



FOLDING CONTROLLER 49



## Owner's Manual

DESIGNED IN PARTNERSHIP  
WITH BLACKSTAR AMPLIFICATION UK



## WARNING!

In order to avoid electric shock, short circuit, accidents, fire, or other hazards, please pay attention to the following important information:

Please do not open the Carry-on Folding Controller, disassemble its parts or make any changes to the internal components. This product has no parts that can be repaired or altered by users themselves (the Carry-on Folding Controller has its own tuning stability system, which never needs tuning).

If you notice abnormal behaviour in your Carry-on Folding Controller's functions, please contact an official service centre.

Please keep your Carry-on Folding Controller away from rain, water, or any other wet environment.

Do not place containers of liquids on top of your Carry-on Folding Controller as accidental spillage may cause damage.

If the charging cable or plug is worn or damaged, if there is a sudden power failure during use, or if there is an abnormal smell or smoke from your Carry-on Folding Controller, you should turn off the power and unplug the charging cable immediately.

Before cleaning your Carry-on Folding Controller, turn off the power and unplug it. Do not clean your Carry-on Folding Controller with a corrosive solvent.

Ensure that the internal battery pack is not exposed to excessive heat. Keep away from fire, hot surfaces, direct sunlight or other ignition sources.

The internal battery is not a user serviceable part. Risk of explosion if the battery is replaced by an incorrect type.

If your FC49 freezes, please turn the power off and on again as per the instructions.

## Precautions

The following, but not limited to, precautions should always be observed at all times to avoid possible injury to the user or others, as well as possible damage to the Carry-on Folding Controller or other external equipment:

1. Do not over bend the charging cable, do not place heavy objects on the

charging cable, do not place the charging cable in a place where people can pass, and do not wrap the charging cable around other objects to avoid damaging the charging cable.

2. When unplugging the charging cable, hold the plug itself instead of pulling the wire.
3. The charging cable should be removed when the Carry-on Folding Controller 49 is not in use for a long time, or during thunder storms.
4. Do not place the Carry-on Folding Controller in dusty, vibrating, cold or hot conditions (such as direct sunlight or transportation in the sun) to avoid damage to the appearance and internal components of the Carry-on Folding Controller.
5. Before moving the Carry-on Folding Controller, unplug the charging cable and all cables from it to other equipment.
6. When cleaning the Carry-on Folding Controller, wipe it with a soft and dry fabric. Do not use a cloth soaked in paint thinners, organic solvents, cleaning agents, or other corrosive chemicals to wipe the Carry-on Folding Controller, to avoid fading the panel or keyboard.
7. Do not place the Carry-on Folding Controller near other electrical appliances, such as a TV, radio, etc. Placing the Folding Controller near other electrical appliances may cause mutual interference between them.
8. Do not put the Carry-on Folding Controller on an unstable surface, so as not to cause damage.
9. Do not place heavy objects on the Carry-on Folding Controller or use excessive force to press keys or toggle control switches.
10. Avoid strong collisions and shaking of the Carry-on Folding Controller, as they may cause damage to the Carry-on Folding Controller and cause personal injury.
11. Avoid use in areas where the Folding Controller is uneven, to avoid damage.
12. Before using a charger to power this product, check the charger carefully for breakage, tearing, stripped wires, and any other damage.
13. Children under 3 years old should not use this product.

## Introduction

Congratulations on buying this Carry-on Folding Controller 49.

Measuring only 39cm long when folded, the Carry-on Folding Controller is a unique 49-key MIDI Controller in a foldable, easy to store and portable format. Thanks to its unique design and velocity sensitive full width keys, the Carry-on Folding Controller is the perfect solution for entry-level students to seasoned professionals. With a built in Arpeggiator, X/Y pad, 2 customisable control knobs and pre-mapped transport controls, this is the ultimate MIDI anywhere controller.

In order to utilise its many functions, please read this manual carefully before use and keep it safe for future reference.

