BLUE CHIP
m u s i c   t e c h n o l o g y

Baby b.™

User's Manual

GENERAL PRECAUTIONS

NOTE:

- Keep your instrument out of high humidity.

- Use ONLY the included powersupply.

- Use only the correct house current.

- Avoid physical trauma and impact.

- Disconnect the power immediatly if problems arise.

- Read the user's manual before using the instrument.

- Avoid high temperatures and direct sunlight.

Check to make sure your house voltage matches the rating printed on the powersupply. Avoid high temperatures such as near a power amplifier.

Avoid using your instrument in conditions of high humidity. If you bring it in from the cold outdoors, wait until it has reached room temperature before powering it up. Otherwise damage can be caused by condensation. Do not spill liquids such as coffee on your instrument.
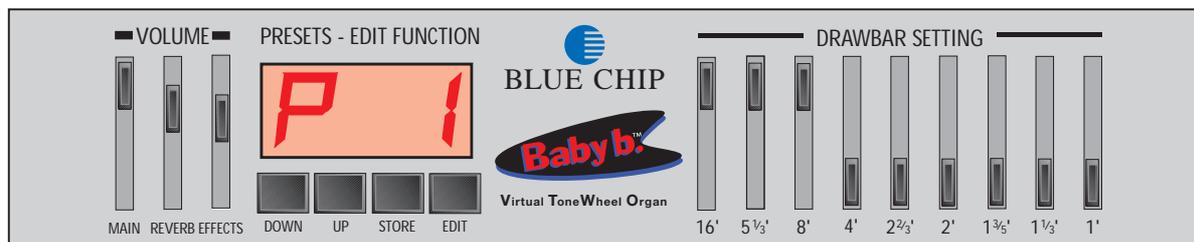
OPERATING PRECAUTIONS

If repair becomes necessary, allow repair only by qualified service technicians. When you unplug your instrument from the wall, always pull it out by the plug and NOT by the cable.

Don't plug your instrument into a socket that is already being used by something that could cause problems; eg. electric motors, lighting dimmers, etc. Do not use the instrument near devices that are known to cause problems; eg. Televisions, cellular phones, florescent lighting. If liquid or any object should get into the instrument, pull the power plug immediately and let it be checked by a qualified service technnician before you try to use it again. This instrument carries the CE Logo and meets the standards of the European Union.

Table of Contents

CHARACTERISTICS OF THE Baby b.

Congratulations on your purchase of the new **Baby b.** MIDI drawbar module! You can drive your **Baby b.** with any MIDI instrument and thereby have access to the legendary drawbar organ sounds of the 60's, 70's and 80's. We have invested much time and energy in simulating as exactly as possible the trend-setting sounds of the famous electromagnetic HAMMOND B3 and the electronic WERSI organs. Not only did we analyse in finest detail of the sounds of these organs, but have sought the advice of professional musicians in the development of the **Baby b.**.

The drawbar section of the **Baby b.** affords complete access to the nine classical organ registers in feet (16', 8', 5 1/3', 4', 2 2/3', 2', 1 1/3', 1'.) The number of sound variations is endless.

Registers are divided into three multitimbral manuals (UPPER, LOWER, PEDAL), and can be independantly programmed and saved. Using a MIDI capable pedal bank and a split capable MIDI keyboard, or even two separate keyboards, you can play all three manuals simultaneously.

Your **Baby b.** is equipped with all the standard effects available in the original instruments as well as numerous reverb programs that are easily accessed.

The programmable KEYCLICK function simulates the attack noise of a typical tone wheel organ.

The two-level Rotor rotor simulates exactly the complexities of a Rotor cabinet. The acceleration and deceleration of both sets of rotating speakers have been taken into consideration in the simulation.

Other typical organ effect features such as percussion, phase-vibrato and distortion serve to enhance sound variation possibilities for even the most ambitious organist.

All the registers and parameters of the **Baby b.** can be saved in 99 presets which can be accessed easily at any time.

You can use the DUMP function to transfer and back up all your saved presets and data using MIDI.

FRONT PANEL
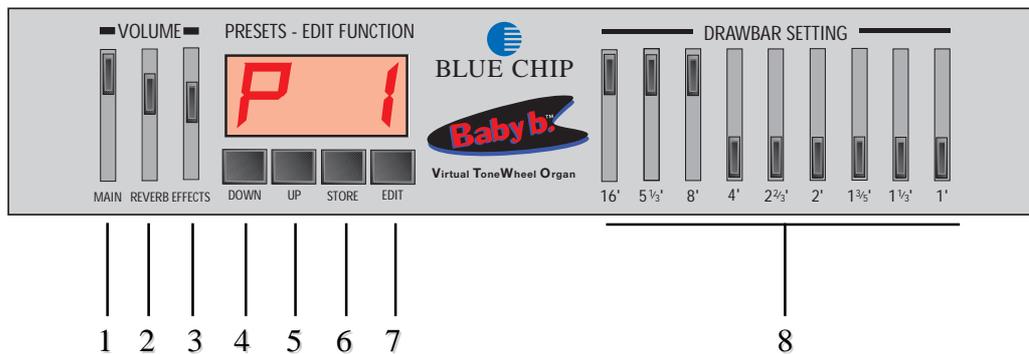
1. GENERAL:Volume setting for the entire instrument..

2. REVERB:controls the reverb intensity of the presently selected reverb program.

3. EFFECTS: controls the intensity of the percussion effect.

4. DOWN: to reduce the presently selected value or presently selected preset by one.

5. UP: to increase the presently selected value or presently selected preset by one.

6. KEYBOARD SELECT: allows the selection of the appropriate manual to which to apply drawbar settings. STORE: After editing, the newly changed values can be saved using the STORE button.

7. EDIT: switches to edit mode, allowing access to various programmable parameters.

8. Harmonic Sliders

REAR PANEL

BLUE CHIP
music technology

Baby b.

OUTPUT — ROTOR — POWER — POWER INPUT — MIDI — Virtual ToneWheel Organ

R/MONO   L/STEREO   SLOW/FAST   ON/OFF   AC-15V/1A   IN   THRU   OUT

POWER   POWER INPUT

Baby b.

BLUE CHIP
music technology

Stereo / Mono
Audio Output

FOOTSWITCH

MIDI
Input
Keyboard
Computer
Sequenzer

MIDI
Thru

MIDI
Output
Computer
Sequenzer
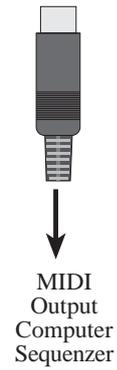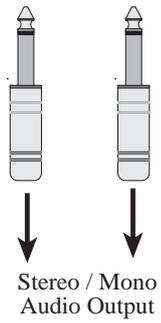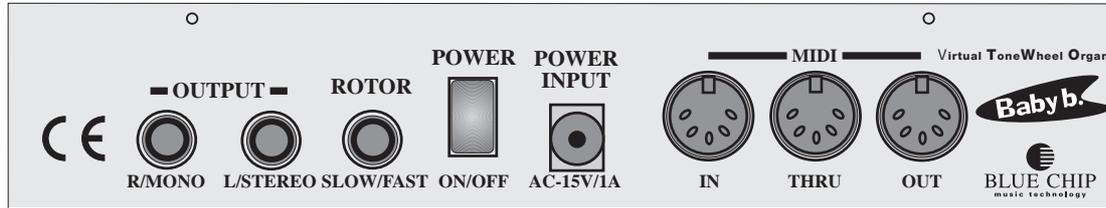
SETTING UP AND POWERING UP

Before you can use your **Baby b.** it will be necessary to connect it to your MIDI equipment. Make sure you have the cables connected properly in order to avoid error functions:

CONNECTING THE Baby b. TO A KEYBOARD

1) Connect both AUDIO OUT jacks on the **Baby b.** with your amplifier using two (MONO) quarter inch cables. If you not be sending a stereo signal, use just the LEFT/MONO output jack on the **Baby b.**. For an optimal Rotor sound you should connect your **Baby b.** in stereo.
2) Connect the MIDI out jack on your keyboard with the MAIN-IN jack on the **Baby b.**. Use a standard 5-connector MIDI cable. .
3) Connect the quarter inch cable of a volume pedal to the SWELL PEDAL jack, if you will be using one. If you have a foot switch, connect it to the ROTOR slow/fast quarter inch input jack.

Note: If your MIDI master keyboard allows for connecting volume pedals or switch pedals to it, you can connect your pedals to it instead if you desire.

5) Connect the included power supply to the POWER-IN jack of the **Baby b.** and plug it into your power source. Turn on the power switch on your **Baby b.** as well as your MIDI and amplifier equipment. Play some keys on your MIDI keyboard to make sure the connetions are functional.
6) If you want to use the Upper and Lower manuals of the **Baby b.** at the same time, you will need to set your master keyboard to allow for an appropriate split. If you're not sure how to do this, see the user's manual of your master keyboard or your dealer. Normally your **Baby b.** uses MIDI channel 1 for the upper manual, MIDI channel 2 for the lower manual, and MIDI channel 3 for the pedal bank. It could be necessary for you to change these channel assignments in your **Baby b.**. See „EDIT Key/Global Parameters."

NOTICE! The **Baby b.** has a special function to allow adapting to a keyboard. Using a program change command the **Baby b.** can be turned on or off per channel. See the directions in the section „Receiving Program Change Commands" .

BLUE CHIP
music technology

Baby b.

OUTPUT   ROTOR   POWER   POWER
                            INPUT

MIDI   Virtual ToneWheel Organ

Baby b.

BLUE CHIP
music technology

R/MONO L/STEREO SLOW/FAST ON/OFF AC-15V/1A   IN   THRU   OUT

FOOTSWITCH

Keyboard
STEREO-INPUT

MIDI OUT

Swell Pedal
Keyboard

CONTROLS
UPPER STRINGS RHYTHME SWING
LOWER PIANO   MIDI CHANNEL 1
PEDAL GUITAR SPECIALS 150

Keyboard

CONNECTING THE Baby b. TO AN 88-KEY MIDI MASTER KEYBOARD

1) Connect both AUDIO OUT jacks on the **Baby b.** with your amplifier using two (MONO) quarter inch cables. If you not be sending a stereo signal, use just the LEFT/MONO output jack on the **Baby b.**. For an optimal Rotor sound you should connect your **Baby b.** in stereo.

2) Connect the MIDI out jack on your keyboard with the MAIN IN jack on the **Baby b.**. Use a standard 5-connector MIDI cable.

3) If you will be using a MIDI capable bass pedal bank, connect its MIDI out jack with the PEDAL-IN jack of the **Baby b.**. Plug in the powersupply for the pedal bank.

4) Connect the quarter inch cable of a volume pedal to the SWELL PEDAL jack, if you will be using one. If you have one, or even better, two foot switch pedals, connect them to the PEDAL-1 and PEDAL-2 quarter inch input jacks. If you only have one pedal, you need to decide whether you would rather use it to control Rotor rotor speed (PEDAL-1) or sustain effect (PEDAL-2).

Note: If one of your MIDI master keyboards allows for connecting volume pedals or switch pedals to it, you can connect your pedals to it instead if you desire.

5) Connect the included power supply to the POWER-IN jack of the **Baby b.** and plug it into your power source. Turn on the power switch on your **Baby b.** as well as your MIDI and amplifier equipment. Play some keys on your MIDI keyboard to make sure the connetions are functional.

