

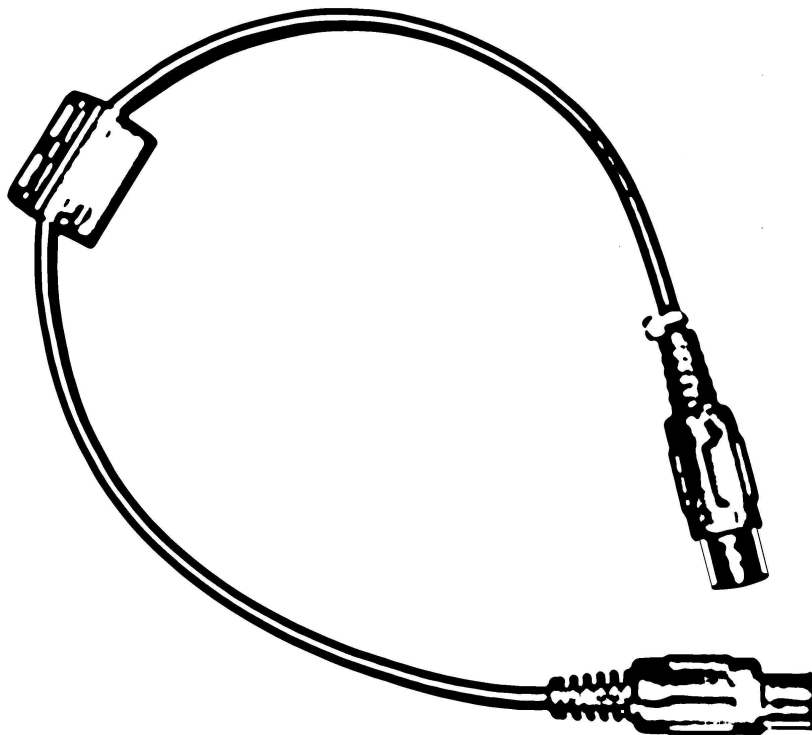
Piano Realism Accessory Cable™

DIGITAL STUDIO DESIGNS™

PIANO REALISM ACCESSORY CABLE™

AC-01

Owner's Manual



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Document Revision A

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Warranty

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To Obtain Warranty Service

Return the product to your dealer, using the following procedure:

1. Include a note describing the failure, as well as your contact information: name, return shipping address, phone number and email address.
2. Label and ship the product, freight prepaid, to your dealer.
3. Please keep your tracking information on file.
4. Contact your dealer for warranty information or to check on warranty service.

What This Warranty Does Not Cover

This warranty does not cover (a) damage due to acts of nature, including but not limited to: lightning, wind, or flood; (b) damage due to accident; (c) damage due to neglect, abuse, misuse, improper installation, mishandling, or failure to follow instructions provided in the product's Owners Manual; (d) damage resulting from alteration, improper maintenance, or repair by other than a Digital Studio Designs LLC authorized agent; (e) labor charges for installation, or for removal and reinstallation of the item for servicing. REPAIR OR REPLACEMENT AS PROVIDED IN THIS EXPRESS WARRANTY IS THE PURCHASER'S EXCLUSIVE WARRANTY REMEDY.

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Digital Studio Designs LLC SHALL NOT BE LIABLE FOR ERRORS OR OMISSIONS CONTAINED IN THE SOFTWARE OR MANUALS, ANY INTERRUPTION OF SERVICE, LOSS OF BUSINESS OR ANTICIPATORY PROFITS AND/OR FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH THE FURNISHING, PERFORMANCE OR USE OF THESE MATERIALS. THE SOFTWARE AND DOCUMENTATION ARE PROVIDED AS IS.

Information for Users on Collection and Disposal of Old Equipment



This symbol on the product, packaging, and/or accompanying documents means that used electronic products should not be mixed with general household waste. For proper treatment, recovery and recycling of old products, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC and 2006/66/EC. By disposing of these products correctly, you will help to save valuable resources and prevent any potential negative effects on

Piano Realism Accessory Cable™

human health and the environment which could otherwise arise from inappropriate waste handling. For more information about collection and recycling of old products and batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items. Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.



