stork™

en

# Hub

## USER'S MANUAL

**Not intended for use as a medical device or to replace a medical device. Do not use it to diagnose, cure, treat, alleviate, or prevent any disease or health condition.**

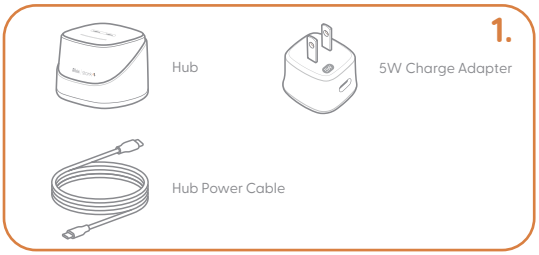
Download the Stork App before using this product. For help, go to www.masimostork.com for additional tips and tutorials, a full list of supported devices, warranty, trouble shooting, and customer support. Follow the in app instructions for device pairing and use.

## DESCRIPTION

Stork™ Hub is part of the Stork smart home baby monitoring system , which is designed for parents to monitor a healthy baby at home. The Stork Hub is a wireless device that communicates health data, two-way audio, and room conditions to the Stork App through the secure Masimo Cloud.

**Note:** Stork Hub is designed to work with the Stork baby monitoring system (sensor and boot) and is not meant to be a standalone baby monitor.

**Contents**:

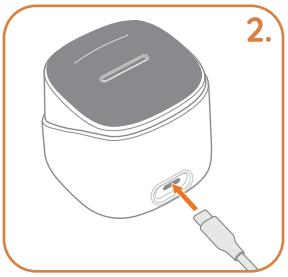



Not included: Boot, Boot Straps, Camera, or Sensor (all sold separately).

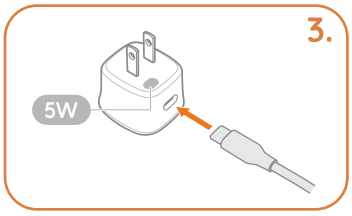
## INSTRUCTIONS

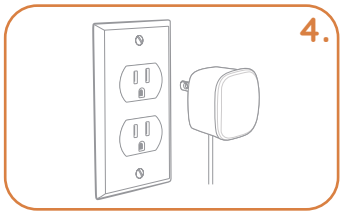
### a) Plug in the Hub

1. Refer to **Fig. 2.** Plug the Hub power cable into the back of the Hub.




2. Refer to **Fig. 3.** Plug the other end of the USB-C cable into the 5W power adapter.
3. Refer to **Fig. 4.** Plug the power adapter into a wall socket.
   CAUTION: Do not connect Stork Hub to an electrical outlet controlled by a wall switch or dimmer.



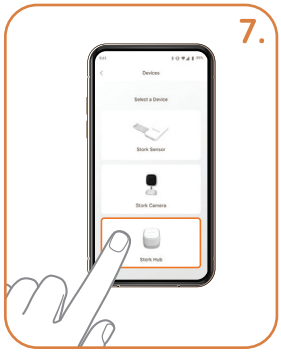

### b) Hub placement

1. Refer to **Fig. 5.** Place the Stork Hub on top of a dresser, nightstand or cabinet, or other hard flat surface, near the baby's crib.


WARNING: Make sure the Hub is placed out of reach of the baby and small children.

### b) Pair the Hub (sensor and phone are not included)

1. Refer to **Fig. 6.** Open the Stork App and click on add.
2. Refer to **Fig. 7.** Click on Stork Hub.
3. Refer to **Fig. 8.** Follow the on screen instructions to pair Stork Hub and begin tracking.



## CLEANING

- Do not attempt to remanufacture, recondition or recycle the Stork Hub to prevent harm or damage to the system.
- Always turn off and unplug the Stork Hub before cleaning to prevent harm or damage to the device.
- Do not clean the Stork Hub with undiluted bleach, petroleum-based products, acetone, or other harsh solvents.
- Do not submerge Stork Hub in liquid or attempt to sterilize by any method to prevent damage to the device.

