HM | DCC – Text Tutorials

Contents

1. HM | DCC & HM7000 - First Setup

Welcome to HM | DCC, your new digital control system.

Firstly, make sure that the instructional manuals within your decoder and locomotive pack have been followed, ensuring your decoder is installed correctly and your locomotive is powered on your layout ready for the HM | DCC app to connect.

Ensure your Bluetooth® & Wi-Fi are turned on in your device settings and you are connected to the internet.

Download the HM | DCC application using the QR code shown on the instructions, or search for "HM DCC" in your app store.

Once the download is complete, open the HM | DCC app on your device.

Accept **ALL** permissions* to ensure your application works correctly with your hardware. These can be altered within your device settings at any time.

*Android users must ensure that Location Services, Bluetooth® access and *Nearby device scanning (device dependent)* are granted. HM | DCC will not connect to HM Devices without these permissions granted. Depending on your Android device, certain permissions may not be available for accepting on HM | DCC app launch; if this is the case, you will need to go into your Android device settings and grant these permissions for the HM | DCC app.

You will require a Hornby.com account to use the HM | DCC application. If you already have a Hornby.com account, tap the **Login** button, enter your details, and then tap the **Sign In** button.

If you do not already have a Hornby.com account, tap on the **Sign Up*** button and you will be redirected to the Hornby website where you will be able to create an account. Once your account has been verified, please use the same details to login to the HM | DCC app.

*Versions of the HM | DCC may have the exclusion of the Sign Up button. In this case, please visit: https://uk.hornby.com/community/login/register

Once logged in, tap on **Link Device**.

Tap on **Start Scan** and wait for the scan to finish. You should notice your decoder (HM7000-_ _ _ _) pop-up under the **Ready to Link** section.

If your device has not been found, please ensure that your locomotive is powered correctly and tap **Restart Scan**.

Note: Android users may experience the **HM Device** scan underneath the **Resettable Devices** section. In this instance, please **Force Quit** the HM | DCC app in your Android device settings, reopen the HM | DCC app and tap on **Restart/Start Scan**. Your **HM Device** should now appear underneath the **Ready to Link** section.

Tap on your decoder (**HM7000-_ _ _ _**) and allow the **Device Link** process to complete. Please note, you may be prompted to update your decoder if it is not updated to the latest version. For your decoder to work correctly with HM | DCC you must ensure your decoder is updated to the latest version. If you are presented with the essential update screen, please place your phone or tablet down next to your locomotive and tap the **Start Update** button. Please allow a few minutes for the update(s) to complete, then tap the **Done** button.

Please then **Power-Cycle** your decoder by removing the locomotive from the track, waiting 5 seconds, and replacing the locomotive. If you have a **Power Bank** installed, you will have to wait up to 60 seconds for your HM7000 to power down. Once power is restored to your locomotive, your HM7000 will auto-reconnect to HM | DCC within 15 seconds.

You may be prompted to install the **Function Map** for the **Profile** that is installed on your locomotive. It is always advised to do this at it will pre-setup the sound, lighting, and motor **Functions** for your control.

Once connected, tap on the **Control** ' ' button on the bottom toolbar. Your locomotive is ready to control.

Please repeat the above **Device Link** process in order to add more HM7000 decoders to the HM | DCC app*.

*It must be noted that HM | DCC allows for multiple HM7000 fitted locomotives to be controlled. HM | DCC has been tested for up to **20** HM7000 decoders using a *high-performance* phone and tablet. More HM7000 fitted locomotives may be possible for HM | DCC app control but cannot be recommended. **It is however, recommended that the use of the HM7040: Legacy Dongle is used for control of more than 20 locomotives.** In this scenario, **ALL** HM7000 decoders are to be set to **DCC Mode** (CV12: 0). HM | DCC has been tested for up to **128** locomotives to be featured in the **Engine Shed** using a *high-performance* phone and tablet when **Assigned** to the HM7040: Legacy Dongle. More locomotives in the **Engine Shed** of the HM | DCC app may be possible but cannot be recommended.

Please continue to view **HM | DCC – Basic Locomotive Settings** If you wish to setup your locomotive with a name, an image and tinker with sound, inertia, and CV Settings.

2. HM | DCC & HM7000 – Basic Locomotive Settings

Welcome to another tutorial for HM | DCC, in this tutorial we will look at basic locomotive settings within the HM | DCC app and how to use them.

Firstly, ensure **HM | DCC & HM7000 - First Setup** has been followed and your decoder is connected to HM | DCC.

Tap on the **Control** ' ⛫ ' button on the bottom toolbar and then tap the **Locomotive Settings** button. Ensure the **DATA** column is selected on the top toolbar – These are your *basic* locomotive settings.

Change the image for your locomotive by tapping the **Edit** button.

Tap **Take Photo** to use your device camera, ensuring that camera access is granted. Take your desired photo and then tap **Use Photo (iOS)** or **Confirm**.

Alternatively, to get the perfect image, tap the **Import** button to choose an image from your device library. Tap **Choose (iOS)** or **Confirm** and your image will be inserted.

Remove any previously chosen image by tapping the **Remove Image (iOS)** button.

When your HM7000 is connected to HM | DCC, you can alter the locomotive address by tapping on the field to the *right-hand side* of **Loco Address**. Key in the desired address with your device's number pad. The address will instantly be written to your locomotive's HM7000 decoder. Please note: **Loco Address** is not required for **Bluetooth®** control but is necessary for **DCC** control. It is good practice to have a different address for each of your locomotives.

You can change the name of your locomotive by tapping the field to the *right-hand side* of **Name** and typing in your desired locomotive name with your device's keyboard.

When your locomotive's HM7000-TXS decoder is connected to HM | DCC, the control mode will automatically switch to **Bluetooth®** mode. You can alter the **Control Mode** of your locomotive's HM7000-TXS decoder by tapping on the **Bluetooth®** button for wireless control and **DCC** for use with digital DCC controllers such as the Hornby Elite, Select or eLink controllers. Only motor and function control will be changed, allowing you to still be connected to the HM | DCC app to change CV settings whilst controlling motor and functions on your DCC controller; it is good practice to only use the faster method of using the HM | DCC app to alter **CV Settings** in this scenario.

Please note: Out of the box, HM7000 will be set to **DCC** mode (CV12: 0). On first **Device Link** with HM | DCC, your decoder will automatically switch to **Bluetooth®** mode (CV12: 0).

If you wish to remove your locomotive from the **Control** ' ⛫ ' screen, you can tap on the **Inactive** button, your locomotive will continue to appear in the **Engine Shed** within the HM | DCC **Settings** ' ⚙ ' screen. If you wish for your locomotive to appear in the **Control** ' ⛫ ' screen, ensure that the **Vehicle State** is set to **Active** and a decoder is assigned to your locomotive. When you first link your decoder, you will automatically be assigned a locomotive. You can **Unassign** a decoder from a locomotive by tapping on the **Decoder Setup** box and tapping on **Remove Assigned Decoder**. Your decoder will then be ready to assign to another locomotive in your **Engine Shed** on the **Settings** ' ⚙ ' **screen**. Tap on your locomotive your wish to assign the free decoder to and tap on the

Decoder Setup box, then tap on the decoder you wish to assign to your locomotive. Providing the

Vehicle State is set to **Active**, your locomotive will appear on the Control '⬚' screen.

When your HM7000 is connected to HM | DCC, you can alter your locomotive's **Acceleration** & **Deceleration Rate** by moving the slider bars to the desired values. Tap and hold your finger on the screen and move your finger up and down to pan the screen.

Any values altered on the slide bars will instantly be updated on your locomotive's HM7000 decoder and settings can be altered whilst your locomotive is on the move. A higher value for the rate of acceleration and deceleration will mean your locomotive takes longer to speed up and slow down.

You can alter the sound volume of your locomotive's sounds by moving the **Global Volume** slider bar to the desired value. A smaller value will mean more quiet locomotive sounds.

If you wish to delete your locomotive from HM | DCC, you first must remove your assigned decoder from your locomotive as shown previously. If there is no decoder assigned to your locomotive, then at the bottom of the **Locomotive Settings** screen, tap on the **Delete** button and then tap **Yes**. Your decoder will still be linked to HM | DCC and will not be deleted.

Please continue to view **HM | DCC & HM7000 – Advanced Locomotive Settings** If you wish to learn how to change **CV settings** and **Function Maps** for your HM7000 fitted locomotive.

3. HM | DCC & HM7000 – Installing (Sound) Profiles

At launch, ALL locomotive (Sound) Profiles are FREE. Each *"Profile"* includes a set of lighting functions, sounds* and motor control functions based on your class of locomotive.

- *TXS sounds are only available for HM7000-TXS sound decoders.

If your locomotive is **DCC Fitted** with a HM7000 at the point of purchase, you will have pre-installed on your HM7000 decoder a **Profile** that is best suited to that locomotive. If you have purchased a HM7000-TXS decoder separately, you will have a *Default* **Profile** installed (SD999).

If you wish to try a new **Profile**, this will require the **Profile** to be installed via the HM | DCC app.

Firstly, ensure **HM | DCC & HM7000 - First Setup** has been followed and your HM7000 fitted locomotive you wish to update is stationary. Ensure that your HM7000 fitted locomotive you wish to update the **Profile** for is the only locomotive on the rails. It is good practice to **Power-Cycle** the entire layout from the main supply and ensure that no short-circuits are present.

Ensure that your phone or tablet has Wi-Fi turned ON and your internet connection is stable. Wi-Fi is required for the full duration of the **Profile** installation from the HM | DCC app to your HM7000 decoder.

The installation screen is required to be <u>always on</u> when updating your HM7000, therefore it is advised to alter your phone or tablet settings to make sure your screen is set to **Do Not Disturb**. This will ensure that the installation is not interrupted*. Instructions on how to do this are available from your phone or tablet's support website.

- *It is always advised to leave your phone or tablet stationary on the HM | DCC app during the entirety of the installation process.

If the screen turns off the HM | DCC app, the installation will pause. But, returning to the HM | DCC app will resume the installation process.

