# D-BOX 800N036 Haptisync System User Manual

**Contents**

## IMPORTANT SAFETY INSTRUCTIONS

- Read, keep and follow these instructions.
- Heed all warnings:

This D-BOX Haptic System may be harmful to women who are pregnant, persons with heart conditions, the elderly, or those with other preexisting medical conditions. All such persons should consult their physicians before using this D-BOX Haptic System.

Use of this D-BOX Haptic System is a risk to hands and feet. Do not put hands or feet underneath the seat or near the haptic system. This may lead to serious injury.

Use of hot liquids in the vicinity of this D-BOX Haptic System should always be avoided to prevent spillage which could cause serious injuries to the user.
Do not use this device near water.

- Only clean the device with a dry cloth.

- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Protect all the cables (USB, network, power, etc.) from being walked on or pinched, particularly at the ends.
- Use only attachments/accessories specified by the manufacturer.

Use of this D-BOX Haptic System is not recommended for children under the age of ten years old without adult supervision. Owners and/or users of this D-BOX Haptic System should consult and comply with the user guide enclosed herein.

Unplug this device during electrical storms or when unused for long periods of time.

Do not install near any heat sources such as radiators, heat registers, stoves, or any other appliances (including amplifiers).

Refer all servicing to qualified personnel. Servicing is required when the device has been damaged in any way. For example: if the liquid has been spilled or objects have fallen onto it, if it has been exposed to rain or moisture, if it does not operate normally or, it has been dropped.

Owners and/or users of this D-BOX Haptic System are responsible for the dissemination of this information to all such persons named herein. Each owner and/or user of this D-BOX Haptic System agree to evaluate and bear all risks associated with the use of this D-BOX Haptic System for themselves and for any subsequent users of this D-BOX Haptic System and any subsequent users of this D-BOX Haptic System shall be deemed to be using this D-BOX Haptic System under the direct supervision of such owner/user and such owner/user will be deemed to have communicated this advisory to all person described herein.

D-BOX Technologies Inc. is in no way responsible for any damages of any kind arising from the use of this D-BOX Haptic System and the owners and/or users of this D-BOX Haptic System hereby agree not to hold D-BOX Technologies Inc. responsible for any and all damages of any kind arising from the use of this D-BOX Haptic System including, but not limited to direct or indirect, punitive, incidental, special or consequential damages arising out of or in any way connected with the use of this D-BOX Haptic System.

## REGULATORY COMPLIANCE STATEMENTS

**FCC Regulatory Compliance**
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device does not cause harmful interference, and (2)
this device must accept any interference received, including interference that may cause undesired operation.
Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed
to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy
and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that
interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is
encouraged to try correcting the interference by one or more of the following measures:

- Reorient or relocate the HaptiSync Hub.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a different circuit from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- Warning: any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**RF Exposure Compliance**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Supplier's Declaration of Conformity

47 CFR § 2.1077 Compliance Information

Unique Identifier Trade Name: D-BOX Technologies Inc., Model No.: H300

Responsible Party – U.S. Contact Information

D-BOX Technologies Inc.

2172 Rue de la Province, Longueuil, Quebec J4G 1R7 Canada

1-450-442-3003

**FCC Compliance Statement**

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device does not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



**HaptiSync Hub Model: H300**

FCC ID: 2AS2X800NO36 IC ID: 24991-800NO36 THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

**ISED Regulatory Compliance**

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science, and Economic Development Canada's licence-exempt RSS(s).

Operation is subject to the following two conditions:

1. This device may not cause interference.

2. This device must accept any interference, including interference that may cause undesired operation of the device

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

**INTRODUCTION**

Congratulations on purchasing your new at-home D-BOX HaptiSync System!

Life is a journey, and we hope that your new HaptiSync System will add more thrilling experiences to your life! At D-BOX, we believe that your body is the ultimate vehicle to make life resonate; that by tapping into its sensory potential with perfectly synchronized haptic technology we can create richer, fuller experiences and bring the ultimate experience to your home!

Your new HaptiSyc Hub is designed to be used with the D-BOX HaptiSync App and features an integrated sound sensor capable of synchronizing your favorite movies, series, music, and more experiential content using your room's ambient sound. With haptic codes available for more than 2,000 titles, watching movies, series, and more at home will never FEEL the same again! Use your tablet, smartphone, or PC to quickly and easily adjust your D-BOX Haptic System by configuring your HaptiSync App!

# GETTING STARTED

## HaptiSync System Overview
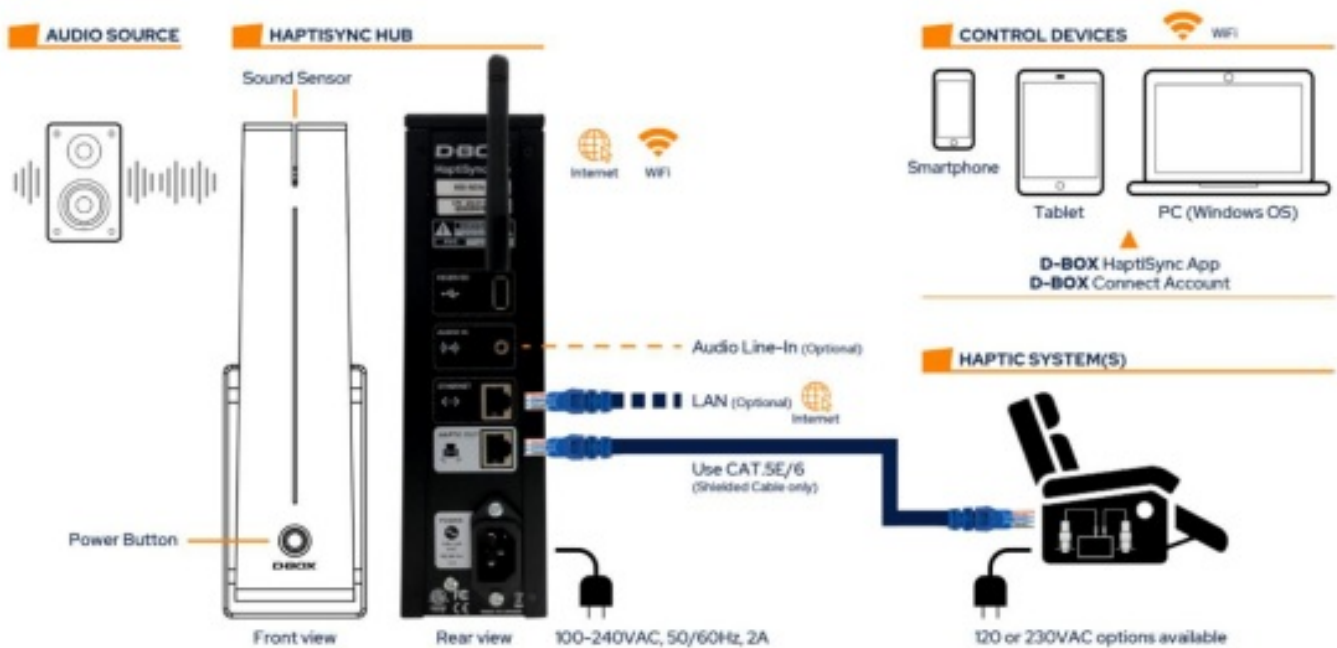


### HaptiSync Hub
Used to synchronize your on-screen content to your Haptic System(s) using audio.  **(see section 3)**.

### Haptic System(s)
Must be connected to the Haptic OUT port on your HaptiSync Hub using a CAT.5E/6 shielded cable.

### Control Devices
Smartphone/tablet or PC required to remotely control your Haptic System(s) using the D-BOX Connect App.

### D-BOX Connect Account
Required to manage your profile and purchase a HaptiSync subscription.

### HaptiSync App
The user interfaces to remotely control your Haptic System(s). Compatible with iOS, Android, and Windows OS devices.

### Audio Source
Required to synchronize your Haptic System. Either the integrated sound sensor (default setting) or the AUDIO IN jack (see section 3.3) can be used to receive audio.


### STEP 1: Prepare your HaptiSync Hub
Your HaptiSync Hub uses the audio from your content to synchronize with your Haptic System. There are two (2) options to route the audio to your HaptiSync Hub: using the integrated sound sensor (default option) or the AUDIO IN jack (see section 3.3).

Using the sound sensor is the easiest way to synchronize your Haptic System since it does not require an audio connection. The microphone will sense the audio in the room and will automatically synchronize with your Haptic System.

