




## Radius PPG™ und Masimo SafetyNet™ Supplement

### DIRECTIONS FOR USE

|  |          |  |                                    |  |             |
|--|----------|--|------------------------------------|--|-------------|
|  | Reusable |  | Not made with natural rubber latex |  | Non sterile |
|--|----------|--|------------------------------------|--|-------------|

**Prior to using this product the user should read and understand the Directions for Use for the sensor and this Directions for Use.**

- WARNINGS, CAUTIONS AND NOTES**
- Do not self-diagnose or self-medicate on the basis of the measurements. Always consult your doctor.
  - Do not leave the sensor components unattended around children. Small items may become choking hazards.
  - Do not use continued monitoring, routinely verify the wireless connection.
  - When using multiple Radius PPG sensors, repeat pairing before monitoring to ensure proper wireless connection.
  - When using Radius PPG, keep it within the recommended range from the connected device (see Wireless Technology Information for details); moving outside of this range may cause a loss in connection with the smart device/mobile application.
  - When using Radius PPG, relocate the devices away from sources that may interfere with the Bluetooth connection. The presence of other devices that may create radio frequency interference (RFI) may result in loss of Quality of Service (see Specifications for details) of the Bluetooth connection. Devices that may cause RFI include but are not limited to the following: electronic equipment, dumthney equipment, other cellular telephones, wireless PC and tablets, pager, RFID devices, Wi-Fi, and electromagnetic security systems.

### LIGHT INDICATOR GUIDE

The reusable chip will glow to indicate battery and pairing status. Refer to the table for a description of the color of the flashing light, and next steps.

| Color  | Description  | Next steps   |
|--------|--|--|
| Green  | • Successful pairing of chip into sensor                       | • Follow app instructions for pairing  |
| Blue   | • Successful pairing of chip to mobile device and app          | • Verify data is displayed on app  |
| Purple | • Battery seal tab has not been removed to activate battery    | • Remove seal to activate battery  |
|        | • Battery is obstructed  | • Refer to Directions for Use for Radius PPG Adhesive                                |
| Orange | • Low sensor battery   | • Disconnect reusable chip from sensor, wait 30 seconds, insert chip into sensor     |
|        | • Depleted sensor battery                                      | • Reconnect reusable sensor, do not discard reusable chip                            |
| Red    | • Hardware or sensor failure, chip blinking board failure code | • Replace sensor, do not discard reusable chip if issue persists, reusable chip only |
|        |  | • Contact Masimo Technical Support, or replace sensor and chip                       |

**CLEANING** Before cleaning, make sure the device is off and is not applied to a patient. Thoroughly clean the Radius PPG reusable chip before applying to a new patient.

- To surface clean the reusable chip:**
- Remove the sensor from the patient and disconnect the reusable chip.
  - Wipe all surfaces of the reusable chip with one of the following:
    - 70% isopropyl alcohol
    - 10% (1:10) chlorine bleach to water solution
    - Quaternary ammonium chloroxine solution
  - Allow the reusable chip and receiver to dry thoroughly before using again.

- CAUTIONS:**
- Do not avoid permanent damage to the reusable chip, do not use undiluted bleach (5–2.5% sodium hypochlorite) or any other cleaning solution not recommended.
  - Do not immerse the reusable chip in any liquid solution.
  - Do not sterilize by irradiation, steam, autoclave or ethylene oxide.

| ENVIRONMENTAL SPECIFICATIONS  |   |
|-------------------------------|---|
| Storage/Transport Temperature | -40 ~ +70 °C ambient humidity                       |
| Operating Temperature         | 0 ~40°C ambient humidity                            |
| Storage/Transport Humidity    | 5-95% non-condensing                                |
| Operating Humidity            | 5-95% non-condensing                                |
| Atmospheric Pressure          | 540 to 1060 mbar @ ambient temperature and humidity |

| BATTERY LIFE |                                      |
|--------------|--------------------------------------|
| Battery Life | 96 hours in typical continuous usage |

