

Security is a far reaching topic and will have different implications for different types of organisation. The information below offers an overview of some features built into the Red Box Recorders software to help IT and Communications managers comply with security policies, and procedures. If additional information is required on any component of security or related technical issue please contact your local Red Box Recorders representative who will be pleased to answer any specific questions.

## Frame Based Recording

Red Box Recorders utilise a unique process for capturing, storing and archiving audio and the associated data within its voice recording software.

The Frame based recording technology will open one file across the whole recording system, capturing all active audio within a single file for a defined time period and or file size. This method is called Frame Based recording and creates a secure and authenticated method of recording audio.

The system utilises a proprietary filing convention within the frame file and within the file allocation / naming conventions within the voice recorder. No single conversation can be accessed via a single frame file, in fact the average 2 minute conversation will be stored across more than 64 frame files. Each frame file is made up of 312 sub frames (on average). This results in a system that *obfuscates* each audio sub-frame and creates a security level requiring over 20,000 audio segments to be processed in order to manually recompile a single 2 minute call (assuming that the user can gain access, decode the obfuscation, Transcode the audio, then monitor over 20000 audio segments identifying the correct pieces of audio pertaining to the required call).

The Frame recording engine is very much like a two way paper shredder, allowing hundreds of conversations (pieces of paper) to be recorded concurrently, and storing all of the calls into separate frame files (changing the waste paper bin every few seconds). The level of complexity and processing required to manually recompile a single call is equal to that of hacking a base level encryption code.

## Red Box Recorders Additional Security Features

The Voice recording system has been specifically designed to offer Obfuscation throughout the system to keep information secure without the need for the complexities of encryption. Below are listed some additional features within the system that offer improved security for voice recording.

- Browser based solution, offers a centralised administration and management, offering a single server based solution that can be deployed within a customer's network security requirements.
- Software based solution offers easy installation onto any build of windows operating system, allowing for deployment onto 'hardened' or customer specific builds of OS.
- Voice recordings can only be replayed via an authorised user of the voice recording system who has the replay control application loaded, meaning no voice recordings can be replayed without access (to the voice recording server), relevant permissions (set up in the system to replay specific calls) and the replay application available on the local PC (been given access to the software and installed appropriately).
- Most voice recordings utilise a compression standard known as G729a. This offers audio a level of compression but also means that to replay the audio the file has to be decoded through the relevant Codec.
- The G729a codec is not available as a general software utility and is not supported by windows standards such as media player etc. to gain access to G729a audio outside of the Red Box Recorders system would require Transcoding of the audio, again making the audio more secure.
- Every voice recording is digitally authenticated at the point of recording, utilising a MD5 Hash. This process enables every recording to be authenticated at the point of replay, ensuring the audio being replayed has not been tampered with or altered.
- The system can be set to utilise 'Strong Password' security (at least: 6 characters, one caps, one lower case and one number), with automated password timeouts and 'force to change' password features
- Active Directory integration, offering integration with an organisations active directory system to authenticate users
- Recording 'force to disk' as standard, offering all audio securely captured to non volatile storage every 5 seconds ensuring all calls are recorded and stored to within 5 seconds of a catastrophic failure such as power outage.



#### About Red Box Recorders

Red Box Recorders is a global provider of voice and data recording that solves often complex and technical business challenges in the simplest, most effective way.

We enable contact centres, the emergency services and financial, healthcare and government organisations to be fully compliant, and to become more efficient, productive and competitive.

With headquarters in Nottingham, UK, we have regional offices in the City of London, New York, Singapore, Dubai, São Paulo and Bucharest. Our smart, scalable and forward-thinking technology is backed by a growing worldwide network of over 200 partners who provide unrivalled quality, service and support.

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