### For Optimal Performance:


1. Install your HaptiSync Hub on a flat surface (vertically or horizontally):
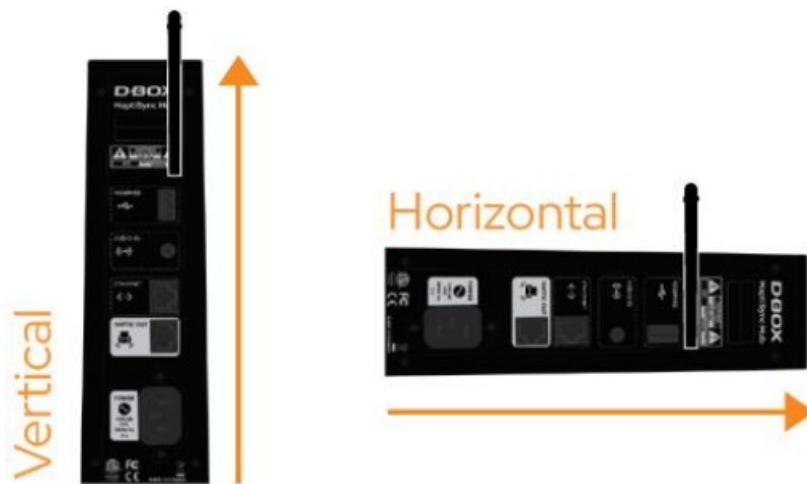
2. Orient the front side of your HaptiSync Hub (sound sensor) toward your front speakers and ensure it is located in an optimal location to maximize sound reception performance:
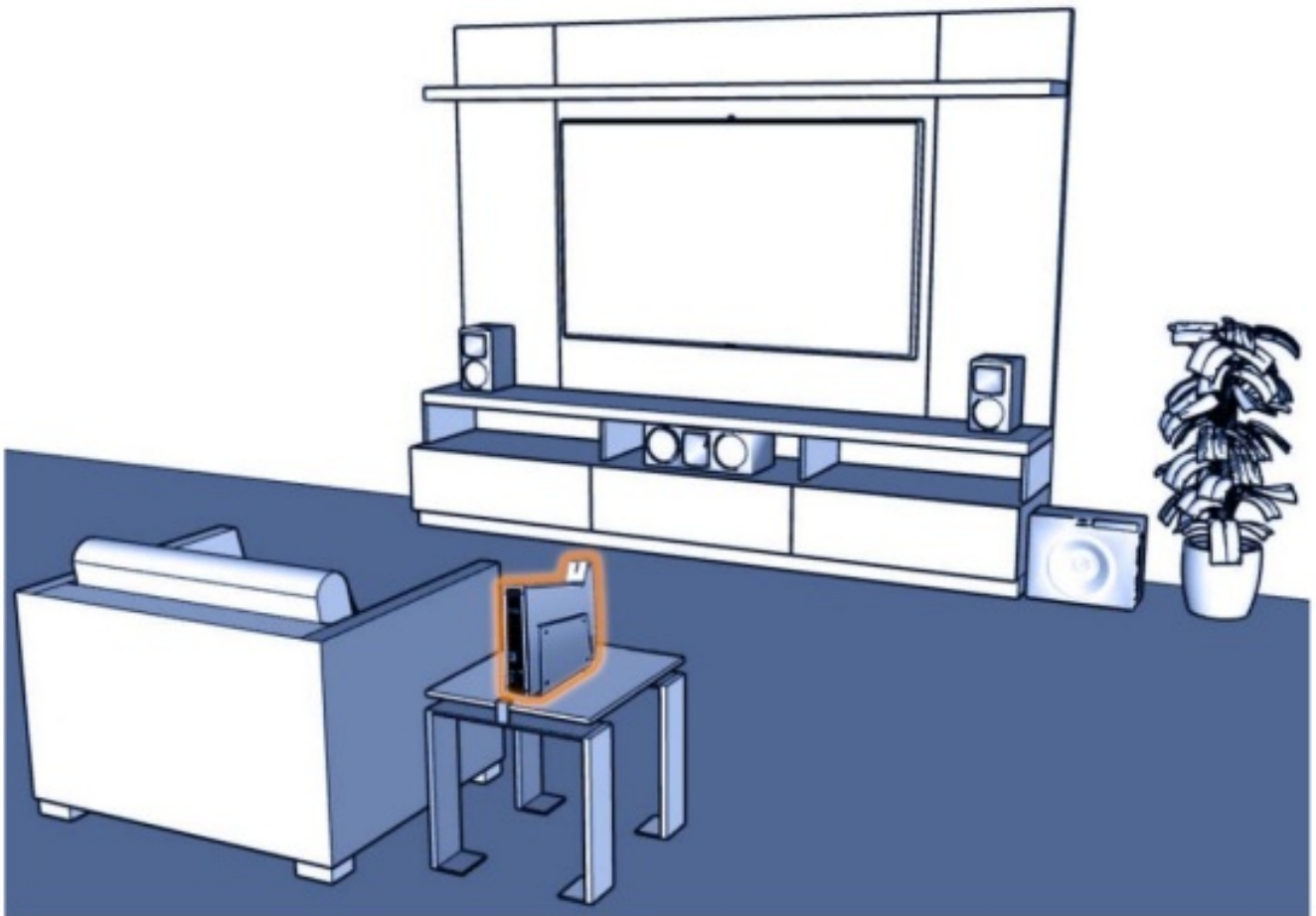


**STEP 2: Prepare your Haptic Seat:**

1. Position your Haptic Seat in your entertainment room. Make sure that you respect the following minimum clearance distances:

Min. 4" (100mm) between armrests

Min. 4" (100mm) from a side wall

Min. 6.5" (165mm) from a back wall
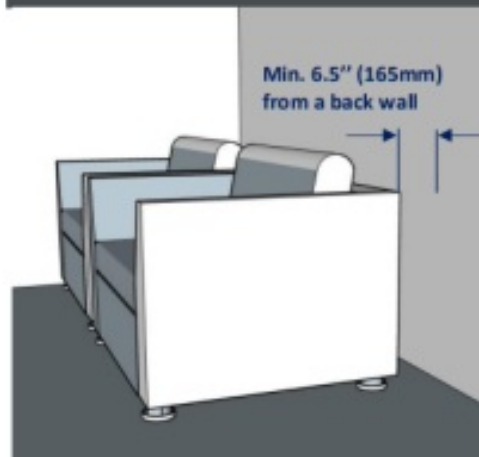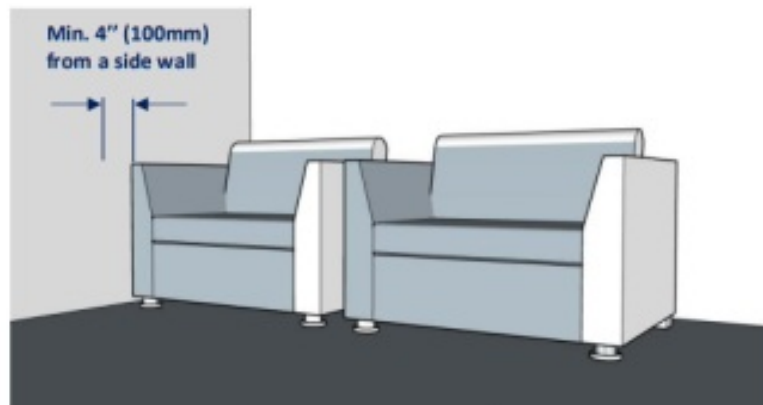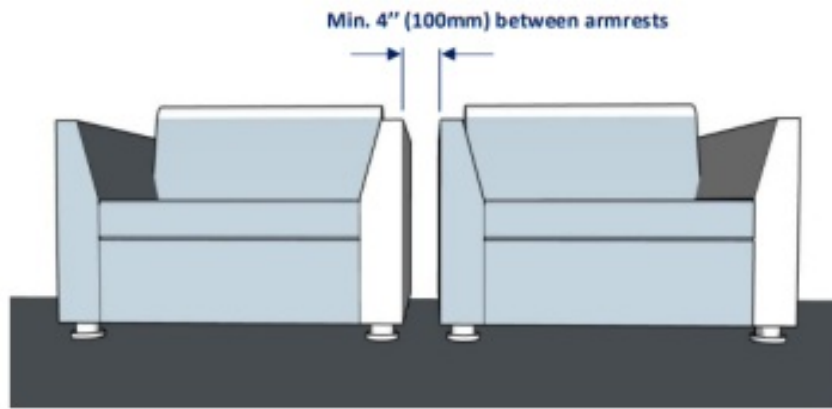
2. Install the stabilization cups underneath your Haptic Seat (actuators & pivot) to prevent damaging your floor. Make sure that the actuators & pivot are centered on the cups:
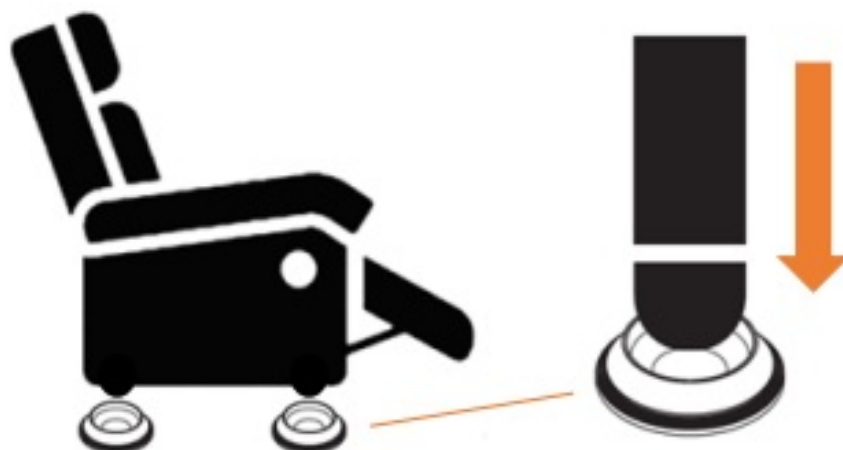


**NOTE:** Do not slide the seat once the stabilization cups have been installed. Lift the seat before moving the stabilization cups if you need to move the seat.

