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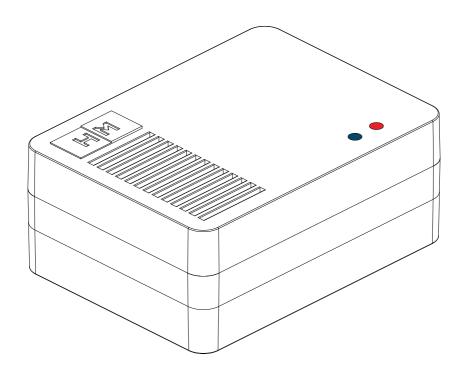
HM | DC - Instruction Manual

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R7292 | HM6000

Instruction Manual



R7292 | HM6000

Operation Notes

Firstly, please follow the Quick Start Guide - Initial setup. Ensure that the Quick Start Instructions on the HM | DC application have been followed and your application is setup. Next make sure the Quick Start Guide - Calibration has also been completed to ensure your new system functions correctly.

If your locomotive does not respond to the controls, check that:

- All wheels of your locomotive are correctly aligned to the track
- All fishplates are fully engaged and all track sections are properly aligned
- The HM6000 (R7292) is correctly connected to your power track or power clip
- The mains power switch is ON
- The HM6000 Power LED is solid 'RED'
- The HM6000 Bluetooth LED is solid 'BLUE' if it is a host or strobing 'BLUE' if it is a 'non-host' in the the mesh.

If a metal object, such as a pin or derailed locomotive lies across the 2 running rails, a short circuit may occur. This will activate the 'Short-Circuit Detection' within the application. Short-Circuit Detection will allow you to quickly reset the system once the cause of the short circuit has been identified and removed.

When controlling a locomotive at very low speed settings, a very small amount of electricity may still reach the locomotive motor. This may result in a slight 'hum' emitting from the locomotive.

With some larger locomotives at higher speed ranges, with inertia settings set to '0':

- You may notice when the direction is quickly altered, a short-circuit may occur. This can be avoided by setting the acceleration and deceleration settings to greater than '2'.

Your new HM6000 can control up to 2 circuits independently, it is advised to independently isolate circuits in order to get the best functionality from your system. This can be done by inserting '2' Hornby isolating fishplates (R920) between 2 points. If circuits are left un-isolated from each other and are connected to 2 circuits of the HM6000, if there is power in both circuits and polarity is different - This could lead to a short-circuit between the 2 circuits.

Specification

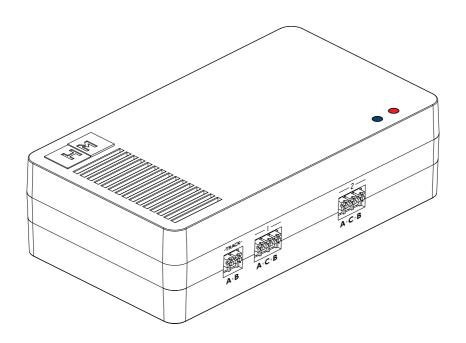
Controller track output maximum - Continuous current: 1.5A @ 15V DC Note: Controller overall maximum current limit (Track outputs): 1.5A

Model: HM6000 Radiation Frequency: 2402MHz-2480MHz.

FCC ID: 2ACUF-HM6000 Power ≤10mW IC: 12075A-HM6000 SKU: R7292

R7293 | HM6010

Instruction Manual



R7293 | HM6010

Operation Notes

Firstly, please follow the Quick Start Guide - Initial setup. Ensure that the Quick Start Instructions on the HM | DC application have been followed and your application is setup. Next make sure the Quick Start Guide - Basic wiring configurations has also been followed to ensure your new system functions correctly.

If your accessory does not respond to the controls, check that:

- All wires of your accessory are correctly wired into the HM6010.
- All fishplates are fully engaged and all track sections are properly aligned
- The HM6010 (R7293) is correctly connected to your P9100 or P9300 power supply unit
- The mains power switch is ON
- The HM6010 Power LED is solid 'RED'
- The HM6010 Bluetooth LED is solid 'BLUE' if it is a 'host' or strobing 'BLUE' if it is a 'non-host' in the the mesh.

A motor driven accessory can only be wired into channel 4 of the HM6010. This is to prevent damage to certain accessories - If a signal light accessory is wired into channel 4 and set up incorrectly as a pulsed accessory in the HM | DC application, this may blow out/damage the accessory.

