PRYME®
Radio Products

PRYME Radio Products

MicroConnect™

Two-Way Radios

USER'S MANUAL

Manual Conventions

Many of the keys on your new MicroConnect^{TM} transceiver have multiple functions which are indicated by both a **bold faced** label and a sub-label on the front of the transceiver. For instance, the key on the top right hand side of the face of the transceiver is labeled both **UP** and **LOCK**. To make this manual easier to read and to use, we refer to each key by the name of the main function of the key.

Whenever a key sequence is referred to in this manual, the name of the keys are offset by <Brackets>. For instance, the "UP" key is always referred to as the <UP> key.

In situations where more than one key must be pressed in sequence, the names of the keys are separated by commas. For example, if the instructions called for you to press: <UP>, <DOWN>, <SQL OFF>, you would press the key labeled "UP," followed by the key labeled "DOWN," and finally the key labeled "SQL OFF."

In some situations you will have to press two keys simultaneously to activate a function. In that case, the names of the keys will be joined by a PLUS sign. For instance, <FUNC>+<UP>, means to press both the "FUNC" an the "UP" keys.

Thank you for purchasing a PRYME Radio Products brand Two-Way Radio Transceiver. Our MicroConnect™ line of radios keep you connected and in touch wherever you go. Our JobConnect™ and ProConnect™ radios keep you in touch with your co-workers and employees at job sites or on-call. Or, you can use our SportConnect™ and ClearConnect™ radios to communicate with your family and friends during sporting events, outdoor activities (such as camping or boating), or whenever you need wireless personal communications.

This PRYME MicroConnect™ transceiver is simple to operate and powerful. The radio provides a full 5-watts output power (4-watts for UHF models) for a maximum communications range of up to 5 miles. * It also includes many more great features including built-in Interference Eliminator Codes (CTCSS), and several different scan modes.

Customer Support

For customer support on your new transceiver, please contact PREMIER Communications Corporation, the distributor for the PRYME Radio line of products.

> PREMIER Communications
> 480 Apollo St., #E
> Brea, CA 92821
>
> Customer Support: 714-257-0300
> (8 AM to 5 PM PST, weekdays only)
>
> To order accessories call: 1-800-666-2654
> (8 AM to 5 PM PST, weekdays only)

You can use the internet to find more information on the quality wireless two-way communications products offered by PREMIER Communications. Just point your web browser to our web site at: http://www.pryme.com.

* Range may vary according to frequency, battery condition, height above average terrain, and nearby obstructions. Maximum range of more than 5 miles may be possible through the use of repeaters. (ProConnect™ and ClearConnect™ versions only.)

License Required

Use of this transceiver within the United States, including all territories and possessions, requires a license issued by the Federal Communications Commission (FCC). The FCC is the organization that regulates all private wireless radio communications within the U.S. Use of this transceiver without a license may result in fines, confiscation of equipment, and/or imprisonment.

If your transceiver is labeled SportConnect[TM] or ClearConnect[TM], then you will need a General Mobile Radio Service license in order to operate the unit. The GMRS is a radio service intended primarily for use by people communicating with their family and friends during recreational activities, such as fishing, camping, and boating. Your GMRS license will authorize you and all other members of your immediate family to communicate with each other using this transceiver. To apply for your GMRS license, you must complete and submit FCC form 605 and the needed licensing fee.

If you have a transceiver that is labeled JobConnect[TM] or ProConnect[TM], then you will need a license for the Business Radio Service in order to operate the unit. A Business Radio Service license will enable you and your employees to communicate while on the job. Business radios may be used to communicate for the operation of any commercial activity (i.e. business), the operation of an educational, philanthropic, educational, or ecclesiastical institution, the operation of hospitals, clinics, or medical associations, or any other service described in FCC Rule 90.

To apply for a Business Radio Service license, you must complete and submit FCC form 600 and the required licensing fee. **NOTE:** The FCC is currently revising the manner in which it accepts license applications. At some point during late 1999 or early 2000 the FCC will switch over from Form 600 to a new form, the form 605, and will allow applications to be filed on-line. If you have any questions about which form you need to apply for your Business Radio License, please call the FCC's customer support hotline at 1-800-CALL-FCC.

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There are a number of different ways that you can receive and file FCC forms:

Internet: You can download a copy of the FCC forms off of the Internet in Adobe PDF format. Just point your web browser to http://www.fcc.gov/formpage.html.

If you are filing using the new FCC form 605, then you can file your application on-line (paperless) using the FCC's new Universal Licensing System (ULS). Just point your web browser to http://www.fcc.gov/wtb/uls.

Fax: Forms are also available from the FCC's fax on demand service. Just use your fax machine to call 1-202-418-0177. When prompted, request either form "000600" (for FCC form 600) or form "000605" (for FCC form 605) as appropriate. Form retrieval will only work if you call this number using a fax machine.