Tap on the **Control** ' ' icon. Then, for the locomotive you wish to update the **Profile** for, tap on **Locomotive Settings**. Scroll down to the bottom of the screen and tap **Browse Profiles**. This will pre-fill your locomotive and HM7000 decoder, ready for install of a new **Profile**.

Alternatively, you can tap on **Profiles** on the **Settings** ' ' screen.

Browse the **Profiles** screen and choose a **Profile**. You can scroll through different **Profiles** by holding your finger on the screen and moving it side to side. Pick the right scale (00 or TT) to ensure your HM7000 is calibrated to the motor in your locomotive once the **Profile** install is complete. The scale is featured in the top-right of each **Profile**.

Tap on the **Profile** you wish to install to open the **Manage Profile** screen. Tap on the **Preview Functions** button to view the **Function Map** and list of **Functions** you are about to install. Tap on **PAGE 2** and **PAGE 3** at the top of the screen to view all **Functions**.

Tap up on the top-left to go back to the **Manage Profile** screen.

Under **Decoder Selection**, make sure your decoder you wish to update is listed. If it isn't, tap on the **Decoder Selection** box and select the correct Locomotive and HM7000 decoder you wish to update. They will be named accordingly based on your Locomotive **Name** and **Address** (#). In the top-right of

the **Decoder Selection** box, the **Sound Download SKU** 'SD###' will show what **Profile** is currently installed on your HM7000 decoder.

Ensure that your HM7000 decoder is connected to HM | DCC and the Bluetooth® icon ' ' is **BLUE** and your locomotive and HM7000 decoder are powered.

Place your phone or tablet around 3-6 inches away from your stationary locomotive, tap on the **Install Locomotive Profile** button and then tap on the **Proceed** button.

Please allow up an average of *15 minutes* for the new **Profile** to install. It may take longer based on your phone or tablet. It is advised to keep your phone or tablet still and plugged into mains power during the entire installation process.

Once the installation is complete, please **Power-Cycle** your decoder by removing the locomotive from the track, waiting 5 seconds, and replacing the locomotive. If you have a **Power Bank** installed, you will have to wait up to 60 seconds for your HM7000 to power down. Once power is restored to your locomotive, your decoder will auto-reconnect to HM | DCC in an average of around 5 seconds. This will activate the new **Profile** for use.

You may be prompted to choose if you would like to **Import** the **Function Map** for your newly installed **Profile**. It is advised to **Import** the new **Function Map** to ensure that all your **Functions** work properly with the new **Profile**. If you are not pre-prompted, you can tap on the **Import Function Map** at the bottom of the **Manage Profile** screen of the **Profile** you have just installed.

Please note: The **Import** of the new **Function Map** will replace any previous **Function Map** for your locomotive. If you wish to keep your existing **Function Map**, please first use the **Export Function Map** feature on your **Locomotive Settings** screen before any new **Profile** install.

You can view what **Profile** is installed onto a HM7000 decoder on the **Manage Device** screen and view the **Profile SKU** code.

Tap on the **Control** ' ' icon and begin controlling with your new **Profile**.

If you wish to take things further and perfect running for your class of locomotive, you can also tap on **Import Running Profile** on the **Manage Profile** screen for a given **Profile**. Ensure that the correct scale is chosen for your locomotive before **Running Profile** import.

If you experience any issues when installing a new **Profile** or receive any app alerts of trouble with your decoder; please ensure no short-circuits are present and your locomotive is the only locomotive on the rails. Then, try reinstalling the **Profile** *a few times,* performing a Power-Cycle before each try. If issues still occur, please read the troubleshooting section on the Hornby.com website, or alternatively contact HM.customercare@hornby.com for specialised assistance.

4. <u>HM | DCC & HM7000 – Unlink & Delete HM7000 from your phone or tablet</u>

In **HM | DCC & HM7000 - First Setup**, we explored linking your HM7000 to HM | DCC. This locks the HM7000 to your phone or tablet, ensuring no other users can control your locomotive. <u>*Another*</u> phone or tablet can **Reset** the HM7000 by inputting the 12 Digit **Device Reset Passcode** on the **Link Device** screen. Please see <u>HM | DCC & HM7000 – Reset your HM7000</u> for information on how to do this.

For now, it is <u>vital</u> that for each HM7000 decoder connected to HM | DCC, you note down the 12 Digit **Device Reset Passcode(s).**

To do this, double tap on the **Settings** ' ⚙ ' icon, then tap on **Export Device Reset Codes**. Then, save the **Device Reset Codes** using an appropriate app (**Notes** etc), or send them to a trusted friend in a message or email. This will allow you to always **Reset** your decoder back to **Default Settings**.

If you wish to pass on your HM7000 to a friend, you will first need to **Unlink** your HM7000 from HM | DCC.

If your HM7000 decoder is **Assigned** to a locomotive, tap on the **Control** ' 🎮 ' button on the bottom toolbar and then tap the **Manage Device** button for the HM7000 you wish to **Unlink and Delete** from your phone or tablet**.**

Alternatively, double tap on the **Settings** ' ⚙ ' icon, tap on **Manage Devices** and then tap on the HM7000 decoder you wish to **Unlink and Delete** from your phone or tablet**.**

Ensure that your HM7000 decoder is connected to HM | DCC and the Bluetooth® icon ' 🔵 ' is **BLUE** and your locomotive and HM7000 decoder are powered.

Tap, hold, and move your finger to scroll down to the bottom of the **Manage Device** screen.

Please note: You cannot **Unlink & Delete** your HM7000 decoder from your phone or tablet if it has a locomotive **Assigned** to it. Tap on **Unassign** in the **Assigned Vehicles** box to remove your HM7000 from your locomotive. Your locomotive will be placed in your **Engine Shed** ready for a different decoder to be **Assigned** to it.

Tap on **Unlink & Delete Device**.

Tap on **Proceed** to remove your decoder from your phone or tablet, this will also perform a **Reset** on the decoder, setting it back to **Default Settings**. Please note: **CV Settings** will be reset to **Default(s)**, but the **Profile** on the decoder will not be removed on a **Reset*.**

- *****This also allows you to install a (Sound) **Profile** for a friend if required.

Once the **Unlink & Delete Device** process is complete, please **Power-Cycle** your decoder by removing the locomotive from the track, waiting 5 seconds, and replacing the locomotive. If you have a **Power Bank** installed, you will have to wait up to 60 seconds for your HM7000 to power down.

The HM7000 will now be ready to **Device Link** to another phone or tablet.

Please note: If you wish to set your decoder back to **Factory Settings**, please install the **Default Profile** (SD999) to your HM7000-TXS or **Default Profile** (SD998) to your HM7000-6/8 and then proceed to **Unlink & Delete Device** from your phone or tablet.

If any issues occur, please read the troubleshooting section on the Hornby.com website, or alternatively contact HM.customercare@hornby.com for specialised assistance.

5. <u>HM | DCC & HM7000 – Reset your HM7000</u>

In **HM | DCC & HM7000 - First Setup**, we explored linking your HM7000 to HM | DCC. This locks the HM7000 to your phone or tablet, ensuring no other users can control your locomotive.

It is <u>vital</u> that for each HM7000 decoder connected to HM | DCC, you note down the 12 Digit **Device Reset Passcode(s).**

To do this, double tap on the **Settings** ' ⚙ ' icon, scroll the bottom of the screen and then tap on **Export Device Reset Codes**. Then, save the **Device Reset Codes** using an appropriate app (Notes etc), or send them to a trusted friend in a message or email. This will allow you to always **Reset** your decoder back to **Default Settings**.

Deleting the HM | DCC app from your phone or tablet will reset the entire app back to **Default App Settings** and any locomotives and **HM Devices** stored will be lost.

Please note: Your HM7000(s) will remain locked to the previously deleted version of the app. Therefore, before deleting the HM | DCC app it is always advised to perform the **Unlink & Delete Device** process for all HM7000 decoders first. Please see the <u>HM | DCC & HM7000 – Unlink & Delete HM7000 from your phone or tablet</u> section for advice on how to do this.

If this cannot be done, the HM7000 decoders can be **Reset** back to **Default Settings** to allow you to **Link** them back to the HM | DCC app. You will need your 12 Digit **Device Reset Passcode(s)** at hand to do this for each of your HM7000 decoders.

If you have lost your **Device Reset Passcode(s)**, please contact <u>HM.customercare@hornby.com</u> where a *1-use* **Device Reset Passcode** can be provided for you for each decoder you wish to **Reset**.

Ensure your Bluetooth® & Wi-Fi are turned on in your phone or tablet settings and you are connected to the internet.

To **Reset** a HM7000 decoder, double tap the Settings ' ⚙ ' Icon.

Tap on **Link Device**.

Tap on **Start Scan** and wait for the scan to finish. You should notice your decoder (HM7000-_ _ _ _) pop-up under the **Resettable Devices** section.

If your device has not been found*, please ensure that your locomotive is powered correctly and tap **Restart Scan**.

*Ensure that the HM7000 is not connected to another previously used phone or tablet, you can temporarily turn off Bluetooth® on any other phone or tablet to ensure this does not happen. If the HM7000 decoder is connected to another phone or tablet, the **Scan** process will not find the decoder to **Reset** or **Link** to.

Tap on your decoder (**HM7000-_ _ _ _**) and a **Reset Device** prompt will appear. Insert your 12-Digit **Device Reset Passcode** for your decoder. Each reset code will be specific to each HM7000 decoder. If the **Reset** process fails, ensure that you check the 4-Digit code (HM7000-_ _ _ _) at the end of your HM7000's name correlates to the correct 12-Digit **Device Reset Passcode** previously saved. Also,

ensure your Bluetooth® & Wi-Fi are turned on in your phone or tablet settings and is connected to the internet.

Once the **Reset** is complete, please **Power-Cycle** your decoder by removing the locomotive from the track, waiting 5 seconds, and replacing the locomotive. If you have a **Power Bank** installed, you will have to wait up to 60 seconds for your HM7000 to power down.

