RME Fireface UCX

RME Fireface UCX Audio Interface User Manual

Model: Fireface UCX

1. Introduction

The RME Fireface UCX is a highly integrated professional audio solution designed for both studio and live recording environments. This ultra-compact unit combines extensive I/O capabilities with advanced digital signal processing, offering high-end performance in a half-rack format. It supports both USB and FireWire connectivity, ensuring broad compatibility and stable, low-latency operation.
This manual provides detailed instructions for setting up, operating, and maintaining your Fireface UCX, ensuring optimal performance and longevity.

2. Key Features

The Fireface UCX incorporates several advanced technologies and features:

- **High-Performance Converters:** The A/D and D/A converters operate at up to 192 kHz, offering a 114 dBA dynamic range for recording and playback. The multi-bit converter architecture provides a high signal-to-noise ratio and low total harmonic distortion across the analog level range.
- **Premium Mic Preamps:** Features two mic preamps utilizing technology from RME's Micstasy and UFX, including AutoSet overload protection.
- **Hammerfall Audio Core:** A newly developed audio core supports USB and FireWire, providing maximum performance and ultra-low latency operation, complemented by RME's driver stability.
- **TotalMix FX:** Incorporating the complete Fireface UFX DSP engine, TotalMix FX provides comprehensive routing and mixing capabilities, along with effects up to 192 kHz.
- **Monitoring Controller:** Integrates the flexible TotalMix FX monitoring tool set and supports the optional RME Advanced Remote Control.
- **DIGICheck:** RME's metering and analysis toolbox for Windows PC and Mac.
- **Class Compliant Mode:** The first professional audio interface with Class Compliant mode for Apple iPad compatibility, enabling stereo up to 18-channel recording and playback with professional I/Os.
- **SteadyClock:** RME's jitter suppression technology ensures consistent sound quality by making the device independent of external clock signal quality. This allows the UCX converters to operate as if using an internal clock, and enables the Fireface UCX to control the sample rate autonomously.
- **Setup Memory:** Internal memory allows storage of six different presets, enabling stand-alone operation without a

connected computer.

- **Connectivity:** 18 Input / 18 Output channels, including analog, digital (SPDIF, ADAT), Word Clock, and MIDI I/O.

3. Setup

3.1 Unpacking and Initial Inspection

Carefully remove the Fireface UCX from its packaging. Inspect the unit for any signs of damage. Ensure all included accessories, such as the power supply, USB cable, FireWire cable, and breakout cables, are present.

3.2 Connecting the Hardware

1. **Power Connection:** Connect the included power supply to the DC input on the rear panel of the Fireface UCX and then to a power outlet. Ensure the power switch is in the OFF position before connecting.
2. **Computer Connection:**
    - **USB:** Connect the Fireface UCX to your computer using a USB 2.0 cable (compatible with USB 3.0 ports).
    - **FireWire:** Alternatively, connect the Fireface UCX to your computer using a FireWire 400 cable.
3. **Audio Connections:** Connect your microphones, instruments, monitors, and other audio equipment to the appropriate inputs and outputs on the front and rear panels. Refer to Section 4 for detailed connectivity information.
4. **MIDI Connections:** Use the provided breakout cable to connect MIDI devices to the MIDI I/O ports.

Figure 3.2.1: Angled front view of the RME Fireface UCX, showing the microphone/line inputs, instrument inputs, and front panel controls.

Figure 3.2.2: Rear panel of the RME Fireface UCX, displaying power input, USB, FireWire, MIDI, Word Clock, ADAT, SPDIF, and balanced

line inputs/outputs.

3.3 Driver Installation and Firmware Update

Before powering on the unit, download and install the latest drivers and firmware from the official RME website (www.rme-audio.de/downloads.html). Follow the on-screen instructions for installation. A firmware update may be required out of the box; this process is typically guided by the driver installation utility.
After successful driver installation, power on the Fireface UCX using the switch on the rear panel. Your computer should recognize the device.

4. Connectivity

The Fireface UCX offers a comprehensive array of input and output options:

Type	Description	Quantity
Analog Inputs	2 x Mic/Line Preamps (XLR/TRS Combo) with 48V phantom power and AutoSet 2 x Line/Instrument Inputs (TRS) 4 x Balanced Line Inputs (TRS) on rear panel	8
Analog Outputs	6 x Balanced Line Outputs (TRS) 1 x Stereo Headphone Output (TRS)	8
Digital I/O	1 x ADAT Optical I/O (switchable to SPDIF Optical) 1 x SPDIF Coaxial I/O	Up to 10 channels
Other I/O	2 x MIDI I/O (via breakout cable) 1 x Word Clock I/O (BNC) 1 x USB 2.0 Port (USB 3 compatible) 1 x FireWire 400 Port	

Figure 4.1: Detailed view of the front panel inputs, including XLR/TRS combo jacks for mic/line inputs 1 and 2, and TRS jacks for inputs 3 and 4.

