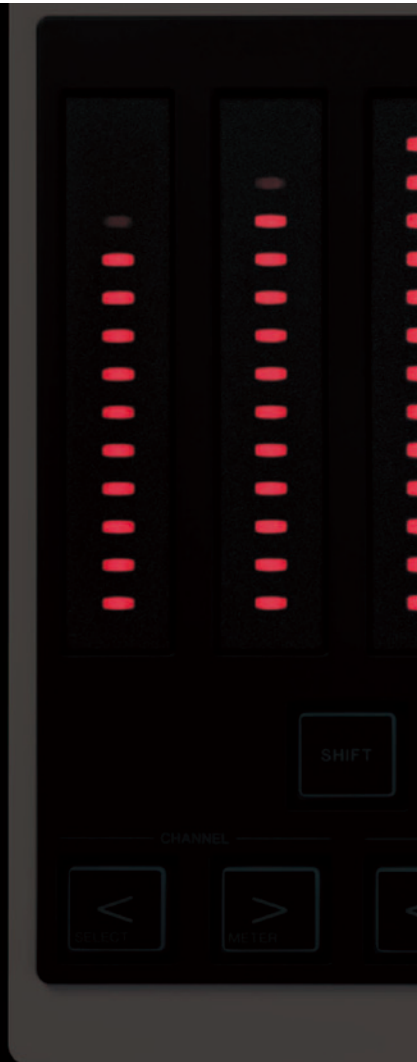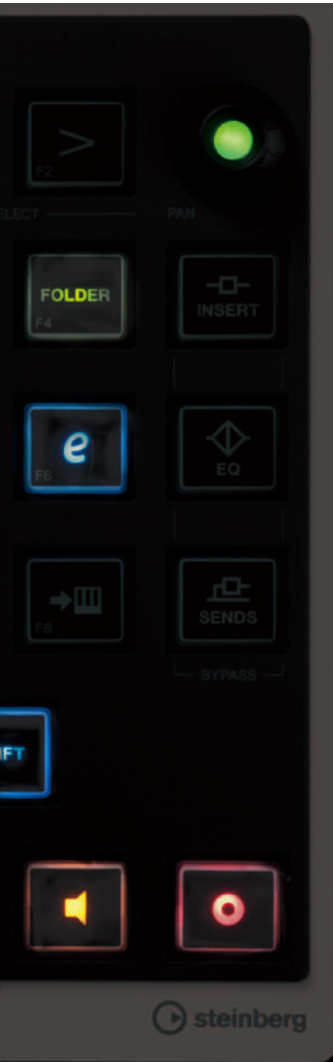# GUIDE BOOK

CMC Operation guide for creative music production

CMC
SERIES

TAKE CONTROL!

Streamline the workflow in music production

Add new functions to Cubase

steinberg
Creativity First

This guide book shows you how physical controllers can improve your workflow, along with actual workflow during music production whether it's recording, waveform editing or mixing.

What is a physical controller?

Some music production software, such as Cubase, function as mixers or synthesizers that are controlled on the computer via input devices like a mouse or a keyboard. Traditionally, music devices (hardware) have various switches and knobs to create sounds or to adjust balances. Contrarily, the computer mouse or keyboard do not provide the same operability. So, special controllers, with knobs and faders that can be connected to a computer became popular. These controllers with physical operators are called "physical controllers."

Physical controller for Cubase & Nuendo: "CMC"

There are two types of physical controllers: generic controllers that support various software and special controllers that are designed for particular software. While generic controllers seem to be more widely applicable, the supported functions tend to be limited. On the other hand, special controllers provide more in-depth support with its software so that you can use them in sync.
Optimized for Cubase and Nuendo, physical controller "CMC" is designed to allow users to control most of their functions and provide intuitive controls for basic functions like record and play to editing functions like zooming, marking and fading. There are 6 models of controllers for various applications. By combining them, you can build the best private studio environment.

Do I need a physical controller?

Many of you might think, "It does not make sense to use controllers to operate functions that are operable with a mouse or computer keyboard," or, "It is easier to use a mouse…" The following pages are some benefits of using physical controllers.

☑ Relief from fatigue

There is a word for what can be called "mouse elbow", we sometimes hear tennis elbow, but mouse elbow is used to refer to pains in fingers/wrists due to excessive use of a computer mouse.
You may not gain this "mouse elbow" from surfing the net or writing emails. However, this is a serious problem for those who take on projects that involve time-consuming editing with DAW (music production tool like Cubase), or designers who draw on the computer. When using computer mice, users often move their hands, fixing the wrist on the desk as a pivoting point. When pressure is added unconsciously, it might hurt the wrist, and the mouse operations like clicking and scrolling while the wrist is bent may further hurt joints. However, it is also hard to operate the mouse without fixing the wrist on the desk because the mouse pointer would be unstable.
With physical controllers, you can touch buttons and switches. You can also operate faders and knobs to change the values without fixing the wrist into a pivoting point. In fact, the level of fatigue is more than double when mixing a song using only a mouse rather than using a physical controller.
Reducing the physical burden is one of the physical controller's benefits.

◢ You can use functions that computer mice and keyboards cannot support

Intuitive operation . . . is the selling point of most physical controllers. For example, to move the pan pot using the mouse with wheel, you need to move the mouse's cursor over the pan pot on the Cubase mixer (see the picture) and scroll the mouse wheel to make changes (of course you can change it by clicking and dragging with the mouse). Some people may think that's enough, but isn't it a little strange to move something that moves horizontally by scrolling a mouse wheel vertically?

With a physical controller, you can control just like you were using a hardware mixer: turn the knob clockwise/counter clockwise to move the value left and right. You can operate naturally. (The picture is PAN knob of CH).

Also, physical controllers have a function that computer mice and keyboards do not have: touch sensitivity. Mice clicks and computer keyboards act like switches, but they are not touch sensitive. On the other hand, physical controllers with velocity sensitive pads like PD (the picture) can detect pressure of the touch and control various parameters.

You haven't seen any computer with knobs, have you? Knobs can be an important item to have to compensate for a computer's standard input device.

◢ You don't need a dominant hand to operate

Which hand do you use to operate a computer mouse?

