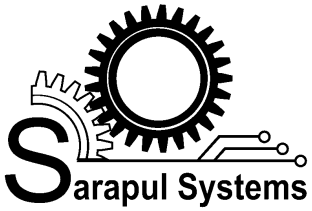

«SpRecord» System of Telephone Calls Registration and Record

Technical Specification
Installation and Operating Manual

Contains

1. Technical Specification

1.1. System Application

SpRecord System is designed for multy-channel registration and record of voice messages to a personal computer.

The system may be used by civil and dispatching (controlling) services: energetic, community facilities, ambulance, fire prevention service, various commercial organizations which imply calls registration and record.

SpRecord system provides:

- Dispatching services automation;
- Calls registration and record;
- Telephone calls database maintenance.

IMPORTANT!

SpRecord system is not aimed to get information illegally. While operating the system outputs recording notification signal.

1.2. System Overview

SpRecord system scheme is illustrated in Figure 1.1.

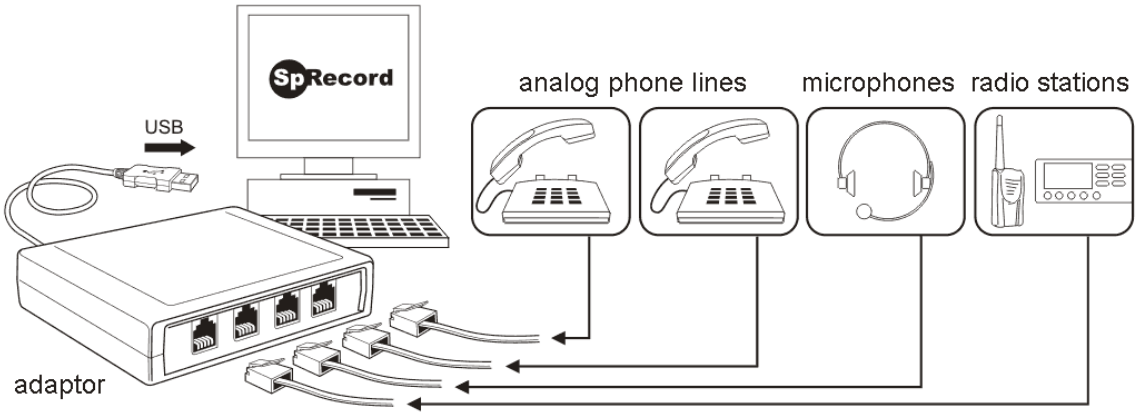

Figure 1.1. SpRecord system.

1.3. System Versions

SpRecord system is available in several versions:

- SpRecord A System;
- SpRecord AT System.

Depending on a version the system is equipped with “A” or “AT” SpRecord adapters. SpRecord adapter is the end equipment, connected to analogue telephone line in parallel to telephone sets. Linear analogue sound signal sources may be connected to the adapters.

1.3.1. SpRecord A Adapter

SpRecord A adapters are designed for analogue-to-digital conversion of sound signals. Adapters are packed in a plastic box as a desktop block. Depending on the construction version SpRecord A adapters are equipped with 1 to 8 telephone sockets RJ11 to connect to the converted signal source and one USB socket to establich communication with a personal computer. The adapters are designed for USB1.1 or 2.0 port with DC voltage +5V.

1.3.2. SpRecord AT Adapter

«AT» adapter version unlike "A" one allows closing the communication link circuit (telephone receiver picking up/putting down) to make possible using voice mail or auto-caller. The other SpRecord AT adapter characteristics are compatible of those of "A" adapter.

1.4. Technical Features

1.4.1. Recording Notification Parameters

SpRecord system provides recording notification signal to be output into the telephone line. Alarm signal parameters are shown in Table 1.

Table 1

Recording Notification Signal Parameters

Frequency, Hz	Signal length, sec.	Pause length between signals, sec.	Signal level, dB
1400	0,40 ± 0,04	15 ± 3	-20

1.4.2. General Features

Table 2

Power Consumption

+5V	600 mW max.