3. Make sure that nothing will be pinched or damaged when the Haptic Seat is moving.

4. Connect the HaptiSync Hub to the Haptic Seat using the CAT.5E shielded cable provided with the seat. **See Appendix A for specific wiring diagrams**:
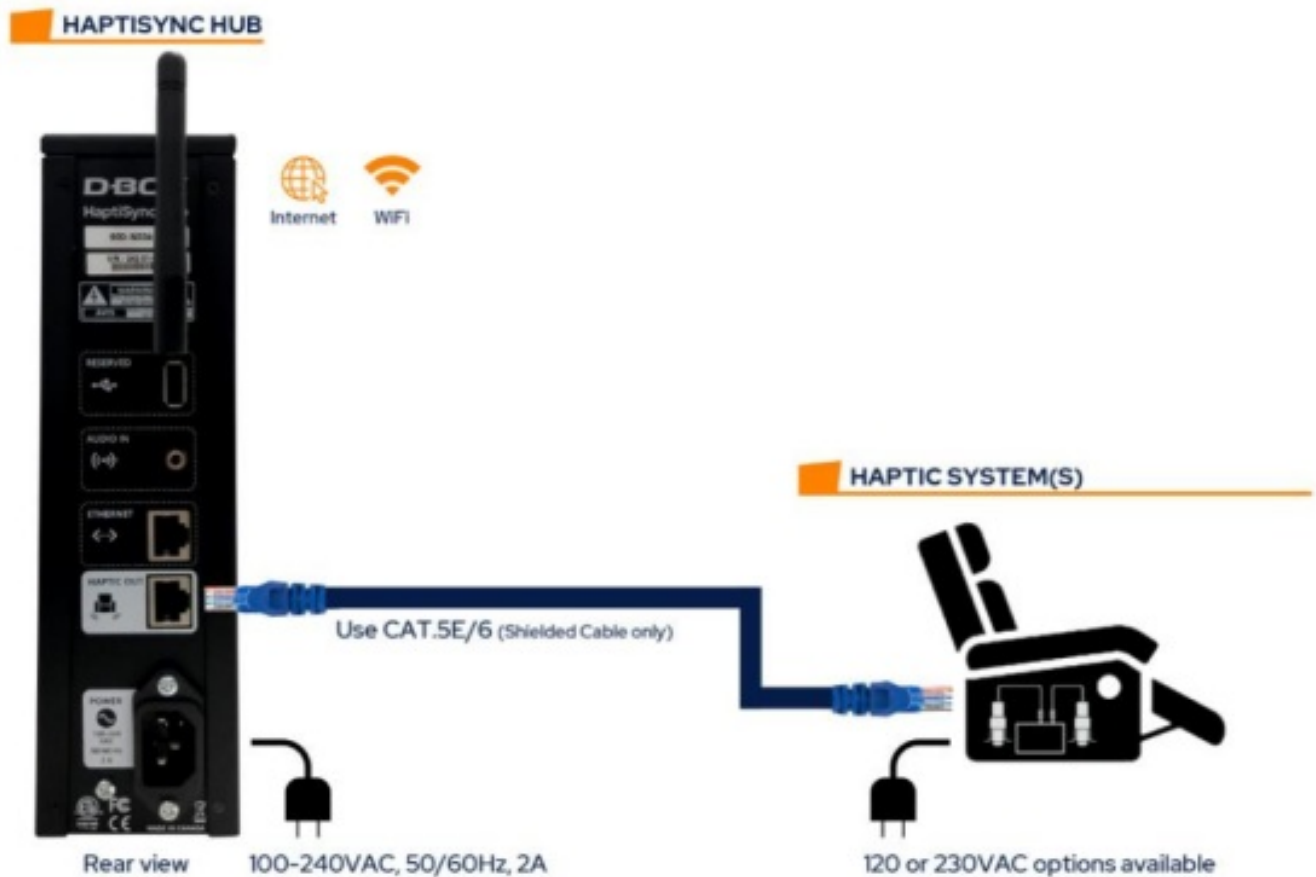


5. Plug your HaptiSync Hub and your Haptic Seat into an electrical outlet:
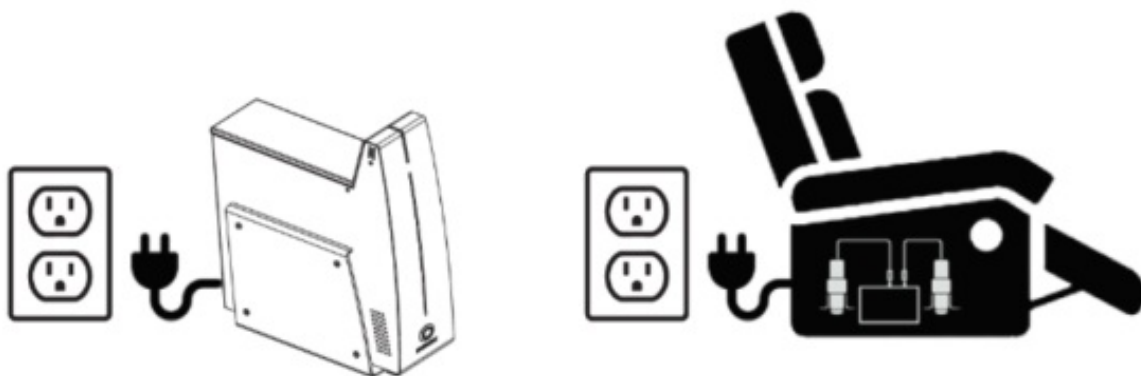


**STEP 3: Create your D-BOX Connect Account**

Your D-BOX Connect Account is used to manage your subscription and sends HaptiCode tracks to your HaptiSync Hub.

- Go to the D-BOX Connect website: **https://connect.d-box.com**
- Create an account using a valid email address.
- Edit your payment information (**please note that a valid credit card is required to complete your registration)**.
- Purchase your HaptiSync subscription.

**STEP 4: Complete the HaptiSync Configuration from the D-BOX Connect Website**

1. **Install the D-BOX HaptiSync App**

   The D-BOX HaptiSync App is an application that is compatible with iOS, Android, and Windows devices. This app allows you to manage and customize your HaptiSync System(s).

   • Download the D-BOX HaptiSync App from your mobile device's app store or by using one of the following download links:

   ➢ Apple App Store

   ➢ Google Play Store

   ➢ Windows download link

2. **Connect your HaptiSync Hub to your Network**

   To use a wireless Wi-Fi network:

   • Open the HaptiSync App.

   • Press the ''Add'' button to add your HaptiSync Hub.

   • Follow the on-screen instructions to complete your network configuration (you must know your Wi-Fi password).

   To use a wired Ethernet network:

   • Connect a network cable to the ETHERNET port on your HaptiSync Hub.

   • Open the HaptiSync App.

   • The HaptiSync Hub will automatically be detected.

3. **Activate your HaptiSync Hub**

   • Make sure that you have purchased a HaptiSync subscription on your D-BOX Connect account.

   • Open your HaptiSync Hub in the HaptiSync App.

   • Follow the on-screen instructions to complete activation.

   ➢ You will need to enter your D-BOX Connect account email and password in the app.

   **NOTE:** it may take 10 minutes for the HaptiSync Hub to become operational after updating the database upon successful activation.

4. **Test your HaptiSync System**

   • Make sure that all components of your HaptiSync System are powered on.

   • Find the D-BOX Haptic Experience channel on YouTube.

   • Play the System Test video.

   ➢ This can be done on your mobile device by aiming the speaker toward your HaptiSync sound sensor (microphone).

   • Turn up the playback sound so that the HaptiSync Hub can detect it.

