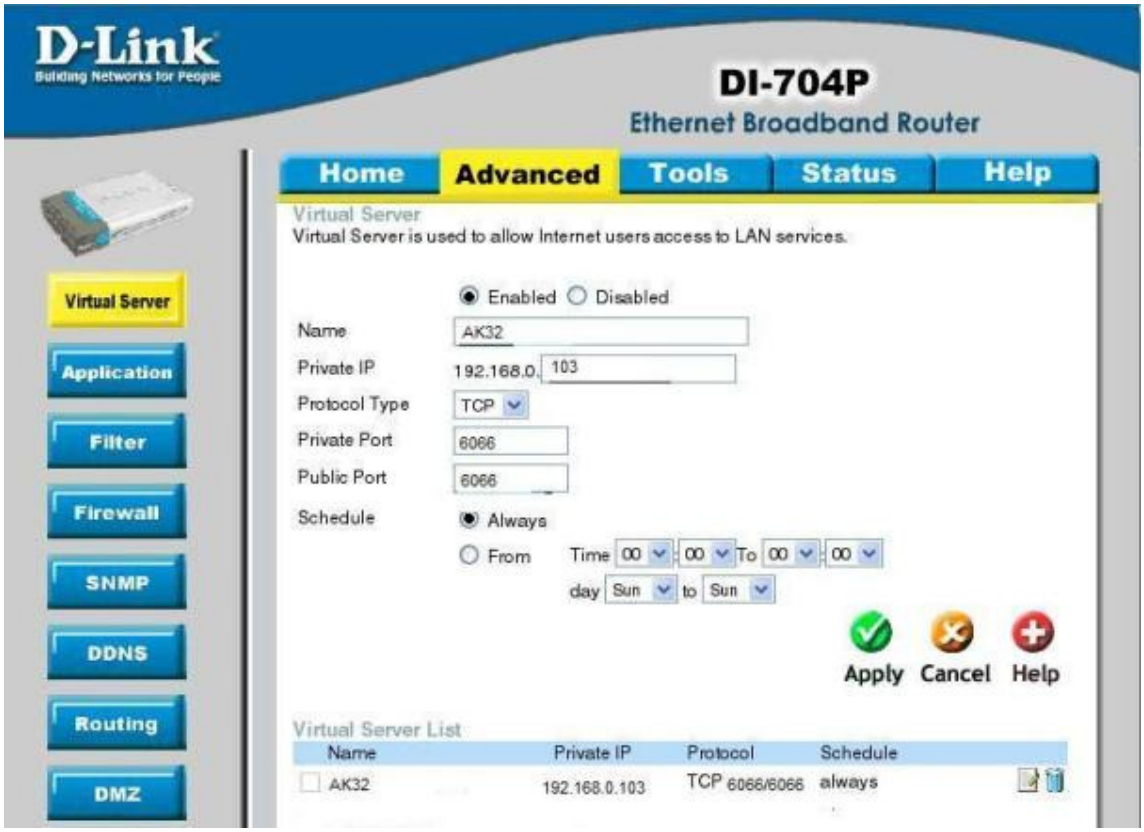
Notes

- IP address of selected the device will be saved. It will be display automatically in next login.
- User Name: admin (default)Password: 1111 (default)
- If AQ and AK located in same LAN as PC can be log into with LAN IP address, user name and password.
- If AQ / AK located in remote site, you can log in remotely with site IP address or Domain name, user name and password.

Logging into Voice Logger Remotely

For remote log in, you must have a fixed IP for the remote site; you can then use Black Box to log into the remote site. On remote site you will have to setup porting **(Voice Logger uses port 6066)** for communications, below is a very simple example of how this could be done.

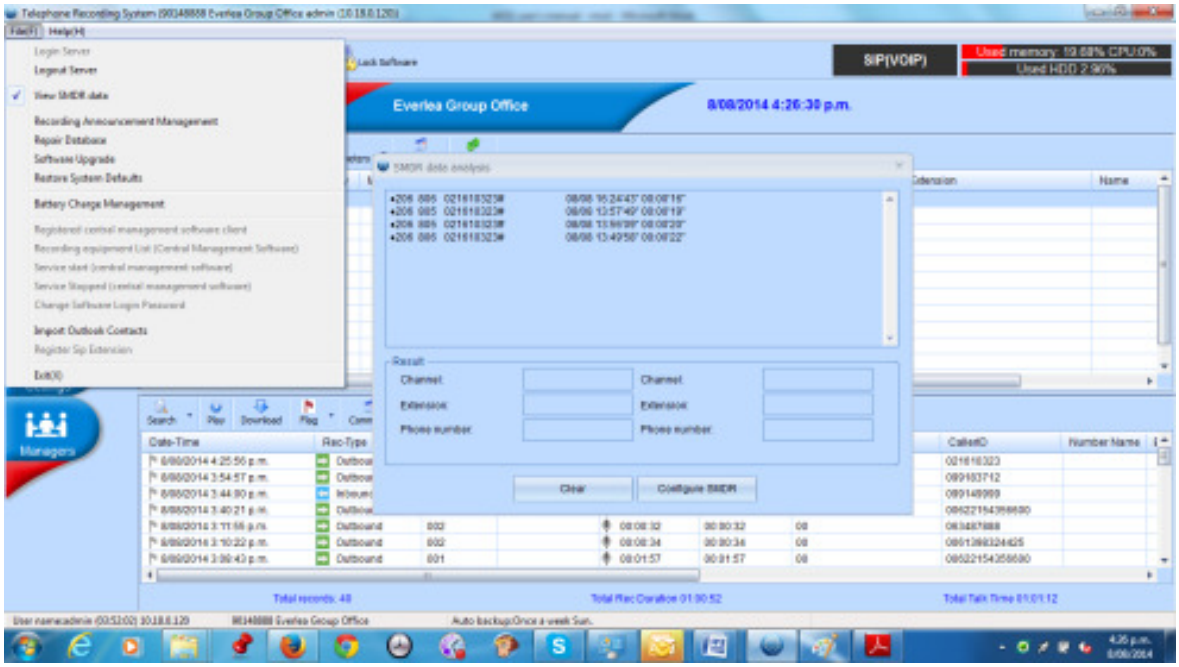
Access to remote voice logger via public IP address can be directed to local IP 192.168.0.103 port 6066.



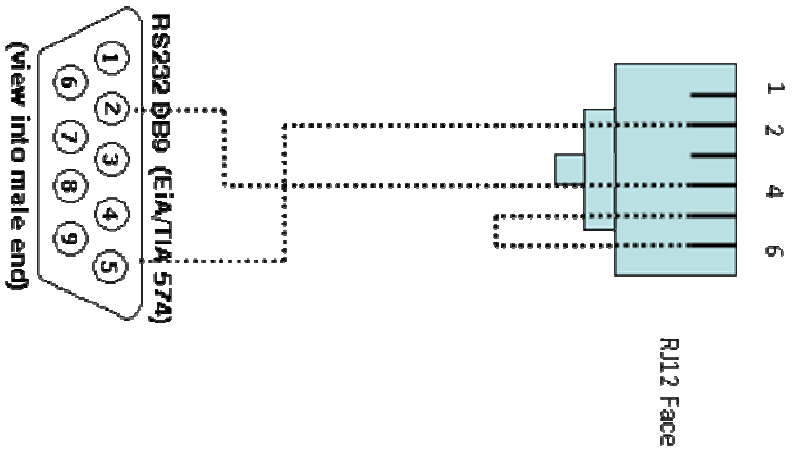
View SMDR Data

The View SMDR data works in conjunction with the PBX settings under the Settings TAB on the main page, e.g. the SMDR must be setup and connected for this option to work. If the voice logger is connected to the PBX SMDR, you can select the “View SMDR” and when call information is received by the voice logger the information will be display like below. From this you can confirm SMDR settings (see Appendix 1 “Setting up SMDR Integration Example)

You can connect to a PBX system using an RS232 connection or via TCIP connection, below is an example 2 x wire connection from an AQ / AK Voice Logger to an RJ12 PBX connection, the 2 wire configuration will always let AQ/AK send SMDR without PC connection



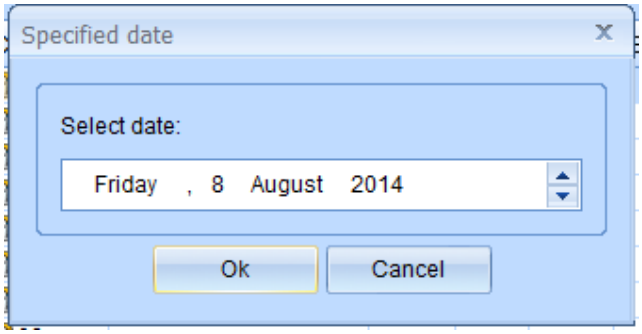
Example of 2 x Wire SMDR from PBX RJ12 to the DB9 Serial input on Voice Logger, please see example on how to setup Voice Logger in Appendix’s



Repair database

In the un-likely event that the Voice Loggers recording data base has issues (example if the recorder experiences an un-expected power cut) the voice loggers call data base could get damaged or some calls may appear to be missing. The “Repair database” command instructs the voice logger to scan and rebuild its data base for the instructed period.

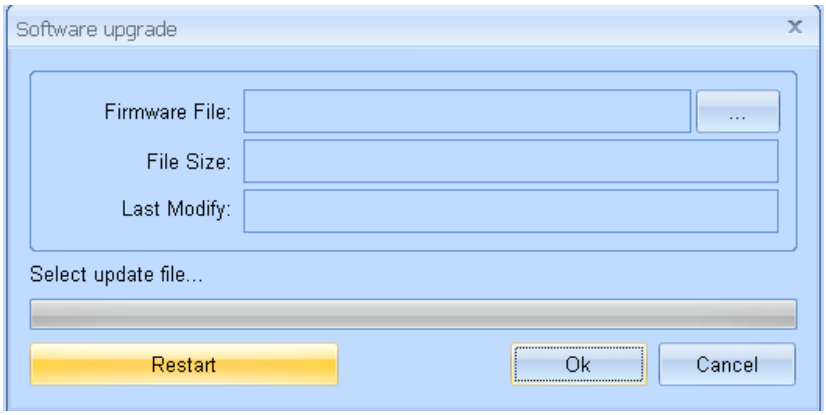
Select date you want the voice logger to repair and click OK, please note if there are a lot of records for that day this process may take a while, please be patient while this process in running.



Software upgrade

The AQ and AK series voice logger can easily have its firmware upgraded via the Black Box client software, select the Software upgrade option and the below box will appear, using firmware File button browse to folder you have new firmware and select. When ready to upgrade click OK, voice logger will upload new firmware.

Voice logger must be restarted for new firmware to be installed, when ready to restart click “restart”



Note: Please insure voice logger is idle before restarting or you will lose any recording in progress during restart.

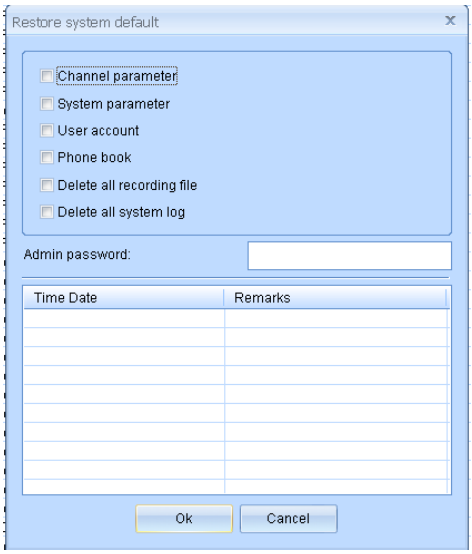
Restore system default

Restore system default gives you various options, default part options or complete Factory Default on the voice logger.

Options are:

- Channel Parameters: Reset all commands under the channel parameter tab on ALL channels
- System Parameter: Resets all commands under the System parameter tab
- User Account: Deletes are user accounts
- Phone Book: Deletes all Phone Book entries
- Delete all recording file: Deletes ALL call recordings
- Delete all system log: Clears all logs and log history

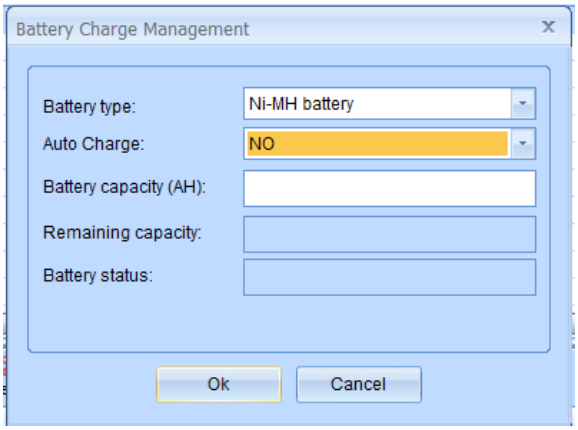
To complete TOTAL factory default please have all option boxes click



Caution: Default setting requires administrator login to carry out the task. Administrator needs to re-enter the password to avoid abuse. Each reset or default operation is unable to be recovered! Once it is done you connect recover the data!

Battery Charge Management

The AQ and AK Series voice loggers have a unique battery backup option which will allow the voice logger to maintain full recording operations during a power cut.



Notes: Battery types supported are: Ni-MH, Lead Acid, Lithium and polymer

Import Outlook Contacts

The AQ and AK Voice Loggers can import Outlook contacts into its own onboard phone book, these contacts can be used for services such as Screen Pops on incoming calls and details on call reports.

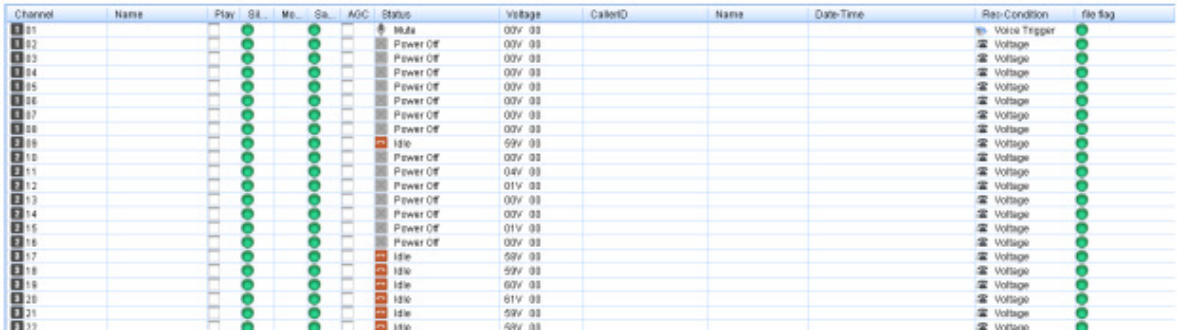
Please note you have to be logged in as the “Administrator” and the outlook contacts imported are from the local PC you are logged into.

Notes: please check number format in your contacts work with the voice logger for screen popping if that’s what you require)

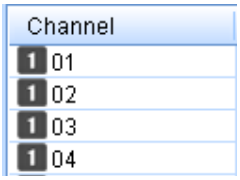
Depending on the number Outlook contacts the Sync can take a while, please be patient.

Channel Status Window

The channel status window shows you real time status of each channel, the below section details this window.



