FIBARO

a **Nice** group company

USER MANUAL

YH-001
HC3-001
HC3L-001

TABLE OF CONTENTS

1: IMPORTANT SAFETY INFORMATION

Read this manual carefully before installing and operating the product.

⚠ Warning!

- The manufacturer will not be held responsible for any loss or damage resulting from not following the instructions. Store this manual in a secure place for future reference.

- This product is not a toy. Keep away from children and animals.

- When wall-mounted, do not place the product higher than 2 meters from the floor.

⚠ Caution!

- Do not attempt to disassemble, repair or modify this product yourself. Any repair should be performed only by an authorized FIBARO service.

- This product is designed for indoor use only. Do not use outside!

- Do not expose this product to moisture, water, or other liquids. Never place any water carrying vessels near the product.

- Do not use the product outside of the recommended temperature and humidity ranges.

- Keep the product away from heat sources and do not place under direct sunlight.

- Do not cover or place anything on the product.

- Do not connect cable longer than 3 meters to the USB port.

- Do not place the product in metal boxes or on metal surfaces for best radio performance.

2: INSTALLATION

2.1: CONNECTING THE GATEWAY USING WI-FI

1. Plug the provided power adapter into an outlet and connect it to the gateway.

2. The gateway will turn on, wait for the indicator to turn solid red.

3. Connect your computer to Wi-Fi network created by the gateway. You will find Wi-Fi SSID (name) and password on the bottom of the device.

2.2: ACCESSING CONFIGURATION INTERFACE

1. Go to **find.fibaro.com**.

2. Choose your language.

3. Log in with default credentials:

   • Login: **admin**

   • Password: **admin**

4. Configure the gateway by following steps in the Configuration Interface.
   Remember: connect the gateway to your home Wi-Fi network after finishing the configuration.

3: ADDING Z-WAVE™ DEVICES

3.1: ADDING USING INCLUSION MODE

To add the device to the Z-Wave network **manually**:

1. Open the Configuration Interface.

2. Go to ⚙ **> Devices**.

3. Click ➕.

4. Select **Z-Wave Device**.

5. There are few available settings:

   • NWI - Network-Wide Inclusion – enabling allows for adding devices outside the direct range of the gateway,

   • Add in S2 Security mode if device supports it,

   • Allow inclusion only in near proximity (less than 2 meters).

6. Click **Start adding**.

7. Follow adding procedure for the device you want to add (according to its manual).

8. If you are adding in Security S2 Authenticated and the device is not on the Provisioning List (see chapter 5 on page 10):
   Input the PIN code (the underlined part of the DSK) and click **Send**.

9. The device will be added within few minutes.

3.2: ADDING USING SMARTSTART

SmartStart enabled devices can be added into a Z-Wave network by entering the Z-Wave DSK Code present on the product. The devices will be automatically added to the Z-Wave network using secure connection encrypted with Z-Wave S2 security framework.

To add the device to the Z-Wave network **using SmartStart**:

1. Open the Configuration Interface.

2. Go to ⚙ > **Z-Wave > SmartStart**.

3. Click **Add DSK**.

4. Enter the full DSK string code you have received with your device.

5. For advanced users: In **Choose Security levels** select which Security keys will be granted to the joining node (available: S2 Unauthenticated, S2 Authenticated, S2 Access Control, S0).

6. Leave the **Only S2 classic inclusion** unchecked.

7. Power the device and it will be added automatically within 10 minutes.

4: REMOVING Z-WAVE DEVICES

4.1: REMOVING DEVICES USING EXCLUSION MODE

To **remove** the device from the this or other Z-Wave network:

1. Open the Configuration Interface.
2. Go to ⚙ > **Devices**.
3. Click 🔲.
4. Select **Z-Wave Device**.
5. Follow removing procedure on the device (according to its manual).

4.2: REMOVING FAILED NODES

To **remove** the device from the Z-Wave network if it is not responding:

1. Open the Configuration Interface.
2. Go to ⚙ > **Devices**.
3. Go to **Z-Wave** tab.
4. Click 🗑 next to the device you want to force remove.
5. Click **Force remove**.