   • Within 30 seconds, your system should move and follow the test video.

   **NOTE:** The high-performance actuators on your D-BOX Haptic System are carefully designed to provide immersive vibrations while minimizing noise. The actual noise levels produced are different for every location. If you experience significant noise, you can reduce the vibration intensity by using the intensity slider in the HaptiSync App.

5. **Enjoy your Favourite Immersive Content!**

   • D-BOX has a comprehensive library of HaptiCode tracks for you to discover (or re-discover) with immersive haptic effects.

   • The complete list of compatible titles can be found in the D-BOX HaptiSync subscription details on your DBOX Connect account. The list is also available on the D-BOX website and is updated regularly.

• To enjoy the ultimate viewing experience, first pick a compatible title.

• Next, start playing the title from your favourite source (disc, streaming, video-on-demand, etc.) and make sure that the sound level is comfortable.

• Using its integrated sound sensor (microphone), your HaptiSync Hub will automatically recognize any compatible title in less than 1 minute (when played from the beginning) and then start playing the corresponding HaptiCode track in your Haptic Seat.

• After a title is recognized, you can pause, rewind or skip ahead, and the immersive experience will resume within a few seconds.

6. **Calibrate your Sound System (optional)**

• D-BOX's unique and patented HaptiSync technology can accurately synchronize a haptic experience with your movie better than human perception.

• Your D-BOX HaptiSync Hub is factory calibrated for most common uses, such as using its sound sensor (microphone) within 3 metres (10 ft.) of your viewing location.

• However, external factors may influence synchronization delays, such as:

– Using an Audio Line-in signal with audio processors.

– Distance and sound transmission delays through the air.

– Mixing wireless and wired sound paths.

• Follow these steps to adjust (or verify) the optimal calibration delay between your sound system and your HaptiSync Hub:

• Find the D-BOX Haptic Experience channel on YouTube.

• Play the Calibration video through the sound system that you want to calibrate.

• Open the HaptiSync App and find the calibration delay slider.

• Follow the on-screen video instructions to adjust your optimal calibration value.

o Note a value where a haptic pulse is perceived slightly before a sound pulse.

o Note a value where a haptic pulse is perceived slightly after a sound pulse.

o Use the value in between (the average) for final calibration.

o If you don't perceive any difference, leave the calibration value at 0.

# HAPTISYNC HUB

Being the heart of your Haptic System, the HaptiSync Hub features an integrated sound sensor capable of synchronizing your favorite movies, series, music, and more experiential content using audio. Haptic codes are available for more than 2,000 titles and new haptic codes are added weekly (internet required).
A HaptiSync Hub can control up to twenty (20) Haptic Systems (single cable chain) through the Haptic Out port.

## 3.1 Part Names & Functions
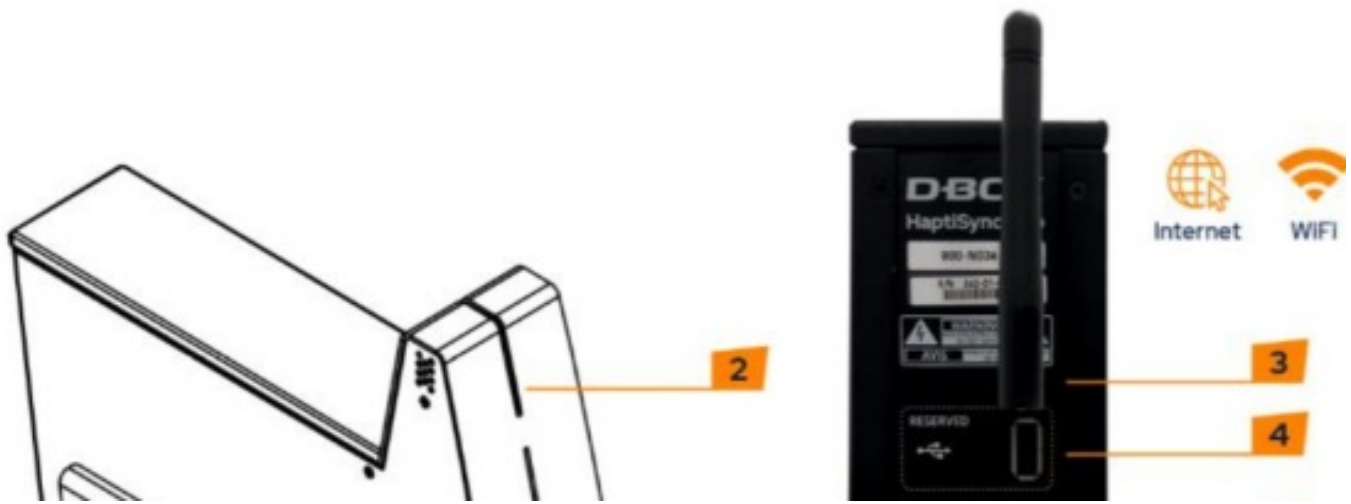
1. **Power Operation Button**

   Used to turn the power of the HaptiSync Hub.

2. **Integrated Sound Sensor**

   Used to sense the movie audio. (Default Setting)

3. **External Antenna**

   Used for Wi-Fi Communication

4. **USB (Reserved)**

   Not used.

5. **AUDIO IN**

   Used to connect a 3.5mm analog stereo audio source. **Not required when using the integrated sound sensor feature.**

6. **ETHERNET**

   Used to connect a LAN cable when connecting to a wired LAN network. Not required when using Wi-Fi.

7. **HAPTIC OUT**

   Used to connect to a D-BOX HaptiSync System using a Shielded CAT.SE or 6E cable.

8. **AC Inlet (100-240VAC, 50/60Hz, 2A)**

   Used to connect the power cord.

### 3.2 Power Operation Button Functionalities

The power operation button on your HaptiSync Hub has different functionalities. If you press the button for:

- **1 second, then release:** Power on/off
- **6 seconds, then release:** Network reset (while blinking twice per second)
- **10 seconds, then release:** Factory reset (while blinking 4 times per second)
- **12+ seconds:** Nothing (cancels all operations)

### 3.3 Content Synchronization using the AUDIO IN Jack

This option allows you to connect an analogue stereo source to the AUDIO IN jack on your HaptiSync Hub. This option is suitable for the following situations:

- If you want to watch a movie from your tablet, smartphone, or laptop with wired headphones.

- If your HaptiSync Hub is located outside of your entertainment room and/or connected to your AV Receiver.
- If your HaptiSync Hub cannot be properly positioned in the room.
- If you keep getting synchronization errors when using the integrated sound sensor because the sound level is too low.

**NOTE:** make sure that you select the **Audio Line-In** mode in the HaptiSync App.

**How to Connect a Tablet, Smartphone, or Laptop to Headphones**
When using headphones to watch a movie, the integrated sound sensor cannot detect the room's sound.
Therefore, you need to route the audio through the analogue AUDIO IN jack.
*This configuration requires a stereo audio splitter (not included).
**A Lightning to Audio Jack Converter may be required for Apple devices.
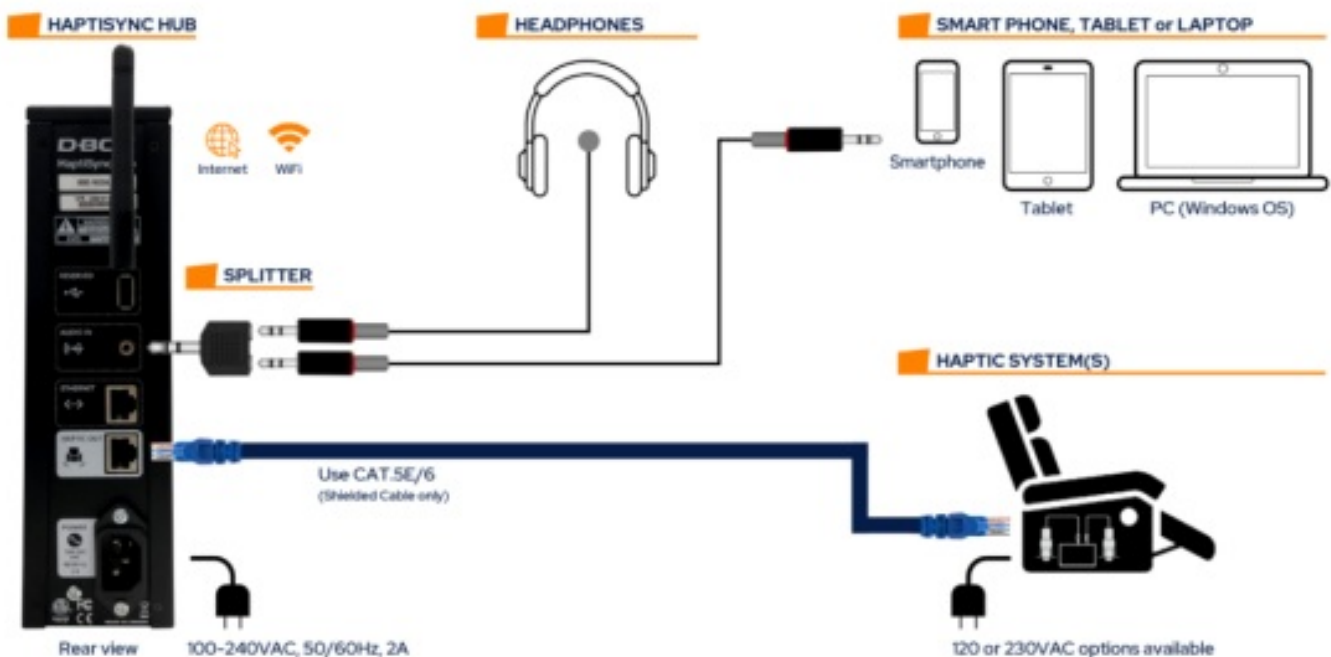