## Unfolding and folding instructions

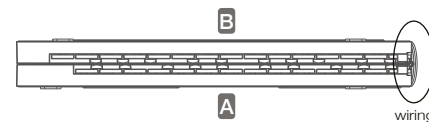
**How to unfold your Carry-on Folding Controller 49:**

**Important:** Lay the Folding Controller on a flat surface before unfolding. To prevent damage, Do not unfold the Piano on an uneven surface.



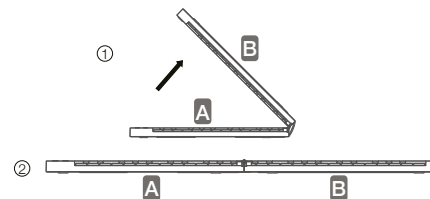
### STEP 1:

Place the Folding Controller to the left of your flat playing surface, with the keys facing towards you and the wiring connector on the right side.



### STEP 2:

Lift up part B and move it towards the right and lay it flat as shown below.

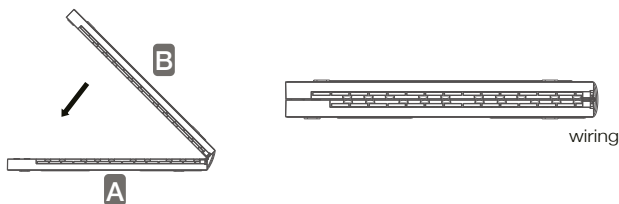


Your Folding Controller is now ready for use.

## How to fold your Carry-on Folding Controller 49:

### STEP 1:

Lift part B and fold on top of part A as shown.



Your piano is now safely folded for transport or storage.

## Factory Reset

If required, the default factory configuration can be recalled by performing a factory reset of your Folding Controller.

To perform a factory reset on your Folding Controller 49:

- Ensure your Folding Controller is powered off
- Hold the “OCT+” and “OCT-” buttons
- Power on your Folding Controller
- When the screen displays **rES** release the “OCT+” and “OCT-” buttons

## Front panel

### 1. Display

The screen displays information appropriate to the current mode. By default, it will show the current octave and in ARP mode it will show the current tempo. Changes to settings and parameters are also displayed here.

### 2. OCT.+ /ARP. Button

Pressing the OCT.+ /ARP. button will shift the octave range of the keyboard up in pitch. The octave range is -3 to +4.

While holding the SHIFT button, pressing the OCT.+ /ARP. button will toggle Arpeggiator mode on and off. When the Arpeggiator mode is turned on, **ARP** and then **On** will be shown on the display. When the Arpeggiator mode is turned off, **ARP** and then **Off** will be shown on the display.

### 3. SHIFT Button

The SHIFT button toggles the secondary functions of certain buttons, keys and knobs while it is being held.

### 4. TAP/OCT.- Button

Pressing the TAP/OCT.- button will shift the octave range of the keyboard down in pitch. The octave range is -3 to +4.

While holding the SHIFT button, the TAP/OCT.- button will act as a tap tempo input for the Arpeggiator. Tap this button at a regular tempo to set the Arpeggiator BPM. The tapped BPM will be shown on the display.

**NOTE:** Tap tempo can be set regardless of whether the Arpeggiator mode is on or off.

### 5. A/DIV. Knob

Turning the A/DIV. knob will send MIDI CC messages to all MIDI outputs. By default, the A/DIV. knob is set to MIDI CC number 12. The MIDI CC number of the A/DIV. knob can be changed using the Carry-on Control app (see section on Carry-on Control app). Map the appropriate CC number to a parameter in your DAW or MIDI device to control that parameter with the A/DIV. knob.

Holding SHIFT and turning the A/DIV. knob will adjust the note division of the Arpeggiator. Starting from full anti-clockwise, the available note divisions are:

- 4 = ¼ note
- 4E = ¼ note triplets
- 8 = ⅛ note
- 8E = ⅛ note triplets
- 16 = 1/16 note
- 16E = 1/16 note triplets
- 32 = 1/32 note
- 32E = 1/32 note triplets

## 6. B/SWING Knob

Turning the B/SWING knob will send MIDI CC messages to all MIDI outputs. By default, the B/SWING knob is set to MIDI CC number 13. The MIDI CC number of the B/SWING knob can be changed using the Carry-on Control app (see section on Carry-on Control app). Map the appropriate CC number to a parameter in your DAW or MIDI device to control that parameter with the B/SWING knob.

