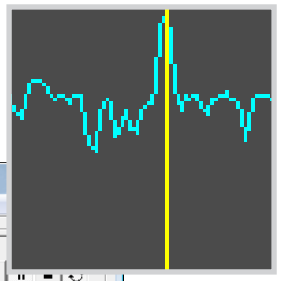
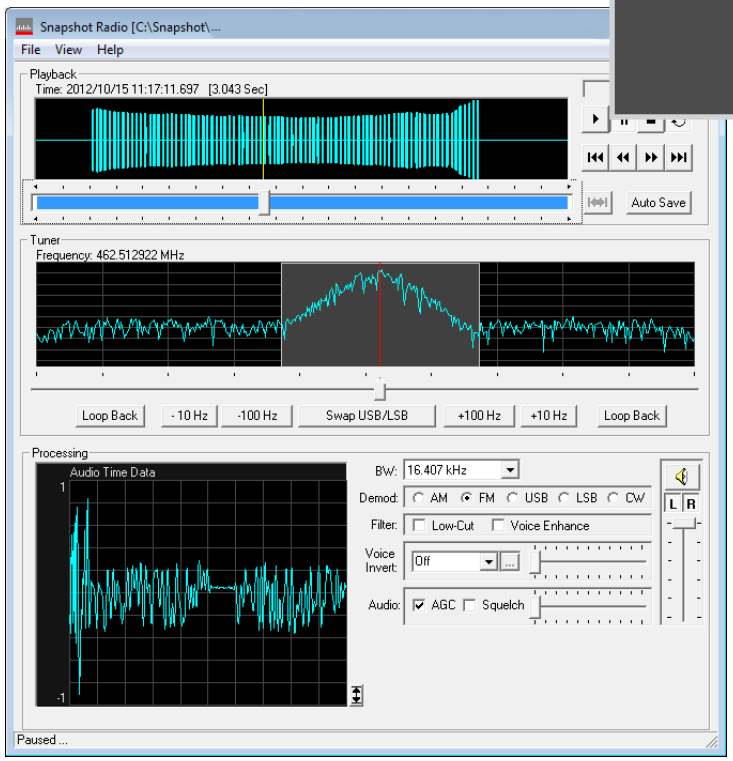
Keysight Technologies
N6829BS
Snapshot Radio Software Application

Snapshot Radio Key Features

- Plays a variety of IQ and Audio file types (.cap, .wav, .au, .sdf)
- Provides a variety of demodulation types (AM, FM, USB, LSB, CW)
- Flexible Voice Inversion scheme offers a range of flip frequencies
- Allows the captured file to be saved as a wave (.wav) file
- Displays signal as time or frequency data
- Efficient one click file sorting
- Easy to set up hierarchical sorting
- Plays files while the N6820ES Surveyor 4D continues to record new narrowband files

There are times when I need to take my recordings in the field quickly and sort it out after the fact





The N6829BS audio player is a stand-alone application that allows you to play-back, sort, delete, and save, IQ files created by applications such as the N6820ES Surveyor 4D or 89600B VSA (Vector Signal Analyzer) software.

The N6829BS audio player executes entirely on a PC and does not require N6820ES Surveyor 4D system hardware or software.

Don't worry if you weren't able to dial in the center frequency exactly right. The N6829BS application allows you to "retune" IQ files during playback and select the best demodulation scheme to either listen to audio or play into a decoding package.

KEYSIGHT TECHNOLOGIES

Maximize Operator Efficiency

Time in the field is extremely valuable and always limited. The N6829BS Snapshot Radio software enables an operator or field technician to focus on survey and data collection while on station knowing they can easily replay recordings after the fact. The N6829BS can demodulate IQ recordings made by either the N6820ES Signal Surveyor 4D or 89601B Vector Signal Analyzer software. It is also able to play a variety of audio format files produced by other receiver assets.

Once the signal data is recorded to a file, reviewers can work at their own pace without risk of losing valuable time or data. Recordings can be edited, filtered and refined for sharing or reporting purposes.