6) If you want to use both the upper and lower manuals of your **Baby b.**, you will need make the appropriate split settings in your Master keyboard. Set the MIDI OUT channel of the keyboard you will using for the upper manual to MIDI channel 1 and the channel for the keyboard you will be using for the lower manual to channel 2. If you're not sure how to do this, see the user's manual of your master keyboard or your dealer. Normally your **Baby b.** uses MIDI channel 1 for the upper manual, MIDI channel 2 for the lower manual, and MIDI channel 3 for the pedal bank. It could be necessary for you to change these channel assignments in your **Baby b.**. See „EDIT Key/Global Parameters."
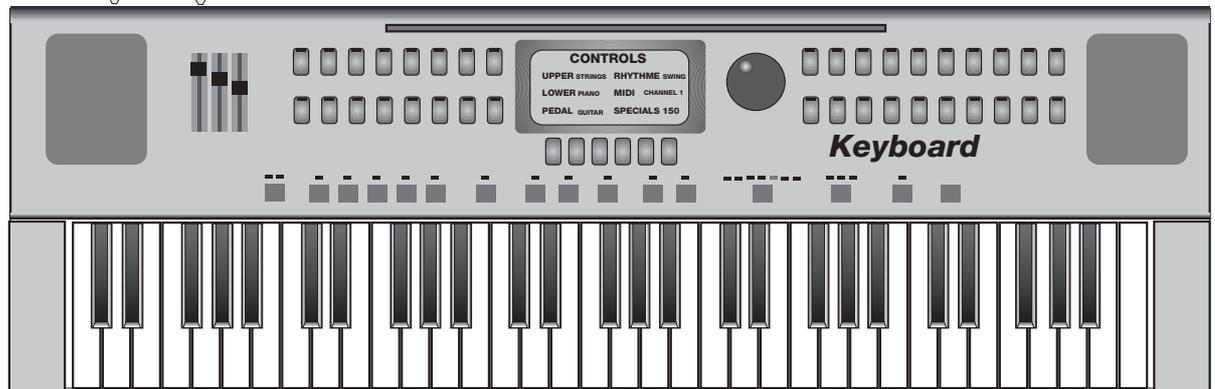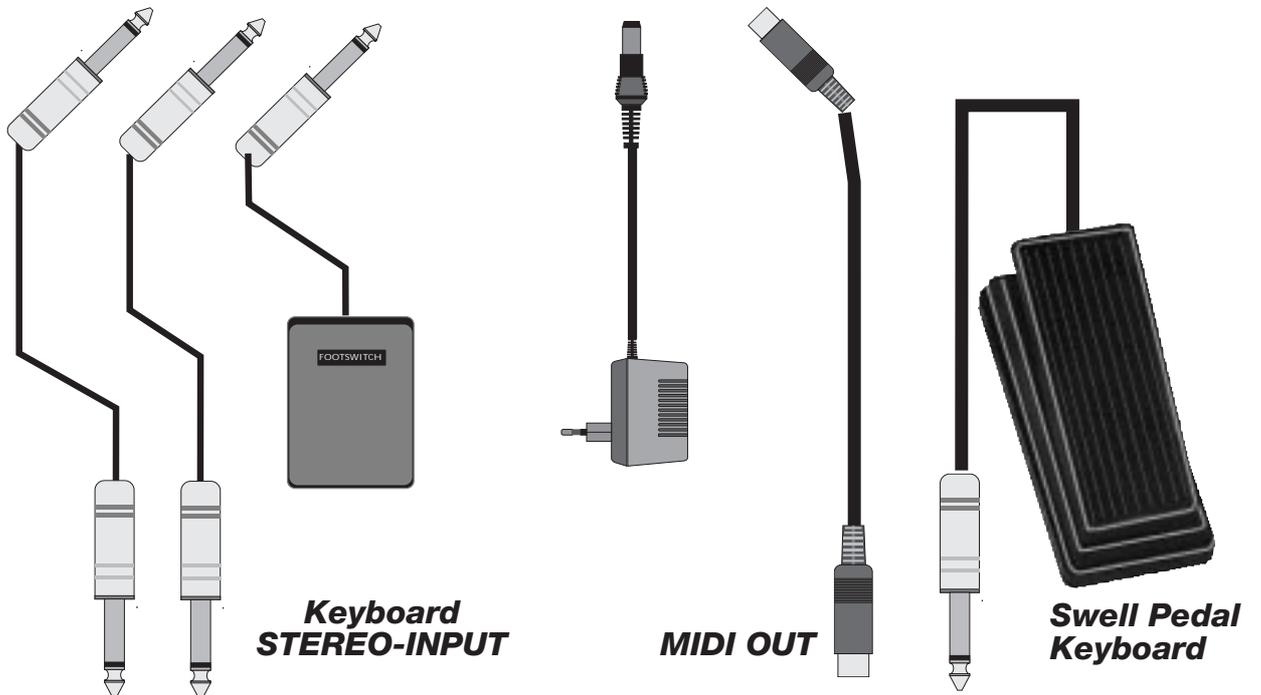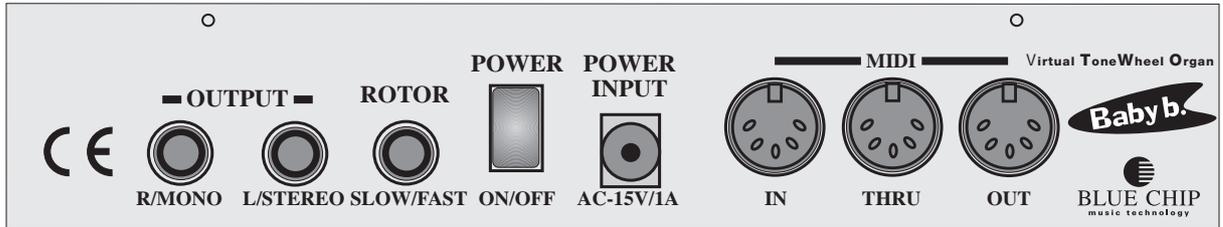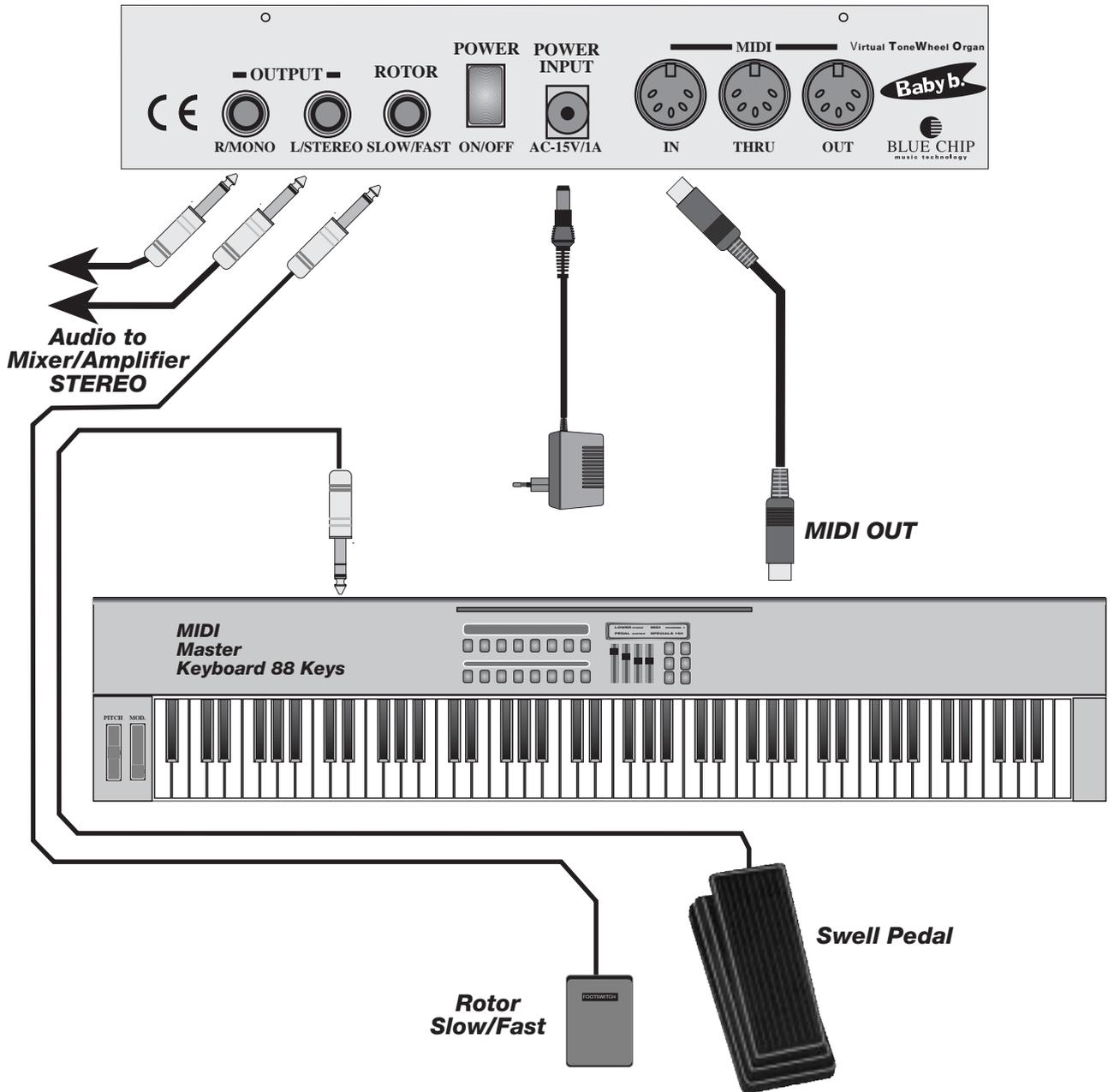
CONNECTING THE Baby b. TO 2 MIDI KEYBOARDS WITH A MIDI MERGE BOX

1) Connect both AUDIO OUT jacks on the **Baby b.** with your amplifier using two (MONO) quarter inch cables. If you not be sending a stereo signal, use just the LEFT/MONO output jack on the **Baby b.**. For an optimal Rotor sound you should connect your **Baby b.** in stereo.

2) Connect the MIDI out jack on both keyboards with the MIDI IN jacks on the (optional) MIDI MERGE box. From the MIDI OUT jack on the merge box, connect to the MAIN-IN jack on the **Baby b.**. Use 3 standard 5-connector MIDI cables.

3) If you will be using a MIDI capable bass pedal bank, connect its MIDI out jack with the PEDAL-IN jack of the **Baby b.**. Plug in the powersupply for the pedal bank.

4) Connect the quarter inch cable of a volume pedal to the SWELL PEDAL jack, if you will be using one. If you have one, or even better, two foot switch pedals, connect them to the PEDAL-1 and PEDAL-2 quarter inch input jacks. If you only have one pedal, you need to decide whether you would rather use it to control Rotor rotor speed (PEDAL-1) or sustain effect (PEDAL-2).

Note: If one of your MIDI master keyboards allows for connecting volume pedals or switch pedals to it, you can connect your pedals to it instead if you desire.

5) Connect the included power supply to the POWER-IN jack of the **Baby b.** and plug it into your power source. Turn on the power switch on your **Baby b.** as well as your MIDI and amplifier equipment. Play some keys on your MIDI keyboard to make sure the connetions are functional.

6) Set the MIDI OUT channel of the keyboard you will using for the upper manual to MIDI channel 1 and the channel for the keyboard you will be using for the lower manual to channel 2. If you're not sure how to do this, see the user's manual of your master keyboard or your dealer. Normally your **Baby b.** uses MIDI channel 1 for the upper manual, MIDI channel 2 for the lower manual, and MIDI channel 3 for the pedal bank. It could be necessary for you to change these channel assignments in your **Baby b.**. See „EDIT Key/Global Parameters."

BLUE CHIP
music technology

Baby b.

OUTPUT   ROTOR   POWER   POWER   MIDI   Virtual ToneWheel Organ
                            INPUT
R/MONO L/STEREO SLOW/FAST ON/OFF AC-15V/1A   IN   THRU   OUT   Baby b.

BLUE CHIP
music technology

Audio to Mixer Amplifier STEREO

Rotor Slow/Fast

FOOTSWITCH

MIDI OUT

MIDI OUT

MIDI MERGE

MIDI IN

MIDI IN

MIDI Master Keyboard

LOWER PIANO   MIDI   CHANNEL 1
PEDAL GUITAR SPECIALS 150

PITCH MOD.

MIDI OUT

MIDI Master Keyboard

LOWER PIANO   MIDI   CHANNEL 1
PEDAL GUITAR SPECIALS 150

PITCH MOD.

CONNECTING THE Baby b. TO AN ORGAN

1) Connect both AUDIO OUT jacks on the **Baby b.** with your amplifier using two (MONO) quarter inch cables. If you not be sending a stereo signal, use just the LEFT/MONO output jack on the **Baby b.**. For an optimal Rotor sound you should connect your **Baby b.** in stereo.

2) Connect the MIDI out jack on your organ with the MAIN-IN jack on the **Baby b.**. Use a standard 5-connector MIDI cable.

3) Normally your organ will have a volume pedal, bass pedal bank and foot switch built in. You can use these controllers globally to control both the organ and the **Baby b.**.

4) Connect the included power supply to the POWER-IN jack of the **Baby b.** and plug it into your power source. Turn on the power switch on your **Baby b.** as well as your MIDI and amplifier equipment. Play some keys on your MIDI keyboard to make sure the connetions are functional.

5) Normally your **Baby b.** uses MIDI channel 1 for the upper manual, MIDI channel 2 for the lower manual, and MIDI channel 3 for the pedal bank. It could be necessary for you to change these channel assignments in your **Baby b.**. See „EDIT Key/Global Parameters.“
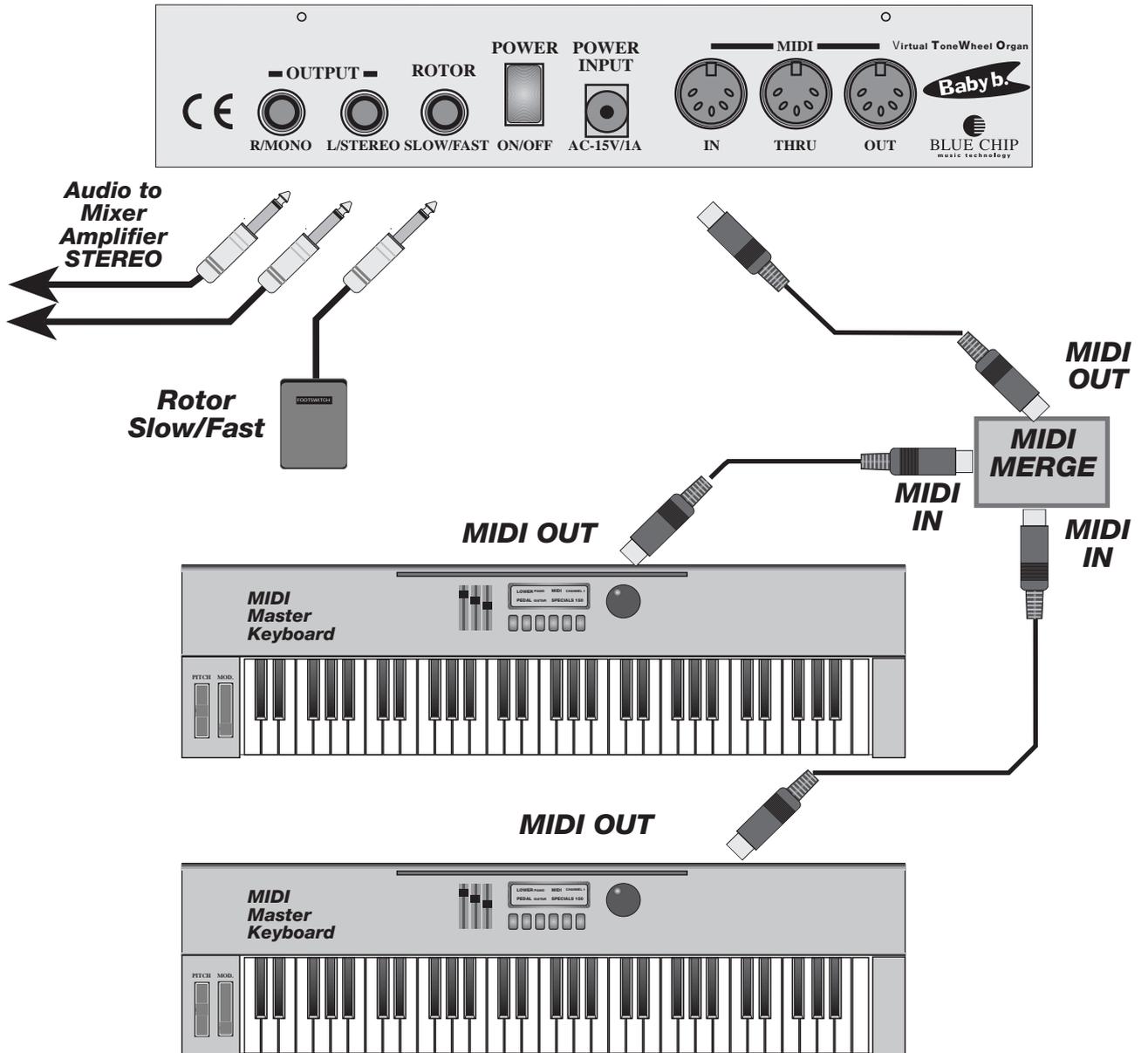
NOTICE! The **Baby b.** has a special function to allow adapting to a keyboard. Using a program change command the **Baby b.** can be turned on or off per channel. See the directions in the section „Receiving Program Change Commands“ on page 38.

BLUE CHIP music technology

Baby b.

OUTPUT **ROTOR** **POWER** **POWER INPUT** **MIDI** Virtual **T**one**W**heel **O**rgan

Baby b.

R/MONO L/STEREO SLOW/FAST ON/OFF AC-15V/1A IN THRU OUT

BLUE CHIP music technology

Audio Input Instrument STEREO

MIDI OUT

CONNECTING THE Baby b. TO A MIDI MASTER KEYBOARD AND SEQUENCER

1) Connect both AUDIO OUT jacks on the **Baby b.** with your amplifier using two (MONO) quarter inch cables. If you not be sending a stereo signal, use just the LEFT/MONO output jack on the **Baby b.**. For an optimal Rotor sound you should connect your **Baby b.** in stereo.

2) Connect the MIDI out jacks on your keyboard and sequencer with the MIDI IN jacks on a MERGE BOX. Connect the MIDI OUT jack on the merge box with the MAIN-IN jack on the **Baby b.**. Use 4 standard 5-connector MIDI cables.

3) If you will be using a MIDI capable bass pedal bank, connect its MIDI out jack with the PE-DAL-IN jack of the **Baby b.**. Plug in the power supply for the pedal bank.

