



**SCOTT™**  
Fire & Safety

**User Instructions**

April 2020



## **3M™ Scott™ Vision C5 Full Facepiece Electronics**

UserInstructions for the RadioDirectInterface(RDI) and  
BatteryCharger for the 3MScottVisionC5FullFacepiece

### **‡ IMPORTANT NOTE**

Before use, the wearer must read and understand these User Instructions. Keep these User Instructions for reference.

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## Regulatory & Safety Information



### IMPORTANT NOTE

Read all of the regulatory and safety information before use.

This facepiece and its components are intended to be used with 3M Scott respirators, which may support human life in hazardous atmospheres. Failure to carefully follow these instructions and warnings and the instructions and warnings provided with your 3M Scott respirator may result in serious injury or death.

### Conditions of Safe Use



RDI

Vision C5 Facepiece

Model Number: FPXXXXXXXXXXXXX

Ex ia IIB T3 Ga IP 66/67

Ta = -20° C to +50° C

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|   |  |
|---|--|
| <p>Intrinsically safe per IEC 60079-0: 2011 6th Edition, IEC 60079-11: 2011 6th Edition for use in Zone 0, Group IIB, potentially explosive atmospheres.</p>  | <p>Sécurité intrinsèque en vertu de IEC 60079-0: 2011, 6e édition, IEC 60079-11: 2011 6e édition pour usage dans les atmosphères potentiellement explosives des zones 0, 1, 2, groupe IIB.</p>   |
| <p>This equipment is listed as intrinsically safe by CSA Group to UL Std UL-913, 6th edition, for use in the following hazardous locations:<br/>Class I, Division 1, Groups C and D; Class II, Division 1, Groups E, F and G, T3A</p> | <p>Cet équipement est classé comme étant sécuritaire de façon intrinsèque par le CSA Group en vertu de la norme UL UL-913, 6e édition pour usage dans les emplacements dangereux suivants:<br/>Catégorie I, Division 1, Groupes C et D;<br/>Catégorie II, Division 1, Groupes E, F et G, T3A</p> |

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| <p>This equipment is listed as intrinsically safe by CSA Group to CSA 60079-11 for Canada and UL 60079-11 for the USA for use in the following hazardous locations:<br/>Ex ia IIB T3 Ga (Canada)<br/>Class I Zone 0 AEx ia IIB T3 Ga (USA)</p>  | <p>Cet équipement est classé comme étant sécuritaire de façon intrinsèque par le CSA Group en vertu de la norme CSA 60079-11 au Canada et UL 60079-11 aux États-Unis pour usage dans les emplacements dangereux suivants: Ex ia IIB T3 Ga (Canada)<br/>Catégorie I Zone 0 AEx ia IIB T3 Ga (É.-U.)</p>   |
| <p>To maintain the Intrinsic Safety Listing, regularly inspect this equipment per the inspection procedures provided with the equipment. Do not tamper with or substitute components in any manner. Charge the battery only with the approved battery charger and only in accordance with the charging instructions provided.</p> | <p>Pour préserver la classification de sécurité intrinsèque, cet équipement doit être régulièrement inspecté selon les procédures d'inspection opérationnelle provenant du fabricant. Aucune modification ou substitution est permise. N'utiliser que les piles du type indiqué dans les instructions traitant sur installation des piles.</p> |
| <p>Substitution of components may impair intrinsic safety. To reduce the risk of ignition of a flammable atmosphere, change the battery only in a non-hazardous area.</p>   | <p>La substitution de composants peut compromettre la sécurité intrinsèque. Afin de prévenir le risque d'incendie dans une atmosphère inflammable, ne changer les piles que dans des endroits non inflammables.</p>  |

### Battery Charger

Vision C5 Battery Charger

Model Number: 201718-XX

[Ex ia Ga] IIB

Ta = 0° C to +45° C

#### IMPORTANT NOTE

The battery charger is **not** intrinsically safe but satisfies intrinsic safety requirements for the battery.

#### IMPORTANT NOTE

Charge the equipment only when in a non-hazardous area using 3M Scott power supply units supplied with the charger (specify part numbers 31004245 or 31003969). The maximum voltage from the charger shall not exceed 32V DC.

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| <p>To maintain the Intrinsic Safety Listing, regularly inspect this equipment per the inspection procedures provided with the equipment. Do not tamper with or substitute components in any manner. Charge the battery only with the approved battery charger and only in accordance with the charging instructions provided.</p> | <p>Pour préserver la classification de sécurité intrinsèque, cet équipement doit être régulièrement inspecté selon les procédures d'inspection opérationnelle provenant du manufacturier. Aucune modification ou substitution est permise. N'utiliser que les piles du type indiqué dans les instructions traitant sur installation des piles.</p> |
| <p>Substitution of components may impair intrinsic safety. To reduce the risk of ignition of a flammable atmosphere, change the battery only in a non-hazardous area</p>  | <p>La substitution de composants peut compromettre la sécurité intrinsèque. Afin de prévenir le risque d'incendie dans une atmosphère inflammable, ne changer les piles que dans des endroits non inflammables.</p>  |

|   |   |
|---|---|
| Approved battery charger:<br>201718-XX<br>Power Supply (Low-power): 31004245<br>Power Supply (High-power): 31003969 | Chargeur à pile approuvé:<br>201718-XX<br>Power Supply (Low-power): 31004245<br>Power Supply (High-power): 31003969 |
|---|---|