5. Operation

5.1 TotalMix FX Software

TotalMix FX is RME's powerful digital mixer and routing software that provides comprehensive control over all inputs and

outputs of the Fireface UCX. It allows for zero-latency monitoring, independent submixes, and the application of DSP effects (EQ, Dynamics, Reverb/Echo) to each channel, even when operating in stand-alone mode.

- **Routing:** Create custom routing configurations between physical inputs, software playback channels, and physical outputs.
- **Monitoring:** Set up multiple independent monitor mixes for performers and engineers with zero latency.
- **DSP Effects:** Utilize built-in EQ, dynamics processing, and reverb/echo effects without taxing your computer's CPU.

Refer to the dedicated TotalMix FX manual for detailed instructions on its features and operation.

5.2 Stand-Alone Operation

The Fireface UCX can operate independently without a connected computer. Six different configurations can be stored in the unit's internal memory. These presets can transform the UCX into various devices, such as a digital mixer, AD/DA converter, or headphone amplifier. Presets are recalled using the front panel controls.
In stand-alone mode, TotalMix FX settings can also be controlled via MIDI, allowing for remote control of the unit's internal mixer and effects.

5.3 Front Panel Controls

Figure 5.3.1: Close-up of the Fireface UCX front panel, showing the main encoder, display, and various status LEDs for inputs, outputs, and host connection.

The front panel features a multi-purpose encoder/push button and a display for direct control and monitoring:

- **Encoder:** Used to adjust levels, navigate menus, and select parameters. Rotate to change values, push to select or confirm.
- **Display:** Shows current channel levels, selected parameters, and operational status.
- **LED Indicators:** Provide visual feedback for signal presence (SIG), clipping (CLIP), 48V phantom power, Word Clock (WC), SPDIF, ADAT, Host connection, and MIDI activity.

6. Maintenance

Proper maintenance ensures the longevity and reliable operation of your Fireface UCX.

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the unit. Avoid liquid cleaners or abrasive materials.
- **Ventilation:** Ensure the ventilation slots on the sides of the unit are not obstructed to prevent overheating.
- **Storage:** When not in use for extended periods, store the unit in a cool, dry place, protected from dust and extreme temperatures.
- **Cable Management:** Securely connect all cables and avoid excessive strain on connectors.

7. Troubleshooting

If you encounter issues with your Fireface UCX, consider the following troubleshooting steps:

- **No Power:**
  - Verify the power adapter is securely connected to the unit and a working power outlet.
  - Ensure the power switch on the rear panel is in the ON position.
- **No Sound/Input Signal:**
  - Check all audio cable connections.
  - Verify input levels in TotalMix FX and your DAW.
  - Ensure the correct input is selected and routed to an output in TotalMix FX.
  - Check for 48V phantom power if using condenser microphones.
- **Computer Not Recognizing Device:**
  - Ensure the USB or FireWire cable is securely connected to both the UCX and the computer.
  - Reinstall the latest drivers from the RME website.
  - Check your computer's Device Manager (Windows) or System Information (macOS) to see if the device is listed.
  - Try a different USB or FireWire port or cable.
  - Restart your computer and the Fireface UCX.
- **Audio Dropouts/Crackling:**
  - Increase the buffer size in your DAW or audio settings.
  - Ensure your computer meets the minimum system requirements.
  - Disable other background applications that may be consuming CPU resources.
  - Check for conflicting drivers or software.

For further assistance, consult the comprehensive RME Fireface UCX manual available on the RME website or contact RME technical support.

8. Specifications

Detailed technical specifications for the RME Fireface UCX:

Specification	Value
Product Dimensions	8 x 4 x 14 inches
Item Weight	4.9 pounds
Manufacturer	RME
Item Model Number	UCX
Date First Available	February 20, 2012
Brand	RME
Compatible Devices	Personal Computer

Specification	Value
Supported Software	ADAT, S/PDIF
Connectivity Technology	USB, FireWire
Number of Channels	18 Input / 18 Output
Sample Rate	Up to 192 kHz
Bit Depth	24-Bit

9. Warranty and Support

RME products are designed for reliability and performance. For information regarding the warranty period and terms, please refer to the warranty card included with your product or visit the official RME website. Technical support and additional resources, including updated drivers and comprehensive manuals, are available on the RME website.
RME Official Website: www.rme-audio.de