4) Connect the quarter inch cable of a volume pedal to the SWELL PEDAL jack, if you will be using one. If you have one, or even better, two foot switch pedals, connect them to the PEDAL-1 and PEDAL-2 quarter inch input jacks. If you only have one pedal, you need to decide whether you would rather use it to control Rotor rotor speed (PEDAL-1) or sustain effect (PEDAL-2).
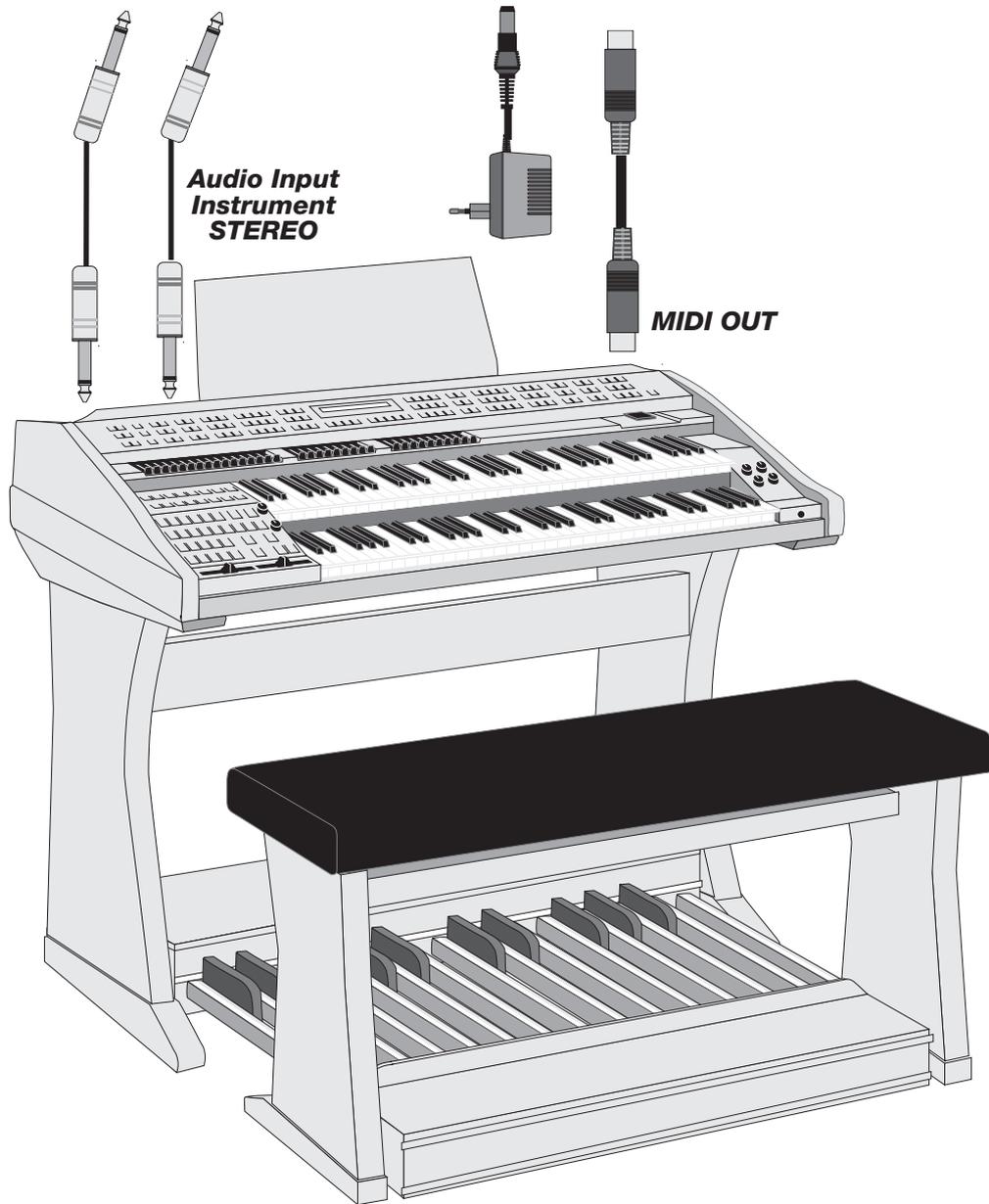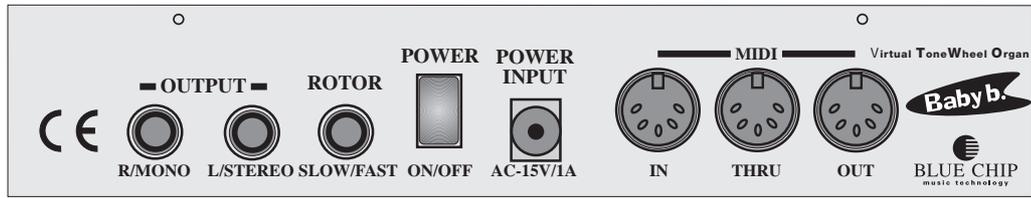
5) Connect the included power supply to the POWER-IN jack of the **Baby b.** and plug it into your power source. Turn on the power switch on your **Baby b.** as well as your MIDI and amplifier equipment. Play some keys on your MIDI keyboard to make sure the connetions are functional.

6) If you want to use the Upper and Lower manuals of the **Baby b.** at the same time, you will need to set your master keyboard to allow for an appropriate split. If you're not sure how to do this, see the user's manual of your master keyboard or your dealer. Normally your **Baby b.** uses MIDI channel 1 for the upper manual, MIDI channel 2 for the lower manual, and MIDI channel 3 for the pedal bank. It could be necessary for you to change these channel assignments in your **Baby b.**. See „EDIT Key/Global Parameters."
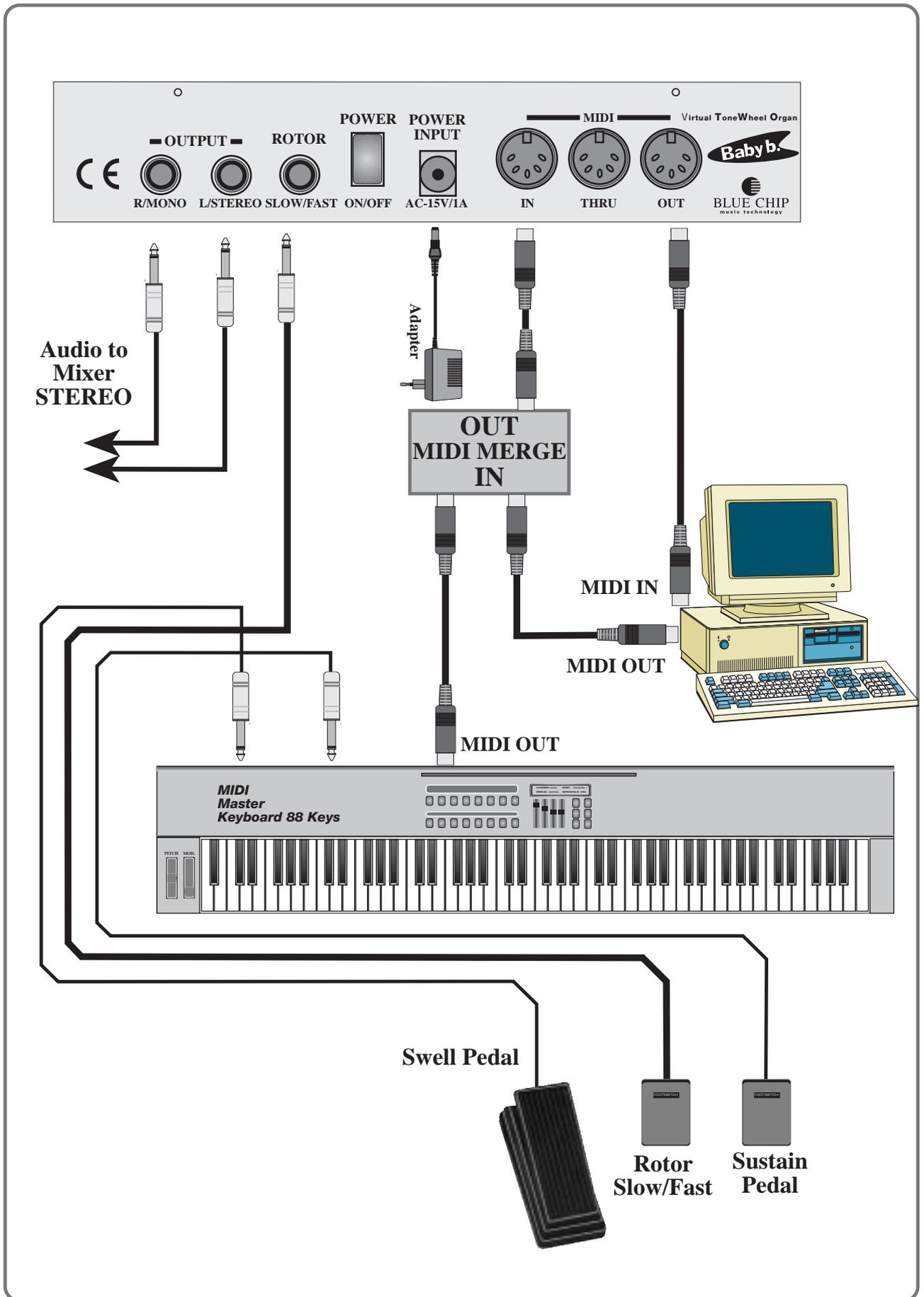
Sound Features of the Baby b.

B3 SOUND

For the last 40 years and still today the HAMMOND B3 organ has been a preference for musicians. Because of the legendary drawbar system, the B3 is still one of the most sought-after instruments. Some of the features of the B3 are:

1. **Drawbar balance of the individual foot registers.**

2. **The „dirty effect" of the sine generation.**

3. **Key click (the characteristic click noise upon pressing or releasing keys).**

4. **Repitition of the foot registers starting with 2'.**

These characteristics make possible the legendary B3 sound that reaches the quality standard of professional musician when used with a ROTOR cabinet (an amplified speaker system with rotating horns and woofers). The following is a list of features of the ROTOR cabinet:

1. **The full effect of two speed vibrato.**

2. **The varying acceleration and decceleration of the rotating horns and woofers.**

3. **The presence effect of the horns and the pressure effect of the woofers in low and midrange.**
4. **Combination of ROTOR with phase-vibrato.**

The combination of all the above features give the B3 it's characteristic and much-loved sound.

All of these characteristics have been recreated in perfect detail in the **Baby b.**. During it's development, it was tested in a professional studio under the scrutinizing ear of professional musicians and compared again and again to a „real" HAMMOND B3 until the result was perfected.

WERSI SOUND

The same attention to detail and perfection was implemented in the creation of the WERSI organ sound, so that the **Baby b.** is equipped with both of the best-known drawbar organ systems.

In order to serve the creative needs of every user, some of the sound effects and variations are implemented in such a way as to give the musician total control of the effect, and others are automatically set when switching from B3 mode to WERSI mode. When the **Baby b.** is switched from B3 mode to WERSI mode, the following characteristics are changed:

1. **The repitition in the foot registers above 2' is different, especially in the upper two octaves.**

2. **The balance in foot registers is different, which influences the sound drastically.**

3. **The B3's keyclick is switched to the „WERSI Patsch".**

4. **The „Dirty effect" in sine generation of the B3 is not applicable in WERSI mode.**

The ROTOR features remain unchanged between the two modes.

You can choose a different organ for each manual. If you use ROTOR, its effect will be the same in both manuals and modes with the exception of the pedal manual because it is a global effect.

Other global effects (effects common to the entire instrument) are reverb and the variants of the phase-vibrato. MIDI data that is received on the PEDAL IN port are automatically mapped to the bass manual. In other words, all MIDI channel numbers received here are replaced with the channel number you choose globally for the bass manual (PEDAL).

We have preprogrammed presets for you with the intent of assisting you in creating your own Organ Setups. Have fun with your new **Baby b.**.

The two best-known drawbar organs worldwide:
The Hammond B3/H100
and the Wersi Spectra/Helios
as well as the legendary ROTOR
all in one instrument: the new Baby b..

HAMMOND B3 with Leslie
Hammond and Suzuki are tragemarks of
Suzuki Musical Instruments in Japan.

WERSI CD-Organ DX 700

The Front Panel of the Baby b.

MAIN VOLUME CONTROL
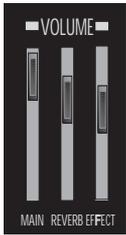
The MAIN VOLUME control sets the overall volume of your **Baby b.**. The level set here is also the maximum level that can be reached when using a volume pedal (when the pedal is pressed all the way).

Note: When MIDI controller #11 (EXPRESSION) data is received via MIDI IN on the channel set for Upper, the overall volume of the **Baby b.** is affected. However, when MIDI controller #7 (VOLUME) data is received, this affects ONLY the channel to which it is assigned (UPPER, LOWER oder PEDAL).

REVERB CONTROL
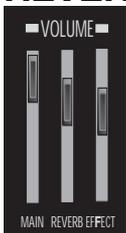
The Reverb Control sets the intensity of the presently selected reverb program. To guarantee the proper mix between dry signal and reverb, reverb intensity can also be controlled using an external swell pedal. The level that is set using this control will be the maximum amount of reverb when the swell pedal is fully depressed.

Note: The setting of this control will affect all three manuals (UPPER, LOWER & PEDAL). MIDI Controller #91 (REVERB SEND LEVEL) data can also be sent to the upper manual MIDI channel to change this value. The resulting setting will then affect all three manuals.

EFFECTS CONTROL

This control sets the level of the percussion effect. Percussion Effect and the available variants will be discussed later in the section „PERCUSSION Button".

Note: The setting of this control will affect all three manuals (UPPER, LOWER & PEDAL). MIDI Controller #16 (EFFECT POT) data can also be sent to the upper manual MIDI channel to change this value. The resulting setting will then affect all three manuals.

VALUE UP/DOWN BUTTONS

Some of the parameters of your **Baby b.** require you to input a particular value. Using these buttons you can change the presently selected presets in the display. The value is raised by pressing the UP button and lowered by pressing the DOWN button. If you hold one of these buttons down, after a moment, the values will increase/decrease in increments.

DEMO PLAY

PRESETS - EDIT FUNCTION

dEA

DOWN   UP   STORE   EDIT

Your **Baby b.** contains demo-sequences which will give you an overview of the various features and sound characteristics of the module:

1) Press the EDIT button. In the display appears an abbreviation, assuring you that you are now in DEMO PLAY mode.

2) The demo-sequences are numbered starting with 0 upward. This number is shown in the display after the abbreviation „dE". An „A" in this position means that ALL demo-sequences are selected for play. Use the VALUE UP/DOWN buttons to select individual sequence numbers. The UP button selects the next sequence in the series and the DOWN button the previous one. To start play of the selected sequence(s), press the MODE button. During playback of a sequence, you have access to all the play functions of your **Baby b.**. This means for example, that you can use the drawbars to change the timbre of the playback sounds.

3) To stop playback, press the EDIT button and then the MODE button. If you want to hear another sequence, repeat step 2. Otherwise you can leave DEMO PLAY mode by pressing the EDIT button.

Note: MIDI data generated in DEMO PLAY will NOT be sent to the MIDI out port. MIDI data input to the **Baby b.** during DEMO PLAY will only be received on the MIDI MAIN IN port.

Presets

PRESETS - EDIT FUNCTION

P.50

DOWN   UP   STORE   EDIT

A "preset" is a programmed group of settings that are used often and can be recalled; eg: the position of drawbars and other settings. Your **Baby b.** is equipped with 99 freely programmable presets. They are preprogrammed for you at the factory with stardardized settings. You can cycle through them using the VALUE UP/DOWN buttons. You see the presently selected preset (p1…P99) in your display.

As easy as cycling through the available presets, the availability of many practical variations and drawbar settings, as well as effects, gives the organist ample opportunity to express himself. The **Baby b.** registers and saves every change in settings you make within a preset. These changes remain in effect as long as the preset remains active. Using the STORE function, you can save your changes permanently or copy them to another preset number.