Holding SHIFT and turning the B/SWING knob will adjust the amount of swing of the Arpeggiator. From full anti-clockwise to clockwise the range of the swing control is Off (50%) to 75%.

## 7. Touch Pad

The touch pad has two modes: PITCH/MOD. And X/Y. The touch pad mode can be changed by holding down the SHIFT button and pressing the key labelled "TOUCH PAD". The touch pad mode can also be set using the Carry-on Control app.

In PITCH/MOD. mode, the left half of the touch pad will control pitch and the right half will control modulation. The PITCH control will "snap" back to halfway when released, just like a traditional pitch wheel. The MOD. control will remain wherever it is set until it is adjusted again.

**NOTE:** Pitch and Modulation are standard MIDI parameters, so when connected to a MIDI device or DAW these controls will be pre-mapped (where possible) to the appropriate parameters.

In X/Y mode, a CC number can be assigned to each axis of the touch pad. Sliding along the X axis will adjust the value of the CC number assigned to the X axis and sliding along the Y axis will adjust the value of the CC number assigned to the Y axis. Sliding diagonally from the bottom left corner of the touch pad to the top right corner will adjust the value of both CC numbers at the same time.

**TIP:** In X/Y mode, map the CC numbers to parameters on your MIDI device or in your DAW, slide all around the touch pad and see what happens!

**NOTE:** By default, in X/Y mode the X axis is assigned to MIDI number 71 and the Y axis is assigned to MIDI number 74. The CC numbers assigned to each axis can be changed in the Carry-on Control app.

## 8. Keyboard

Your Folding Controller 49 has 49 velocity sensitive keys. Playing the keys with different amounts of pressure will cause the velocity of the MIDI notes to vary. When using the default velocity curve, playing the keys harder will output MIDI notes with higher velocities and playing the keys softer will result in lower velocities.

Certain keys have secondary functions that can be accessed by holding the SHIFT button. The secondary functions of the keys are:

- ARPEGGIATOR: The keys in the ARPEGGIATOR section adjust the relevant parameter of the Arpeggiator. Please see the Arpeggiator section for more information on the Arpeggiator functions and parameters.
- TRANSP. - and TRANSP. +: Pressing one of these keys will transpose the keyboard down a semitone (TRANSP.-) or up a semitone (TRANSP.+). The current transposition will be displayed on screen and the range of transposition is -11 to +11 semitones.

**TIP:** Pressing both transpose buttons and shift simultaneously will reset the transposition to 0.

- TOUCH PAD: Pressing this key will toggle the mode of the touch pad. Please see (7) for more information on the touch pad modes
- VEL. CURVE: The velocity curve can be altered by pressing this key. The velocity curve options are:

- DEF = Default
- SFE = Soft
- HFB = Hard
- CUS = Custom
- OFF = Off

The velocity curve options change the emphasis of the velocity curve. The hard velocity curve will emphasise higher velocities and the soft curve will emphasise lower velocities. Setting the velocity curve to off will result in all key presses outputting the same fixed velocity. The custom curve can be altered using the Carry-on Control app and saved to your Folding Controller.

**NOTE:** The default velocity when the velocity curve is off is 80. This can also be adjusted in the Carry-on Control app.

■ **MIDI CHANNELS:** These keys can be used to select the MIDI channel for all MIDI messages. For example, pressing the 2 key will set the MIDI channel of all MIDI messages to channel 2.

**NOTE:** For information on how to select individual MIDI channels for specific controls, please see the section on the Carry-on Control app.

■ **PROGRAM CHANGE, NUMERIC KEYPAD, CANCEL and ENTER:** Program change messages can be sent using these keys. To send a PC message:

- Press the PROGRAM CHANGE key - 000 will be displayed on screen
- Use the NUMERIC KEYPAD to enter the desired PC message number
- Press the ENTER key to confirm and send the message

The display will show PC and the message number to confirm the message has been sent. To cancel sending a message after pressing the PROGRAM CHANGE key, press the CANCEL key.