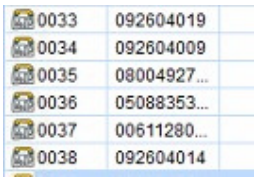
Channel Status Window – Channel Numbering



Channel Numbering

On AK series the analogue cards use Channel No.01-32. Black label is for Card No e.g. 1-4.
Card 1: Channel 01-08
Card 2: Channel 09-16
Card 3: Channel 17-24
Card 4: Channel 25-32

On AQ series the analogue cards use Channel No.01-08. Black label is for Card No e.g. 1-2.
Card 1: Channel 01-04
Card 2: Channel 05-08



Channel Numbering SIP

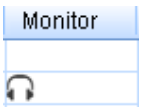
On both the AQ and the AK recorder the channel numbering starts from 33, please note the channels at idle will display the SIP registered numbers the Logger will record.

When recording the channels are dynamic so if a SIP number receives multiple calls at once you will see multiple channels with same SIP number.

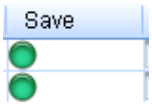
Channel Status Window – Channel Status

Recording announcement status indicator, indicates if enabled or disabled.

Mute enabled indicator. Enabled/Disabled by specific hot key
Green: Disable
Red: Enable



Monitor indicator – Only one channel can be monitored by a PC at a time. Headset symbol indicates the channel is been monitored.

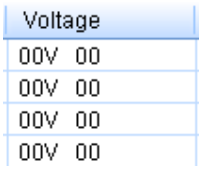


Call saved or not saved indicator.
Voice logger will not save the calls for following situations

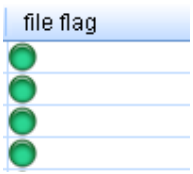
- Hot-t key recording. The call is unable to be saved until the specified hot-key is pressed
- Polarity reversal recording. The call is unable to be saved until polarity reversal signal received.
- Phone or extension number loaded in do not record exception tables

AGC indicator
AGC: Automatic Gain Control

Channel Status
Indicate channel status. Include: idle, power off, dialing, etc.



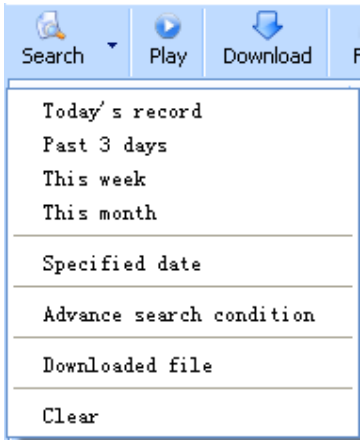
Current channel voltage (Analogue Cards Only)
No landline in: 1-3 V Power off
Idle: >30V
Dialing: 5-24V



Create recording file establishing indicator
Indicate whether voice logger is recording calls properly. If the HDD is disconnected or unformatted, the indicator will not appear. Suggest: Record the calls 1min after Logger is powered on.

Central Tool Bar

Search for Recordings



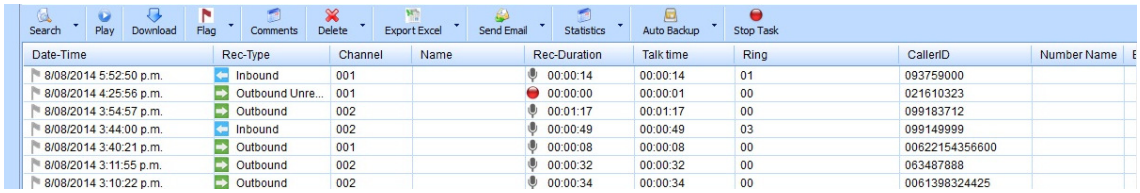
There are several time spans for quick search that can be used. If the records have being searched before, the program will compare with database with last search.

a. If databases are different, the program will synchronize with voice logger again. (Can take time due to sync form voice logger)

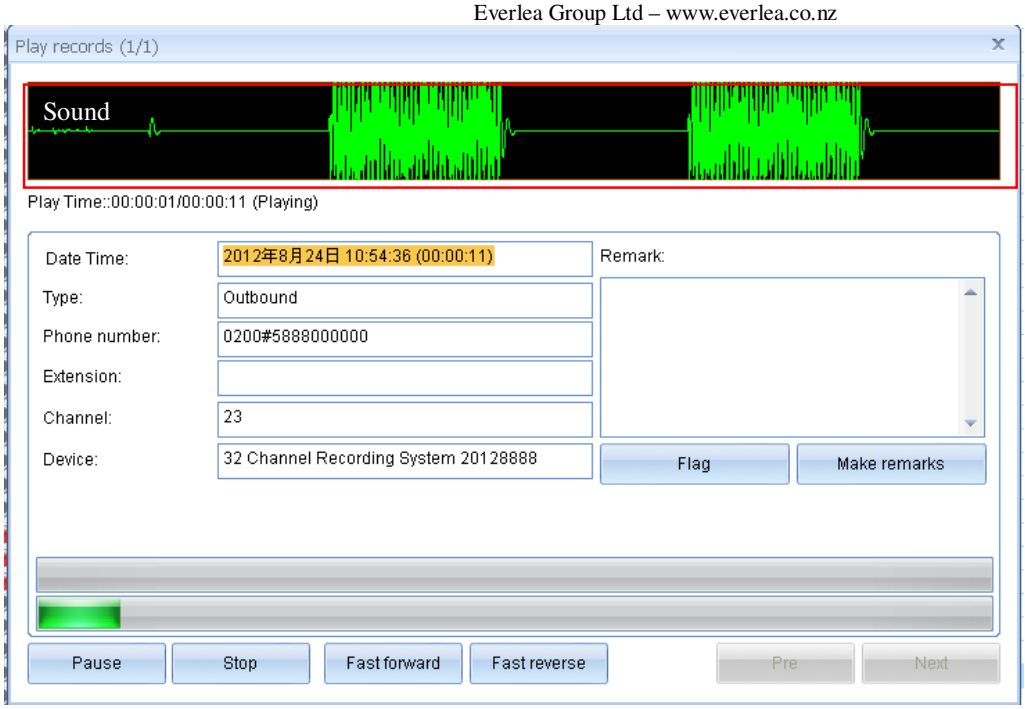
b. If databases are the same, the program will look-up local PC synchronized database.

Playing, Deleting, Sending and exporting Recording Information

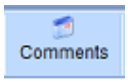
When records are displayed you can play a record by double clicking on a record, or clicking on record and right clicking for options.



Select single or multi recording files to playback. Recording files will be downloaded to local PC simultaneously for next playback.



When you play a recording the file is downloaded to the local PC, please note, once downloaded the file will not be downloaded twice.



You can add comments and remarks to individual recording records

Flag important recording files. The flagged file will not be deleted directly by mistake operation unless you totally restore the system to default.

To delete recording files from the voice logger you have two options:

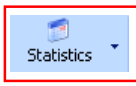
a. Delete the audio file and retain the CDR record
b. Delete both audio file and CDR record

If a record in deleted the Voice Logger will log the action in the system log

You can generate a search report and then Export CDR to Excel

You can email a selected recording file to specified email address. Please note the recording file size for emailing.

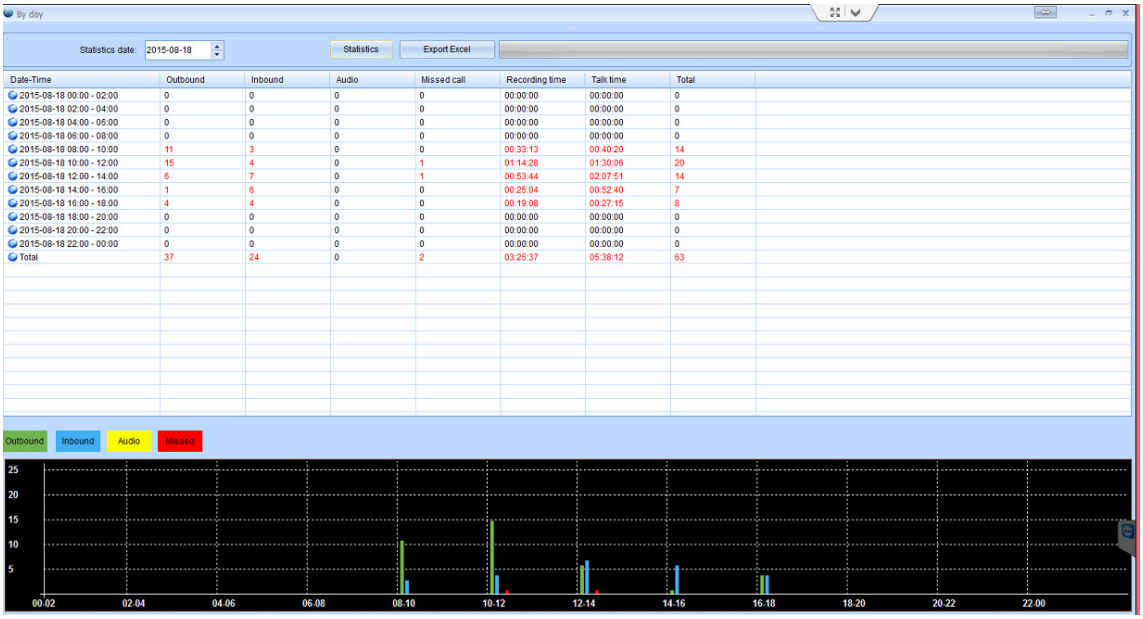
Statistics



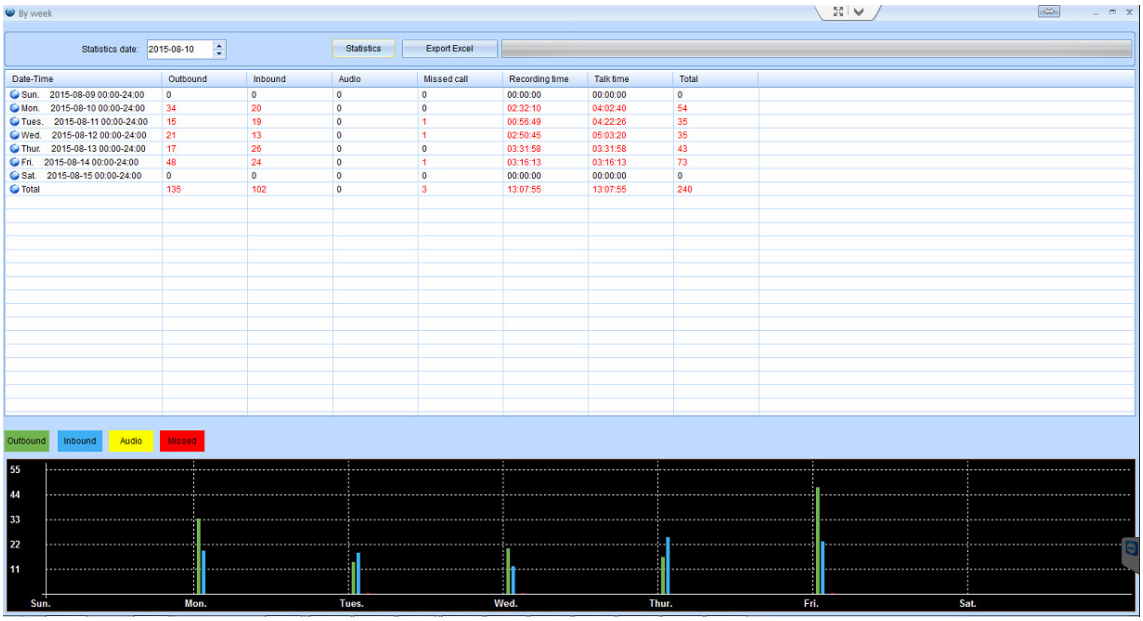
Statistics of recording files by day/week/month, Custom including inbound/ outbound/ missed calls.

Call types are distinguished with different color.

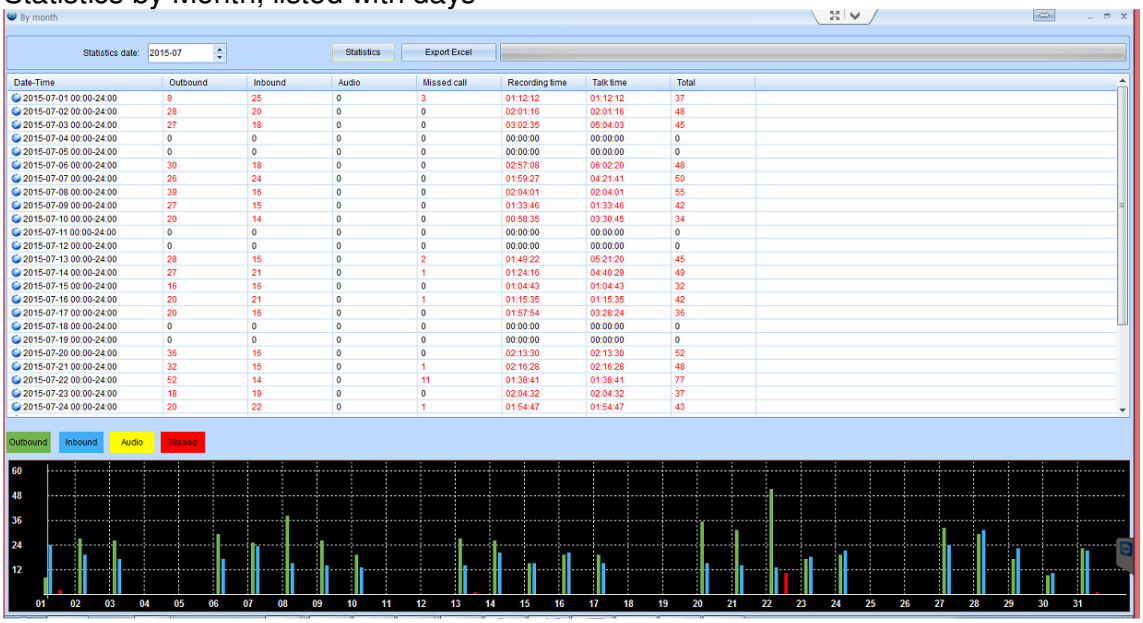
Statistics by day, listed with time section



Statistics by week, listed with days



Statistics by Month, listed with days



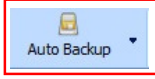
Date-Time	Outbound	Inbound	Audio	Missed call	Recording time	Talk time	Total
2015-07-01 00:00-24:00	9	25	0	3	01:12:12	01:12:12	37
2015-07-02 00:00-24:00	28	20	0	0	02:01:16	02:01:16	48
2015-07-03 00:00-24:00	27	18	0	0	03:02:35	05:04:03	45
2015-07-04 00:00-24:00	0	0	0	0	00:00:00	00:00:00	0
2015-07-05 00:00-24:00	0	0	0	0	00:00:00	00:00:00	0
2015-07-06 00:00-24:00	30	18	0	0	02:57:08	06:02:20	48
2015-07-07 00:00-24:00	26	24	0	0	01:59:27	04:21:41	50
2015-07-08 00:00-24:00	39	16	0	0	02:04:01	02:04:01	55
2015-07-09 00:00-24:00	27	15	0	0	01:33:46	01:33:46	42
2015-07-10 00:00-24:00	20	14	0	0	00:58:35	03:30:45	34
2015-07-11 00:00-24:00	0	0	0	0	00:00:00	00:00:00	0
2015-07-12 00:00-24:00	0	0	0	0	00:00:00	00:00:00	0
2015-07-13 00:00-24:00	28	15	0	2	01:49:22	05:21:20	45
2015-07-14 00:00-24:00	27	21	0	1	01:24:16	04:40:29	49
2015-07-15 00:00-24:00	16	16	0	0	01:04:43	01:04:43	32
2015-07-16 00:00-24:00	20	21	0	1	01:15:35	01:15:35	42
2015-07-17 00:00-24:00	20	16	0	0	01:57:54	03:28:24	36
2015-07-18 00:00-24:00	0	0	0	0	00:00:00	00:00:00	0
2015-07-19 00:00-24:00	0	0	0	0	00:00:00	00:00:00	0
2015-07-20 00:00-24:00	36	16	0	0	02:13:30	02:13:30	52
2015-07-21 00:00-24:00	32	15	0	1	02:16:28	02:16:28	48
2015-07-22 00:00-24:00	52	14	0	11	01:38:41	01:38:41	77
2015-07-23 00:00-24:00	18	19	0	0	02:04:32	02:04:32	37
2015-07-24 00:00-24:00	20	22	0	1	01:54:47	01:54:47	43

Statistics by Custom

You can set custom time periods using date ranges, reporting are similar to the weekly and monthly reports.