The HM6010 also features a 'Track' input. This allows for the HM6010 to be wired into a digital power track or power clip in a DCC setup allowing control of accessories independently of a DCC controller and without the need for a power supply unit (transformer).

The HM6010 for points motors features a 'double-fire'. This is to attempt to throw points more consistently as some track points have a higher resistance than others. It is recommended that points motors installed into your system are correctly placed to ensure consistent throwing of points from open to closed and vice versa.

Specification

(Channel 1, 2 & 3): Controller accessory output maximum - Continuous current: 140mA @ 14V DC

(Channel 4): Controller accessory output maximum - Continuous current: 500mA @ 12V DC

Model: HM6010 Radiation Frequency: 2402MHz-2480MHz,

FCC ID: 2ACUF-HM6010 Power ≤10mW IC: 12075A-HM6010 SKU: R7293

Provisioning (Connecting to a HM unit via Bluetooth Mesh)

HM | DC utilises a new Bluetooth Mesh Architecture to allow for the best possible connection to your HM devices. The HM6000/HM6010 requires provisioning to your IOS/Android phone or tablet.

First ensure that you have followed the HM6000 or HM6010 Quick Start Guide and ensure that your HM unit is switched on and the 'RED' LED is solid.

Please ensure Bluetooth on your phone or tablet is switched on.

Tap on the 's' lcon to switch to the **Settings** screen.



Tap on 'Device Provisioning' and then 'Start Scan', this will search for your HM6000/HM6010 unit(s) [1].

Tap on the device named 'HM6000-####' or 'HM6010-####' [2]. The 4 digits after your HM Unit name is unique to your HM6000 or HM6010 unit.

Tap on 'Provision Device' [3] and wait for the successfully provisioned prompt [4]. This will bind the HM6000/HM6010 to your phone or tablet.

If you wish to pass control to another device, please tap on 'Unprovision Device' on the 'Manage Device' screen. Please see 'Unprovisioning' section of this manual (Page 22).

Tap on the 'co' loon again to switch back to the **Settings** screen and tap on the 'Device Connectivity' icon [1].

Next, tap on 'Connect' and then select 'Automatically Allocate'. The system will pick the strongest possible connection for the host [5].

Alternatively, if you have multiple HM units, you can 'Manually Allocate' and choose the best host for yourself [5].

Once your device is connected & meshed as a 'Host' [6], the Bluetooth LED on your HM6000/HM6010 should be solid 'BLUE'.

If you have more than one HM device; when connected as a 'Non-Host', the Bluetooth LED should be strobing 'BLUE'.

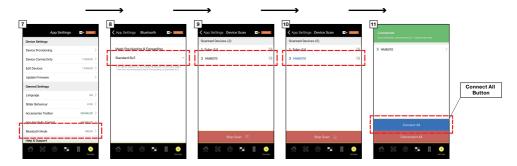
Connecting (Standard BLE)

HM | DC also allows for standard Bluetooth Low Energy if preferred over Bluetooth Mesh. This may assist with performance on certain older devices in some scenarios.

First ensure that you have followed the HM6000 or HM6010 Quick Start Guide and ensure that your HM unit is switched on and the 'RED' Power LED is solid.

Please ensure Bluetooth on your device is switched on.

Tap on the ' conto switch to the **Settings** screen.



Under 'General Settings' on the 'App Settings' screen, tap on 'Bluetooth Mode' [7], then select 'Standard BLE' [8] and tap 'Yes' on the pop-up prompt. Please note: This will disconnect all your HM units, but it will not unprovision any HM units from your phone or tablet.

Tap on 'Device Provisioning' and then 'Start Scan', this will search for your HM6000/HM6010 unit [9].

Tap on the device named 'HM6000' or 'HM6010' [10].

Tap on the 'co' loon again to switch back to the **Settings** screen and tap on the 'Device Connectivity' icon.

Next, tap on the 'Connect All' button. This will also connect any other HM units that are switched on, paired with your phone or tablet and in range [11].

If you wish to only connect 1 HM unit, tap on the HM unit you wish to connect and select 'Connect' on the 'Manage Device' screen.

Once your device is connected, the Bluetooth LED(s) on your HM6000/HM6010 unit(s) should be solid 'BLUE'.