Selector for Upper, Lower and Pedal

As already mentioned your **Baby b.** is equipped with 3 multitimbral manuals that each have their own registers. Using an external bass pedal bank and two MIDI keyboards (or one split-capable keyboard), it is possible to play all three manuals simultaneously. Pressing the KEYBOARD button cycles you through the various manuals, activating them for editing (UPPER, LOWER, PEDAL). For each manual you can change drawbar settings. One of the three LED's in the display shows you which manual is presently active.

UPPER MANUAL (Upp)
The upper manual is the one that is normally used for solo registers. In the default setting is this manual the active one.

LOWER MANUAL (Lo)
The lower manual is used for normal playing with an accompaniment register.

PEDAL (Ped)
The pedal or bass manual allows accompaniment using a bass instrument or pedal bank.

STORE PRESETS

Changing drawbar settings will only remain in effect as long as the present preset is active.

You can use the STORE button to save your changes, so that the next time you activate the present preset, your settings will be as they were the last time you saved them using this button:

1) Press the EDIT button.

2) Next press the STORE button.

2) If you do not want to overwrite the presently saved values, use the VALUE UP/DOWN buttons to select a free preset position.

3) Use the STORE button again to confirm your save. If you change your mind, press the EDIT button. The preset will not be overwritten. You will see „nUP" in the display indicated that the preset was „not updated."Press the EDIT button again to return to Preset Mode.

Note: Using the STORE button overwrites the selected preset. From now on your **Baby b.** will select this preset as the active one.

FUNCTIONS USING MIDI NON-REGISTERED PARAMETERS

These functions apply to the different sound functions of the **Baby b.**. You can use the function on each of the three midi channels. After you have set these functions, you can use the store function, to store a preset.

You can also use this function with the CUBASE Mixermap. Please refer to chapter "Program Maps for Cubase" in this manual.

SELECT THE DIFFERENT ORGANS

```
Drawbar B3/WERSI      B0 63 02 62 07 26 XX XX = 0,2    0=B3, 2=WERSI
Drawbar Main/Variat   B0 63 02 62 08 26 XX XX = 0,1    0=Main, 1=Variat
```

Use this Function to switch total parameter sets between 4 complete and complex drawbar organ systems:

Ham d B3 => B3 and the MAIN
Simulates the electromagnetic "Hammond B3" organ. Selected from the palatte of offerings by Laurens Hammond, the B3 was first introduced in 1955. The B3, with its "dirty" sound has become a legend among jazz musicians and rock artists alike.

Hammond B3 => B3 and the VARIATION
Simulates the electromagnetic "HAMMOND H100" organ.

WERSI Spectra/Atlantis => WERSI and the MAIN
The sound of the modern electronic WERSI entertainer organ. Developed by the german Franz family, the WERSI organ has acclaimed appreciation because of it's crystal clear sound by artists in all areas of music. The most famous representative of the WERSI organ series is the "one-man-orchestra" Franz Lambert.

WERSI Helios/Galaxis => WERSI and the VARIATION
This Organ was developed in the 70th and one of the famous WERSI organs. The most famous representative of this WERSI organ series was Klaus Wunderlich.

ROTOR ON - OFF
MIDI Data: B0 63 02 62 01 26 XX   XX = 0,1 0=Off, 1=On (Only for upper channel)

This button turns the ROTOR effect on and off. ROTOR is a simulation of the special amplifier cabinet with mechanically rotating speakers, that was invented in the days of Tone-Wheel organs by Donald Rotor. The rotating speakers resulted in a doppler effect, creating a complex waveform of frequency and phase vibrati.

ROTOR SPEED SLOW/FAST
MIDI Data: B0 63 02 62 02 26 XX   XX = 0,1 0=Slow, 1=Fast

Use this button to adjust the rotation speed (in a virtual sense) of the rotating speakers. Two speeds are available. You can also user the footswitch to change the speed of the rotor. The "SLOW" setting gives you a cathedral-like, swinging effect. The "FAST" setting results in a vibrato-like sound. If you change the speed while holding a note or chord on your keyboard, your **Baby b.** simulates the actual slowing or accelleration of the rotating speakers, a very complicated process electronically.

Note: You will only hear ROTOR when the "ROTOR ON" function is on.

PERCUSSION ON - OFF

MIDI DATA: B0 63 02 62 0A 26 XX   XX = 0,4 0=Off, 4=On

The effect percussion affects the attack phase of the envelope curve of your organ sound. When you press a key, a synthesized attack can be added, amplified and varied. A good organist will recognize many different percussion variations. Your **Baby b.** offers you two preprogrammed percussion variants as well as one freely programmable variant for selection. Using this MIDI Data, you can turn on or off the percussion effect that is set in the "HARMONIC" function for the selected manual.

HARMONICS OF THE PERCUSSION

MIDI DATA: B0 63 02 62 0B 26 XX   XX = 0..2 0=2nd, 1=3rd, 2=User

Here you set the percussion variant of the presently selected preset. The preprogrammed variants are "2nd" and "3rd" here. The setting "USER" allows you to program your own variant. To program a user-defined percussion variation, you can use the MIDI Controllers 52 to 60.

PERCUSSION: MONOPHONIC OR POLYPHONIC

MIDI DATA: B0 63 02 62 0C 26 XX   XX = 0,1 0=Poly, 1= Mono (onyl for Upper Channel)

Use this function to switch your **Baby b.** to polyphonic percussion mode. The presently selected percussion variant is now globally in effect for all manuals.

LENGHT OF THE PERCUSSION

MIDI DATA:B0 63 02 62 0D 26 XX   XX = 0..2 0=Shrt, 1=Med, 2=Lng

With this function you set the decay time for the percussion effect for each of the three MIDI channels. There are three settings: SHORT, MED, LONG.

SHORT: Percussion effect sounds only for a short time.

MED: Percussion effect decays at a medium rate.

LONG: The amount of time before the end of the percussion effect is long.

Note: You will only hear the percussion effect when the PERCUSSION function is active.

PERCUSSION ROUTING

MIDI DATA: B0 63 02 62 03 26 XX   XX = 0..2 0=Direct 1=Vibrato 2=Rotor

Using the PERCUSSION ROUTING you can send the percussion through three possible effects:

DIRECT: Percussion is directly returned without any effect.

VIB: Percussion is sent through Vibrato effect before it is returned.

ROTOR: Percussion is sent through ROTOR before being output. In order
              for this to happen, the ROTOR effect must be active.

SUSTAIN OR DELAY
MIDI DATA: B0 63 02 62 0E 26 XX   XX = 0..2 0=Delay 1=Sustain 2=Both

The ENVELOPE function allows you access to the various programmable segments of the three MIDI Channels drawbar envelope curve. The following are the possible settings:

DEFAULT: Attack, sustain and delay relationships are normal.

DELAY: The attack (amount of time after pressing a key until the level of the tone has reached its loudest) is longer; somewhat like the time it takes a pipe organ pipe to reach its full resonance.

SUSTAIN: This is the amount of time that a note sounds after a key has been released; somewhat like the sustain pedal of a piano allows the string to continue vibrating long after its key has been released.

DELAY and SUSTAIN**:** Both the attack time (DELAY) and the decay time (SUSTAIN) can be lengthened.

SELECT KEYCLICK
MIDI DATA: B0 63 02 62 0F 26 XX   XX = 0..3 0=Off, 1=Soft, 2=Med, 3=Loud

Typical of electromagnetic organs such as the HAMMOND B3 is the characteristic key click noise that was an unintentional result of dirty key switch contacts and the not totally synchronized switching of the sinus foot register.

What was for the makers of these organs an unwanted sound, found favor among musicians who included the "keyclick" as part of what a good organ sound should have, and it became a "feature."

Using the KEYCLICK function, you can simulate this "feature" for the presently active manual. Repeated pressing of the button gives you access to four possible settings:

DEFAULT: No keyclick for the drawbar register is added.

SOFT: A soft, subtle keyclick is simulated for the drawbar register.

MED: For the drawbar register of the presently active manual a medium loud keyclick is heard.

LOUD: For the drawbar register of the presently active manual a loud keyclick is heard.

SELECT REVERB
MIDI DATA: B0 63 02 62 10 26 XX   XX = 0..5 Reverb progr. 1..6

Use this function to select the available reverb programs. There are presently six to choose from.

If you want to save a reverb program within the present preset, use the STORE button.(see: "STORE button")

VIBRATO ON - OFF

MIDI DATA: `B0 63 02 62 04 26 XX    XX = 0,1  0=Off, 1=On`

This function turns on or off one of the three available phase vibrato effect types for the drawbar section.

Your **Baby b.** offers you a choice of three vibrato variations: CHORUS, NORMAL, CELESTE. The orginal signal is modulated with a phase shifted waveform to give a delay or frequency-cancellation effect. This function turns on or off the presently selected vibrato type.

SELECT VIBRATO SPEED

MIDI DATA: `B0 63 02 62 05 26 XX   XX = 0,1  0=Slow, 1=Fast`

Use this function to toggle through the two available vibrato speeds.

SLOW: slow phase vibrato… a rotating wave-like effect.

Note: You will only hear vibrato if the VIBRATO function is on.

SELECT VIBRATO TYPE

MIDI DATA: `B0 63 02 62 06 26 XX   XX = 0..2 0=Normal, 1=Chorus, 2=Celeste`

There are three available alternative vibrato types. Pressing the VIBRATO TYPE button cycles through CHORUS, NORMAL, CELESTE.

OVERDRIVE-EFFECT

MIDI DATA: `Modulation Wheel`

Overdrive effect came into being by overdriving the old tube amplifiers of the ROTOR cabinet. Rock bands in the early 70's such as Deep Purple (John Lord) brought this effect popularity.

Use the modulation wheel on your controller keyboard to simulate this overdrive. The further you turn the wheel, the more distortion will be applied to the signal.

Be sure to check the position of your modulation wheel (or VCF control) in order to avoid unwanted distortion.

Note: Overdrive applies to all three (UPPER, LOWER, PEDAL) manuals. MIDI Controller #1, when received at the MIDI IN port on the MIDI channel of the UPPER MANUAL, will apply to all manuals.

Changing Sound Settings

The following settings remain even after turning the **Baby b.** off

You can make changes to your sounds remotely over MIDI and save them in the permanent memory of your **Baby b.**. In order to do this, you must send the appropriate sysex message (see table below). Otherwise these parameters cannot be changed.

Note: In order to save the changes to the permanent memory of the **Baby b.**, you will need to send the „STORE" command. Otherwise, when you turn your **Baby b.** off, all your changes will be lost. When you have used the STORE button, you can then only use the function „Reset to Factory Presets".

START OF PROGRAMMING

```
Start Program      F0 00 20 2D 40 7E F7
```

Use this System Exclusive data to start the program of all the following functions.

CHANGING ROTOR SPEED

```
Rotor speed SLOW        B0 63 08 62 64 26 XX     XX = 0..7F    Factory preset: 56
Leslie speed FAST       B0 63 08 62 65 26 XX     XX = 0..7F    Factory preset: 35
```

The two speeds, „SLOW" and „FAST" can be individually set to your own taste.

CHANGING ROTOR SETTINGS

```
Rotor Bass Level        B0 63 08 62 44 26 XX     XX = 0..7F
Rotor Horn Level        B0 63 08 62 45 26 XX     XX = 0..7F
Rotor angle Bass        B0 63 08 62 42 26 XX     XX = 0..7F
Rotor angle Horn        B0 63 08 62 43 26 XX     XX = 0..7F
Rotor radius Bass       B0 63 08 62 3C 26 XX     XX = 0..7F
Rotor radius Horn       B0 63 08 62 3D 26 XX     XX = 0..7F
```

SETTING THE LENGTH OF PERCUSSION

```
Percussion Short        B0 63 08 62 55 26 XX     XX = 0..7F    Factory preset: 49
Percussion Medium       B0 63 08 62 56 26 XX     XX = 0..7F    Factory preset: 54
Percussion Long         B0 63 08 62 57 26 XX     XX = 0..7F    Factory preset: 66
```

The three values for percussion length, SHORT, MEDIUM, LONG have been preset for you, but can be changed according to your personal taste.

SETTING SUSTAIN LENGTH

```
Sustain Time            B0 63 08 62 58 26 XX     XX = 0..7F    Factory preset: 5A
```

Using the SUSTAIN button, you can set the sustain length for each manual separately according to your personal taste.

KEYCLICK SETTINGS

```
B3 Clic Level       B0 63 08 62 09 26 XX XX = 0..7F
WERSI Clic Level    B0 63 08 62 08 26 XX XX = 0..7F
```

VIBRATO SETTINGS

```
Vibrato Depth          B0 63 08 62 6F 26 XX     XX = 0..7F
Vibrato Speed          B0 63 08 62 6E 26 XX     XX = 0..7F
Vibrato Dry / Wet      B0 63 08 62 36 26 XX     XX = 0..7F
```

PERCUSSION SETTINGS

```
Percussion direct      B0 63 08 62 28 26 XX     XX = 0..7F
Percussion to Vibrato  B0 63 08 62 29 26 XX     XX = 0..7F
Percussion to Leslie   B0 63 08 62 2A 26 XX     XX = 0..7F
```

STORE FUNCTIONS IN FLASH ROM

```
STORE in Flash rom     B0 63 08 62 04 26 XX     XX = 01
```

EDIT BUTTON

Using the EDIT button brings you to the edit mode of your **Baby b.**. Here you can set a series of global parameters that control the MIDI system. In addition you have the option of saving all your present preset settings over MIDI (Bulk Dump) or loading previously saved settings.

1) Press the EDIT button.

2) Use the VALUE UP/DOWN buttons to cycle through the available parameters in order to get to the one you want to change. The display shows you appropriate abbreviations for the active parameters. (A description of the available parameters follows shortly.)

3) Press the EDIT button again to see the value of the present parameter or function.

4) Use the VALUE UP/DOWN buttons to change the value according to your desire.

5) Press the EDIT button again and the new value or function is saved and you are returned to the starting point.

GLOBAL PARAMETERS

Pressing the EDIT button allows you access to the following parameters and their respective values:

SELECT MIDI CHANNEL FOR UPPER

(MIDI Channel assignment for the upper manual: OFF, 1 ... 16)

Use this parameter to set the MIDI channel used to play the upper manual of your **Baby b.**. This channel should be the same as the channel you have assigned in your MIDI controller keyboard or the split you want to play the upper manual. The default value is channel #1. If you want to use another channel, set it here. The setting „OFF" turns the entire manual off. If you are using equipment that is capable of playing more than one MIDI channel at a time (eg: more than one keyboard or pedal bank, split-capable keyboard), make sure you have a separate channel set for each manual.

Notice: Even using a keyboard without a split point set, you can still use the areas UPPER and LOWER. See the section called „Split point on one MIDI channel"

SELECT MIDI CHANNEL FOR LOWER

(MIDI Channel assignment for the lower rmanual: OFF, 1 ... 16)

Use this parameter to set the MIDI channel used to play the lower manual of your **Baby b.**. This channel should be the same as the channel you have assigned in your MIDI controller keyboard or the split you want to play the lower manual. The default value is channel #2. If you want to use another channel, set it here. The setting „OFF" turns the entire manual off. If your MIDI keyboard can only play one channel, make sure this manual is set to „OFF". If you are using equipment that is capable of playing more than one MIDI channel at a time (eg: more than one keyboard or pedal bank, split-capable keyboard), make sure you have a separate channel set for each manual.

