Freekie

user manual

Martin

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INTRODUCTION 1

Thank you for selecting the Martin Freekie. This ruggedly built, easy to use controller offers 12 fixture DMX control and multiple triggering options.

Freekie allows control of up to 12 fixtures, each with 12 channels; there's a joystick for easy pan/tilt adjustment, as well as strobe and smoke control. A master fader allows you to instantly fade all fixtures, and there are multi-purpose buttons which you can customize to control additional DMX units.

For audio-controlled shows there is the choice of either external signal input or the Freekie's own internal microphone.

FEATURES

- Controls up to 12 fixtures each with 12 channels, plus a strobe and a smoke fixture.
- 3 banks of 12 programmable shows, each show with up to 10 scenes.
- 8-character show naming
- MIDI-triggering of shows
- Strobe and smoke fixture control
- Follow-spot functionality
- Blackout
- Pitch fader allowing instant speed adjustment during playback of a show
- Joystick for easy pan/tilt control
- Master fader for all fixtures
- Musical triggering of scene changes: Built-in microphone or external control signal input
- Control any DMX512 compatible intelligent light
- Solid steel construction
- Table or 19” rack mount

SAFETY PRECAUTIONS

- The Freekie is not for domestic use.
- Use the device only as described.
- Do not expose the device to rain or moisture.
- Make sure the device is properly grounded.

- Do not operate the device with the cover removed.
- Immediately repair or replace damaged power cords.
- There are no user-serviceable parts inside; refer all service to a qualified technician.

INSTALLATION 2

The Freekie comes with the following:

- 9 volt, 1 amp transformer
- User manual

POWER

The device is powered by a 9 volt DC transformer that is supplied with the product. Connect this to a mains supply and plug it into the DC9V input at the back of the Freekie.

Note ***If the plug on the transformer supplied does not match those in use in your country you may need to purchase an adaptor. Alternatively, any 9 volt DC transformer with an output of 1 amp can be used.***

CONNECTING THE SERIAL LINK

About serials links

The Freekie sends instructions through a serial data link. The link goes from the controller's output to the input of the first lighting fixture and then from the fixture's output to the input of the next fixture. It continues output-to-input in a daisy-chain to all fixtures.

Adaptor cables may be required when building the data link. There are two differences to be aware of. First, both 3-pin and 5-pin XLR sockets are common. (Martin fixtures have 3-pin XLR sockets. On fixtures that have 5-pin XLR sockets, pins 4 and 5 are not used.)

To build the serial link

1. **Use shielded twisted-pair cable.** A reliable data connection begins with the right cable. Microphone cable cannot transmit DMX data reliably over long runs. For best results, use only cable designed for RS-485 applications. Your Martin dealer has a

range of cables, connectors, and adaptors designed for lighting control.

2. **Starting from the controller, connect output to input.** Four parallel DMX outputs, two 3-pin, and two 5-pin are provided on the Freekie.

3. **Never use a "Y" connector to split the link.** If you need to split the serial link into branches use a dedicated splitter/amplifier such as the Martin 4-Channel Opto-Isolated RS-485 Splitter.

4. **Don't overload the link.** Placing more than 32 devices on a link can cause unpredictable performance.

5. **Always terminate the link** by installing the provided termination plug in the output socket of the last fixture on the link. The termination plug, which is a male XLR connector with a 120 ohm resistor soldered between pins 2 and 3, "soaks up" the control signal so it cannot reflect back down the link. If a splitter is used, terminate each branch of the link.

DMX ADDRESS SETTING 3

Each fixture connected to the serial link must have a DMX address, also known as a start channel, which is the first channel the controller uses to send instructions to the fixture.

The Freekie can control the first 12 channels of up to 12 fixtures, plus for smoke and strobe fixtures. The Freekie assigns 12 channels to each fixture regardless of how many channels it uses, therefore the DMX addresses have been pre-defined.

Assign the following addresses using the procedure that is required for each fixture (refer to the user documentation for the fixture if you are in doubt as to the procedure). The address is often set on the fixture using a DIP-switch, while others use electronic address setting.