**Battery**

|  |   |
|--|---|
| To maintain the Intrinsic Safety Listing, regularly inspect this equipment per the inspection procedures provided with the equipment. Do not tamper with or substitute components in any manner. Charge the battery only with the approved battery charger and only in accordance with the charging instructions provided. | Pour préserver la classification de sécurité intrinsèque, cet équipement doit être régulièrement inspecté selon les procédures d'inspection opérationnelle provenant du manufacturier. Aucune modification ou substitution est permise. N'utiliser que les piles du type indiqué dans les instructions traitant sur installation des piles. |
| Substitution of components may impair intrinsic safety. To reduce the risk of ignition of a flammable atmosphere, change the battery only in a non-hazardous area.   | La substitution de composants peut compromettre la sécurité intrinsèque. Afin de prévenir le risque d'incendie dans une atmosphère inflammable, ne changer les piles que dans des endroits non inflammables.  |

**FCC/ISED Compliance**

This device complies with Part 15 of the FCC Rules and with ISED's license-exempt RSS's. 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.

1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le

FCC ID: DGFPSDVC51

IC:458A-PSDVC51

Contains FCC ID: SSSBC127-X and IC:11012A-BC127, Bluetooth Certified 4.0 Audio module

**NOTE:** The Battery Charger has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at the user's own expense.

**Warning:** Modifications to this device shall not be made without the written consent of 3M, Company. Unauthorized modifications may void the authority granted under Federal Communication Rules permitting the operation of this device.

## Battery Storage

When the battery is not in use, charge the battery until it is full, and then store the battery in a cool place. Ensure that the battery is charged bi-annually.

Do not leave the battery on prolonged charge when not in use.

Store the battery within the temperature range of -10°C to 40°C. Optimum battery storage is 20°C. Keep the batteries and cells clean and dry. Avoid storing the battery pack in direct sunlight.

After extended periods of storage, it may be necessary to charge and discharge the battery several times to obtain maximum performance.

### IMPORTANT NOTE

Storing a battery that has depleted can damage the battery.

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## Battery Disposal

To properly dispose of the battery, follow local solid waste disposal regulations. 3M Personal Safety Division has partnered with Call2Recycle to help ensure that the rechargeable batteries within our products are recycled properly. To assist you in using this service consult Call2Recycle's battery recycling guidance online or call the Call2Recycle battery recycling information helpline at 1-800-8-BATTERY (1-800-822-8837).



## Safety Directives

### 3M Scott Fire & Safety Products

Many 3M Scott Fire & Safety products are intended to support human life in hazardous atmospheres. Failure to carefully read, understand, and follow the instructions and warnings in this manual may result in serious injury or death.

Improper use of this equipment may result in serious injury or death. Improper use includes, but is not limited to, use without adequate training, disregard of the warnings and instructions contained herein, use of the equipment for purposes not included in these instructions, and failure to inspect and maintain the equipment.

Apply only the instructions offered within this manual. Maintenance procedures beyond the scope of this manual must not be performed. Additional disassembly may cause operation errors and/or component failure and result in serious injury or death. If a discrepancy or malfunction cannot be corrected using the procedures contained within this manual, the product must be tagged to indicate that it is unserviceable and referred to a 3M certified technician for evaluation and repair.

Exercise caution when using chemicals. Prior to using any chemical substance, thoroughly review and understand the product label, Material Safety Data Sheet (MSDS), and manufacturer's use instructions. Chemical substances may present serious hazards such as flammability and human-specific health hazards, which can affect the nervous and reproductive systems. Failure to adhere to the manufacturer's product instructions and warnings may result in serious injury or death.

Comply with all instructions and warnings contained in this and all applicable manuals and modules. While an attempt has been made to address all foreseeable operating conditions, you must exercise careful judgment when operating any equipment. If there is any doubt regarding the safe operation of equipment, remove the equipment from service and send it for repair.

Failure to use 3M recommended lubricants and replacement parts will invalidate all certifications and warranties issued to the 3M Scott Fire Safety product.

You are responsible for any damage, improper function, or injury as a result of user-applied markings, etchings, labeling, material additions, or modifications to the equipment.

### 3M Scott Full Facepieces

#### IMPORTANT



#### NOTE

For safety information specific to 3M Scott Air-Pak respirators, see the operating and maintenance instructions provided with the respirator.

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Improper use of this equipment may result in serious injury or death. Improper use includes, but is not limited to, use without adequate training, disregard of the warnings and instructions contained herein, and failure to inspect and maintain this equipment. Read and understand all instructions before attempting to operate or service this equipment.

The information in this instruction is meant to supplement — not replace — the instructions, training, supervision, maintenance, and other elements of your organized respiratory protection program.

Use this equipment only in conjunction with an organized respiratory protection program that complies with the requirements of the following:

- American National Standard Practices for Respiratory Protection, Z88.2-2015, available from American National Standards Institute, Inc., 1430 Broadway, New York, NY, 10018
- OSHA Safety and Health Standard 29 CFR 1910, Paragraph 134, available from the US Department of Labor, Occupational Safety and Health Administration
- Other pertinent nationally recognized standards, such as those of the US Coast Guard or the Department of Defense

This equipment is designed and intended to function properly in reasonable/ordinary firefighting conditions. The functionality of this equipment may be compromised by extreme fire conditions.

Training is required before use of this equipment. Use this equipment only if you have been trained in its use and only in conjunction with an organized respiratory protection program. Do not use this equipment for purposes other than those authorized by your respiratory protection program. Do not use this equipment underwater.