**Note:** The Stork Hub does not require cleaning with the exception of wiping the surface with a damp cloth.

stork™

# Hub

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Masimo®

304169/11835A-0623

## HUB STATUS LIGHT

Stork Hub includes a light to indicate status. Refer to the table for a description of the colored lights.

| Color /Behavior | What does it mean? |
|---|---|
| **White** Slowly blinking | · The sensor is not actively monitoring. |
| **White** Solid light | · The sensor is actively monitoring with a successful connection to the Masimo Cloud. |
| **Green** Blinking | · The hub is ready for pairing to the smart phone/Stork App |
| **Blue** Slowly blinking | · The hub software is currently updating. Readings from the sensor may be unavailable at this time. |
| **Blue** Solid light | · The hub software is currently updating. Readings from the sensor may be unavailable at this time. |
| **Yellow** Blinking | · A low or medium priority notification is active. |
| **Yellow** Solid light | · A low or medium priority notification has been acknowledged and silenced. |
| **Red** Blinking | · A high priority notification is active. |
| **Red** Solid light | · A high priority notification has been acknowledged and silenced. |
| **Red*** Blinking Red in a pattern to indicate a numbered code | · A fault has been detected. Contact customer support.<br>· * An audible notification may also sound. |

## CUSTOMER SUPPORT

For product support, along with troubleshooting for your Stork product, please go to the Stork support page:
www.masimostork.com/en-us/support/contact-us.html

## PHYSICAL CHARACTERISTICS

| | |
|---|---|
| Dimensions | 2.5" (L) x 2.5" (W) x 2.0" (H) (6.35 cm x 6.35 cm x 5.08 cm) |
| Weight | 0.18 lbs. (80g) |

## ENVIRONMENTAL

| | |
|---|---|
| Storage Temperature | -20°C to + 60°C @ ambient humidity |
| Operating Temperature | 5°C to + 35°C @ ambient humidity |
| Storage/Transport Humidity | 10–95% RH (non-condensing) @ ambient temperature |
| Operating Humidity | 10–95% RH (non-condensing) @ ambient temperature |
| Atmospheric Pressure | 540 to 1060 mBar at ambient temperature and humidity |

## SAFETY PRECAUTIONS

- Stork is not intended for use as a medical device or to replace a medical device. Do not use it to diagnose, cure, treat, alleviate, or prevent any disease or health condition.
- Do not self-diagnose or self-medicate on the basis of the measurements. Always consult your doctor.
- For safe use, do not use any component of the Stork system if it appears damaged.
- Do not adjust, repair, open, disassemble, or modify Stork. Such changes may lead to injury and/or incorrect readings.
- Keep small parts away from small children and pets. Small items can be a choking hazard.
- Carefully position any cables to avoid possible strangulation or entanglement.
- Secure Stork Hub where it will not fall on anyone.
- Only use the AC power supply and cable included with your Stork Hub to prevent damage to the device.
- Place Stork Hub where you can easily disconnect it from AC power in case of an emergency.
- Keep Stork Hub plugged in while in use. Loss of power may limit the notifications available.
- Only use Masimo-approved parts with Stork to make sure the device works correctly.
- Note: Do not monitor more than one person at a time with Stork.

## WIRELESS TECHNOLOGY INFORMATION

| Communication (Bluetooth) | |
|---|---|
| Type | Bluetooth LE 4.2 |
| Frequency | 2402-2480 MHz |
| Classification of Output Power Rating | Conducted |
| Max. Peak Output Power | 9 dBm |
| Output Power Type | Fixed at the Factory |
| Modulation Types | GFSK |
| Modulation Signals | Analog and Digital |
| Available Data Rates | 1 Mbps |
| Recommended Max. Range | 100 ft (~30 meters) line-of-sight |