Freekie fixture ID	DMX address	DIP switch setting
1	1	
2	13	
3	25	
4	37	

Table 1

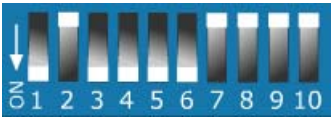
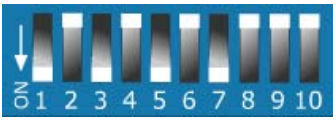
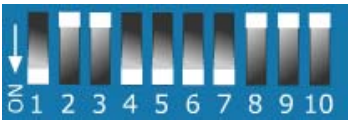
Freekie fixture ID	DMX address	DIP switch setting
5	49	
6	61	
7	73	
8	85	
9	97	
10	109	
11	121	
12	133	

Table 1

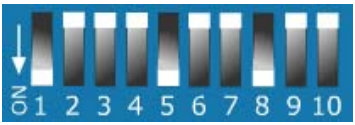
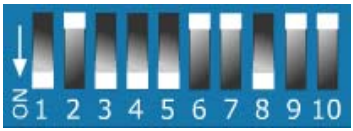
Freekie fixture ID	DMX address	DIP switch setting
Smoke	145	
Strobe	157	

Table 1

If independent control is not required, two or more identical fixtures may use the same address. They will receive the same instructions and behave identically.

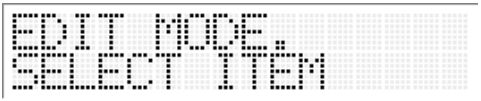
Make a note of the fixtures and the fixture ID that they have been assigned to. You will need this to set up the controller.

CONTROLLER SET-UP

4

FIXTURE SET-UP

1 Press and hold **EDIT** for 3 seconds.



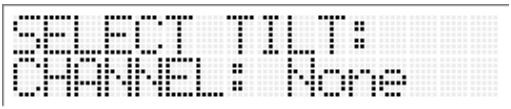
2 If the PIN-code function is enabled (see “Administrative functions” on page 21), you will be prompted to enter the PIN code (factory set as “221174”). Use the fixture buttons to select numbers and **ADD** to advance to the next number. Press **ENTER**.

3 Press **FIXTURE** so that the red indicator is lit.

4 Select a fixture to be set-up (and any other fixture of the same type) using the numbered buttons, **1**-**12**. You can select a range of fixtures by pressing and holding the first and last fixture buttons.

5 Press **ENTER**.

6 Select the pan channel by moving the appropriate fader (these represent channels 1 through to 12), and then press **ENTER**. Refer to the fixture documentation if you do not know which channel controls the pan function.



7 Select the tilt channel by moving the appropriate fader and then press **ENTER**. Refer to the fixture documentation if you do not know which channel controls the tilt function.

8 Select the dimmer channel by moving the appropriate fader and then press **ENTER**. Refer to the fixture documentation if you do not know which channel controls the dimmer function.

9 Using the same fader set the minimum dimmer intensity value and press **ENTER**.

10 Using the same fader set the maximum dimmer intensity value and press **ENTER**.

11 You have now completed set up of this/these fixture/s. If:

- There are additional fixtures to set up then go back to step 3 and repeat these steps.
- You have completed fixture configuration, then press **EDIT** to leave fixture set up mode.

STROBE SET-UP

The Freekie can control one of more strobe devices that have a DMX control address of 157. During a show you can activate strobe effects using the **STROBE** button. To configure strobe effects:

1 Press and hold **EDIT** for 3 seconds.

2 If the PIN-code function is enabled (see “Administrative functions” on page 21), you will be prompted to enter the PIN code (factory set as “221174”). Use the fixture buttons to select numbers and **ADD** to advance to the next number. Press **ENTER**.

3 Press **STROBE**.

4 Set the strobe active scene using the appropriate faders (representing channels 1-12) and then press **ENTER**.

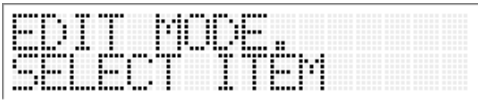
5 Set the inactive strobe scene using the appropriate faders (representing channels 1-12) and then press **ENTER**.