IMPORTANT SAFETY PRECAUTIONS:

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

USE OF THIS PRODUCT IN CONJUNCTION WITH A SYNTHESIZER EITHER ALONE OR IN COMBINATION WITH AN AMPLIFIER AND HEADPHONES OR SPEAKERS **MAY BE CAPABLE OF PRODUCING SOUND LEVELS THAT COULD CAUSE PERMANENT HEARING LOSS OR DAMAGE TO EQUIPMENT.** DO NOT OPERATE THE SYNTHESIZER FOR A LONG PERIOD OF TIME AT A HIGH VOLUME LEVEL OR AT A LEVEL THAT IS UNCOMFORTABLE. IF YOU EXPERIENCE ANY HEARING LOSS OR RINGING IN THE EARS, YOU SHOULD IMMEDIATELY STOP USING THE SYNTHESIZER AND CONSULT A PHYSICIAN.

THIS PRODUCT TRIGGERS A MIDI NOTE IN THE SYNTHESIZER WHEN IT RECEIVES A SUSTAIN PEDAL MIDI EVENT, WHICH **COULD PRODUCE AN UNEXPECTED HIGH- OR LOW-PITCHED SOUND** FROM A SYNTHESIZER. **TO PREVENT DAMAGE TO HEARING AND EQUIPMENT, ADHERE TO THE FOLLOWING PRECAUTIONS:**

1. ALWAYS MAKE SURE THAT THIS PRODUCT IS CONNECTED AS DESCRIBED IN THE INSTRUCTIONS.
2. NEVER USE THIS PRODUCT ON A SYNTHESIZER THAT WAS NOT CONFIGURED TO WORK WITH THIS PRODUCT.
3. NEVER CHANGE FROM ONE SYNTHESIZER MODE, PATCH, PROGRAM, VOICE, SONG, OR THE LIKE TO ANOTHER WITH THE VOLUME SET HIGH. LOWER THE VOLUME OF THE SYNTHESIZER FIRST, AND THEN LISTEN FOR POTENTIALLY HARMFUL SOUNDS BEFORE RAISING THE VOLUME.
4. DO NOT USE THIS PRODUCT IF YOU DO NOT FULLY UNDERSTAND ALL OF THESE PRECAUTIONS.

Although the Piano Realism Accessory Cable has logic to detect Piano Realism Pack voices, the following recommendations will help you reduce the possibility of triggering unintentional voices:

1. Release the sustain pedal before changing from one synthesizer mode, patch program, voice, song, or the like to another with the sustain pedal down.
2. Wait two seconds after changing from one mode to another before pressing the sustain pedal.
3. Send one program or song change after this product is connected, to ensure that the Piano Realism Pack voices are detected.

Digital Studio Designs LLC CANNOT BE HELD RESPONSIBLE FOR DAMAGE, LOST DATA, OR DESTROYED DATA CAUSED BY FAILURE TO ADHERE TO THE SAFETY PRECAUTIONS OR BY IMPROPER USE OF THIS PRODUCT.

FCC VERIFICATION:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications to this product, not expressly approved by Digital Studio Designs LLC, could void the user's authority to operate the equipment.

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1. Introduction

Thank you for purchasing the Piano Realism Accessory Cable. As a complementary product for the Piano Realism Pack, this accessory cable gives your MOTIF-based synthesizer the ability to generate realistic sounding pedal action for your piano solos. This isn't merely a MIDI cable, but a microprocessor-controlled MIDI translation device designed to trigger the Sustain pedal effects of the Piano Realism Pack or other compatible sound library. You simply plug the accessory cable into the synthesizer and begin playing your Piano Realism Pack's Performances, MULTIs, and Song Mixes where you'll experience dynamic pedal effects with your FC3 pedal. It works not only with the FC3, but with any MOTIF-compatible pedal. To get the most out this product, please read the entire manual before installation.