Most of people would answer, "It's definitely my dominant hand!" For right-handed people, operating the computer mouse with the left hand is as difficult as writing with the left hand. What about knobs and buttons? Surprisingly, turning knobs or pressing buttons is not difficult with the non-dominant hand. Yes, another benefit of using physical controllers is that they allow you to use either hand to operate. Of course, operating with both hands will increase efficiency. You can imagine how efficient the workflow would be.
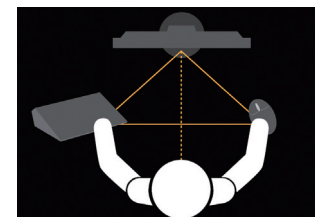
Another benefit is that you can utilize your non-dominant hand. Most of people who create music in front of Cubase also play guitar or keyboard (such as synthesizers) at the same time. For example, many guitarists may operate Cubase while holding guitars and having a guitar pick in one hand. It is very frustrating to change a plug-in effect's knobs or to set the start point for the recording by moving a mouse with the right hand while already holding items or with the unstable left hand. With the physical controllers, you can easily operate with your left hand.
If you play synthesizers at a live performance, imagine which hand you use to switch the sounds. You may realize that you actually use the left hand a lot. If so, you will be addicted to physical controllers.

I hope you can understand some benefits of physical controllers. Now let's see how convenient it will be by combining Cubase and the "CMC" series.

# Audio recording and CMC

CMC-TP

This chapter introduces some basics to use TP for those who want to use Cubase as an MTR (Multi Track Recorder).
TP is designed for controlling transport function--play, record and fast forward. TP is one of the DAW physical controllers that is relatively easy to understand.

Let's try to use this TP to control Cubase as an MTR. Please note only 1 TP cannot cover all of Cubase's functions, so we will use the computer keyboard from time to time.
Here, let's use "Classic Rock Production" from Cubase 6's project templates as a recording example.
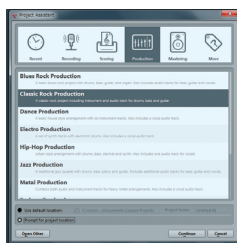
When you open the template, you can see drum patterns. Guitar and Bass tracks have effect settings. Let's record an electric guitar part on the Guitar track.
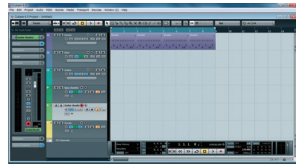
To utilize a physical controller, it is essential to "use the computer mouse as little as possible." As you get used to operations without a mouse, the efficiency will be improved and you will enjoy the benefits of physical controllers. Let's change one setting so that you don't have to use a computer mouse during your work.

Open Preferences from Cubase 6's file menu and click VST. In most cases, the "Auto Monitoring," which is second from the bottom, is set to "Manual." Change the setting to "Tapemachine Style." Press "Apply" and then "OK" to close the environment setting.
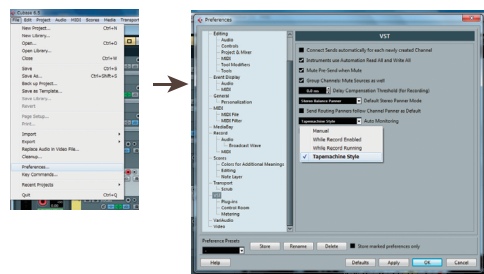
This setting is to switch on/off the monitoring switch on the Cubase 6 tracks (see picture below) automatically. The "Tapemachine Style" setting turns on the monitoring during recording and stand-by and you will hear the sound of electric guitars connected to an audio interface with an effect that is set at the track. When you finish recording and switch to playback mode, the monitoring will be automatically turned off and you will hear the sound that you recorded in the track.
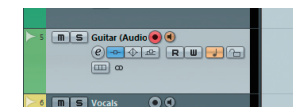
Now we are ready to record guitar sounds. From now on, try not to touch the mouse.

You can choose tracks by using up/down keys on the computer keyboard.

You should have already selected a guitar track, but if not, select it using up/down keys.

Next, press the left of the "previous/next marker button" to set the start position for the recording at the beginning of the track (you can also move back to the beginning with SHIFT + stop button).

Now, let's set up the click sound.

You can turn on/off the click by pressing the "cycle" button while holding SHIFT button. Turn the click on.

You can also turn on/off the pre-count (play click sound for a few bars before recording is started) by pressing SHIFT button and the right bar move button (F3). Let's turn this on also.

Now, let's start the recording.

When you press the record button, you will hear the drum sound after 2 bars of pre-count. Play the guitar to record it.
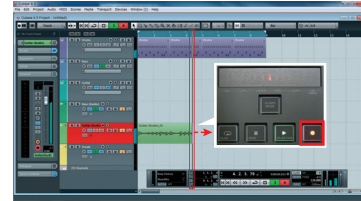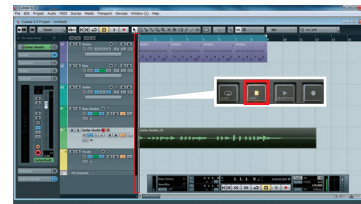
When you finish recording, press the stop button to stop the recording.

Now, let's listen to the recorded sound from the beginning.

When you press the stop button again, the locator goes back to the beginning.

Press the play button to play back the recorded sound.

Press the stop button once to stop the play back and press it again to go back to the beginning

Cycle on/off   Stop   Play   Record

When you press the button while it is stopped, it goes back to the beginning (where you start the playback).

Next, let's play from the middle of the part.

Press the fast forward button to move the project cursor (the vertical line that shows the playback position) to the right. Release the button at a certain position and press play button to play from that position. To go back, press the rewind button to move the project cursor to the left.

You can move the project cursor by these buttons.
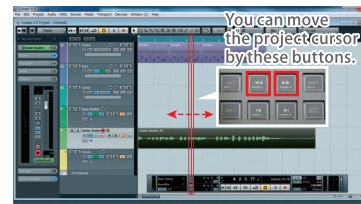
This fast forwarding and rewinding operation is one of the best parts of physical controllers. When using a mouse, you have to change the position to click on the transport panel, so you need subtle mouse movements. It is irritating to do this task with the right or left hand while holding guitar picks, but with TP, you can easily assume control with just your fingertips. The transport panel of the software does not have a button to move bars, but TP has the step bar forward/backward buttons, which moves it by one bar.