All for the above Statistics information can be exported to Excel

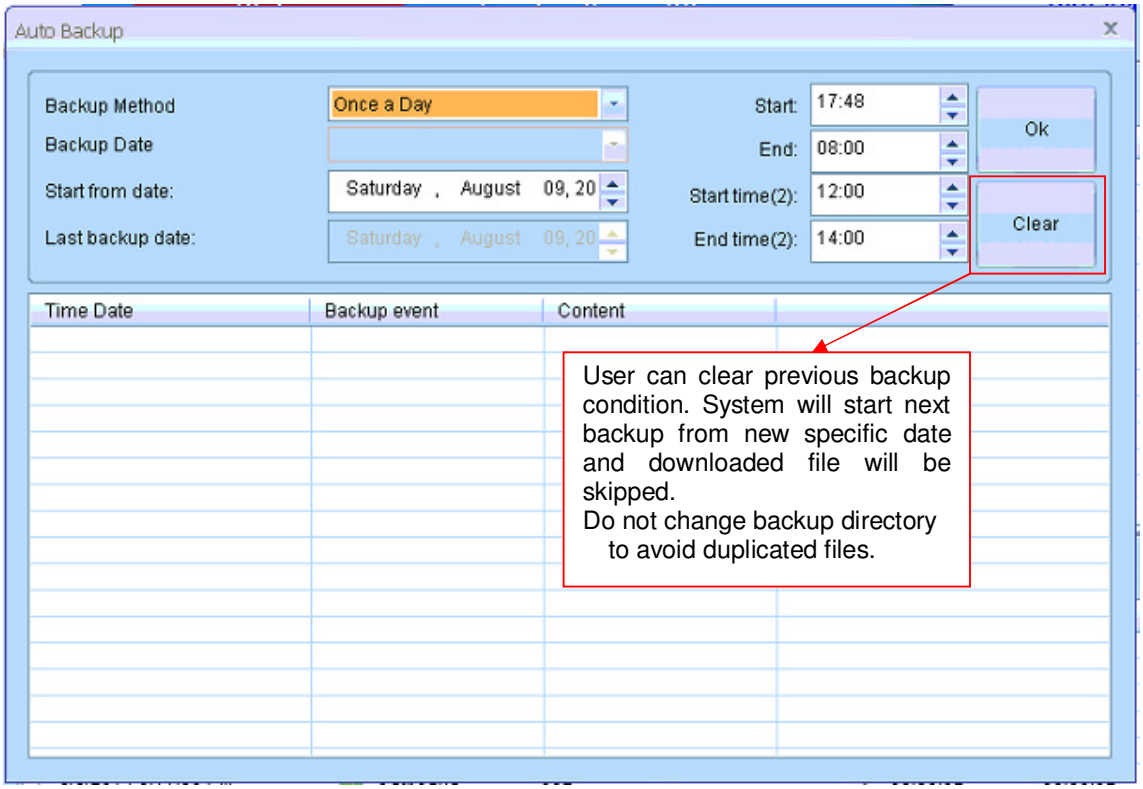
Auto Backup



Auto Backups can be set on the voice logger to run daily. Weekly or monthly

Select Auto Backup, you can set the backup method and backup times

Program will display backup events include total number of records and date, etc.



Notes:

For the Black Box Backup to work the PC must be on with the Black Box Program logged in to the Voice Logger during the set backup times

It is advised that you run backup sessions outside the normal operational Recording times to avoid excess load on the CPU and resources.

Stop Task

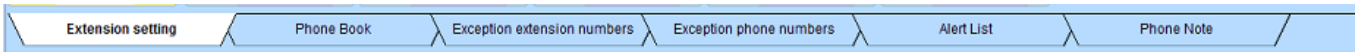
Main Function

a. Terminate delete task. You can press this key to stop delete during processing
b. Terminate Flag task
c. Terminate downloading
d. Terminate playing records

SIDE MENU

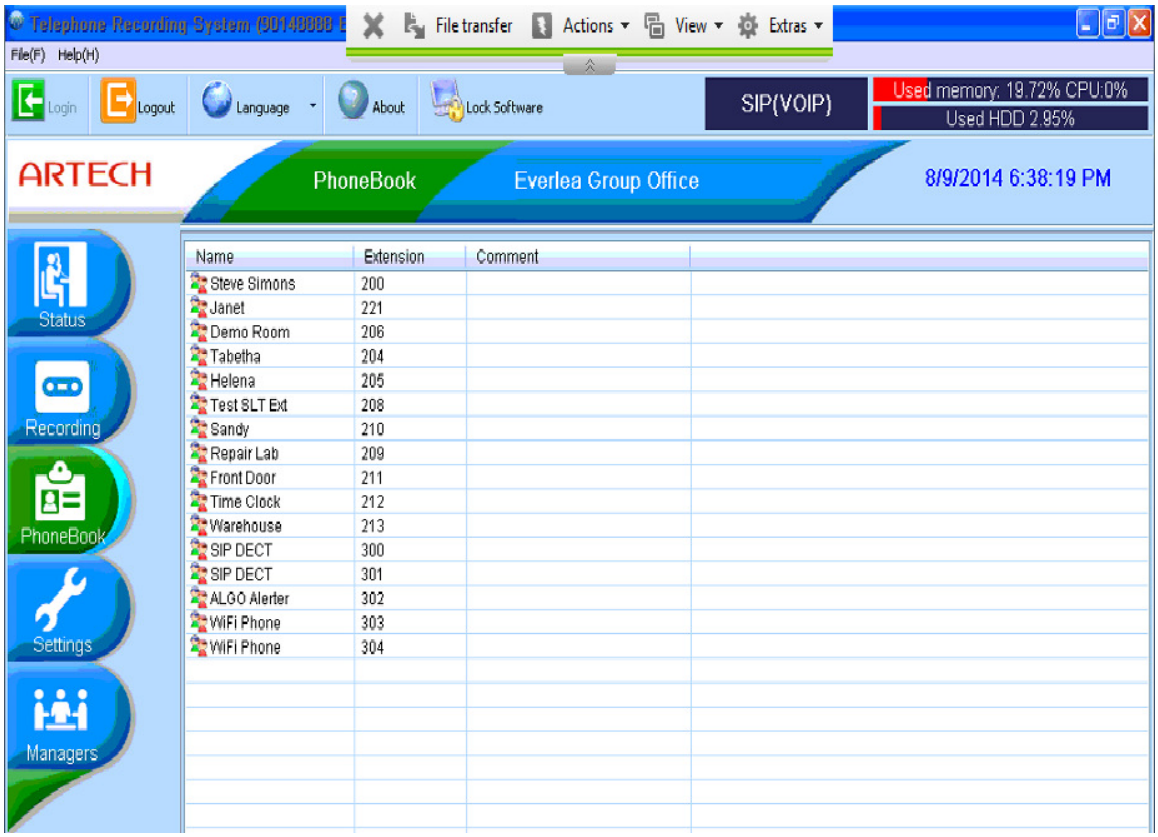
- **Phonebook**

The phone book option includes Extension setting for SMDR function, Phonebook for line information and screen Popping of caller information, Exception extension numbers that are not to be recorded, Exception phone numbers that are not to be recorded, Alert List for incoming and outgoing dialed numbers warning and Phone Notes.



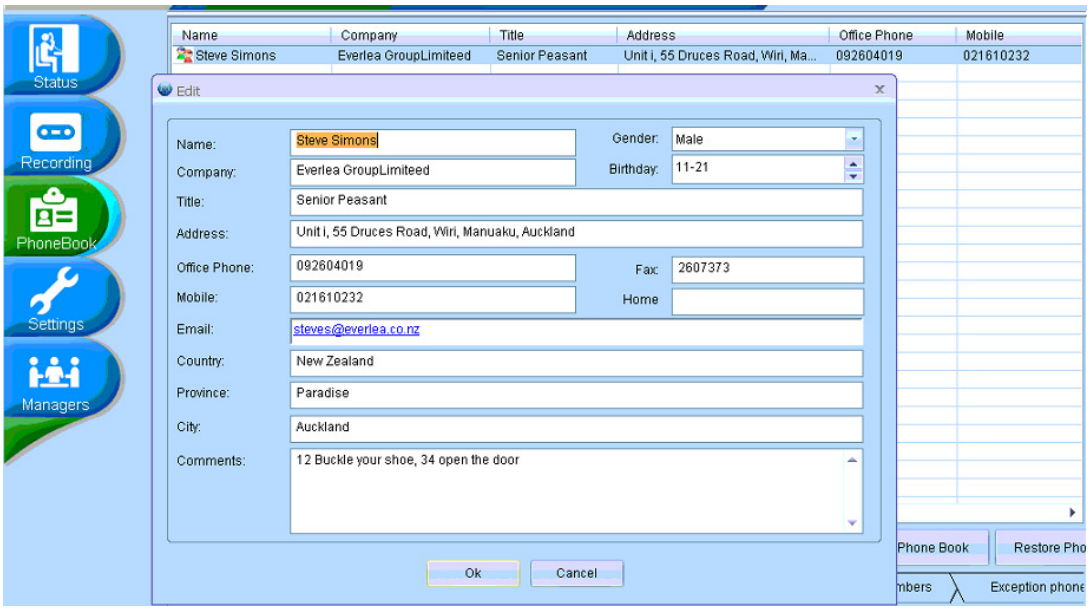
Extension setting:

This parameter works with SMDR integration function. The recording file will include extension number and name if the setting completed. You can add, edit, have comments and delete extension numbers. Extensions numbers must match the SMDR extensions, on some PBX systems Auto Attendant and ACD groups will also generate a port number that may be presented in the SMDR data.



Phonebook:

Any Inbound and outbound numbers will be saved with phonebook information when number is dialed out or incoming call ID matches. Voice logger can also generate screen pop with customer name and or can screen pop entire contact.



Exception Extension:

Any Excepted extension number that is specified in this table will not be recorded, for this feature to work correctly the SMDR from IP / PBX must be configured, connected and working correctly.

Exception Number:

You can load phone numbers you do not wish to have recorded, this will compare these numbers with incoming and outgoing calls, if the numbers match the voice logger will not record the conversation.

ALERT Number:

You can load phone numbers into this table, if any incoming or outgoing calls match the numbers in this table the voice logger will generate an alert.

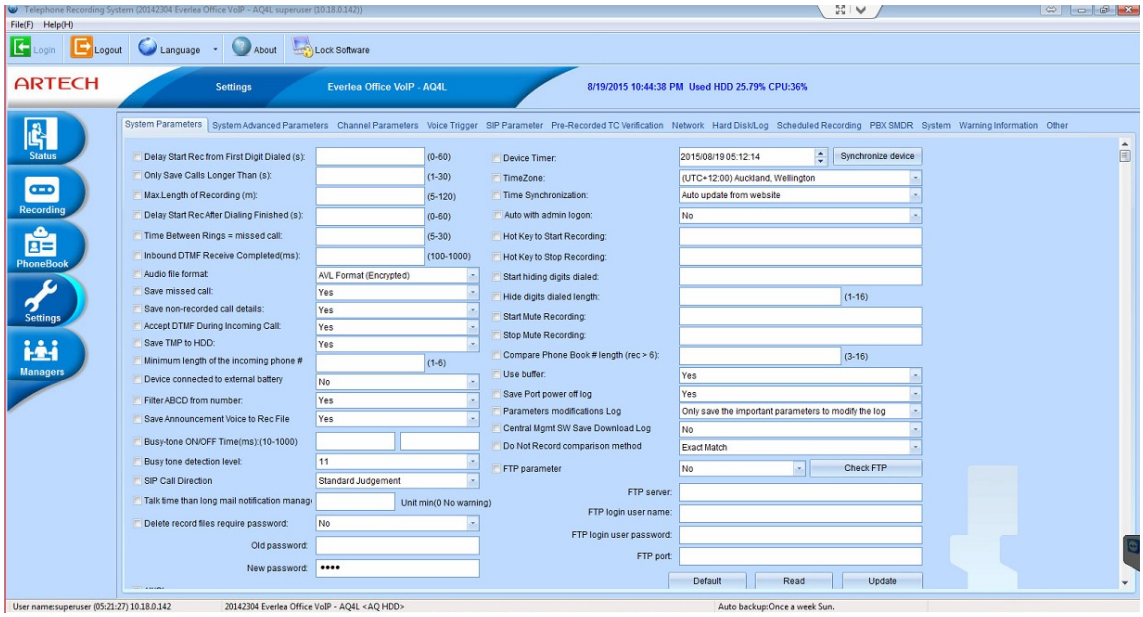
Phone Note:

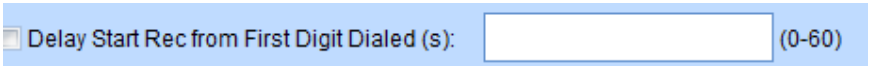
You can load phone numbers into this table, if any incoming or outgoing calls match the numbers in this table the voice logger will tag the recorded call with the associated note for that number.

- **System Settings**

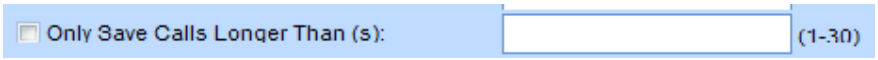
System Parameter

The System Settings controls common parameters that effect entire system instead of individual channels.

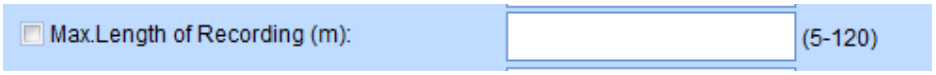


1. 

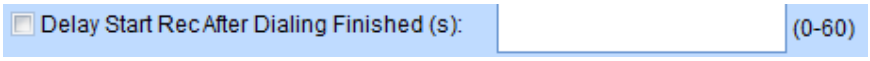
This is the pause timer from first digit dialed to the start of recording. If the value is 0, the call will be recorded from line is seized.

2. 

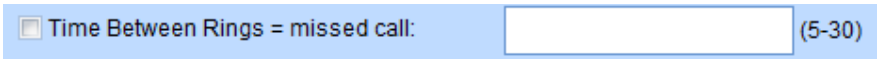
This setting is the minimum time of a call before system will save the recording - Recommend: 5s

3. 

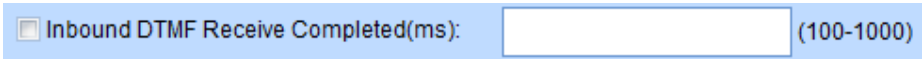
This limits the recording time of each call to avoid large audio files. If a single call exceeds this timer set value the call will be broken in separate sections.