Mail: You can place a telephone order for FCC forms by calling 1-800-418-FORM. Forms are sent via 1st class mail and can usually be received within a few business days.

Questions: Any questions that you might have about how to complete your FCC forms can be directed at the FCC's customer support hotline. Just dial 1-800-CALL-FCC.

Note: If you are applying for a Business Radio License, you will have to choose which frequency or frequencies you will operate on, **before** you submit the license application. If you are using a JobConnect^{TM} model radio, see the appendix for a list of frequencies pre-programmed into your portable radio. Users of the ProConnect^{TM} series radios should ask their two-way radio dealer which frequencies are available in their local area.

FCC Warning

This device generates or uses Radio Frequency (RF) energy. It is designed to comply with national and international guidelines regarding the maximum permitted amount of human exposure to RF. To ensure minimum RF exposure, and optimal performance, always hold the radio in a vertical position when transmitting, as far away from your head as possible.

Changes, modifications, or repairs to this equipment must be performed by an FCC authorized technician only. Unauthorized modifications to this equipment may cause the device to operate in an unintended manner, and may cause harmful interference. The user could loose the authority to operate this equipment if any unauthorized change, modification, or repair is made.

If this unit is not installed or operated in accordance with the instructions, it may cause harmful interference to home electronics and/or nearby radio communications. Even if operated properly according to the manual, interference may still occur. If this equipment does cause harmful interference, such as to radio or television reception, which can be determined by turning the unit on or off, the user is encouraged to try to correct the interference by taking one or more of the following actions:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet or circuit different than that to which the receiver is connected.
- Consult your radio dealer for technical assistance.

Do Not Use a Damaged Antenna

Never operate your transceiver using an antenna that has been damaged. Operating the radio with a damaged antenna could damage the transceiver, and skin contact with any exposed metal from the antenna could result in a minor burn.

Battery Pack Recycling

This radio transceiver may use either a Nickel Cadmium (NiCd) or a Nickel Metal Hydride (NiMH) battery pack. If your radio was supplied with a NiCd battery, please be sure to dispose of the battery properly at the end of its life span. NiCd batteries contain Cadmium, a heavy metal, and must be recycled. Federal and local laws prevent NiCd battery packs from being disposed of in landfills or incinerators. Please call 1-800-8-BATTERY to find the local battery recycling location in your area.

Other Cautions for the User

- Attach battery packs or DC power supplies rated only for 5 – 15 Volt DC.
- Do not attempt to modify or adjust your transceiver. This radio is produced under strict quality control guidelines and is factory adjusted for best performance.
- Keep out of high humidity and dust.
- Do not operate your transceiver or charge the battery pack in an area with a potentially explosive atmosphere (gas, fumes, dust, etc.).
- Do not attempt to service the transceiver yourself. Only an authorized technician should perform service.
- Do not leave your transceiver exposed to sunlight for long periods of time.
- Do not place your transceiver on any unstable surface.
- Clean your transceiver by wiping it with a damp cloth only. Do not use any cleaning solutions, solvents, or other chemicals, as these may harm the radio's case and could leak inside the radio, damaging internal components.
- Always ensure that the antenna is properly attached when operating your transceiver. Operating without the antenna attached could damage the transceiver.

PRYME's MicroConnect[TM] Line

The PRYME MicroConnect[TM] line of products, by PREMIER Communications, offers a full range of communications solutions for a wide variety of communications needs.

There are several different radios in the MicroConnect[TM] line. Each of the different units is listed on the table below, along with an overview of the radio's capabilities.

PRYME MicroConnect[TM] Products

Model Number	# of Channels[1]	Frequency Range (MHz)	Type of Use	Typical Range
JobConnect V	8	136-174	Job Site	6 miles
JobConnect U	8	440-470	Job Site	5 miles
SportConnect	8	440-470	Recreational	5 miles
ClearConnect	23	440-470	Recreational	25 miles[2]
ProConnect VL	Up to 99	38-50	Commercial	20 miles[2]
ProConnect V	Up to 99	136-174	Commercial	25 miles[2]
ProConnect U	Up to 99	440-470	Commercial	25 miles[2]

[1]With the exception of the ProConnect[TM] models, all other models of this transceiver come pre-programmed for the most popular frequencies available for either recreational (SportConnect[TM], ClearConnect[TM]) or job site (Job Connect[TM]) use. Additional channels may be programmed into the unit as needed. Contact your PRYME Two-Way Radio dealer for information. For a list of which frequencies that came pre-programmed in your radio, see appendix A.