Fit testing is required to determine the correct facepiece for each user. The Respiratory Protection Program Manager or Safety Coordinator must assist the user in selecting the correct facepiece size relative to the user's facial features and dimensions. Prior to use, fit testing must be performed with any approved 3M Scott accessory that will be installed on the facepiece, such as communications devices or thermal imaging systems.

## Warnings and Cautions

### IMPORTANT NOTE

The following warnings and cautions apply to the 3M Scott Vision 6000 facepiece electronics and battery charger. For similar information about the facepiece, see the operating and maintenance instructions provided with the facepiece.

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### WARNING

To reduce the risks associated with loss of air supply, exposure to life-threatening contaminants, or oxygen-deficient atmospheres, which, if not avoided, could result in serious injury or death:

- Stay alert when operating this equipment.
  - Do not operate this equipment while under the influence of drugs, alcohol, or medication that may affect vision, dexterity, or judgment.
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### WARNING

To reduce the risks associated with fire and explosion, which, if not avoided, could result in serious injury or death:

- Do not dispose of lithium battery by incineration.
- Do not use the battery chargers in a hazardous location.
- When cleaning the facepiece, use a dampened cloth to avoid building an electrostatic charge.
- Do not clean or perform maintenance on the facepiece in an explosive environment.
- Do not remove, charge, or replace the battery where a potentially explosive mixture of gas or fine powder may exist.
- Do not use a facepiece that has an electronic module that is damaged or a case that is broken. If damage is found, remove it from service and tag it for repair.
- Do not use an RFID TAG reader that has an output power greater than 6 watts while in a flammable atmosphere.
- Charge the battery only within the temperature range of 0° C to 45° C.



- Do not store batteries haphazardly in a box or drawer where they may short-circuit each other or where other metal objects may short-circuit them.
  - Do not attempt to charge a non-rechargeable or non-3M-approved battery using the battery charger.
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### **WARNING**

To reduce the risks associated with fire, explosion, and exposure to battery chemicals, which, if not avoided, could result in serious injury or death:

- Use only a 3M-approved battery.
  - If the battery does not securely fit onto the Communications Module or one of the modules does not operate as described, do not use the battery.
  - Do not electrically short the battery terminals. Do not disassemble or modify the battery.
  - Do not subject the battery to mechanical shock.
  - Do not expose the battery to high temperatures, fire, or water. Avoid storing the battery in direct sunlight.
  - Do not use a battery charger other than the one approved for use with the equipment.
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### **WARNING**

To reduce the risks associated with fire, explosion, and hazardous voltage, which, if not avoided, could result in serious injury or death:

Do not disassemble, modify, or service the power adapter for the battery charger or the battery charger itself. Please contact 3M or an authorized service personnel for service.

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### **WARNING**

To reduce the risks associated with fire, explosion, and property damage, which, if not avoided, could result in serious injury or death:

- Store the battery in non-flammable, clean, dry areas when not installed in the Communications Module.
  - Store the battery within the temperature range of -10°C to 40°C (optimal is 20°C).
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### **WARNING**

To reduce the risks associated with fire and extreme heat exposure, which, if not avoided, could result in serious injury or death:

Ensure that any protective head gear does not interfere with the facepiece seal or the facepiece's functions. If wearing a fire hood, ensure that its face opening sits on top of the face seal directly behind the bezel.

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### **WARNING**

To reduce the risks associated with exposure to contaminants and oxygen-deficient atmospheres, which, if not avoided, could result in serious injury or death:

Take care to prevent snagging the facepiece, which may pull the facepiece away from the face.

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 **WARNING**

To reduce the risks associated with fire and exposure to contaminants, which, if not avoided, could result in serious injury or death:

Do not charge batteries not approved for use with the 3M battery charger unit.

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 **WARNING**

To reduce the risks associated with fire and exposure to battery chemicals, which, if not avoided, could result in serious injury or death:

Do not expose the battery, battery charger, or power adapter to water or moisture.

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 **WARNING**

To reduce the risks associated with hazardous voltage, which, if not avoided, could result in serious injury or death:

- Use only a 3M-approved power supply with the charger.
  - Do not mount the battery charger where it will be exposed to moisture such as rain or hose spray.
  - When securing the power cord, ensure the power cord is protected from edges and corners to prevent damage to the cord over time.
  - Regularly inspect the battery charger and power cord for loose, worn, or damaged components. If any damage is found, remove the unit from service and tag for repair by authorized personnel.
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 **WARNING**

To reduce the risks associated with hazardous voltage and tripping and falling, which, if not avoided, could result in serious injury or death:

When mounting the bracket assembly for the battery charger, secure the full length of the power cord so no one will trip on it.

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 **WARNING**

To reduce the risks associated with exposure to contaminants, which, if not avoided, could result in serious injury or death:

The contaminant must be identified, and effectively removed or contaminated components must be removed and disposed of in accordance with applicable regulations.

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 **WARNING**

To reduce the risks associated with fire, explosion, exposure to contaminants, and oxygen-deficient atmospheres, which, if not avoided, may result in serious injury or death:

- Do not alter or repair the facepiece beyond the scope of these instructions.
- Use only 3M-approved parts.

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 **WARNING**

To reduce the risks associated with fire, explosion, exposure to contaminants, and oxygen-deficient atmospheres, which, if not avoided, may result in serious injury or death. Follow the regular operational inspection procedures exactly. If there are any operational malfunctions, remove the respirator from service and tag for repair by authorized personnel.

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 **CAUTION**

To reduce the risks associated with environmental contamination, which, if not avoided, could result in minor to moderate injury:

Dispose of all system components, including battery (when provided), in accordance with applicable local laws and government regulations.