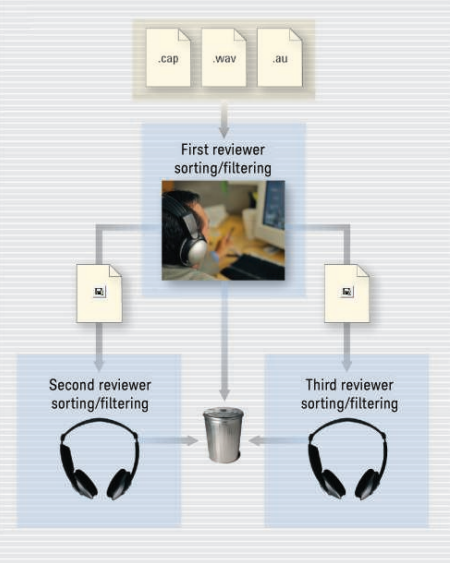
Recordings can be demodulated by the N6829BS software and evaluated for voice or data content. For data recordings, demodulated audio can be input to commercial decoding software for identification purposes as outlined in ITU-R recommendation SM.1600, “Technical Identification of Digital Signals.”

Full-featured Playback

The N6829BS software shows the signal file playback in the time domain, a tuner function showing the full bandwidth of the file, and a processing function for enhancing the conversion to voice. Besides the typical playback functions, the N6829BS software lets the user select regions of time and repeat or loop on those regions. You can tune the frequency of SSB signals with the mouse in real-time while listening. The bandwidth of the processing function is user-selectable.

The N6829BS processing functions can display either the modulated or demodulated signal, in the frequency or time domain. Modulation of AM, FM, USB, LSB, and CW detections is automatically chosen but it is also user-selectable. You can choose a low-pass filter function to remove CTCSS tones or choose the voice enhance filter to remove noise.

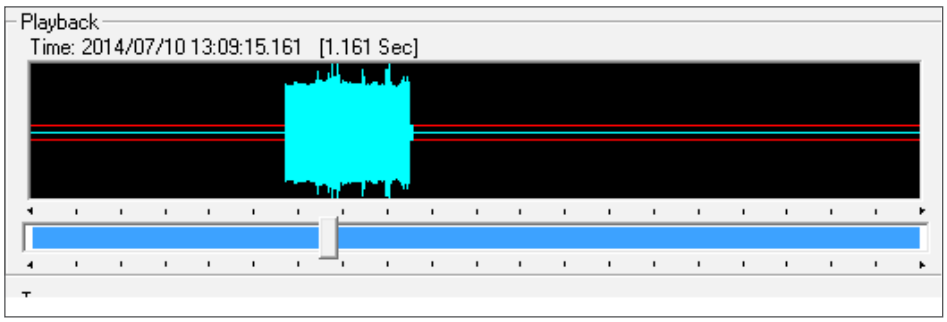
To simplify sharing the file with others who do not have N6829BS software, the selected portion of the returned signal can be saved as a .wav or .16t file, with all demodulation and filtering already applied.



Multiple reviewers using the N6829BS file player can be organized in a hierarchy for maximum efficiency.

Dramatically Compress Playback Review

The N6829BS software has a squelch function that skips over portions of the recorded data that does not contain voice. By removing the noise and “dead time” in a recording, reviewers can quickly listen to two-sided voice transmissions, thereby dramatically compressing the playback time. Reviewers might only need to hear a few seconds of this compressed two-sided voice transmission to determine if the recording should be saved or deleted.



Squelch function skips over the noise in playback to significantly compress listening time and reduce fatigue.