5: MANAGING PROVISIONING LIST

The **Provision List** is used to add Z-Wave devices using SmartStart or bootstrap classic S2 inclusion.

5.1: ADDING DEVICES TO PROVISIONING LIST

1. Open the Configuration Interface.
2. Go to ⚙ > **Z-Wave** > **SmartStart**.
3. Click **Add DSK**.
4. Enter the full DSK string code you have received with your device.
5. For advanced users: In **Choose Security levels** select which Security keys will be granted to the joining node (available: S2 Unauthenticated, S2 Authenticated, S2 Access Control, S0).
6. If the device should not be automatically included when powered, but only after the classic inclusion, check the **Only S2 classic inclusion** setting.
7. Click **Add**.

5.2: EDITING DEVICES IN PROVISIONING LIST

1. Open the Configuration Interface.
2. Go to ⚙ > **Z-Wave** > **SmartStart**.
3. Click ✏ next to the device you want to edit.
4. You can change the **Security levels**.
5. Save.

5.3: REMOVING DEVICES FROM PROVISIONING LIST

1. Open the Configuration Interface.
2. Go to ⚙ > **Z-Wave** > **SmartStart**.
3. Click 🗑 next to the device you want to remove.
4. Click **Delete**.
5. The device will be removed from the list, but if it was already added to the Z-Wave network, you must perform standard removing procedure or reset the device.

6: MANAGING DEVICES

6.1: CONTROLLING AND CHECKING STATE OF DEVICES

You can control the device and check its last known state using Dashboard.

1. Open the Configuration Interface.
2. Go to 🏠.
3. You will see list of all devices and their status.
4. To fully control the device, hover over it and click ↗.
5. The right sidebar will be expanded allowing you to fully control the device.

6.2: CONFIGURING DEVICES

1. Open the Configuration Interface.
2. Go to ⚙ > **Devices**.
3. You will see list of all devices with information about its ID, assigned room, role, and battery level (if battery powered).
4. Click the device to expand it, you will see a few tabs:
   - General – basic device information, like firmware version, Node ID, Endpoint ID, type and all nodes of this device,
   - Advanced – more advanced information, like Z-Wave type and version, type and unit for meters,
   - Device configuration – rediscovering device configuration (see "Re-discovering Z-Wave devices" on page 16),
   - Associations – configuration of Z-Wave associations (see "Z-Wave Associations" on page 15),
   - Notifications – setting notifications for events on the device,
   - Parameters – setting values of configuration parameters.

6.3: IDENTIFYING DEVICES

Some devices allow to identify them using light or sound signal (refer to the manual), for example, by blinking the light 3 times. To request the device to identify itself:

1. Open the Configuration Interface.
2. Go to ⚙ > **Devices**.
3. Click the device to expand it.
4. Click the device you want to identify to expand it.
5. Go to **Advanced** tab.
6. Click **Identify**.

6.4: VIEWING EVENTS HISTORY

Using History panel you can check all events in the system, like: changes in statuses of devices, activated scenes and notifications.

1. Open the Configuration Interface.
2. Go to 🕑.
3. You will see full history of your system.

6.5: PERFORMING ACTIONS ON DEVICES WITH SPECIFIC COMMAND CLASSES

Basic

In the Dashboard 🏠, click ↗ on device tile, then on the displayed sidebar you will see the last known state and you will be able to:

- Click **ON** – set 0xFF,
- Click **OFF** – set 0x00.

Binary Switch

In the Dashboard 🏠, click ↗ on device tile, then on the displayed sidebar you will see the last known state and you will be able to:

- Click **ON** – set 0xFF,
- Click **OFF** – set 0x00.

Central scene

In the Device Settings (⚙ > **Devices**), click the device to expand it and go to **Advanced** tab. You will see the list of all Scene IDs and key attributes with scenes that will be activated after receiving them:

- Click **ADD ACTION** – create new scene that will be activated when received the specific Scene ID and key attribute.

Color Switch

In the Dashboard 🏠, click ↗ on device tile, then on the displayed sidebar you will see the last known state and you will be able to:

- Click **ON** – turn ON the light,
- Click **OFF** – turn OFF the light,
- Change **Brightness** slider position – set new brightness,
- Click ⌃ – start increasing brightness,
- Click ⌄ – start decreasing brightness,
- Click ‖ – stop increasing/decreasing component.