| Communication (Wi-Fi) | |
|---|---|
| Type | WLAN Radio: IEEE 802.11 b/g/n |
| Frequency | 802.11b/g/n(HT20): 2412-2462 MHz<br>802.11n(HT40): 2422-2452 MHz |
| Classification of Output Power Rating | Conducted |
| Max. Peak Output Power | 20 dBm |
| Output Power Type | Fixed at the Factory |
| Modulation Types | 802.11b: DSSS<br>802.11g/n(HT20/HT40): OFDM |
| Modulation Signals | Analog and Digital |
| Available Data Rates | 802.11b - 1, 2, 5.5, 11 Mbps.<br>802.11g - 6, 9, 12, 18, 24, 36, 48, 54 Mbps<br>802.11n- MCS0 – MCS7 |
| **Security and Authentication** | |
| Encryption | 64/128-bit WEP, Dynamic WEP, WPA-TKIP, WPA2-AES |
| Authentication | Open System, Shared Key, Pre-Shared Key (PSK), 802.1X: LEAP, PEAP, TTLS, TLS, EAP-FAST |
| **Radio Compliance** | |
| USA | Contains FCC: 2AC7Z-ESP32WROVERE |
| Canada | Contains IC ID: 21098-ESPWROVERE |

**WARNING:** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
**WARNING:** The frequency bands of this device (2.4 GHz) are only for indoor use, in accordance with international telecommunication requirements.

**GUIDANCE AND MANUFACTURER'S DECLARATION- ELECTROMAGNETIC EMISSIONS**

The ME Equipment is intended for use in the electromagnetic environment specified below. The customer or the user of the ME Equipment should assure that it is used in such an environment.

| EMISSION TEST | COMPLIANCE | ELECTROMAGNETIC ENVIRONMENT - GUIDANCE |
|---|---|---|
| RF Emissions (Radiated) CISPR 11 | Group 1 Class B | The ME Equipment must emit electromagnetic energy in order to perform its intended function. Nearby electronic equipment may be affected. |
| RF Emissions (Conducted) CISPR 11 | Group 1 Class B | Suitable for use in all establishments, including domestic environments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes. |
| Harmonic Emissions IEC 61000-3-2 | Class A | |
| Voltage fluctuations/ Flicker emissions IEC 61000-3-3 | Complies | |

**GUIDANCE AND MANUFACTURER'S DECLARATION - ELECTROMAGNETIC IMMUNITY**

The ME Equipment is intended for use in the electromagnetic environment specified below. The customer or the user of the ME Equipment should assure that it is used in such an environment.

| IMMUNITY TEST | IEC 60601 TEST LEVEL | COMPLIANCE LEVEL | ELECTROMAGNETIC ENVIRONMENT - GUIDANCE |
|---|---|---|---|
| Electrostatic discharge (ESD)<br>IEC 61000-4-2 | +/- 8 kV contact<br>+/- 15 kV air | +/- 8 kV contact<br>+/- 15 kV air | Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%. |
| Electrical fast transient/ burst IEC 61000-4-4 | +/- 1 kV for input/ output lines | +/- 1 kV for input/ output lines | Mains power quality should be that of a typical commercial or hospital environment. |
| Surge<br>IEC 61000-4-5 | +/-1 kV line(s) to line(s) | +/-1 kV line(s) to line(s) | Mains power quality should be that of a typical commercial or hospital environment |
| Conducted RF | 3 Vrms | 3 Vrms | Performed over 0.15-80 MHz |
| IEC 61000-4-6 | 6 Vrms | 6 Vrms | Performed on the following ISM (industrial, scientific and medical) bands of frequency: The bands between 0,15 MHz and 80 MHz are 6,765 MHz to 6,795 MHz; 13,553 MHz to 13,567 MHz; 26,957 MHz to 27,283 MHz; and 40,66 MHz to 40,70 MHz. The amateur radio bands between 0,15 MHz and 80 MHz are 1,8 MHz to 2,0 MHz, 3,5 MHz to 4,0 MHz, 5,3 MHz to 5,4 MHz, 7 MHz to 7,3 MHz, 10,1 MHz to 10,15 MHz, 14 MHz to 14,2 MHz, 18,07 MHz to 18,17 MHz, 21,0 MHz to 21,4 MHz, 24,89 MHz to 24,99 MHz, 28,0 MHz to 29,7 MHz and 50,0 MHz to 54,0 MHz |
| Power frequency (50 / 60 Hz) magnetic field.<br>IEC 61000-4-8 | 30 A/m | 30 A/m | Power frequency magnetic fields should be at levels characteristic of typical location in a typical hospital environment. |
| Voltage dips on power supply input lines<br>IEC 61000-4-11 | 0% UT1, 0.5 cycle, at 0°, 45°, 90°, 135°, 180°, 225°, 270°, and 315°;<br>0% UT 1 cycle, and 70% UT 25/30 cycles at 0° | 0% UT1, 0.5 cycle, at 0°, 45°, 90°, 135°, 180°, 225°, 270°, and 315°;<br>0% UT 1 cycle, and 70% UT 25/30 cycles at 0 | Mains power quality should be that of a typical commercial or hospital environment. |
| Voltage Interruptions on power supply input lines<br>IEC 61000-4-11 | 0% UT, 250/300 cycle | 0% UT, 250/300 cycle | |
| Radiated RF<br>IEC 61000-4-3 | 10 V/m | 10 V/m | Performed over 80 MHz to 2.7 GHz |