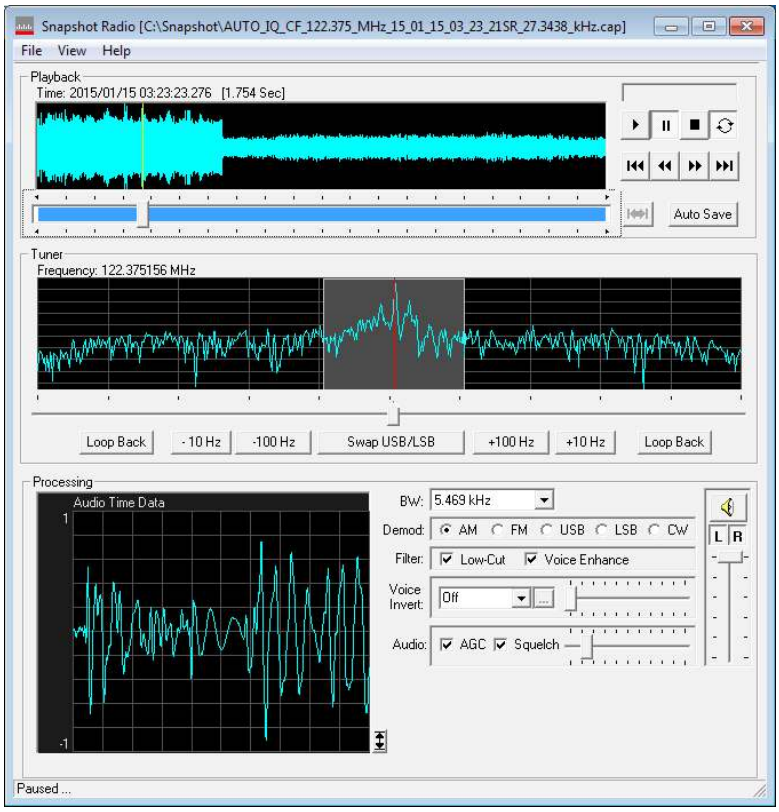
Efficient File Management

Signal files are automatically displayed in the N6829BS file manager and can easily be selected and played. With the up/down arrow buttons, users quickly move through a list of files while they play automatically, the N6829BS can instantly jump to next recording for faster playback of multiple files.

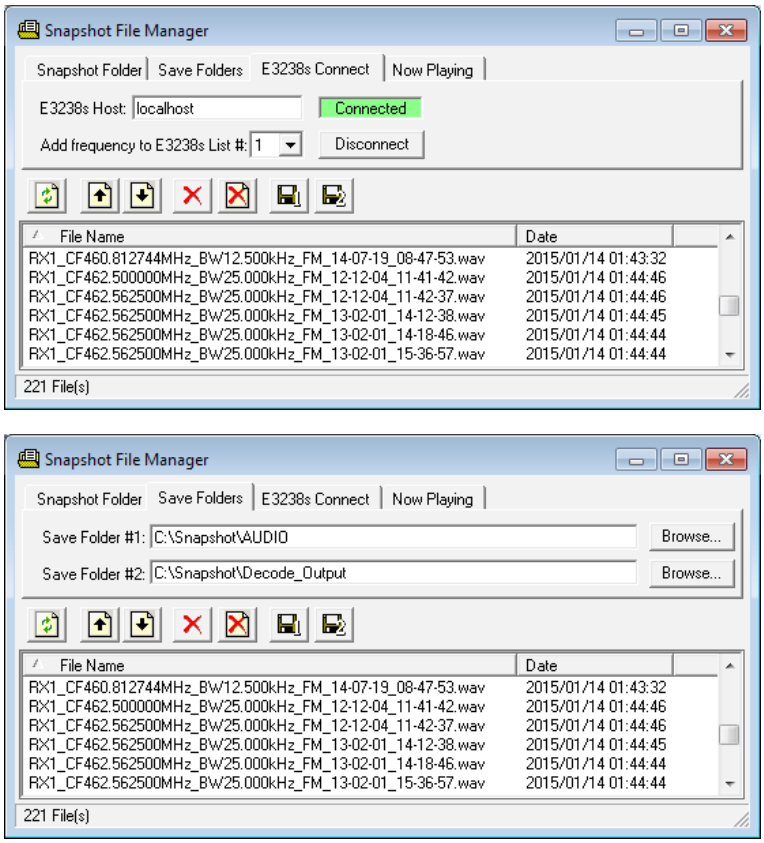
Reviewers will listen to the voice content and delete unwanted recordings or save files to one of two directories. Directory1 could be used for highly relevant signals and directory2 used for less relevant signal files or data intercepts. The file list can be refreshed manually or automatically. New files created from an operational N6820ES Surveyor 4D system can be saved in the same directory. To save critical review time, all retuning, looping, filtering, and noise reduction settings are saved in the file.

Users can establish a socket link between the N6820ES Surveyor 4D system and the N6829BS software that will automatically add frequencies to the N6820ES Surveyor 4D ignore list. Now deleting a file with the alternate delete button in file manager adds that file's center frequency to the N6820ES Surveyor 4D ignore list.

The N6829BS software allows reviewers to listen to files, demodulate the signal files with radio functions, and manage work flow efficiently.



Integrated, full-featured playback in N6829BS software.



Efficient recorded file management automatically jumps to next recording after save/delete decision.

Operating Characteristics

Supports playback of capture files up to 2 MHz in bandwidth.

Input file formats supported

.cap from N6820ES Surveyor 4D or 89600S
.sdf from 89600S
.au
.wav from other types of programs

Ouptut file formats:

.wav, .16t, or .cap

The N6829BS software can be installed on a PC with these recommended features:

Processor	: 1.8 GHz P4 or better
Memory	: 512 MB
Operating System	: Win-2K with SP4 or Win-XP with SP2
Sound Card	: Required
LAN	: Ethernet adaptor required

Ordering Information

N6829BS	Audio player
N6829BS-103	Standard software on Windows

Your license file is keyed to the MAC address of your ethernet adapter. Therefore, the N6829BS software will only work on the specific PC for which it is licensed.

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