For each color component:

- Change slider position – set new component value,

- Click ∧ – start enhancing component,
- Click ∨ – start fading component,
- Click ‖‖ – stop enhancing/fading component.

Door Lock

In the Dashboard ⌂, click ↗ on device tile, then on the displayed side-bar you will see the last known state and you will be able to:

- Click **Set Mode**, then select mode – activate the selected mode.

In the Device Settings (⚙ > **Devices**), click the device to expand it and go to **Advanced** tab. In **Door Lock Configuration** section you will be able change door lock configuration.

Meter

In the Device Settings (⚙ > **Devices**), click the device to expand it and go to **Advanced** tab. You will see the type, scales and rate type of the meter.

- Click **RESET** in **Meter reset** section – reset the accumulated data.

Multilevel Sensor

In the Device Settings (⚙ > **Devices**), click the device to expand it and go to **Advanced** tab. You will see the type and scales of the sensor.

Multilevel Switch

In the Dashboard ⌂, click ↗ on device tile, then on the displayed side-bar you will see the last known state and you will be able to:

- Click **ON** – set 0xFF,
- Click **OFF** – set 0x00,
- Change slider position – set new level,
- Click ∧ – start level change up,
- Click ∨ – start level change down,
- Click ‖‖ – stop level change.

Notification

In the History Panel 🕐, you will see all the received Notification Reports with information about the type of the notification and event/state.

Sound Switch

In the Dashboard ⌂, click ↗ on device tile, then on the displayed side-bar you will see the last known state (like currently played tone, default tone) and you will be able to:

- Click **ON** – start playing the default tone,
- Click **OFF** – stop playing,
- Click **Play tone**, then select tone – start playing the selected tone,

- Click **MUTE** – mute the sound switch,
- Click **UNMUTE** – unmute the sound switch,
- Change **Volume** slider position – set new volume.

In the Device Settings (⚙ > **Devices**), click the device to expand it and go to **Advanced** tab. In Sound Configuration section you will be able change default tone and volume.

Thermostat Mode

In the Dashboard ⌂, click ↗ on device tile, then on the displayed sidebar you will see the last known state and you will be able to:

- Click **Set Mode**, then select mode – activate the selected mode.

Thermostat Setback

In the Dashboard ⌂, click ↗ on device tile, then on the displayed sidebar you will see the last known state and you will be able to:

- Click **ON** – set Comfort Mode,
- Click **OFF** – set Energy Saving Mode.

Thermostat Setpoint

In the Dashboard ⌂, click ↗ on device tile, then on the displayed sidebar you will see the last known state and you will be able to:

- Change value in temperature field – set new Setpoint value.

Battery

In the Device Settings (⚙ > **Devices**), you will see battery icon with last known battery level in the column **Power** next to the device with Battery CC.

Association / Multi Channel Association

See "Z-Wave Associations" on page 15.

Firmware Update

See "Updating firmware of Z-Wave devices" on page 20.

Indicator

See "Identifying devices" on page 11.

Other Commands Classes

Command Classes not mentioned above are controlled in the same way as Basic Command Class. To learn if the device supports Basic Command Class and how it maps values to other Command Classes, refer to manual of the device.

7: Z-WAVE ASSOCIATIONS

Associations allow devices to control other devices directly within the Z-Wave network without the participation of the gateway. Devices such can continue to work and operate selected devices even when the gateway is damaged or turned off (in case of a fire, flood, or system malfunction).

7.1: CREATING ASSOCIATIONS

1. Open the Configuration Interface.
2. Go to ⚙ > **Devices**.
3. Click the device you want to associate to expand it.
4. Go to **Associations** tab.
5. Select the source EndPoint and Association Group (refer to manual of the device for more information).
6. Select the target device you want to associate with.
7. Click ⊕ to set the association.
8. If the device is battery powered, wake it up manually or wait for next automatic wake up.

