

Long time recording of compressed audio data

Protected remote data transmission via GSM, PSTN (POTS), ISDN

Otto-Schmirgal-Strasse 3 · D-10319 Berlin

Phone: +49 30 - 515 932 - 0

Fax: +49 30 - 515 932 - 299

E-Mail: contact@dresearch.de

WWW: <http://www.dresearch.de>

Managing director: Dr. Michael Weber

Amtsgericht Berlin-Charlottenburg · HRB-Nr. 54412

Accounting details:

Dresdner Bank AG

Bank code number: 120 800 00

Account number: 40 472 475 00



RemoteRec RR2110A is a small and compact system for “on-the-spot” long-time recording and remote transmission of audio data. Leading edge compression techniques facilitate transmission even via the narrow bandwidth of the GSM cellular network.

The built-in GSM modem allows mobile operation of the system all over Europe and in more than 146 countries/areas all over the world.

The recordings will be stored in the sender. Using the PC receiver software, you set up a connection to the sender, e.g.: via the cellular network (GSM).

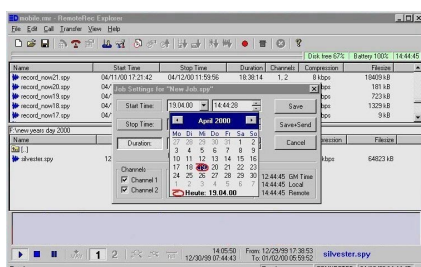
To quickly locate sequences of activity within a recording, an actogram is displayed by the PC software. RemoteRec allows you to select parts of a recording and transmit only the selection.

Application areas include: audio surveillance, acoustical long-time observation, process analysis and further tasks that require audio recordings over long periods of time.

Features

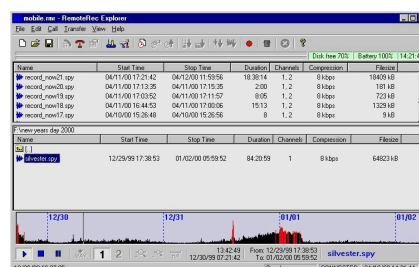
- Speech-based audio compression, possible in the following rates: 8 kbit/s (max. compression), 32 kbit/s or 64 kbit/s (data quality is acceptable as legal evidence).
- Flash memory with a file system in the sender
- 1 or 2 channel recording for days through highly efficient data reduction
- Time or event controlled recording
- Remote programming of the sender by the PC software
- Remote access to the file system in the sender, controlled by passwords
- Listen in live with the integrated GMS module (single telephone numbers or groups of numbers can be selected)
- Preview (actogram) for detecting spots of activity (amount of preview data is 1% compared to audio data)
- Transmission of parts of a recording (selective transmission)
- Storage of the compressed audio data at the receiving PC
- Conversion of compressed audio data into well-known PCM or WAV format
- Playback of recordings on the receiving PC after transmission
- Noiseless functioning of the recording unit

1. Job Creation



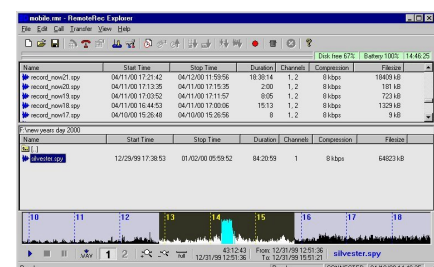
Creation of a job (time controlled recording)

2. Preview



Preview (actogram) of activity within the recording

3. Selective Transmission



Picture of 9 hours from a recording in the actogram (marking: 3 hours)

The receiver software allows the creation of an exact timetable for the recording times and the recording modes. These settings will be transferred via GSM to the sender.

A preview of the recorded audio data (actogram) is displayed by the software. Increased activity is indicated by red peaks. A zoom function is available for a more detailed analysis of the activity.

With RemoteRec it is easy to select parts of a recording. Simply select the portion of interest in the actogram (preview) and download the audio data. This saves substantial transmission time and call charges.

Technical Specifications (Sender / Recorder Unit)

Model	RemoteRec RR2110A
Audio bandwidth	4 kHz (sampling rate: 8kHz / 16 bit)
Recording time	100 h (usual activity, 160 MB Flash)
Data transmission	Secured, packet-based transmission
Flash memory	160 - 320 MByte
Microphone input	Impedance: 15 k Ω Sensitivity: 2.5 .. 7 mV Dynamic microphone or condenser microphone can be connected
Sensor input	Turnkey
Internal Modem	GSM 900 MHz
Serial interfaces	RS 232
Power Supply	External: 9 – 24 V Internal: 12V rechargeable battery pack (100 h standby, 5 h recording or transmitting)
Power Consumption	650 mA/12 V active, 20 mA/12 V standby
Size	189 x 112.5 x 51 mm
Weight	1200 g (incl. rechargeable battery)

Technical Specifications (Receiver Unit)

Software	Receiver software: storing, control, audio analysis and data format conversion functions
PC / Notebook	Not included in scope of delivery

System Requirements (Receiver)

Processor	Pentium® 90 MHz
Main Memory	16 Mbyte
Graphic card	640 x 480
Operation system	Windows95®/98®/NT®
Receiver	Analogue (AT command set), ISDN (modem emulation with AT command set) or zero modem direct connection

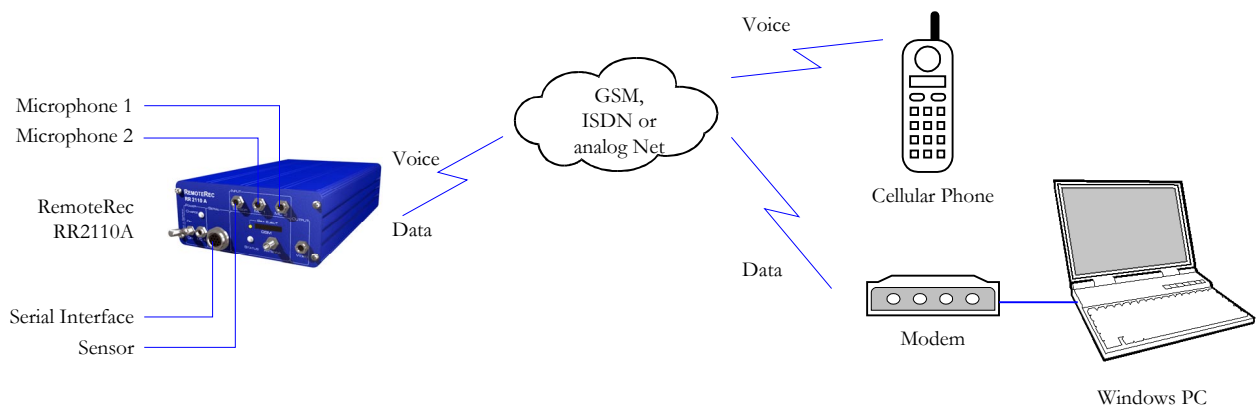
Configurations

RemoteRec RR2110A can be purchased in various configurations. All models comprise an internal GSM modem, accumulator pack, charge control, antenna socket, accumulator control LED, 9–24 V DC IN and receiver software

Basic configuration	160 MB Flash
Accessory (optional)	
Memory	320 MB Flash
Adapter cables	RS 232 (modem) RS 232 (zero modem) Sensor Video-out
Connectors	Neutrik MiniCon Neutrik NanoCon
Other	Microphone, GSM900-antenna Charging & power supply unit

date: June 20th 2000

Recording & Transfer Unit



Receiver