

SH075

MIDI Guitar Converter

Installing SH 075 on your Guitar

1. Unscrew the strap button and place the unit on the guitar as shown (figure 1).
2. Reinstall the strap button screw through the converter bracket.
3. Mount the pickup under the strings as close to the bridge as possible using the enclosed screws. OPTION: If you want to avoid screw holes, use the included double sided adhesive tape.

IMPORTANT:

The end of the pickup with the cable must be under the low E string (No. 6). The pickup should not be more than 1 mm to 1.5 mm (1/32" to 1/16") away from the strings. The strings must run over the center of the magnetic pole pieces. This will ensure accurate tracking. If there is not enough clearance between the body and the strings to mount the pickup, then raise the bridge saddles and shim the neck accordingly.

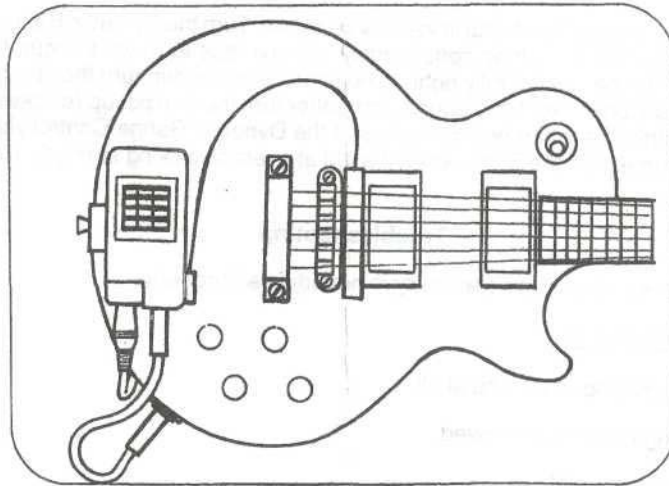
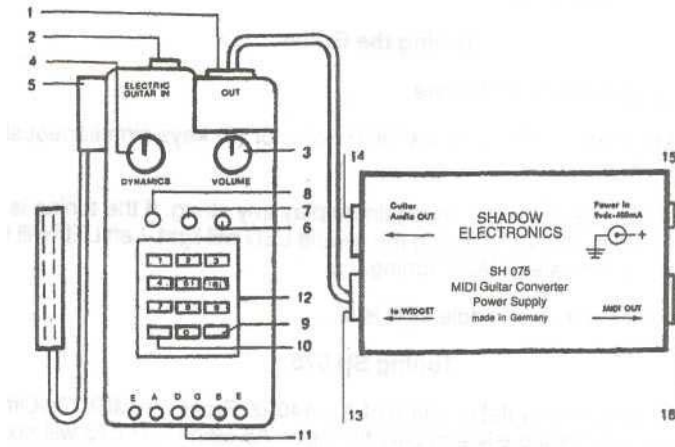
4. Plug the pickup into the converter as illustrated.

SH 075:	Distribution Box:
1. SH 075 output (5 Pin DIN connector)	13. Input for SH 075 cable (5 Pin DIN connector)
2. Guitar Input (mini phone)	14. Guitar Audio Output Jack
3. Synth Volume Control	15. Power Adaptor Input Connector
4. Dynamic Range Control	16. MIDI OUT Connector
5. Hex Pickup Input Connector	
6. MONO/POLY Mode LED	
7. Pitch BEND On/Off LED	
8. MIDI ON/OFF LED	
9. MODE Select Key	
10. MIDI ON/OFF Key	
11. String sensitivity Trim Pots	
12. Numeric Key Pad	

GUITAR INSTRUCTIONS

Connecting The System

- A.) Connect the 5 pin cable between SH 075 and the Distribution Box.
 - B.) Use the included phone to mini phone jumper cable to connect from SH 075 Guitar Input (2) to your guitar's output.
 - C.) Connect a MIDI cable from Distribution Box (16) to the MIDI Input on your Synth.
 - D.) Using a shielded guitar cable, go from the Guitar Output (14) on the Distribution Box to your amplifier's Guitar Input.
 - E.) Connect the Power adaptor to input 15 on the Distribution Box.
 - F.) Make sure the Power Adaptor voltage is correct (120VAC input, 9VDC output for North America), then plug the adaptor into the wall.
- If all is correct, the MIDI ON LED (8) will light and SH 075 is ready for use.



Working with SH 075

Tuning the Guitar

Tune your guitar to A 440 hz as follows:

- Press the MIDI ON/OFF (10) and MODE Selector (9) keys simultaneously. All 3 LEDs will flash.
- Press the MODE Selector (9) key again and play any string. If the tuning is correct within + or - 5 cents to 440 hz tuning the middle LED will light. Left LED will indicate FLAT - right will indicate SHARP tuning.
- Tune each string until the middle LED is lit.