7.2: DELETING ASSOCIATIONS

1. Open the Configuration Interface.
2. Go to ⚙ > **Devices**.
3. Click the device from which you want to delete the association.
4. Go to **Associations** tab.
5. Click 🗑 next to the association you want to delete.
6. If the device is battery powered, wake it up manually or wait for next automatic wake up.

8: REDISCOVERING Z-WAVE DEVICES

Rediscovery – the process of reading the device's capabilities after altering them.

1. Open the Configuration Interface.

2. Go to ⚙ > **Devices**.

3. Click the device to expand it.

4. Go to **Device configuration** tab.

5. Under **Device reconfiguration** click **Reconfigure device**.

6. If the device is battery powered, wake it up manually or wait for next automatic wake up.

9: CONNECTING WITH EXISTING Z-WAVE NETWORK

9.1: ADDING/REMOVING TO/FROM EXISTING Z-WAVE NETWORK

This gateway can be added to an existing Z-Wave network only if no Z-Wave devices are added to it.

1. Start adding/removing procedure on the primary controller (according to its manual).

2. Go to ⚙ > **Z-Wave**.

3. Under **Start Learn Mode** click **Start**

4. If you are prompted for the PIN, you will find it on the bottom of the gateway and on the box.

9.2: COPYING NETWORK INFORMATION BETWEEN CONTROLLERS

Copying network information (Replication) is the process of updating network information from a primary controller to secondary controllers, such as node list and routing information.

These steps are usually not required unless you have a multiple controller network.

Copying information from this controller to the secondary controller

1. Start adding procedure according to chapter "Adding using Inclusion Mode" on page 7.

2. Start Learn Mode on the secondary controller (according to its manual).

3. After couple of minutes both controllers will have the same network information.

Copying information to this controller from the primary controller

1. Start adding procedure on the primary controller (according to its manual).

2. Go to ⚙ > **Z-Wave**.

3. Under **Start Learn Mode** click **Start**

4. After couple of minutes both controllers will have the same network information.

9.3: DSK AND PIN

In case you need full DSK code of the gateway you will find it on the label under the device.

If no Z-Wave devices are added to the gateway or the gateway is a secondary controller (not SIS*), you can also find the full DSK in the interface:

1. Open the Configuration Interface.

2. Go to ⚙ > **Z-Wave**.

3. Under **Start Learn Mode** click **Start**

4. Click ▸_ in the left sidebar to open the Console, where the DSK will be displayed.

* SIS – Static Update Controller configured to enable other controllers to include/exclude nodes on its behalf

10: RESETTING TO FACTORY DEFAULTS

10.1: RESETTING SYSTEM TO FACTORY DEFAULTS

⚠ **Caution!** The whole configuration will be removed and lost if not backed up.

This feature allows you to restore the whole system to factory settings. It means the factory software version will be restored and all data from the system A and B will be deleted (users, devices, scenes etc.).

If the gateway is set as Z-Wave secondary controller use this procedure only when the primary controller is missing or otherwise inoperable.

1. Open the Configuration Interface.

2. In the top right corner click user name

3. Choose **Recovery Mode** from the menu.

4. Confirm.

5. Wait for the system to reboot, the LED indicator will be pulsing red.

6. When the LED indicator turns solid red, refresh the browser tab.

7. Click **Factory Reset** under **Network Status** section.

8. Check **"Yes, I'm sure and I know what I'm doing"** checkbox.

9. Confirm.

10.2: RESETTING Z-WAVE TO FACTORY DEFAULTS

Resetting the Z-Wave network removes all the Z-Wave devices from the gateway's memory, but the other data remains unchanged. Scenes that used Z-Wave devices will not work anymore.

1. Open the Configuration Interface.

2. Go to ⚙ > **Z-Wave**.

3. Under **Reset Z-Wave** click **Reset**.

4. Confirm.

11: UPDATING FIRMWARE

11.1: UPDATING FIRMWARE OF GATEWAY

1. Open the Configuration Interface.
2. Go to ⚙ > **Update > Home Center**.
3. Click **Download Update** for the respective update.
4. Wait for the update to be downloaded.
5. Determine whether you want to do the cloud backup, local backup or no backups before the update.
6. Accept Terms & Privacy Policy.
7. Click **Install Update**.
8. Click **Update** to confirm the update.

