Introduction

This is the BB^3. The BB^3 is an ultra-compact MIDI Transport Controller. Its main application is for remote transport control of tape recorders and hard disk recorders that respond to MIDI Machine Control (MMC).

The BB^3 also sends MIDI notes, so you can use it for remote transport control of most software sequencers.

The BB^3 is really simple, there is nothing to "program". It requires no external power supply. You simply plug it in. Enjoy your new BB^3 and thank you for selecting this JLCooper product.

How to Connect It

You must connect two MIDI cables for it to work. If you only connect one cable, it will not work. That is because one of the MIDI cables is used to provide power for the BB^3.

MIDI comes out of the jack labeled "**TO MIDI IN**". Plug in a MIDI cable here. Connect the other end of that MIDI cable to the MIDI In of the machine that you want to control.

The other MIDI cable provides the BB^3 its power. This jack is labeled "**TO MIDI OUT**". Plug in a MIDI cable here. The BB^3 gets power from any MIDI Out jack, or any MIDI Thru jack. Connect the other end of that MIDI cable to any MIDI Out or MIDI Thru. (Literally any MIDI Out or Thru will work. It does not even have to be the MIDI Out or MIDI Thru of the machine you are controlling.)

About the Power / Activity LED

The LED is always lit when the BB^3 is powered. If it is not lit, check that both MIDI cables are connected. Check that both MIDI cables are going to the right place.

Make sure that the machine or instrument that you have connected is on. It is possible to connect the unit with the "TO MIDI IN" and "TO MIDI OUT" cables going to two different devices. If that is how you connected it, make sure that both devices are on.

The LED will blink briefly when you press a button. This is an "activity" indication, it lets you know that the BB^3 is sending MIDI.

Some Suggested MMC Applications

MMC is being implemented on more and more machines. Here is a partial list of MMC-compatible machines. Most machines require an optional interface (plug-in card or stand-alone box) for MMC.
- Akai DR-4, DR-8, or DR-16 (requires Akai MIDI card)
- Alesis ADAT or ADAT XT (requires JLCooper's dataSYNC^2 or dataMASTER)
- EMU Darwin
- Fostex RD-8 or CX-8
- Panasonic MDA-1 (requires JLCooper's dataSYNC^2 or dataMASTER)
- Sony PCM-800 (requires Sony Sync Card)
- Tascam DA-88 or DA-38 (requires Tascam Sync Card or MMC interface)
- Tascam "Accessory 2"-Equipped Analogue Tape Recoders (requires Tascam MMC-100)
- Vestax HDR-6 or HDR-8

Specifications

Commands	MMC and Note On upon key down. Note Off upon key up.
MMC Data	ID# = All. Rewind, Fast Forward, Stop, Play, and Record Strobe.
MIDI Note Data	MIDI Channel 16. Note Numbers 21 - 25. Velocity = 80.
Net weight	8 oz.
Dimensions	7.5" X 1.7" X 0.6"

Transport Control of MMC Machines

Setup your System
Some applications will be "plug in and go". Others will require some amount of Setup.
For example, the Tascam DA-88 (with SY-88) requires that you flip a small switch on the back of the unit, before turning it on, in order for the machine to respond to MMC.

Know your Machine before Using the BB[3]!
Here's where you may have to do some homework. From the standpoint of the BB[3], it is very simple to connect. (2 cables and bang that's it.) But from the standpoint of the machine that you desire to control, it may be challenging to configure. You will need to possess knowledge (or have access to someone with knowledge) of your particular system.

Since the BB[3] can be used in thousands of different possible applications, JLCooper technical support cannot provide you specific information regarding how to setup your machine to respond to MMC.

You must become familiar with the (arrgh!) owners manuals of your machine in order to know how to configure it to respond to the BB[3]. The setup process may also require sorting through tortuously cryptic photo-copied addendums. By the time you are done, you will know not only the first name of the technical support manager of the company that made the machine, but also the names of his or her children.

The following pages provide some specific information and may be helpful to those who are trying to get a particular piece of equipment to respond to the BB[3].