Your HM7000 will now be **Reset** and ready to **Device Link** to any phone or tablet.

Please note: *Another* phone or tablet can **Reset** the HM7000 by inputting the 12 Digit **Device Reset Passcode** on the **Link Device** screen. This will **Unlink** the device from any currently **Linked** phone or tablet. Please note: This will not Delete the HM7000 decoder from HM | DCC and will cause it to *desync* from your phone or tablet. If this occurs, you can tap on the **Unlink & Delete Device** function on the **Manage Device** screen for your HM7000. This will fail due to the HM | DCC app trying to find a HM7000 that is no longer **Linked**. But, after the *3rd attempt* a **Force Delete** button will be available.

Tap on the **Force Delete** button at the bottom of the screen to remove the HM7000 decoder from HM | DCC.

It is always advised to use the **Unlink & Delete Device** function prior to *another* phone or tablet **Resetting** or **Device Linking** to the HM7000 decoder.

If any issues occur, please read the troubleshooting section on the Hornby.com website, or alternatively contact HM.customercare@hornby.com for *1-use* **Device Reset Passcode**(s) for your HM7000 and specialised assistance.

6. <u>HM | DCC & HM7000/HM7040 – Function Map Setup</u>

Tap on the **Control** ' ![icon] ' button on the bottom toolbar. You will notice that when the **Device Link** to your HM7000 has completed and you have tapped **Yes** on the **Function Map Import** prompt, the correct **Functions** will be present and ready to use on the **Control** ' ![icon] ' screen under **Function Control**.

This is your **Function Map** and features a *profile* of **Function Buttons**. A *"profile"* includes a set of lighting functions, sounds* and motor control functions based on your class of locomotive and the **Profile** installed on your HM7000 decoder.

If your decoder has been purchased separately to your locomotive, you will have pre-installed on the HM7000 decoder a Default Profile (SD999).

- *TXS sounds are only included with HM7000-TXS sound decoders.

If your decoder is pre-fitted into a locomotive when purchased, you will have pre-installed on your HM7000 decoder a **Profile** that is best suited to that class of locomotive.

If you wish to change the locomotive profile on your decoder, please follow the instruction in **HM | DCC & HM7000 – Installing (Sound) Profiles**.

When on the **Control** ' ![icon] ' screen, you can easily change the pre-set **Function Control Map** by tapping on **Locomotive Settings** and then tapping the **FUNCTIONS** column on the top toolbar.

You can move your **Function Button(s)** by pressing and holding a **Function Button** and moving it to the desired place. These changes will take effect on your **Control** ' ![icon] ' screen.

Tap on a **Function Button** to go to **Edit Function** screen. Here you can alter settings for the chosen function.

Under **Function Setup**, you can alter the **Name** of your **Function** by tapping on the field to the right-hand side and entering a new **Name** with your phone or tablet's keyboard.

Your HM7000 decoder will have in-built on the decoder a set of **Functions** (0 – 28). If you wish to alter what **Function** is activated on the **Function Button** press, please type in the desired number (0 – 28) to the right-hand side of the '**Function (0 – 28)**' field. For further information of the list of **Functions** for each **Profile**, please refer to **HM7000 Series Decoders Reference Manual**.

You can alter the way the button is set on your HM | DCC app for the respective Function by tapping on **Switch** (Toggle), **Push-Button** (Momentary) and **Timed** (Switch-Toggle, for a set amount of time).

For **Functions** you wish to stay on, when you press the **Function** Button, it is advised to select **Switch**.

For **Functions** you wish to turn off when you release your finger, it is advised to select **Push-button**.

If you select **Timed**, this will open a **Timer Interval** field. Enter how many seconds you would like the **Function** to stay on for. On tapping the **Function Button**. This will activate the **Function** for the set amount of time input.

If you are a **HM7040** user, the addition of the **Elite** button mode is now present with the latest HM | DCC update.

Elite button mode works to mimic that of the Elite/Select controllers whereby a *long-press* of a **Function** button provides a *single-play* of a given **Function** (This essentially is a replacement for the **Push** button mode).

In **Elite** button mode, a *short-press* of a **Function** button provides a *switch-play* of a given **Function** (This essentially is a replacement for the **Switch** button mode).

More information on the **Elite** button mode is featured in **[14.2]** **Function Control of your DCC Locomotive**.

You can tap the **Icon** to the right-hand side of the **Icon** field to select from a list of desired icons that best suit your **Function**.

You can turn off the **Function Number** by tapping on the **GREEN** switch icon for your **Function**.

You can test your **Function** works by tapping on the **Test Function** button.

You can clear the **Function** button completely by tapping on **Clear Function Setup**.

Once finished, tap on the **< Back** button in the top-left of the screen to go back to your **Function Map Setup** screen. If you notice a **Spanner** icon, you can edit this by tapping on it. but if left as the **Spanner** icon, the **Function** Button will appear blank and unusable on your **Function Map** on the

Control ' ' screen.

7. <u>HM | DCC & HM7000 – Advanced CV Editor</u>

Firstly, ensure **HM | DCC & HM7000 - First Setup** has been followed and your HM7000 decoder is connected to HM | DCC.

Tap on the **Control** ' ⛉ ' button on the bottom toolbar and then tap on **Locomotive Settings** for the desired locomotive you wish to alter **CV Settings** (Configuration Values) for.

On the top toolbar, tap on **ADV. CV EDITOR**. This is where you can alter all the **CV Settings** on your HM7000 decoder.

On entering the **ADV. CV EDITOR**, it is always advised to tap on the **Refresh** ' ↻ ' button in the top-right of the **ADV. CV EDITOR** table or the **Refresh CV Data** ' ↻ ' button to ensure that the **Values** are up to date. All **CV Settings** should be updated within *12-18 seconds*.

If a **CVs Out of Sync** prompt appears, please tap the **Refresh** ' ↻ ' button to ensure your **CV Settings** are correct.

Once your **CV Settings** have been refreshed, a list will be populated of all the available **CV Settings** that can be altered on your HM7000 decoder.

On each row of the **CV Settings** list, in the top-left is the **CV Number** (CV#). Underneath is the name of the **CV Setting** and on the right-hand side is the *current* **Value**. Please see the **HM7000 Series Decoders Reference Manual** for full explanation of each **CV Setting** and their **Default Values**.

You can tap on a particular **CV Setting** row and a pop-up prompt will appear. Certain **CV Settings** will only provide a set of **Options**, whilst other **CV Settings** will allow you to alter **Values** within a certain range using a Slider Bar.

You can also tap on the '**-**' and '**+**' buttons in the top-left and top-right of the pop-up prompt for fine tuning of **CV Settings**.

If your HM7000 decoder is connected to HM | DCC and the Bluetooth® icon ' 🚀 ' is **BLUE** at the top of the screen. You can alter the **Options** by tapping on each **Option** button or by using the **Slider Bar** to alter the **Value**.

You can reset your entry of **CV Setting** by tapping on the **RESET CV** button on the pop-up prompt. This will write your **CV Settings** back to the **Default Value** for the respective **CV**.

Once happy with the **CV Setting** input, you can tap on the **EXIT** button or tap on the outside of the pop-up prompt, these **CV Settings** will be instantly *written* and changed on your HM7000 decoder.

Please note: on the install of a **Profile**, **Unlinking** and also **Resetting** your HM7000 decoder, all **CV Settings** will be set to **Default Values**. It is advised to write down any **CV Settings** prior to installing a new **Profile**, **Unlinking** or **Resetting** your HM7000 decoder.

You can still alter **CV Settings** using a DCC Controller. But please note, **CV Settings** will not be reflected on the **ADV. CV EDITOR** until a **CV Setting Refresh** ' ↻ ' has been actioned.

It is good practice to only use the faster method of using the HM | DCC app to alter **CV Settings**. You can use the **ADV. CV EDITOR** in parallel with a DCC controller by altering the **Control Source** (CV12) to **DCC** (Value: 0). Only **Motor** & **Function** control will be changed.

Please note: **Loco Address CV Settings** can only be *read/viewed* in the **ADV. CV EDITOR**. If you wish to alter your **Loco Address**, please do this on the **DATA** tab on the **Locomotive Settings** screen. Multiple **CV Settings** will be written when inputting the **Address #** to allow for **Long Addressing.**

Lastly, if you notice any issues with the running of your locomotive. It is advised to **Reset All CVs** using CV8 (Manufacturer ID) and tapping on the **Reset All CVs** button on the pop-up prompt. This will reset all **CV Settings** to **Default Values***. Please then tap the **Refresh** ' ↻ ' button in the top-right of the **ADV. CV EDITOR** table to check **CV Settings** are reset to **Default Values**.

*It is important to note that this will set the HM7000 to **DCC Mode** (CV12: 0) and set the **Loco Address** to '3' (CV1: 3), but this may not be reflected on the **Locomotive Settings – DATA** screen. It is advised to write down any **CV Settings** prior to installing a new **Profile**, **Unlinking** or **Resetting** your HM7000 decoder.

8. <u>HM | DCC & HM Devices – Consisting</u>

On the **Settings '** ⚙ **'** screen, under **Device Settings,** select **Engine Shed.** You will see all of the locomotives stored in your engine shed.

Select **New Vehicle.** The **Consist** will appear as an option to select. Select **Consist** to jump to the **Consist Settings** screen.

Similar to the **Locomotives Settings** screen you can add a custom image within the Vehicle image window, name the Consist, choose your preferred control method as well as adjust the Acceleration, Deceleration and Global Volume settings.

It's recommend you name your consist, which makes it easier to identify in your **Engine Shed.**

Note: The Consist **Loco Address** will automatically assign the next available numerical digit based on the DCC locomotive addresses stored in the app. At this point, all locomotives that you wish to be

added to the Consist should be on the track, powered, and being displayed as connected ' 🔵 ' **BLUE** in the HM7000 app.

Under **Consist Setup** select the **Assign Now** icon.

The Assign Consist screen opens where you can assign or remove any locomotives stored in your **Engine Shed** to your Consist.