2. Features

- Translates MIDI Sustain events into velocity sensitive events that trigger Pedal and Damper effects
- Designed for use with the Piano Realism Pack, and will work with other compatible sound libraries
- Enables and disables itself based on detected voice parts
- Enhanced operation with FC3 produces velocity sensitive effects
- Simple MIDI connectivity
- MIDI-powered microprocessor, no external power supply needed
- Manual on/off override with lock
- Sensitivity adjustment
- Polyphony booster
- Customized operation based on detected MOTIF model

3. System requirements

- One of the following MOTIF-based synthesizers:
MOTIF, S90, MO, MOTIF ES, S90ES, MOTIF XS, S90XS, MOX, MOTIF XF, MOXF*
- A MOTIF-compatible sustain pedal
- Piano Realism Pack, or other compatible sound library

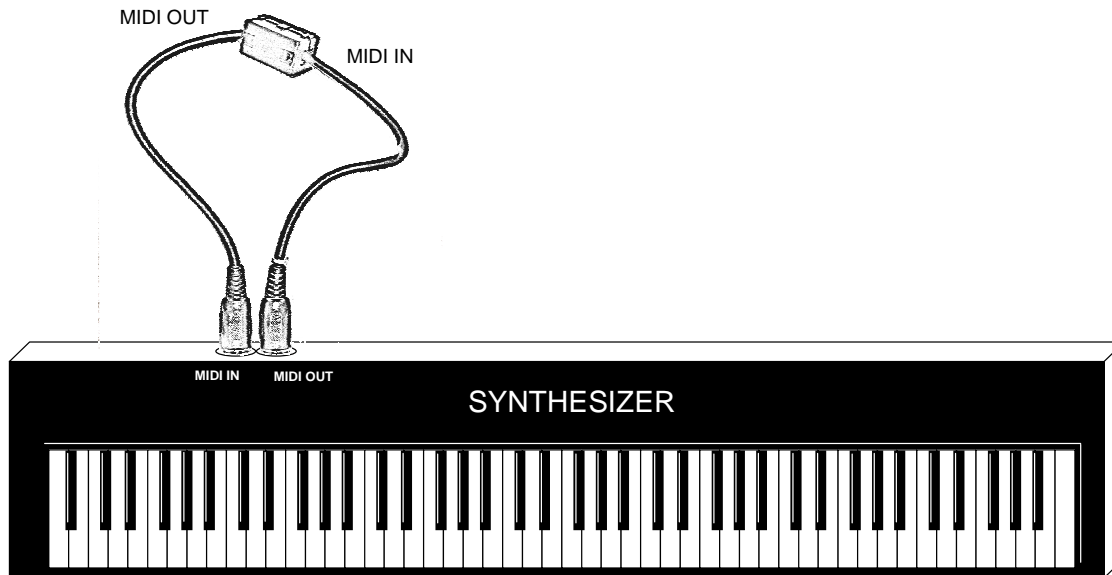
*Note: Compatibility with synthesizer is determined at time of purchase.

4. What's included

- Piano Realism Accessory Cable
- Owner's Manual (this document)
- Supplemental Guide for advanced users (Piano Realism Accessory Cable – Supplement.pdf)

5. Connecting the accessory cable

The Piano Realism Accessory Cable is designed to function with one running synthesizer at a time for a given MIDI input and output port combination. You connect the MIDI Out of the synthesizer to the MIDI In of the accessory cable, and the MIDI In of the synthesizer to the MIDI Out of the accessory cable, as shown in the following diagram:



If you require the MIDI Out of the synthesizer to be connected to a different device, you can connect the input of the accessory cable the last available MIDI THRU in your daisy chain that supplies enough power for the cable to operate. If you require the MIDI In of the synthesizer to be connected to a different device, you will probably need a third device that will merge the MIDI messages from the other device with the MIDI messages from the accessory cable. The cable does not operate as a MIDI through device.

6. Using the accessory cable

When the accessory cable is initially plugged-in, the pedal translation will be enabled on all channels. The accessory cable will enable and disable itself when it detects the presence of pedal effects after a MIDI Program Change or Song Change—this helps the Sustain pedal to not trigger the wrong voices. It works with the specific MOTIF-based synthesizers and compatible foot pedals identified in the System Requirements. When using an FC3 pedal, the accessory cable will send velocity-sensitive events to the synthesizer to produce the maximum realism.

For detection to work properly the **Device Number** on the synthesizer must be set to either “1” or “All”. Consult your synthesizer’s Owners Manual for instructions on how to set this parameter.