Push here

※You have to move between these two buttons with the mouse. With TP, you can fast forward and rewind by pressing the button.

Next, let's dub over another guitar sound on the recorded track. You can do so by creating a new track, selecting plugin effects and so on, but you may want to play for another track with the same sound.

TP has very useful buttons for this.

Press the "COPY TRACK" button on the left bottom of the upper part.

COPY TRACK

The recorded performance is copied with the track, as shown in the picture.
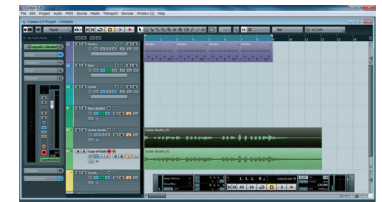
It was not only a recorded audio file that was copied, but a set of effects for the track as well. Now, press the down arrow button of the computer keyboard once to select the audio file of the copied track, and then press the delete key of the computer keyboard. You can have the track with the effect settings copied where you can have a new recording.
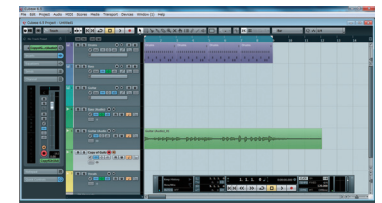
Repeat the recording following the previous steps. You can proceed throughout the recording without touching your mouse.
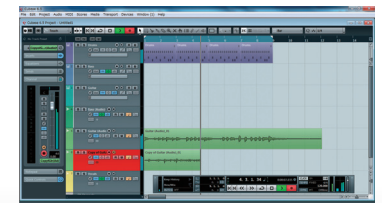
CMC-AI

Now, let's see how to use the CMC series when 2nd or 3rd units are added.
In the previous example, the second guitar was recorded by copying the sound that was set in the project template. AI comes in handy when you want to change the sound.

AI stands for Advanced Integration, and as the name shows, you can easily control software using AI. For example, you can change various parameters using knobs with push buttons. It is especially useful when selecting presets of VST effects and VST instruments.

Continuing from the previous step, let's now add a clean guitar track.
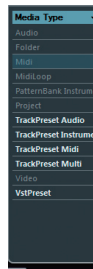
Make sure that the AI's knob mode is set to AI, and push the AI knob.

The screen to select track presets appears.

The left side is the category filter. By turning the AI knob, you can select the "Media Type" column.

In this example, select "TrackPreset Audio" to select a preset for an audio track. Move the lightly shaded part over the "TrackPreset Audio" and press the AI knob. It will be highlighted in white and move to "Category" column to select.


Some categories are boldfaced to show that the presets are available (if you check other filters that are not boldfaced, search results will not be displayed). Set the "Category" to "Guite/Plucked" and press the AI knob. Then continue to select "Clean" >"Pop".


As for the last "instrument," the "Pop" category does not have the presets, so nothing is in bold. Press the right AI browse button (see the picture) to skip this filter selection, p and move to search result.


You can select presets in the search result column by turning the AI knob. Select "Studio Clean Chorus Guitar" and push the AI knob.
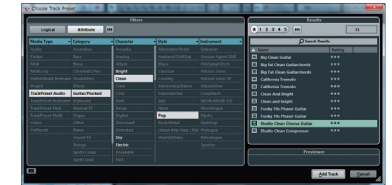
Now a new track with effect setting for a clean guitar is added and you can continue the recording.
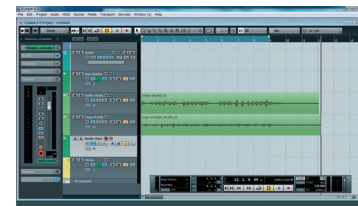

※In this picture, filter is displayed on the left, but it may be displayed differently depending on the window layout setting. When you press Shift+F2 while "Select Track preset" screen is displayed, the screen for the window layout setting is displayed. Select a filter using the AI's browser button and press the AI knob to check the "filter" check box.
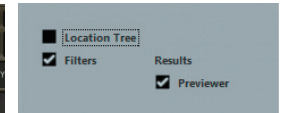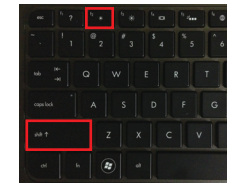
Some track presets have audio input set as Stereo IN. Open VST connection to match the input of the audio interface that the guitar is connected to and the input of Stereo IN (the name within the devise port).
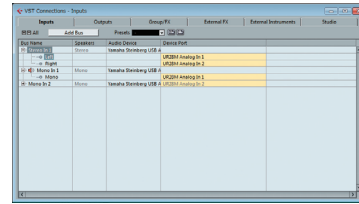
There are 4 function buttons on the top of AI: F1 to save, F2 to undo, F3 to open/close the mixer window, and F4 to redo. They are very useful when you want to redo the recording or save right after the recording.

Save   Undo   Open/Close mixer window   Redo
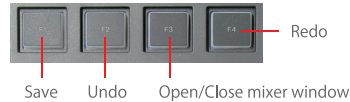
By using AI along with TP, you can further improve the MTR operability. "CMC" series comes with Cubase AI. So if you have a multi effector for a guitar that can be used as an audio interface, you already have MTR by only adding TP or AI.

TP for waveform editing

CMC-TP **When it comes to waveform editing, some of you might think you will use the computer mouse a lot, but using TP and some short cuts, you can do advanced editing without mouse.**

First, let's look at the recorded waveform in the sample editor. You can select waveforms using arrow keys on the computer keyboard. Locate the track using up/down arrow key and select the waveform using the right arrow key.
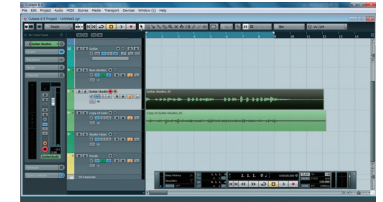
Then press the Enter key (not the Enter on the ten key but the one on the keyboard) to open the sample editor.