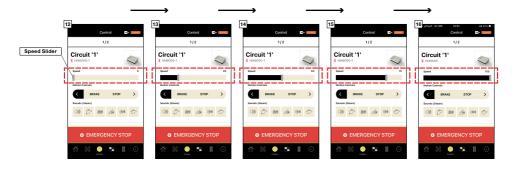
Control

HM | DC **Control** is the new controls in order to control your circuit(s), please see below instructions on using these controls to control your locomotives:

Tap on the '(**)' Icon to switch to the **Control** screen.

Speed

This slider control within the application is used to add power into your circuit(s) in order to speed up and slow down your locomotives.



Using your finger, move the 'Speed' slider on 'Circuit' 1' from '0' up in increments up to a max of '100' [12] - [16]. Providing your system is correctly setup and your locomotive is on Circuit '1' correctly, your locomotive will increase in speed with respect to the 'Speed' slider.

The setting of '100' is your max speed setting possible [16].

The setting of '0' is your minimum speed setting possible [12].

Troubleshooting:

- If you notice your locomotive not getting up to it's full speed or you notice that the locomotive jumps to a very high speed with a low 'Speed' slider setting, please ensure that the 'Min / Max Speed Range' settings on the **Setup** page are set to '0-100'. This is explained further in the **Setup** portion of this instruction manual (Page 16).
- If you notice your locomotive gradually getting up to speed, please ensure that the 'Acceleration' & 'Deceleration' settings on the **Setup** page are set to '0'. This is explained further in the **Setup** portion of this instruction manual (Page 17).

Control

HM | DC **Control** is the new controls in order to control your circuit(s), please see below instructions on using these controls to control your locomotives:

Tap on the '(**)' Icon to switch to the **Control** screen.

Directional Buttons

These button controls within the application are used to change the polarity of the circuit and therefore the direction of the locomotive.





Using your finger, select the 'Left' [17] or 'Right' [18] directional buttons on 'Circuit '1'. Providing your system is correctly calibrated and your locomotive is on Circuit '1' correctly, your locomotive will change direction in respect to the 'Left' or 'Right' directional buttons.

For the system to function at the optimum level, keeping all circuits consistent in direction is essential.

Troubleshooting:

- If you notice your locomotive travelling around the circuit in the opposite direction that is shown on the directional buttons, please refer to the Quick Start Guide - Calibration for help with calibrating the system. In simple terms, un-insert the circuit lead, rotate 180° and re-insert into the power track or power clip.

Control

HM | DC **Control** is the new controls in order to control your circuit(s), please see below instructions on using these controls to control your locomotives:

Tap on the '(*)' Icon to switch to the **Control** screen.

Brake

The Brake button within the application is used to slow the locomotive in small increments. This will assist with shunting together 2 or more locomotives and gradually slowing down the locomotives to a halt.



Using your finger, tap the 'Brake' button on the circuit controls that is connected to the locomotive that you wish to slow. You should notice the 'Speed' slider begin to decrease [19] - [23] As the 'Speed' slider approaches lower end speeds, the increments will gradually get smaller and smaller giving you plenty of control to easily shunt locomotives.

Troubleshooting:

- If you notice 2 or more different locomotives slowing at differing levels, this is due to the locomotive(s) in question having different motors and running speeds in relation to the power being applied to the circuit.

Control

HM | DC **Control** is the new controls in order to control your circuit(s), please see below instructions on using these controls to control your locomotives:

Tap on the '(°)' lcon to switch to the **Control** screen.

Stop

The 'Stop' button within the application is used to bring the locomotive to '0' velocity. Inertia values are not respected. If you wish for the locomotive to come to a stop with inertia values, please use the 'Speed' slider and set it to '0'.



Using your finger, tap the 'Stop' button on the circuit controls that is connected to the locomotive that you wish to slow to a halt. You should notice the 'Speed' slider decrease to '0' [24] - [25].

Please note: Some locomotives will slow to a halt slower than others - This is usually down to the locomotive in question; larger or heavier locomotives will have an increased braking distance and therefore will take longer to come to a halt.

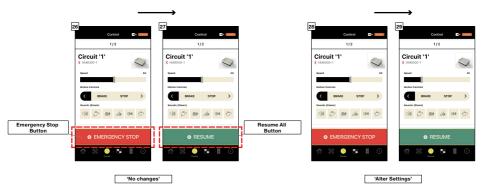
Control

HM | DC **Control** is the new controls in order to control your circuit(s), please see below instructions on using these controls to control your locomotives:

Tap on the '(')', Icon to switch to the **Control** screen.

