

KORG MS-20 FS

KORG MS-20 FS Analog Synthesizer User Manual

Model: MS-20 FS

INTRODUCTION

This manual provides essential information for the setup, operation, and maintenance of your KORG MS-20 FS Analog Synthesizer. The MS-20 FS is a full-size analog monophonic synthesizer, faithfully reproducing the original MS-20 circuit with modern enhancements like USB and MIDI connectivity. Please read this manual thoroughly to ensure proper use and to fully explore the capabilities of your instrument.

The KORG MS-20 FS features a 37-key keyboard, two voltage-controlled oscillators (VCOs), two voltage-controlled filters (VCFs), two envelope generators (EGs), and a low-frequency oscillator (LFO). Its distinctive patchbay allows for extensive sound design possibilities and integration with external equipment.

PACKAGE CONTENTS

- KORG MS-20 FS Analog Synthesizer Unit
- AC Adapter
- Patch Cables (various lengths)
- Owner's Manual (this document)

SETUP

1. Unpacking and Placement

Carefully remove the MS-20 FS from its packaging. Place the unit on a stable, flat surface, ensuring adequate ventilation around the instrument. Avoid direct sunlight, heat sources, and excessive humidity.

2. Power Connection

1. Ensure the MS-20 FS power switch is in the OFF position.
2. Connect the supplied AC adapter to the DC IN jack on the rear panel of the MS-20 FS.
3. Plug the AC adapter into a standard electrical outlet.

3. Audio Output

Connect the AUDIO OUT jack (1/4" mono phone jack) on the rear panel to an amplifier, mixer, or audio interface using an appropriate audio cable. For stereo monitoring, use a mixer or two separate channels.

4. MIDI and USB Connectivity

- **MIDI In:** Connect a MIDI cable from the MIDI OUT of an external MIDI controller or sequencer to the MIDI IN jack on the MS-20 FS to control notes and other parameters.
- **USB:** Connect a USB cable from the USB port on the MS-20 FS to your computer. This allows for MIDI communication with your Digital Audio Workstation (DAW) or other software. No special drivers are typically required for basic MIDI functionality on most operating systems.



Image 1: Front panel of the Korg MS-20 FS Analog Synthesizer, showcasing the 37-key keyboard, control knobs, switches, and the patchbay section. The white finish and classic design elements are clearly visible.

OPERATING THE MS-20 FS

1. Basic Power On/Off

To power on, flip the POWER switch located on the rear panel to the ON position. The power indicator LED will illuminate. To power off, flip the switch back to OFF.

2. Signal Flow Overview

The MS-20 FS follows a classic subtractive synthesis architecture. Sound generation begins with the two Voltage Controlled Oscillators (VCOs), which produce raw waveforms. These signals then pass through the Voltage Controlled Filters (VCFs) to shape the timbre. Envelope Generators (EGs) control the amplitude and filter cutoff over time, while the Low Frequency Oscillator (LFO) provides modulation. The patchbay allows for rerouting these signals and integrating external audio sources via the External Signal Processor (ESP).

3. Key Sections and Controls

- **VCO Section:** Controls for waveform selection (sawtooth, square, triangle, pulse), pitch, and modulation.
- **VCF Section:** Features both a High-Pass Filter (HPF) and a Low-Pass Filter (LPF) with controls for cutoff frequency, resonance (peak), and modulation.
- **Envelope Generators (EG1 & EG2):** Shape the attack, decay, sustain, and release (ADSR) characteristics of the sound. EG1 is typically for the VCF, and EG2 for the VCA.
- **LFO (Modulation Generator):** Provides periodic modulation for pitch, filter, or amplitude.
- **External Signal Processor (ESP):** Allows processing of external audio signals through the MS-20 FS's filters and envelopes.
- **Patchbay:** A matrix of input and output jacks for rerouting internal signals and connecting to external modular synthesis equipment. Use the supplied patch cables.



Image 2: Angled view of the Korg MS-20 FS Analog Synthesizer, highlighting the depth of the control panel and the layout of the patchbay on the right side. This perspective shows the instrument's physical dimensions and robust construction.

MAINTENANCE

1. Cleaning

Wipe the exterior of the MS-20 FS with a soft, dry cloth. For stubborn dirt, use a slightly damp cloth and then dry thoroughly. Do not use abrasive cleaners, solvents, or alcohol, as these can damage the finish and markings.

2. Storage

When not in use for extended periods, store the synthesizer in a cool, dry place, away from direct sunlight and extreme temperatures. Consider using a dust cover to protect the keys and controls.

3. Patch Cables

Handle patch cables carefully. Avoid bending them sharply or pulling them by the cable itself. Store them neatly to

prevent tangling and damage.

TROUBLESHOOTING

- **No Sound:**
 - Check power connection and ensure the unit is turned ON.
 - Verify audio cables are securely connected to the AUDIO OUT and your amplifier/mixer.
 - Ensure the VOLUME knob is turned up.
 - Check VCA EG2 settings (Attack, Decay, Sustain, Release) and ensure Sustain is not at zero if you expect continuous sound.
 - If using the patchbay, ensure all connections are correct and not creating a short or incorrect signal path.
- **MIDI Not Responding:**
 - Confirm MIDI cable is connected to the MIDI IN jack.
 - Check MIDI settings on your external controller or DAW to ensure correct MIDI channel and output.
 - For USB MIDI, ensure your computer recognizes the MS-20 FS as a MIDI device.
- **Unusual Noise/Distortion:**
 - Check all cable connections for proper seating.
 - Ensure input levels on your amplifier/mixer are not overdriven.
 - If using the ESP, ensure input levels are appropriate and not causing clipping.

SPECIFICATIONS

Feature	Detail
Model Name	MS-20 FS
Keyboard	37-key (3 octaves)
Synthesis Type	Analog Monophonic Synthesizer
Connectors	MIDI IN, USB (Type B), AUDIO OUT (1/4" mono phone jack), External Signal Processor (ESP) inputs/outputs, Patchbay (3.5mm mini jacks)
Dimensions (L x W x H)	28.5 x 15.7 x 13.4 inches (approx.)
Weight	10 pounds (approx.)
Body Material	Plastic, Metal
Color	White
Manufacturer	Korg

WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the warranty card included with your product or visit the official KORG website. Keep your purchase receipt as proof of purchase for warranty claims.

Online Resources: For additional resources, tutorials, and frequently asked questions, please visit the KORG official support page.

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ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question