11.2: UPDATING FIRMWARE OF Z-WAVE DEVICES

1. Open the Configuration Interface.
2. Go to ⚙ > **Z-Wave**.
3. Go to **Firmware update** tab.
4. You will see list of endpoints ready to update.
5. Click **Upload File** next to the endpoint you want to update.
6. Select target and file from your computer.
7. Click **Start update**.

12: Z-WAVE SPECIFICATION

> **i** This product can be operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers. All mains operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.

12.1: SUPPORTED COMMAND CLASSES

Command Class	Version	Secure
COMMAND_CLASS_ZWAVEPLUS_INFO [0x5E]	V2	NO
COMMAND_CLASS_TRANSPORT_SERVICE [0x55]	V2	NO
COMMAND_CLASS_CRC_16_ENCAP [0x56]	V1	NO
COMMAND_CLASS_APPLICATION_STATUS [0x22]	V1	NO
COMMAND_CLASS_SUPERVISION [0x6C]	V1	NO
COMMAND_CLASS_INCLUSION_CONTROLLER [0x74]	V1	NO
COMMAND_CLASS_TIME [0x8A]	V1	NO
COMMAND_CLASS_MULTI_CMD [0x8F]	V1	NO
COMMAND_CLASS_SECURITY [0x98]	V1	NO
COMMAND_CLASS_SECURITY_2 [0x9F]	V1	NO
COMMAND_CLASS_VERSION [0x86]	V3	YES
COMMAND_CLASS_NETWORK_MANAGEMENT_ INCLUSION [0x34]	V3	YES
COMMAND_CLASS_NETWORK_MANAGEMENT_ PROXY [0x52]	V3	YES
COMMAND_CLASS_NETWORK_MANAGEMENT_ BASIC [0x4D]	V2	YES
COMMAND_CLASS_NETWORK_MANAGEMENT_ INSTALLATION_MAINTENANCE [0x67]	V2	YES
COMMAND_CLASS_POWERLEVEL [0x73]	V1	YES
COMMAND_CLASS_MANUFACTURER_SPECIFIC [0x72]	V2	YES
COMMAND_CLASS_NODE_PROVISIONING [0x78]	V1	YES
COMMAND_CLASS_FIRMWARE_UPDATE_MD [0x7A]	V5	YES
COMMAND_CLASS_INDICATOR [0x87]	V3	YES
COMMAND_CLASS_ASSOCIATION [0x85]	V2	YES
COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION [0x8E]	V3	YES
COMMAND_CLASS_ASSOCIATION_GRP_INFO [0x59]	V3	YES
COMMAND_CLASS_DEVICE_RESET_LOCALLY [0x5A]	V1	YES