Now TP comes in handy.

First, let's start finding the general location. Press the TP's SLIDER MODE switch and the red LED will blink while the switch is held.

There are 6 modes listed under the slider: JOG, SHTL, LOCATE, SCRL, ZOOM, TAP TEMPO. The blinking light shows the mode currently selected.

Here, let's use LOCATE mode.

The project cursor moves as you move your finger on the slider.
When you move your finger to the right end of the TP's slider, release your finger and start from the left end again.

If you want to move your cursor in large, you can swipe your finger on the slider. The project cursor moves and seems to roll by way of inertia. It is fun to watch this take place. Experience it by yourself!

To zoom in/out of the display range of the sample editor, pinch in/out on the slider. Place the two fingers on the slider and open/close them. The screen zooms in and out along your finger's movements. Set the size to your preference.


Next, suppose you want to delete a particular part.

Move to the area around the point in question and locate the exact point by listening to the actual sound. Find the starting point of the area by listening to the sound with fast forward, rewind, play and stop. You can move in smaller steps by pressing the fast forward/rewind button while holding the SHIFT button.


To check the beginning of the sound in details, set the SLIDER MODE to JOG and use the slider to move the project cursor. You'll hear the sound like a tape recorder in slow mode, which will enable you to easily analyze details.
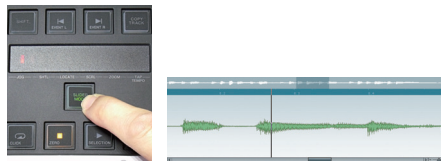
※Set Auto Monitoring to "Manual" to turn off the monitoring switch so that track sound is played at playback.

※You can find the position, while listening to the sound, by moving the project cursor over the waveform.

When you locate the position, press the LEFT button while holding the TP's SHIFT button to place the Cubase's left locator to the project cursor location.
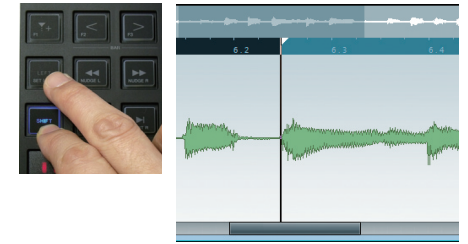
Now let's set the end position of the area to delete. Like before, move the project cursor to the position using fast forward and slider.
Next, press the RIGHT button while holding the TP's SHIFT button to set the project cursor as the right locator.

Now we use the Cubase's shortcut.

After pressing Alt+E, press S, and then I. The area between the left and right locators you set is selected.
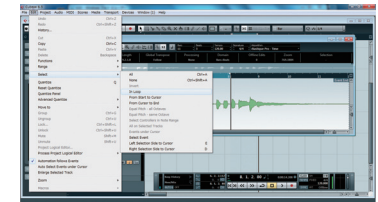
You can delete the selected area by pressing the Delete key. Clearly, all these things can be done without a mouse.

Area selected

Deleted

MIDI Data entry and CMC

If you feel tired to use Cubase shortcuts, you can register the shortcuts on the CMC.
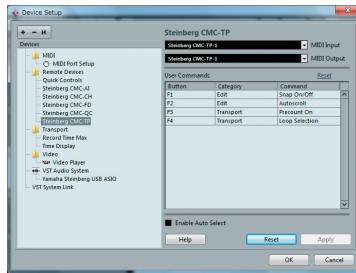
When you open the device setup window from Cubase's Device menu, the CMC in use is displayed on the remote device column.
The number of shortcuts you can register depends on the model, but for TP, for example, you can assign up to 4 shortcuts to function keys F1 to F4. Press the 4 buttons in the upper section to activate these keys while holding SHIFT button.

As a default, snap on/off, auto-scroll on/off, pre-count on/off and repeat the selected area are assigned, but by clicking on the command column, you can choose from all of the Cubase's shortcut commands to assign. You can assign Alt+E&S&I and trigger it by TP's button.
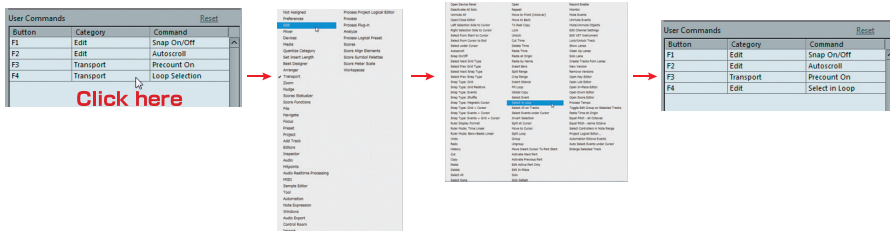
You should understand that you can edit with CMC and a computer keyboard without using mouse. When you get used to working this way, you can reduce the burden to your wrist significantly. This is a big benefit, especially for guitarists whose right wrist is important.

CMC-PD
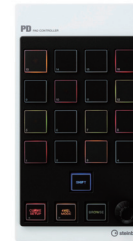
Here, we will show you how to use a physical controller to create music using VST instruments or synthesizers.
A strong recommendation for those who prefer programming is PD. PD is the only one controller that, among the CMC series, concentrates more on instruments' characteristics. Especially unlike the other models, its 16 pads are velocity sensitive, which can detect the pressure of the pressing (hit) of the pad. So you can use this like an instrument.
Now let's take a look at the example.

This example assumes that there is a track where drum sounds are set, but by selecting the VST preset with AI, you can add a VST instrument and select the sound when you add a new track.

First example is a real-time data entry.

PD has 2 modes. In the first mode, Normal mode, a note is assigned to each pad (act like keys of keyboards). The second mode, 4 Velocity Mode, uses 4 pads all together to produce a note.

Let's start using the first mode.

Obviously, 16 notes are assigned to the pads, but you can create up to 15 "assignment sets" of the assignment (banks). That means, you can control total 240 notes (16 x 15).
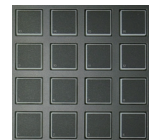
However, there are only 128 notes in MIDI from the lowest note to the highest note. So there will be duplicates of the notes. By default, Bank1 is ideal for entering a drum set of the GM sound module. From Banks 2 to 8, the notes E2 to G7 are programmed in semitones. Banks 9 to 15 are the exactly same as Banks 2 to 8, but unlike Banks 2 to 8 you cannot change Banks 9 to 15. So consider Banks 9 to 15 like backups of Banks 2 to 8.
You can assign keyboard shortcuts to Bank 16 instead of notes. By using this function, you can assign various operational commands (quantize, play, stop and so on) for your convenience.