4. 

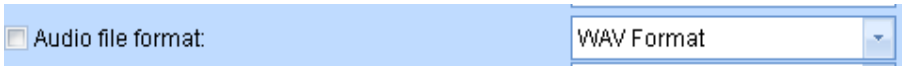
User can set interval time between the DTMF digits. If the interval time is more than 7s, any DTMF digits dialed after this timer will not be stored in the call record. This timer can be used to avoid capturing post dialing Digits. If the interval time is 0, all the DTMF digits will be displayed. Recommend: 7s

5. 

It is the interval time between ring cadences. If the interval time is more than 7 s, the call will be determined as a missed call. Recommend: >5s

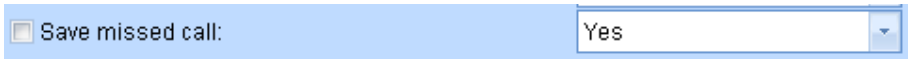
6. 

This parameter for inbound call DTMF receiving only. .

7. 

The recording file will be saved as followed format

A. wav Normal audio file to be played by any PC.
B. avl Encrypted audio file to be played by specified PC program
C. xtr Encrypted audio file to be played by specified PC program.

8. 

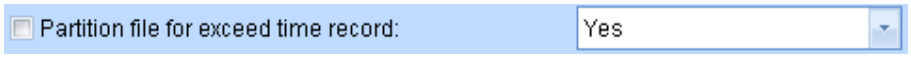
Enable /Disable to save missed calls.

9. 

Enable/disable to save non-record number of outbound call.

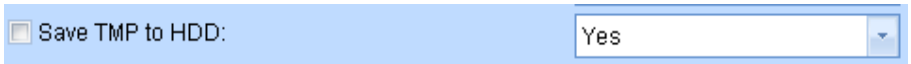
10. 

Enable/Disable to save DTMF during incoming call. Yes to save all including extension number dialing from inbound call.

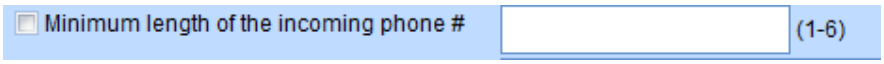
11. 

The parameter works with parameter 3. You can split the recording file to save in HDD

Recommend: Yes

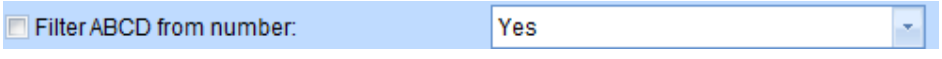
12. 

Enable/Disable to save tmp file. Beside recording file, system will generate a tmp file with CDR information for each call. Recommend to enable this function, it will be useful for system repairing of data base.

13. 

14. 

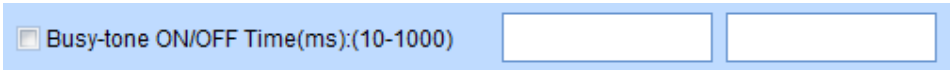
Tells the Voice Logger there is or is not an external Battery connected

15. 

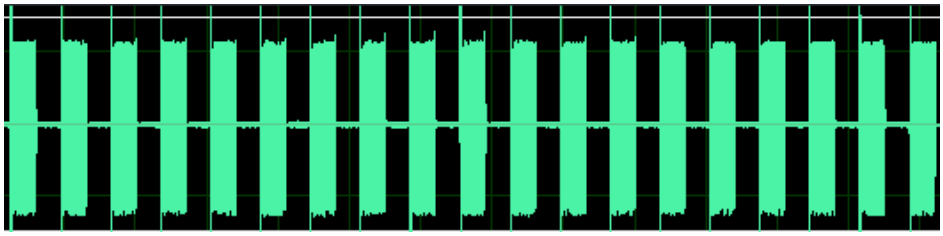
16. 

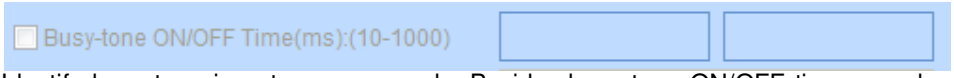
When a pre-recorded announcement is to be played by voice Logger this command tell wither the actual

announcement is recorded with the call recording or not

17. 

Identify busy tone ON/OFF time (ms) on the landline. Mostly ON/OFF = 500/500in China and 250/250 in Taiwan. User may record busy tone on site and analyze it by Cool Edit.

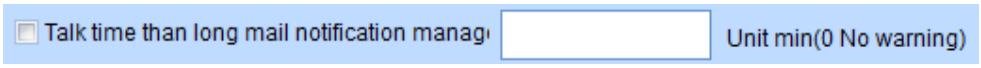


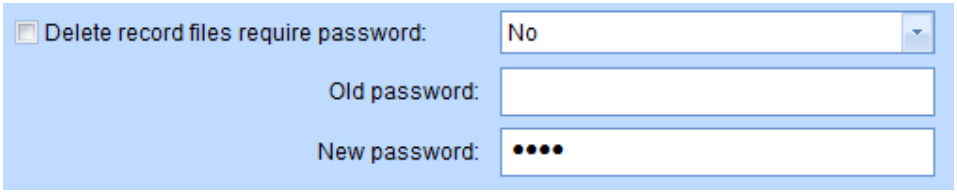
18. 

Identify busy tone in auto-answer mode. Besides busy tone ON/OFF time, user has to set up busy tone volume level to distinguish sound and soundless. Therefore, misjudgment during talking would be avoided. .

19. 

Standard Judgment. req data judgment

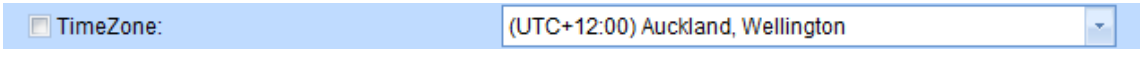
20. 

21. 

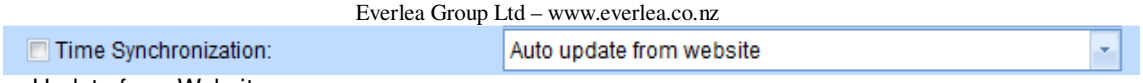
Option to have the Logger request a password if any recording file is requested to be deleted. Feature on or off and ability to set the password

22. 

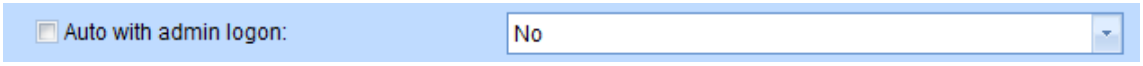
User can set-up current voice logger system time.

23. 

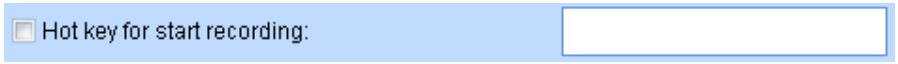
Set the Country and Time zone the recorder is in.

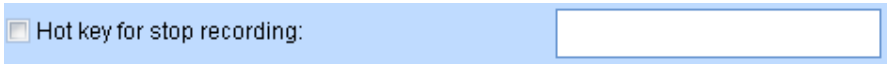
24. 

a. Update from Website
b. Caller ID
c. Don't Synchronize

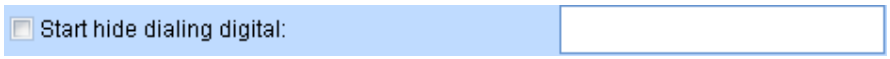
25. 

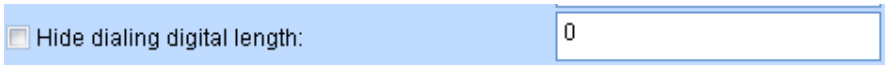
Sieieiieheiheihe?

26. 

27. 

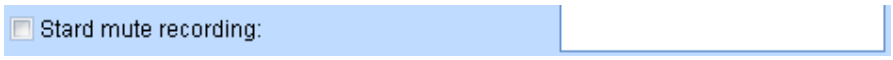
Command for start or stop voice recording by user dialing DTMF code. (Analogue Only)

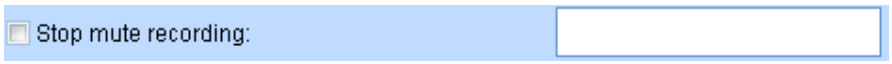
28. 

29. 

Used to hide DTMF digits, used to hide credit card numbers etc. Start position and the length. The numbers will be replaced by ***

For example, (18)=556 (19)=10. As long as system receives 556 during the calls, it will show 10times * in the program instead of private card information.

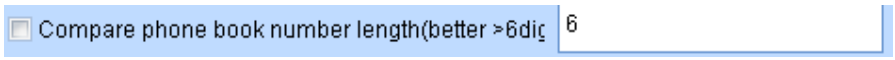
30. 

31. 

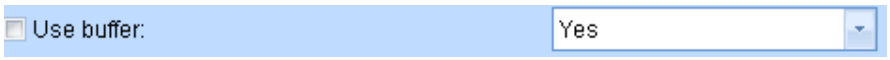
Command for Start/Stop mute recording manually (PCI Compliance) (Analogue Only)

Start: Red light
Stop: Green light.

Recommend: Set up at least 4 digit DTMF to avoid accidental Trigger eg **1 and **2.

32. 

Basis of Caller ID comparison with phone book

33. 

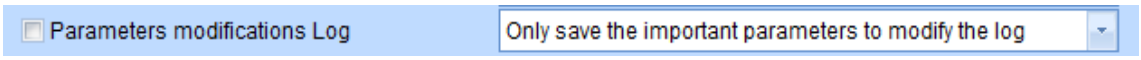
Use system buffer to reduce time of HDD write.

Recommend: Yes

34. 

If the Analogue port / ports do not have line power or the line drops off this parameter determines if event /

status recorded in the system log.
Recommend: Yes

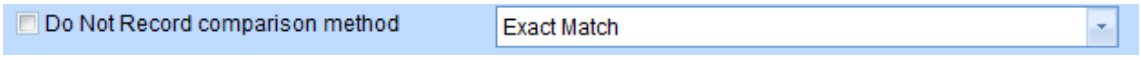
35. 

Sets what type of Parameter changes will be saved in logs, options: KEN Please explain more?

- Only save the important parameters to modify log
- Save the basic parameters to the modify log
- Save parameter change log

36. 

Enable / Disable logging of Central Management (Vault) software

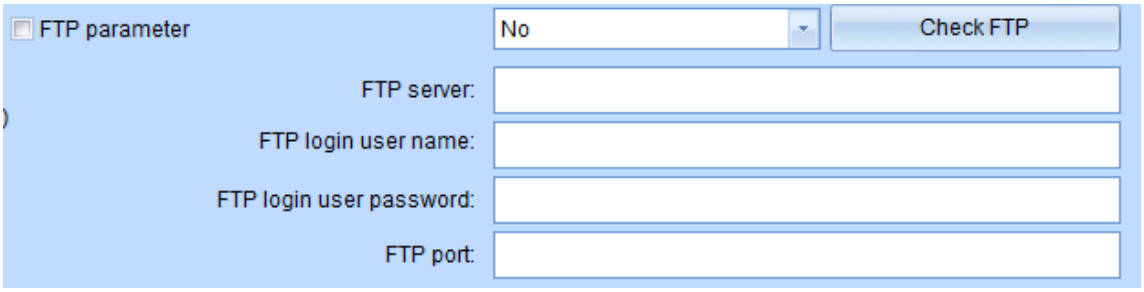
37. 

Non-Record numbers comparison.

- Fuzzy: Call will not be recorded if the non-records numbers is included in whole number string. *Example: 200 is Non-record number, the calling number 92001 would NOT be recorded.*
- Precise: Call will not be recorded if the calling number is exactly match with original setting.

  Example: 200 is Non-record number, the calling number 92001 would BE recorded.

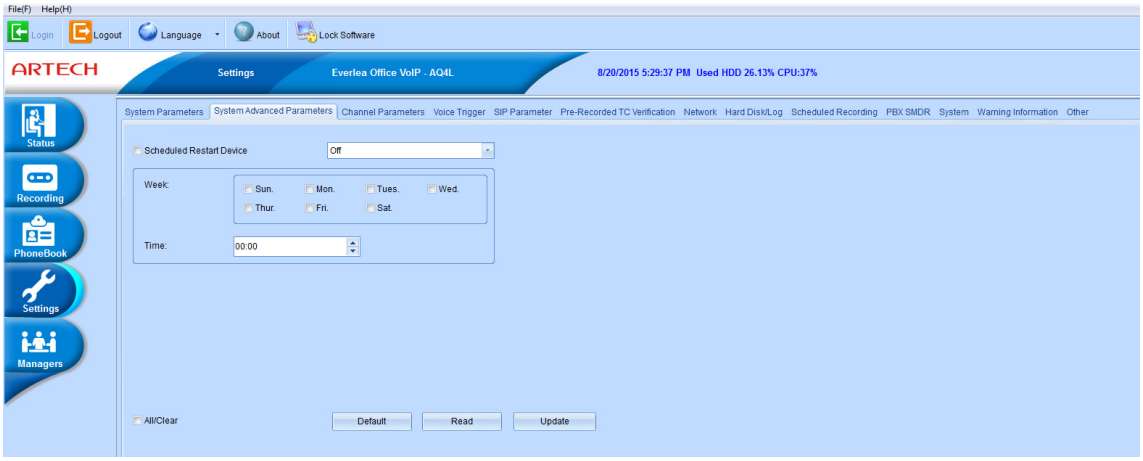
Please Configure Carefully otherwise you risk losing recorded calls.

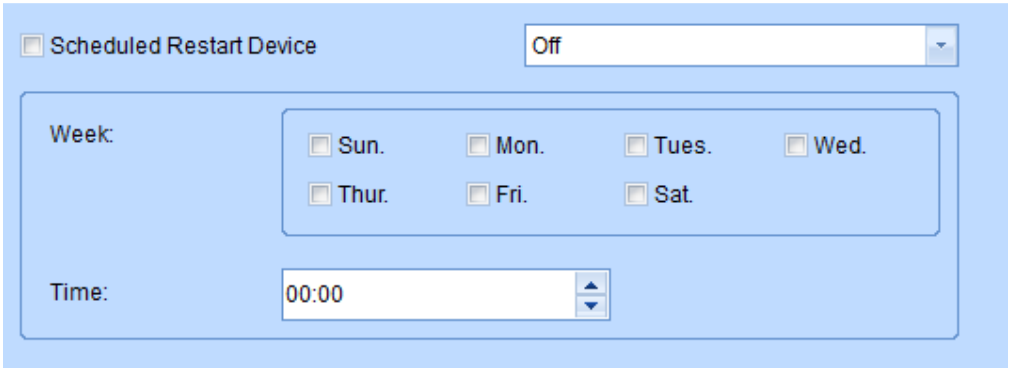
38. 

You can setup an FTP Server to have the Voice Logger transfer voice file to the FTP Server.