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 **CAUTION**

To reduce the risks associated with impact, which, if not avoided, could result in minor to moderate injury:

- Mount the battery charger in a closed compartment on the vehicle.
  - Properly secure spare batteries before moving the vehicle on which the battery charger is mounted.
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 **CAUTION**

To reduce the risk associated with exposure to battery chemicals which, if not avoided, could result in minor or moderate injury:

Do not allow the liquid from the battery to come into contact with skin or eyes. If it does, wash the affected area thoroughly with water and seek medical advice immediately.

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## Using the Facepiece

The Mask Communication Unit (MCU) is the hub for in-mask voice and data communications for the 3M™ Scott™ Vision C5 Full Facepiece. The MCU is powered by a rechargeable lithium-ion battery located within the facepiece's communications module; a battery charger is available separately (see [Charging the Battery](#)). Available communication interfaces include the following:

**Radio Direct Interface (RDI)** provides facepiece wireless radio voice communications when connected via Bluetooth® <sup>1</sup> to a compatible portable two-way radio, also known as a land mobile radio or LMR (not included). The RDI is a built-in component of the facepiece's communications module.

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1. The Bluetooth word mark and logo are registered marks owned by Bluetooth SIG, Inc., and any such use of such marks by 3M is under license.

The Universal Expansion Port (UEP) on the RDI is used for communicating with other peripheral devices such as the Integrated Bone Conduction Headset <sup>1</sup>. The UEP includes a high-speed bus and power supply.

**Integrated Bone Conduction Headset (BCH)** enhances voice communication clarity by leveraging the transmission of sound through the skull using transducer headphones that sit on the wearer's temples.

**Interactive Voice Response (IVR)** provides voice confirmation of use states, such as powering on or pairing a radio. IVR is available only with BCH.



### IMPORTANT NOTE

This equipment is for use only with an approved 3M Scott self-contained breathing apparatus (SCBA). Training is required before use. This equipment is not for use under water or for any purpose not specifically authorized by your organized respiratory program.

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1. The Vision C5 Full Facepiece UEP connects to only the following accessories covered under CSA report 70196089: 1) RDI Volume Accessory, Model number 201690-XX; 2) Thermal Imaging Camera (TIC) only, Model number 201526-XX; and 3) TIC with Volume Accessory, Model number 201726-XX.

3M Scott Vision C5 Full Facepiece with Electronics



1 3M Scott Vision C5 Full Facepiece

Bone Conduction Headset (BCH)

Bone Conduction Headset (BCH) Control Module

Communications Module

Battery

*Facepiece Power Button and Battery Compartment*



Power Button

Battery Compartment

Battery Compartment Latch

*Inspecting the Facepiece*

*Pairing a Radio*

*Terminating Use*

**Inspecting the Facepiece**

2 Mask Communication Unit (MCU)

3

4

5

6

1

2

3

See also:

### *Maintenance*

Carefully read all provided safety instructions before inspecting the equipment. Inspect the equipment before first use, before donning, after each use, and during periodic inspections. Refer to the figures in [About This Equipment](#) to identify equipment components.

#### To inspect the facepiece

- 1) Inspect the facepiece for deformation, wear, cracks, or other damage. For more information, see the operating and maintenance instructions provided with your facepiece.

- 2) Inspect the communications module for damage such as cracks, chips, discoloration, corrosion, missing or loose parts, or burned or melted components. If there is a damage, remove the unit from service and tag it for repair by authorized personnel.
- 3) Inspect the nose cup. Make sure the microphone port in the nose cup is clean and unobstructed.
- 4) Power on the facepiece electronics by pressing and holding the power button.
  - The power button LED is solid green.
  - The IVR system (available only with BCH) states, "Power on."
- 5) Check the battery status:

| Condition                                       | RDI LED                            | Power Button LED     |
|---|------------------------------------|----------------------|
| If the RDI is connected to an LMR...            | Flashes <b>red</b> and <b>blue</b> | Flashes <b>red</b>   |
| If the RDI is <b>not</b> connected to an LMR... | Flashes <b>red</b>                 | Flashes <b>green</b> |

- If the LED fails to illuminate or the tone indicates a low battery, do not use the unit.
  - Remove the unit from service or insert a fully charged battery. (See [Changing the Battery](#).)
- 6) (BCH only) Verify that the volume switch is functional by pressing the switch up and down.
  - 7) Power off the facepiece electronics by pressing and holding the power button.
    - The power button LED turns off.
    - The RDI LED turns off.
    - The IVR system (available only with BCH) states, "Power off."

## Pairing a Radio

You can pair and connect the facepiece RDI with land mobile radios from several manufacturers. Pairing is the process by which two Bluetooth devices are connected to each other by exchanging and storing each device's Bluetooth radio address. Once paired, the two Bluetooth devices can be connected and operated as a paired set to communicate and share data with one another. Audio transmits between the devices only after a successful connection.

Required Equipment:

- 3M Scott Vision C5 Full Facepiece equipped with RDI
- Land mobile radio (LMR)

To pair a radio

- 1) Power on the facepiece electronics by pressing and holding the power button.
  - The IVR system (available only with BCH) states, "Power on."
  - The unit makes an audible tone (3 beeps) to indicate that it is ready for pairing.



- 2) To complete the pairing process, refer to instructions provided by the manufacturer of your LMR or to reference information provided by 3M for compatible radios. Quick reference guides for pairing the facepiece RDI with specific LMRs are available from 3M.

When the facepiece RDI and LMR are connected, the power button LED and RDI LED are solid blue, and the IVR system (available only with BCH) states, "Radio paired. Radio connected."