Emergency Stop / Resume All

The 'Emergency Stop' button within the application is used to halt all circuits connected to the HM | DC application. This will assist with manoeuvring that may take some thought as well as aiding in avoiding locomotive collisions.



Using your finger, tap the 'Emergency Stop' button on the **Control** screen [26]. All circuits should come to a halt (Inertia values are not respected).

This function will also act as a pause in time - Within this pause in time, 'Speed', 'Brake', 'Stop', & 'Direction' can be altered on the **Control** screen [28] - [29] & 'Min / Max Speed Range', 'Acceleration', 'Deceleration' and 'Sound Profile' can be altered on the **Setup** screen.

Next, tap the 'Resume All' button [27] / [29] to proceed with the alterations that have been made (or no change); this will activate the system with the current settings on screen (Inertia values are respected).

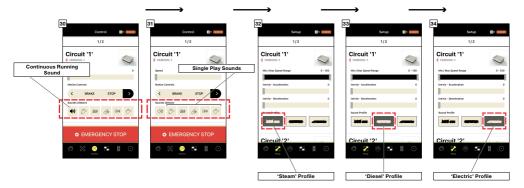
Control

HM | DC **Control** is the new controls in order to control your circuit(s), please see below instructions on using these controls to control your locomotives:

Tap on the '(°)' lcon to switch to the **Control** screen.

Sounds

HM | DC features 18 sounds in total split across 3 sound profiles; 'Steam', 'Diesel' and 'Electric'. Each sound profile has 5 single play spot sounds and 1 continuous running sound.



Ensure that the volume is turned up on your device. Then, using your finger, tap the sound buttons in order to allow playback through your device [30] / [31].

The '\(\sigma\) sound button features the continuous running sounds [30] and the 5 rightmost feature the single play spot sounds [31]. Continuous running sounds will play dependent on the 'Speed' Slider.

Dependent on the selected profile, different sounds will play through the device. If you wish to alter your sound profile:

Tap on the '%' Icon to switch to the **Setup** screen.

Then, tap either the silhouette of a 'Steam', 'Diesel' or 'Electric' locomotive corresponding to the circuit you wish for your sounds to play in respect of [32] / [33] / [34].

Tap on the '() lcon to switch to the **Control** screen.

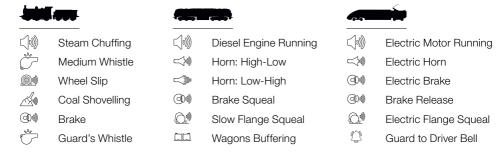
Simply tap your finger on the ' \(\sqrt{1} \text{1} \)" button; the button will be become highlighted and sound will play through the device [31].

To turn off 'Continuous Running Sound', simply tap the ' v button [30].

Please note: Connecting a Bluetooth speaker will result in sounds playing through the speaker instead of the device in hand.

Control

Sound list:



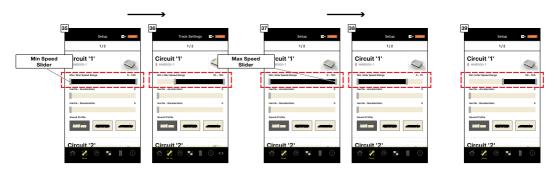
Setup

HM | DC **Setup** are new track settings to give you more control over your locomotives than ever before. Please see below instructions on using these settings to further control your locomotives:

Tap on the '%' Icon to switch to the **Setup** screen.

Min / Max Speed Range

This dual slider control within the application is used to limit the speed of your locomotives.



Using your finger, begin to drag the 'Min Speed' slider to the right [35] - [36], this will increase the minimum speed limit that your locomotive will travel at for the respective circuit. This will result in your locomotive having a higher initial speed.

Using your finger, begin to drag the 'Max Speed' slider to the left [37] - [38], this will decrease the maximum speed limit that your locomotive will travel at for the respective circuit. This will result in your locomotive having a lower max speed.

When using DCC locomotives on Analogue mode, you will find that you will require more power in the circuit in order for the locomotive to initially start moving. This can be alleviated by setting your 'Min / Max Speed Range' slider to have higher 'Min Speed'.