Table 3

Audio-path (Telephone Line Interface)

Maximum input signal amplitude	3,3 V
Rated input signal range	-50 dB … +10 dB
Input resistance modulus at 1kHz	10 kOhm min.
DC resistance	200 kOhm min.
Self-noise level	–50 dB max.
Transition noise immunity between channels	70 dB
Operating frequency range	250-3500 Hz
Sampling rate	11025 Hz

Table 4

Outgoing Call Number Identifier at Tone Dialing DTMF

DTMF digits and symbols	0-9, *, #
Detection range	–20 dB to +10 dB
Minimal sending time	60 msec.
Minimal pause between digits input	40 msec.
Telephone line signal/noise ratio	10 dB min.

Table 5

Outgoing Call Number Identifier at Pulse Dialing

Dialing digits	0-9
Minimal pulse length	20 msec.
Minimal pause between pulses	20 msec.
Minimal pause between pulse string	180 msec.

Table 6

Incoming Call Number Identifying

Caller ID (FSK, DTMF)	Between first and second calling signals
USSR ANI	Active

Table 7
Physical Features

Operating temperature range	+5 ^{o} C…+40 ^{o} C
Storage temperature if stored in production package	-50 ^{o} C…+50 ^{o} C

1.4.3. SpRecord Adapters Dimensions

SpRecord adapter: A1, AT1 - 90x50x32 mm;
SpRecord adapter: A2, A4, AT2 - 130x100x30 mm;
SpRecord adapter: A8, AT4, AT8 - 190x140x30 mm.

1.4.4. Personal Computer Connection

If using different versions of SpRecord systems, SpRecord «A» and «AT», up to 16 adapters can be connected per a computer (3 adapters per a USB controller), that provides connection of up to 128 sound signal sources at once.

1.5. Minimal Technical Requirements

SpRecord system operates together with a personal computer (PC).
Minimal PC requirements to record up to 8 channels:

- Operating system: Windows 98, ME, NT, 2000, XP, 2003;
- Processor of Pentium II 400 MHz series;
- 64Mb RAM;
- CD-ROM drive;
- USB 1.1 or 2.0 port;
- Sound card;
- Enough place on HDD (1 hour of constant recording with mp3 compression takes 5.2 Mb per each channel).

Table 8
PC Requirements Depending on Recorded Channel Quantity

Characteristic	**Value**				
Channel number	Up to 8	Up to 16	Up to 32	Up to 64	Up to 128
CPU clock	400 MHz	700 MHz	1200 MHz	2000 MHz	3000 MHz
RAM	64 Mb	64 Mb	128 Mb	256 Mb	512 Mb
Number of USB ports	1	2	4	8	16
Number of USB controller	1	1	2	3	6

1.6. Accessories

Table 9
System Accessories Depending on the Adapter Version, pcs.

Description	**Adapter version**			
	A1, AT1	A2, AT2	A4, AT4	A8
SpRecord Adapter	1	1	1	1
Telephone cable extender 0,2 m.	1	2	4	8
Telephone cable extender 1,8 m.	1	2	4	8
Telephone splitter	1	2	4	8
USB 2.0 Cable Am-Bm 1,8 m.	1	1	1	1
CD SpRecord	1	1	1	1
Certificate	1	1	1	1
Package	1	1	1	1

1.7. Transportation and Storage

SpRecord adapter should be stored in production package indoors at temperature range from -50 ^{o}C to + 50 ^{o}C, at 90% of relative humidity.

Avoid exposure to acid and alkaline vapors, aggressive gases and other detrimental impurities, causing corrosion.

The Product should be transported in a sealed cardboard box by any covered transport means.

1.8. Warranty

The Manufacturer guarantees that the system parameters coincide with the declared values on terms that transportation, storage and operation conditions are followed.

Warranty period is 12 months from the date of purchasing.

Equipment quality claims are not considered in the following cases:

1. If SpRecord adapter box is damaged.
2. If the Product bears signs of mechanical damage, opening or repairing.
3. If transportation, storage and operating rules, stated in the technical documentation (user manual) accompanying the Product are violated.
4. If the Product is damaged due to natural disasters.