SELECT MIDI CHANNEL FOR PEDAL

PRESETS - EDIT FUNCTION

PEd

DOWN UP STORE EDIT

(MIDI Channel assignment for the Bass pedal bank: OFF, 1 ... 16)
If you have access to a MIDI-capable foot pedal bank, you can set the channel here to be used for the pedal manual of your **Baby b.**. The default value is channel #3. If you want to use another channel, set it here. The setting „OFF" turns the entire manual off. If your MIDI keyboard can only play one channel, make sure this manual is set to „OFF". If you are using equipment that is capable of playing more than one MIDI channel at a time (eg: more than one keyboard or pedal bank, split-capable keyboard), make sure you have a separate channel set for each manual.

PITCHBEND RANGE

PRESETS - EDIT FUNCTION

Pbd

DOWN UP STORE EDIT
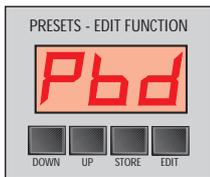
(The range limits for pitchbend information: 1 ... 12)
Here is where you set the maximum number of half steps that the pitch of a note can be bent using a controller from your MIDI keyboard. The increments are half steps and the maximum range is twelve; one octave. The default value is 12 and should be set to match the value set for pitchbend range in your MIDI controller keyboard.

RECEIVE CONTROL CHANGE COMMANDS

PRESETS - EDIT FUNCTION

CCr

DOWN UP STORE EDIT

(Settings: OFF or ON)
Using this parameter you can determine whether or not incoming control change information will be processed. Control change commands contain special information about elements that relate to control-oriented functions such as Volume level (Controller #7), or drawbar settings (Controller #20 up to 29). Your **Baby b.** is also capable of sending MIDI data, especially data relating to the drawbar system, and because of this, it might be necessary for incoming controller information to be squelched. In this case, set this command to „OFF".

TRANSMIT CONTROL CHANGE COMMANDS

PRESETS - EDIT FUNCTION

CCt

DOWN UP STORE EDIT

(Settings: OFF or ON)
If necessary, setting this function to "OFF" prohibits sending control change data from the **Baby b.** to external MIDI devices (eg: drawbar movements, pedal confirmation).

RECEIVING PROGRAM CHANGE COMMANDS

PRESETS - EDIT FUNCTION

PCr

DOWN UP STORE EDIT
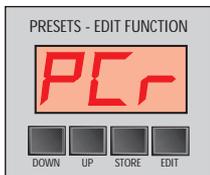
(Settings: OFF, ALL, 1 to 128)
The **Baby b.** can react differently to incoming program change information.

Setting OFF
No Program Change information is processed.

Setting ALL
Program Change information will be received on the MIDI channel selected under UPPER (factory preset 1) and presets 1 to 99 can be selected.
Setting 1 to 128

When a program change command is set between 1 and 128, the **Baby b.** will only play when the set value is received. The advantage of this is that you can choose a particular key on your keyboard or organ to turn on and off all three of the **Baby b.**'s MIDI channels UPPER, LOWER, PEDAL individually. Any other program change information received will not be processed or reacted to by the manual in question.

Example:
Many keyboard have the option of switching the function of their different sound key off. This key can be effectively used to control your **Baby b.**. Set your **Baby b.** to receive the appropriate program change number. Now the **Baby b.** will only play when you press the appropriate sound key on your keyboard. If you select another instrument on your keyboard, the **Baby b.** will automatically stop playing. The manuals of your **Baby b.**, UPPER, LOWER, PEDAL can be set individually.

SEND PROGRAM CHANGE COMMANDS

(Settings: OFF or ON)

In the same way as in the previous parameter, you can sqelch the transmission of Program Change information by setting this function to "OFF" so that changing a preset using the VALUE UP/DOWN buttons, only affects the **Baby b.** internally. No Program Change data is sent to the MIDI OUT port.

SPLIT POINT ON ONE MIDI CHANNEL

Setting: ALL or 1 to 84

If the keyboard connected to your **Baby b.** has no split point, your **Baby b.** can have it's own split point.

ALL: The MIDI channel set in the area UPPER is played by the upper manual without a split point.

1 to 84: Enter the split point as MIDI key number. The MIDI channel set in the area UPPER will play the upper manual of the **Baby b.** up to the MIDI key number, and after that the lower manual will be played.

SPLIT POINT FOR THE LOWER MANUAL

Setting: ALL or 1 to 84

With this function the lower manual can be set to play only above the split point. The advantage is that you can play chords with your left hand on your controller keyboard without worrying about bass notes coming from the **Baby b.**.

ALL: The lower manual is completely on.

1 to 84: 1 to 84: Enter the split point as MIDI key number.
The MIDI channel set in the area LOWER will play the upper manual of the **Baby b.** up to the MIDI key number.

MIDI MERGE FUNCTIONS

PRESETS - EDIT FUNCTION

ECH

DOWN   UP   STORE   EDIT

The **Baby b.** is equipped with an internal MIDI Merge function which combines incoming MIDI information from both MIDI IN ports and sends the total MIDI information to the MIDI OUT port.

Example: You're playing on your organ with your upper manual and your pedal manual and you want to record your piece into a sequencer. If this parameter is set to ON, all MIDI information from your keyboard including all the information generated by your **Baby b.** sent out the MIDI OUT port and to a sequencer.

OFF: MIDI Merge is turned off.

ON: MIDI Merge is turned on. All incoming data on both the MAIN IN and MIDI PEDAL IN as well as all **Baby b.** data (eg: drawbar movements, rotor speed control) will be combined and sent to the MIDI OUT port. But the **Baby b.** will not play the incoming events.

RESET FACTORY PRESETS

PRESETS - EDIT FUNCTION

ECH

DOWN   UP   STORE   EDIT

If you have altered sound data and want to get back to the factory preset sounds, use this function. Also included in this function are rotor speed settings, Sustain settings, percussion length or vibrato settings.

SEND MIDI DUMP

This function allows you to send a MIDI dump containing all the important parameter settings and presets of your **Baby b.**. The "SYSEX Send Enable" parameter must be set to "ON" in order to do this. Press the EDIT button to begin the bulk dump. The progress will be shown in the display.

THE DRAWBARS

Using the drawbars, you can adjust the volume level of the 9 classical octave foot registers (16', 8', 5 1/3', 4', 2 2/3', 2', 1 3/5',1 1/3', 1'). This is the heart of your organ sound.

Because the timbre of all natural instruments is a synthesis of different strength overtones in the overtone series, the drawbar organ with its fully variable sine wave drawbars is capable of imitating closely all natural instruments. In the years of composer Johann Sebastian Bach, the organ was called "König der Instrumente" (King of all instruments) for this reason. It is of course impossible to reproduce natural sounds exactly using the drawbar system. The organ maintains in own personal characteristic timbre, which gives it its identity. It is nevertheless the forefather of the modern synthesizer, which can replicate in detail the timbre of natural instruments.

All of your drawbar settings for all of the foot registers can be saved permanently within the presently selected preset using the "STORE" button. (see: "STORE" button.) When you change presets, the drawbar settings of the last saved version are active. You can of course save your registrations separately for each of the three manuals.

Note: The drawbars are also used for setting the timbre of user-defined percussion. (see: HARMONIC Button.)
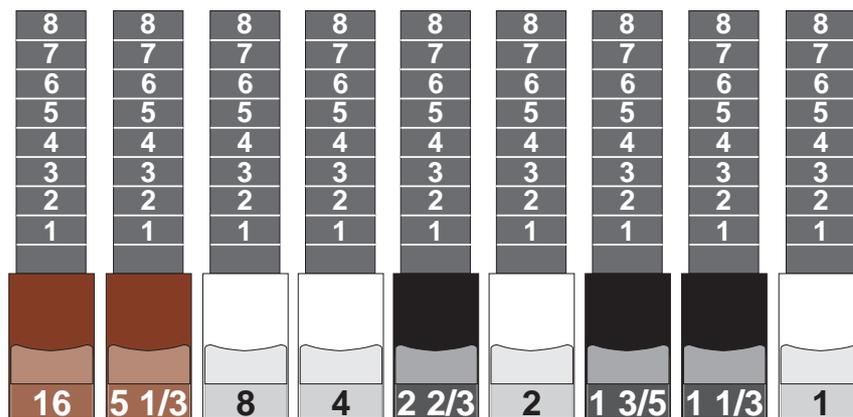
DRAWBAR SETTINGS
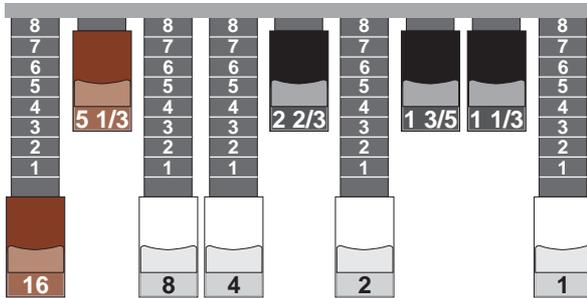
Full Tibia / Flutes

All the full-numbered drawbars pulled with Leslie or Vibrato give a full, direct drawbar organ sound.
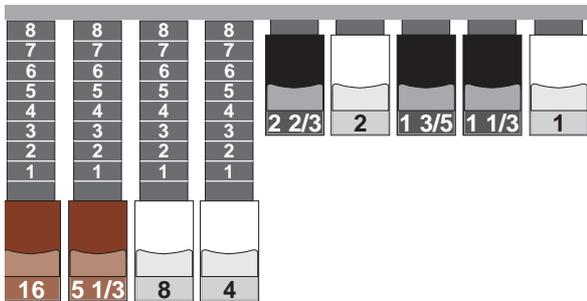
Horns / Dark

This setting is especially interesting when used with a 2nd or 3rd percussion and Leslie or Vibrato. This is a favorite of jazz musicians using a short percussion setting and a loud keyclick, whereas entertainer organists would use typically a long percussion and a soft keyclick.
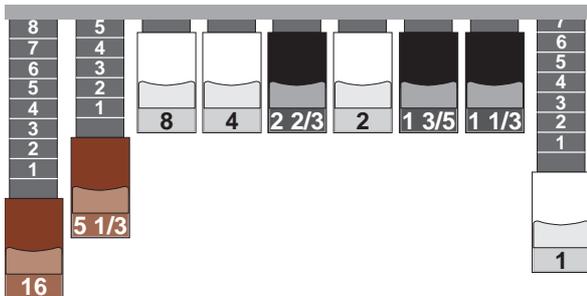
Open Drawbar Setting

This broad setting of drawbars when used with Leslie or Vibrato gives a pleasant sound for many musical styles.
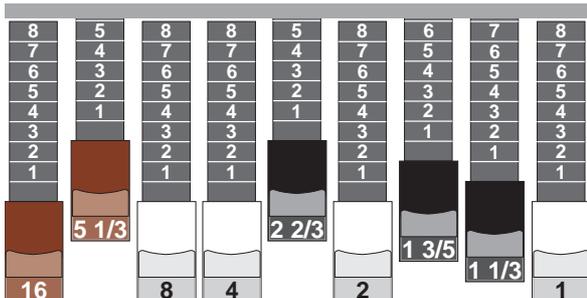
Drawbar Setting "Full" mixed sound

This setting is effective in both entertainment and sacred music as "Plemun/Tutti." Use Vibrato and/or Leslie as desired.

DRAWBAR SETTINGS FOR SOLO REGISTER
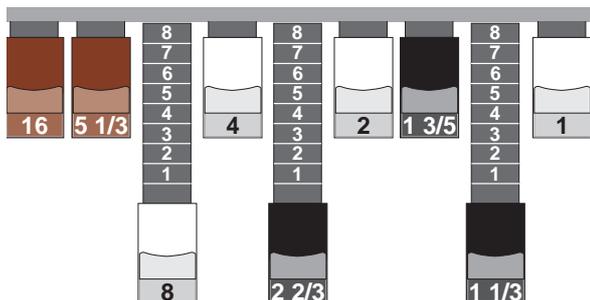
Clarinet
Drawbar Setting

The setting sounds similar to a clarinet or, in combination with a soft attack, like a "Gedackt Register" on a pipe organ.
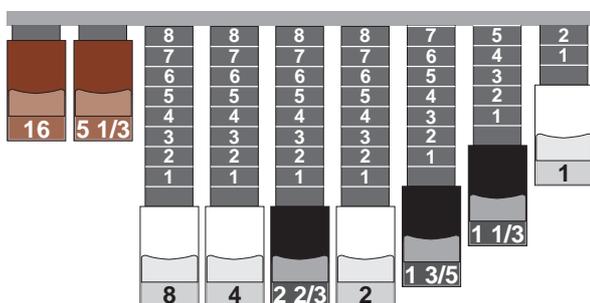
Trumpet
Bright Setting

Trumpet Timbre built on the 8' Register

You can also use this setting for percussion. On the old Hammond H100, this setting was called "guitar". Klaus Wunderlich has used this percussion setting for many many H100 recording projects.
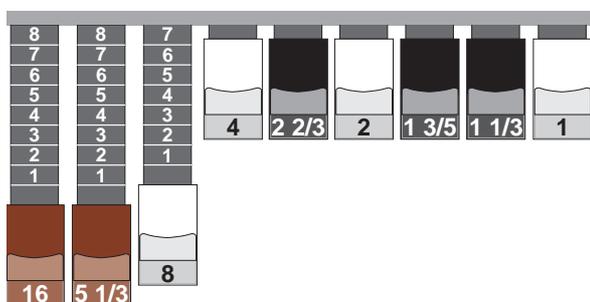
Horn Setting

Dark, horn-like drawbar setting that can be effectively used with or without vibrato.
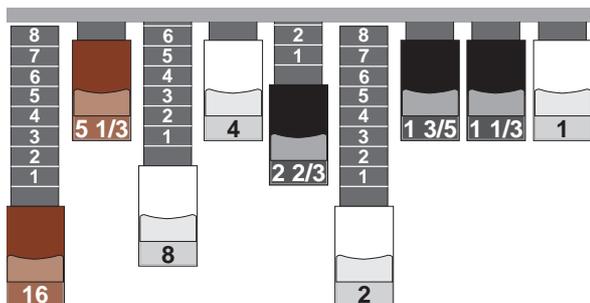
Flute
Theater Organ Sound

This setting, when used with vibrato, reminds one of the typical old theater organ sound. Add delay to this setting to round out the sound and to complete its fullness.

DRAWBAR SETTINGS FOR PERCUSSION
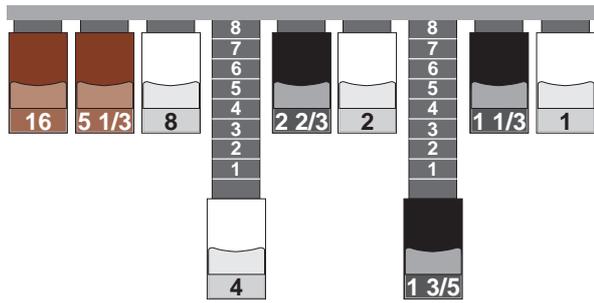
Xylophone Percussion

Stacato with short percussion played in "Poly-Mode" gives this setting a xylophone-like sound. Often used by Franz Lambert in his "Zirkus Renz".
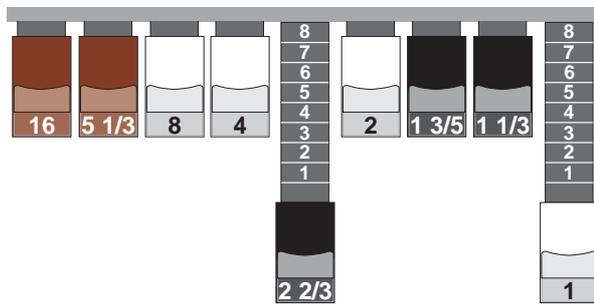
Bright Bell-like Percussion

Trumpet-like setting based on the 8' Register.