Once the RDI and LMR have been paired and connected, the Bluetooth pairing information is maintained until manually removed from the LMR.

#### To disconnect a paired radio

Power off the facepiece electronics by pressing and holding the power button. The IVR system (available only with BCH) states, "Radio connection lost."

The Bluetooth communications link between the facepiece RDI and the LMR is disconnected, and all radio transmit and receive communications are routed to the LMR.

#### To reconnect a paired radio

- 1) Power on the LMR.
- 2) Power on the facepiece electronics by pressing and holding the power button. The IVR system (available only with BCH) states, "Power on. Radio connected."

#### Terminating Use

##### **IMPORTANT NOTE**

Before terminating your use of the facepiece's voice and data communications functions, do the following:

- 1) Exit the area requiring respiratory protection.
- 2) After leaving the contaminated area and arriving in a safe, clean atmosphere, decontaminate as required by your respiratory protection program.
- 3) Remove any encapsulating protective garments.
- 4) Remove the respirator per the doffing instructions provided with your respirator.

#### To terminate use of facepiece communications

Power off the facepiece electronics by pressing and holding the power button. The IVR system (available only with BCH) states, "Radio connection lost."

The Bluetooth communications link between the facepiece RDI and the LMR is disconnected, and all radio transmit and receive communications are routed to the LMR.

#### Maintenance

Maintenance of the electronic components of the facepiece is limited to changing the battery.

Refer to the figures in [Regulatory & Safety Information](#) to identify equipment components. **i**

#### **IMPORTANT NOTE**



Do not alter or repair the electronic components of the facepiece beyond the scope of these instructions. Use only 3M Scott approved parts.

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### IMPORTANT NOTE

The rubber tube on the MCU microphone is not sold as a service part. If the MCU microphone tube is damaged, replace the MCU (P/N 201625-01).

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### IMPORTANT NOTE

For instructions to clean or repair the facepiece, see the operating and maintenance instructions provided with the facepiece. For configurations with RDI or Scott Sight, blowing air directly into microphone tube may cause damage to microphone. Shake excess water from the tube or tap on the tube to disperse water droplets.

For instructions to clean or repair the battery charger, see [Cleaning and Repairing the Battery Charger](#).

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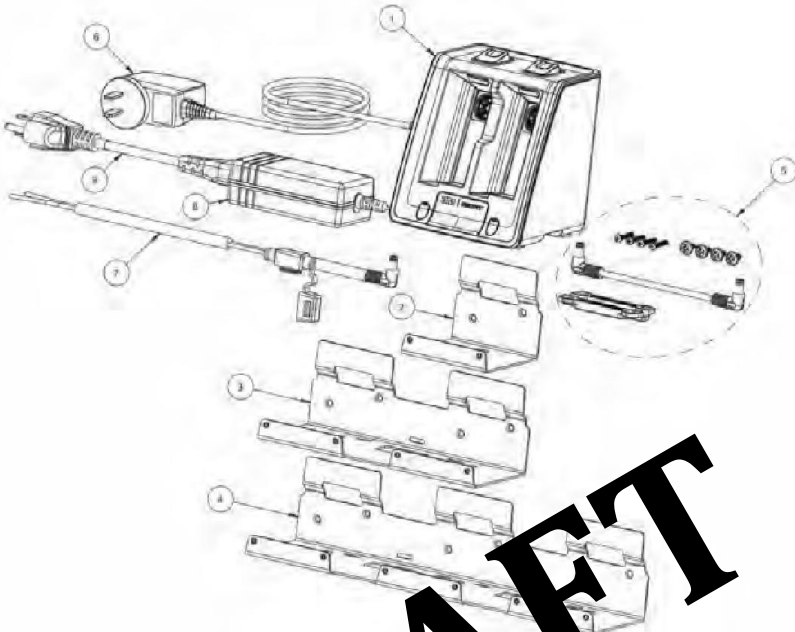
To change the battery

- 1) On the bottom on the facepiece, locate the battery compartment latch in front of the power button.
- 2) Using your thumb, slide the latch toward the outside of the facepiece. The battery disengages.
- 3) Inspect the battery contacts to ensure that they are clean and that the area around them is free of debris.
- 4) Insert a charged battery into the battery compartment, starting at the end opposite the battery compartment latch. Upon proper insertion of the battery, you will hear a click.

## Charging the Battery

The battery charger is a key component of the facepiece electronics system. The charger has 2 battery bays and can charge 2 batteries simultaneously. You can connect ("daisy-chain") up to 3 chargers to charge as many as 6 batteries simultaneously.

## Battery Charger Components



- 1 Battery Charger
- 2 Mounting Bracket - Single
- 3 Mounting Bracket - Double
- 4 Mounting Bracket - Triple
- 5 Daisy Chain Kit
- 6 Power Supply, 18 W
- 7 Power Supply, Hardwired Cable
- 8 Power Supply, High
- 9 Detachable Cordset - North America

You can power the charger using any of the following power supplies:

- Low-power supply: Output Rated 24VDC, 750mA; Input Rated 100-240VAC, 1.5A 50/60 Hz; supports single battery charger
- High-power supply: Output Rated 24VDC, 2500mA; Input Rated 100-240VAC, 0.6A

50/60 Hz; supports up to 3 battery chargers in a daisy-chain configuration •

Vehicle DC power bus: 12V or 24 V; ATC/ATO 5 A inline fuse **IMPORTANT NOTE**

See [Installing the Battery Charger](#) for information about the required cables and power supply for your charging configuration.