1.9. Claims

The Customer is entitled to claim issue of adapter's parameters to those stated in the present technical specification on terms that the conditions of storage, installation and operation are followed.

Claims are to be addressed to an authorized Distributor or system Manufacturer.

If a defect is found by the Distributor, he ought to give the claim in writing to the Manufacturer together with a defective Product. The Manufacturer is to analyze the defective SpRecord Product within 10 days from the date of receiving the defective Product together with the claim. If the defect was caused by the Manufacturer's fault, he is to eliminate it, and in case if it is impossible he should change defective SpRecord Product to a new one free of charge or arrange the delivery to the Distributor (Buyer) at his expense.

1.10. Manufacturer Information

Manufacturer: Sarapul Systems, Ltd.
Russia, Udmurt Republic, Sarapul, Sovetskaia St., 17a

Postal address: 427960, Russia, Udmurt Republic, Sarapul, POB 91
Tel./fax: +7 (34147) 4-06-57
E-mail: info@sprecord.ru
Web-site: www.sprecord.ru/eng/

2. Installation and Operating Manual

2.1. Introduction

Welcome to perfect SpRecord Technologies world.

SpRecord system will extend your possibilities of operating the computer. This system gives you the following opportunities:

- Dispatching services automation;
- Telephone orders database maintenance;
- Management of conflicts with customers;
- Recording of important telephone calls and conferences;
- Cost reducing of long-distance calls;
- Improvement of labor discipline and security level;

Main system functions are as follows:

- Conversation beginning date and time registration;
- Determination of telephone line usage period;
- Identification of incoming and outgoing telephone calls (Caller ID FSK/DTMF, USSR ANI);
- Conversation recording to HDD;
- Quick search and listening of required records;
- Digital compression of audio data;
- Database access via network with limiting of user rights;
- Telephone line status control: failure, waiting, conversation;
- Unanswered calls registration;
- Automatic record level regulation (allows to hear well both of the speakers);
- Line voltage adjustment (Correct work with mini-ATS);
- Correct work with mini-ATS (voltage adjustment of response to phone receiver picking up);
- Event log maintenance and personnel notification in case of failure;
- Output of notification signal about telephone conversation being registered (recorded) into telephone line;

SpRecord system passed all the tests successfully. Our reputation is the guarantee of its quality and reliability.

Thank you for purchasing SpRecord system. We hope that you will contact us in future if you need new high-grade equipment.

2.2. How to Use Present Manual

Present user manual, where it is described how to install SpRecord system and operate it, assumes that the user is acquainted with Microsoft Windows 98/Me/2000. If not, it is strongly recommended that you should study Microsoft Windows user manual before working with SpRecord system.

The first part of documentation “Technical Specification” contains the list of accessories, supplied with SpRecord system, and minimal computer requirements for program to work correctly. Before installing SpRecord system, confirm that it is complete. If some components are missing, you should contact the sales office.

Note: SpRecord system is connected to Universal Serial Bus of the computer (Universal Serial Bus, USB). In case if your computer does not support USB technology, you should purchase USB-card before installing SpRecord system, otherwise USB devices will not work at your computer.

2.3. System Connection

Telephone lines are connected to adapter through standard 6-pins sockets for RJ-11 plugs in parallel to telephone sets as shown in Figure 2.1.

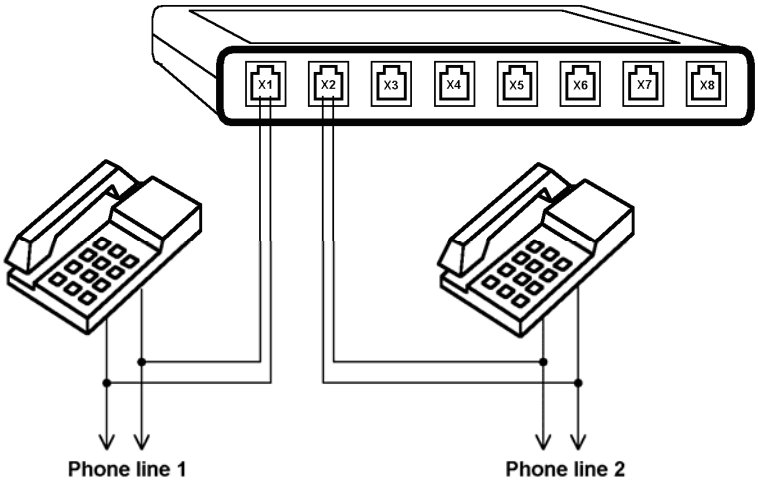

Fig. 2.1. Adapter connection to telephone line

Telephone line is connected to the middle socket pins (just like telephone sets, modems, fax-machines, etc.).