This same setting can be used as a percussion setting. On the old Hammond H100, this setting was referred to as "guitar". Klause Wunderlich, in has many recordings using the H100, often used this setting for percussion.

Bell-like Percussion

Full, bell-like percussion setting. An especially pleasant melody sound when used with a horn-setting and a long percussion decay. Effective in all music styles.
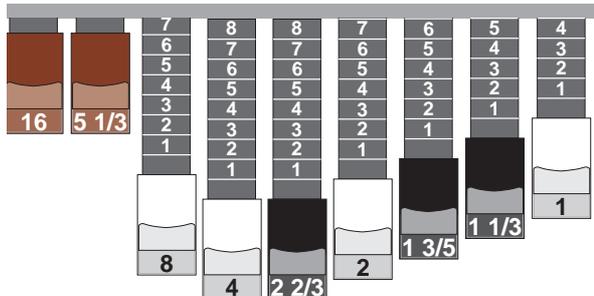
Guitar-like Percussion

On the old Hammond H100, this setting was referred to as "guitar". Klause Wunderlich, in has many recordings using the H100, often used this setting for percussion.

FACTORY PRESETS NO. 1-3

Drawbar B3 "Straight" , Vibrato — PRESET No. 1

Group	Function	Upper	Lower	Pedal
Percussion	On			X
	2nd	X	X	
	3rd			
	User			X
	Polyphone	X	X	X
Time	Short	X	X	X
	Medium	X		
Envelope	Delay			
	Sustain			X
Keyclick	Soft		X	
	Medium	X		
Reverb	Program		3	
Rotor	On			
	Slow			
	Fast	X		
Percussion	Direct	X	X	X
	Vibrato			
	Rotor			
Drawbar	Vibrato	X	X	
Phase-Vibrato	Slow			
	Fast		X	
	Chorus			
	Normal			
	Celeste		X	
DB Sound Select	B3	X	X	X
	Wersi			
	Main	X	X	
	Variation			X
DB Registration	16'	8		8
	5 1/3'			6
	8'	8	7	8
	4'	8	5	
	2 2/3'			
	2'	8	4	
	1 1/3'			
	1 3/5'			
	1'	8		

Drawbar B3 "mellow", Percussion , Vibrato — PRESET No. 2

Group	Function	Upper	Lower	Pedal
Percussion	On	X		X
	2nd	X	X	
	3rd			
	User			X
	Polyphone		X	X
Time	Short		X	X
	Medium	X		
Envelope	Delay			
	Sustain			X
Keyclick	Soft		X	
	Medium	X		
Reverb	Program		3	
Rotor	On			
	Slow			
	Fast	X		
Percussion	Direct	X	X	X
	Vibrato			
	Rotor			
Drawbar	Vibrato	X	X	
Phase-Vibrato	Slow			
	Fast		X	
	Chorus			
	Normal			
	Celeste		X	
DB Sound Select	B3	X	X	X
	Wersi			
	Main	X	X	
	Variation			X
DB Registration	16'	8		8
	5 1/3'	8		6
	8'	7	7	8
	4'	6	5	
	2 2/3'			
	2'		4	
	1 1/3'			
	1 3/5'			
	1'			

Drawbar B3 "mellow" , Percussion via Rotor — PRESET No. 3

Group	Function	Upper	Lower	Pedal
Percussion	On	X		X
	2nd	X	X	
	3rd			
	User			X
	Polyphone		X	X
Time	Short		X	X
	Medium	X		
Envelope	Delay			
	Sustain			X
Keyclick	Soft		X	
	Medium	X		
Reverb	Program		3	
Rotor	On	X		
	Slow			
	Fast	X		
Percussion	Direct	X	X	X
	Vibrato			
	Rotor			
Drawbar	Vibrato		X	
Phase-Vibrato	Slow			
	Fast		X	
	Chorus			
	Normal			
	Celeste		X	
DB Sound Select	B3	X	X	X
	Wersi			
	Main	X	X	
	Variation			X
DB Registration	16'	8		8
	5 1/3'	8		6
	8'	8	7	8
	4'	8	5	
	2 2/3'			
	2'		4	
	1 1/3'			
	1 3/5'			
	1'			

FACTORY PRESETS NO. 4-6

		Preset 4 Upper	Preset 4 Lower	Preset 4 Pedal	Preset 5 Upper	Preset 5 Lower	Preset 5 Pedal	Preset 6 Upper	Preset 6 Lower	Preset 6 Pedal
Drawbar B3 "Straight", Rotor slow — PRESET No. 4										
Drawbar B3 "Straight", Rotor fast — PRESET No. 5										
Drawbar B3 "open, 16, 5/13, 1'", Vibrato fast, Rotor fast — PRESET No. 6										
Group	Function									
Percussion	On									X
	2nd	X	X		X	X		X	X	
	3rd									
	User			X			X			X
	Polyphone	X	X	X	X	X	X	X	X	X
Time	Short	X	X	X	X	X	X	X	X	X
	Medium	X		X	X		X	X		X
Envelope	Delay									
	Sustain			X			X			X
Keyclick	Soft		X			X			X	
	Medium	X			X			X		
Reverb	Program		3			3			3	
Rotor	On		X			X			X	
	Slow		X							
	Fast					X			X	
Percussion	Direct	X	X	X	X	X	X	X	X	X
	Vibrato									
	Rotor									
Drawbar	Vibrato							X	X	
Phase-Vibrato	Slow		X							
	Fast					X			X	
	Chorus									
	Normal		X			X			X	
	Celeste									
DB Sound Select	B3	X	X	X	X	X	X	X	X	X
	Wersi									
	Main	X	X		X	X		X	X	
	Variation			X			X			X
DB Registration	16'	8		8	8		8	8		8
	5 1/3'			6			6	5		6
	8'	8	7	8	8	7	8		7	8
	4'		5		8	5			5	
	2 2/3'									
	2'	8	4		8	4			4	
	1 1/3'									
	1 3/5'									
	1'				8			8		

FACTORY PRESETS NO. 7-9

Group	Function	P7 Upper	P7 Lower	P7 Pedal	P8 Upper	P8 Lower	P8 Pedal	P9 Upper	P9 Lower	P9 Pedal
Preset No.		7			8			9		
Percussion	On	x		x	x		x	x		x
	2nd		x			x		x	x	
	3rd				x					
	User	x		x			x			x
	Polyphone	x	x	x	x	x	x			
Time	Short	x	x	x	x	x	x	x	x	x
	Medium	x		x	x		x			x
Envelope	Delay									
	Sustain			x			x			
Keyclick	Soft	x	x		x	x			x	
	Medium							x		
Reverb	Program		3			3			3	
Rotor	On					x				
	Slow					x			x	
	Fast		x							
Percussion	Direct	x	x	x		x	x	x	x	x
	Vibrato									
	Rotor				x					
Drawbar	Vibrato	x	x		x	x		x	x	
Phase-Vibrato	Slow					x				
	Fast		x						x	
	Chorus								x	
	Normal									
	Celeste		x			x				
DB Sound Select	B3	x	x	x	x	x	x	x	x	x
	Wersi									
	Main	x	x			x		x	x	
	Variation			x	x		x			x
DB Registration	16'	8		8	8		8	8		8
	5 1/3'	8		6	8		6	8		6
	8'	7	7	8	8	7	8	8	7	8
	4'	7	5		8	5		8	5	
	2 2/3'									
	2'		4			4			4	
	1 1/3'									
	1 3/5'									
	1'									

Preset 7: Drawbar B3 "mellow" with "Guitar" Percussion, Vibrato
Preset 8: Drawbar B3 "mellow" with 3rd Percussion, Rotor Slow
Preset 9: Drawbar B3 "mellow" with 2nd Percussion, Vibrato Chorus

FACTORY PRESETS NO. 10-12

Drawbar B3 "mellow", 2nd Percussion, Vibrato Chorus, Rotor Slow — PRESET No. 10

Group	Function	Upper	Lower	Pedal
Percussion	On	X		X
	2nd	X	X	
	3rd			
	User			X
	Polyphone			
Time	Short	X	X	X
	Medium			X
Envelope	Delay			
	Sustain			
Keyclick	Soft	X	X	
	Medium	X		
Reverb	Program		3	
Rotor	On		X	
	Slow		X	
	Fast			
Percussion	Direct		X	X
	Vibrato			
	Rotor	X		
Drawbar	Vibrato	X	X	
Phase-Vibrato	Slow			
	Fast		X	
	Chorus		X	
	Normal			
	Celeste			
DB Sound Select	B3	X	X	X
	Wersi			
	Main	X	X	
	Variation			X
DB Registration	16'	8		8
	5 1/3'	8		6
	8'	7	7	8
	4'	7	5	
	2 2/3'			
	2'		4	
	1 1/3'			
	1 3/5'			
	1'			

Drawbar B3 "mellow", 2nd Percussion, Vibrato Chorus, Rotor Fast — PRESET No. 11

Group	Function	Upper	Lower	Pedal
Percussion	On	X		X
	2nd	X	X	
	3rd			
	User			X
	Polyphone			
Time	Short	X	X	X
	Medium			X
Envelope	Delay			
	Sustain			
Keyclick	Soft	X	X	
	Medium	X		
Reverb	Program		3	
Rotor	On		X	
	Slow			
	Fast		X	
Percussion	Direct		X	X
	Vibrato			
	Rotor	X		
Drawbar	Vibrato	X	X	
Phase-Vibrato	Slow			
	Fast		X	
	Chorus			
	Normal		X	
	Celeste			
DB Sound Select	B3	X	X	X
	Wersi			
	Main	X	X	
	Variation			X
DB Registration	16'	8		8
	5 1/3'	8		6
	8'	8	7	8
	4'	8	5	
	2 2/3'			
	2'		4	
	1 1/3'			
	1 3/5'			
	1'			

Drawbar B3 "mellow", 2nd Percussion, Vibrato Chorus Slow, Rotor Slow — PRESET No. 12

Group	Function	Upper	Lower	Pedal
Percussion	On	X		X
	2nd	X	X	
	3rd			
	User			X
	Polyphone			
Time	Short	X	X	X
	Medium			X
Envelope	Delay			
	Sustain			
Keyclick	Soft	X	X	
	Medium	X		
Reverb	Program		3	
Rotor	On		X	
	Slow		X	
	Fast			
Percussion	Direct		X	X
	Vibrato			
	Rotor	X		
Drawbar	Vibrato	X	X	
Phase-Vibrato	Slow		X	
	Fast			
	Chorus			
	Normal		X	
	Celeste			
DB Sound Select	B3	X	X	X
	Wersi			
	Main	X	X	
	Variation			X
DB Registration	16'	8		8
	5 1/3'	8		6
	8'	8	7	8
	4'	8	5	
	2 2/3'			
	2'		4	
	1 1/3'			
	1 3/5'			
	1'			

Drawbar B3 "open", Rotor Fast — PRESET No. 13

Group	Function	Upper	Lower	Pedal
Percussion	On			x
	2nd	x	x	
	3rd			
	User			x
	Polyphone			
Time	Short	x	x	x
	Medium			x
Envelope	Delay			
	Sustain			
Keyclick	Soft	x	x	
	Medium	x		
Reverb	Program		3	
Rotor	On		x	
	Slow			
	Fast		x	
Percussion	Direct		x	x
	Vibrato			
	Rotor	x		
Drawbar	Vibrato		x	
Phase-Vibrato	Slow		x	
	Fast			
	Chorus			
	Normal			
	Celeste		x	
DB Sound Select	B3	x	x	x
	Wersi			
	Main	x	x	
	Variation			x
DB Registration	16'	8		8
	5 1/3'	5		6
	8'		7	8
	4'		5	
	2 2/3'			
	2'		4	
	1 1/3'			
	1 3/5'			
	1'	4		

Drawbar B3 Variation "Straight", Rotor Slow, Keyclick Loud — PRESET No. 14

Group	Function	Upper	Lower	Pedal
Percussion	On			
	2nd	x	x	
	3rd			
	User			x
	Polyphone			
Time	Short	x	x	x
	Medium			x
Envelope	Delay			
	Sustain			
Keyclick	Soft	x	x	
	Medium	x		
Reverb	Program		3	
Rotor	On		x	
	Slow		x	
	Fast			
Percussion	Direct		x	x
	Vibrato			
	Rotor	x		
Drawbar	Vibrato		x	
Phase-Vibrato	Slow		x	
	Fast			
	Chorus			
	Normal		x	
	Celeste			
DB Sound Select	B3	x	x	x
	Wersi			
	Main	x	x	
	Variation			x
DB Registration	16'	8		8
	5 1/3'			6
	8'	8	7	8
	4'	8	5	
	2 2/3'			
	2'	8	4	
	1 1/3'	2		
	1 3/5'	3		
	1'	8		

Drawbar B3 Variation "Straight", Rotor Fast, Keyclick Loud — PRESET No. 15

Group	Function	Upper	Lower	Pedal
Percussion	On			
	2nd	x	x	x
	3rd			
	User			
	Polyphone			
Time	Short	x	x	x
	Medium			
Envelope	Delay			
	Sustain			
Keyclick	Soft	x		
	Medium	x		
Reverb	Program		3	
Rotor	On		x	
	Slow			
	Fast		x	
Percussion	Direct		x	x
	Vibrato			
	Rotor	x		
Drawbar	Vibrato		x	
Phase-Vibrato	Slow			
	Fast		x	
	Chorus			
	Normal			
	Celeste		x	
DB Sound Select	B3	x		
	Wersi		x	x
	Main			x
	Variation	x	x	
DB Registration	16'	8		8
	5 1/3'			6
	8'	8	7	8
	4'	8	5	
	2 2/3'			
	2'	8	4	
	1 1/3'	2		
	1 3/5'	3		
	1'	8		

FACTORY PRESETS NO. 16-18

PRESET No. 16 — Drawbar B3 "Mellow", Vibrato, Rotor Fast, Keyclick Loud

Group	Function	Upper	Lower	Pedal
Percussion	On			
	2nd	x	x	x
	3rd			
	User			
	Polyphone			
Time	Short	x	x	x
	Medium			
Envelope	Delay			
	Sustain			
Keyclick	Soft	x		
	Medium	x		
Reverb	Program		3	
Rotor	On		x	
	Slow			
	Fast		x	
Percussion	Direct		x	x
	Vibrato			
	Rotor	x		
Drawbar	Vibrato	x	x	
Phase-Vibrato	Slow			
	Fast		x	
	Chorus			
	Normal			
	Celeste		x	
DB Sound Select	B3	x		
	Wersi		x	x
	Main	x		x
	Variation		x	
DB Registration	16'	8		8
	5 1/3'	5		6
	8'	3	7	8
	4'	8	5	
	2 2/3'			
	2'		4	
	1 1/3'			
	1 3/5'			
	1'			

PRESET No. 17 — WERSI Drawbar "Straight", Vibrato

Group	Function	Upper	Lower	Pedal
Percussion	On			
	2nd	x	x	x
	3rd			
	User			
	Polyphone			
Time	Short	x	x	x
	Medium			
Envelope	Delay			
	Sustain			
Keyclick	Soft	x		
	Medium	x		
Reverb	Program		3	
Rotor	On			
	Slow			
	Fast		x	
Percussion	Direct		x	x
	Vibrato			
	Rotor	x		
Drawbar	Vibrato	x	x	
Phase-Vibrato	Slow			
	Fast		x	
	Chorus			
	Normal			
	Celeste		x	
DB Sound Select	B3			
	Wersi	x	x	x
	Main	x		x
	Variation		x	
DB Registration	16'	8		8
	5 1/3'			6
	8'	8	7	8
	4'	8	5	
	2 2/3'			
	2'	8	4	
	1 1/3'			
	1 3/5'			
	1'	8		