System Advanced Parameters

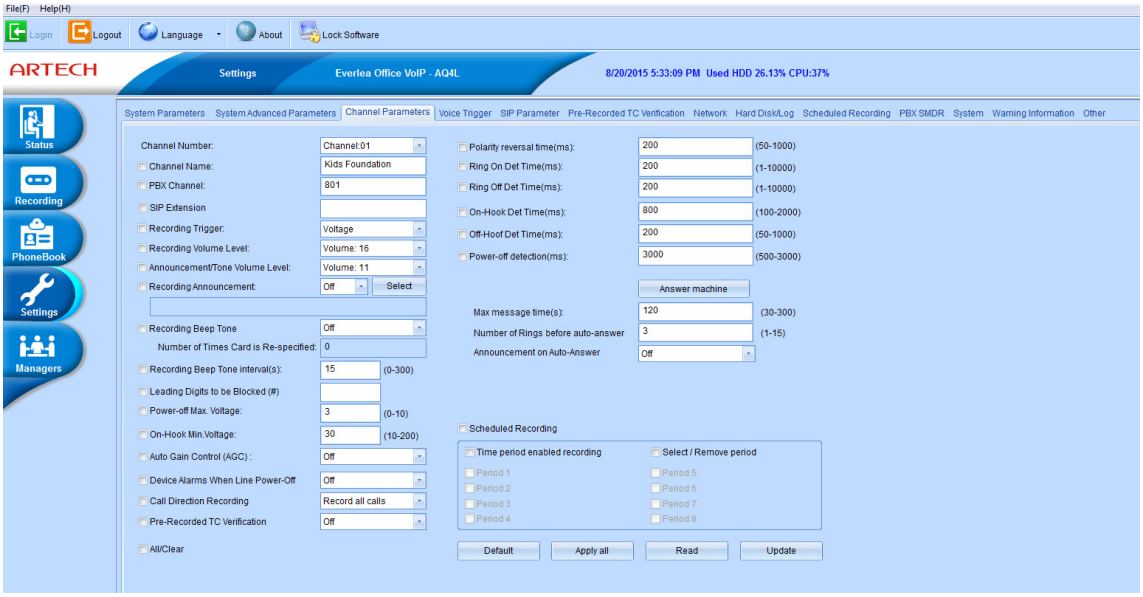
Controls Scheduled restarting of the voice logger

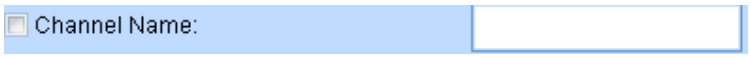




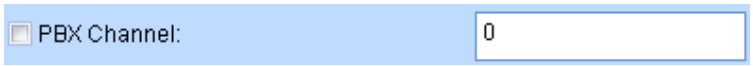
Enables “Logger Restart” Schedule, you can select the days the Logger is to be retarted and the time of day.

Channel Parameter

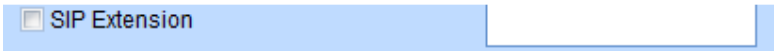


1. 

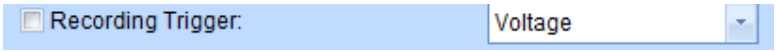
You can name each channel, this name will be part of each recording file and will show in the “Monitor age”, it can also be used in searches etc.
For example the Phone number of line e.g. 2604019, or the extension number e.g. 515, or a room recorder name e.g. Board Room, or RT circuit e.g. Courier Heavy Freight

2. 

This parameter works with PABX SMDR. The channel must be corresponded with PABX port channel set out in the PBX SMDR stream.

3. 

vvsepjeiperbjrbg

4. 

Normally we use Voltage for most analog lines, but you have other options you can use:

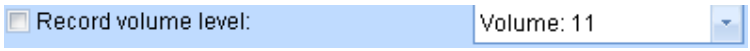
A. **Key recording:** Manually recording by press hot key.
Refer system setting 28 & 29 in “System Parameters”

B. **Voice trigger:** Start recording while sound reaches specified level. Otherwise, the call will not be recorded. This particular setting is for microphone room recording, interphone recording, Radio Telephone Recording, Stock Room Shout down Circuits. (DTMF will not be recorded)

C. **Continuous Recording:** Non-stop recording. Usually for microphone and interphone recording. DTMF during the call will not be recorded.

D. **Polarity Reversal:** Start recording while polarity reversal signal received.

Remark: You need to subscribe polarity reversal signal service from local telecom service provider.

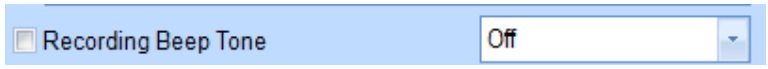
5. 

Sets the sensitively for the recording Volumes.

6. 

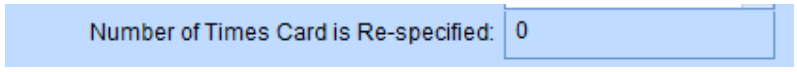
Enable/Disable recording announcement. Recording announcement will be broadcasted to both Parties of a call and it will be saved in recording file. (Analogue Only)

Click Select button for menu to appear with recording you have pre-loaded into Logger (See "Recording Announcement Manager" under File Menu) Select Announcement you want played.

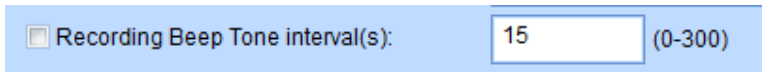
7. 

Enables / Disables "Beep Tone" as a reminder to both Parties the call is being recorded.

(Analogue Lines Only)

8. 

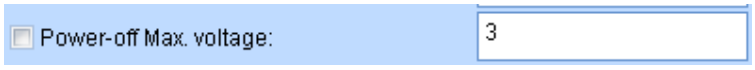
Fhfhhdgh

9. 

Interval between record reminder Beeps

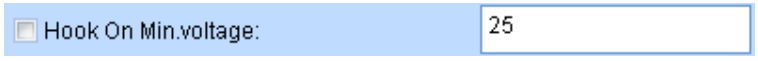
10. 

iipiphpie

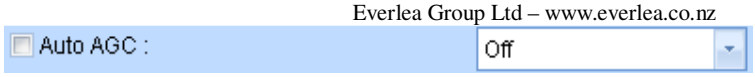
11. 

This is voltage level to verify if the channel has an Analogue Line lugged in.

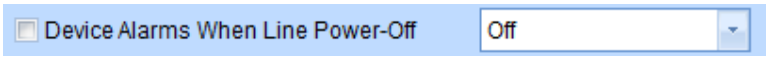
Recommend: 3V

12. 

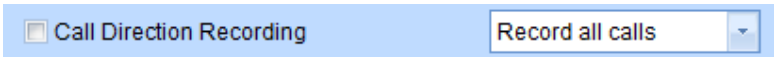
This is minimum voltage setting to verify if telephone is on hook.
Recommend: 25V

13. 

AGC:
Automatic Generation Control. To average the sound of both parties in a call.
Recommend: Disable this function in voice trigger recording.

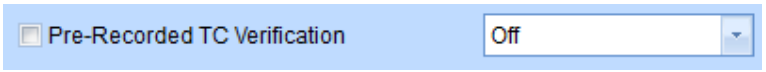
14. 

Enables or disables the line voltage alarm for each channel

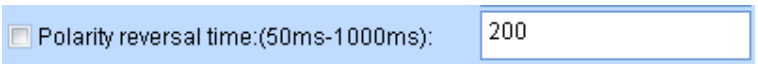
15. 

Controls what calls are recorded e.g.

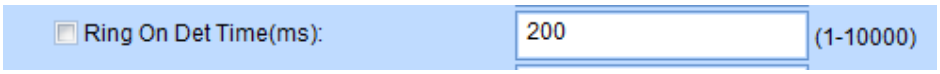
- All Call
- Incoming Call Only
- Out Going Calls Only

16. 

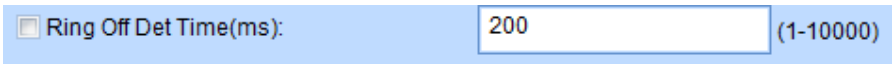
Enables / Disables the channel to use the "Terms and Conditions" announcement, see "Pre-Recorded TC Verification" TAB

17. 

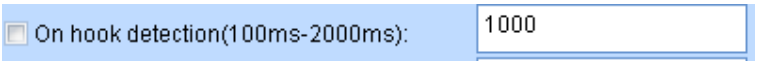
Set Polarity reversal Timer

18. 

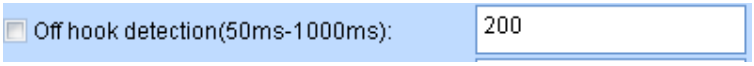
Time setting for "Ring Detect" circuit so Logger can correctly detect when Lines and ringing.

19. 

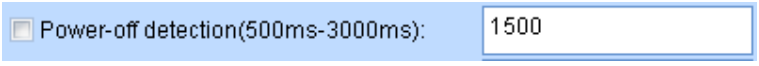
Time setting for "Ring Detect" circuit so Logger can correctly detect when Lines and ringing.

20. 

This timer sets the channels on hook duration to end recording

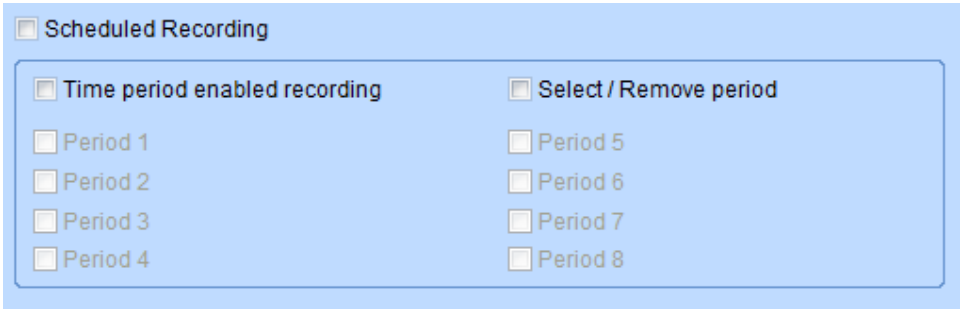
21. 

Time elapse setting for specified voltage of ON/OFF hook.

22. 

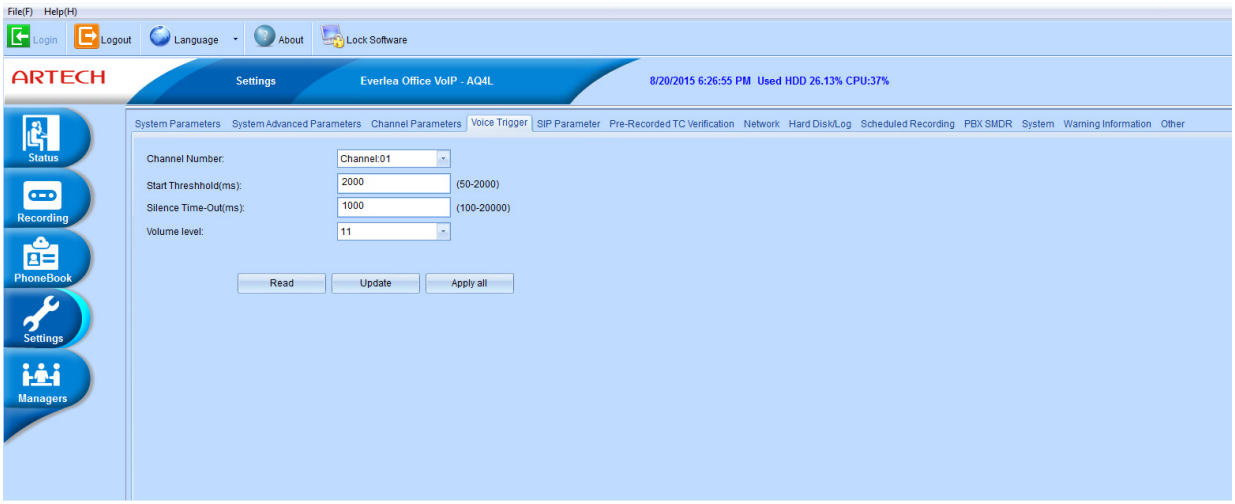
Definition of landline plug in.

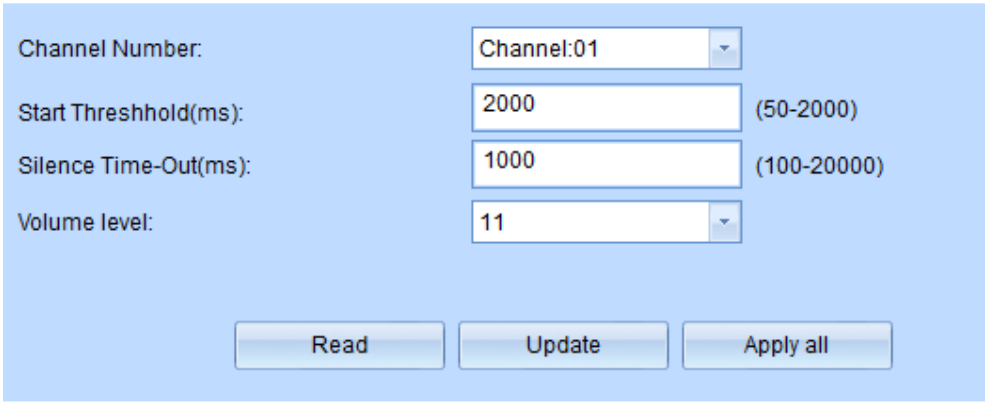
Power on: <value
Power off: >value

23. 

By default voice logger record all calls in above sections (24 hours) but can be setup to record during set period. (See settings in time section)

Voice Trigger parameter





The user needs to configure sound level trigger level and sensitivity when the channel is set voice trigger recording.

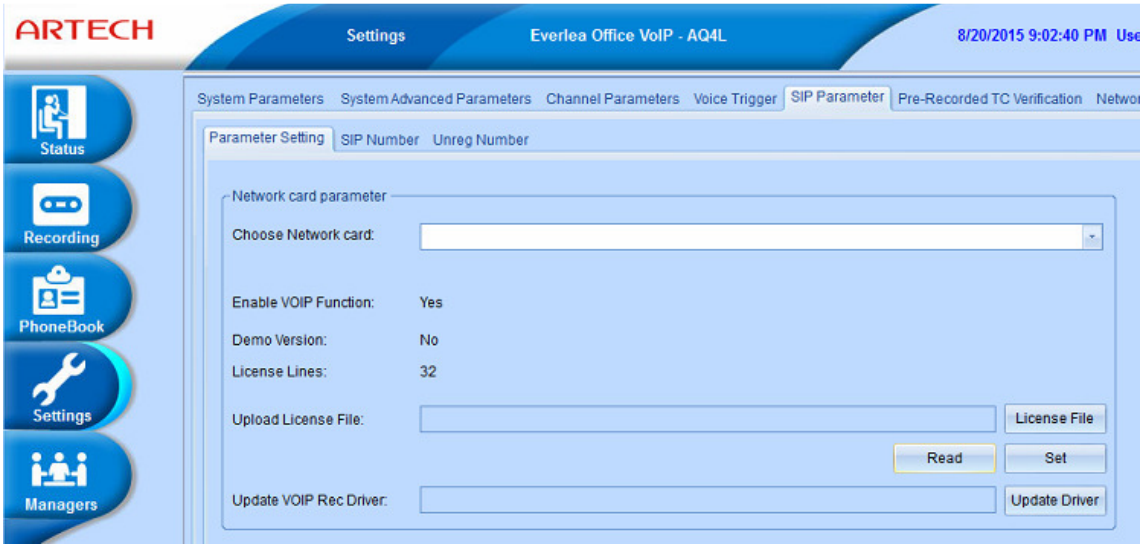
Start Threshold (ms): The specific level sound lasts for this period before Logger start recordings. The lower value comes with higher sensitivity.