6 Press **EDIT** to leave fixture set up mode.

SMOKE SET-UP

The Freekie can control one of more smoke devices that have a DMX control address of 145. During a show you can activate smoke effects using the **SMOKE** button. To configure smoke effects:

1 Press and hold **EDIT** for 3 seconds.



2 If the PIN-code function is enabled (see “Administrative functions” on page 21), you will be prompted to enter the PIN code (factory set as “221174”). Use the fixture buttons to select numbers and **ADD** to advance to the next number. Press **ENTER**.

3 Press **SMOKE**.

4 Set the smoke active scene using the appropriate faders (representing channels 1-12) and then press **ENTER**.

5 Set the inactive smoke scene using the appropriate faders (representing channels 1-12) and then press **ENTER**.

6 Press **EDIT** to leave fixture set up mode.

FOLLOW-SPOT SET-UP

The Freekie can use an individual fixture as a follow-spot device that can be controlled independently using the joystick during playback of a show. To configure the follow-spot scene:

1 Press and hold **EDIT** for 3 seconds.

2 If the PIN-code function is enabled (see “Administrative functions” on page 21), you will be prompted to enter the PIN code (factory set as “221174”). Use the fixture buttons to select numbers and **ADD** to advance to the next number. Press **ENTER**.

3 Press **SPOT**.

4 Select the follow-spot fixture using the numbered buttons, **1**-**12**.

5 Set the follow-spot scene effect on the fixture using the faders. For example, the color might be white.

6 Set the fade time into the spot effect using the **FADE TIME/PITCH** fader.

7 Press **ENTER**.

8 Press **EDIT** to leave fixture set up mode.

PROGRAMMING SHOWS 5

Shows are made up of up to 10 scenes that contain one DMX value for every channel and determine how each light looks at a particular moment. Shows are stored in 3 groups called *banks*. There are 12 shows per bank.

Scenes in a show are programmed and executed one at a time.

PROGRAMMING A SHOW

1 Press and hold **EDIT** for 3 seconds.

2 If the PIN-code function is enabled (see “Administrative functions” on page 21), you will be prompted to enter the PIN code (factory set as “221174”). Use the fixture buttons to select numbers and **ADD** to advance to the next number. Press **ENTER**.

3 Press **SHOW**.

4 Select the appropriate bank using the **<** or **>** buttons.

5 Select a show using any one of the numbered buttons (**1**-**12**).

6 The display shows

SC *n* ,*n*	Current scene number of the total number of scenes
MA	Any macros that are in use: • Off (none) • Circular • Pan sine movement • Tilt sine movement
FT	The fade time of the scene. The fade time is the dynamic part of a lighting scene where the effects move to their positions. The total scene time is the sum of the fade time and the wait time.
WT	The wait time of the scene. The wait time is static part of a lighting scene where the effects are expressed.

Table 2

7 Press **FIXTURE**.

8 Use the number buttons to select one or multiple fixtures. You can select a range of fixtures by pressing and holding the first and last fixture buttons.

9 Use the faders to set the scene and the joystick to select pan and tilt movement. Press the **FINE** button if you need to make micro-adjustments with the joystick.

10 You can enable a macro that produces circular, vertical, or horizontal movement effects during the scene. To do so:

- Press the **MACRO** button once, twice, or three times, to choose the appropriate macro type.
- Set the speed of the movement using the **FADE TIME/PITCH** fader.
- Set the size of the circle/amplitude of the movement using the **WAIT TIME/MASTER FADER**.
- Press **ENTER** to toggle out of Macro mode (and return to Fade/Wait time parameters).

11 Set the fade time for the scene using the **FADE TIME/PITCH** fader.

12 Set the wait time for the scene using the **WAIT TIME/MASTER** fader.

13 When the scene is set press **ADD**. This button will add the currently selected scene to the end of the show. You can also scroll back and forth between scenes using the **<** and **>** buttons and use the **INSERT** and **DEL** buttons where appropriate. Use the **STORE** button to apply changes to the currently selected scene.