| WIRELESS TECHNOLOGY INFORMATION              |                                  |
|--|----------------------------------|
| Bluetooth LE Wireless Technology Information |                                  |
| Modulation Type                              | GFSK                             |
| Max. Output Power                            | +8 dBm                           |
| Frequency Range                              | 2402–2480 MHz                    |
| Channel Bandwidth                            | 1 MHz                            |
| Recommended Range                            | 100 ft (30 meters) line-of-sight |
| Quality of Service (QoS)                     | Priority 3 <30 seconds           |
| Security                                     | Proprietary binary protocol      |

| INFORMATION SUR LA TECHNOLOGIE SANS FIL |   |
|---|---|
| Type de modulation                      | Informations sur la technologie sans fil Bluetooth LE |
| Puissance de sortie max.                | +8 dBm  |
| Plage de fréquences                     | 2 402 - 2 480 MHz                                     |
| Plage recommandée                       | Champ de vision de 30 mètres (100 pieds)              |
| Qualité de service (QoS)                | Délai < 30 secondes                                   |
| Sécurité                                | Protocole binaire propriétaire                        |

| INFORMATION SUR LA TECHNOLOGIE SANS FIL Bluetooth LE |   |
|--|---|
| Type de modulation                                   | Informations sur la technologie sans fil Bluetooth LE |
| Puissance de sortie max.                             | +8 dBm  |
| Plage de fréquences                                  | 2 402 - 2 480 MHz                                     |
| Plage recommandée                                    | Champ de vision de 30 mètres (100 pieds)              |
| Qualité de service (QoS)                             | Délai < 30 secondes                                   |
| Sécurité   | Protocole binaire propriétaire                        |

| Radius PPG Receiver  | Radius PPG Chip   |
|----------------------|-------------------|
| EN 301 489-17 V3.1.1 | EN 300 328 V2.1.1 |
| EN 301 489-3 V2.1.1  | EN 300 330 V2.1.1 |

| Radius PPG Empfänger | Radius PPG-Chip   |
|----------------------|-------------------|
| EN 301 489-17 V3.1.1 | EN 300 328 V2.1.1 |
| EN 301 489-3 V2.1.1  | EN 300 330 V2.1.1 |

| Recepteur Radius PPG | Chip Radius PPG   |
|----------------------|-------------------|
| EN 301 489-17 V3.1.1 | EN 300 328 V2.1.1 |
| EN 301 489-3 V2.1.1  | EN 300 330 V2.1.1 |

**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 in this device (2.4 GHz) are only for indoor use, in accordance with international telecommunication requirements.

**CAUTION:** Keep the Radius PPG away from electrical equipment that emits radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.

**Note:** This device complies with part 15 of FCC Rules, Title 47 and Industry Canada License exempt RSS: 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.

**Note:** When using Radius PPG consideration should be taken to local government frequency allocations and technical feasibility to interfere with other equipment.

**Note:** This device complies with part 15 of FCC Rules, Title 47 and Industry Canada License exempt RSS: 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.

**Note:** When using Radius PPG, consideration should be taken to local government frequency allocations and technical feasibility to interfere with other equipment.

**Note:** This device complies with part 15 of FCC Rules, Title 47 and Industry Canada License exempt RSS: 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.

**CAUTION:** Keep the Radius PPG away from electrical equipment that emits radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.

**Note:** When using Radius PPG, consideration should be taken to local government frequency allocations and technical feasibility to interfere with other equipment.

**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 in this device (2.4 GHz) are only for indoor use, in accordance with international telecommunication requirements.

**CAUTION:** Keep the Radius PPG away from electrical equipment that emits radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.

**Note:** When using Radius PPG, consideration should be taken to local government frequency allocations and technical feasibility to interfere with other equipment.

**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 in this device (2.4 GHz) are only for indoor use, in accordance with international telecommunication requirements.

**CAUTION:** Keep the Radius PPG away from electrical equipment that emits radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.

**Note:** When using Radius PPG, consideration should be taken to local government frequency allocations and technical feasibility to interfere with other equipment.

**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 in this device (2.4 GHz) are only for indoor use, in accordance with international telecommunication requirements.