Silent Time Out (ms): A silent period lasting longer than this value will stop the recording. Configure a large value to avoid multiple recording files caused by silent during conversation.

Volume level: Voice trigger sound lever. The lower the value, the more sensitive the trigger.

SIP Parameters

Parameter Setting



Choose Card
This option is used to select the source of VoIP traffic on the voice Loggers:

- On an AQ and AK recorder there is only 1 LAN port so you need to use a Mirror port switch or an Artech 3-way Network VoIP TAP (This parameter does not apply)
- On a BF series VoIP recorder it has the main LAN port for communications and the 2 x RJ45 ports for through put of VoIP, this parameter selects the configuration / Network ports the VoIP traffic will be put through

Enable VoIP Function
In will indicate if the Voice Logger is enabled for VoIP Recording function

Demo Version
Indicates if the Voice Logger is running under a Demo Version or a Licensed Version

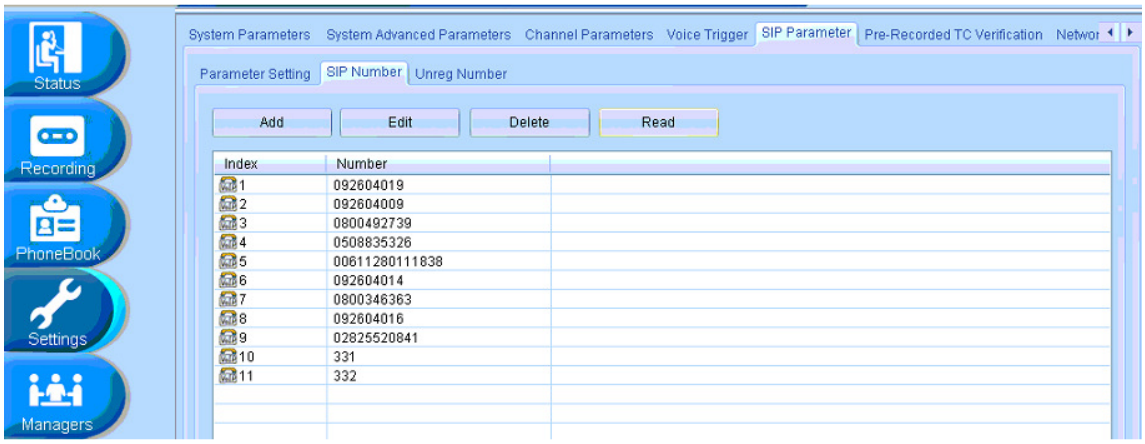
Licensed Lines
Indicates how many numbers the Voice Logger is Licensed for.

Upload License File
Use this function to load additional licenses into the Voice Logger

Update VoIP Rec Driver
Use this function for future Voice Logger Driver updates

SIP Number Registration

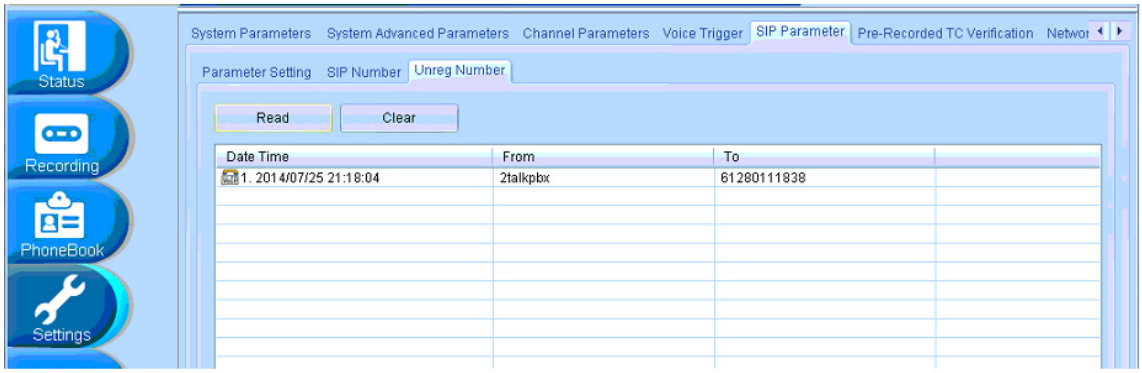
Add the SIP phone numbers or SIP extension numbers you wish to record. Please insure number format is correct so recorder captures all calls to and from the number.



SIP Un-Registered Number

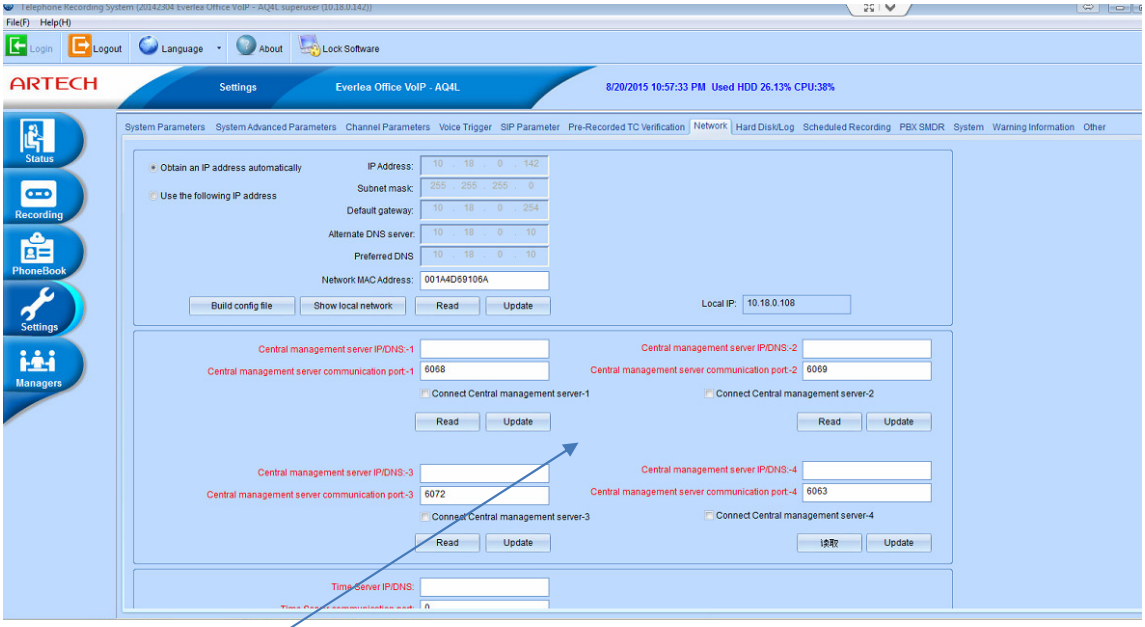
If the Voice Logger detects any SIP number traffic that is not registered in the SIP Number table the logger will note the number under this section. To refresh the information press the “Read” button.

To record any of the numbers in the unreg Number Tab you can add them to the SIP number Tab.



Network Setting

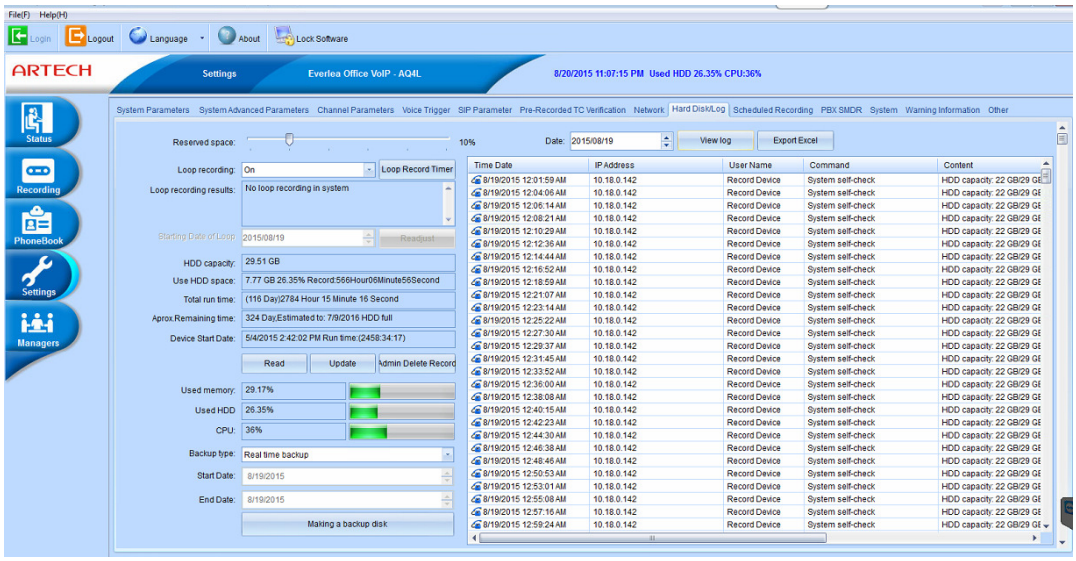
Setting up a Voice Logger is similar User can configure network setting same as PC.



The Voice Logger can be set to use DHCP (default) or fixed IP

KEN what is this bottom section for, can you explain more please so I can write up

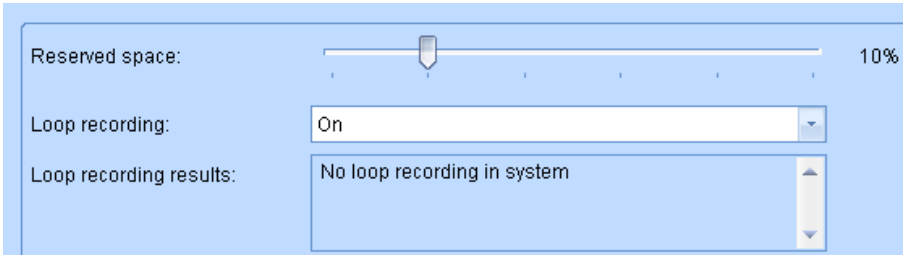
HDD Parameter and system log



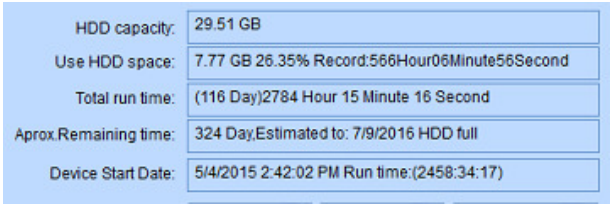
HDD reserved space: It is for HDD read / writer buffer. Recommend at least: 10%

Loop recording: When this function is enabled when the hard drive becomes full it will start over writing the oldest recording files.

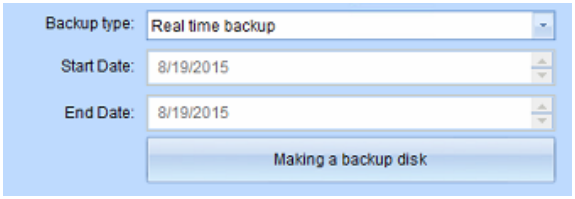
HDD Capacity
It indicates space, total and Remaining calculated parameter Exact is based on actual conditions.



HDD current operation time remaining time. time is by average of used HDD. remaining time



Real Time Backup



WHAT is this for

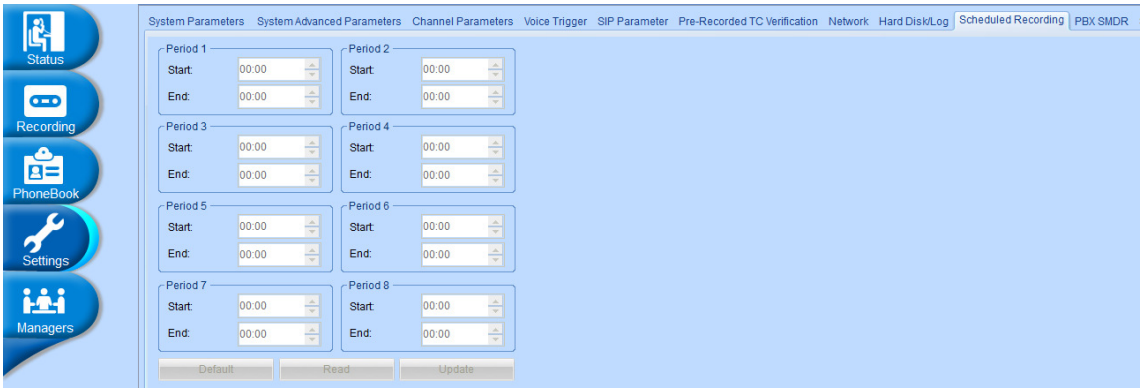
System log: The critical operation will be recorded in system log.

Time Date	IP Address	User Name	Command	Content
2012年8月24日 0:02:25	192.168.22.108	Record Device	System self-check	HDD capacity: 1782 GB/1862 GB Used capacity: 48 MB/65 MB Run time: 892:50:00 Online users: 1
2012年8月24日 0:41:52	192.168.22.108	Record Device	System self-check	HDD capacity: 1782 GB/1862 GB Used capacity: 48 MB/65 MB Run time: 893:20:00 Online users: 1
2012年8月24日 1:21:22	192.168.22.108	Record Device	System self-check	HDD capacity: 1782 GB/1862 GB Used capacity: 48 MB/65 MB Run time: 893:50:00 Online users: 1
2012年8月24日 2:00:45	192.168.22.108	Record Device	System self-check	HDD capacity: 1782 GB/1862 GB Used capacity: 48 MB/65 MB Run time: 894:20:00 Online users: 1
2012年8月24日 2:40:09	192.168.22.108	Record Device	System self-check	HDD capacity: 1782 GB/1862 GB Used capacity: 48 MB/65 MB Run time: 894:50:00 Online users: 1
2012年8月24日 3:19:40	192.168.22.108	Record Device	System self-check	HDD capacity: 1782 GB/1862 GB Used capacity: 48 MB/65 MB Run time: 895:20:00 Online users: 1
2012年8月24日 3:59:02	192.168.22.108	Record Device	System self-check	HDD capacity: 1782 GB/1862 GB Used capacity: 48 MB/65 MB Run time: 895:50:00 Online users: 1
2012年8月24日 4:38:25	192.168.22.108	Record Device	System self-check	HDD capacity: 1782 GB/1862 GB Used capacity: 48 MB/65 MB Run time: 896:20:00 Online users: 1
2012年8月24日 5:17:59	192.168.22.108	Record Device	System self-check	HDD capacity: 1782 GB/1862 GB Used capacity: 48 MB/65 MB Run time: 896:50:00 Online users: 1
2012年8月24日 5:57:22	192.168.22.108	Record Device	System self-check	HDD capacity: 1782 GB/1862 GB Used capacity: 48 MB/65 MB Run time: 897:20:00 Online users: 1
2012年8月24日 6:36:45	192.168.22.108	Record Device	System self-check	HDD capacity: 1782 GB/1862 GB Used capacity: 48 MB/65 MB Run time: 897:50:00 Online users: 1
2012年8月24日 7:16:18	192.168.22.108	Record Device	System self-check	HDD capacity: 1782 GB/1862 GB Used capacity: 48 MB/65 MB Run time: 898:20:00 Online users: 1
2012年8月24日 7:55:42	192.168.22.108	Record Device	System self-check	HDD capacity: 1782 GB/1862 GB Used capacity: 48 MB/65 MB Run time: 898:50:00 Online users: 1
2012年8月24日 8:35:06	192.168.22.108	Record Device	System self-check	HDD capacity: 1782 GB/1862 GB Used capacity: 48 MB/65 MB Run time: 899:20:00 Online users: 1
2012年8月24日 8:43:59	192.168.22.111 192.168.22.111	admin	User logon	
2012年8月24日 8:46:23	192.168.22.111 192.168.22.111	admin	User logout	
2012年8月24日 8:46:53	192.168.22.111 192.168.22.111	admin	User logon	
2012年8月24日 8:53:38	192.168.22.111 192.168.22.111	admin	Start monitoring	Channel: 0
2012年8月24日 8:54:05	192.168.22.111 192.168.22.111	admin	Stop monitoring	Channel: 0
2012年8月24日 8:57:29	192.168.22.108	Record Device	Port power-down	Port power-down: 30 00V (03V - 25V)
2012年8月24日 8:58:10	192.168.22.111 192.168.22.111	admin	File download	\Hard Disk\Record\Backup\20120824085732-O-L09-EN-0200#.wav
2012年8月24日 9:15:35	192.168.22.108	Record Device	System self-check	HDD capacity: 1782 GB/1862 GB Used capacity: 47 MB/65 MB Run time: 899:50:00 Online users: 1
2012年8月24日 9:55:03	192.168.22.108	Record Device	System self-check	HDD capacity: 1782 GB/1862 GB Used capacity: 47 MB/65 MB Run time: 900:20:00 Online users: 1