**Note 1:** At 80 MHz and 800 MHz, the higher frequency range applies.
**Note 2:** These guidelines may not apply in all situations.
Electromagnetic propagation is affected by absorption and reflection from structures, objects and people. Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the ME Equipment is used exceeds the applicable RF compliance level above, the ME Equipment should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the ME Equipment.
[1]UT: Rated voltage for the equipment

| ENCLOSURE PORT IMMUNITY TO RF WIRELESS COMMUNICATION EQUIPMENT | | | | | | |
|---|---|---|---|---|---|---|
| TEST FREQUENCY | BAND (A) (MHZ) | SERVICE (A) | MODULATION (B) | MAXIMUM POWER (W) | DISTANCE (M) | IMMUNITY TEST LEVEL (V/M) |
| 385 | 380-395 | TETRA 400 | Pulse modulation (b) 18 Hz | 1.8 | 0.3 | 27 |
| 450 | 430-470 | GMRS 460, FRS 460 | FM (c) +/- 5 kHz deviation 1 kHz sine | 2 | 0.3 | 28 |
| 710<br>745<br>780 | 704-787 | LTE Band 13, 17 | Pulse modulation (b) 217 Hz | 0.2 | 0.3 | 9 |
| 810<br>870<br>930 | 800-960 | GSM 800/900, TETRA 800, iDEN 820, CDMA 850, LTE Band 5 | Pulse modulation (b)<br>18 Hz | 2 | 0.3 | 28 |
| 1720<br>1845<br>1970 | 1700-1990 | GSM 1800; CDMA 1900; GSM 1900; DECT; LTE Band 1, 3. 4. 35: UMTS | Pulse modulation (b) 217 Hz | 2 | 0.3 | 28 |
| 2450 | 2400-2570 | Bluetooth, WLAN, 802.11 b/g/n, RFID 2450, LTE Band 7 | Pulse modulation (b) 217 Hz | 0.2 | 0.3 | 9 |

**Note:** If necessary to achieve the IMMUNITY TEST LEVEL, the distance between the transmitting antenna and the ME EQUIPMENT or ME SYSTEM may be reduced to 1 m. The 1 m test distance is permitted by IEC 61000-4-3.
(a) For some services, only the uplink frequencies are included.
(b) The carrier shall be modulated use a 50% duty cycle square wave signal.
(c) As an alternative to FM modulation, 50% pulse modulation at 18 Hz may be used because while it does not represent actual modulation, it would be worst case.

**RECOMMENDED SEPARATION DISTANCE BETWEEN PORTABLE AND MOBILE RF COMMUNICATION EQUIPMENT AND THE ME EQUIPMENT**

The ME Equipment is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ME Equipment can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ME Equipment as recommended below, according to the maximum output power of the communication equipment.

| RATED MAXIMUM OUTPUT POWER OF TRANSMITTER (W) | |
|---|---|
| | d = 0.6*Sqrt (P) |
| 0.01 | 0.06 |
| 0.1 | 0.19 |
| 1 | 0.6 |
| 10 | 1.9 |
| 100 | 6 |

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer..