Let's try to enter drums using Bank 1's GM mode.
Pad 7 is assigned to closed hi-hat, pad 1 to bass drum, and pad 4 to snare drum. Start the recording (if you have a TP, you can start by hitting the TP's record button) and start hitting the pad.

As the picture shows, a drum pattern with velocity is entered.
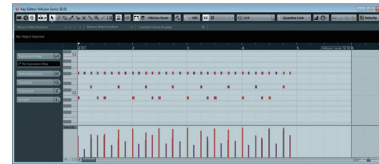
Different music styles (Rock, Jazz, Techno, House and so on) have different dynamics.
Depending on the VSTi's settings, the dynamics of your performance may not be properly reflected. To fine tune the response, PD has a function to set velocity curb.
To explain better, let's try to use the "CMC-PD Editor," which is included with PD.

CMC-PDEditor

Launch "CMC-PD Editor" and click the "VELOCITY CURVE" tab on the top.
The screen to set the "VELOCITY CURVE" is displayed. You can see that Normal is selected.
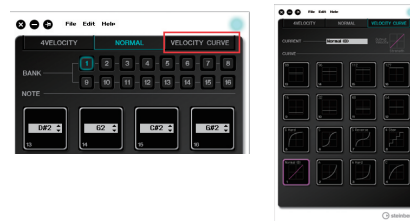
If unwanted notes are recorded, select the 4th "C" or 5th "C Hard" to reduce the response to small velocities. If you need more sensitivity, select "A" or "A Hard".

This is not only beauty of the pads.

By using this "CMC-PD Editor," you can change the notes that are assigned to the pads. If the GM set was not easy to use, click the "Normal" tab on top of the "CMC-PD Editor" and select BANK button 1 to change the notes displayed on each pad.

Click the pad to highlight in purple; click on the bottom keyboard to select the note you wish to control.

By changing the setting for each pad, you can create your original drum set.

BANK 1 to BANK 8 are changeable. You can prepare several presets for various instruments.

This function is not only for the drums.

For example, by assigning the scale tone (Do, Re, Mi, Fa, So, La, Ti…. and so on) on the pad, you can play along with the backing track by hitting the pads.

You can also convert the pad to a bass pad machine by assigning 4 root notes in the bass range to Pads 1 to 4, those very notes a 5th higher to Pads 5 to 8 and an octave higher to Pads 9 to 12, and other root notes to Pad 13 to 16. This way, you can play music using only the pad.
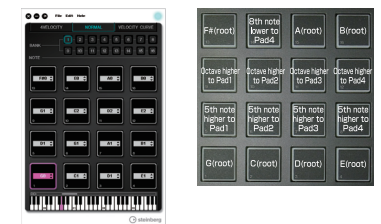
You can use the pads as a keyboard or a useful input device depending on your ideas, so try to explore it.

PD has another mode that is called "4VEL MODE." In this mode, you can assign one note with different velocities in the same column. It is effective when you want to set the velocity value precisely, or when you want a step input with intonation.

Column
Note 1 Note 2 Note 3 Note 4
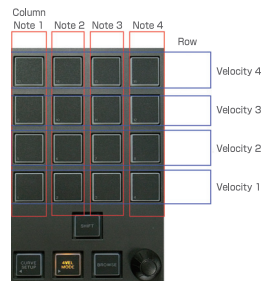Row
Velocity 4
Velocity 3
Velocity 2
Velocity 1

There are a total of 8 banks for 4VEL MODE, and you can assign 4 notes per bank; up to total 32 notes. By default, the notes from B0 are assigned in semitones, which is ideal for GM drum sets. However, you can change the setting using the "CMC-PD editor," so you can use a sampler or other drum sounds than GM.

The following picture is an example of step input in 4VEL MODE using GM drum set.
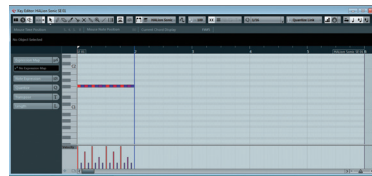
The pads 4,8,12 and 16 of Bank 2 are assigned to closed hi-hat. Set quantize to the 16th note and hit the pads 16,4,12,4,16,4,8,4,16,4,12,4,16,4,8,4. Doing this will give you a groovy hi-hat.

If 127 is too high for the maximum velocity of hi-hat, you can change the velocity values of each pad using "CMC-PD Editor." Click on the 4VELOCITY tab on the top of "CMC-PD Editor" and select the bank to display the velocity value of each pad. Use the up/down keys next to the value to make changes.

If EASY SETUP is ON at that time, all the velocities in the same row will be changed. If you want to change only selected velocity (only hi-hat, for example), turn off EASY SETUP.

Software synthesizer and CMC –HALion Sonic SE and PD&QC–

Next, we will show you a more advanced input method.

If you use Cubase 6, you may already use a software synthesizer called HALion Sonic SE. This is the perfect synthesizer for use with CMC.

CMC-QC Let's begin with an easy-to-understand combination: HALion Sonic SE and QC.

This picture is a screen of HALion Sonic SE. 8 knobs are displayed above the keyboard and parameters such as sounds and effects are assigned to each knob. Actually, these 8 knobs are linked to the 8 top knobs on the QC. By setting QC to the QC mode (the button with knob icon is lit in blue), you can control these 8 knobs without setting anything.

If you cannot find any parameter you want to control from HALion Sonic SE's 8 parameters, you can change the setting. Press the QC's f/Q LEARN button to blink, and then open the HALION Sonic SE's edit screen. Move the mouse cursor over the parameter you wish to control and move QC's knob.

When you finish the setting, press the f/Q LEAN button again and exit the setting mode.