Note: The accessory cable must receive a MIDI Program Change or Song Change in order to enable or disable itself. These changes might not be sent from a MOTIF-based synthesizer in Master Mode unless the synthesizer is programmed to do so. Consult your synthesizer’s Owners Manual for instructions on how to set the Zone Switch to trigger an external Program Change in Master Mode. In Master Mode, the synthesizer may ignore consecutive clicks of the Number [1] - [16] buttons that occur too quickly.



THERE MAY BE A PERIOD OF TIME WHEN A SYNTHESIZER IS CHANGING MODES THAT THE ACCESSORY CABLE COULD TRIGGER AN UNINTENDED VOICE, PERFORMANCE, MULTI, SONG MIX, OR THE LIKE BEFORE THE ACCESSORY CABLE DETECTS THAT THE CHANGE HAS OCCURRED. READ THE IMPORTANT SAFETY PRECAUTIONS SECTION FOR MORE DETAILS.

7. Temporary shutoff**

Send two identical MIDI Program Change events (e.g. two consecutive clicks of one of the Number [1] - [16] buttons on the synthesizer) within one second, and the accessory cable will disable itself on all channels. Send one more MIDI Program Change event (one more click) and the accessory cable will resume with voice detection.

8. Lock mode**

Send three identical MIDI Program Change events (e.g. three consecutive clicks of one of the Number [1] - [16] buttons on the synthesizer) within two seconds, and the accessory cable will lock its detection state. This means that if the accessory cable was enabled on any channels, after locking, it will remain enabled on those channels even after a Program Change where no pedal voices were detected. Send three more MIDI Program Change events (three more clicks) and the accessory cable will resume with voice detection.



IN LOCK MODE THE ACCESSORY CABLE COULD TRIGGER A VOICE, PERFORMANCE, MULTI, SONG MIX, OR THE LIKE THAT PRODUCES AN UNEXPECTED HIGH- OR LOW PITCHED SOUND. READ THE IMPORTANT SAFETY PRECAUTIONS SECTION FOR MORE DETAILS.

9. Pedal sensitivity**

Send four identical MIDI Program Change events (e.g. four consecutive clicks of one of the Number [1] - [16] buttons on the synthesizer) within three seconds and the accessory cable will enter the Pedal Sensitivity Adjustment mode. In this mode, you press and release the pedal while adjusting the modulation wheel (second wheel from the left) to fine tune the pedal sensitivity to your preference. Higher values cause the pedal to react more quickly. Send one more MIDI Program Change event (one more click), and the accessory cable will store the sensitivity setting. The factory setting is 122 (hex 7A). The pedal sensitivity value that you set is retained permanently, until you change it again.

10. Polyphony Booster**

The Dynamic Voice Allocation (DVA) in older generation synthesizers (Original MOTIF and ES-series) consumes notes in such a way that you can experience “note robbing” or dropouts with heavy use of the sustain pedal while certain effects of the Piano Realism Pack are used. The effects which consume the most polyphony are Hammer Release and Key-off. To remedy this problem, the Polyphony Booster function of the accessory cable automatically adjusts the polyphony of the synthesizer while notes are being played with the sustain pedal down in order to minimize the potential dropouts.

Polyphony Booster is enabled by default when the accessory cable detects an original MOTIF, S90, MOTIF ES, or S90ES. It is disabled by default on the newer synthesizers XS and beyond since it makes no noticeable improvement to the sound. The synthesizer model must be detected by using a Program Change or Song Change before this feature will be activated.

Send five identical MIDI Program Change events (e.g. five consecutive clicks of one of the Number [1] - [16] buttons on the synthesizer) within four seconds and the accessory cable will enter the Polyphony Booster Sensitivity Adjustment mode. In this mode you adjust the modulation wheel (second wheel from the left) while playing to set the Polyphony Booster sensitivity to your preference. With the modulation wheel at zero Polyphony Booster is off, and you may hear dropouts while playing if you hold the pedal down and play many notes. With the modulation wheel at max, the Polyphony Booster stays on for the longest amount of time before restoring the polyphony. The factory setting is 100 (hex 64) for models MOTIF and ES, and 0 for models XS and above. The Polyphony Booster sensitivity value that you set is retained permanently, until you change it again.

**This feature may not be available when the synthesizer is in Song, or Master-Song mode.