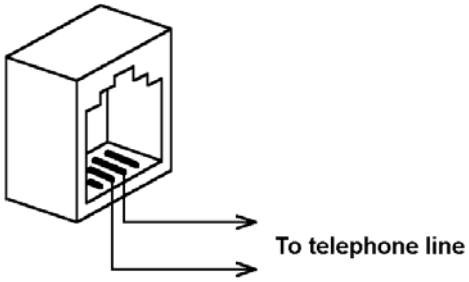

Fig. 2.2. Telephone line connection

A telephone splitter is used to connect adapter and telephone set to telephone line (socket – 2 sockets) (Fig. 2.3).

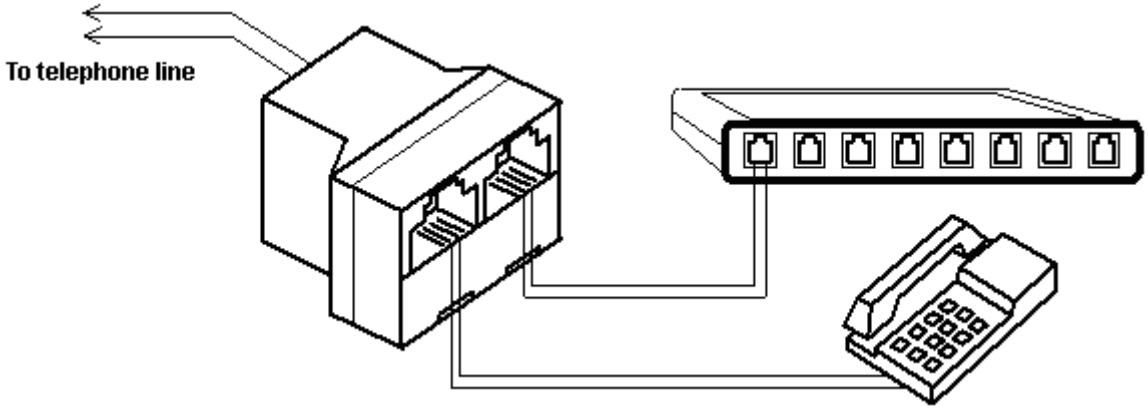

Fig. 2.3. Telephone set and adapter connection to telephone splitter.

Standard USB am-bm cable is used to connect adapter to PC.

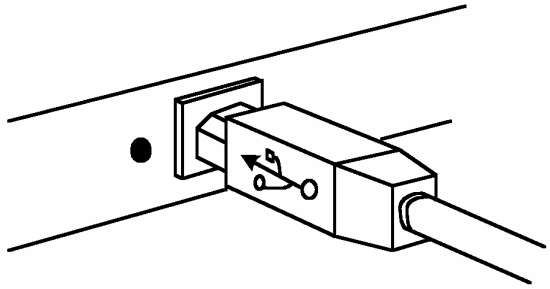

Fig. 2.4. USB-cable connection to adapter

*Before connecting USB-device to a computer, confirm that the computer box is grounded, otherwise noise will appear and system may work incorrectly.

2.4. Program Installation

To install the program insert CD SpRecord into CD-drive. The installation window will appear automatically (Fig.2.5), if not – start “autorun.exe” file manually.

Fig. 2.5. Program Installation

If the previous SpRecord version is used, it should be closed and uninstalled through Windows Control Panel (Start/ Setting/ Control Panel/ Install and delete the programs) before installing a new version of the program. When deleting the previous program version all information stored in the database will be lost (telephone numbers, comments, etc.), while audio files will be saved in the specified folder.