The QUICK CONTROL that is learned by the f/Q LEARN button can be saved for each CH (track). So you can control different parameters for each sound instantly, just like you would on a hardware synthesizer.
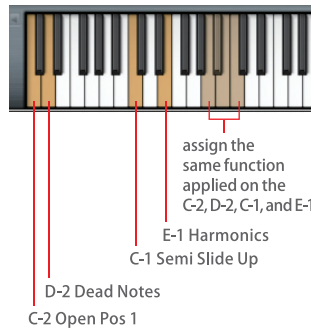
CMC-PD **Another controller which is good to use with HALion Sonic SE is PD.**

As previously introduced, the typical use of this PD is as a keyboard for programming. But this PAD can be useful for those who already have a keyboard too: you can use it as a key switch.

In the following picture, the sound called "Dry Finger Bass" is loaded and the lower keyboard is showing up to the lowest key.

Look at the keyboard closely and you will find that some keys are colored differently. These keys called key switch are programmed to change the sound when pressed. The C-2 on the left end is Open Pos 1 and it plays a normal bass sound. D2 is Dead Notes and play mute sounds. C-1 is Semi Slide Up and plays glide sounds from a semitone lower note. E-1 switches to harmonics sound. These 4 key switches are copied to keys from A1 to C0 for easier use.

assign the
same function
applied on the
C-2, D-2, C-1, and E-1

E-1 Harmonics
C-1 Semi Slide Up
D-2 Dead Notes
C-2 Open Pos 1

Usually, a keyboard for input is used to switch these key switches, but unless you have an 88-key keyboard, it is hard to play the lower keys. So, let's assign these key switch notes to PD's pads. You can set Pad 1 to 4 of Bank 8 to these 4 key switches. By placing PD next to the keyboard, you can play the keyboard while using the pad to switch the sound.

Also, this Bass sound has special samplings, including glissando or fret noise in some keys higher than C5. You can assign these samplings to the pads. When using only a keyboard, you need to transpose a lot to do this task, but with PD, you can put them in 16 compact pads.
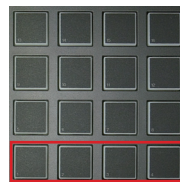
※use this part as
key switches.

Here is one more fun tip to try in combination with HALion Sonic SE.

HALion Sonic SE's screen has 8 pads. First, let's link these pads to PD's pads.

An electric piano sound, "Amplified Wurli," is selected here.

Set the lower keyboard to display the lowest key. You will see the keys in gray. Since no notes are assigned in this gray area, let's link HALion Sonic SE's pad and the keys in this area.

Right click on the top of the pad to select "Learn Trigger Note" and click the key of the note that you wish to link using the keyboard below. Here, we will assign 8 notes from C-2 in semitones.
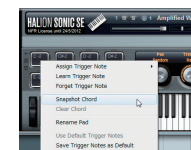
Next, use "PD Editor" to assign each note (C-2 to G-2) to the top 8 pads (pads 9 to 16).

Now, HALion Sonic SE's pads and PD's pads are linked.

At this point, nothing will happen. Now, register the response when the pad is pressed. Right-click on HALion Sonic SE's pad and select "Snapshot Chord." The pad will blink.

While maintaining this condition, use the keyboard on the bottom to select the note to play.

Here, click G2, B2, C3 and E3.
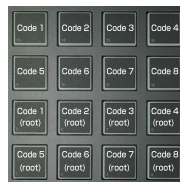Click the pad again to finish registering.

Press Pad 13 of PD, and Cmaj7 will be played.

Press here for Cmaj7

Now assign F#2, G2, B2 and D3 to the next pad.

Already, you can play chords with these 2 pads, but let's assign chords to the other 6 pads as well. Then, let's assign root sounds 2 pads below their respective chords: for example, assign C1 to pad 5, G1 to Pad 6.

Code 1	Code 2	Code 3	Code 4
Code 5	Code 6	Code 7	Code 8
Code 1 (root)	Code 2 (root)	Code 3 (root)	Code 4 (root)
Code 5 (root)	Code 6 (root)	Code 7 (root)	Code 8 (root)

Hit pad 5 and 13 to play Cmaj7, pad 6 and 14 to play Gmaj7. You can play backing chords using pads only. PD detects the pressure of the hit to change velocities, so you can play backing chords, closely resonating the sounds of a live performance. This is the perfect input method for those who are good at building the voicing, but not very good at playing chords in real-time.

Also, by assigning both chord and root sound to one pad and using a normal keyboard, you can play a backing chord on PD with left hand and play solo or obbligato using the keyboard with your right hand.

PD is a unique physical controller, but you can use it for live performances and for recording. It's up to you, and we recommend you get one.

Mixing and CMC

Physical controllers will show their best power in the mix down. Computer mice can handle only one task at a time, but with physical controllers, you can process multiple tasks at the same time using your fingers and/or both hands.
Of course, DAWs have an automation function that saves the movement of faders and knobs to reproduce, so it is not necessary to handle multiple tasks in real-time. However, it is very important that workflow is efficient when recording automation or repeating the adjustment. Now, let's see how to utilize the physical controller.

From the CMC series, **CH**, **FD** and **TP** will be ideal for mix down.

TP handles basic tasks such as play and stop. You don't need an explanation of how important it is for mixing down where you adjust balances while listening to the sound. Let's look at FD and CH.

CMC-FD **Mixdown tasks begin with brief level adjustments. With FD, you can adjust the levels just like using a hardware mixer.**
When you press FD's SHIFT button and BANK's > button, Cubase mixer screen is displayed.

Like this picture, the number display of the mixer is highlighted in white for 4 channels. These highlighted channels are the channels that FD can control.

If you want to change the channels to control, you can use the CHANNEL's <> buttons on the bottom of FD to move one by one. If you use the BANK's <> button, you can move by 4 channels. You can add up to 4 FDs. When you use 4 FDs at once, you can use them as 16 channel faders.

Move by one channel

Move by four Channels
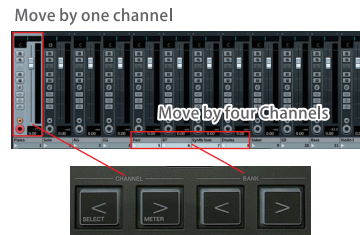
To adjust the volume, trace over the red LED lighting at the FD's fader parts with a finger. This fader operation is called catch mode and the fader value will follow the movement of the finger after the point where the finger passes the red LED.

