



Multichannel Audio Interface (Multichannel microphone preamplifier / mixer with backup recording and streaming)

SRS Femida Audio Interface 8USB-IP

Data Sheet



Kyiv, 2024





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1. Application

The multichannel audio interface (multichannel microphone preamplifier / mixer with backup recording and streaming) "SRS Femida Audio Interface 8USB-IP" (further referred to as "the device") is designed to connect dynamic or condenser microphones as well as sources of line level signal to PC via multichannel USB audio board which is built into the device and to make backup audio and video recording and IP streaming as a stand-alone device.

This device is a multichannel amplifier with low noise level which allows recording of microphones and/or sources of line level signal (up to eight sources) via eight independent channels on PC with crosstalk attenuation between channels not less than 60 dB and via one combined channel in the device.

The device has a special combined channel so as to use it for the multichannel recording as well as with the public address system at the same time.

The device can contain an optional module for acoustic echo cancellation to use it with a video conference system as well as an optional licensing USB key to protect the software.

The level of each input and output is digitally controlled.

The frequency response of each input and output is digitally controlled by the device.

To control the recording directly, the device is provided with the jack to connect headphones and volume controls.

2. Main Functions

- To amplify signals received from microphones;
- To output the multichannel audio in digital form via USB interface;
- To supply phantom power for condenser microphones;
- To indicate phantom power;
- To digitally control the level and frequency response of each input;
- To indicate the signal level of each input;
- To indicate the level of combined signal;
- To mix all inputs for public address systems or video conference systems;
- To provide acoustic echo cancellation (optional);
- To make backup audio and video recording in stand-alone mode;
- To provide IP broadcasting of audio and video signal;
- To connect additional devices (foot pedal, flash drive etc.) to the built-in USB hub.

3. Design of Device

The device is made in a metal housing and can be placed on any flat surface or mounted into 19" rack by using additional brackets.

4. Delivery Set



Fig. 1. Delivery set*

The delivery package includes**:

1. SRS Femida Audio Interface 8USB-IP – 1 pc.
2. Power adapter 12V, 1A – 1 pc.
3. Interface cable USB Type A – USB Type B to connect to PC – 1 pc. (optional).
4. Data sheet – 1 pc.
5. Condenser microphone "SRS CM-11/14/15/17" with the table stand "SRS TS-11/12" – 1÷10 pcs. (optional).
6. Dynamic microphone "SRS VoiceClear" with the table stand and holder – 1÷10 pcs. (optional).
7. Interface cable "XLR-F – XLR-M" to connect microphones – 1÷10 pcs. (optional).
8. Interface cable Ethernet CAT5e – 1 pc. (optional).
9. Foot pedal "SRS Pedal USB" – 1 pc. (optional).
10. Electronic clock "SRS Clock" – 1 pc. (optional).

* The appearance of the goods may differ from the appearance in picture.

** Additional components may be delivered as spare parts.

5. Controls and Jacks

You may connect to the device by using appropriate cables sound sources (microphones or sources of line level signal), video signal source (video camera) as well as PC, public address system, video conference system, power adapter and other external devices.

You will find controls and jacks on the front and back panel of the device.

In addition, the device enables digital controlling of level and frequency response of each input.

The legend and description of controls and jacks you will find in Tab. 1.