The ProConnect[TM] models have the capability of up to 99 channels. Your local two-way radio shop must program your radio for those channels that are available in your area. Contact PREMIER Communications for the location of the two-way radio dealer nearest you.
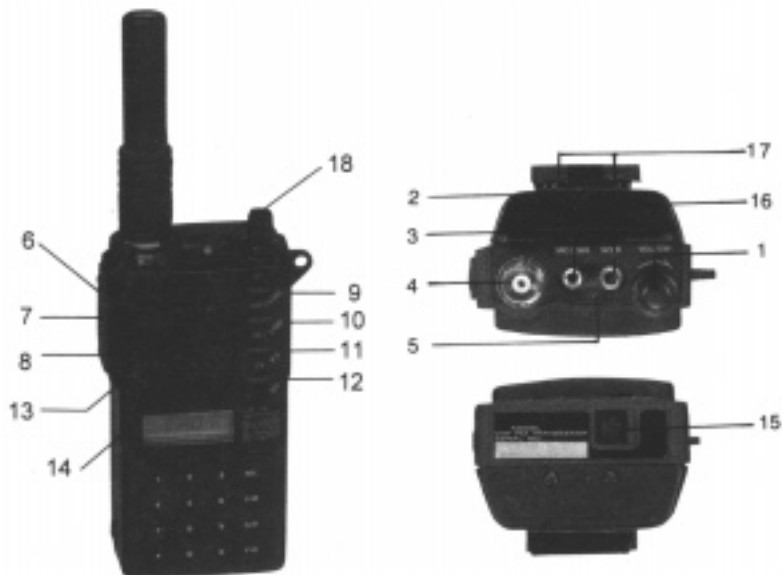
[2] Communication over distances of 5 – 25 miles (or more) is only possible by subscribing to repeater access. Subscriber fees vary from area to area. Contact your local two-way radio shop for information on subscribing to repeater use.

Table of Contents

Controls and Connections

1. VOL/SW: This switch allows you to turn the transceiver on and off, and to set the volume level. To turn the radio off, rotate the knob all the way counter-clockwise until it clicks. To turn the unit on, and to set the volume level, turn the knob clockwise.

2. SPKR Jack: This jack is used to connect an earphone, external speaker, or the speaker terminal of a speaker microphone to the transceiver. Any 8-ohm speaker can be used. The internal speaker is automatically disabled when a speaker is connected to this jack.

3. MIC Jack: You may use this jack to connect the microphone terminal of a speaker microphone to the transceiver.

4. Antenna Jack: The supplied rubber duck antenna attaches to this jack. All models of MicroConnect™ radio use a standard BNC antenna connector, except for the ProConnect™ Low VHF model (PR-45), which uses a TNC style connector.

5. BUSY/TX Indicator: This indicator lights up red whenever the transmitter is keyed. It lights up green when a signal is received.

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6. FUNC Key: This button enables special sub-functions of other buttons. For instance, the LCD back light can be turned on by pressing <FUNC>+<DOWN>.

7. PTT (Push-To-Talk) Button: Press and hold this key to transmit. Release the button to receive when you are finished talking.

8. SQL OFF: When this button is depressed the squelch operation is turned off. This enables you to check the channel for actiity, especially when you are using CTCSS Interference Eliminator Codes. Push again to re-enable the squelch control.

9. UP / LOCK: Use this button to change the channel upwards,

10. DOWN / LAMP: This button is used to decrease the current channel number.

11. CALL / SCAN: Pressing this key changes the channel to the priority, or "CALL" channel.

12. DUAL / EDIT: This button enables the "Dual Watch / Priority Scan" which switches the channel back and forth between the current operating channel and the CALL channel.

13. Speaker: This is the built-in speaker for the radio. This speaker is automatically disabled whenever an external speaker is attached to the unit through the jack on top of the radio.

14. Internal Microphone: This is the built-in microphone for the radio. When transmitting, depress the <PTT> key and speak into this portion of the radio.

15. Battery Latch: This latch locks the radio's rechargeable battery pack into place. See the section on attaching and detaching the battery pack for information on its use.

16. Battery Pack: The supplied rechargeable battery pack attaches to the back of the radio transceiver.

17. Belt Clip: The supplied metal belt clip keep the transceiver firmly clipped to your belt while it is not in use.

18. Rubber Dust Cover: This cover protects the radio's speaker microphone jacks from damage due to dust. Always keep this dust cover firmly in place when you are not using an external speaker microphone.

Supplied Accessories

Unpack the transceiver carefully and ensure that all of the items listed below are included with the transceiver box. In cases where more than one model number is listed, only one item is supplied. Which item is supplied depends on the model of transceiver you have.

Description	Model Number	QTY
MicroConnect Radio Transceiver (JobConnect, SportConnect, Clear Connect, or ProConnect)	PR-45 (VHF-Low) PR-160 (VHF) PR-460 (UHF)	1
Rechargeable Battery Pack	RBP-22N (NiCad) RBP-22H (NiMH)	1
AC Adapter (for charging battery)	CHA-120	1
Belt Clip	CLIP-22	1
Screws for belt clip	-	2
Rubber Duck Antenna	DUCK-45 (VHF-L) DUCK-160 (VHF) DUCK-460 (UHF)	1
Wrist Strap	STRAP-145	1
Warranty Card	-	1
Instruction Manual	-	1

Installing the Rechargeable Battery

For attaching the battery, refer to the diagram on the right side of the page.