**How to Connect your AV Receiver (or audio source) to the HaptiSync Hub**

In some situations, it may be more convenient for you to connect your AV Receiver directly to your HaptiSync Hub. In this case, an analogue stereo mix must be sent from your AV Receiver to the AUDIO IN jack (3.5 mm stereo) on your HaptiSync Hub (see sections 4.2.1 to 4.2.3):

**HAPTISYNC HUB**

**ANALOG STEREO MIX OUTPUT**

AV Receiver

Gaming Console

Disc Player

Streaming

Television

Audio

Internet   WiFi

Analog Stereo Mix

**HAPTIC SYSTEM(S)**

Use CAT.5E/6
(Shielded Cable only)

Rear view   100-240VAC, 50/60Hz, 2A

120 or 230VAC options available
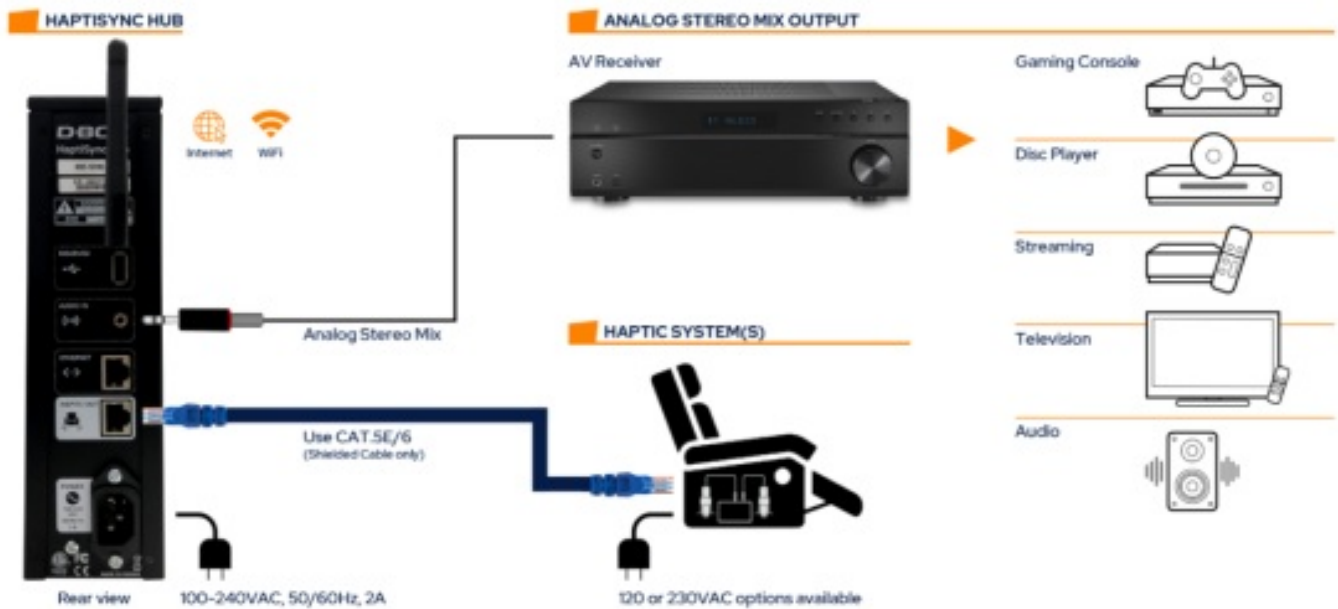
## Recommended Connection Setup

Connect the analogue Stereo Downmix output from any AV source to the HaptiSync Hub AUDIO IN jack:

AV SOURCE

AV OUT

AV Receiver
Television
BD/DVD Player
Media Player

OR

Stereo Downmix 1/8" (3.5 mm)

OR

Stereo Downmix L/R to 1/8" (3.5 mm)

○ HaptiSync Hub AUDIO IN jack
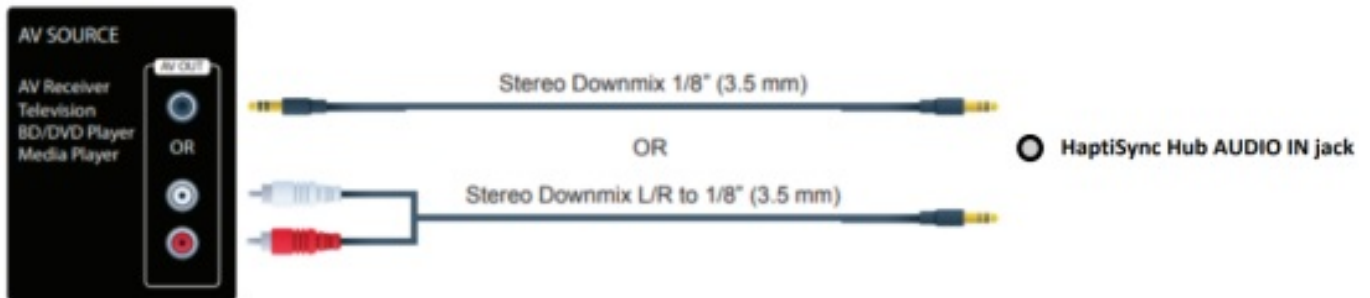
## Alternate HDMI Connection Setup

Connect the HDMI OUT from your AV source to an HDMI Multichannel to 2CH converter and output a Left/Right Downmix to the HaptiSync Hub. Please note that some audio formats can't be converted using this type of converter (Dolby Atmos, Dolby TrueHD, etc.). Verify the manufacturer specs prior to installation:

AV SOURCE

AV OUT

AV Receiver
Television
BD/DVD Player
Media Player

HDMI

AUDIO CONVERTER

AV IN   AV OUT

AV OUT

Stereo Downmix
L/R to 1/8" (3.5 mm)

○ HaptiSync Hub AUDIO IN jack
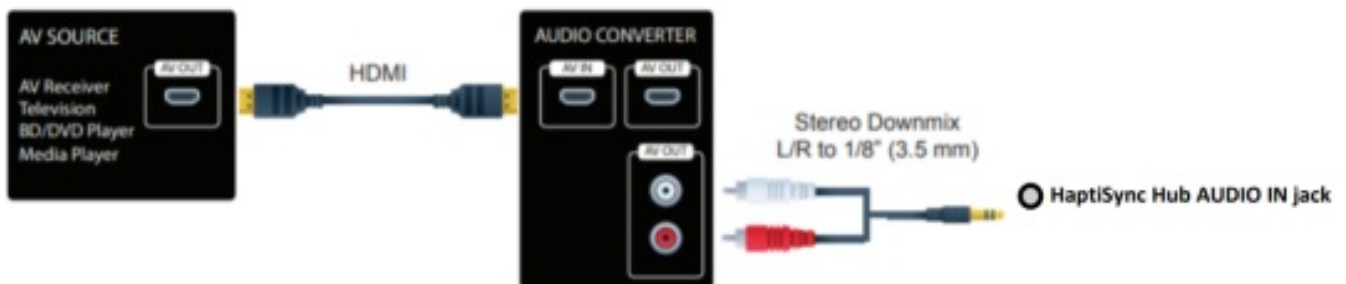
Connect the Optical or Coaxial OUT from your AV source to the Universal Digital/Analogue Audio Converter. Please note that with this converter, you can use the Optical or Coaxial pass to connect to your TV.
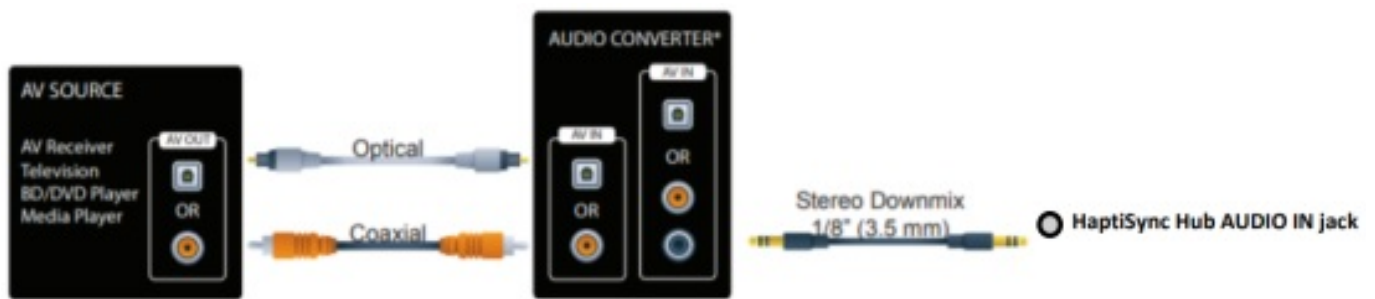
### 3.4 HaptiSync Recognition Technology