PRESET No. 18 — WERSI Drawbar "Medium", Vibrato, 2nd Percussion

Group	Function	Upper	Lower	Pedal
Percussion	On	x		
	2nd	x	x	x
	3rd			
	User			
	Polyphone			
Time	Short	x	x	x
	Medium	x		
Envelope	Delay			
	Sustain			
Keyclick	Soft			
	Medium	x		
Reverb	Program		3	
Rotor	On			
	Slow			
	Fast		x	
Percussion	Direct	x	x	x
	Vibrato			
	Rotor			
Drawbar	Vibrato	x	x	
Phase-Vibrato	Slow			
	Fast		x	
	Chorus			
	Normal			
	Celeste		x	
DB Sound Select	B3			
	Wersi	x	x	x
	Main	x		x
	Variation		x	
DB Registration	16'	8		8
	5 1/3'	8		6
	8'	8	7	8
	4'	5	5	
	2 2/3'			
	2'		4	
	1 1/3'			
	1 3/5'			
	1'			

FACTORY PRESETS NO. 19-21

Group	Function	Preset 19 — WERSI Drawbar "Mellow", Vibrato, 3rd Percussion			Preset 20 — WERSI Drawbar "Mellow", Vibrato, User Percussion bright			Preset 21 — WERSI Drawbar "Straight bright", Vibrato		
		Upper	Lower	Pedal	Upper	Lower	Pedal	Upper	Lower	Pedal
Percussion	On	X			X					
	2nd		X	X		X	X		X	X
	3rd	X								
	User				X			X		
	Polyphone									
Time	Short	X	X	X	X	X	X	X	X	X
	Medium	X			X			X		
Envelope	Delay									
	Sustain									
Keyclick	Soft									
	Medium	X			X			X		
Reverb	Program		3			3			3	
Rotor	On									
	Slow									
	Fast		X			X			X	
Percussion	Direct	X	X	X	X	X	X	X	X	X
	Vibrato									
	Rotor									
Drawbar	Vibrato	X	X		X	X		X	X	
Phase-Vibrato	Slow									
	Fast		X			X			X	
	Chorus									
	Normal									
	Celeste		X			X			X	
DB Sound Select	B3									
	Wersi	X	X	X	X	X	X	X	X	X
	Main	X		X			X			X
	Variation		X		X	X		X	X	
DB Registration	16'	8		8	8		8	8		8
	5 1/3'	8		6	8		6			6
	8'	8	7	8	8	7	8		7	8
	4'	7	5		6	5			5	
	2 2/3'									
	2'		4			4			4	
	1 1/3'							4		
	1 3/5'							6		
	1'							8		

FACTORY PRESETS NO. 22-24

PRESET No. 22 — WERSI Drawbar Variation "Straight bright", Vibrato, Rotor Fast

Group	Function	Upper	Lower	Pedal
Percussion	On			
	2nd		x	x
	3rd			
	User	x		
	Polyphone			
Time	Short	x	x	x
	Medium	x		
Envelope	Delay			
	Sustain			
Keyclick	Soft			
	Medium	x		
Reverb	Program		3	
Rotor	On		x	
	Slow			
	Fast		x	
Percussion	Direct	x	x	x
	Vibrato			
	Rotor			
Drawbar	Vibrato	x	x	
Phase-Vibrato	Slow			
	Fast		x	
	Chorus			
	Normal			
	Celeste		x	
DB Sound Select	B3			
	Wersi	x	x	x
	Main			x
	Variation	x	x	
DB Registration	16'	8		8
	5 1/3'	4		6
	8'		7	8
	4'		5	
	2 2/3'			
	2'		4	
	1 1/3'	4		
	1 3/5'	6		
	1'	8		

PRESET No. 23 — WERSI Drawbar Variation "Straight bright", Vibrato, Rotor Slow

Group	Function	Upper	Lower	Pedal
Percussion	On			
	2nd		x	x
	3rd			
	User	x		
	Polyphone			
Time	Short	x	x	x
	Medium	x		
Envelope	Delay			
	Sustain			
Keyclick	Soft			
	Medium	x		
Reverb	Program		3	
Rotor	On		x	
	Slow			
	Fast		x	
Percussion	Direct	x	x	x
	Vibrato			
	Rotor			
Drawbar	Vibrato	x	x	
Phase-Vibrato	Slow		x	
	Fast			
	Chorus			
	Normal			
	Celeste		x	
DB Sound Select	B3			
	Wersi	x	x	x
	Main			x
	Variation	x	x	
DB Registration	16'	8		8
	5 1/3'	4		6
	8'		7	8
	4'		5	
	2 2/3'			
	2'		4	
	1 1/3'	3		
	1 3/5'	6		
	1'	8		

PRESET No. 24 — WERSI Drawbar Variation "mellow", Vibrato, User Percussion Guitar, Rotor Fast

Group	Function	Upper	Lower	Pedal
Percussion	On	x		
	2nd		x	x
	3rd			
	User	x		
	Polyphone			
Time	Short	x	x	x
	Medium	x		
Envelope	Delay			
	Sustain			
Keyclick	Soft			
	Medium	x		
Reverb	Program		3	
Rotor	On		x	
	Slow			
	Fast		x	
Percussion	Direct	x	x	x
	Vibrato			
	Rotor			
Drawbar	Vibrato	x	x	
Phase-Vibrato	Slow			
	Fast		x	
	Chorus			
	Normal		x	
	Celeste			
DB Sound Select	B3			
	Wersi	x	x	x
	Main	x		x
	Variation		x	
DB Registration	16'	8		8
	5 1/3'	8		6
	8'	8	7	8
	4'	4	5	
	2 2/3'			
	2'		4	
	1 1/3'			
	1 3/5'			
	1'			

FACTORY PRESETS NO. 25-27

WERSI Drawbar "Church" — Flute piano — PRESET No. 25

Group	Function	Upper	Lower	Pedal
Percussion	On			
	2nd	x	x	x
	3rd			
	User			
	Polyphone			
Time	Short	x	x	x
	Medium	x	x	
Envelope	Delay	x	x	x
	Sustain			
Keyclick	Soft			
	Medium			
Reverb	Program		3	
Rotor	On		x	
	Slow		x	
	Fast			
Percussion	Direct	x	x	x
	Vibrato			
	Rotor			
Drawbar	Vibrato	x		
Phase-Vibrato	Slow		x	
	Fast			
	Chorus		x	
	Normal			
	Celeste			
DB Sound Select	B3			
	Wersi	x	x	x
	Main	x		x
	Variation		x	
DB Registration	16'	8		8
	5 1/3'			6
	8'	7	7	8
	4'	6	5	
	2 2/3'			
	2'		4	
	1 1/3'			
	1 3/5'			
	1'			

WERSI Drawbar "Church" — Flutes mezzo forte — PRESET No. 26

Group	Function	Upper	Lower	Pedal
Percussion	On			
	2nd		x	x
	3rd			
	User	x		
	Polyphone			
Time	Short	x	x	x
	Medium	x		
Envelope	Delay	x	x	x
	Sustain			
Keyclick	Soft			
	Medium			
Reverb	Program		3	
Rotor	On		x	
	Slow		x	
	Fast			
Percussion	Direct	x	x	x
	Vibrato			
	Rotor			
Drawbar	Vibrato		x	
Phase-Vibrato	Slow		x	
	Fast			
	Chorus		x	
	Normal			
	Celeste			
DB Sound Select	B3			
	Wersi	x	x	x
	Main	x		x
	Variation		x	
DB Registration	16'	8		8
	5 1/3'			6
	8'	8	7	8
	4'	8	5	
	2 2/3'			
	2'	8	4	
	1 1/3'			
	1 3/5'			
	1'	8		

WERSI Drawbar "Church" — Plenum — PRESET No. 27

Group	Function	Upper	Lower	Pedal
Percussion	On			
	2nd		x	x
	3rd			
	User	x		
	Polyphone			
Time	Short	x	x	x
	Medium	x		
Envelope	Delay	x	x	x
	Sustain			
Keyclick	Soft			
	Medium			
Reverb	Program		3	
Rotor	On		x	
	Slow		x	
	Fast			
Percussion	Direct	x	x	x
	Vibrato			
	Rotor			
Drawbar	Vibrato		x	
Phase-Vibrato	Slow		x	
	Fast			
	Chorus		x	
	Normal			
	Celeste			
DB Sound Select	B3			
	Wersi	x	x	x
	Main	x		x
	Variation		x	
DB Registration	16'	8		8
	5 1/3'	3		6
	8'	8	7	8
	4'	8	5	
	2 2/3'	4		
	2'	8	4	
	1 1/3'	3		
	1 3/5'	4		
	1'	8		

FACTORY PRESETS NO. 28-30

PRESET No. 28 — WERSI Drawbar Variation "Church" Tutti

Group	Function	Upper	Lower	Pedal
Percussion	On			
	2nd		x	x
	3rd			
	User	x		
	Polyphone			
Time	Short	x	x	x
	Medium	x		
Envelope	Delay	x	x	x
	Sustain			
Keyclick	Soft			
	Medium			
Reverb	Program		3	
Rotor	On		x	
	Slow		x	
	Fast			
Percussion	Direct	x	x	x
	Vibrato			
	Rotor			
Drawbar	Vibrato			
Phase-Vibrato	Slow		x	
	Fast			
	Chorus		x	
	Normal			
	Celeste			
DB Sound Select	B3			
	Wersi	x	x	x
	Main			
	Variation	x	x	x
DB Registration	16'	8		8
	5 1/3'	8		6
	8'	8	7	8
	4'	8	5	
	2 2/3'	8		
	2'	8	4	
	1 1/3'	8		
	1 3/5'	8		
	1'	8		

PRESET No. 29 — WERSI Drawbar Variation, Sustain, Vibrato Slow

Group	Function	Upper	Lower	Pedal
Percussion	On			x
	2nd		x	
	3rd			
	User	x		x
	Polyphone			
Time	Short	x	x	x
	Medium	x	x	
Envelope	Delay			
	Sustain	x		x
Keyclick	Soft			
	Medium			
Reverb	Program		3	
Rotor	On			
	Slow		x	
	Fast			
Percussion	Direct	x	x	x
	Vibrato			
	Rotor			
Drawbar	Vibrato	x	x	
Phase-Vibrato	Slow		x	
	Fast			
	Chorus		x	
	Normal			
	Celeste			
DB Sound Select	B3			
	Wersi	x	x	x
	Main			
	Variation	x	x	x
DB Registration	16'	8		8
	5 1/3'			6
	8'	8	7	8
	4'		5	
	2 2/3'			
	2'	4	4	
	1 1/3'			
	1 3/5'			
	1'			

PRESET No. 30 — WERSI Drawbar Variation, Sustain, User Percussion bright, Rotor Slow

| Group	Function	Upper	Lower	Pedal
Percussion	On	x		x
	2nd		x	
	3rd			
	User	x		x
	Polyphone	x	x	x
Time	Short	x	x	x
	Medium	x	x	
Envelope	Delay			
	Sustain	x		x
Keyclick	Soft			
	Medium			
Reverb	Program		3	
Rotor	On		x	
	Slow		x	
	Fast			
Percussion	Direct	x	x	x
	Vibrato			
	Rotor			
Drawbar	Vibrato		x	
Phase-Vibrato	Slow			
	Fast		x	
	Chorus			
	Normal		x	
	Celeste			
DB Sound Select	B3			
	Wersi	x	x	x
	Main	x		
	Variation		x	x
DB Registration	16'	8		8
	5 1/3'			6
	8'	8	7	8
	4'	6	5	
	2 2/3'	3		
	2'		4	
	1 1/3'			
	1 3/5'			
	1'			

WERSI Drawbar Variation, Sustain, User Percussion bright, Vibrato Fast, Rotor Slow

WERSI Drawbar Variation, Sustain , 2nd Percussion, Vibrato Fast, Rotor Fast

Group	Function	U	L	P	Group	Function	U	L	P	Group	Function	U	L	P
PRESET No.	**31**				**PRESET No.**	**32**				**PRESET No.**				
Percussion	On	X			**Percussion**	On	X			**Percussion**	On			
	2nd		X	X		2nd	X	X	X		2nd			
	3rd					3rd					3rd			
	User	X				User					User			
	Polyphone	X	X	X		Polyphone	X	X	X		Polyphone			
Time	Short	X	X	X	**Time**	Short	X	X	X	**Time**	Short			
	Medium	X	X			Medium	X	X			Medium			
Envelope	Delay				**Envelope**	Delay				**Envelope**	Delay			
	Sustain	X		X		Sustain	X		X		Sustain			
Keyclick	Soft				**Keyclick**	Soft				**Keyclick**	Soft			
	Medium					Medium					Medium			
Reverb	Program		3		**Reverb**	Program		3		**Reverb**	Program			
Rotor	On		X		**Rotor**	On		X		**Rotor**	On			
	Slow		X			Slow					Slow			
	Fast					Fast		X			Fast			
Percussion	Direct	X	X	X	**Percussion**	Direct	X	X	X	**Percussion**	Direct			
	Vibrato					Vibrato					Vibrato			
	Rotor					Rotor					Rotor			
Drawbar	Vibrato	X	X		**Drawbar**	Vibrato	X	X		**Drawbar**	Vibrato			
Phase-Vibrato	Slow				**Phase-Vibrato**	Slow				**Phase-Vibrato**	Slow			
	Fast		X			Fast		X			Fast			
	Chorus					Chorus					Chorus			
	Normal		X			Normal					Normal			
	Celeste					Celeste		X			Celeste			
DB Sound Select	B3				**DB Sound Select**	B3				**DB Sound Select**	B3			
	Wersi	X	X	X		Wersi	X	X	X		Wersi			
	Main			X		Main			X		Main			
	Variation	X	X			Variation	X	X			Variation			
DB Registration	16'	8		8	**DB Registration**	16'	8		8	**DB Registration**	16'			
	5 1/3'	7		6		5 1/3'			6		5 1/3'			
	8'	3	7	8		8'	3	7	8		8'			
	4'		5			4'		5			4'			
	2 2/3'					2 2/3'					2 2/3'			
	2'		4			2'		4			2'			
	1 1/3'					1 1/3'					1 1/3'			
	1 3/5'					1 3/5'					1 3/5'			
	1'					1'	7				1'			

PRESETS

PRESET No.		Upper	Lower	Pedal
Group	Function			
Percussion	On			
	2nd			
	3rd			
	User			
	Polyphone			
Time	Short			
	Medium			
Envelope	Delay			
	Sustain			
Keyclick	Soft			
	Medium			
Reverb	Program			
Rotor	On			
	Slow			
	Fast			
Percussion	Direct			
	Vibrato			
	Rotor			
Drawbar	Vibrato			
Phase-Vibrato	Slow			
	Fast			
	Chorus			
	Normal			
	Celeste			
DB Sound Select	B3			
	Wersi			
	Main			
	Variation			
DB Registration	16'			
	5 1/3'			
	8'			
	4'			
	2 2/3'			
	2'			
	1 1/3'			
	1 3/5'			
	1'			

PRESET No.		Upper	Lower	Pedal
Group	Function			
Percussion	On			
	2nd			
	3rd			
	User			
	Polyphone			
Time	Short			
	Medium			
Envelope	Delay			
	Sustain			
Keyclick	Soft			
	Medium			
Reverb	Program			
Rotor	On			
	Slow			
	Fast			
Percussion	Direct			
	Vibrato			
	Rotor			
Drawbar	Vibrato			
Phase-Vibrato	Slow			
	Fast			
	Chorus			
	Normal			
	Celeste			
DB Sound Select	B3			
	Wersi			
	Main			
	Variation			
DB Registration	16'			
	5 1/3'			
	8'			
	4'			
	2 2/3'			
	2'			
	1 1/3'			
	1 3/5'			
	1'			

PRESET No.		Upper	Lower	Pedal
Group	Function			
Percussion	On			
	2nd			
	3rd			
	User			
	Polyphone			
Time	Short			
	Medium			
Envelope	Delay			
	Sustain			
Keyclick	Soft			
	Medium			
Reverb	Program			
Rotor	On			
	Slow			
	Fast			
Percussion	Direct			
	Vibrato			
	Rotor			
Drawbar	Vibrato			
Phase-Vibrato	Slow			
	Fast			
	Chorus			
	Normal			
	Celeste			
DB Sound Select	B3			
	Wersi			
	Main			
	Variation			
DB Registration	16'			
	5 1/3'			
	8'			
	4'			
	2 2/3'			
	2'			
	1 1/3'			
	1 3/5'			
	1'			

CONNECTING THE Baby b. TO A PC FOR MIDI DUMPS; SAVING PRESETS

1) Connect the MIDI OUT jack of your **Baby b.** with the MIDI IN jack on your PC (or Sequencer hardware). Connect the MIDI OUT jack of your PC with the MAIN IN jack on the **Baby b.**.