1. Peel off the protective label on the battery's plus terminal
2. Pivot the top of the battery pack against the top of the radio as shown, then firmly press the bottom of the battery against the bottom of the radio until you hear a click.
3. To remove the battery, move the battery latch (located on the bottom of the radio) in the direction of the arrow.

Installing the Rubber Duck Antenna

To attach the supplied rubber duck antenna, push the antenna down onto the connector. Then, rotate the antenna clockwise until it is finger tight. Do not over tighten.

Never operate the transceiver without the antenna being properly attached. Failure to properly attach the antenna could result in damage to the radio.

Installing the Belt Clip

The supplied belt clip attaches directly to the back of the battery pack. Simply locate the two machine screws that were supplied with the transceiver, and then use them to attach the clip to the back of the battery pack.

Installing the Wrist Strap

To install the supplied wrist strap, simply thread the short loop end of the strap through the wrist strap guide on the side of the transceiver. Then pull the long end of the strap through the short loop end to tie the wrist strap in place.

Installing the (Optional) Speaker Microphone

Your MicroConnect^{TM} transceiver can be used with an external speaker microphone, headset, or surveillance kit. Simply lift up the dust cover protecting the radio's speaker and microphone jacks, and then insert the speaker microphone connections into the supplied jacks. Always keep the dust cover in place when you are not using an external speaker microphone or earphone.

There are a wide variety of audio products available that will work with your MicroConnect^{TM} transceiver. Whatever your application, PRYME has an audio product that will fit your need. To see our full line of audio accessories visit our web site at http://www.pryme.com.

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Charging the Battery Pack

Your MicroConnect™ radio is supplied with a rechargeable NiCd battery pack, which should provide about 8 hours of use, assuming a 95% receive / 5% transmit duty cycle. An optional Nickel Metal Hydride (NiMH) pack is also available which should provide about 14 hours of use.

The first time you charge the battery pack, or if you store the battery for a long period of time without using it, it may not provide the full rated operating time. However, after 3-5 use cycles the battery should reach full operating capacity. If properly cared for, you battery pack should be good for more than 500 charge / discharge cycles before it needs to be replaced.

Supplied Wall Charger: Plug the wall charger into an AC outlet in your home or office. Connect the charger plug into the jack located on the back of the supplied battery pack. Your battery should be fully charged after 12 hours for the NiCd pack or 16 hours for the NiMH battery.

Optional Fast Charger: Plug the fast charger into an AC outlet in your home of office. Disconnect the battery pack from the radio and drop the battery into the charger slot. The lights on the front of the charger provide an indicator for the charge status. Your battery should charge in about two hours.

Please observe the following cautions when charging the battery pack:
1. If you leave the battery connected to the radio while charging, ensure that the radio is turned OFF while the charger is connected.
2. Do not recharge the battery pack if it is already fully charged. Doing so could shorten the life of the pack.
3. Do not overcharge the battery pack. Leaving the battery connected to the charger for an excessive amount of time could damage the battery.
4. Never apply a voltage to the pack that is higher than the specified voltage.
5. Never charge the battery using a charger other than the recommended chargers.

Additional Batter Pack Cautions

1. Do not short the output terminals of the battery pack using a metal object. This could result in a strong current which could cause burns and melt the battery pack.
2. Do not submerse the battery pack in water. Do not use a battery pack that is wet. Dry it off with a soft towel and allow it to air dry for several hours.
3. Do not expose the battery pack to flames or excessive heat.
4. Never disassemble or modify the battery pack.

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Basic Operation

1. **Turn the transceiver on** by rotating the <VOL/SW> switch clockwise. The LCD on the face of the radio will light up, briefly, and then show the current channel number.

2. To **adjust the volume**, press the <SQL OFF> key to disable the squelch. Your will hear some static. Adjust the <VOL/SW> knob until the volume level is comfortable, then press the <SQL OFF> key to re-enable the squelch mode.

3. The **LCD display** shows you the current channel number, as well as other important information about the channel your are listening to, such as repeater mode and CTCSS code mode. A diagram of the display is shown below. To enable the LCD Lamp (for night time operation) press <FUNC>+<DOWN>. Repeat the same key sequence to turn the lamp off. Do not leave the lamp turned on all the time, as doing so will quickly run down the battery.

4. **Select your operation channel** using the <UP> and <DOWN> keys. Once you have selected your operating channel, you can engage the selector lock to prevent accidental changing of the channel. To enable the lock press <FUNC>+<UP>. Repeat the same keystrokes to disable the selector lock.

5. **If a signal is received** on the channel you are using, the status bar at the bottom of the radio's LCD will show "busy" and the strength of the signal will be shown across the bottom of the screen. A strong signal will light up all the segments of the status bar, all the way across the LCD.