Fig. 2. Front panel

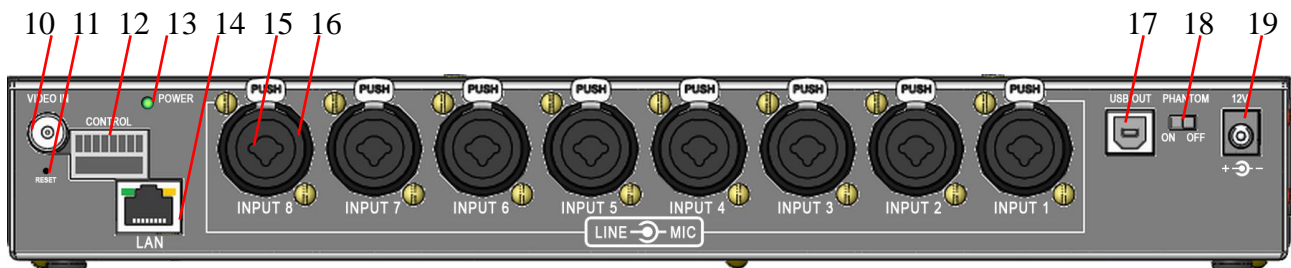


Fig. 3. Back panel

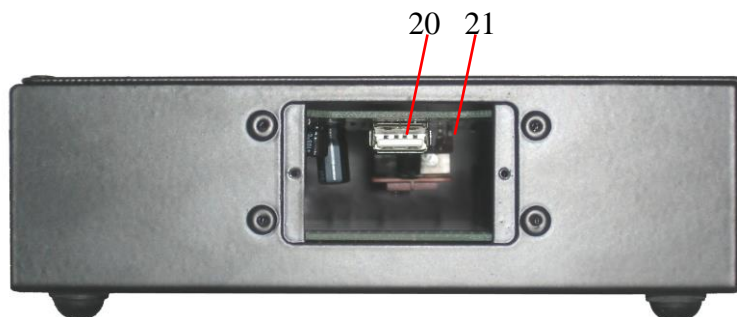


Fig. 4. Left side panel (without cover)

Tab 1.

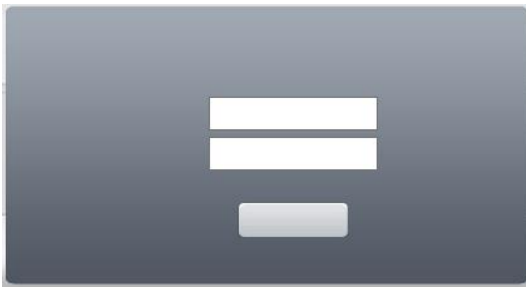
No.	Item	Description
1.	ON / OFF	Power switch
2.	POWER	Power indicator
3.	PHANTOM	Phantom power indicator
4.	LED indicator	Output level indicator (9 segments)
5.	USB IN	USB hosts to connect external devices (2 pcs.)
6.	GAIN	Input sensitivity control (8 pcs.)
7.	PHONES VOLUME	Volume control for headphones
8.	LINE OUT	Output for public address system
9.	PHONES	Output for headphones
10.	VIDEO IN	Video input (BNC)
11.	RESET	Reset button of recording and streaming module
12.	CONTROL	PTZ control terminals for video camera
13.	POWER	Status indicator of recording and streaming module
14.	LAN	RJ45 jack for LAN connection
15.	INPUT 1÷8	Combined audio input: line TRS 6,35mm Balanced (8 pcs.)
16.	INPUT 1÷8	Combined audio input: microphone XLR Female Balanced (8 pcs.)
17.	USB OUT	USB Type B output for connection of this device to PC
18.	PHANTOM ON/OFF	Phantom power switch
19.	12V	Power supply
20.	USB host	Built-in USB-host for connection of a USB dongle to protect the software (service function)
21.	Sensitivity control	Device sensitivity control

6. Getting Started

The device requires the initial setup of input levels and frequency response as well as the backup recording and IP broadcasting in stand-alone mode. After that the device will operate automatically and does not require additional configuration.

Follow these steps to prepare the device for operation:

1. Setup of sound channels.
 - 1.1. Place the device on the desktop.
 - 1.2. Connect this device to audio sources (microphones by using XLR "INPUT", sources of line level signal by using TRS 6,35mm "INPUT").
 - 1.3. If you use condenser microphones, switch on the phantom power by using the "PHANTOM ON/OFF" switch.
 - 1.4. Setup the sensitivity of device by using the sensitivity control.
 - 1.5. Connect the power adaptor.
 - 1.6. Plug the power adaptor into the power socket of 220V.
 - 1.7. Switch on the device by using the "ON/OFF" switch.
 - 1.8. If the "POWER" indicator is on, the device works.
 - 1.9. Connect to the device headphones or the active sound system by using "LINE OUT".
 - 1.10. Connect only one microphone and say something. Check if the output level of indicator doesn't reach "0" when you speak as loud as possible (maximal level -3 dB). Control the sound of connected microphone by using your headphones or the active sound system. If there will be any acoustic feedback in the speakers, reduce its volume.
 - 1.11. Connect headphones or the active sound system by using the "PHONES" jack.
 - 1.12. Connect the device and PC by using the USB cable; wait until the audio devices will be detected by the operating system.
 - 1.13. Open "Recording Control" (for Microsoft Windows XP) or "Recording Devices" (for Microsoft Windows 7) and move controls of all devices "SRS(***)" to the middle position.
 - 1.14. In the system settings on your PC you have to select any device "SRS(***)" as playback device by default. Play any audio file on your PC. In your headphones or in the speakers you should hear the sound from PC. Check if the "PHONES VOLUME" control works well.
2. Initial setup of the recording and streaming module.
 - 2.1. Connect a video source (video camera, video conferencing terminal, etc.) to the device to the "VIDEO IN" jack).
 - 2.2. Connect the Ethernet cable to the device and PC (or network switch).
 - 2.3. Open the properties of the IP v4 protocol on your computer, write down the current settings and set the new values:
 - IP address: 192.168.1.1
 - Subnet mask: 255.255.255.0
 - Gateway: 192.168.1.1
 - 2.4. Open the Internet Explorer, enter the security settings menu (Tools → Internet Options → Security tab → "Custom Level" button), under **ActivX controls and plug-ins** select the **Prompt** option for **Download unsigned ActiveX controls** and press **OK** to save changed settings.
 - 2.5. Restart the Internet Explorer, type "http://192.168.1.10" and press <Enter>. This will open the login window. In this case, you are prompted to install ActiveX – confirm the installation. If the ActiveX installation is successful, the login window will appear with the text labels.



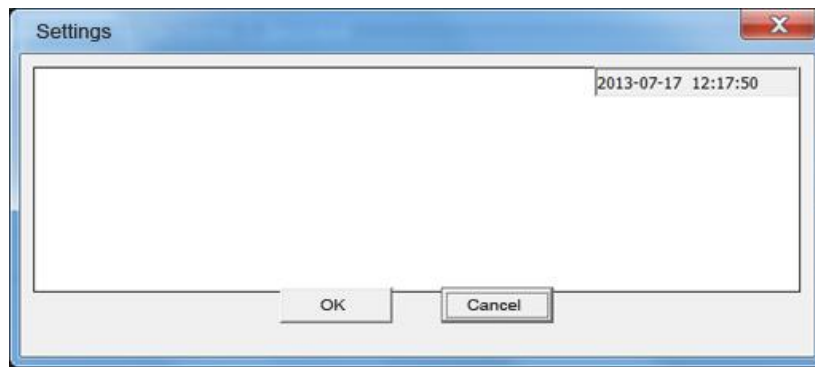
Without ActiveX



With installed ActiveX

Login Window

- 2.6. Type "admin" in the "User Name" field and click "Login" button.
3. Setup of the English language interface of the recording and streaming module.
 - 3.1. In the main window, on the top bar, click "DeviceCfg" – "Device config" settings window will open.
 - 3.2. On the bottom panel, click the middle icon "System" (in the form of a gear), then at the top of the window click the "General" button, then change the option "Language" to "ENGLISH", then click the "OK" button and confirm the restart of the device in the dialog window. The restart of the device takes about two minutes.
4. Restart the Internet Explorer, type "http://192.168.1.10" and press <Enter>. This will open the login window. Type "admin" in the "User Name" field and click "Login" button.
5. Setup of system parameters of the recording and streaming module.
 - 5.1. In the main window, on the top bar, click "DeviceCfg" – the Settings window "Device config" will open.
 - 5.2. On the bottom panel, click the "Advanced" button (in the form of a wrench), then at the top of the window click the "Auto Maintain" button, then change the "Auto-Reboot System" to "Every Sun At 01:00", then click the "OK" button.
 - 5.3. Close the "Device config" window by clicking the "x" in the upper right corner of the window.
6. Setup of backup recording parameters.
 - 6.1. In the main window, on the top bar, click "DeviceCfg" – the Settings window "Device config" will open.
 - 6.2. At the top of the window click the "Record" button, then change the "Length" to "15", then click the "OK" button.
 - 6.3. On the bottom panel, click the middle icon "System" (in the form of a gear), then at the top of the window click the "General" button, then assign the current time and date in the "System Time" area, and then change the "Date Format" to "DD MM YYYY", then change the "separator" to ".", change the "Format" to "24-hour", change "HDD Full" to "Overwrite", change the "Video Standard" to the value "PAL", then click the "OK" button.
 - 6.4. At the top of the window click the "Encode" button, then change the "Resolution" to the value "D1 (704x576)", then change the setting in "FPS" to "10", then change the "Bit Rate Type" to the value "VBR", then change the "Quality" to "Normal", then change the "Frame Interval" to "2", then change the "Video / Audio" checking all the checkboxes, and then change the "Static configuration" to the value "high profile", then click the "OK" button.
 - 6.5. At the top of the window click "Display", then at the top and bottom of the window check checkboxes "Time", at the bottom of the window click the "Settings" button and in the new window drag the rectangle with date and time to the top right corner of the windows, as shown below. Then click the "OK" button in the "Settings" window and press "OK".