D-BOX HaptiSync Technology is the core of your HaptiSync Hub. This complex technology enables recognition and synchronization with your on-screen content. This recognition technology matches the audio to a specific D-BOX HaptiCode track. Since your library contains thousands of HaptiCode tracks, some titles may take longer to be recognized. To maximize your system's performance, please take the following steps:

- Your HaptiSync Hub should recognize any D-BOX compatible content within 1 minute when first played from the beginning of its timeline (the first 15 minutes).
- Recently added D-BOX titles (250 latest) should be recognized when first played from anywhere in their timeline.
- For example, if you want to watch the final scene from an old movie: first play the title from the beginning, wait for the HaptiSync Hub to recognize the content, and then skip to the final scene.
- Your HaptiSync Hub will remember the last 10 titles that have been recognized and/or included in the last library update. When a title is stored in the HaptiSync Hub memory, it can recognize it faster (within 10s).
- Please note that non-original versions (such as foreign languages) may take significantly longer for the HaptiSync Hub to recognize.
- You can adjust the recognition tolerance parameters in the HaptiSync App.
- Use a higher tolerance value (like the 30s) to continue the haptic experience for portions of unrecognized audio (foreign languages, ambient noise, talking).
- Use a lower tolerance value (like 5s) to stop haptic experiences faster when pausing or stopping playback.

## TROUBLESHOOTING

If a problem occurs, first check the following:

1. Has everything been connected properly (see Appendix)?
2. Has the audio on your (Audio Line-In – Microphone) HaptiSync App been configured properly?
3. If steps 1 & 2 do not solve the problem, reset your devices. For your HaptiSync Hub: press the power button, wait 5 seconds, disconnect the power cable and then reconnect it after 5 seconds. Press the power button to restart the Hub. For your Haptic System: remove the power cable, wait 10 seconds and then reconnect it.
4. If the system is not operating properly, check the LED status on the back panel of the seat (Jaymar Lifestyle and Living models only) or on the KineChain Adapter (KCA) on the G1 Haptic System:

| Seat Rear Panel | KineChain Adapter (KCA) | Possible Cause | Solution |
|---|---|---|---|
| 🟩 ACTUATOR<br>🟩 SEAT | 🟩 Actuator Fault<br>🟩 Seat Mode | Normal operation | Normal operation |
| ⬜ ACTUATOR<br>⬜ SEAT | ⬜ Actuator Fault<br>⬜ Seat Mode | Communication problem | Make sure that the flat cable is properly connected to the NEXT port (models with a rear panel) or the KineChain OUT port (G1 models).<br><br>Try replacing the CAT.5E shielded cable between your HaptiSync Hub and the seat and/or between seats (for a multiple seat setup). |
| ⬜ ACTUATOR<br>🟩 SEAT | ⬜ Actuator Fault<br>🟩 Seat Mode | Communication problem | Verify that the CAT5E cable from the ACM G1 port (models with a rear panel) or the ACM OUT (G1 models) cable to the motor drive is properly connected.<br><br>Try replacing the CAT5E cable on the ACM G1 |
| 🟥 ACTUATOR<br>🟩 SEAT | 🟥 Actuator Fault<br>🟩 Seat Mode | Defective actuator | Call your reseller |
| 🟧 ACTUATOR<br>🟩 SEAT | 🟧 Actuator Fault<br>🟩 Seat Mode | Could be an error on one or more actuators. | Verify whether there is a cable or an object blocking the movement of the actuator(s). |

If the problem you are experiencing is not listed above, please contact your reseller.

**APPENDIX A: CONNECTIONS FOR JAYMAR LIFESTYLE & LIVING MODELS**

These models are equipped with a rear panel to simplify the connections:
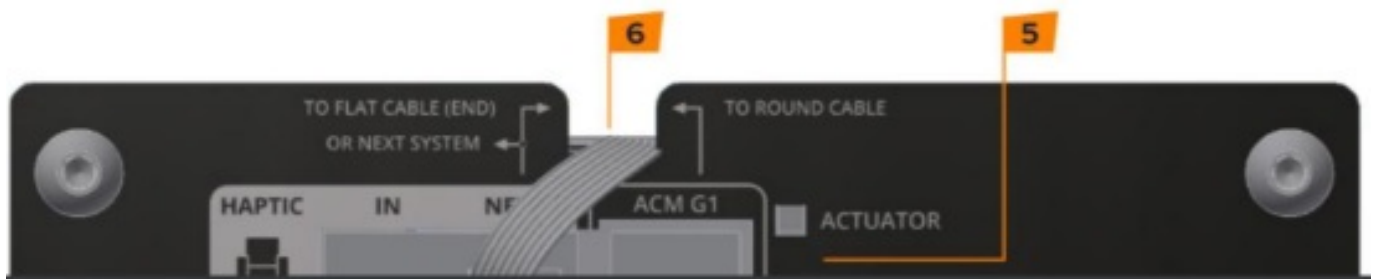
1. **AC Inlet (12OVAC, 50/60Hz, 5A)**

   Used to connect the power cord.

2. **HAPTIC IN**

   Used to link the Haptic Processor (single seat configuration) or another seat (2+ seat configuration).

3. **HAPTIC NEXT**

   sed to connect the flat cable (single seat configuration) or to connect another seat (2+ seat configuration).

4. **ACM G1**

   Cable factory connected to internal Haptic Motor System.

5. **LEDs Status**

   Show the status of the system. Could be used to troubleshoot the system.
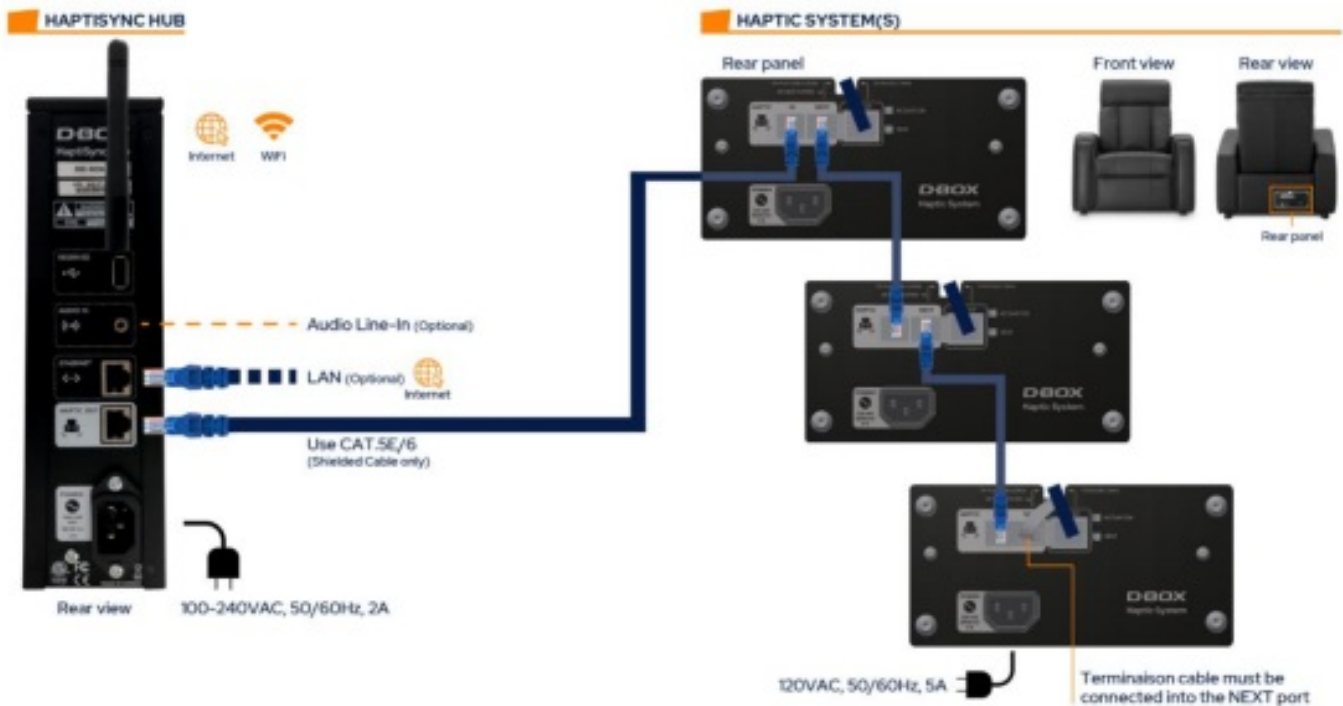
6. **Flat Termination Cable**