6. **To make a call**, hold down the <PTT> key on the side of the radio. Hold the radio vertically, 2-3 inches from your face, and speak clearly and distinctly. Release the <PTT> key when you are done talking.

7. The default is for the radio to transmit on high power for maximum range. In some situations, you may want to **choose a lower power setting** to conserve battery power. To change the setting, hold down the <PTT> key and then press <UP> or <DOWN>. There are three output power settings: 5 watts, 2 watts, and 1 watt. Whenever you transmit, the status bar indicator at the bottom of the LCD will show the current output power level.

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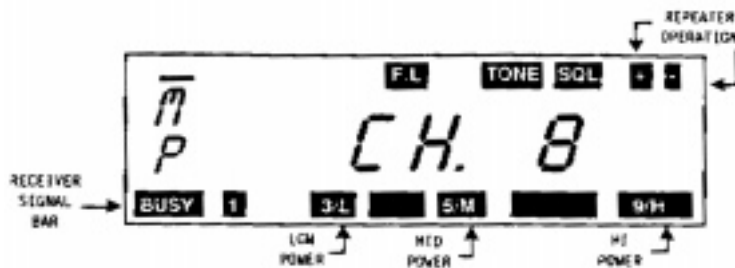
Setting Up CTCSS Codes

This transceiver includes 32 CTCSS (Continuous Tone Coded Squelch System) interference eliminator codes. These codes can be used to quiet your radio's receiver, so that you will only hear other radios in your talk group. This may be necessary, as some channels may be very busy in your area.

If you turn on your radio's CTCSS, you will only hear other users who are using the same CTCSS code. If another signal is transmitted on the channel that does NOT have the correct CTCSS code, it will not be heard. For that reason, all of the radios in your talk group MUST be programmed to the **SAME** CTCSS code, if you choose to use CTCSS.

A different CTCSS code can be programmed into each of your transceiver's channels. To turn CTCSS on in your radio, perform the following procedure:
1. Select the channel on which you wish to use CTCSS using the normal channel selection procedure.
2. Press <FUNC>+<DUAL>.
3. Press <CALL>. An icon will appear on the LCD screen that says "TONE SQL". This indicates that CTCSS is now enabled.
4. Press <FUNC>+<DUAL> to save the CTCSS setting

Once you have enabled CTCSS, you will need to set the proper tone frequency code. To set the code press <FUNC>+<SQL OFF>. The current CTCSS code will be shown. Use the <UP> and <DOWN> keys to change the setting as needed. When you are done press <FUNC>+<SQL OFF> to save the setting.

In Appendix B of this manual you will find a complete list of the CTCSS codes that are included in this radio, as well as a cross reference that will allow you to choose the same codes that you may be used by other radios in your talk group.

If you choose to use CTCSS, you should always use the <SQL OFF> key to momentarily disable CTCSS before you transmit. By momentarily disabling the squelch, you will be able to ensure that you are not interfering with other users who may be using the channel.

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Scanning

Your MicroConnect^{TM} transceiver has several different scan modes, which allow you to search through your programmed channels for activity. This essentially enabled to listen to several channels simultaneously for calls.

To enable the standard scan mode, press <FUNC>+<CALL>. The radio will search through the available channels until it finds a channel that has activity. When activity is detected on a channel, the radio will stop there until the activity ceases. When the activity stops, the radio will continue scanning. To disable the scan feature, simply press <FUNC>+<CALL> again.

Dual Watch

This scan mode allows you scan back and forth between two channels: the CALL channel and another standard memory channel.

To engage this scan mode, first use the normal channel selection method to choose the channel that you want to "watch." Then, press the <DUAL> key. The radio will now scan back and forth between the currently selected channel and the CALL channel.

If activity is detected on either of the two channels, the radio will stop scanning to allow you to listen to the activity. When the activity ceases, the radio will resume scanning. To turn the dual watch function off and return to normal operation, simply press the <DUAL> key again.

Priority Scan

This function allows all other channels to be scanned at the same time that the radio "watches" the CALL channel for activity. In this mode the radio will scan all memory channels, but it will also check the CALL channel for activity in between normal channels. So, the radio would scan from CALL > CHAN 1 > CALL > CHAN 2 > CALL > CHAN 3, etc.

To enable this function, select the CALL channel (by pressing the <CALL> key) and then press the <DUAL> key. If activity is detected on either of the two channels, the radio will stop scanning to allow you to listen to the activity. When the activity ceases, the radio will resume scanning. To turn the dual watch function off and return to normal operation, simply press the <DUAL> key again.

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Busy Transmit Lockout

This function allows you to lock your MicroConnect™ transceiver so that the unit will not transmit if there is a received signal present on the channel in use. This function helps to prevent interference cause by accidental key-downs, etc.