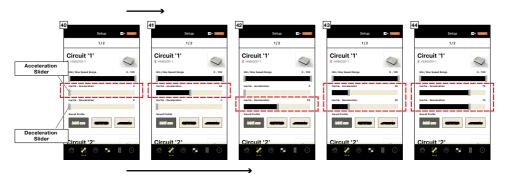
Example: The 'Min Speed' [39] has been altered to a value of '50', this will mean that the 'Speed' slider on the Layout Control screen only requires a value of '1' in order to begin the locomotive moving.

Please note: Due to different DCC locomotives requiring different powers to get them rolling, some trial and error may be required to perfect the 'Min / Max Speed Range' required for your given locomotive.

Setup

Inertia

This slider control within the application is used to add inertia into your circuit(s) in order to speed up and slow down your locomotives.



Using your finger, move the 'Acceleration' slider on 'Circuit' 1' from '0' from left to right up to a max of '100' [40] - [41]. Next, move to the **Control** screen and begin to increase the 'Speed' of Circuit' 1'. You should notice the locomotive on Circuit '1' will increase to it's top speed slower. This can be seen to give a more realistic representation of typical locomotive acceleration.

Note: This effect becomes more noticeable with a higher 'Acceleration' setting and increasing the 'Speed' from '0' to '100'.

Using your finger, move the 'Deceleration' slider on 'Circuit '1' from '0' from left to right up to a max of '100' [40] - [42]. Next, move to the **Control** screen and begin to decrease the 'Speed' of Circuit '1'. You should notice the locomotive on Circuit '1' will decrease to a halt slower. This can be seen to give a more realistic representation of typical locomotive deceleration.

Note: This effect becomes more noticeable with a higher 'Deceleration' setting and decreasing the 'Speed' from '100' to '0'.

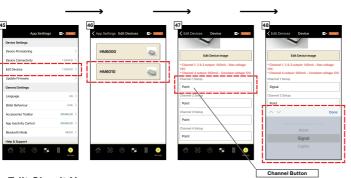
If you wish for your 'Acceleration' & 'Deceleration' to match, simply ensure that the 'Acceleration' & 'Deceleration' settings have the same value [43] / [44].

Please note: You may notice that the system includes a very small amount of innate inertia when altering direction at higher 'Speed' values. This is in order to avoid short-circuiting - A large surge of current occurs when changing polarity at higher speeds amongst larger locomotives that typically require more power.

Setting Up Accessories

In order for the HM | DC app to send the correct signal to operate your accessories, they will first need to be correctly setup within the app.

Tap on the ' conto switch to the **Settings** screen.





Edit Circuit Name:

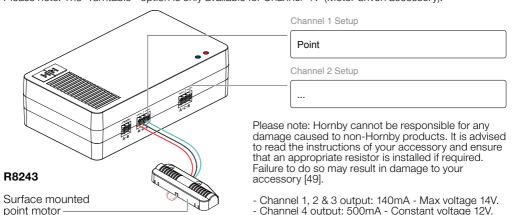
Tap on 'Edit Devices' under 'Device Settings' [45].

Tap on the HM6010 you wish to set up accessories for [46].

Next, tap on the 'Channel' button your given accessory is wired in to [47].

Select from 'Point', 'Signal', 'Lights' or 'Turntable' to match the accessory you have wired into the given channel on your HM6010 and then tap 'Done' [48].

Please note: The 'Turntable'* option is only available for Channel '4'. *(Motor driven accessory).



Accessories

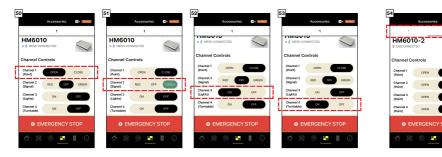
Accessory Control

The HM | DC app allows for control of your accessories 2 ways; with the 'Accessories Toolbar' & 'Accessories Screen'.

Firstly, please ensure that you have followed the HM6010 - Quick Start Guide and also followed 'Setting Up Accessories' within this manual (Page 18).

Accessories Screen

Tap on the 'loon to switch to the **Accessories** screen.



Control pulsed 'Points' to an 'OPEN' or 'CLOSED' position by tapping the respective buttons [50]. A double-fire pulse will be sent to the Point Motor.

Please note: The HM6010 will have a 3 second delay before allowing points to fire again, this is to give the capacitors time to charge.

Control 'Signals' to 'RED', 'GREEN' or 'OFF' by tapping the respective buttons shown [51]. The signal will respond by changing colour.

Control constant 'Lights' 'ON' or 'OFF' by tapping the respective buttons shown [52]. The lighting will respond by turning on and off.