**CAUTION:** Keep the Radius PPG away from electrical equipment that emits radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.

**Note:** When using Radius PPG, consideration should be taken to local government frequency allocations and technical feasibility to interfere with other equipment.

**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 in this device (2.4 GHz) are only for indoor use, in accordance with international telecommunication requirements.

**CAUTION:** Keep the Radius PPG away from electrical equipment that emits radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.

**Note:** When using Radius PPG, consideration should be taken to local government frequency allocations and technical feasibility to interfere with other equipment.

**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 in this device (2.4 GHz) are only for indoor use, in accordance with international telecommunication requirements.

**CAUTION:** Keep the Radius PPG away from electrical equipment that emits radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.

**Note:** When using Radius PPG, consideration should be taken to local government frequency allocations and technical feasibility to interfere with other equipment.

**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 in this device (2.4 GHz) are only for indoor use, in accordance with international telecommunication requirements.

**CAUTION:** Keep the Radius PPG away from electrical equipment that emits radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.

**Note:** When using Radius PPG, consideration should be taken to local government frequency allocations and technical feasibility to interfere with other equipment.

**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 in this device (2.4 GHz) are only for indoor use, in accordance with international telecommunication requirements.

**CAUTION:** Keep the Radius PPG away from electrical equipment that emits radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.

**Note:** When using Radius PPG, consideration should be taken to local government frequency allocations and technical feasibility to interfere with other equipment.

**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 in this device (2.4 GHz) are only for indoor use, in accordance with international telecommunication requirements.

**CAUTION:** Keep the Radius PPG away from electrical equipment that emits radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.

**Note:** When using Radius PPG, consideration should be taken to local government frequency allocations and technical feasibility to interfere with other equipment.

**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 in this device (2.4 GHz) are only for indoor use, in accordance with international telecommunication requirements.

**CAUTION:** Keep the Radius PPG away from electrical equipment that emits radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.

**Note:** When using Radius PPG, consideration should be taken to local government frequency allocations and technical feasibility to interfere with other equipment.

**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 in this device (2.4 GHz) are only for indoor use, in accordance with international telecommunication requirements.

**CAUTION:** Keep the Radius PPG away from electrical equipment that emits radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.

**Note:** When using Radius PPG, consideration should be taken to local government frequency allocations and technical feasibility to interfere with other equipment.




**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 in this device (2.4 GHz) are only for indoor use, in accordance with international telecommunication requirements.

**CAUTION:** Keep the Radius PPG away from electrical equipment that emits radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.

## Radius PPG™ and Masimo SafetyNet™ Supplément

### MODE D'EMPLOI

|  |              |  |                                  |  |             |
|--|--------------|--|----------------------------------|--|-------------|
|  | Réutilisable |  | Ne contient pas de latex naturel |  | Non stérile |
|--|--------------|--|----------------------------------|--|-------------|

**Avant d'utiliser ce produit, l'utilisateur doit lire et comprendre le Mode d'emploi du capteur et ce Mode d'emploi.**

- AVERTISSEMENTS, MISES EN GARDE ET REMARQUES**
- Ne pas effectuer d'auto-diagnostic ou pratiquer d'automédication sur la base des mesures. Toujours consulter un médecin.
  - Ne pas laisser le composant du capteur sans surveillance près des enfants. De petits éléments peuvent présenter un risque d'étouffement.
  - Ne pas utiliser de monitoring continu, vérifiez régulièrement la connexion sans fil.
  - En cas de utilisation de plusieurs capteurs de Radius PPG, répétez le couplage avant la surveillance pour assurer une connexion sans fil correcte.
  - Utilisation recommandée de Radius PPG : à maintenir dans la plage recommandée à partir du dispositif connecté (voir Informations sur la technologie sans fil pour plus de détails) ; un déplacement en dehors de cette plage peut entraîner une perte de connexion avec l'appareil intelligent/l'application mobile.
  - Lors de l'utilisation de Radius PPG, déplacez les appareils loin des sources qui peuvent interférer avec la connexion Bluetooth. La présence d'autres appareils peut créer des interférences de fréquence radio (RFI) qui peuvent entraîner une perte de qualité de service (see Specifications for details) de la connexion Bluetooth. Les appareils qui peuvent créer des interférences de fréquence radio (RFI) incluent : les téléphones cellulaires, les ordinateurs portables, les appareils électroniques, les systèmes de sécurité, les tablettes sans fil, les téléviseurs, les dispositifs RFID, les IRM et les systèmes de sécurité domestiques.