Position of displayed date and time in the Settings window

- 6.6. On the bottom panel, click the "Advanced" button (in the form of a wrench), then at the top of the window click the "HDD Manage", then left-click once on the string in the table at the top left of the window, then click the "Format Disk" button and confirm formatting in the dialog box. It takes about one minute to format the internal storage. After the formatting is complete, you will see the dialog box "Device configuration saved successfully" – click the "OK" button.
- 6.7. On the bottom panel, click the icon "Info" (in the form of tables with "tick"), then at the top of the window, click the icon "HDD Info" to display a table where you can see the size of internal storage.
- 6.8. Close the "Device config" window by clicking on the "x" in the upper right corner of the window.
7. Setup of IP streaming parameters.
 - 7.1. In the main window, on the top bar, click "DeviceCfg" – the Settings window "Device config" will open.
 - 7.2. On the bottom panel, click the middle icon "System" (in the form of a gear), then at the top of the window click the "Network", then change the settings for "IP Address", "Subnet Mask", "Gateway", "Primary DNS" to the values obtained from your system administrator, and then click the "OK" button.
 - 7.3. Close the "Device config" window by clicking on the "x" in the upper right corner of the window.
 - 7.4. Close the Internet Explorer.
 - 7.5. Open the properties of the IP v4 protocol on your computer, and specify previous values (IP address, Subnet mask, Gateway).
8. Start the Internet Explorer, type "<http://IP address entered in paragraph 7.2.>" in the URL bar and press <Enter>. Make sure that the login window opens.

After the function test, the device is ready for operation.

7. Operation

Switch on the device by using the "ON/OFF" switch.

Upon completion of the work with the device switch it off by using the "ON/OFF" switch.

8. Technical Specifications

Item	Description
Audio channels	
Inputs	
Analog inputs	8
Type of inputs	Combined XLR/TRS (microphone/line)
Supported microphone types	<ul style="list-style-type: none"> • Dynamic • Condenser
Nominal level of microphone input (sensitivity control in the middle position)	<ul style="list-style-type: none"> • 1,5 mV for dynamic microphones • 20 mV for condenser microphones
Nominal level of line input (sensitivity control in the middle position)	1000 mV
Impedance of microphone input	2 kOhm
Impedance of line input	47 kOhm
Level controls for each input	Yes (for microphone and line inputs)
Nominal voltage of phantom power	24 V
Phantom power can be switched off	Yes
Outputs	
Mixed analog line output for PA system	1 (TRS 6,35mm mono)
Nominal voltage of line output	1000 mV
Impedance of line output	10 Ohm
Output digital USB channels	8
Digital level control for each output USB channel	Yes
Digital frequency response control for each output USB channel	5 bands, +/-12 dB
Headphones jack	1 (TRS 6,35mm mono)
Volume control for headphones	Yes
Impedance of headphone output, max.	10 Ohm
Maximal power of headphone output	50 mW
General	
Frequency band for playback and recording	60 ÷ 20000 Hz
Frequency flatness	±1 dB
Signal/noise ratio, min.	60 dB
Preamplified	60 dB
Built-in USB hub	Yes
USB hosts for connection of external devices	2
Output level LED indicator	9 levels (-39 dB ÷ 0 dB)
Acoustic echo cancellation module	Optional
Built-in licensing USB key	Optional
Supply current for condenser microphones, max.	4 mA/channel
Recording and streaming module	
Interface language	English
User rights management	Yes
Recording type	Automatic overwriting
Analog audio inputs	1
Nominal level of the audio input	1000 mV
Recording and streaming audio codec	AAC, 16 bit, 8000 Hz
Analog video inputs	1
Nominal level of the video input	1 V p-p
Recording and streaming video codec	<ul style="list-style-type: none"> • H.264 High Profile • H.264 Main Profile • H.264 Baseline
Recording and streaming video resolution	<ul style="list-style-type: none"> • 176x144 (QCIF) • 352x288 (CIF) • 704x288 (HD1) • 704x576 (D1)
Recording and streaming video frame rate	PAL 1 ÷ 25 FPS NTSC 1 ÷ 30 FPS