This function is set up on a per channel basis, so you could enable it selectively just on certain channels, if you wish. To enable this function, select the channel you wish to have locked out and then perform the follow keystrokes:
1. Press <FUNC>+<DUAL>.
2. Press <FUNC>+<CALL>. A "P" will be shown on the display. This is the indicator that the Busy Lock function has been enabled.
3. Press <FUNC>+<DUAL> to save the setting.

If you ever wish to disable the Busy Transmit Lockout, simply repeat the steps above.

Low Battery Warning

During operation, your MicroConnect™ transceiver will automatically check the status of the attached rechargeable battery pack. When the radio detects that the battery needs to be charged, a low battery warning will be displayed. The word "LO" will be flashed on the screen every second and a beep will sound every 5 seconds to indicate the battery needs to be recharged. Do not continue to use the radio after the low battery warning has sounded. Recharge the battery pack immediately.

Time Out Timer

The Time Out Timer limits the length of time for any transmission made by your radio. This setting is factory preset to 3 minutes. If you attempt to transmit for longer than 3 minutes at any one time the transmission will automatically stop and a beep indicator will sound. Simply release the <PTT> to reset the timer and you can immediately begin transmitting again. Your local two-way radio dealer may set the timer to another value besides 3 minutes.

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Using the Emergency Channel
(SportConnect^{TM} and ClearConnect^{TM} models only)

For users of the General Mobile Radio Service, our SportConnect^{TM} and ClearConnect^{TM} model radios offer one-touch access to the designated Emergency Channel, 462.675 MHz. Just press the <CALL> key and your radio will be automatically switched to this channel.

There are two different kinds of communications that are given a high priority on this channel:

Emergency Use: communicating in an emergency pertaining to the immediate safety of life or the immediate protection of property.

Motorist Assistance: communicating for the purpose of soliciting or rendering assistance to a traveler.

Please note that the 462.675 is not reserved **exclusively** for emergencies. Users are permitted to use the channel for their regular communications traffic, and are encouraged to monitor the channel for other GMRS users who might be in need of assistance.

The Personal Radio Steering Group, (PRSG), a GMRS advocacy group, recommends that emergency operations on the 675 channel be conducted using the 141.3 CTCSS code, and that other types of communications take place on other CTCSS codes. For that reason, we have pre-set the 675 channel to use the 141.3 code. If you use the 675 channel for other types of communications, we recommend you switch to a different code.

For more information about using the 675 channel, or GMRS use in general, you can contact the Personal Radio Steering Group: PO Box 2851, Ann Arbor MI 48106, Phone: 734-662-4533, Internet web page: http://www.provide.net/~prsg.

If you'd like to know more about public service communications on GMRS, contact REACT International. REACT is a large organization of volunteer communicators that actively monitors 462.675 for emergency traffic in most parts of the U.S. REACT International: 5210 Auth Rd #403, Suitland MD 20746, Phone: 301-316-2900, Internet web page: http://www.reactintl.org.

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Troubleshooting Guide

Problem	Solution
Radio will not turn on	Make sure that the battery is fully charged
Rechargeable battery does not last long enough	1. Make sure that the wall charger is pushed fully into the jack on the battery when charging 2. Turn the radio off when charging. Leaving the radio turned on may prevent the battery from reaching a full charge 3. Heavy use may require a spare battery pack.
Radio will not transmit	1. Make sure that you are firmly pressing the <PTT> key 2. Check to see whether the Busy Transmit Lockout is turned on.
No signals are received	1. Check to see that the antenna is properly connected to the transceiver 2. Make sure that the volume is turned up to a comfortable level 3. Ensure that the CTCSS codes are turned off, or set to the proper code for your talk group.
Talk range is too low	Heavy buildings, foliage, and hills may block transmission. Check for line of site to improve range.
The LCD display is weak or blanks out	The battery is too low. Recharge the battery pack.
The displayed channel cannot be changed	1. Check to see if the Selector Lock is turned on. If it is the letters "FL" will be visible on the LCD Display 2. Make sure you have not selected the CALL channel. Press <CALL> to return to normal operation.
Other voices are heard on the channel you are using	Change all of the radios in your talk group to a different CTCSS code.