Control 'Motor driven' ('Turntable option') accessories 'ON' or 'OFF' by tapping the respective buttons shown [53]. The motor will respond and drive your accessory.

If you have more than 1 HM6010 connected to HM | DC, you can swipe using the toolbar near the top of screen to cycle through your HM6010 units and control more accessories [54].

- Channel 1, 2 & 3 output: 140mA Max voltage 14V.
- Channel 4 output: 500mA Constant voltage 12V.

Accessories

Accessory Toolbar

The HM | DC app allows for control of your accessories on the same screen as your circuit controls by enabling the 'Accessory Toolbar' setting within the 'App Settings'.

To enable this setting, tap on the '() lcon to switch to the **Settings** screen.



Tap on the 'Accessories Toolbar' button [55], then tap on 'Enabled' to turn on the 'Accessory Toolbar' setting [56].

Tap on the '(°°)' icon to switch to the **Control** screen.

Providing your HM6010 is connected to HM | DC, you will notice at the top of the screen above your circuit controls the 'Accessory Toolbar' [57].

Tap on the relevant buttons assigned to your accessories to activate them [58]. The buttons will cycle through the different states for your accessory.

If you have more than 1 HM6010 connected to HM | DC, you can swipe the 'Accessory Toolbar' at the top of screen to cycle through your HM6010 units and control more accessories [59].

Disconnecting

Please note that disconnecting your HM unit from your phone or tablet will not 'unprovision' that unit from your device.

Tap on the ' loon to switch to the **Settings** screen.





Tap on 'Device Connectivity' under 'Device Settings' [60].

Tap on the HM unit you wish to disconnect on the 'Saved Devices' screen [61].

Next, tap on the 'Disconnect' button on the 'Manage Device' screen and wait for the 'Disconnected' prompt [62].

This will disconnect the selected device only. The Bluetooth LED on your HM6000/HM6010 will begin flashing 'BLUE'.

Alternatively, you can disconnect all devices connected with your phone or tablet by tapping on the 'Disconnect All' button [63]. The Bluetooth LED(s) on your HM6000/HM6010(s) will begin flashing 'BLUE'.

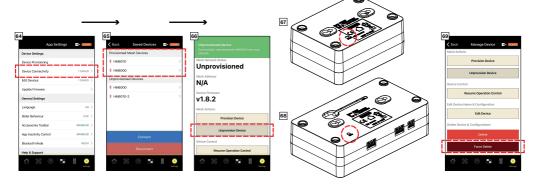
Please note: If a HM6000/HM6010 unit is never provisioned to your phone or tablet, the Bluetooth LED will not flash 'BLUE' when disconnected and will be in an 'OFF' state.

Unprovisioning

Although a HM6000 or HM6010 may be disconnected from the HM | DC app, but it may still be bound to your phone or tablet. If a HM unit is provisioned to your phone or tablet, it cannot be provisioned to another device.

Other devices will still be able to connect through standard BLE mode even if your HM unit is provisioned to your phone or tablet.

Please note: Another device will not be able to find a HM6000 or HM6010 unit when a phone or tablet is connected to the HM unit.



There are 2 ways that your HM6000 or HM6010 can be unprovisoned from your phone or tablet:

(1): Unprovisioning through HM | DC

Tap on the ' conto switch to the **Settings** screen.

Tap on 'Device Connectivity' under 'Device Settings' [64].

Tap on the HM unit you wish to disconnect on the 'Saved Devices' screen [65].

Next, tap on the 'Unprovision Device' button on the 'Manage Device' screen and wait for the 'Device Unprovisioned' prompt [66].

This will unprovision the selected device only. The Bluetooth LED on your HM6000/HM6010 will turn to an 'OFF' state.

(2): Factory Reset

Using a paper-clip or other tool, press in the 'Reset' button for 5 seconds [67] / [68]. This will factory reset the HM unit and unprovision the unit from your phone or tablet. The Power and Bluetooth LEDs will begin to flash and then the Power LED will be solid 'RED'.

Please note: This will not delete the HM unit from the HM | DC app, this will have to be manually done by tapping the 'Force Delete' button on the 'Manage Device' screen under 'Delete Device & Configurations' [69].

Deleting a HM Unit

If you wish to remove a HM6000 or HM6010 from your HM | DC, you can delete the device from your phone or tablet.