Recording and streaming overall stream	11 ÷ 2560 kbps
Duration of recorded tracks (files)	1 - 120 min.
Capacity of internal storage	Up to 32 GB
Access to records and streaming	LAN 10/100 mbps
Maximum number of simultaneous users	5
Authorization to view records	Yes
Number of configurable streams	2
View clients (maximal)	5
Authorization to view the stream	Yes
Stream (stream quality) selection for viewing	Yes
Snapshots	Yes
Turning off the sound when watching the stream	Yes
Full screen video view	Yes
General parameters	
Rated power supply voltage	12 V
Maximum current consumption	500 mA (700 mA with acoustic echo cancellation module)
Brackets (optional)	<ul style="list-style-type: none"> • To the vertical surface • To the horizontal surface (top/bottom) • Rack 19" 1 RU
Operating requirements	<ul style="list-style-type: none"> • Operating mode: continuous • Ambient air temperature: +10 ÷ +40 °C; • Relative air humidity: <80 % at +25 °C; • Atmospheric pressure: 630 ÷ 795 mm Hg

9. Safety Requirements

The device must be operated by trained and qualified personnel with not lower than the second qualification group according to the safety measures of operation of electrical installations up to 1000 V.

It is prohibited:

- To operate with removed covers or faceplates;
- To make the connection and disconnection of audio-video devices to the inputs or outputs when the power is turned on;
- To allow penetration of liquids or strange objects;
- To install near radiators and heating appliances.

10. Operating Conditions

The device is designed to operate under following conditions for the performance of UHL 4.2:

- Operating mode: Continuous.
- Ambient air temperature: $+10 \div +40$ °C;
- Relative air humidity: <80 % at $+25$ °C;
- Atmospheric pressure: $630 \div 795$ mm Hg.

11. Transportation and Storage

The device in a transport container can be transported by vehicles, rail and air transport in sealed compartments at any distance.

Stowage and securing shipping containers in vehicles should ensure its stable position and prevent movement during transportation.

During transportation the protection of transport container from the direct effects of solar radiation and atmospheric precipitation should be ensured.

Transportation conditions:

- Ambient air temperature: $-50 \div +40$ °C;
- Relative air humidity: <98 % at 25 °C;
- Atmospheric pressure: $84 \div 107$ kPa ($630 \div 800$ mm Hg)

After transportation at subzero temperatures, the components of the system should be kept at room temperature in the package for not less than two hours.

12. FAQ

Q: There's no sound from microphones on PC.

A: For condenser microphones check if the phantom power is switched on. Check connecting cables and connectors. Check if the USB cable is connected. Check if there's sound available by using the "LINE OUT" output.

Q: The recorded sound and sound from the PA system is too low.

A: Set necessary input levels by using "GAIN" controls.

Q: Loud 50 Hz background noise on an audio output.

A: Disconnect microphones one by one. When you've found the microphone which causes 50 Hz background noise, check the connecting cables and connectors. If necessary, replace this microphone with another one. If you cannot solve this issue, please contact the technical support of supplier.

Q: Can the device work without PC?

A: Yes. The device can operate as a standalone microphone preamplifier / mixer in the public address system and as a backup recording device.

13. Manufacturer's Warranty

The manufacturer guarantees the compliance of the parameters of the device to the declared ones in case of adherence of the operating, storage and transportation conditions by consumer.

The warranty period is 12 months from the date of sale through retail distribution network. In case of absence of the sale date in the warranty certificate, the warranty period is calculated from the first day of the month the product was manufactured.

The manufacturer performs the product repairing free of charge during the warranty period. The manufacturer bears shipment costs during the warranty period.

The products having the label with the serial number, data sheet with the note of the date of sale are accepted for warranty repair.

The guarantee is not applied for connectors and cables.

The products with the mechanical damage caused by the consumer are not subject to the warranty service.

The storage life is 36 months from the date of production.

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SRS Femida Audio Interface 8USB-IP

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