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Specifications

GENERAL SPECIFICATIONS:
Dimensions: 4.25" x 2.0" x 0.75" (H/W/D without battery)
Modulation Type: F3
Microphone Impedance: 2K ohms
Speaker Impedance: 8 ohms
Input Voltage: 5.0-16.0 volts DC
 Current Draw (13.8 volts):
    High Power: approx. 950 mA
    Medium Power: approx. 650 mA
    Low Power: approx. 400 mA
    Stand By: approx. 25 mA
    Power Save: varies by setting
Operating Temperature: -10°C to +60°C
Frequency Stability: ±5 PPM

RECEIVER SPECIFICATIONS:
Frequency Range:
    PR-45: 38 - 50 MHz
    PR-160: 136-174 MHz
    PR-460: 440-470 MHz
Receiving System: Double-conversion super heterodyne
Intermediate Frequency:
    1st: 21.4 MHz
    2nd: 455 kHz
Sensitivity (12db SINAD): 0.16 μV
Channel Spacing: 12.5 or 25 kHz
Audio Output Power: 300 mW 10% distortion at 8 ohms

TRANSMITTER SPECIFICATIONS:
Frequency Range:
    PR-45: 38 - 50 MHz
    PR-160: 136-174 MHz
    PR-460: 440-470 MHz
RF Output Power (12 volts):
    0.5 / 2.5 / 5 watts (low / medium / high)
Modulation Method: Voltage-variable reactance
Max. Deviation: ±5 kHz
Microphone: Built in electret condenser
Spurious Emissions: More than 60 dB below carrier

Optional Accessories

There are a wide variety of optional accessories available for the MicroConnect™ line of transceivers. The most popular accessories are listed below:

RBP-22	Standard NiCd battery pack (12 Volt, 600 mAH)
RBP-22H	Long Life NiMH battery pack (12 Volt, 1000 mAH)
CBP-263	AA Battery Adapter (uses 6 AA batteries, not included)
CHA-120	Standard wall charger
CC-1802	Mobile charger
MQA-999	Drop-in fast charger
SLC-22L	Protective leather case
SPM-100	Mini-remote speaker microphone
SPM-200	Lapel microphone with ear-bud
SPM-200E	Lapel microphone with ear-hook
SPM-400	Mini-boom microphone
SPM-500	Throat microphone
SPM-600	Full-sized remote speaker microphone
SPM-700	Surveillance kit

To order accessories for your MicroConnect™ transceiver, call your local two-way radio dealer or contact PREMIER Communications directly at 1-800-666-2654.

Limited Warranty

PREMIER Communications Corporation warrants these product against defects in materials or workmanship as follows:

During the warranty period (one year from the date of retail purchase), PREMIER Communications will repair or replace a defective unit, at our option, without charge for parts or labor. After the warranty period the product owner must pay all parts and labor charges.

The limited warranty is extended only to the original purchaser and is valid only to consumers in the United States and Canada. It does not cover damage or failure caused by or attributable to Acts of God, abuse, misuse, improper or abnormal usage, faulty installation, improper maintenance, lightning, or other incidences of excessive voltage, or any repairs or tampering by other than by a PREMIER authorized repair facility. It does not cover replacement of consumable parts, transportation costs, or damage in transit. This warranty will become void if the serial number or model number identification has been wholly or partially removed or erased. Repair or replacement under the terms of this warranty does not extend the terms of this warranty. This warranty can only be modified by an officer of PREMIER Communications, and then only in writing.

Should this product prove defective in workmanship or material, the consumer's sole remedies shall be such repair or replacement as provided by the terms of this warranty. Under no circumstances shall PREMIER

Communications be liable for any loss or damage, direct, consequential, or incidental, arising out of the use of or inability to use this product. Some states do not allow limitations on how long an implied warranty lasts or the exclusions or limitations of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights. You may also have other rights, which vary, from state to state.

To obtain warranty service, call PREMIER Communications at (714) 257-0300 or e-mail sales@pryme.com for instructions. When returning a unit for warranty service, please include a copy of your sales receipt, a brief description of the symptoms, your name, address, phone number, e-mail address, and any special shipping instructions. **You must also include the original copy of your sales receipt or invoice when returning a product for warranty service.** Then deliver or ship the product, postage or shipping costs prepaid to:

PREMIER Communications
ATTN: Service
480 Apollo - Suite E
Brea, CA 92821

PREMIER Communications is not liable for products lost or damaged during shipment. Always insure any items shipped to PREMIER for their full replacement value.

Appendix A: Frequency Reference Tables

The following tables list the channels that come pre-programmed in our JobConnect^{TM}, SportConnect^{TM}, and ClearConnect^{TM} radios. These are the most popular channels available for the type of communications that the radios are sold for. Additional or different frequencies can be programmed into the units if your application requires it, and if you are properly licensed. Each unit may be programmed with a maximum of 99 channels. Your local two-way radio dealer must perform this programming. Contact your local dealer, or PREMIER Communications Corporation, for more information.