Tap on the ' lcon to switch to the **Settings** screen.



Delete:

Please first ensure that the HM unit you wish to delete is disconnected and unprovisioned from your phone or tablet.

Tap on 'Device Connectivity' under 'Device Settings' [70].

Tap on the HM unit you wish to delete on the 'Saved Devices' screen [71].

Next, tap on the 'Delete' button on the 'Manage Device' screen [72] and tap 'Yes' on the 'Confirm Action' prompt [73].

This will delete the selected device only and all settings associated with the deleted HM unit.

Please note: You will not be able to delete the HM unit if it is still 'Provisioned' to your phone or tablet.

Force Delete:

If for some reason your HM6000 or HM6010 is unresponsive and cannot be unprovisioned from your phone or tablet, you may need to use the 'Force Delete' function [72].

This will remove any instances of the HM6000 or HM6010 devices from your HM | DC app.

Please note: This will mean that you will no longer be able to connect or use any functions of the HM6000 or HM6010 on the 'Mesh Provisioning & Forwarding' mode without first factory resetting the HM unit first.

Device Settings

You can edit your HM6000 or HM6010 Device Settings to further personalise your system.

Tap on the '{o}' Icon to switch to the **Settings** screen.





Edit Device Name:

Tap on 'Edit Devices' under 'Device Settings' [74].

Tap on the HM unit you wish to personalise [75].

Next, tap on the current name of your HM unit and type in your desired name [76]. Once complete, tap on 'OK' to confirm changes.

Edit Device Image:

Tap on 'Edit Devices' under 'Device Settings' [74].

Tap on the HM unit you wish to personalise [75].

Next, tap on 'Edit Device Image' and select from 'Device Image Options' and select or take a photo [78]. Please ensure that you allow HM | DC app permission to access your camera or photos.

You can also 'Reset Device Image' to set the device image back to default [78].

Circuit Settings

In the same manner you can edit Device Settings of your HM6000 unit, you can edit your HM6000 Circuit Settings to further personalise your system.

Tap on the ' loon to switch to the **Settings** screen.





Edit Circuit Name:

Tap on 'Edit Devices' under 'Device Settings' [80].

Tap on the HM6000 you wish to personalise [81].

Next, tap on the current name of your Circuit and type in your desired name [82]. Once complete, tap on 'OK' to confirm changes.

Edit Circuit Image:

Tap on 'Edit Devices' under 'Device Settings' [80].

Tap on the HM6000 you wish to personalise [81].

Next, tap on 'Edit Circuit Image' [83] and select from 'Track Image Options' and select or take a photo [84]. Please ensure that you allow HM | DC app permission to access your camera or photos.

You can also 'Reset Track Image' to set the device image back to default [84].

App Language

In order for the HM \mid DC app to function for international users, the language can be altered to best suit the user.

Tap on the ' cost con to switch to the **Settings** screen.



Tap on 'Language' under 'General Settings' [85].

Tap on the language you wish to alter all text in HM | DC to that language [86] / [87].

All screens on HM | DC will be altered to your selected language [88].

Slider Behaviour

There are 2 different methods to control the 'Speed' slider within HM | DC; 'Live Swiping' & 'Drag & Drop'.

Tap on the ' con to switch to the **Settings** screen.



Live Swiping

Tap on 'Slider Behaviour' under 'General Settings' [89].

Tap on the 'Live Swiping' button to activate 'Live Swiping' 'Speed' slider control [90]. This will make the 'Speed' slider instantly responsive to the dragging of your finger [92].

This is similar to previous Hornby controllers in that you would turn a dial and gain instant response from your locomotive.

Please note: If you notice degradation and delay when using 'Live Swiping' over Bluetooth Mesh, ensure that your HM6000 is the 'Host' in the Bluetooth Mesh or you can setup your devices using 'Standard BLE'. This should reduce any delay noticed. Hornby will continue to improve functionality through future 'Live Updates'.

Drag & Drop

Tap on 'Slider Behaviour' under 'General Settings' [89].

Tap on the 'Drag & Drop' button to activate 'Drag & Drop' 'Speed' slider control [91]. This will make the 'Speed' slider wait until your finger is removed from the screen to action the speed you have selected [92].

Firmware

To ensure that HM units are performing to a high standard, firmware is updated and maintained regularly. HM | DC has the ability to update HM units to the latest firmware, or revert back to a previous version.