### GUIDE DU MODE D'EMPLOI

Le tableau réutilisable ci-dessous vous permet d'indiquer l'état de la batterie et de l'appariage. Consulter le tableau pour une description de la couleur du voyant (éclotant ainsi que les étapes suivantes).

| Coloration | Description   | Prochaines étapes  |
|------------|---|--|
| Vert       | Insertion réussie de la batterie dans le capteur                                      | Suivre les instructions de l'application pour l'appariage  |
| Bleu       | Appariage réussi de la batterie avec l'appareil mobile et l'application               | Vérifier que les données s'affichent sur l'application   |
| Violet     | La languette d'étanchéité de la batterie n'a pas été retirée pour activer la batterie | Retirer la languette pour activer la batterie  |
|            | La batterie est obstruée  | Se référer aux instructions de l'application pour activer la batterie  |
| Orange     | Batterie du capteur faible  | Retirer la languette pour activer la batterie  |
|            | Batterie du capteur déchargée   | Se reporter au mode d'emploi du capteur adhésif Radius PPG   |
| Rouge      | Défaut de la batterie ou du capteur, code de défaut de la batterie ou du capteur      | Remplacer la pile réutilisable, si ce n'est pas possible, remplacer le capteur et contacter l'assistance technique de Masimo ou remplacer le capteur et la pièce technique |

**NETTOYAGE** Avant de procéder au nettoyage, s'assurer que l'appareil est éteint et n'est pas appliqué sur un patient.

**Nettoyer soigneusement la pile réutilisable Radius PPG avant de l'appliquer à un nouveau patient.**

- Pour nettoyer la surface de la pile réutilisable:**
- Retirer le capteur du patient et déconnecter la pile réutilisable.
  - Essuyer toutes les surfaces de la pile réutilisable avec l'un des produits suivants :
    - Alcool isopropyle à 70%
    - Solution d'eau de Javel à 10% (1:10) et d'eau
    - Solution de chlorure d'ammonium quaternaire
  - Laisser la pile réutilisable sécher pendant toute interférence radio, notamment toute interférence RF.

**MISES EN GARDE**

- Afin de ne pas endommager la pile réutilisable de manière irréversible, ne pas utiliser d'eau de Javel diluée (5 à 2,5%) ou d'hypochlorite d'ammonium (5 à 2,5%) sur la pile réutilisable ou sur le capteur non recommandé.
- Ne pas immerger la pile réutilisable dans une solution liquide.
- Ne pas stériliser par rayonnement, à la vapeur, à l'autoclave ou à l'oxyde éthylène.

| NUTRITIONNELS ENVIRONNEMENTAUX    |  |
|-----------------------------------|--|
| Température de transport/stockage | -40 ~ +70 °C humidité ambiante                       |
| Température de fonctionnement     | 0 ~40 °C humidité ambiante                           |
| Humidité de transport/stockage    | 5-95 % sans condensation                             |
| Humidité de fonctionnement        | 5-95 % sans condensation                             |
| Pression atmosphérique            | 540 à 1 060 mbar à température et humidité ambiantes |

| DURÉE DE VIE DE LA PILE |   |
|-------------------------|---|
| Durée de vie de la pile | 96 heures en utilisation continue typique |

| INFORMATION SUR LA TECHNOLOGIE SANS FIL |   |
|---|---|
| Type de modulation                      | Informations sur la technologie sans fil Bluetooth LE |
| Puissance de sortie max.                | +8 dBm  |
| Plage de fréquences                     | 2 402 - 2 480 MHz                                     |
| Plage recommandée                       | Champ de vision de 30 mètres (100 pieds)              |
| Qualité de service (QoS)                | Délai < 30 secondes                                   |
| Sécurité                                | Protocole binaire propriétaire                        |