JobConnect *(VHF)*

Channel #	Frequency	Name
1	151.505 MHz	
2	151.540 MHz	
3	151.625 MHz	Red Dot
4	151.700 MHz	
5	151.760 MHz	
6	151.955 MHz	Purple Dot
7	154.570 MHz	Blue Dot
8	154.600 MHz	Green Dot

JobConnect *(UHF)*

Channel #	Frequency	Name
1	464.500 MHz	
2	464.550 MHz	
3	467.7625 MHz	J Dot
4	467.8125 MHz	K Dot
5	467.850 MHz	Silver Dot
6	467.875 MHz	Gold Dot
7	467.900 MHz	Red Dot
8	467.925 MHz	Blue Dot

SportConnect

Channel	Frequency	CTCSS Code
CALL	462.675* MHz	141.3
1	462.5625 MHz	
2	462.5875 MHz	
3	462.6125 MHz	
4	462.6375 MHz	
5	462.6625 MHz	
6	462.6875 MHz	
7	462.7125 MHz	

* 462.675 is the designated emergency and traveler's assistance channel. In addition, the *Personal Radio Steering Group* suggests the 141.3 CTCSS code for emergency use.

ProConnect

The ProConnect^{TM} models of Professional Land Mobile Radio must be pre-programmed by your local two-way radio dealer. Each ProConnect^{TM} unit has a 99 channel capacity. Different channels are available in different areas for Professional Land Mobile use. Please contact the dealer where you purchased the radio for a list of channels included in the radio, or contact your local two-way radio dealer for information about having the radio programmed or re-programmed for your local channels.

ClearConnect

Channel	Frequency	Mode	CTCSS
CALL	462.675* MHz	Repeater	141.3
1	462.5625 MHz	Talk Around	
2	462.5875 MHz	Talk Around	
3	462.6125 MHz	Talk Around	
4	462.6375 MHz	Talk Around	
5	462.6625 MHz	Talk Around	
6	462.6875 MHz	Talk Around	
7	462.7125 MHz	Talk Around	
8	462.550 MHz	Talk Around	
9	462.550 MHz	Repeater	
10	462.575 MHz	Talk Around	
11	462.575 MHz	Repeater	
12	462.600 MHz	Talk Around	
13	462.600 MHz	Repeater	
14	462.625 MHz	Talk Around	
15	462.625 MHz	Repeater	
16	462.650 MHz	Talk Around	
17	462.650 MHz	Repeater	
18	462.675* MHz	Talk Around	
19	462.675* MHz	Repeater	
20	462.700 MHz	Talk Around	
21	462.700 MHz	Repeater	
22	462.725 MHz	Talk Around	
23	462.725 MHz	Repeater	

* 462.675 is the designated emergency and traveler's assistance channel. Many repeaters are available nationwide for the sole purpose of providing help to people in need. In addition, the *Personal Radio Steering Group* suggests the 141.3 CTCSS code for this use.

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Interference Eliminator Codes (CTCSS)

The CTCSS codes provided in your MicroConnect™ radio are compatible with the codes provided by other popular two-way radio manufacturers. The table below should assist you in choosing the same CTCSS dode as other radios in your talk group.

CTCSS Compatibility

Code	Motorola Code	TalkAbout, FreeTalk, Spirit	Sport 7/7X Code
67.0	XZ	01	
71.9	XA	02	
74.4	WA	03	
77.0	XB	04	A
79.7	WB	05	
82.5	YZ	06	
85.4	YA	07	
88.5	YB	08	B
91.5	ZZ	09	
94.8	ZA	10	
97.4	ZB	11	C
100.0	1Z	12	
103.5	1A	13	
107.2	1B	14	
110.9	2Z	15	
114.8	2A	16	
118.8	2B	17	E
123.0	3Z	18	
127.3	3A	19	F
131.8	3B	20	
136.5	4Z	21	G
141.3	4A	22	
146.2	4B	23	
151.4	5Z	24	
156.7	5A	25	
162.2	5B	26	
167.9	6Z	27	
173.8	6A	28	
179.9	6B	29	

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CTCSS Compatibility (cont.)

Code	Motorola Code	TalkAbout, FreeTalk, Spirit	Sport 7/7X Code
186.2	7Z	30	
192.8	7A	31	
203.5	M1	32	
210.7	M2	33	
218.1	M3	34	
225.7	M4	35	
233.6	M5	36	
241.8	M6	37	
250.3	M7	38	

Maximum Communications Distance

The handy chart below provides you with some idea what kind of communications range to expect from your MicroConnect™ portable radio. The distances listed below are estimates only, and your range may vary due to local obstructions, dense foliage, battery condition, weather, height above average terrain, or other factors.

Maximum Communications Range

Obstructions	VHF-Low	VHF	UHF
Clear	3 miles	6 miles	5 miles
Minor (Trees and/or light building	1 ½ miles	2 ½ miles	3 miles
Dense (Dense trees, hills, or hardened buildings)	½ mile	1 mile	2 miles
Indoors (Distance in Square Feet)	100,000	250,000	320,000
Office Building (Distance in Floors)	10	18	25
Using a Repeater *	20 miles	25 miles	25 miles

* Users of the ProConnect™ and ClearConnect™ models may gain additional operating range, as much as 25 miles or more, through the use of repeater stations. Access to a repeater may require a monthly access fee. Actual communications range is based on the location of the repeater. Contact your local two-way radio shop for information on subscribing to repeater use.