**NOTE:** The display will show EFF if the number is outside of the MIDI range. The range of MIDI PC message numbers is 0 to 127.

## 9. Transport Buttons

The default transport control configuration will be pre-mapped to most Digital Audio Workstations (DAWs) and MIDI devices. In this configuration, the transport controls will send the MIDI Machine Control messages (MMC messages) associated with their icons:

- ● = Record
- ■ = Stop
- ▶ = Play

The transport controls can be configured instead to send CC messages. To do this hold the SHIFT button and press the transport button you would like to change. The display will show the current configuration of that control:

- MPC = MMC (MIDI Machine Control)
- CC = CC (Control Change)

**NOTE:** The default CC numbers for the transport controls are 14, 15 and 16 for the Record, Stop and Play buttons respectively. The button behaviour and CC numbers assigned to the transport controls can be adjusted using the Carry-on Control app.

Please see the section on DAW Integration for more information about using the transport controls with specific DAWs.

## Rear Panel Features

### 10. MIDI OUT

Output MIDI to external MIDI devices using the MIDI OUT socket. The default MIDI channel for the MIDI OUT is channel 1.

**NOTE:** To connect a 5 pin MIDI cable use a TRS MIDI to 5 pin MIDI adaptor.

### 11. Power Button

The power button toggles your Folding Controller on and off. Hold the power button for 3 seconds to power up and power down your Folding Controller. The display will illuminate when the Folding Controller is on.

If your Folding Controller does not power up, connect it to a suitable power source to charge the battery using the USB-C socket (3). The typical charging time from zero charge is 2 hours.

**NOTE:** Use your computer's USB port or a suitable 5V DC power supply at a maximum of 1A for safe charging of the internal battery.

## 12. USB-C Socket

Connect to your computer or MIDI device using the USB-C socket. Please see the section on DAW Integration for more information about connecting your Folding Controller to your DAW.

This socket is also used to charge your Folding Controller. When charging, the display will show an advancing dot. When your Folding Controller is fully charged, the display will show three static dots. The typical charging time from zero charge is 2 hours.

**NOTE:** Use your computer's USB port or a 5V DC power supply at a maximum of 1A for safe charging of the internal battery.

## 13. SUSTAIN

Connect a TS sustain pedal to your folding controller using this socket.

## Using the Arpeggiator

The ARPEGGIATOR mode activates a sequencer. When a note is held down on the keyboard, the ARPEGGIATOR begins playing a sequence of notes based on the held note or notes. The sequence played and how the sequence is played can be adjusted using the ARPEGGIATOR parameters.

There are 4 basic parameters that are the basis for the Arpeggiator sequence:

### ■ Tempo/BPM

This sets the fundamental  $\frac{1}{4}$  note speed or the Tempo/BPM (Beats Per Minute) of the Arpeggiator sequence.

The tempo can be set using the TAP/OCT.- button (see Front Panel 4), when the Arpeggiator is set to internal clock. Internal clock is the default setting for the Arpeggiator. The tempo can also be set by an external clock source (a DAW for example) over USB.

To select the clock source for the Arpeggiator hold the SHIFT button and press the CLOCK key. Pressing this key will toggle between:

■  = Internal Clock

■  = External Clock

**NOTE:** When the clock source is set to external, the Arpeggiator will not play a sequence if there is no clock input from the USB connection.

### ■ Note Division

The note division is the rhythm that the Arpeggiator sequence will follow. The note division can be adjusted by holding the SHIFT button and adjusting the A/DIV. knob. Please see Front Panel (5) for more information on the A/DIV. knob and the note divisions.

The selected rhythm of the sequence can also be swung by holding SHIFT and turning the B/SWING knob. The swing setting is off by default, but can be increased from Off (50%) to 75% by turning the B/SWING knob clockwise.