In this mode, the level will not change abruptly, even if you accidentally touch a fader. However, it is a little inconvenient when you do want to increase/decrease the level instantly. In this case, switch the mode to jump mode. You can switch the modes by pressing the BANK's < button while pressing SHIFT button.

In jump mode, fader value will change to the finger position at the moment that the finger touches the fader area for the first time. The fader value continues to change according to the finger's movement until you release.

This jump mode is very convenient, for example, when resetting all the faders around 0 value to redo the mix down. However, for regular mixing down, catch mode is recommended to avoid mistakes.

CMC-CH After you finish brief level adjustments, let's set the pan pot. CH is very useful for pan pot setting.

CH can control the parameters of the inspector menu, which is available for each Cubase channel.
Press the CH's CH SELECT button with Cubase's mixer window open. The white highlight moves to show which channel is currently selected.

Move to the channel that you want to change and turn the PAN knob (on the upper right) left and right to set its value.

Using m and s buttons of CH, you can mute the selected channel or make it solo.

CMC-FD FD also has this function. With FD, click on the upper half of the fader while pressing SHIFT button to mute, and click on the lower half of the fader to make it solo.

These operations are much easier to handle with physical controllers than with a mouse. It is very useful because it switches absolutely.

CMC-QC Another important process of mix down is EQ, or equalizing. QC is ideal for this EQ processing. It will be a good addition to the basic combination of CH, FD and TP.
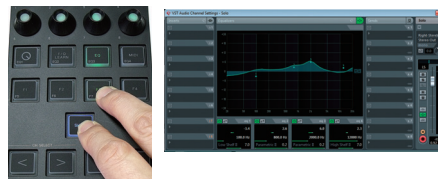
Now let's see how to use QC. First, press CH's e button and open "VST audio channel setting" of the selected channel.
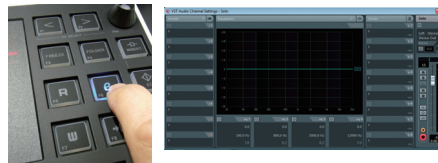
Then, press QC's EQ button to switch to EQ mode.

After that, press buttons EQ1, EQ2, EQ3 and EQ4 in this order while pressing the SHIFT button. EQ 1 to 4 under the "VST audio channel setting" will be turned on.

Move 8 knobs to adjust EQ parameters. EQ parameters are basically GAIN, FREQUENCY and Q (bandwidth), but QC only has 2 knobs available for the four EQs. So, you will use the buttons to switch the functions of these knobs. Knobs on the top row are always for GAIN, but the knobs on the second row act as Q button when the f/Q LEARN button below is blinking in yellow, and as a FREQUENCY knob when the f/Q LEARN button is off.

f/Q LEARN lights out
GAIN
Frequency

f/Q LEARN lights on
GAIN
Q
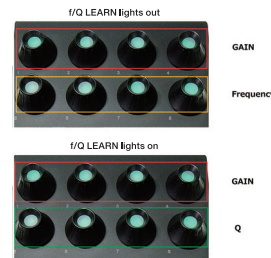
CMC-CH You can also move to other channels by using CH's CH SELECT when "VST audio channel setting" screen is open. So you can effectively set EQ while playing a song.

You can also bypass the channel's EQ (turn it off without changing the setting) temporarily by pressing the CH's EQ button so that you can compare the processed sound with the original sound instantly.

The button to bypass the insert effect

The button to bypass EQ

The button to bypass AUX send
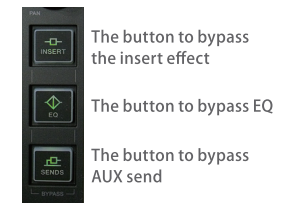
Like this, CMC can control various parameters. To sum up the mix down phase, let's see how to use the automation.

Automation is to record the parameters you want to change during the song, such as fader's up/down or effect's on/off, so that they are reproduced automatically. Especially for the tracks, such as vocal tracks, where volume changes a lot, detailed volume changes are automated for an entire song. For these detailed tasks, physical controllers come in handy.
Here, let's suppose you want to adjust the volume using automation.

There are two automation modes: Write mode to record the automation and Read mode to reproduce the written automation. These two modes are switched by W and R buttons of the channel.

CH and QC also have these buttons, so you can switch from CMC.

Mixing and CMC CH FD TP QC
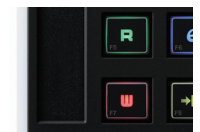
First you need to record the data. Press the CH's W button to switch to Write mode. Write mode will automatically turn on Read mode, so the R lamp is lit also.

In Cubase, click the "Show/Hide Automation" button on the lower left of the track to display the automation lane so that you can check automation from Cubase.
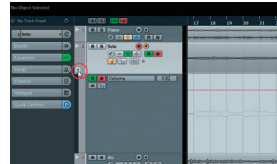
Play the song (not the recording). When the song starts, move FD or CH's fader at the point where you want to change the volume. The red line will move up and down like a wave and the fader values are written.
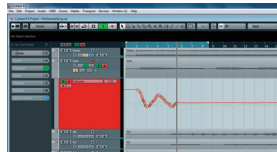
If you want to adjust the volume in details, move the fader while pressing CH or FD's SHIFT button.

If you prefer to use a knob for detailed adjustments, you can assign any knob to the channel fader by QC's QUICK CONTROL mode. Of course, you can also set the detailed value by turning the knob while pressing SHIFT button.

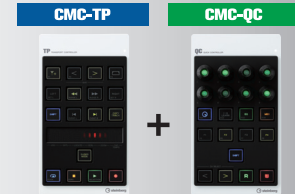## Let's find the perfect CMC for you.

Here are our suggestions for the best CMCs by user types. Find the perfect CMC combo for you.

For guitarists

For those who have an audio interface without an AI knob such as CI1 or UR28M, the combination TP & AI that was presented in the previous chapter is ideal. You can operate the AI knob with the left hand instead of with the right hand that is holding the guitar pick for loading presets or changing parameters as well as transporting during recording.