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### IMPORTANT NOTE

When using DC power from a vehicle, ensure that the power source chosen will provide the necessary power for the time required to recharge a battery. The charger will not recharge a battery if the power source to the charger is not active. Consult the manufacturer of your vehicle if you have any questions about its available power sources before installing the charger.

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### IMPORTANT NOTE

Keep the antenna of the land mobile radio (LMR) at least six (6) inches away from the battery charger when transmitting. Close proximity of the LMR to the battery charger during radio transmission may cause the charger to malfunction.

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See also:

[Inspecting the Battery Charger](#)

[Installing the Battery Charger](#)

[Mounting the Battery Charger](#)

[Troubleshooting the Battery Charger Cleaning and Repairing the Battery Charger](#)

**DRAFT**

## Inspecting the Battery Charger

Carefully read all provided safety instructions before inspecting the equipment. Inspect the equipment before first use, during daily or periodic inspections, and before mounting.

To inspect the battery charger

- 1) Inspect the housing for cracks or other damage that could interfere with the equipment's usability. If there is a damage, remove the unit from service and tag it for repair by authorized personnel.
- 2) Connect the charger to a power supply and confirm that the LED start-up test performs as expected. Each LED (red, green, and blue) will light up for 1 second each.
- 3) Ensure that the battery contacts are clean and that the area around them is free of debris.
- 4) Confirm the battery charger status:

|            |                        |
|------------|------------------------|
| LED Colors | Battery Charger Status |
|------------|------------------------|

|  |                     |
|--|---------------------|
| All off                                      | No battery detected |
| Solid green                                  | Charge complete     |
| Flashing green (500 ms on, 500 ms off)       | Charging            |
| Flashing red quickly (250 ms on, 250 ms off) | System Fault        |
| Flashing red slowly (750 ms on, 250 ms off)  | Battery Fault       |

- If the charger's LEDs indicate a **System Fault** or **Battery Fault**, try the troubleshooting tips listed in [Troubleshooting the Battery Charger](#).
- If the faults do not resolve after troubleshooting, remove the unit from service and tag it for repair by authorized personnel.

## Installing the Battery Charger

Install a single battery charger or up to 3 chargers in a daisy-chain configuration. Both procedures require you to position a cap or plate over the power cord and screw it into place.

To install a single charger:

You will need the following equipment (see the figure):

- Battery charger (2)
- Low-power supply cable (1)
- Power cap and screws (2)
- Screw plugs (2)
- #1 Phillips screw driver

- 1) Inspect the battery charger. See [Inspecting the Battery Charger](#).
- 2) Place the battery charger face down on a desk or other flat surface so that the bottom surface is visible.
- 3) Position the charger end of the power supply between the screw mounts on either side of the charger.
- 4) Place the power cap over the cord and line up the holes with the screw mounts.
- 5) Place the 2 screws through the holes and hand-tighten. You should be able to move both the power cap and the power cord after tightening. The power cap should be flush with the bottom of the charger.
- 6) Connect the power supply to the battery charger.
- 7) Set the battery charger upright on a desk or other flat surface.
- 8) **(If you are not attaching the charger to a mounting bracket)** Install the screw plugs into the screw holes on each side of the battery charger label. For information about mounting the charger, see [Mounting the Battery Charger](#).



9) Plug the power supply into a wall outlet. **IMPORTANT NOTE**

Ensure that you are using a 3M Scott approved battery and power supply (low-power only). See [Conditions of Safe Use](#). Do not connect a second power supply to the charger.

To install multiple chargers in a daisy-chain configuration

You will need the following equipment (see the figure ):

- Battery chargers (maximum of 3)
- High-power supply (1)
- Power cap (1) and screws (2)
- Daisy-chain cord (1 cord for 2 chargers, 2 cords for 3 chargers)
- Daisy-chain plate (1 cord for 2 chargers, 2 cords for 3 chargers) screws (4 per plate)
- Screw plugs (2 per charger)
- #1 Phillips screw driver

- 1) Inspect the battery charger. See [Inspecting the Battery Charger](#).
- 2) Place one of the battery chargers face down on a desk or other flat surface so that the bottom surface is visible.
- 3) Position one of the daisy chain cables between the screw mounts on one side of the charger. The side you choose will be the connecting side for the next charger in the daisy chain configuration.
- 4) Place one of the daisy chain plates over the cord and line up the holes with the screw mounts.
- 5) Place the 2 screws through the holes and hand-tighten. You should be able to move both the daisy chain plate and the daisy chain cord after tightening.
- 6) Place the second charger in the daisy chain configuration face down next to the first charger. Ensure that the chargers face the same direction. Confirm that the daisy chain cable and daisy chain plate are positioned appropriately.
- 7) Place the 2 screws through the holes on the bottom of the charger and hand-tighten. Ensure that there is some slack between the connected chargers. The daisy chain plate should be flush with the bottom of the chargers.
- 8) To connect a 3rd battery charger, repeat steps 3, 4, and 5 for one of the 2 connected chargers. Repeat steps 6 and 7 for the 3rd charger.
- 9) Connect the ends of the daisy chain cables to the corresponding chargers.
- 10) Position the charger end of the power supply between the screw mounts on one free end of the connected chargers.
- 11) Place the power cap over the cord and line up the holes with the screw mounts.
- 12) Place the 2 screws through the holes and hand-tighten. You should be able to move both the power cap and the power cord after tightening. The power cap should be flush with the bottom of the chargers.
- 13) Connect the power supply to the battery chargers.
- 14) Set the battery chargers upright on a desk or other flat surface.
- 15) **(If you are not attaching the charger to a mounting bracket)** Insert the screw plugs into the screw holes on each side of the battery charger label. See [Mounting the Battery Charger](#).
- 16) Plug the power supply into a wall outlet. **IMPORTANT NOTE**



Ensure that you are using a 3M Scott approved battery and power supply (high-power only). See [Conditions of Safe Use](#). Do not connect a second power supply to the connected chargers.