Tap the locomotives you wish to assign. Note: They will turn green and show as **Assigned.**

Note: Locomotives can only be assigned to 1 consist at a time. Locomotives that are assigned to another consist will be displayed **Red.**

In the top left corner of the screen tap**, < Consist Settings** to return back to the previous page..

The locomotives you've assigned in **Consist Setup**, are now displayed.

When operating your Consist, you can either operate a locomotive function for each individual locomotive or for all Consisted Locomotives globally by using the **Global Functions** option.

Global function map import is only of use for locomotives such as HST, Flirt, DMUs, 800, etc with like for like locos. For a disparate consist the manual method should be used to populate typical common functions like lights, AFC, brake, etc.

Global Function Map provides you the option to either import a function map from your **Consisted Locomotives,** or a function map from locomotives found in the Profiles screen. Alternatively you can allocate any functions manually by tapping the Global Function tab on the main **Consist Settings** screen.

The **Control Mode** will default to **Bluetooth** operation and **Vehicle State** will display as **Active.**

Adjusting the **Acceleration** and **Deceleration Rate** slide bars under the **Locomotive Data** section will change these values globally, for every locomotive in the consist. To change these values for individual locomotives within the consist instead, tap **Configure Locomotives** under **Locomotive Data.**

Each locomotive has it's own adjustable **Acceleration** and **Deceleration** slide bar. Scroll up and down to view all locomotives in the consist. Once you've set the desired values, tap **back.**

Similarly, the **Global Volume** slide bar within the **Sound Settings** section, adjusts the volume for every locomotive in the consist. Tap **Configure Locomotives** if you wish to view and adjust the global volume on an individual basis. . Once you've set the desired values, tap **back.**

Select the **Control** ' ![control icon] ' button on the bottom toolbar.

The **Control** screen will now show all of your consisted locomotives in tab form. The selected locomotive will be displayed in yellow, along with it's Bluetooth status. The relevant function map is also displayed with each corresponding icon and F# beneath.

Individual functions for each locomotive can be played here OR if you tap the **Global Functions,** the **Global Function** window will pop out to the right of the screen. Tapping a function in this window allows you to send a global function command to every loco simultaneously in the consist.

Note: The throttle slide bar and page scaling can be changed to suit your preference by going to **Settings** ' ![settings icon] ' – **Consist Control Customisation.**

If you wish to change the running direction of 1 of the locomotives in the consist, tap **Direction Setup.** Tap the opposing directional arrow to reverse the locomotive direction then tap **back**. For example, you may have 2 Class 20 locomotives consisted and running nose to nose during operation. Youa re ready to control your consisted locomotives!

The previous horizontal throttle slide bar has now been replaced with a touch sensitive vertical one. All locomotives in the consist will begin to move when throttle is applied.

Note: The vertical throttle slide bar is currently only available whilst in consist mode.

To dissolve a consist and revert back to individual locomotive function and motor control select the **Settings** ' ![settings icon] ' icon on the bottom right of the page then select **Engine Shed.**

Scroll through the list of locomotives. select the Consist you wish to dissolve.

On the **Consist Settings** screen, select the locomotives displayed within **Consist Setup.**

Scroll and select all consisted loco's displayed as green and show as **Assigned.**

The **Assigned** icon is removed and all locomotives will have reverted back to their previous pre-consist state.

The **Consist** will remain in your **Engine Shed** until deleted.

Updates to come that are currently in development and will be released shortly:

Features HM7040 Dongle Integration

DCC Operation if locomotives are still allocated to a Consist in the HM7K app

Speed Compensation – how to further fine tune your locomotives to run at similar speeds when Consisted.

Double tap the **Settings** ' ⚙ ' Icon.

Tap on **Manage Devices**. This is the list of all **HM Devices*** connected to HM | DCC.

Under **My Devices**, you will be able to see **HM Devices** that are connected when the Bluetooth® icon ' ᛒ ' is **BLUE** or they will disconnected when the Bluetooth® icon ' ᛒ ' **RED**.

*A **HM Device** is any device in the HM6000 Or HM7000 range of products that has Bluetooth® capability.

Each **HM Device** has it's on own box on screen, in the top-right corner of each **HM Device** box will be a number that correlates to the number of locomotives are **Assigned** to it (if any).

You may notice in the bottom-left of each box a **RED** update icon. This will tell you that your **HM Device** firmware is out of date. For your **HM Device** to work correctly with HM | DCC you must ensure your decoder is updated to the latest version. Please see **Device Version(s) & Updating** for advice on how to do this.

Tap on a **HM Device** to go to the **Manage Device** screen for the selected **HM Device**. The **Manage Device** screen provides important information regarding your **HM Device**.

Basic Information such as your **HM Device Name** is shown, this is a name that identifies your **HM Device**. The **4-Digit Code** after your **HM Device** name is unique and differs between another **HM Device**.

Connection Status will let you know if your **HM Device** is connected to HM | DCC in **BLUE** or disconnected when **RED**. 1 device on your **Bluetooth® Mesh Network**, will feature a '**H**' to the left-hand side of the Bluetooth® icon ' ᛒ ', this is your **HOST** in your **Bluetooth® Mesh Network** and all commands will be relayed through this device. It is always advised for your **HOST** to be as stable as possible: Static HUBs such as the HM7040, HM6000 and HM6010 are always recommended.

Vehicle Allocation Limit is the limit of how many locomotives can be assigned to the **HM Device**. As of the HM | DCC app release date, HM7000 decoders can have 1 locomotive **Assigned** to them, whilst the **HM7040: Legacy Dongle** can have multiple locomotives under different addresses **Assigned** to it.

Device SKU is the identification SKU of the decoder installed into your locomotive and **Sound Capable Decoder** shows if the decoder can be connected to a speaker output to play TXS (Triplex) locomotive sounds.

(HM7000-21TXS: **R7322**) – Sound Capable Decoder: **True**

(HM7000-N18TXS: **R7345**) – Sound Capable Decoder: **True**

(HM7000-8TXS: **R7336**) – Sound Capable Decoder: **True**

(HM7000-8: **R7335**) – Sound Capable Decoder: **False**

(HM7000-6: **R7321**) – Sound Capable Decoder: **False**

(HM7000-N18: **R7401**) – Sound Capable Decoder: **False**

(HM7000-21: **R7402**) – Sound Capable Decoder: **False**

Also featured is your **Device Reset Passcode** for your HM7000 decoder, this is very important and is used to **Reset** your HM7000. Please ensure that the **Device Reset Passcode** is written down or stored away from HM | DCC. Tap on the **12-Digit Code** to copy this to your phone or tablet's clipboard, it can then be pasted where you wish.

Other **HM Devices** often have a physical **Reset Button** located on the hardware. Please follow the **Quick Start Guides** instructional manuals included within the pack for information on how to **Hard Reset** your **HM Device**. It must be noted that a **Hard Reset** on the physical HM Device will not remove the instance from the HM | DCC app but will sever any **Device Link**. Users must ensure that any instances of a **HM Device** are **Force Deleted** from the app prior to repeating the **Link Device** process. Information on how to do this are featured in: **HM | DCC & HM7000 – Reset your HM7000**. It is always recommended to **Unlink & Delete** a **HM Device** before performing a **Hard Reset**.

Alternatively, double tap on the **Settings** '⚙' icon, scroll the bottom of the screen and then tap on **Export Device Reset Codes**. Then, save the **Device Reset Codes** using an appropriate app (Notes etc), or send them to a trusted friend in a message or email. This will allow you to always **Reset** your decoder back to **Default Settings**.

10. HM | DCC & HM7000 – Device Health

Double tap the **Settings** '⚙' Icon.

Tap on **Manage Devices**. This is the list of all **HM Devices*** connected to HM | DCC.

Tap on a **HM7000** to go to the **Manage Device** screen for the selected **HM Device**. The **Manage Device** screen provides important information regarding your **HM Device**.

The **Device Health Check** section is information to ensure that your HM7000 is working as expected. This section will notify you if there are any issues with your decoder.

All fields in the **Device Health Check** section must be **GREEN** for your **HM Device** to function properly.

If you notice a '❗' , next to any fields. It is advised to reinstall the **Profile** on your HM7000 decoder until all fields in the **Device Health Check** section are **GREEN**. For Information on how to do this, please view HM | DCC & HM7000 – Installing (Sound) Profiles and check the installation of your HM7000 decoder in your locomotive.

If you still experience '❗' or in app-notifications, please read the troubleshooting section on the Hornby.com website, or alternatively contact HM.customercare@hornby.com for specialised assistance.

11. HM | DCC & HM Devices – Device Version(s) & Updating

Double tap the **Settings** ' ⚙ ' Icon.

Tap on **Manage Devices**. This is the list of all **HM Devices*** connected to HM | DCC.

Tap on a **HM Device** to go to the **Manage Device** screen for the selected **HM Device**. The **Manage Device** screen provides important information regarding your **HM Device**.

Further down the **Manage Device** screen is the **Device Version(s)** box. This is important information to see what firmware is installed onto your **HM Device**.

Bluetooth® Version is the firmware of the Bluetooth® chip on your **HM Device.**

Profile ROM (APROM) is the firmware on your **HM7000** that allows for running your locomotive.

Boot ROM (LDROM) is firmware in relation to the hardware on your **HM7000**, this will not change.

Profile SKU (SPIROM + APROM) is the currently installed **Profile** on your **HM7000** decoder and will relate to a certain class of locomotive.

Hardware Version is in relation to **Boot ROM** and will not change.

It is vital to ensure that your **HM Device** is running correctly to always be up to date with the latest Version (firmware).

To update the **Bluetooth® Firmware** of your **HM Device**, under the **Bluetooth® Firmware** section on the **Manage Device** screen, an **Update Device** button will be present.

Ensure your Bluetooth® & Wi-Fi are turned on in your phone or tablet settings and the phone or tablet is connected to the internet. Ensure that **Do Not Disturb** is turned on to ensure no interruptions to the update.