14 Repeat these steps as appropriate to add up to 10 scenes to the show.

15 Press **PREV.** (preview) to test the show.

16 Press **EDIT** to exit.

PLAYBACK 6

This section describes the built-in options for executing shows.

RUNNING A SHOW

To select and run a show:

1 Select the appropriate bank with the **<** or **>** buttons. Note that you can change banks whenever the **SHOW** button is toggled off (when the indicator is not lit).

2 Press **SHOW**.

3 Select a show using one of the numbered buttons (**1**-**12**). The show will start to run immediately, and will run in a loop. You can select a range of shows by pressing and holding the first and last show number buttons. The selected shows will run in a loop when executed.

There are three ways to execute shows:

- Execution using programmed scene times, or
- Music trigger execution to the beat of the music, or
- MIDI show execution

Execution using programmed scene times

Shows will run using their programmed scene times when the **FADE TIME/PITCH** fader is in the middle position.

Music trigger execution

Music triggered scene changes are enabled by the built-in microphone, or from audio signals from an external microphone. In Control-By-Audio mode the Freekie will change scenes to the beat of the music (wait times in scenes will not be used).

To activate music trigger execution set the **FADE TIME/PITCH** fader to the zero position. **CONTROL BY AUDIO** will appear in the display.

MIDI triggering

When the Freekie is connected to a MIDI device, and is in **SHOW** mode (the SHOW indicator is lit), the first 24 keys on the MIDI device can be used to trigger show execution. Keys:

- 1-12 are used to activate corresponding shows in the first bank
- 13-24 are used to activate corresponding shows in the second bank

Because the Freekie runs selected shows in a continuous loop it might be a good idea, when using MIDI triggering, to record an inactive show, where all the fixtures are dimmed, so that a show can "stopped".

MANUAL CONTROL OF INDIVIDUAL FIXTURES DURING SHOW PLAYBACK

To take control of an individual fixture, or group of fixtures, during show playback:

1 Press **FIXTURE**.

2 Select a fixture, or fixtures, using the numbered buttons (**1** - **12**).

3 Use the faders to override the programmed effects for those fixtures. For example, to change the programmed mirror movement speed of one or more scanners during a show, you would set the pan/tilt speed channel to the desired value. (The DMX value does not change until the fader is moved.)

4 Normal program execution resumes when **FIXTURE** button is deactivated.

INTENSITY CONTROL

The master fader controls the intensity of all the fixtures.

BLACKOUT

In *blackout* mode, the Freekie blacks out all the fixtures by setting their dimmer values to their minimum level (see "Fixture set-up" on page 11).

Press **BLACKOUT** activate blackout mode, Press it again to reset the fixtures to the current scene.

Blackout does not apply to the follow-spot fixture if it has been activated (see "Follow spot" on page 19).

DYNAMICALLY MODIFYING FADE TIMES

You can dynamically adjust the fade times in a show up or down using the **FADE TIME/PITCH** fader.

FOLLOW SPOT

Ensure that you have configured a follow-spot fixture and scene. See “Follow-spot set-up” on page 13.

To use the follow-spot:

1 Press the **SPOT** button (the indicator will light up) during scene show playback. The show will continue to be played normally with the exception of the follow-spot fixture.

2 Use the joystick to move the follow-spot effect. To use smaller movements press **FINE**.

During the follow-spot scene the faders can be used to control the first 12 channels of the follow-spot fixture.

To deactivate the follow-spot scene press **SPOT** again so that the red indicator is no longer lit.

Note that you can dim all the other fixtures using the **BLACKOUT** button. This will not apply to the follow-spot fixture.

SMOKE EFFECTS

Ensure that you have configured the Freekie to use smoke effects. See “Smoke set-up” on page 13.

Activate smoke effects by pressing the **SMOKE** button and holding it as long as required.

While the **SMOKE** button is being held the faders can be used to control the first 12 channels of the smoke fixture.