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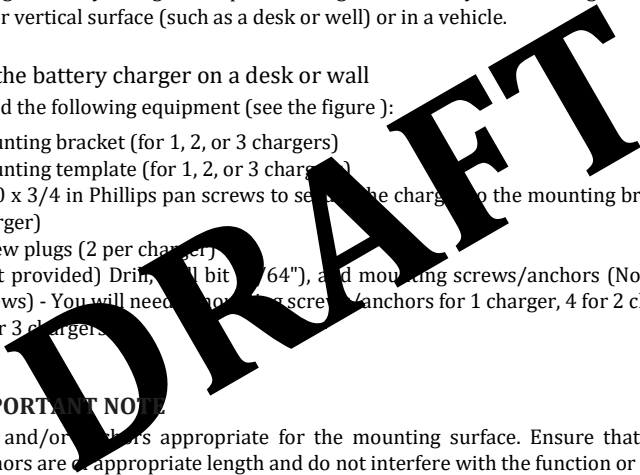
## Mounting the Battery Charger

Mount a single battery charger or up to 3 chargers in a daisy-chain configuration on a flat horizontal or vertical surface (such as a desk or wall) or in a vehicle.

To mount the battery charger on a desk or wall

You will need the following equipment (see the figure ):

- Mounting bracket (for 1, 2, or 3 chargers)
- Mounting template (for 1, 2, or 3 chargers)
- 4-40 x 3/4 in Phillips pan screws to secure the charger to the mounting bracket (2 per charger)
- Screw plugs (2 per charger)
- (Not provided) Drill, drill bit (1/64"), and mounting screws/anchors (No. 6 flat head screws) - You will need 2 mounting screws/anchors for 1 charger, 4 for 2 chargers, and 6 for 3 chargers.



### IMPORTANT NOTE

Use screws and/or anchors appropriate for the mounting surface. Ensure that the screws and/or anchors are of appropriate length and do not interfere with the function or operation of the equipment.

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- 1) Inspect the battery charger. See [Inspecting the Battery Charger](#).
- 2) Install the battery charger. **Do not insert the screw plugs and do not plug the power supply into a wall outlet.** See [Installing the Battery Charger](#).
- 3) Use the provided template to drill holes in the wall or desktop.
- 4) Attach the bracket to the desired surface.
- 5) Slide the charger(s) onto the bracket.
- 6) Insert the 4-40 screws into the screw holes on each side of the battery charger label.
- 7) Insert the screw plugs into the screw holes on each side of the battery charger label.
- 8) Plug the power supply into a wall outlet.
- 9) (Optional) Use cable ties or zip-ties to attach the power supply and its cord to the mounting bracket. For a wall mount, attach the power supply to the bottom of the mounting bracket. For a desk mount, attach the power supply to the back of the mounting bracket.

To mount the battery charger in a vehicle i

### IMPORTANT NOTE

Do not immerse the vehicle-mounted battery charger in liquid or expose it to hose spray or heavy moisture.

You will need the following equipment (see the figure ):

- Mounting bracket (for 1, 2, or 3 chargers)

- 
- Mounting template (for 1, 2, or 3 chargers)
  - 4-40 x 3/4 in Phillips pan screws to secure the charger to the mounting bracket (2 per charger)
  - Screw plugs (2 per charger)
  - External charging cord (positive terminal to be fused with ATC/ATO 5 A inline fuse)
  - (Not provided) Drill, drill bit (9/64"), and mounting screws/anchors (No. 6 flat head screws) - You will need 2 mounting screws/anchors for 1 charger, 4 for 2 chargers, and 6 for 3 chargers.

### IMPORTANT NOTE

When using DC power from a vehicle, ensure that the power source (motor) will provide the necessary power for the time required to recharge a battery. The charger cannot recharge a battery if the power source to the charger is not active. Consult the manufacturer of your vehicle if you have any questions about its available power supply before installing the charger.

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### IMPORTANT NOTE

When installed in a vehicle, the battery charger must be securely mounted in either a vertical or horizontal position using all of the provided mounting holes. Installation must comply with applicable vehicle safety rules and the requirements of the vehicle manufacturer.

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### IMPORTANT NOTE

Choose a suitable location for the battery charger(s) where the equipment will be readily accessible but will not pose a hazard to occupants of the vehicle. Secure the entire length of the power supply cord or wiring so that it does not cause a tripping or entanglement hazard. Also choose a location where the equipment will not be exposed to excess moisture.

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- 1) Inspect the battery charger. See [Inspecting the Battery Charger](#).
- 2) Install the battery charger. **Do not insert the screw plugs and do not connect the charger to the vehicle's power supply.** See [Installing the Battery Charger](#).
- 3) Use the provided template to drill holes in the vehicle. **IMPORTANT NOTE**

Ensure that you will have at least 1.5 in (3.8 cm) of space in front of the mounted bracket so that the charger fits on the bracket properly and you will have enough room to install the mounting screws and to insert and remove the rechargeable battery or batteries.

### IMPORTANT NOTE

Leave a minimum of 4 inches (10.2 cm) of space from the top of the bracket to permit insertion and removal of the rechargeable battery or batteries.