CMC-TP + CMC-AI
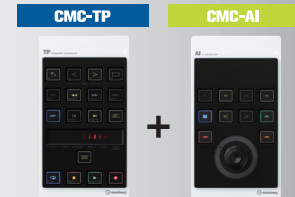
For those who have CI2 or CI2+, it is convenient to combine TP with QC. You can create sound like in analog by controlling the VST Amp Rack's knobs with QC's QUICK CONTROL mode.

CMC-TP + CMC-QC

If you are using Cubase as a drum machine, PD is highly recommended. You can enter a rhythm pattern as if you were using a hardware drum machine by using 1-2 bar cycle recording function.

CMC-PD

Let's find the perfect CMC for you.

For Keyboard players

If you have a hardware synthesizer such as MOTIF or MOX, PD is recommended. You can control transport functions from the synthesizer. With PD, you can assign percussion or SE and use it for live performances.

CMC-PD

If you are a software synthesizer user, the combination of PD and QC with CH is best. CH's instrument edit button can load an instrument with one touch and PD&QC work perfectly with HALion Sonic SE. The possibility is unlimited.

CMC-PD + **CMC-QC** + **CMC-CH**

For engineers

If you mainly edit the waveforms, TP is the must to have. You don't even need a mouse for the LOCATE, SCROLL or ZOOM screens, significantly reducing the burden to your wrists.

If you mainly handle mix downs, definitely the stack of 4 FDs is for you. You can use it not only as a fader but 16 level meters as well. Of course, we recommend you get TP, QC or CH also.

CMC-FD

+

CMC-TP + **CMC-QC** + **CMC-CH**

Things to be considered when using CMC series

As you know, the CMC series are very useful, but there are several points to be careful of when you use them to connect to the computer. When you use USB HUB, make sure you use the self-powered type (connect the AC adapter directly to the HUB).
If you use bus-power type HUB, especially when you connect multiple CMCs at the same time, proper function may not occur due to the lack of current. To maintain a stable control feature, please use a self-powered type HUB.

We have shown that CMC series can be useful in various music production scenes such as recording, programming and mixing.
For music production, you can accomplish more by improving the operability or by eliminating the hindrance of fatigue or stress.
Find your favorite CMC and enjoy your music production life.

CMC SHIFT + function list

CMC-CH

	operator	function
[SHIFT] +	Fader	Adjust the volume in detail by sliding the fader
[SHIFT] +	[CH SELECT <]	Execute user command F1
[SHIFT] +	[CH SELECT >]	Execute user command F2
[SHIFT] +	[PAN]	Adjust the sound panning in details
[SHIFT] +	[FREEZE]	Execute user command F3
[SHIFT] +	[FOLDER]	Execute user command F4
[SHIFT] +	[R]	Execute user command F5
[SHIFT] +	[e]	Execute user command F6
[SHIFT] +	[W]	Execute user command F7
[SHIFT] +	(Instrument edit button)	Execute user command F8
[SHIFT] +	[M]	Unmute all the channels
[SHIFT] +	[S]	Deselect solo for all the channels
[SHIFT] +	(Monitor button)	Switch the fader operation modes between catch mode and jump mode.

CMC-FD

	operator	function
[SHIFT] +	Fader	Adjust the volume of the selected channel in details by sliding the fader. Mute/unmute by tapping on the upper part of the fader. Fader's both ends (top/bottom) will be lit. Select/deselect solo by tapping on the lower part of the fader. The value of the fader will be lit.
[SHIFT] +	[CHANNEL<]	Move the channel bank to the channel selected in Cubase
[SHIFT] +	[CHANNEL>]	Switch between fader function and level meter function. In level meter mode, the volume information of the assigned channel will be displayed in LED in real time.
[SHIFT] +	[BANK <]	Switch the fader modes between catch mode and jump mode.

CMC-TP

	operator	function
[SHIFT] +	(Marker insert button)	Execute user command F1
[SHIFT] +	[BAR <]	Execute user command F2
[SHIFT] +	[BAR >]	Execute user command F3
[SHIFT] +	(Locator range select button)	Execute user command F4
[SHIFT] +	[LEFT]	Set the left locator to current project cursor location.
[SHIFT] +	[◄◄][►►]	Move the project cursor forward and back by 1 frame. Keep holding the button to repeat the action
[SHIFT] +	[RIGHT]	Set the right locator to current project cursor location.
[SHIFT] +	[|◄][►|]	Move the project cursor to previous/ next event from the current position.
[SHIFT] +	(Cycle button)	Switch on/off the metronome (click)
[SHIFT] +	[■]	Execute the command "reset to zero"
[SHIFT] +	[►]	Playback the event selected in the event display.
[SHIFT] +	Slider	Jog mode:adjust jog wheel in detail. Shuttle mode:adjust shuttle speed in detail. Locate mode:adjust the project cursor position in detail. Scroll mode:adjust the display position in the event display in detail. Zoom mode:adjust Zoom in/out of the display in the event display in detail. Tap Tempo mode:adjust the volume of the metronome (click) in detail.

CMC-PD

	operator	function
[SHIFT] +	Nothing	Light up the current bank
[SHIFT] +	PAD 1 to 16	Switch between PAD 1 to 16
[SHIFT] +	[CURVE SETUP]	Move to previous bank
[SHIFT] +	[4VEL MODE]	Move to next bank

CMC-QC

	operator	function
[SHIFT] +	KNOB	Adjust parameters in detail
[SHIFT] +	[Q]	Switch on/off EQ band 1(EQ mode only)
[SHIFT] +	[f/Q LEARN]	Switch on/off EQ band 2 (EQ mode only)
[SHIFT] +	[EQ]	Switch on/off EQ band 3 (EQ mode only)
[SHIFT] +	[MIDI]	Switch on/off EQ band 4 (EQ mode only)
[SHIFT] +	[F1]	Execute user command F5
[SHIFT] +	[F2]	Execute user command F6
[SHIFT] +	[F3]	Execute user command F7
[SHIFT] +	[F4]	Execute user command F8

YAMAHA

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CMC series
USB CONTROLLER