STROBE EFFECTS

Ensure that you have configured the Freekie to use strobe effects. See “Strobe set-up” on page 12.

Activate strobe effects by pressing the **STROBE** button and holding it as long as required.

While the **STROBE** button is being held the faders can be used to control the first 12 channels of the strobe fixture.

ADMINISTRATIVE FUNCTIONS 7

LOCKING EDIT FUNCTIONS

A PIN-code lock can be activated to prevent unauthorized use of edit mode. The PIN code is factory set as “221174”.

Activating the PIN-code lock

To activate the PIN code lock simultaneous press and hold the **SPOT** and **FINE** buttons for 5 seconds.

Deactivating the PIN-code lock

To deactivate the PIN code lock:

1 Simultaneously press and hold the **SPOT** and **FINE** buttons for 5 seconds.

2 Enter the PIN code (factory set as “221174”). Use the fixture buttons to select numbers and **ADD** to advance to the next number.

3 Press **ENTER**.

CLEARING FREEKIE MEMORY

To erase everything in memory:

1 Turn the Freekie off.

2 Simultaneously press and hold the **SHOW** and **FIXTURE** buttons.

3 Turn the Freekie on.

4 Enter the PIN code (factory set as “221174”). Use the fixture buttons to select numbers and **ADD** to advance to the next number.

5 Press **ENTER**. “CLEAR MEMORY” will appear in the display.

TROUBLESHOOTING

A

problem	probable cause(s)	suggested remedy
None of the fixtures respond to the controller.	The controller is disconnected from the data link.	Connect controller.
	Blackout or standby mode selected.	Press blackout button.
Some fixtures do not respond, respond erratically, or continuously reset.	Bad data link connection.	Check data link connections/cables and correct accordingly.*
	DMX signal polarity reversed.	Swap pins 2 and 3. See section 2.
	DMX signal reflection.	Insert termination plug in the last light on the link.
	Incorrect addressing of fixtures.	Check addresses.
	Fixtures not on.	Turn on fixtures.
Fixtures do not execute programming on one or more channels.	Fader control is overriding programming.	Deactivate the **FIXTURE** button.
No light from some or all fixtures.	The scenes do not contain 'Lamp On' instructions for fixtures with remote lamp on/off.	Make sure the "Lamp On" command is saved in at least one scene.

* To test the data link with an ohm meter, disconnect the link from the controller and measure the resistance across pins 2 and 3 of the XLR male plug. The reading should be around 120 ohms. Readings from 400 - 20,000 ohms indicate the data link is not terminated. Infinite resistance indicates a bad connection, broken wire, or a defective fixture. Very low readings indicate a short circuit in the link or a defective fixture.

SPECIFICATIONS

B

DIMENSIONS

Height . . . . . 95 mm (3.7")
Length . . . . . 482 mm (19.0")
Width . . . . . 176 mm (6.9")
Weight . . . . . 2.5 kg (5.5 lb)
Supported rack size . . . . . 19” 4U

CONSTRUCTION

Cover, case . . . . . steel
Buttons, knobs . . . . . plastic
Feet . . . . . rubber

TRANSFORMER SUPPLY

Direct current: . . . . . 9 volts
Output . . . . . 1 amp

PROGRAMMING CAPACITY

Shows capacity . . . . . 3 banks, each containing up to 12 shows
Scene capacity per show 10

DMX CAPACITY

DMX signal input / output DMX512
DMX signal output . . . . . 168 Channel
DMX connector . . . . . XLR 5 PIN (x2), 3 PIN (x2)

TRIGGER SOURCES

Sound (via internal microphone or external audio input)
Programmed scene times
MIDI keys 1-24

REAR PANEL CONNECTIONS

Power input . . . . . 9v DC input
5-pin DMX output 2
3-pin DMX output 2
Audio in 1
MIDI input 1
MIDI throughput 1

ORDERING INFORMATION

Freekie Controller, 210-230 V . . . . . P/N 90734000
Freekie Controller, 110-130 V . . . . . P/N 90734010

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