Tap on **Update Device** and you will be prompted with a screen showcasing all the available **Bluetooth® Firmware**. The latest **Bluetooth® Firmware** version will have "**(Latest)**" to the right-hand side of the **Version Number**.

Place your phone or tablet around 3-6 inches away from your HM Device and tap on the required firmware, tap **Yes** and then tap **Update.** It is also possible to *'down-date'* the firmware if required.

Please allow up an average of *1 minute* for the new **Bluetooth® Firmware** to install. It may take longer based on your phone or tablet. It is advised to keep your phone or tablet still and plugged into mains power during the entire installation process.

For HM7000 decoder firmware updates: Once the installation is complete, please **Power-Cycle** your **HM Device** by removing the locomotive from the track, waiting 5 seconds, and replacing the locomotive. If you have a **Power Bank** installed, you will have to wait up to 60 seconds for your HM7000 to power down. Once power is restored to your locomotive, your decoder will auto-reconnect to HM | DCC in an average of around 5 seconds. This will activate the new **Bluetooth® Firmware** for use.

For other **HM Devices**, please **Power-Cycle** by switching of the **HM Device** at the mains, waiting 5 seconds and then switching power back on. This will activate the new **Bluetooth® Firmware** for use.

If, after update, issues are noticed. It is always possible to revert to a previous firmware. Alternatively, please refer to the **Troubleshooting** section or contact HM.customercare@hornby.com for specialised assistance.

12. HM | DCC & HM Devices – Manage HM Devices & Engine Shed

Double tap the **Settings** ' ⚙ ' Icon.

Tap on **Manage Devices**. This is the list of all **HM Devices** connected to HM | DCC.

Tap on a **HM Device** to go to the **Manage Device** screen for the selected **HM Device**. The **Manage Device** screen provides important information regarding your **HM Device**.

Under **Assigned Vehicles**, you can see if your HM7000/HM7040 has a locomotive **Assigned** to it. Tap on **Unassign** to put your locomotive back into the **Engine Shed**.

Or, if no locomotive is **Assigned** to a HM7000/HM7040, tap on one of your locomotives to **Assign** it to your HM7000 decoder or HM7040: Legacy Dongle.

Under **Delete Device & Configurations**, is the **Unlink & Delete Device** button. Tapping this will **Unlink** your **HM Device** from your phone or tablet. Ensure that no locomotive is **Assigned** to your **HM Device** and that your **HM Device** is connected to HM | DCC before tapping the **Unlink & Delete Device** button.

Alternatively, Double tap the **Settings** ' ⚙ ' Icon.

Tap on **Engine Shed**. This will list all your locomotives.

Tap and hold down your finger on a locomotive box, then move your finger up and down to reorder your locomotives. This will alter the order of the **Control** ' 🎚 ' screen.

You will see at the top-left of the locomotive box your locomotive **Name** and **Address #**. Also, a picture of your locomotive on the right-hand side if you have imported or taken a photo.

In the bottom-left of the locomotive box. You will see the HM7000/HM7040 **Assigned** to it. You will also see locomotives without a HM7000/HM7040 **Assigned** to them with **Vehicle Not Assigned** status.

You can tap on a locomotive with the **Vehicle Not Assigned** Status, and then on the **Locomotive Settings** screen, tap on **Assign Now >** in the **Decoder Setup** box. A prompt will pop-up, allowing you to **Assign** an available HM7000 decoder or HM7040: Legacy Dongle. HM7000 decoders already **Assigned** to another locomotive will not appear in the pop-up prompt. The HM7040: Legacy Dongle can be assigned up to a max of **128** locomotives providing your phone/tablet is powerful enough.

In the **Engine Shed**, you can create a **New Vehicle** by tapping the button at the bottom of the **Engine Shed** screen. You can then tap on **Locomotive** to create a brand-new locomotive (Vehicle) in the HM | DCC app.

Tap on the **Control** ‘ ‘ button on the bottom toolbar and then tap on Manage Device

In the **Decoder Setup** box, in the top right corner, tap on **Manage**. This will take you to the **Manage Device** screen.

Tap and hold your finger to scroll down to the bottom of the **Manage Device** screen. The **Manage Device** screen provides important information regarding your HM7000 decoder or HM7040: Legacy Dongle.

Information such as your HM Device **Name** is shown: This is a unique name that identifies your HM7000/HM7040 only.

Connection Status will let you know if your HM7000/HM7040 is connected to HM | DCC in **BLUE** or disconnected when **RED**. 1 device on your **Bluetooth® Mesh Network**, will feature a '**H**' to the left-hand side of the Bluetooth® icon ‘ ’, this is your **HOST** in your **Bluetooth® Mesh Network** and all commands will be relayed through this device. It is always advised for your **HOST** to be as stable as possible: Static HUBs such as the HM7040, HM6000 and HM6010 are always recommended. HM | DCC will attempt to always connect to a static HUB on rebooting the HM | DCC app, or turning power on a given layout first.

Also featured is your **Device Reset Passcode** for your HM7000 decoder, this is very important and is used to **Reset** your HM7000. Please ensure that the **Device Reset Passcode** is written down or stored away from HM | DCC. Tap on the **12-digit Code** to copy this to your phone or tablet's clipboard, it can then be pasted where you wish.

Alternatively, you can double tap on the **Settings** ‘ ‘ icon and then scroll to the bottom of the screen and tap on **Export Device Reset Codes**. Then, save them using an appropriate app (**Notes** etc). This will then give you a record of **ALL** your HM7000 decoders connected to HM | DCC.

13. HM | DCC & HM7040 - First Setup

- 12.1 Download & Login to HM | DCC

Welcome to HM | DCC and the HM7040: Legacy Dongle, your new digital control system for DCC decoders.

Firstly, make sure that the instructional manuals within your HM7040 and Elite/Select controller pack have been followed, ensuring your HM7040 is installed correctly and is powered on your layout ready for the HM | DCC app to connect.

Ensure your Bluetooth®, Wi-Fi, Location Services and Nearby Device Scanning* are turned on in your device settings and you are connected to the internet.

*Android users must ensure that Location Services, Bluetooth® and Nearby Device Scanning (device dependent) are all turned **ON**. **HM | DCC will not connect to HM Devices without these Android services turned ON.**

Download the HM | DCC application using the QR code shown on the instructions, or search for "HM DCC" in your app store.

Once the download is complete, open the HM | DCC app on your device.

Accept **ALL** permissions** to ensure your application works correctly with your hardware. These can be altered within your device settings at any time.

Depending on your Android device, certain permissions may not be available for accepting on HM | DCC app launch; if this is the case, you will need to go into your Android device settings and grant these permissions for the HM | DCC app.

Android users must ensure that Location Services, Bluetooth® access and Nearby Device Scanning (device dependent) **permissions are granted. **HM | DCC will not connect to HM Devices without these permissions granted.**

You will require a Hornby.com account to use the HM | DCC application. If you already have a Hornby.com account, tap the **Login** button, enter your details, and then tap the **Sign In** button.

If you do not already have a Hornby.com account, tap on the **Sign Up*** button and you will be redirected to the Hornby website where you will be able to create an account. Once your account has been verified, please use the same details to login to the HM | DCC app.

*Versions of the HM | DCC may have the exclusion of the **Sign Up** button. In this case, please visit: https://uk.hornby.com/community/login/register

Please ensure that the instructions in the HM7040: Legacy Dongle pack have been followed and the HM7040 and Elite/Select controller are both powered. The **Power LED** on the HM7040 should be solid **RED**.

Once logged in, tap on **Link Device**.

Tap on **Start Scan** and wait for the scan to finish. You should notice your Legacy Dongle(HM7040-_ _ _ _) pop-up under the **Ready to Link** section.

If your device has not been found, please ensure that your HM7040 and Elite/Select controller is powered correctly and tap **Restart Scan**.

Tap on your Legacy Dongle (**HM7040-_ _ _ _**) and allow the **Device Link** process to complete. Please note, you may be prompted to update your HM7040 if it is not updated to the latest version. For your HM7040 to work correctly with HM | DCC you must ensure your HM7040 is updated to the latest version. If you are presented with the essential update screen, please place your phone or tablet down next to your HM7040 and tap the **Start Update** button. Please allow a few minutes for the update(s) to complete, then tap the **Done** button.

Please then **Power-Cycle** your HM7040 by removing power from the Elite/Select controller, waiting 5 seconds, and turning power back on.

HM | DCC will attempt to always connect to a static HUB such as the HM7040 on rebooting the HM | DCC app, **Refreshing Host** or turning power ON, on a given layout first.

Connection Status will let you know if your HM7040 is connected to HM | DCC in **BLUE** or disconnected when **RED**. 1 device on your **Bluetooth® Mesh Network**, will feature a '**H**' to the left-hand side of the Bluetooth® icon ' ' on the **Control Screen** or **Manage Device** screen, this is your **HOST** in your **Bluetooth® Mesh Network** and all commands will be relayed through this device.

For the best user experience and the fastest **Motor** & **Function Control**, it is always advised to ensure that the HM7040 is your **HOST** '**H**'. You can tap the **Refresh Host** button on the **Manage Device** screen and providing your HM7040 is **ON** and **Linked**, it will *try* to reconnect to HM | DCC as the **HOST** '**H**'.

You may be prompted to install a *Default* Function Map after the HM7040 **Device Link** process is complete. It is always advised to do this at it will pre-setup the **Functions** for your control.

The HM7040 works differently for the Elite & Select controller regarding **Functions 13 – 28**. You must ensure that your correct **DCC Controller Type** is selected, based on what DCC controller your HM7040: Legacy Dongle is plugged in to.

By default, **Elite** **DCC Controller Type** is selected. If you have a Select controller, you can alter the **DCC Controller Type** by double tapping on the **Settings** ' ' icon, then tap on **Manage Devices** and select your **HM7040**. Then, tap on **Select**. This will ensure **F13 – F28** work correctly for your Select controller.