It is recommended to always ensure that the latest firmware is installed on all your HM units.



Update Firmware

Firstly, please ensure that your HM unit is 'Provisioned', but 'Disconnected' from your phone or tablet.

Please ensure the LED is flashing 'BLUE' on the HM6000 or HM6010 you wish to update.

Tap on the $(50)^{\circ}$ loon to switch to the **Settings** screen. Tap on 'Update Firmware' under 'Device Settings' [93] and tap on the HM unit you wish to update the firmware for [94].

Tap on 'Refresh Available Firmware List' [95] to ensure you can select from the most recent firmware versions.

Tap on the version number (v#.#.#) underneath the 'Desired Device Firmware' and select the firmware version you wish to update you HM unit to and then tap on 'Done' [95].

Please ensure that you do not move the HM unit or your phone or tablet at any time during the update process. Plugging in to charge your phone or tablet and having your HM unit close to your phone will assist the update process.

Tap on 'UPDATE DEVICE (#.#.#)' [96] and then tap on 'Yes', then 'Update' on the 'Confirm Action' pop-ups [96] to begin the firmware update process [97].

Please ensure that you do not move away from the 'UPDATING DEVICE FIRMWARE' 'Status' screen whilst the update is in progress. Putting your phone on 'Do not disturb' may assist the update process.

If the update process fails, please factory reset your HM unit. Please see 'Factory Reset' portion of this instruction manual (Page 22). Your HM unit will revert back to factory settings. HM6000: V1.8.2 & HM6010: V1.6.3.

Once the update is complete, you will get a prompt [98] and your firmware update will be complete.

App Inactivity Control

To ensure that your system functions the way you wish when you switch away from the HM | DC app, the 'App Inactivity Control' has 2 settings to choose from.





Pause & Resume Layout

This setting will pause the system in the same way that the 'Emergency Stop' function would if for any reason you switch away from the application (for example; an incoming phone call).

Tap on the ' loon to switch to the **Settings** screen.

Tap on 'App Inactivity Control' under 'General Settings' [99]

Tap on 'Pause & Resume Layout' [100]

If the app is minimised or you receive a phone call [101], your layout will pause. Once you switch back to HM | DC, your layout will resume [102]; inertia values will be respected.

Disable

This setting will not pause the system if you switch away from the application (for example; an incoming phone call).

Tap on the '() lcon to switch to the **Settings** screen.

Tap on 'App Inactivity Control' under 'General Settings' [99]

Tap on 'Disable' [103]

If the app is minimised or you receive a phone call [101], your layout will not pause.

Please be aware that closing HM | DC will disconnect all HM units and therefore pause the system.

Short-Circuit Detection

Integrated into the HM6000 and HM | DC application is a brand new feature known as 'Short-Circuit Detection'.

'Short-Circuit Detection' can detect a short-circuit that could occur in the system for a variety of reasons; incorrect polarities or metal located on the track are possible reasons for a short -circuit to occur.

The system can quickly 'RESUME' once the cause of the short-circuit is removed.



Short-Circuit

When using the system normally on any of the HM | DC app screens [104], you may notice an 'Operation error' prompt at the top of the screen. The short-circuited HM6000 power LED will begin flashing 'RED'. This will signify that a short-circuit has occurred.

The HM6000 has a resettable fuse to ensure that no damage to your HM6000 unit occurs in event of a short-circuit.

If the 'Operation error' prompt occurs [105], please check your layout for the cause of the short-circuit. Check that no metal items are located on the tracks that the short-circuited HM6000 is connected to and remove them. In this state, no power is applied to track circuits.

Once any cause of short-circuit is removed, tap the 'Short-circuit Resume' prompt [106] to resume the system; inertia values are respected.

Incorrect Polarities

If you wish to pass a locomotive over from 1 circuit to another circuit, you must ensure that the polarities of the 2 circuits are the same [107] + [108]; the 'Directions' on the 'Control' screen must be the same for both circuits, if calibrated correctly. (Please see how to calibrate your system correctly in the HM6000 - Quick Start Guide).

Failure to have the polarities correct when passing a locomotive from 1 circuit to another will result in a short-circuit. However, in the short-circuit state [106] you can alter settings how you wish - Altering the direction of the circuits to ensure they are consistent [107] + [108], then tapping the 'Short-Circuit Resume' prompt, will remove the polarity issue, resume the system and allow for the locomotive to pass over from the first circuit to the second circuit.