Note 1: At 80 MHz and 800 MHz, the higher frequency range applies.
Note 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

## WIRELESS PRECAUTIONS

- When using with a smart device, keep both devices within the recommended range of each other. Moving outside of this range may cause a loss in connection.
- Do not place anything on top of Stork Hub to avoid damaging or blocking the wireless signal or sound.
- To ensure proper notification function, occasionally check for the following:
  - Notification features is turned on your Smart device (i.e., sounds, vibrations, etc.).
  - Smart device battery is fully charged or plugged in.
  - Oxygen values are displayed on the App live view.
- Move devices away from sources that may interfere with Bluetooth connection. The presence of other devices that may create radio frequency interference (RFI). This may result in loss of Quality of Service. Devices that may cause RFI include but are not limited to the following: cell phones, laptops and tablets, pagers, Bluetooth devices, devices with remote controls, electrocautery equipment, diathermy equipment , and other baby monitors.
- Check that Stork notifications can be heard from other rooms in your home, especially when noisy appliances such as vacuum cleaners, dishwashers, clothes dryers, televisions, or radios are operating.
- Check your system setup by viewing the display on the smartphone Stork App. The Stork App will provide an indication if there is a problem with the internet connection.
- To maintain Bluetooth connectivity with the Stork Sensor, ensure that Stork Hub is within the specified distance and in line-of-sight of the Stork Sensor.
- Changes or modifications not approved by Masimo can void the user's authority to operate the equipment.
- Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the Stork, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.
- Disposal of product: Comply with local laws when disposing the device and/or its accessories.
- Do not place Stork near electrical equipment that may affect the device, preventing it from working properly.
- Only use Masimo authorized devices with Stork. Using unauthorized devices with Stork may result in damage to the device and/or injury.
- Keep Stork away from other electrical equipment that emit radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.
- Stork complies with the limits for a Class B digital device, per Part 15 of the FCC Rules. These limits were designed to provide reasonable protection against harmful interference in a residential installation. Stork generates, uses, and can radiate radio frequency energy and may cause interference with radio communications.
- To determine if Stork interferes with radio or television reception, turn it off and see if the interference stops. To correct the interference, try the following:
  - Adjust or move the receiver's antenna.
  - Move the receiver farther away from Stork.
  - Plug the receiver and Stork into outlets on different circuits.
  - Consult the dealer or a radio/TV technician for help.
- This equipment has been tested and found to comply with the Class B limits for medical devices according to the IEC 60601-1-2: 2014. These limits are designed to provide reasonable protection against harmful interference in all establishments, including domestic establishments.
- This device complies with part 15 of the FCC Rules and Industry Canada's license-exempt RSS standards. 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.
- To satisfy RF exposure requirements, Stork Hub and its antenna must operate with a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.
- Users are advised that high-power radars are allocated as primary users (i.e., priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.
- In accordance with international telecommunication requirements, the frequency band of 2.4 GHz and 5.15 to 5.25 GHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems.
- When using Stork consideration should be taken to local government frequency allocations and technical parameters to minimize the possibility of interference to/from other wireless devices.

The following symbols may appear on the product or product labeling:

| SYMBOL | DEFINITION | SYMBOL | DEFINITION | SYMBOL | DEFINITION |
|---|---|---|---|---|---|
| | Follow instructions for use | | Separate collection for electrical and electronic equipment (WEEE). | | Consult instructions for use |
| | Manufacturer | REF | Catalogue number (model number) | | Do not use if package is damaged and consult instructions for use |
| | Date of manufacture YYYY-MM-DD | #### | Masimo reference number | | Atmospheric pressure limitation |
| | Keep dry | | Fragile, handle with care | | Storage temperature range |
| NON STERILE | Non-Sterile | | Not made with natural rubber latex | | Storage humidity limitation |
| | Caution | | Do not discard | | Bluetooth |
| | UL LLC certification | | AC Currant | | Wireless Symbol level |
| IP22 | Protected against solid foreign objects of 12.5 mm diameter and greater and protection against vertically falling water drops when enclosure is tilted at 15 degrees | FC | Federal Communications Commission (FCC) Licensing | FCC ID: | Identifies unit has been registered as a radio device |