Install the program and the driver for USB-device using the next buttons: “Install SpRecord” and “Install SpRecord USB driver ». Then follow the instructions.

The driver should be installed before SpRecord adapter is connected to PC.

2.5. Program Start

Open Windows menu: Start / Applications / SpRecord 3;

Run SpRecord 3 – the program window should look like as follows:

Fig. 2.7. Program appearance

If the program shows a blank window (see Fig. 2.8), it means that either coordinate SpRecord adapter is installed incorrectly or driver is not installed. In this case check adapter connection or reinstall SpRecord USB driver.

Fig. 2.8. SpRecord adapter is not connected

2.6. Operating the System

Detailed description of the program and SpRecord devices operation can be found in Help system, which is available after the program is installed. To enter SpRecord Help system select: Help/Contents in the program menu. The following window will appear:

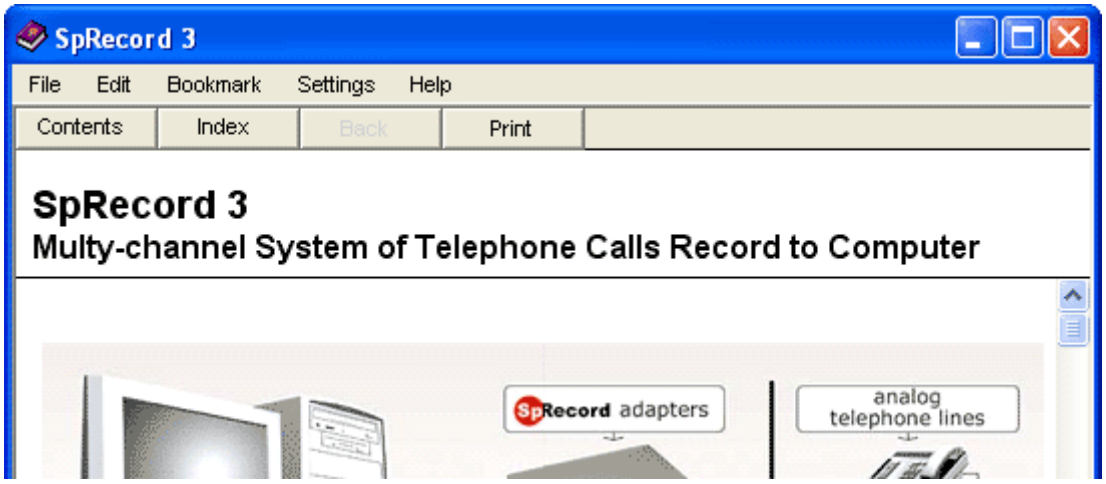

Fig. 2.9. Help window when working with SpRecord system

In the opened window select “Contents” button.

Fig. 2.10. Help Contents

Use navigation buttons to browse information you need concerning SpRecord system operation.

2.7. Safety Information

Pay more attention to the following safety instructions:

- Do not put heavy things on the surface of SpRecord adapter;
- Avoid dust contamination of the adapter. If the adapter is not used, cover it with a cloth; Dust and dirt particles may cause device malfunction;
- Avoid exposure of the adapter to blows and liquid spillage. It may cause the device failure;
- Do not try to disassemble the adapter yourself. In this case warranty becomes invalid;
- Do not expose the adapter to vibration, which may damage the device components;
- Mount adapter on even surface;
- Confirm that computer box is grounded before connecting the adapter to computer and telephone line;
- SpRecord adapter operating temperature range is +5 ^{o}C to +40 ^{o}C.

2.8. Technical Support

If there appeared some problems when operating SpRecord, reread the Manual paragraphs, dedicated to the system installation and operation.

If necessary, contact technical support service. Please, find contact information in “Manufacturer Information” paragraph or at our web-site: http://www.sprecord.ru/eng/.

If contact technical support service, please, prepare the next issues:

- When and where the system was purchased;
- Device name and model number;
- Device serial number;
- Software version;
- Operational system version (e.g.: MS Windows XP);
- CPU clock and type (e.g.: Pentium IV 2400 MHz, etc.);
- Detailed problem description.