- 4) Attach the bracket to the desired surface. Refer to the torque specifications for the mounting screws used.
- 5) Slide the charger(s) onto the bracket.
- 6) Insert the 4-40 screws into the screw holes on each side of the battery charger label. 7) Insert the screw plugs into the screw holes on each side of the battery charger label.
- 8) Connect the positive terminal of the external charging cord to the inline fuse. **Use only the provided external charging cord.**



- 9) (Optional) Use cable ties or zip-ties to attach the power supply and its cord to the mounting bracket. For a vertical mount, attach the power supply to the bottom of the mounting bracket. For a horizontal mount, attach the power supply to the back of the mounting bracket.

## Troubleshooting the Battery Charger

If your battery charger's LEDs indicate a system fault or battery fault, try the troubleshooting tips.

To troubleshoot the battery charger

- Remove the battery to clear the battery contacts and reinsert the battery.
- Replace the battery with a new "good" battery.
- Ensure that you are using a 3M Scott approved battery and power supply.
- Ensure that you have no more than 3 battery chargers connected in a daisy chain configuration.
- Disconnect (unplug) the charger from its power source and reconnect it. If the charger is hard-wired to a power source, check the fuses.
- A system fault may occur when the battery charger is too hot or too cold. Move the charger out of the extreme temperature environment to cool it or warm it. **1**

### ○ IMPORTANT NOTE

The battery charger operates only when its temperature falls between 0° C and 45° C.

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## Cleaning and Repairing the Battery Charger

To clean the battery charger

- Wipe the battery charger with a dampened cloth.
- Ensure that the battery contacts are clean and that the area surrounding them is free of debris.
- Ensure that the button and latch areas are free of debris.
- Do not use conductive materials or immerse the charger in water.



**IMPORTANT NOTE**

For instructions to clean the facepiece, see the operating and maintenance instructions provided with the facepiece.

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To repair the battery charger

Repairs are limited to replacing the listed parts.



**IMPORTANT NOTE**

Do not alter or repair this assembly, its components, or its accessories beyond the scope of these instructions. Use only 3M Scott approved parts.

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| Part Description              | Part Number   |
|-------------------------------|---|
| Battery Charger               | 201718  |
| Power Supply, US (Low-power)  | 31004245  |
| Power Supply, US (High-power) | 31002   |
| Power Supply, Hard-Wired      | 31004254  |
| Daisy Chain Kit               | 201719  |
| Mounting Bracket              | 201681-01 (for 1 charger)<br>201681-02 (for 2 chargers)<br>201681-03 (for 3 chargers) |
| External Charging Cord        | 31004254  |

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## **LIMITED WARRANTY**

3M Scott Fire & Safety (3M SCOTT) warrants Vision C5 Facepiece products (THE PRODUCTS) to be free from defects in workmanship and materials for as long as THE PRODUCTS are owned by the original end-user purchaser. This warranty applies to all components of THE

PRODUCTS including all accessories and optional equipment purchased and supplied at the time of original sale of THE PRODUCTS, except voice communication devices, in-mask displays, facepiece-integrated thermal imaging devices, rechargeable batteries, battery chargers, consumable supplies, and storage bags. 3M SCOTT warrants all voice communication devices, in-mask displays, and integrated thermal imaging devices to be free from defects in workmanship and materials for a period of five (5) years from the date of original manufacture by 3M SCOTT. 3M SCOTT warrants all battery chargers and rechargeable batteries to be free from defects in workmanship and materials for three (3) years from the date of original manufacture by 3M SCOTT. 3M SCOTT further warrants all consumable supplies and storage bags to be free from defects in workmanship and materials for one (1) year from the date of original manufacture by 3M SCOTT. 3M SCOTT's obligation under this warranty is limited to replacing or repairing (at 3M SCOTT's option) THE PRODUCTS or components shown to be defective in either workmanship or materials.

Only personnel of 3M SCOTT or, when directed by 3M SCOTT, authorized 3M SCOTT agents are authorized to perform warranty obligations. This warranty does not apply to defects or damage caused by any repairs of or alterations to THE PRODUCTS made by owner or any third party unless expressly permitted by 3M SCOTT product manuals or by written authorization from 3M SCOTT. To obtain performance under this warranty, and as a condition precedent to any duty of 3M SCOTT, the purchaser must return such products to 3M SCOTT, a 3M SCOTT authorized distributor or a 3M SCOTT authorized service center. Any product returned to 3M SCOTT shall be sent to "3M SCOTT FIRE & SAFETY" (Attn: Warranty Claim Dept.), 4320 Goldmine Road, Monroe, NC 28110.

This warranty does not apply to any malfunction of or damage to THE PRODUCTS resulting from accident, misuse or abuse.

THIS WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN ADDITION, 3M SCOTT EXPRESSLY DISCLAIMS ANY LIABILITY FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES IN ANY WAY CONNECTED WITH THE SALE OR USE OF 3M SCOTT PRODUCTS, AND NO OTHER FIRM OR PERSON IS AUTHORIZED TO ASSUME ANY SUCH LIABILITY. THIS WARRANTY APPLIES ONLY TO THE ORIGINAL END-USER PURCHASER AND IS NON-TRANSFERABLE.

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3M  
Personal Safety Division  
SCBA & Fire Solutions  
4320 Goldmine Road, Monroe NC 28110  
Telephone: (704) 291-8300  
Technical Support: (800) 247-7257, [ScottTechSupport@mmm.com](mailto:ScottTechSupport@mmm.com)  
Web: [www.3MScott.com](http://www.3MScott.com)

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