### ■ Order

The order is the order in which the sequence of notes will be played. The order can be changed by holding the SHIFT button and pressing one of the order keys:

- UP – The sequence will start at the lowest note and move up through the notes in pitch order.

- DOWN – The sequence will start at the highest note and move down through the notes in pitch order.

- EXCL. – The sequence will start at the lowest note and move up through the notes in pitch order. When the highest note is reached, the sequence will move back down through the notes in pitch order. When the lowest note is reached, the entire pattern will be repeated. Each note in the sequence will only be played once.

- INCL. - The sequence will start at the lowest note and move up through the notes in pitch order. When the highest note is reached, the sequence will move back down through the notes in pitch order.

When the lowest note is reached, the entire pattern will be repeated.

The highest and lowest notes in the sequence will be repeated each time there is a direction change.

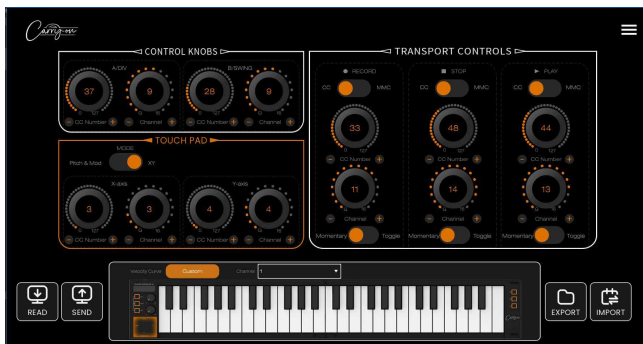
- ORDER – The sequence will be played in the same order that the notes were played into the Arpeggiator on the keyboard.
- RANDOM – The sequence will be played in a random order.

#### ■ Range

The sequence can be extended into the octaves above the starting notes by adjusting the range. Holding the SHIFT button and pressing the RANGE- or RANGE+ keys will adjust the octave range of the sequence. The default setting is 1, with settings above 1 extending/repeating the sequence notes up to the maximum setting of 4.

Holding the SHIFT button and pressing the LATCH key will toggle latch on and off. With latch on, notes played into the Arpeggiator will continue to play even after they are released. These notes will be played in the sequence until the next notes are played on the keyboard.

## Carry-on Control App



The Carry-on Control app offers full configuration of all the controls available on your Folding Controller 49. Once you have configured the perfect control scheme for your needs, the Carry-on Control app allows easy saving and recalling of the full configuration.

To get the most out of your Carry-on Folding Controller 49, please read the detailed guide of the Carry-on Control app below.

### 14. Reading and Sending Data

When your Folding Controller is connected to your PC via USB, the Carry-on Control app will automatically connect and read the current settings on your device when it is launched. A pop-up message will appear to confirm that the settings on your Folding Controller have been read successfully.

Settings adjusted within the Carry-on Control app will not be automatically applied to your Folding Controller. To store the current configuration to your Folding Controller, make sure to click the SEND button in the bottom left corner of the app.

**NOTE:** If there is a connectivity issue between your Folding Controller and your PC, a pop-up message will appear stating that the settings have not been successfully read or sent. To ensure the best connection, please use the USB-C cable supplied in the box and avoid using USB hubs.

### 15. Velocity Curve

As with the VEL. CURVE key (see Front Panel – 8. Keyboard), the velocity curve applied to the keyboard can be selected within the Carry-on Control app using the pop-out window, accessed by clicking on the name of the currently selected velocity curve, for example “Fixed”.

The CUSTOM velocity curve can be customised and saved to your Folding Controller using this pop-out window. Saving a new custom curve to your Folding Controller will overwrite the existing custom curve on your device.

**NOTE:** Once a custom velocity curve is saved to your Folding Controller it can be accessed using the VEL. CURVE key (see Front Panel – 8. Keyboard) and cycling through the curves to **F5**. Your Folding Controller does not need to be connected to the Carry-on Control app.



## 16. Control Knobs

The control knobs A/DIV. and B/SWING can be individually assigned to independent CC numbers and MIDI channels using the “Control Knob” section.