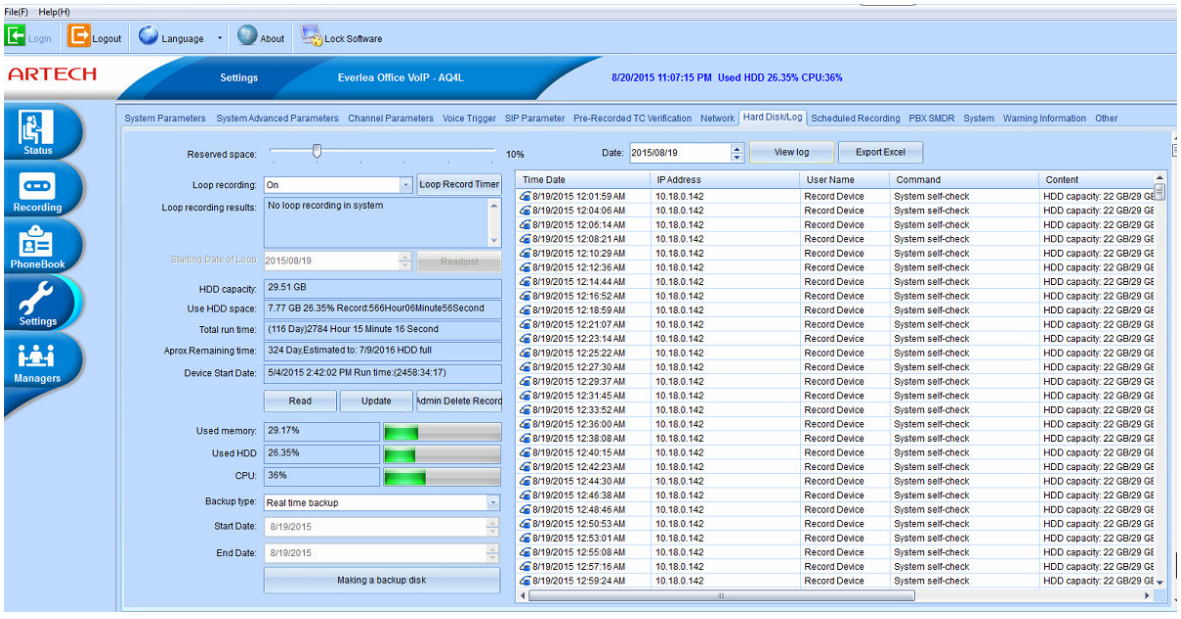
.

Recording Time Section

Flexible combined with 8 recording time sections. It is used in channel setting, special for recording storage option.



PABX SMDR



There are 2 methods to connect the voice logger to the SMDR data from PABX / SIP system

1. RS232
2. TCP/IP

User needs to analyze original data of PABX channel number, extension number from followed main parameters and input them to program setting.

Outbound call

1. Call symbol: The mark to distinguish the call type (Outbound/Inbound call) in character string. Most PABX show “TO “to indicate outbound call.

2. Extension position: User has to count the extension number starting position in character strings.
3. Extension number length: Extension number length.
4. PABX channel number position: User has to count the channel number starting position in character strings.
5. Channel number length: PABX channel number length.

From followed example, user can read out outbound call information

1. Call symbol: $TO
2. Extension position: 14th
3. Extension number length: 2.
4. PABX channel position: 24th
5. Channel number length: 2

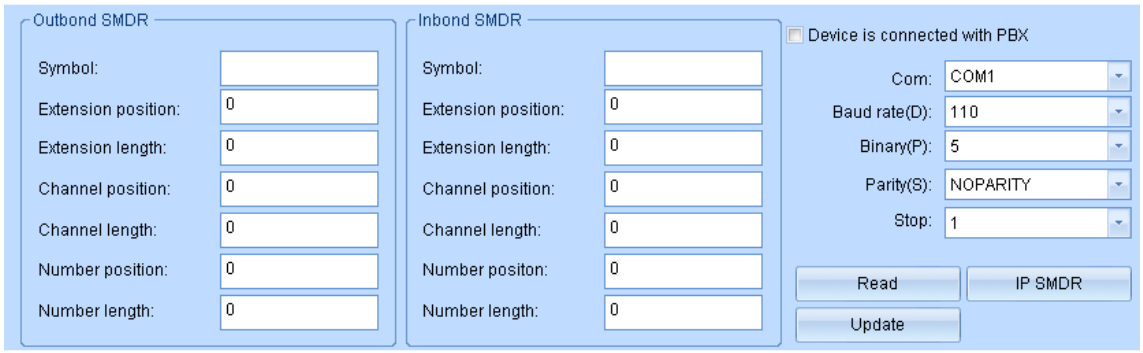
Remark: The Voice Logger is able to decode DTMF for call number itself, the phone number from SMDR will be ignored.

Outbound call:

Same as Inbound call verification.

```
$TO:11/05/30 14   14   01 0229524929              0000 17:54:59 00046 00000
$TO:11/05/30 14   14   01 0229524929              0000 17:54:59 00046 00000
$TO:11/05/30 14   14   01 0229524929              0000 17:54:59 00046 00000
```

```
$TO:11/05/30 14   14   01 0229524929              0000 17:54:59 00046 00000
$TO:11/05/30 19   19   07 0225859650              0000 17:53:29 00033 00000
$TO:11/05/30 24   24   01 09328                   0000 17:53:56 00002 00000
$TO:11/05/30 12   12   04 123                     0000 17:53:07 00002 00000
$TO:11/05/30 12   12   03 123                     0000 17:52:46 00016 00000
$TO:11/05/30 12   12   01 123                     0000 17:52:15 00012 00000
$TO:11/05/30 39   39   01 2479163                 0000 17:49:41 00062 00000
$TO:11/05/30 39   39   01 2586630                 0000 17:49:23 00015 00000
$TO:11/05/30 21   21   04 0929560498              0000 17:48:17 00010 00000
$TO:11/05/30 17   10   07 022562211822            0000 17:44:37 00173 00000
```



PABX SMDR Protocol

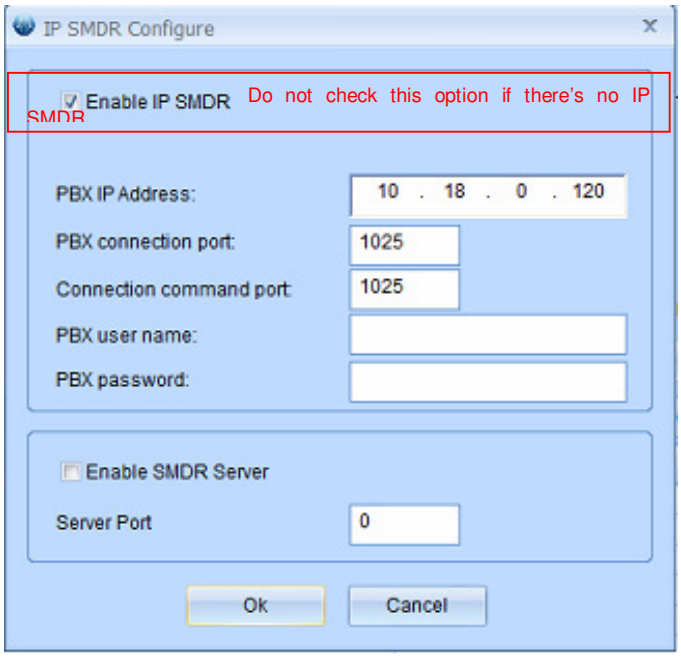
Serial SMDR

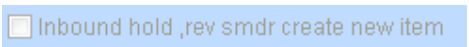
Please refer to the PABX user's manual about serial communication configuration for windows HyperTerminal operation

TCP/IP SMDR

Most PABX support TCP/IP SMDR. Please refer PABX user's manual about SMDR output parameter.

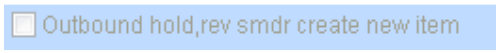
1. PABX IP address: The IP address assigned to PABX
2. Connect Port: Port for PC connection (Provided by PABX)
3. Output Port: Normally it is same as connection port. Otherwise, user can set separately.
4. User Name: User name to login PABX.
5. Password: Password to login PABX





Inbound Call on hold. Program will create new call record while the inbound call is on hold and

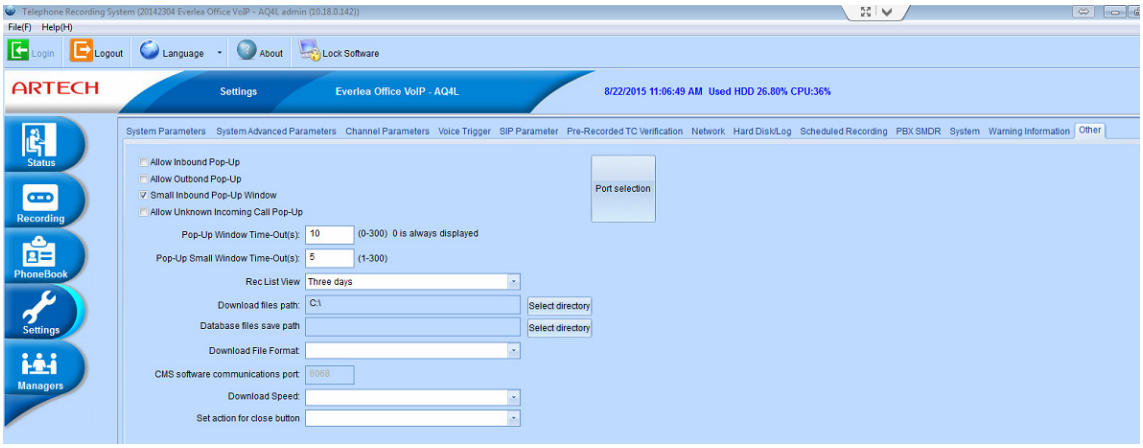
transferred to another extension when SMDR is received.



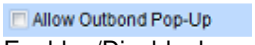
Outbound Call on hold. Program will create new call record while the outbound call is on hold and transferred to another extension when SMDR is received.

Identify the extension is on hold or hang up for above call record settings.

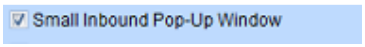
Other setting



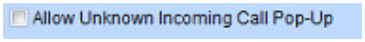
Enable /Disable large popup box for inbound call numbers, information will include names it contacts exist in phonebook



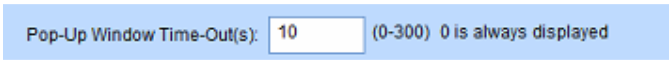
Enable /Disable large popup box for outbound call numbers, information will include names it contacts exist in phonebook



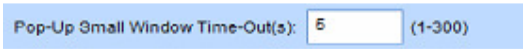
Enable /Disable small popup box for outbound call numbers, information will include names it contacts exist in phonebook



Enable /Disable large popup box for unknown call numbers.



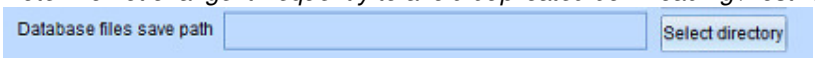
Elapse time for popup window to stay on your screen before auto closing. If value is 0 window will stay open.



Timer for how long the small pop up window will appear on your screen

This command sets how much Call Recording history will be loaded on the main Status Screen when you log into the recorder, by default this is set to 0 days. Note: If the recorder is in high use it can take time to load many days of call history, we suggest you load minimum days required.

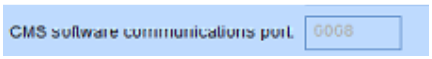
This sets the download path for where the Voice Files will be down loaded to by the Black Box Software. This is also the backup path for the Voice Files if you are going to use the Black Box to backup files.
Note: Do not change it frequently to avoid duplicated downloading / lost recordings or speed slowing down.



Sets the audio format for downloaded files, options are:

- Wave format
- Default Format (As per settings in “System Parameters)

Note: Due to the various CODECs SIP recordings are all saved as Wave format across the recorder



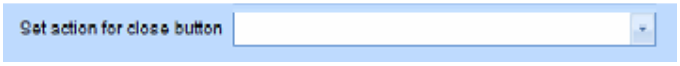
What does this do?

Sets the download load speed for backing up calls from the Voice Logger, options are:

- Speed Low (1Kb)
- Speed Normal (4Kb)
- Speed Fast (12Kb)

Please note it is suggested to complete backup tasks outside normal recording operation times, if you cannot do this suggested speed settings are low especially if your recorder is under high load.

Ken what is the default setting box in empty by default?

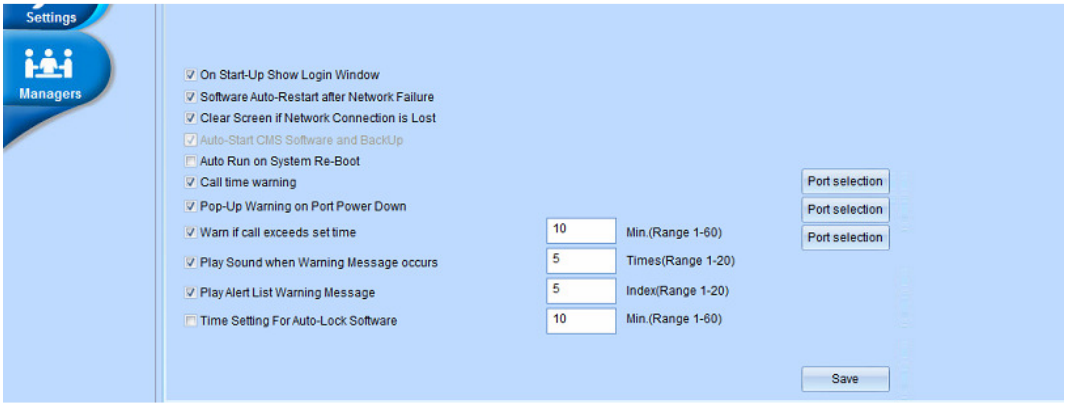


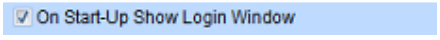
The Setting controls the Action if you click on the close button on the Black Box Software e.g. 