BB[3] has two special modes of operation, MMC Only and Notes Only, to allow for these scenarios.

To turn off notes and just send MMC, press and hold down the rewind button while applying power.
To apply power means to turn on the device that the BB[3]'s MIDI out is connected to.

To turn off MMC and just send notes, press and hold down the fast forward button while applying power.
To apply power means to turn on the device that the BB[3]'s MIDI out is connected to.

The BB[3] has no "memory", and the next time that you power it up it will come back on sending both MMC and notes.

MMC Only or Notes Only Mode

The BB[3] normally sends both MMC and MIDI Notes at the same time. This works fine for nearly all applications. A tape recorder will ignore the notes and respond to the MMC.
A sequencer will respond to the notes and ignore the MMC.

There may be times when you are controlling a piece of equipment that operates better with only one command or the other, but not both at the same time.

For example, a certain hard disk recorder might also respond to notes. Or a certain sequencer might react adversely when receiving MMC.

Alesis ADAT and ADAT XT
The Alesis ADAT and ADAT XT require a MIDI Interface in order for you to control them remotely via MMC. JLCooper's dataSYNC[2] or dataMASTER are recommended.

To use the dataSYNC[2], be sure that the MMC mode is on, MMC LED lit.
To use the dataMASTER, be sure that MMC = Enabled.

Emu Darwin
Select "System". Select "MIDI". Set MMC Mode: Open Loop. Any ID# will work.

Fostex RD-8
The Fostex RD-8 must be set to "Remote" mode, and its Remote setting on "MIDI". Here's how to do it:
Press the RD-8's DATA EDIT button. Press the REMOTE LOCAL button. Press F3. Set "Remote In: MIDI". Press the DATA EDIT button to exit this mode. Then press REMOTE LOCAL until both the Remote and Local LEDs are lit.

Tascam DA-88
The Tascam DA-88 requires either the Tascam SY-88 Sync card or the Tascam MMC-88 interface.
The SY-88 must have its external DIP switch number 2 in the UP position to enable reception of MMC.
(Contact Tascam for more information about their interface products.)

Transport Control of Software Sequencers

Each press of a BB[3] button sends a MIDI note, in addition to sending MMC.
Nearly all software sequencers feature the ability to be controlled by MIDI notes.

Pressing the button sends a MIDI Note On. Releasing the button sends a MIDI Note off.

The buttons send MIDI note numbers 21 through 25.
All the notes are sent on MIDI channel 16.
All the notes are sent with a MIDI velocity of 80.
The note values, channel, and velocity values are fixed and cannot be changed.

In Mark of the Unicorn's Performer, open the Remote Controls Window. Turn the Remote Master ON and Transport Controls ON.

In Opcode's Vision, open MIDIKeys from the Setups menu.

In E-Magic's Logic, open the Key Commands window and turn MIDI Remote On.

In Steinburg's CuBase, open the Remote Keys window and check Remote Active.

Most sequencers have a window or dialogue that allows you to "map" specific MIDI note numbers to transport commands.

When mapping notes to transport controls, keep in mind that the BB[3] sends notes numbered 21 through 25 on MIDI channel 16. On most sequencers, that would be considered A -1 through C# 0.

Know your Software System before Using the BB[3]!
Here's where you may have to do some homework. From the standpoint of the BB[3], it is very simple to connect. (2 cables and bang that's it.) But from the standpoint of the software you desire to control, it may be challenging to configure. You will need to possess knowledge (or have access to someone with knowledge) of your particular system.

In the early days of MIDI, many software applications had a simple dialogue which would configure MIDI communication with a single mouse click. Today's configurations allow for many variables, because each studio is unique.

Variables in the Macintosh world include OMS, FreeMIDI, MIDI Manager, Standard and High-Speed Interfaces, Interfaces with MIDI Patch Bays, etc. In the PC and Windows world, you must contend with installing and configuring MIDI cards and drivers.

Since the BB[3] can be used in thousands of different possible applications, JLCooper technical support cannot provide you specific information regarding how to setup your software or interface to respond to MIDI.

The following general technical notes may be helpful to computer users who are configuring their software to respond to the BB[3].