## 17. Touch Pad

The touch pad configuration can be managed using the TOUCH PAD section within the Carry-on Control app.

Toggle between PITCH/MOD. mode and XY mode using the MODE toggle switch. When XY mode is selected, the CC number and MIDI channel can be set for each axis of the touch pad individually.

## 18. Transport Controls

The default for the transport controls is MMC mode. Within the TRANSPORT CONTROLS section of the app, a specific transport type can be assigned to each button from the 5 options:

- ● = Record
- ■ = Stop
- ▶ = Play
- ◀◀ = Rewind
- ▶▶ = Fast Forward

Each transport control can be individually toggled from MMC mode to CC mode. When in CC mode, a CC number and MIDI channel can be assigned to each transport control. The behaviour of the transport controls can also be configured in CC mode, by switching between:

- Momentary

When the transport control button is pressed, ‘127’ will be sent. When the button is released, ‘0’ will be sent.

- Toggle

When the transport control button is pressed, ‘127’ will be sent. When the button is released and pressed for a second time, ‘0’ will be sent.

## 19. Exporting and Importing Profiles

The full configuration of your Folding Controller can be saved by using the EXPORT button in the bottom left of the Carry-on Control app. Multiple configurations can be saved in this way and recalled by using the IMPORT button.

**NOTE:** When recalling configurations, the SEND button must be pressed to apply the configuration to your Folding Controller.

## DAW Integration

### USB

When connecting to a computer via USB, your Carry-on Folding Controller 49 should will appear as the MIDI device ‘Carry-on FC49’ within your chosen DAW. The Folding Controller 49 can be configured as both a MIDI input and a MIDI output device.

If your DAW supports MMC transport control, the transport controls on your Folding Controller should already be pre-mapped to the appropriate controls ie. record, stop and play.

**IMPORTANT NOTE:** The Folding Controller 49 “MMC Device ID” is 116. To control transport functions when using a DAW that requires an MMC Device ID (Cubase, Pro Tools etc.), you will need to set this ID to 116.

### Bluetooth

#### Mobile Devices

Your Carry-on Folding Controller 49 has MIDI over Bluetooth functionality. When switched on it will automatically be in pairing mode.

To connect your mobile device to your instrument, please do not try to connect through your standard Bluetooth settings, instead you will need to connect via your chosen music app to pair with your device. Go to the Settings menu in your chosen music app to pair with your smartphone.

Using Cubasis as an example, go to:

Setup – MIDI – MIDI over Bluetooth – Host

Find ‘Carry-on FC49’ in the devices list and tap to pair.

### PC and Mac

#### Connecting to Windows PC

- Turn on your Carry-on FC49. It will automatically be in pairing mode.
- Go to settings > Bluetooth & devices > Add Device.
- Select Bluetooth from the list.
- Select “Carry-on FC49” in the list of devices, then click connect.
- Your Carry-on FC49 will now be visible in your DAW as a MIDI peripheral.

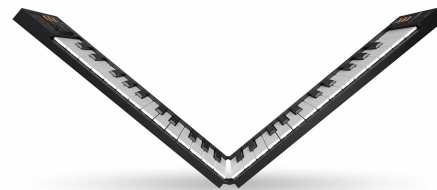
### Connecting to an Apple Mac

- Turn on your Carry-on FC49. It will automatically be in pairing mode.
- In the Audio MIDI Setup app on your Mac, choose Window > Show MIDI Studio.
- In the MIDI Studio window, click the Configure Bluetooth button in the toolbar.
- Select "Carry-on FC49" in the list of devices, then click connect. Your Carry-on FC49 will now be visible in your DAW as a MIDI peripheral.

### Technical Specification

**Dimensions:** 390mm x 126mm x 48mm (Folded)  
775mm x 126mm x 24mm (Expanded)

**Net weight:** 1.01kg



# MIDI ANYWHERE.

**Blackstar Amplification Ltd**, Beckett House, 14 Billing Road, Northampton, NN1 5AW, UK  
For the latest information go to: [www.carryonplaying.com](http://www.carryonplaying.com)

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