Please continue to view **HM | DCC & HM7040 – Basic Locomotive Settings** to setup your locomotive with a name, an image and correctly address your DCC locomotive into the HM | DCC app.

14. HM | DCC & HM7040 – Basic Locomotive Settings

In this tutorial we will look at *basic* **Locomotive Settings** within the HM | DCC app in relation to the HM7040: Legacy Dongle and how to use them.

- 13.1 Setup your first DCC locomotive

Firstly, ensure **HM | DCC & HM7040 - First Setup** has been followed and your HM7040 is connected to HM | DCC.

After the Device Link process is complete, you will be presented with the **Locomotive Settings** screen.

Alternatively, tap on the **Control** ' ' button on the bottom toolbar and then tap the **Locomotive Settings** button. Ensure the **DATA** column is selected on the top toolbar – These are your *basic* **Locomotive Settings**.

Change the image for your locomotive by tapping the **Edit** button.

Tap **Take Photo** to use your device camera, ensuring that camera access is granted. Take your desired photo and then tap **Use Photo (iOS)** or **Confirm**.

Alternatively, to get the perfect image, tap the **Import** button to choose an image from your device library. Tap **Choose (iOS)** or **Confirm** and your image will be inserted.

Remove any previously chosen image by tapping the **Remove Image (iOS)** button.

You can alter the locomotive address by tapping on the field to the *right-hand side* of **Loco Address**. Key in the desired address with your device's number pad between a value of **2 - 127**. If you wish for a higher address (128 – 9999), you must ensure your Legacy Dongle is plugged into the back of an Elite controller.

Please ensure that the address entered matches that of the DCC locomotive that you wish to control. If the address of your DCC locomotive is not known, it is advised to read the **Loco Address (CV1)** using your Elite/Select controller via the programming track; information on how to do this is available in the instruction manual for the Elite/Select controller.

It is good practice to have a different address for each of your locomotives.

You can change the name of your locomotive by tapping the field to the *right-hand side* of **Name** and typing in your desired locomotive name with your device's keyboard.

This completes the initial setup of your first DCC locomotive for HM7040 and HM | DCC app control.

Tap on the **Control** ' ' button on the bottom toolbar. Your DCC locomotive is ready to control.

15. <u>HM | DCC & HM7040 – DCC Locomotive Control</u>

- 14.1 <u>Motor Control of your DCC locomotive</u>

To control your DCC locomotive, tap on the **Control** ' ' button on the bottom toolbar.

If you have multiple locomotives setup, select your locomotive you wish to control using the top toolbar.

Using the horizontal **Speed** slider, gradually drag the *vertical bar* on the left-hand side of the horizontal **Speed** slider to the right-hand side. This will move your locomotive in a given direction similar to that of the speed control dial on your Elite/Select controller.

To get accurate speed control of your locomotive, use the '**-**' and '**+**' buttons in the **Speed** control section of the **Control** screen. This will decrease/increase the **Speed** by a value of 1 on each button press. Holding either one of these buttons down will provide multiple inputs* and decrease/increase the **Speed** slider.

*Please note: multiple inputs will stack and may cause a degraded user experience on older devices with a lower RAM.

Alter the direction of your locomotive by tapping on the 2 *arrows* in the **Motion Controls** section of the **Control** screen.

Tap on the **STOP** button to decrease the **Speed** slider to set your locomotive's Speed to 0, inertia settings will not be respected.

Tap on the **BRAKE** button to decrease the **Speed** slider in increments on each button press and actively slow your locomotive. *Please note: this button works differently to HM7000 control, where **F27** is actioned to provide braking function.*

Tap on the **Stop Layout** button in the top-right corner of the **Control** screen in order to **STOP** all locomotives connected to HM | DCC, inertia settings will not be respected. **Function(s)**, **Speed** and **Direction** can all be altered whilst in this state.

Tap on the **Resume Layout** button in the top-right corner of the **Control** screen in order to *resume* all locomotives connected to HM | DCC, inertia settings will be respected. **Function(s)**, **Speed** and **Direction** whilst in the **Stop Layout** state will be respected and the locomotive will act accordingly.

- 14.2 <u>Function Control of your DCC locomotive</u>

For HM7000 users, **Function Control** works based on **Push** & **Switch** buttons to ensure that decoder functions work correctly.

An example of **Switch** button control would be a ***Lighting Function*** whereby a **Switch** button would be used to ensure that the **Function** stays **ON** until turned **OFF**.

An example of a **Push** button control would be a *single-play **Sound Function*** like a horn or whistle. This ensures that the horn or whistle only plays once and not multiple times.

Through the **Import Function Map** feature in the **Locomotive Settings**, it is possible to import **Function Maps** that feature **Push** & **Switch** button modes. However, it is not possible for the HM |

DCC app to pick up what each **Function** button on a given DCC decoder should be set to. Therefore, the **Elite** button system has been added to HM | DCC to cater for this.

The **Elite** button mode is to be used for DCC decoders where the type of **Function Button** pressing mode is *unknown*. The **Function Button** pressing mode is *unknown* for all <u>non-HM7000</u> decoders by the HM | DCC app. HM7000 allows for firmware to be read from the decoder and the correct **Function Map** is provided for user import on first linking the HM7000 decoder to HM | DCC / installing a new (Sound) Profile; this provides the user with **Switch** & **Push Function Button(s)** that match how the HM7000 decoder **Functions** correctly operate.

Elite button mode works to mimic that of the Elite/Select controllers whereby a *long-press* of a **Function** button provides a *single-play* of a given **Function** (This essentially is a replacement for the **Push** button mode).

In **Elite** button mode, a *short-press* of a **Function** button provides a *switch-play* of a given **Function** (This essentially is a replacement for the **Switch** button mode).

Elite button mode can easily be altered for a locomotive by tapping on **Locomotive Settings**, then tap the **FUNCTIONS** button, tap on the **Function** you wish to alter, then tap **Push** or **Switch** to alter the operation of the **Function Button**. It is only advised to do this, if you know for certain how the **Function Button** should operate regarding the DCC decoder. Please consult the manual of your DCC decoder for more information if a given **Function** is a *toggle* **Switch** or *momentary* **Push** style of **Function** operation.

Please see **[14.3] Importing DCC Function Maps** for guidance on how to import **Function Maps** for HM7040 *assigned* locomotives, to make **Function** control more convenient and user-friendly.

- 14.3 <u>Importing DCC Function Maps</u>

Further to **[14.2]**, HM | DCC features **Function Maps** for import to make **Function Control** more convenient and user-friendly. These include **TXS** (HM7000 Triplex Sound), **TTS** (Twin-Track Sound), **NS** (Hornby Non-Sound) and **Other** (*non-Hornby* Sound/non-Sound)* **Function Maps**.

A given **Function Map** provides the correct **Function Button** mode (**Push** or **Switch**) and provides graphical icons for each **Function**.

*Please note: **Other** (Non-Hornby) **Function Maps** may not be available at launch of the HM7040: Legacy Dongle and may be added at a later date.*

A Function Map for a locomotive *assigned* to the HM7040 can be altered in the same manner as a HM7000 *assigned* locomotive. Options include **Switch**, **Push**, **Timed** and **Elite** Function button styles of operation and are discussed further in **HM | DCC & HM7040 – Function Map Setup**.

To import a **Function Map**, double tap the **Settings** ' ⚙ ' Icon.

Tap on **Profiles**.

Tap on the **Profile** panel of the **Function Map** you wish to import.

In the **Decoder Selection** box, tap on **Select Now >**

Select your Locomotive from the **Decoder Selection** pop-up box.

Tap on **Import Function Map**. (Please note: this will overwrite any existing Function Map).

You can also import the **Default Function Map** (F0 – F28) from the **Import Function Map** button on the **Locomotive Settings** screen. You will notice that any **Function Maps** you have previously exported using the **Export Function Map** function will also be available for import.

To save time, it is a good idea to view through each of the **Function Maps** on the **Profiles** screen to best pick a **Function Map** that is closest to that of your given DCC decoder, alterations can then made later using the **FUNCTIONS** page within **Locomotive Settings** as required.

It is always advised that any edited **Function Maps** using the **FUNCTIONS** page are exported using the **Export Function Map** function within **Locomotive Settings**. This will assist for future use of the **Function Map** and save time on importing **Function Maps** for multiple *similar* DCC decoders.

- 14.4 Setup multiple DCC locomotives

You can control more* DCC locomotives using the HM7040. To do this, it is required to repeat the process above [14.1] for each DCC locomotive on the layout. But please see further instruction below:

Double tap the **Settings** ' ⚙ ' Icon.

Tap on **Engine Shed**. This will list all your locomotives.

You can create a **New Vehicle** by tapping the button at the bottom of the **Engine Shed** screen. You can then tap on **Locomotive** to create a brand-new locomotive (Vehicle) in the HM | DCC app.

You will be presented with the **Locomotive Settings** screen for the newly created Locomotive (Vehicle).

Tap on **Assign Now >** in the **Decoder Setup** box. A prompt will pop-up, allowing you to **Assign** it to an available HM7040. Tap on the HM7040, then proceed to setup a new locomotive as the instruction above, ensuring that the address entered matches that of the DCC locomotive that you wish to control.

Please note: If your DCC locomotives are setup under the same **Loco Address**, 1 locomotive (Vehicle) setup in the HM | DCC app will control all DCC locomotives associated with that given **Loco Address**.

Tap on the **Control** ' 🕹 ' button on the bottom toolbar. Your DCC locomotive is ready to control.

Repeat this process for all the DCC locomotives you wish to control on your layout.

*It must be noted that the HM7040 allows for multiple locomotives to be *assigned*. This means that the number of locomotives is limited to the power available and the performance of your phone/tablet. HM | DCC has been tested for up to **128** locomotives to be featured in the **Engine Shed** using a *high-performance* phone and tablet. More locomotives in the **Engine Shed** of the HM | DCC app may be possible but cannot be recommended.