   Must be connected to the Haptic OUT Port for the last seat in the chain.
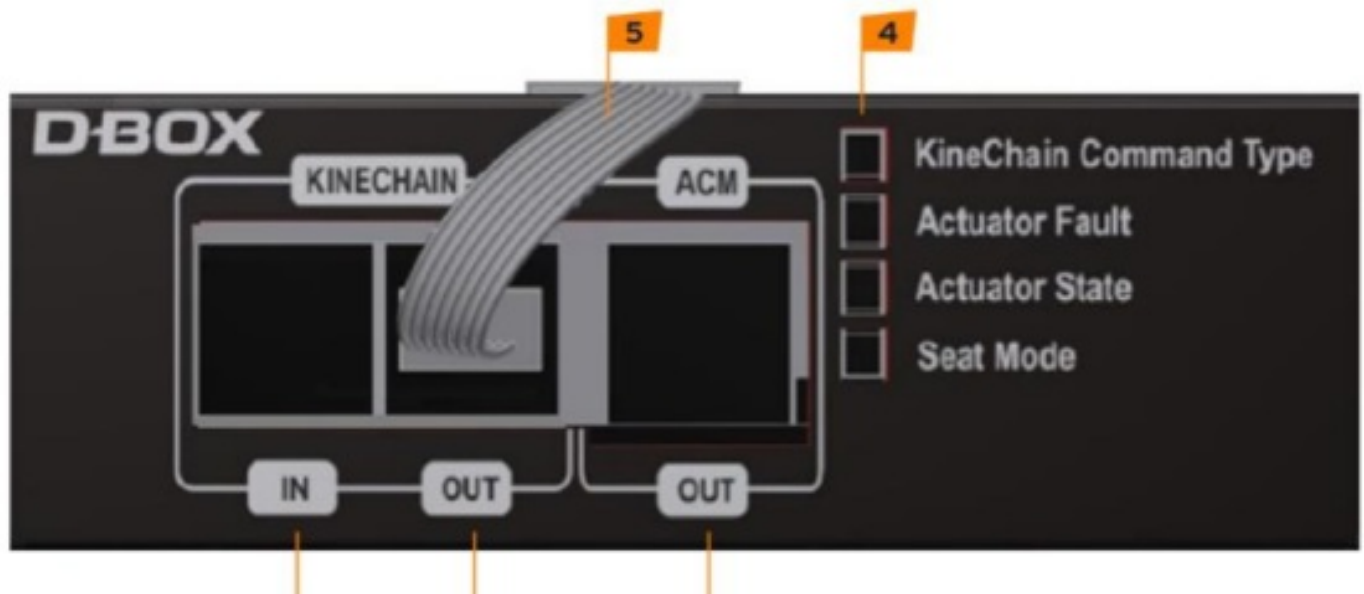
## A.1 Single Seat Configuration



## A.2 Multiple Seat Configuration
**NOTE:** Up to twenty (20) seats can be connected to the HaptiSync Hub.

## APPENDIX B: CONNECTIONS FOR G1 HAPTIC SYSTEMS

G1 Haptic Systems can be connected to a HaptiSync Hub using a KCA-T (KineChain Adaptor with termination):



1. **KINECHAIN IN**

   Used to link the Haptic Processor (single seat configuration) or another seat (2 + seats configuration).

2. **KINECHAIN OUT**

   Used to connect the flat cable (single seat configuration) or to connect another seat (2 + seats configuration).

3. **ACM OUT**
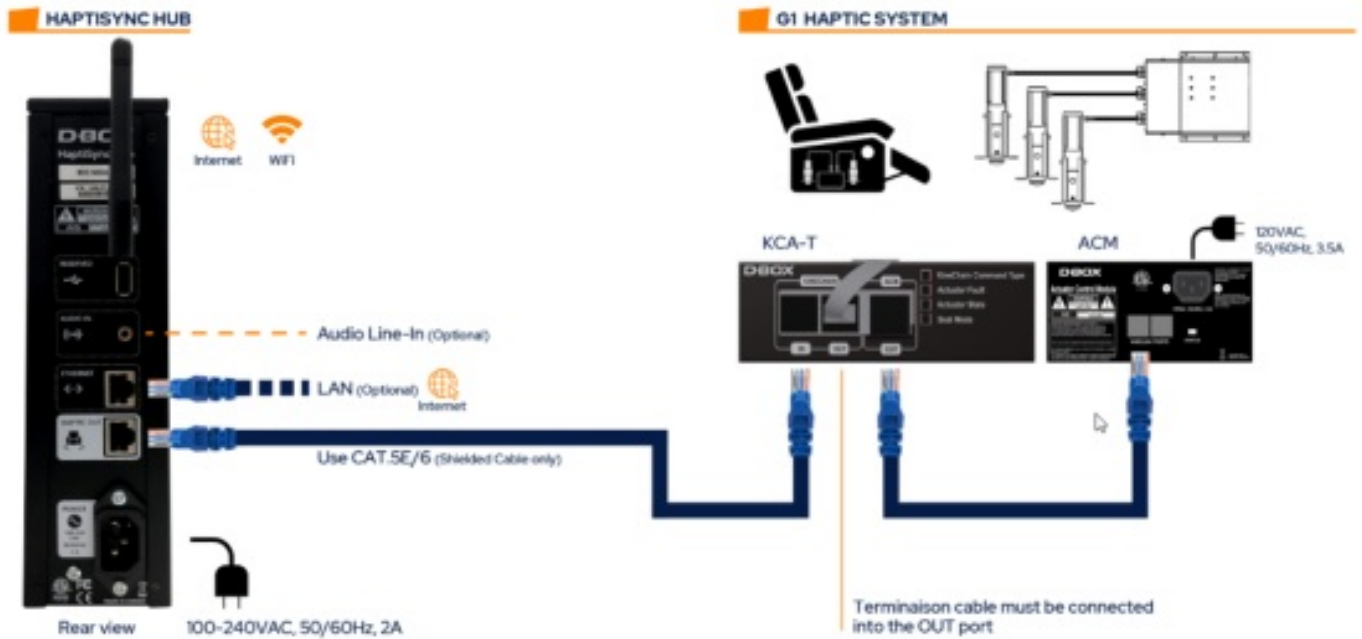
   To be connected to the ACM (01).

4. **LEDs Status**

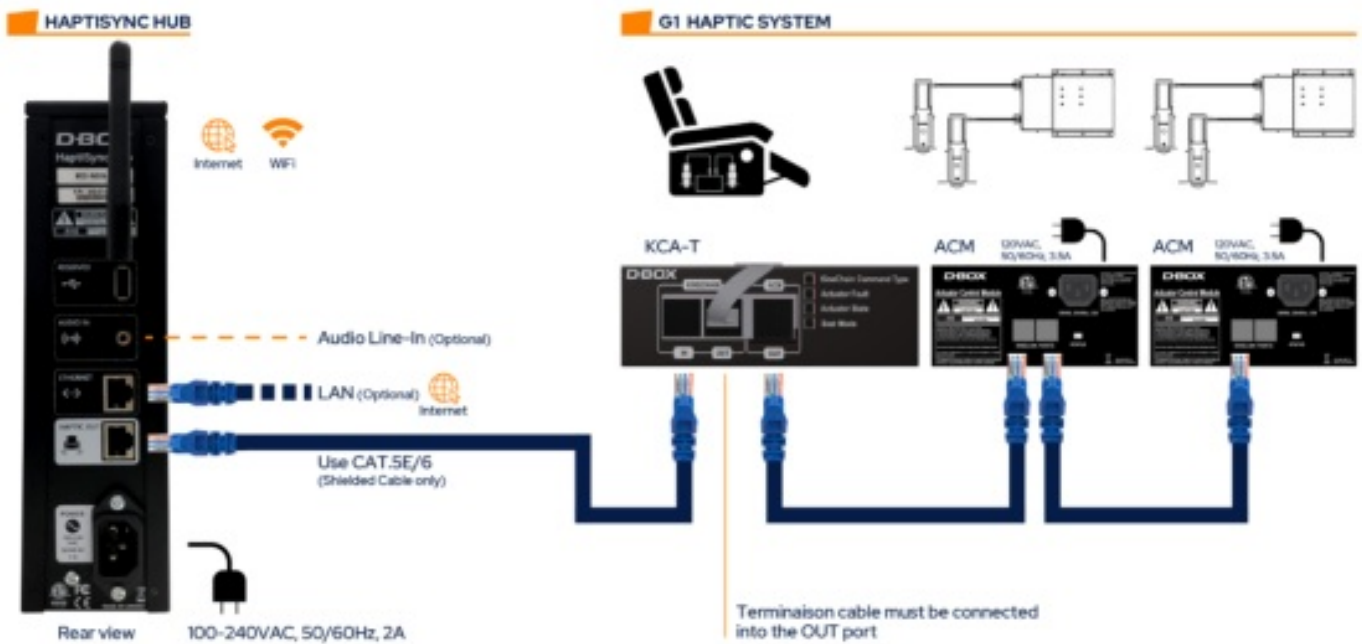   Shows the status of the system. Could be used to troubleshoot the system.