12.2: CONTROLLED COMMAND CLASSES

Command Class	Version
COMMAND_CLASS_SENSOR_ALARM [0x9C]	V1
COMMAND_CLASS_BASIC [0x20]	V2
COMMAND_CLASS_SENSOR_BINARY [0x30]	V2
COMMAND_CLASS_SWITCH_BINARY [0x25]	V2
COMMAND_CLASS_CENTRAL_SCENE [0x5B]	V3
COMMAND_CLASS_CLOCK [0x81]	V1
COMMAND_CLASS_SWITCH_COLOR [0x33]	V3
COMMAND_CLASS_DOOR_LOCK [0x62]	V4
COMMAND_CLASS_METER [0x32]	V6
COMMAND_CLASS_SENSOR_MULTILEVEL [0x31]	V11
COMMAND_CLASS_SWITCH_MULTILEVEL [0x26]	V4
COMMAND_CLASS_NOTIFICATION [0x71]	V8
COMMAND_CLASS_PROTECTION [0x75]	V2
COMMAND_CLASS_SCENE_ACTIVATION [0x2B]	V1
COMMAND_CLASS_SOUND_SWITCH [0x79]	V1
COMMAND_CLASS_THERMOSTAT_FAN_MODE [0x44]	V5
COMMAND_CLASS_THERMOSTAT_FAN_STATE [0x45]	V2
COMMAND_CLASS_THERMOSTAT_MODE [0x40]	V3
COMMAND_CLASS_THERMOSTAT_OPERATING_STATE [0x42]	V2
COMMAND_CLASS_THERMOSTAT_OPERATING_STATE [0x42]	V3
COMMAND_CLASS_BATTERY [0x80]	V2
COMMAND_CLASS_WAKE_UP [0x84]	V2
COMMAND_CLASS_MULTI_CHANNEL [0x60]	V4
COMMAND_CLASS_ZWAVEPLUS_INFO [0x5E]	V2
COMMAND_CLASS_TRANSPORT_SERVICE [0x55]	V2
COMMAND_CLASS_CRC_16_ENCAP [0x56]	V1
COMMAND_CLASS_APPLICATION_STATUS [0x22]	V1
COMMAND_CLASS_SUPERVISION [0x6C]	V1
COMMAND_CLASS_INCLUSION_CONTROLLER [0x74]	V1
COMMAND_CLASS_SECURITY [0x98]	V1
COMMAND_CLASS_SECURITY_2 [0x9F]	V1
COMMAND_CLASS_VERSION [0x86]	V3
COMMAND_CLASS_MANUFACTURER_SPECIFIC [0x72]	V2
COMMAND_CLASS_FIRMWARE_UPDATE_MD [0x7A]	V5
COMMAND_CLASS_INDICATOR [0x87]	V3
COMMAND_CLASS_ASSOCIATION [0x85]	V2
COMMAND_CLASS_MULTI_CHANNEL_ASSOCIATION [0x8E]	V3
COMMAND_CLASS_ASSOCIATION_GRP_INFO [0x59]	V3
COMMAND_CLASS_DEVICE_RESET_LOCALLY [0x5A]	V1

12.3: BASIC COMMAND CLASS

The gateway does not map the Basic Command Class to any functionality and it ignores Basic Get request.

12.4: SECURITY COMMAND CLASS

The gateway is a security-enabled device and supports S0, S2 Unauthenticated, S2 Authenticated and S2 Access Control mode.

Added devices must also support the specific security mode to utilize this feature and provide encrypted communication.

12.5: ASSOCIATION COMMAND CLASS

The gateway supports one association group, the "Lifeline" group, only one device can be added to this group.

The gateway will send Device Reset Locally notification if Z-Wave factory reset is performed.

Group	Profile	Command Class & Command	Group Name
1	General: Lifeline (0x00: 0x01)	COMMAND_CLASS_DEVICE_RESET_ LOCALLY [0x5A] DEVICE_RESET_LOCALLY_NOTIFICATION [0x01]	Lifeline

12.6: INDICATOR COMMAND CLASS

Indicator CC - available indicators

Indicator ID – 0x50 (Identify)

Indicator CC - available properties

Property ID	Description	Values and requirements
0x03	On/Off Periods	Starts toggling between ON and OFF Used to set the duration of an On/Off period. Available values: • 0x00 .. 0xFF (0 .. 25.5 seconds) If this is specified, the On/Off Cycles MUST also be specified.
0x04	On/Off Cycles	Used to set the number of On/Off periods. Available values: • 0x00 .. 0xFE (0 .. 254 times) • 0xFF (indicate until stopped) If this is specified, the On/Off Period MUST also be specified.
0x05	On time with-in an On/Off period	Used to set the length of the On time during an On/Off period. It allows asymetic On/Off periods. Available values • 0x00 (symmetric On/Off period – On time equal to Off time) • 0x01 .. 0xFF (0.1 .. 25.5 seconds) Example: 300ms ON and 500ms OFF is achieved by setting On/Off period (0x03) = 0x08 and On time within an On/Off Period (0x05) = 0x03 This value is ignored if On/Off periods is not defined. This value is ignored if On/Off periods value is less than this value.

Indicator CC - Identifying the gateway with LED signal

The gateway can be Identified using LED signal:

- FGHC3-001: the ⌂ LED indicator will blink green 3 times
  (3 times: ON for 600ms, then OFF for 200ms)

- HC3L-001 / YH-001: the LED indicator will blink orange 3 times
  (3 times: ON for 600ms, then OFF for 200ms)