16. <u>HM | DCC & HM7040 – Unlink & Delete HM7040 from your phone or tablet</u>

In **HM | DCC & HM7040 - First Setup**, we explored linking your HM7040 to HM | DCC. This locks the HM7040 to your phone or tablet, ensuring no other users can control your Legacy Dongle and the locomotives on your layout.

If you wish to pass on your HM7040 to a friend or setup on another phone or tablet, you will first need to **Unlink** your HM7040 from HM | DCC.

If your HM7040 decoder is **Assigned** to locomotive(s), tap on the **Control** ' ⬚ ' button on the bottom toolbar and then tap the **Manage Device** button for the HM7040 you wish to **Unlink and Delete** from your phone or tablet**.**

Alternatively, double tap on the **Settings** ' ⚙ ' icon, tap on **Manage Devices** and then tap on the HM7040 decoder you wish to **Unlink and Delete** from your phone or tablet**.**

Ensure that your HM7040 decoder is connected to HM | DCC and the Bluetooth® icon ' ❋ ' is **BLUE**.

Tap, hold, and move your finger to scroll down to the bottom of the **Manage Device** screen.

Please note: You cannot **Unlink & Delete** your HM7040 Legacy Dongle from your phone or tablet if it has a locomotive **Assigned** to it. Tap on **Unassign** in the **Assigned Vehicles** box to remove your locomotive(s) from the HM7040. Your locomotive(s) will be placed in your **Engine Shed** ready for a different HM7000 or HM7040 to be **Assigned** to it.

Tap on **Unlink & Delete Device**.

Tap on **Proceed** to remove your HM7040 from your phone or tablet. You will notice the **BLUE** LED on your HM7040 device turn **OFF**.

The HM7040 will now be ready to **Device Link** to another phone or tablet.

17. <u>HM | DCC & HM7040 – Reset your HM7040</u>

In **HM | DCC & HM7040 - First Setup**, we explored linking your HM7040 to HM | DCC. This locks the HM7040 to your phone or tablet, ensuring no other users can control your HM7040 device and the locomotives **Assigned** to it.

Please refer to the HM7040: Legacy Dongle Quick Start Guide for information on how to perform a Hard Reset (Manual Reset).

In short, you can **Hard Reset** the HM7040 by using a thin implement (paperclip) to hold down the **Reset Button** for 5 seconds. You will notice the **Power LED** and **Bluetooth LED** flash, then only the **Power LED** will be solid **RED**.

Please note: This will not Delete the HM7040 from HM | DCC and will cause it to *desync* from your phone or tablet. If this occurs, you can tap on the **Unlink & Delete Device** function on the **Manage Device** screen for your HM7040. This will fail due to the HM | DCC app trying to find a HM7040 that is no longer **Linked** *(desynced)*. <u>But, after the 3rd *attempt* a **Force Delete** button will be available.</u>

Tap on the **Force Delete** button at the bottom of the screen to remove the HM7040 from HM | DCC.

<u>It is always advised to use the **Unlink & Delete Device** function prior to *another* phone or tablet **Device Linking** to the HM7040 Legacy Dongle.</u>

Deleting and reinstalling the HM | DCC app from your phone or tablet will reset the entire app back to **Default App Settings** and any locomotives and **HM Devices** stored will be lost. Please note: Your HM7040(s) will remain locked to the previously deleted version of the app. In this scenario, a **Hard Reset** of the HM7040 will be required in order for the newly installed instance of the HM | DCC app to be able to **Scan** for the HM7040.

18. HM | DCC & HM7090 – Multi-User Club Control

Multiple HM7040: Legacy Dongles can be plugged into an Elite/Select *master* controller to allow for multi-user control with the use of the new HM7090: Club Adapter. Perfect for your club layout!

Firstly, make sure that the instructional manuals within your HM7040: Legacy Dongle(s) have been followed, ensuring your HM7040's and HM7090: Club Adapter's are installed and Linked to HM | DCC correctly.

Please ensure that the **Multi-Dongle Control** portion of the **HM7040 Quick Start Guide** has been followed and your system is setup as below:

For the purpose of this tutorial, the following setup is used:

- **1x** Elite/Select Controller
- **2x** HM7040: Legacy Dongles
- **1x** HM7090: Club Adapters
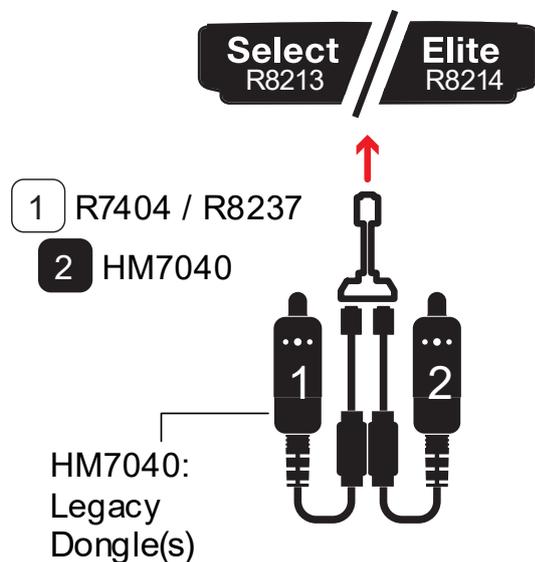
Firstly, each Legacy Dongle is to be Device Linked to 2 separate phones/tablets.

- **User 1** will have a phone/tablet *(A)* with a HM7040 *(1)* **Device Linked** to HM | DCC.
- **User 2** will have a phone/tablet *(B)* with a HM7040 *(2)* **Device Linked** to HM | DCC.

User 1 must proceed to setup all locomotives within the HM | DCC app on phone/tablet *(A)* and must ensure that locomotives are correctly addressed to match the addresses of any DCC decoders/locomotives on the given layout.

User 2 must proceed to setup all locomotives within the HM | DCC app on phone/tablet *(B)* and must ensure that locomotives are correctly addressed to match the addresses of any DCC decoders/locomotives on the given layout.

User 1 and **User 2** will then have access to control all DCC locomotives on the layout.

Increased multiples of the HM7040 and HM7090 can be used, up to a maximum of 6x HM7040: Legacy Dongles. More multiples of the HM7040/HM7090 may be possible, but cannot be recommended.
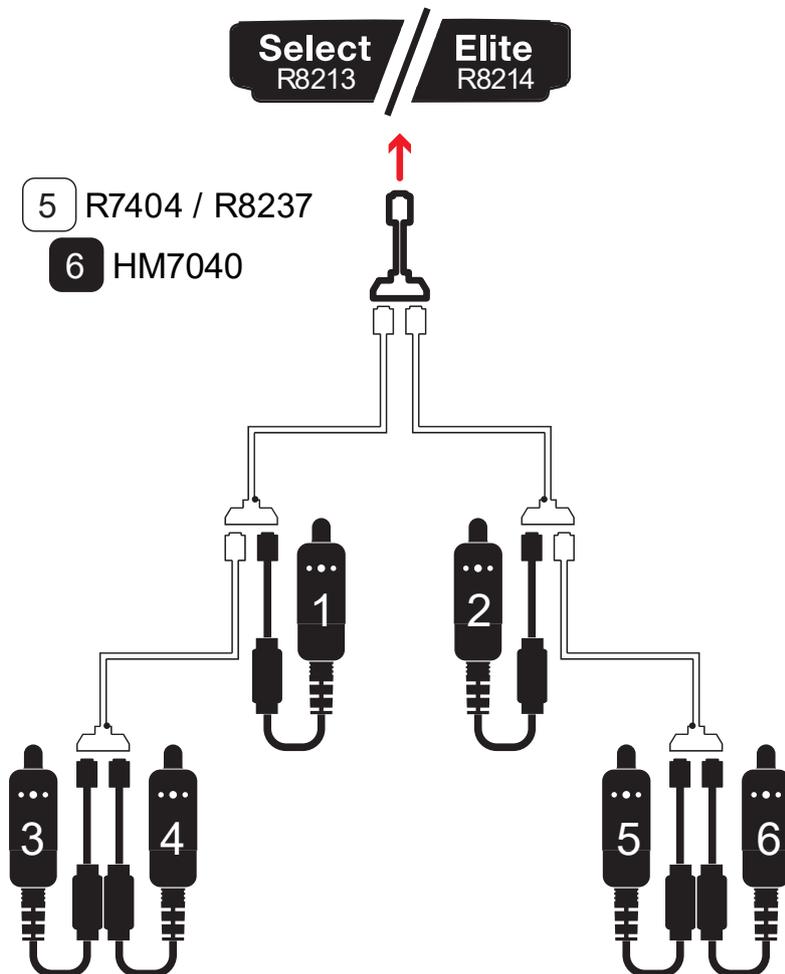
The following must be considered when controlling using the HM7040 & HM7090 Club Control.

- No feedback via the graphical user interface of each user(s) HM | DCC app is provided to any of the other users:
  o Example: If **User 1** selects **F0 – Day Light** and turns this function **ON**, User 2's HM | DCC app will not update to showcase this change in function state.
  o Collaboration and verbal communication is advised when wishing to take control of a given DCC locomotive on the layout.
  o When **User 1** is wishing to pass control of a DCC locomotive to **User 2**, it is advised to set **ALL** functions to **OFF**.
  o Direction is always respected whenever a user alters the **Speed Slider**. For smooth transition between users, it is advised to ensure both users have their **Directional Buttons** set to the same direction prior to altering the **Speed Slider**.
  o

- The DCC decoders work using the *'Last known command'*. This means that if **User 1** sets the **Speed Slider** to a value of 50, and then **User 2** subsequently sets the **Speed Slider** to a value of 100, the DCC locomotive will continue to run at **Speed** value of 100, until **User 1** or **User 2** alters the setting of the **Speed Slider**.
    - o If, **User 1** then taps on the **Speed Slider** to set it to a value of 75, the DCC locomotive will run at **Speed** value of 75 but **User 2**'s graphical interface on their phone/tablet will not update *(and vice versa)* to show the new value of **Speed**.
    - o In conclusion, it is better to take the visual/sound feedback of the DCC locomotive or communicate/collaborate to know if User 1 or User 2 is in control.