5. **Flat Termination Cable**

   Must be connected to the Haptic OUT Port for the last seat in the chain.
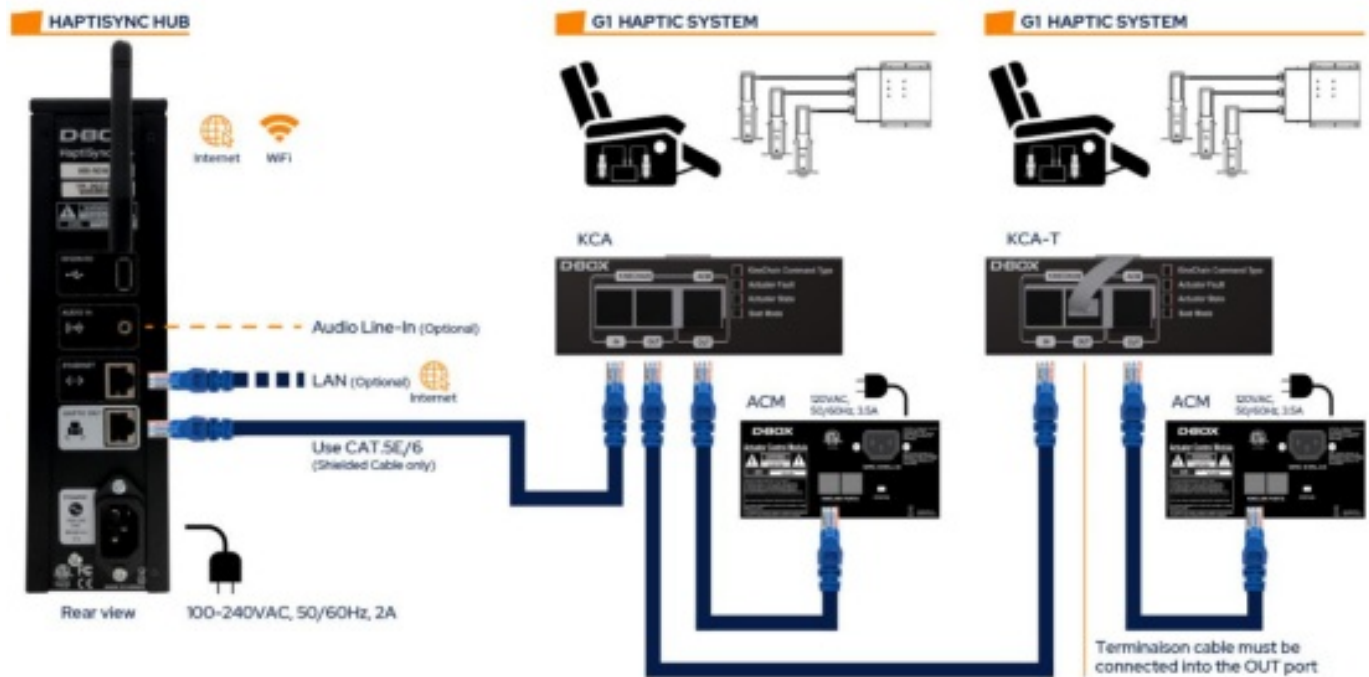
## B.1 Single Seat Configuration (2-3 Actuators)



**HAPTISYNC HUB**

Internet   WiFi

Audio Line-In (Optional)

LAN (Optional)
Internet

Use CAT.5E/6 (Shielded Cable only)

Rear view     100-240VAC, 50/60Hz, 2A

**G1 HAPTIC SYSTEM**

KCA-T     ACM     120VAC, 50/60Hz, 3.5A

Terminaison cable must be connected into the OUT port

## B.2 Single Seat Configuration (4 Actuators)



**HAPTISYNC HUB**

Internet   WiFi

Audio Line-In (Optional)

LAN (Optional)
Internet

Use CAT.5E/6
(Shielded Cable only)

Rear view     100-240VAC, 50/60Hz, 2A

**G1 HAPTIC SYSTEM**

KCA-T     ACM  120VAC, 50/60Hz, 3.5A     ACM  120VAC, 50/60Hz, 3.5A

Terminaison cable must be connected into the OUT port

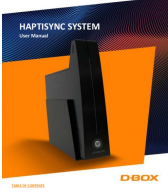## B.3 Multiple Seat Configuration (2-3 Actuators)

## B.4 Multiple Seat Configuration (4 Actuators)
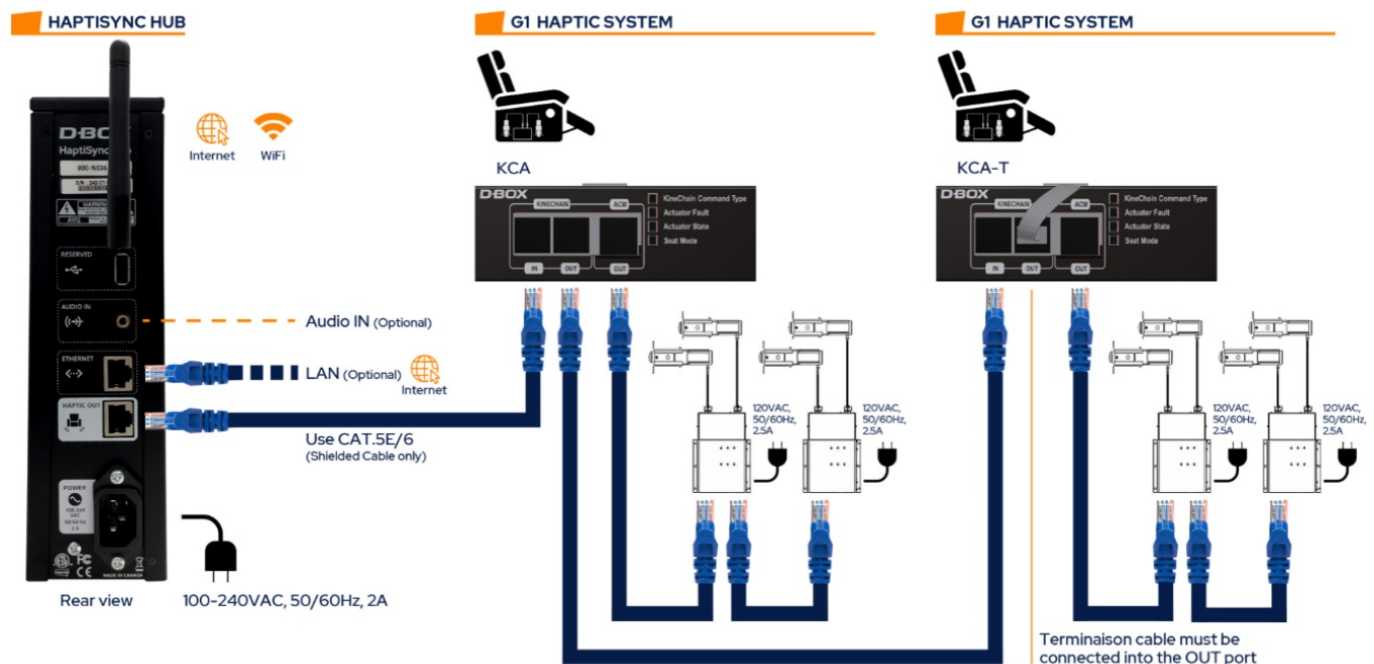


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## Documents / Resources



**D-BOX 800N036 Haptisync System** [pdf] User Manual
800N036, 2AS2X800N036, 800N036 Haptisync System, 800N036, Haptisync System

# References

-  [connect.d-box.com](connect.d-box.com)
-  [connect.d-box.com/](connect.d-box.com/)