Tuning SH 075

SH 075 can be tuned slightly flat or sharp of A = 440hz. Press the MIDI On/Off (9) and MODE (10) keys simultaneously and play the open A5 string. SH 075 will go back to play mode as soon as the new tuning is set. If the LEDs will keep flashing, string A5 was not played loud enough. Play the string again, stronger.

String Sensitivity and Dynamics

For optimum triggering and tracking the string sensitivity must be adjusted.

Choose a patch on your Synth that is velocity sensitive. Turn the Dynamic Range Control fully to the left. Play one string continuously with average picking strength. Now turn the Dynamic Range Control fully right. If the sound gets louder: turn the string trim pot down (counter clockwise). If the sound gets softer turn the trim pot up (clockwise). The correct adjustment is when both extremes of the Dynamic Range Control yield about the same volume from the Synth when played at average picking strength. Repeat for each string.

Troubleshooting

These errors will occur if the sensitivity is not adjusted properly.

Sensitivity too low: a.) Soft playing, no sound at all.

b.) String bends not followed. Sensitivity too high:

a.) False triggering and repeated notes on string decay, b.)

Finger placement and noise causing triggers.

Operation

Keypad (12)

The key pad on SH 075 lets you send MIDI program change numbers 01 to 99. Enter the first digit, the MIDI On/Off LED (8) will flash until you enter the second digit.

Volume control knob (3)

SH 075 sends MIDI controller no. 7 (Volume) to control any synth that can respond to MIDI volume commands. Use the volume knob on your guitar to control the balance between synth and guitar.

Dynamic Range Control (4)

This control adjusts the response to the dynamics of your playing. With the knob turned counter clockwise, the synth will remain at a constant level regardless of how hard you play. With the knob full clockwise, you will have the maximum response to how soft or hard the strings are played.

MIDI On/Off (10)

This key, turns MIDI On and Off. LED (8) shows MIDI On when lit.

MODE SELECTOR KEY (9)

This key selects one of four operating modes, MONO or POLY Mode, and Pitch Bend On & Off (displayed by LED's 6, 7 & 8). Repeated pressing steps you through the modes. In order they are;

1. Poly Mode ON, Pitch Bend OFF (LEDs 7 & 8 OFF)
(This is the default setting when you first turn on SH 075.)
2. Poly Mode ON, Pitch Bend ON (LED 7 ON 8 OFF)
3. Mono Mode ON, Pitch Bend OFF (LED 7 OFF, 8 ON)
4. Mono Mode ON, Pitch Bend ON (LEDs 7 & 8 ON)

LED 7 follows Pitch Bend ON/OFF and LED 8 follows Mono Mode ON/OFF.

MONO MODE (LED 6 ON)

In Mono mode SH 075 assigns each string to a separate MIDI channel. The assignment is fixed as follows:

String	E1 to MIDI channel # 1
String	B2 to MIDI channel # 2
String	G3 to MIDI channel # 3
String	D4 to MIDI channel # 4
String	A5 to MIDI channel # 5
String	E6 to MIDI channel # 6

Use this mode with synthesizers set to MONO or MULTI modes.

POLY MODE (LED 6 Off)

In MIDI Poly mode, all strings are assigned to MIDI channel 1. Chords can be played (multiple notes at the same time) but MIDI restricts pitch bend (see Pitch Bend ON).

Pitch Bend OFF (LED 7 Off)

When Pitch Bend is OFF, any strings that are bent will cause chromatic pitch shifts (semitone steps). As each string is bent to the next semitone, the note will re-trigger. Bends of less than one semitone will have no effect.

Pitch Bend On (LED 7 On)

In POLY MODE with Pitch Bend On, you can play ONE note and follow a string bend exactly (as long as the pitch bend range on the synth is set to the same range). MIDI can only support one pitch bend command per channel, so if more than one string is bent while in POLY mode, SH 075 will NOT send a Pitch Bend command. If you want to bend more than one note at a time, use MONO Mode.

"Page 2" Functions

Pressing both the MIDI ON/OFF (10) and MODE Selector (9) keys simultaneously enters SH 075 "Page 2" extended functions. All 3 LEDs will flash while SH 075 waits for additional key commands.

Tuning SH 075

see "Working with SH 075"

PITCH BEND RANGE

The default pitch bend range is 8 semitones. To set to 4 semitones: From Page 2 (all LEDs flashing), press the MIDI ON/OFF key (10) again. The lights will stop flashing and the converter is now set to 4 semitone pitch bend range. NOTE: Your synth must be set to the same Bend Range as SH 075.

TRANSPOSING

SH 075 can transpose MIDI notes sent up or down 3 octaves. From Page 2 (all LEDs flashing), set transposition by pressing;

KEY	Direction	Amount
1	UP	1 Octave
2	UP	2 Octaves
3	UP	3 Octaves
9	DOWN	1 Octave
8	DOWN	2 Octaves
7	DOWN	3 Octaves
0	RESET	---