The options are:
Minimize in the lower corner and Keep online
Minimize in the lower corner and Keep offline
Close Software

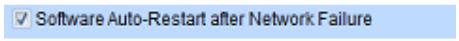
The purpose of this command is to stop the Black Box being accidently closed, please note if this is left at default the Black Box program will not close when the click the close icon (as above) but will minimize and remain logged in.

”

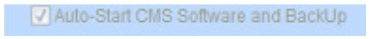


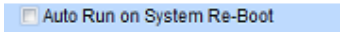


Enable/Disable the log in window after the Black Box programmed is opened.

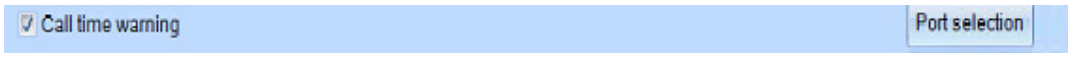


Enable/Disable to run the Black Box program when the PC restarts or on Startup



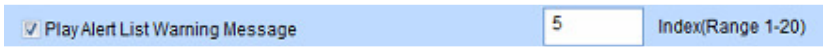


Enable/Disable the automatic re-connect of Black Box if network disconnected



Enable/Disable to warning of phone off hook. This could be caused by a line fault or the handset being left off hook.

Enable/Disable warning of power off on a Line port Pop Up window



Enable/Disable warning tone to active when warning message occurs.

Online user

- **System Settings**

Online user: Shows the Users who are currently logged into voice logger.

Shows users online time, online duration, IP address, software version and MAC address

User Name	Online time	Online duration	IP Address	Software Ver	MAC Address
admin	2012-8-24 11:33:09 上午	02:10:02	192.168.22.111 / 192.168.22.111	Version1.0	0E-85-96-78-54-F2

User Management

Administrator can add new users to log into voice logger

Default user: admin

Default password: 1111.

User Name	Download permi...	Delete permission	Monitor permissti...	Play permission	System setting	Channel setting	User management
admin	Enable	Enable	Enable	Enable	Enable	Enable	Enable
ken	Enable	Enable	Enable	Enable	Enable	Disable	Disable

Add new account

User name: Max. 16 characters

Password: Max 16 characters

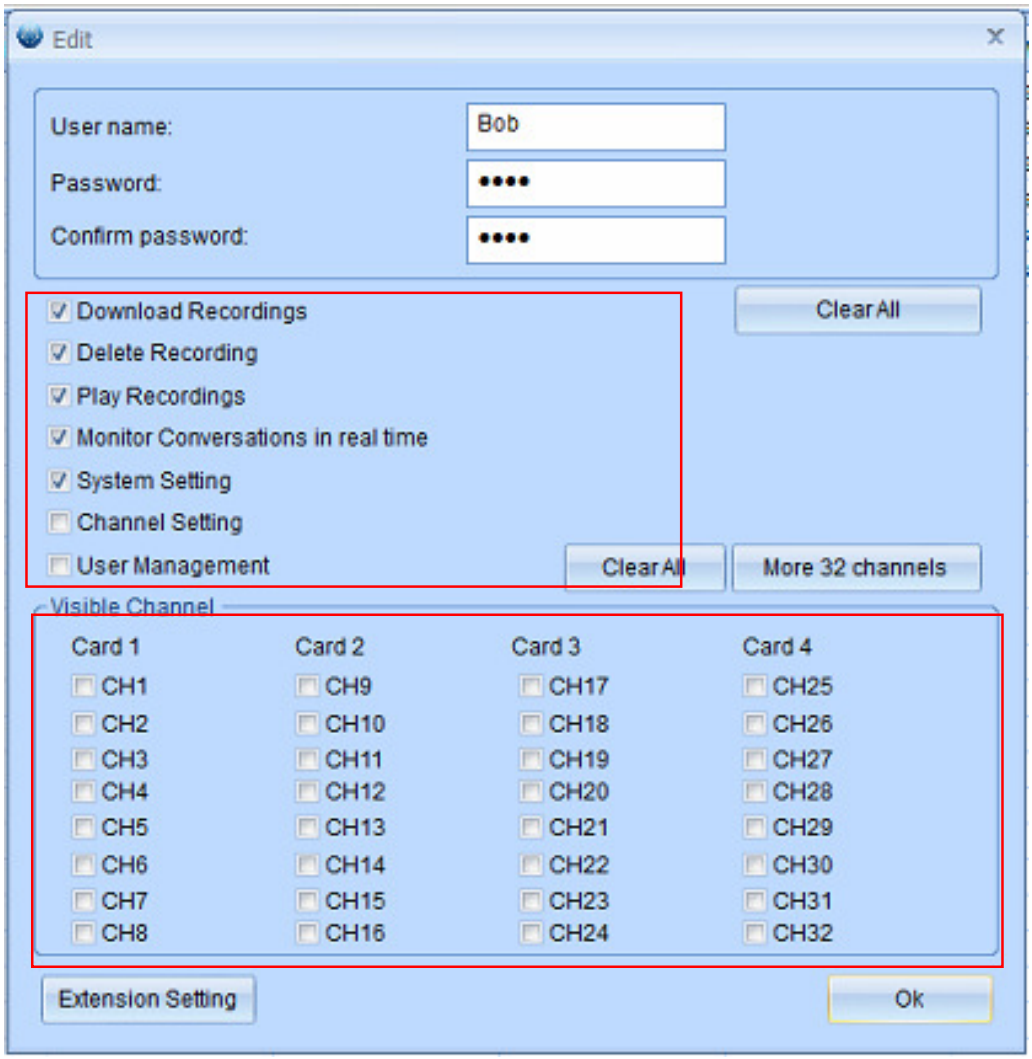
Enable the authorization for

1. ☑ Download recording records
2. ☑ Delete recording records
3. ☑ Play recording records
4. ☑ Monitor talking real time
5. ☑ System setting
6. ☐ Channel setting

7. User management
Add/Delete user account

Users can be assigned various authorization levels for supervisor and staff in a firm.

For example, user can check all channels for supervisor's account and single channel only for staffs. When staff login to voice logger, only one line status is visible in his client program.



Appendix 1 – Helpful Technical Information

CPU
667MHz CPU
Samsung ARM chip

Announcements Recording Format
Bit Rate: 32kbps Audio sample size: 4 bit
Channels 1: (Mono) Audio sample rate: 8 kHz
Audio: IMA ADPCM

Network Communications Port: 6068

SIP Information
Under license the AQ and AK can record standard *Session Initiation Protocol* (SIP), defined in RFC 3261 [6],

SIP Codecs that can be recorded
- G711A
- G711U
- G729

SMDR Outputs
RS232 (DB9)
TCPIP

Battery Backup
12 Volt DC

Battery Types Supported
Ni-MH, Lead Acid, Lithium and polymer

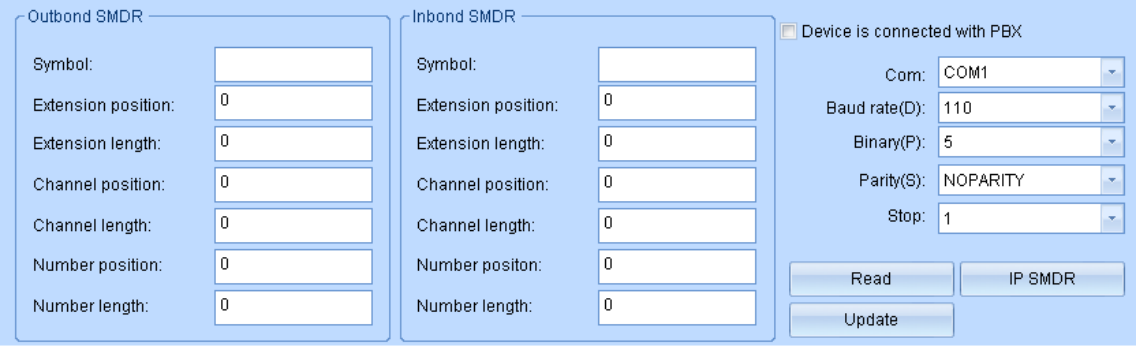
Recording Hour /SD and HD Size

8.	500GB	36,000	Hour
9.	1000GB(1T)	72000	Hour
10.	2000GB(2T)	144000	Hour
11.	8GB	560	Hour (SD Card)
12.	32GB	2240	Hour (SD Card)
13.	64GB	4480	Hour (SD Card)

Appendix 2 – Setting up SMDR Integration Example

You can enable/disable SMDR configuration.

Enable SMDR (Station Message Detail Recording), AK32 will receive data from PABX and pop up details on client program. You may adjust the exact data of the form.



SMDR Configuration example:

```
$TO:11/05/30 14   14   01 0229524929
$TO:11/05/30 14   14   01 0229524929
$TO:11/05/30 14   14   01 0229524929                    0000 17:54:59 00046 00000
$TO:11/05/30 14   14   01 0229524929   0000 17:54:59 00046 00000
$TO:11/05/30 19   19   07 0225859650   0000 17:53:29 00033 00000
$TO:11/05/30 24   24   01 09328        0000 17:53:56 00002 00000
$TO:11/05/30 12   12   04 123         0000 17:53:07 00002 00000
$TO:11/05/30 12   12   03 123         0000 17:52:46 00016 00000
$TO:11/05/30 12   12   01 123         0000 17:52:15 00012 00000
```

It shows extension number is 14, Channel is 01

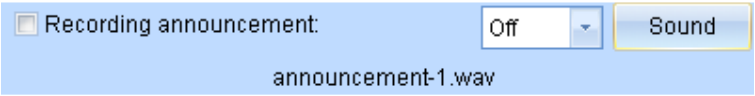
You can count extension number position starts from the 14th digital, length is 2. Input the data to corresponded space.

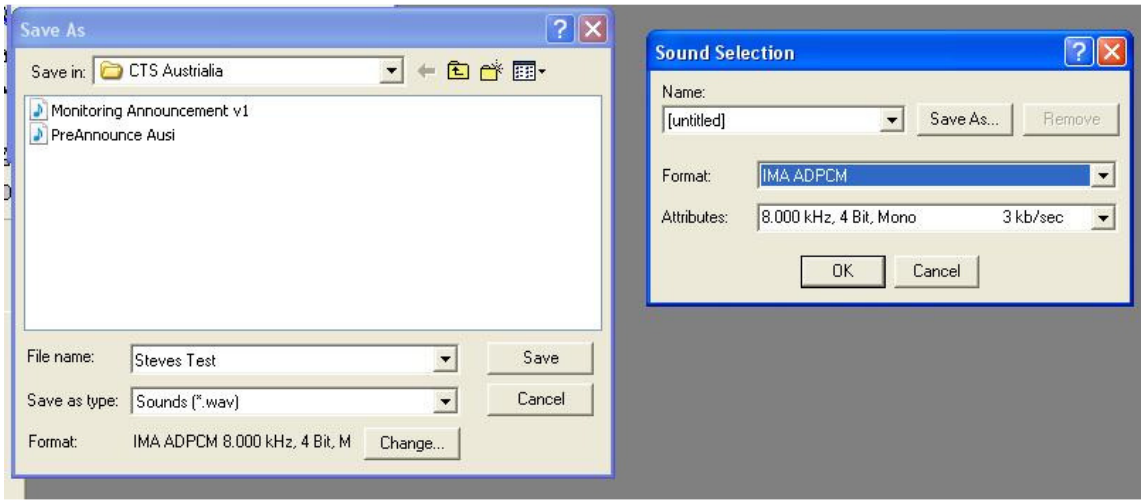
The same methods, it shows channel position starts from the 24th digital, length is 2. Input the data to corresponded space.

AK32 supports Caller ID, telephone number information from SMDR will be ignored. .

Recording Announcement Management

You can upload recording announcement to AK32, it will be broadcasted to both parties while the call is established.



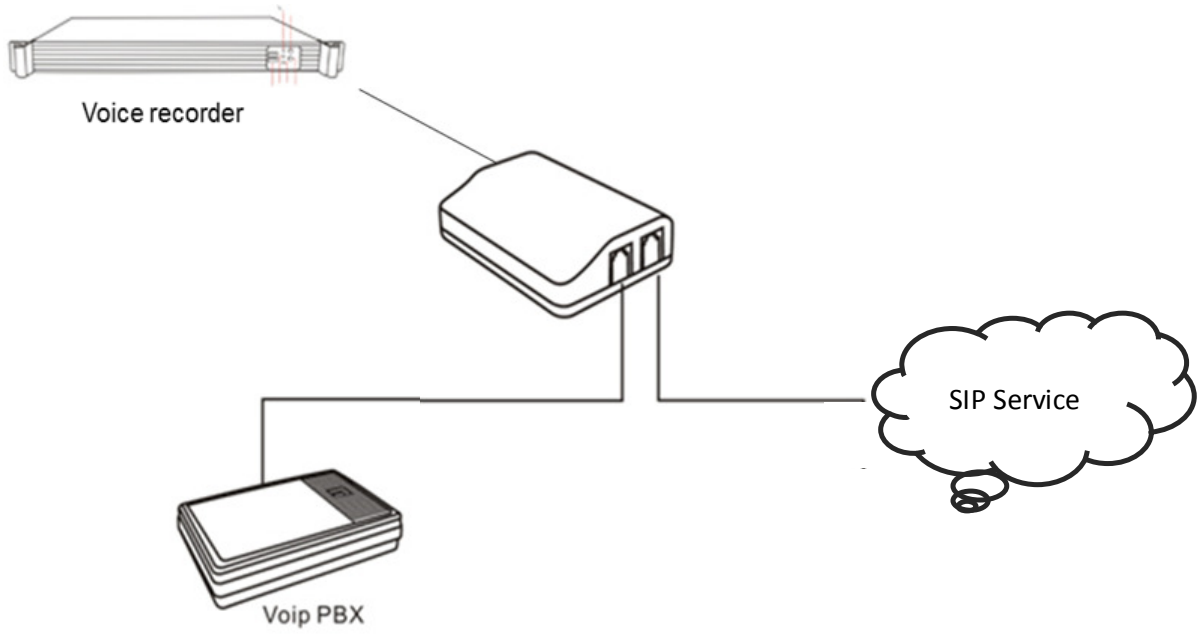


Appendix 3 – VoIP TAP Box (VH100)

The VoIP TAP box is designed as an easy method to capture SIP Network Traffic from or to a VoIP PBX or Cloud solution. The TAP Box is powered by a USB input, this can in turn be plugged into the recorders USB port for powering or be plugged into a USB power pack.

The TAP box is idea for simple installations that do not involve changing Router or Switch settings on the customers Network.

The VH100 uses a “Mirror” port configuration and supports 10M/100M through put.



Specifications

- Network = 10/100 mbps - Full Duplex
- Power = 5 volt Mini USB
- 3 x RJ45 Sockets
- Configuration= In Port / Out Port and Mirror Port for recording unit

Appendix 4 – Compliance

Compliance Notes

"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."

Complies with AS/CA S002:2010 (inc Amendment No 1/2012)

Complies with New Zealand Specification PTC 200:2006

Complies with AS/NZS 60950.1:2011 Incl Amdt 1

Compliance

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Support

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Program System Requirement

1. Windows7/Vista/XP/2000
2. Pentium 400MHZ CPU
3. 256MB RAM
4. 1GB HDD
5. Network RJ45 port
6. Audio output (Play & Monitor)