| Radius PPG Receiver  | Radius PPG Chip   |
|----------------------|-------------------|
| EN 301 489-17 V3.1.1 | EN 300 328 V2.1.1 |
| EN 301 489-3 V2.1.1  | EN 300 330 V2.1.1 |

| Radius PPG Empfänger | Radius PPG-Chip   |
|----------------------|-------------------|
| EN 301 489-17 V3.1.1 | EN 300 328 V2.1.1 |
| EN 301 489-3 V2.1.1  | EN 300 330 V2.1.1 |

| Recepteur Radius PPG | Chip Radius PPG   |
|----------------------|-------------------|
| EN 301 489-17 V3.1.1 | EN 300 328 V2.1.1 |
| EN 301 489-3 V2.1.1  | EN 300 330 V2.1.1 |

**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 in this device (2.4 GHz) are only for indoor use, in accordance with international telecommunication requirements.

**CAUTION:** Keep the Radius PPG away from electrical equipment that emits radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.

**Note:** When using Radius PPG, consideration should be taken to local government frequency allocations and technical feasibility to interfere with other equipment.

**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 in this device (2.4 GHz) are only for indoor use, in accordance with international telecommunication requirements.

**CAUTION:** Keep the Radius PPG away from electrical equipment that emits radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.

**Note:** When using Radius PPG, consideration should be taken to local government frequency allocations and technical feasibility to interfere with other equipment.

**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 in this device (2.4 GHz) are only for indoor use, in accordance with international telecommunication requirements.

**CAUTION:** Keep the Radius PPG away from electrical equipment that emits radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.

**Note:** When using Radius PPG, consideration should be taken to local government frequency allocations and technical feasibility to interfere with other equipment.

**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 in this device (2.4 GHz) are only for indoor use, in accordance with international telecommunication requirements.

**CAUTION:** Keep the Radius PPG away from electrical equipment that emits radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.

**Note:** When using Radius PPG, consideration should be taken to local government frequency allocations and technical feasibility to interfere with other equipment.

**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 in this device (2.4 GHz) are only for indoor use, in accordance with international telecommunication requirements.

**CAUTION:** Keep the Radius PPG away from electrical equipment that emits radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.

**Note:** When using Radius PPG, consideration should be taken to local government frequency allocations and technical feasibility to interfere with other equipment.

**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 in this device (2.4 GHz) are only for indoor use, in accordance with international telecommunication requirements.

**CAUTION:** Keep the Radius PPG away from electrical equipment that emits radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.

**Note:** When using Radius PPG, consideration should be taken to local government frequency allocations and technical feasibility to interfere with other equipment.

**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 in this device (2.4 GHz) are only for indoor use, in accordance with international telecommunication requirements.

**CAUTION:** Keep the Radius PPG away from electrical equipment that emits radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.

**Note:** When using Radius PPG, consideration should be taken to local government frequency allocations and technical feasibility to interfere with other equipment.

**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 in this device (2.4 GHz) are only for indoor use, in accordance with international telecommunication requirements.

**CAUTION:** Keep the Radius PPG away from electrical equipment that emits radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.

**Note:** When using Radius PPG, consideration should be taken to local government frequency allocations and technical feasibility to interfere with other equipment.

**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 in this device (2.4 GHz) are only for indoor use, in accordance with international telecommunication requirements.

**CAUTION:** Keep the Radius PPG away from electrical equipment that emits radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.

**Note:** When using Radius PPG, consideration should be taken to local government frequency allocations and technical feasibility to interfere with other equipment.

**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 in this device (2.4 GHz) are only for indoor use, in accordance with international telecommunication requirements.

**CAUTION:** Keep the Radius PPG away from electrical equipment that emits radio frequencies to minimize radio interference. Radio interference may result in no or inaccurate readings.

**Note:** When using Radius PPG, consideration should be taken to local government frequency allocations and technical feasibility to interfere with other equipment.