- It is possible using the HM7090: Club Adapter for walkabout Select(s) to be used in place of HM7040: Legacy Dongle(s). These systems will work in parallel.
    - o Please ensure that PAGE 22 of R8213 1.5_dcc_select_manual.pdf is consulted for information on how to plug in a Select walkabout to master Elite/Select controller.
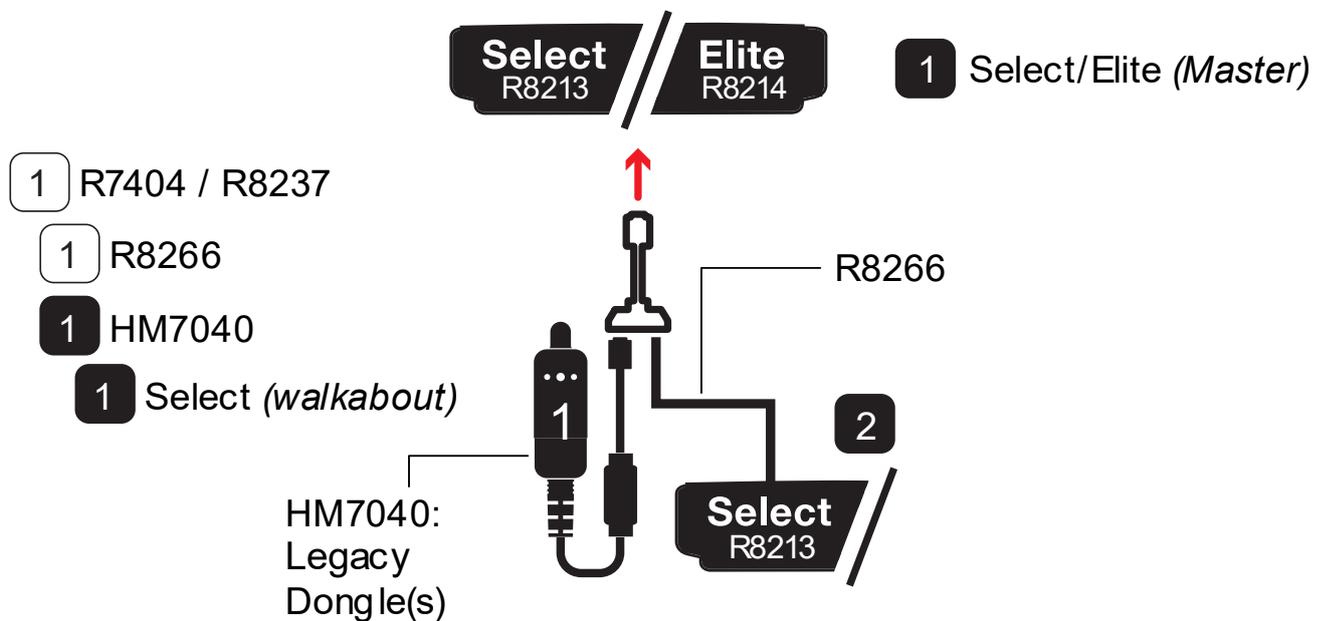
19. HM | DCC & HM6010 – Setup

HM | DCC allows for control of accessories through using the HM6010 – App Based Accessory Controller (R7293).

The HM6010 was originally designed to work with the HM | DC application; steps must be taken to ensure the HM6010 works correctly with the HM | DCC app:

Firstly, make sure that the instructional manuals within your HM6010 pack have been followed, ensuring your HM6010 is powered correctly, and any accessories are correctly wired in to the HM6010 unit ready for the HM | DCC app to connect.

Ensure your Bluetooth® & Wi-Fi are turned on in your device settings and you are connected to the internet.

Download the **HM | DCC** application by searching for "**HM DCC**" in your app store. Please ensure that the correct app is downloaded and for the purpose of the below tutorial, the **HM | DC** app is not downloaded by mistake.

Once the download is complete, open the HM | DCC app on your device.

Accept **ALL** permissions* to ensure your application works correctly with your hardware. These can be altered within your device settings at any time.

*Android users must ensure that Location Services, Bluetooth® access and *Nearby device scanning (device dependent)* are granted. HM | DCC will not connect to HM Devices without these permissions granted. Depending on your Android device, certain permissions may not be available for accepting on HM | DCC app launch; if this is the case, you will need to go into your Android device settings and grant these permissions for the HM | DCC app.

You will require a Hornby.com account to use the HM | DCC application. If you already have a Hornby.com account, tap the **Login** button, enter your details, and then tap the **Sign In** button.

If you do not already have a Hornby.com account, tap on the **Sign Up*** button and you will be redirected to the Hornby website where you will be able to create an account. Once your account has been verified, please use the same details to login to the HM | DCC app.

*Versions of the HM | DCC may have the exclusion of the Sign Up button. In this case, please visit: https://uk.hornby.com/community/login/register

Once logged in, tap on **Link Device**.

Tap on **Start Scan** and wait for the scan to finish. You should notice your accessory controller (HM6010-_ _ _ _) pop-up under the **Ready to Link** section.

If your device has not been found, please ensure that your HM6010 the **RED** LED on the HM6010 is solid and the Bluetooth LED is **OFF**, then tap **Restart Scan**. If this is not the correct LED combination shown, please perform a **Hard Reset** on the HM6010.

Note: Android users may experience the **HM Device** scan underneath the **Resettable Devices** section. In this instance, please **Force Quit** the HM | DCC app in your Android device settings, reopen the HM | DCC app and tap on **Restart/Start Scan**. Your **HM Device** should now appear underneath the **Ready to Link** section.

Tap on your accessory controller (**HM6010-_ _ _ _**) and allow the **Device Link** process to complete. Please note, you may be prompted to update your accessory controller if it is not updated to the latest version*. For your accessory controller to work correctly with HM | DCC you must ensure your accessory is updated to the latest version. If you are presented with the essential update screen, please place your phone or tablet down next to your locomotive and tap the **Start Update** button. Please allow a few minutes for the update(s) to complete, then tap the **Done** button.

*it is very important to note, that updating the HM6010 to the latest version via HM | DCC will mean that the HM6010 no longer functions correctly with the HM | DC app. If you wish to gain correct function back on the HM | DC app, the HM6010 must be updated to the correct version via the HM | DC app.

Please then **Power-Cycle** your HM6010 by removing the power from the HM6010, waiting 5 seconds, and turning power back on.

Once the Device Link and update process is complete, you will be presented with the Manage Device screen for the HM6010.

You will see a section on the **Manage Device** screen for **Accessory Setup**. You can rename your accessory controller by tapping on the field to the right-hand side of '**Label**'. Type in your chosen name for the HM6010 and tap **Return**.

You will need to setup the HM6010 to ensure that the correct command is sent to your relevant accessory.

You will see the **C1**, **C2**, **C3** and **C4** remarks in the top-left of each **Channel** panel. These refer to each **Channel** on your physical HM6010 controller. Tap on **Edit Channel >** to and alter the **Accessory Channel 1 Setup** to either **Point**, **Signal**, **Light** or **Turntable** (Channel 4 only).

Please repeat this process for all **Channels** (C2, C3, C4) to match the accessories wired into the **Channels** of the HM6010 accessory controller. Please ensure that this is correct, as setting a **Signal Light** accessory incorrectly to **Point** will damage the **Signal Light**. Please refer to the HM6010 – Quick Start Guide for more information on wiring in accessories correctly into the 4 given **Channels**.

Once **Accessory Setup** is complete, tap on the **Accessories** ' ⬤ ' button on the bottom toolbar. Your accessory controller is ready to control.

Tap on **OPEN** and **CLOSE** for **Point** control.

Tap on **RED**, **OFF** and **GREEN** for **Signal Light** control.

Tap on **ON** and **OFF** for **Light** control.

Tap on **ON** and **OFF** for **Turntable** control.

If you wish to reconfigure your HM6010, whilst on the **Accessories** screen, tap on the **Configure** button in the top right corner. This will take you to the **Manage Device** screen for the HM6010.

You can **Device Link** multiple HM6010's into the HM | DCC app* and using the top toolbar on the Accessories screen, cycle through each connected HM6010 unit.

*It must be noted that HM | DCC allows for multiple HM Devices to be controlled. HM | DCC has been tested for up to **20** HM Devices using a *high-performance* phone and tablet. More HM Devices may be possible for HM | DCC app control but cannot be recommended.

You can control your HM6010 via the **Control** screen by going to **Settings**, then tap on **Accessories Toolbar** and ensuring the toolbar is **Enabled**. On the **Control** screen, you will be able to cycle through **OPEN**, **CLOSE**, **ON**, **OFF**, **RED** and **GREEN** dependent on the accessory.

If you wish to remove your HM6010 from HM | DCC, please ensure that the HM6010 is connected and tap on the **Accessories** ' ⬤ ' button, then tap on **Configure**. Scroll the bottom of the screen and tap on **Unlink & Delete Device**. This will remove HM6010 from HM | DCC and will allow you to connect HM6010 to another phone/tablet if required.

There may be rare instances where there is no response from the HM6010, in this instance tapping on **RESUME OPERATION CONTROL** can sometimes fix the issue on the **Accessories** screen.

20. <u>HM | DCC & HM Devices – Help & Customer Support</u>

HM | DCC and HM Devices Instructional Manuals: + Function Maps:

https://uk.hornby.com/hm7000/hm-dcc-guides

YouTube Tutorials for HM | DCC, HM7000 & HM7040:

https://www.youtube.com/playlist?list=PLdNqiK7_F42uWgBdQ4HdgqQms7XnSUN73

Specialised support for HM7000, HM7040, HM6010, HM6000, HM | DC and HM | DCC:

HM.customercare@hornby.com

General support for <u>DCC</u> and HM7000, HM7040, HM6010, HM6000, HM | DC and HM | DCC:

customercare@hornby.com

International support for <u>DCC</u> and HM7000, HM7040, HM6010, HM6000, HM | DC and HM | DCC:

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