2) Connect the included powersupply to the POWER IN jack on the **Baby b.**. Power up both PC and **Baby b.**. If you are using a PC with MIDI software, load the appropriate software on the PC.
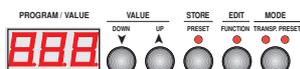
SAVING PRESETS

3) Press the EDIT button and then the VALUE UP button until the display shows „bul" for BULK. Set your MIDI software to receive system exclusive MIDI data.

4) Press the EDIT button to begin the transfer. You can monitor the transfer progress in the **Baby b.**'s display. Save the data received in your MIDI software to a data medium (hard drive, diskette, etc.)

LOADING PRESETS

Load your MIDI software containing the presaved **Baby b.** BULK DUMP. Use the appropriate commands in your software to begin sending the data to the **Baby b.**. You can monitor the transfer progress in the **Baby b.**'s display. Do not press any buttons on the **Baby b.** during the transfer.
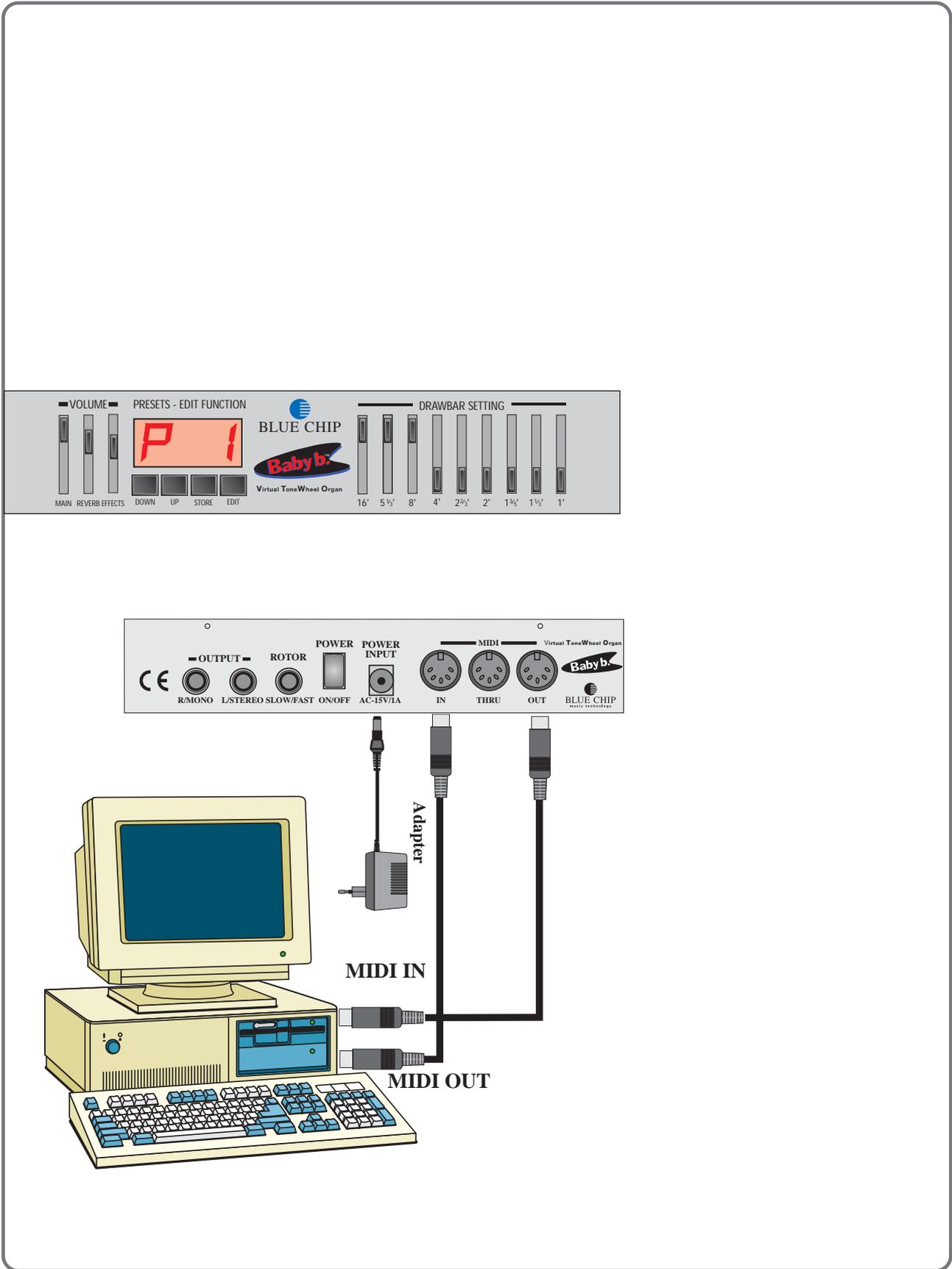
SOFTWARE UPDATE WITH A PC

Your **Baby b.** is equipped with the special feature of being able to update its own operating system via MIDI. In this way it is possible for you to install the latest system software updates including newly added functions and features without having to open the case and install chip or cards. Contact your dealer to obtain system software updates.

In order to update your system software, you will need a PC with MIDI sequencer software. If you don´t own the appropriate equipment, perhaps your dealer will update the software for you if you take the **Baby b.** in. Or perhaps you can borrow the equipment from a friend.

1. Connect your **Baby b.** and PC/software as described in the section "Connecting the **Baby b.** to a PC for MIDI Dumps".

2. Start your MIDI software and load the **Baby b.** MIDI DUMP file containing the system software update.

3. Begin the transfer by using the appropriate system exclusivesend command in your MIDI software. When the tranfer is finished "End" appears in the display.

4. Turn your **Baby b.** off and back on. The new system software is now in operation.

If an error occurs during the transfer, "ErP" appears in the display. Set your MIDI software (songpointer) to begin the transfer, and reinitiate the transfer.

SENDING THE INTERNAL OPERATING SYSTEM SOFTWARE TO A PC OR TO ANOTHER Baby b.

Using the MIDI OUT port you can send the Operating System software to a PC or to another **Baby b.**. The operating system is 250 kb.

1. Press the EDIT button on the **baby b.** with the new software and then the DOWN button until in the display appears „rod".

2. Press and hold STORE, EDIT and MODE buttons on the **baby b.** with the old software and while holding them, power up your **baby b.**. In the display appears the software version and the message "LOD".

3. Use the EDIT button on the **baby b.** with the new software to begin the transmission. When the transmission is finished, you will see „END" in the display of the other **baby b.**.

MIDI IMPLEMENTATION

Software Version 5.0

	Transmit	Receive	Hinweise
Basic Channel Default Channel	1, 2, 3 1 - 16	1,2, 3 1 - 16	Memorized Memorized

Mode   Default
             Messages
             Altered
	Poly
	X
	X
		Poly
		X
		X	

Note Number True Voice	X	1 - 128	
Velocity Note ON Note OFF	O O	O O	
After Key´s Touch Ch´s	X X	X X	
Pitch Bender	O	O	
Control Change	- 3 8 - 11 16 20 bis 29 52 bis 60 64 65 91 98, 99 100,101	1 3 8 7 11 16 20 bis 29 52 bis 60 64 65 91 98,99 123	Distortion Data Entry MSB Volume Expr. Pedal (nur auf Upper Channel) Percussion Volume Drawbars 16, 8, 5 $^{1/3}$, 8, 4 , 2 $^{2/3}$, 2, 1 $^{3/5}$, 1 $^{1/3}$, 1 Percus. 16, 8, 5 $^{1/3}$, 8, 4 , 2 $^{2/3}$, 2, 1 $^{3/5}$, 1 $^{1/3}$, 1 Sustain Leslie slow/fast Reverb Volume (nurUpper Chan.) Non-Registered Parameter (Siehe Liste nächste Seite) RPN (Pitch Bend Sensiv.) All Notes Off
Program Change True#	O (1-99)	O (1-99)	
System Exclusive	O	O	Preset Dump
System :Song Pos :Song Sel Common :Tune	X X X	X X O	
System :Clock Real Time:Commands	O O	O O	
Aux :Local ON/OFF Mes- :All Notes Off sages :Active Sense :Reset all Cntr.	X O X X	X O X X	
Notes			**o** : Yes **X** : No

SWITCH FUNCTION USING NON-REGISTERED PARAMETERS

These functions apply to the buttons and switches on the OX7. They can be sent and received when the appropriate function in the program menu is set to „ON".

Funktion	MIDI Data	Range	Notes
Reverb Typ	B0 63 02 62 10 26 XX	XX = 0..5	Reverb progr. 1..6
Rotor ON / OFF	B0 63 02 62 01 26 XX	XX = 0,1	0=Off, 1=On
Rotor SLOW / FAST	B0 63 02 62 02 26 XX	XX = 0,1	0=Slow, 1=Fast
Vibrato ON / OFF	B0 63 02 62 04 26 XX	XX = 0,1	0=Off, 1=On
Vibrato SLOW / FAST	B0 63 02 62 05 26 XX	XX = 0,1	0=Slow, 1=Fast
Vibrato/Chorus/Celeste	B0 63 02 62 26 26 XX	XX = 0..2	0=Vib, 1=Chor, 2=Cele
Percussion ON / OFF	B0 63 02 62 0A 26 XX	XX = 0,4	0=Off, 4=On
Harmic 2nd/3rd/User	B0 63 02 62 0B 26 XX	XX = 0..2	0=2nd, 1=3rd, 2=User
Percus. Mode	B0 63 02 62 0C 26 XX	XX = 0,1	0=Poly, 1= Mono
Percus. Short/Med/Long	B0 63 02 62 0D 26 XX	XX = 0..2	0=Shrt, 1=Med, 2=Lng
Percus. Dir/Vib/Rotor	B0 63 02 62 03 26 XX	XX = 0..2	0=Dir. 1=Vib, 2=Les
Envelp Del/Sust/Both	B0 63 02 62 0E 26 XX	XX = 0..2	0=Del, 1=Sust, 2=Both
Click Off/Soft/Med/Loud	B0 63 02 62 0F 26 XX	XX = 0..3	0=Off, 1=Soft, 2=Med, 3=Loud
Drawbar B3/WERSI	B0 63 02 62 07 26 XX	XX = 0,2	0=B3, 2=WERSI
Drawbar Main/Variat	B0 63 02 62 08 26 XX	XX = 0,1	0=Main, 1=Variat

SOUND PROGRAMMING USING MIDI

You can make changes to your sounds remotely over MIDI and save them in the permanent memory of your **Baby b.**. In order to do this, you must send the appropriate sysex message (see table below). Otherwise these parameters cannot be changed.

Note: In order to save the changes to the permanent memory of the **Baby b.**, you will need to send the „STORE" command. Otherwise, when you turn your **Baby b.** off, all your changes will be lost.

Function	MIDI Data	Range	Notes
Start Programming	**F0 00 20 2D 40 7E F7**		
Leslie speed SLOW	Controller 99 => 08 / Controller 98 => 100 / Controller 38 => XX = 0..7F		
Leslie speed FAST	Controller 99 => 08 / Controller 98 => 101 / Controller 38 => XX = 0..7F		
Leslie Bass Level	B0 63 08 62 44 26 XX	XX = 0..7F	
Leslie Horn Level	B0 63 08 62 45 26 XX	XX = 0..7F	
Leslie angle Bass	B0 63 08 62 42 26 XX	XX = 0..7F	
Leslie angle Horn	B0 63 08 62 43 26 XX	XX = 0..7F	
Leslie radius Bass	B0 63 08 62 3C 26 XX	XX = 0..7F	
Leslie radius Horn	B0 63 08 62 3D 26 XX	XX = 0..7F	
Percussion direct	B0 63 08 62 28 26 XX	XX = 0..7F	
Percussion to Vibrato	B0 63 08 62 29 26 XX	XX = 0..7F	
Percussion to Leslie	B0 63 08 62 2A 26 XX	XX = 0..7F	
Percussion Short	B0 63 08 62 55 26 XX	XX = 0..7F	
Percussion Medium	B0 63 08 62 56 26 XX	XX = 0..7F	
Percussion Long	B0 63 08 62 57 26 XX	XX = 0..7F	
B3 Clic Level	B0 63 08 62 09 26 XX	XX = 0..7F	
WERSI Clic Level	B0 63 08 62 08 26 XX	XX = 0..7F	
Vibrato Depth	B0 63 08 62 6F 26 XX	XX = 0..7F	
Vibrato Speed	B0 63 08 62 6E 26 XX	XX = 0..7F	
Vibrato Dry / Wet	B0 63 08 62 36 26 XX	XX = 0..7F	
Sustain Time	B0 63 08 62 58 26 XX	XX = 0..7F	
STORE in Flash rom	B0 63 08 62 04 26 XX	XX = 01	

Program Maps for Cubase

Most modern sequencers are equipped with a feature that allows for editing information input from a diversity of tone generators. Usually there are graphically oriented tools such as sliders, potentiometers, and switchboards available that can be freely programmed to meet your personal needs for editing. To make this easier for you, we have created a mixer map template for Steinberg's Sequencer, CUBASE, which is available in versions for MAC, ATARI and PC.

In the sub-directory "Mixer Maps" you will find three sub directories for "PC", "MAC" and "ATARI" computers.

Upper/Main
Settings for the Upper Manual (MIDI Channel 1) as well as general settings.

Lower/Bass
Settings for the Lower Manual and Bass Pedal.

Baby b. Program
Here you can change the settings for the Rotor ans Phase Vibrator and memorize them in the **Baby b.**. Furthermore it is possible to change the length of the sustain and percussion as well as routing settings. Before you commence with programming, press the STARTbutton once in the mixer map. If you wish to memorize the settings in the **Baby b.**, press the STORE button in the mixer map.

For further help concerning the operation of the mixer maps please refer to your CUBASE operation manual.

MIXERMAP UPPER

MIXERMAP LOWER / BASS

MIXERMAP PROGRAM

Baby b.™