

RITRON®

Quick Talk™ Voice Notification Radio Transmitter

Basic Owner's Manual



- CONSTRUCTION
- FACTORIES
- WAREHOUSES
- FARMS
- UTILITIES
- AIRPORTS
- STORES
- SECURITY
- LAW ENFORCEMENT
- SHIPPING
- APARTMENTS
- SPORTS
- HOTELS
- RESTAURANTS
- SCHOOLS
- TRANSPORTATION

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ACCESSORIES FOR QUICK TALK

These replacement and optional items are available from Ritron and its authorized dealers.

Item	Description
AFB-1545	Standard 16 in. Flexible Whip Antenna
RAM-1545	Magnetic-Mount Antenna w/ 20 ft. of Cable and a BNC Connector
RQT-UM2	Advanced Features Owner's Manual

WHAT THIS MANUAL COVERS

This manual (Ritron Item: RQT-UM1), covers basic operation of the Quick Talk Voice Notification Radio Transmitter. For most applications, this is all the information you will need. More complex features of Quick Talk are explained in the Advanced Features Manual (Ritron Item: RQT-UM2).

The following application notes are available via fax by calling Ritron at 317-846-1201, or on the Ritron Website at < <http://www.ritron.com> >.

App. Note # Description of Application Bulletin

RQT-AN01	Using 0-5 V and 4-20 mA Analog Inputs
RQT-AN02	Using Terminated Alarm Loops
RQT-AN03	Greater Range with Optional Antennas
RQT-AN03	Greater Ranges using Repeaters
RQT-AN04	Vehicle Detectors for the Quick Talk
RQT-AN05	Solar Power Panels for Quick Talk
RQT-AN06	Ritron Custom Engineering Services
RQT-AN07	Interfacing to High Power Radios
RQT-AN08	Quick Talk Agricultural Applications
RQT-AN09	Quick Talk Industrial Applications
RQT-AN10	Quick Talk Retail Business Applications
RQT-AN11	Security and Alarm Applications
RQT-AN12	Home and Sports Application

— — — WARNING — — —

IMPORTANT SAFETY INFORMATION

NOTICE: The Quick Talk unit should not be used to report conditions relating to safety of life or property.

To reduce the risk of fire, electric shock or personal injury, follow these basic safety instructions when using this unit.

1. Read and follow all instructions.
2. Disconnect the unit before cleaning. Do not use liquid or aerosol cleaners.
3. Use only approved power sources for the unit.
4. During thunderstorms, avoid contact with this unit and any external antenna system or wiring.
5. The Quick Talk switch and external power terminals are connected internally to the antenna connector. If the Quick Talk switch or power supply terminals contact high voltage, a hazardous condition may exist in that contacting the antenna could prove injurious or even fatal.
6. In general, the switches you connect to the Quick Talk are to be independent dry contact switches, and not part of any other "live" electrical circuit
7. If you are unsure whether your installation will be safe, contact an experienced electrician or electronics technician.

ABOUT THE QUICK TALK™ VOICE NOTIFICATION TRANSMITTER

GENERAL INFORMATION

The Quick Talk™ is a radio transmitter that reports changes in the status of switches by transmitting user-recorded voice messages to two-way mobile, portable or base station radios. Quick Talk transmits your voice message when the switch change occurs, and at intervals you select.

Because you provide and connect the switches, your Quick Talk units can report on the status of intrusion, tampering, equipment malfunction, liquid levels, machinery, pressure, temperature, power, smoke or leakage.

The Quick Talk is easily programmed to transmit on either an existing or a new radio frequency, with the most popular sub-audible coded squelch formats, such as Quiet Call® or Digital Quiet Call™. This enables all your personnel with JOBCOM®, PATRIOT® or equivalent two-way radios to hear the voice messages instantly, and to be advised of the current condition of each monitored location or device.

Quick Talk is housed in a weather-resistant enclosure, so it can be installed in a wide variety of indoor and outdoor locations. Because its six internal AA Alkaline batteries will power the unit for about a year, Quick Talk does not require AC line power.

QUICK TALK MODELS AND FREQUENCIES

There are two Quick Talk models, one for each of the most popular professional radio communications bands. The model number appears on a label on the front of the case, and on a second label inside the case.

MODEL	BAND	FREQUENCY RANGE
RQT-150	VHF-FM	150 to 165 MHz
RQT-450	UHF-FM	450 to 470 MHz

Ritron manufactures mobile, portable and base station two-way radios and repeaters for use with Quick Talk. Ritron pioneered the use of Color Dots on radios to identify frequencies.

Factory-programmed, default Quick Talk frequencies are:

- Blue Dot = 154.570 MHz for VHF units;
- Blue Star = 467.925 MHz for UHF units.

See page 4 for instructions on changing the Quick Talk transmit frequency to match an existing radio system.

QUICK TALK™ FEATURES

DESCRIBED IN THIS BASIC FEATURES MANUAL:

- Internal radio transmitter (separate VHF and UHF models).
- User-recorded voice messages; total recording time of 16 seconds.
- Terminals for connection to user-supplied switches.
- Included external antenna.
- Typical range of 1/2 mile. Longer range is possible using an optional antenna.
- Weather-resistant (not waterproof nor immersible) enclosure.
- Internal battery holder for six (6) AA Alkaline cells.
- Typical operating battery life of 1 year.
- Automatic low battery message.
- Limited One-year Factory Warranty.
- The following programmable features:
 - Transmit Frequency;
 - Tone Coded Squelch Encoder (Quiet Call® Interference Eliminator);
 - Digital Coded Squelch Encoder (Digital Quiet Call™ Interference Eliminator);
 - Message transmission schedules and limits.

DESCRIBED IN THE ADVANCED FEATURES OWNER'S MANUAL:

- Use of the second switch input terminals for messages
- Analog voltage (or 4-20 mA loop) inputs
- Multiple location identification messages
- Terminated alarm loop inputs
- Modulation Select for narrow band channels
- Connection and use of an external 12 Volt DC power supply.
- Use of solar power panels to operate and charge internal NiCad batteries
- Enabling and disabling the low battery or external power failure messages
- Battery saver options

IDENTIFICATION OF CONTROLS AND CONNECTIONS

1 ANTENNA CONNECTOR

The antenna radiates radio signals. Before using Quick Talk, make sure the antenna is fastened securely to this connector. See page 12.

2 TELEPHONE JACK

The modular telephone jack provides temporary connection to a standard pulse or rotary mode telephone unit, which is used by the owner to program Quick Talk voice messages and other settings.

WARNING: Do not connect the Quick Talk to a line from the telephone company; doing so will damage the unit, and void the manufacturer's warranty.

3 BATTERY HOLDER

The battery holder accommodates the six (6) standard "AA" alkaline cells required to power the Quick Talk.

NOTE: Always install a fresh set of alkaline batteries before programming the Quick Talk.

4 SWITCH #1 TERMINALS

These terminals are for connection to a user-supplied switch. The Quick Talk transmits voice messages determined by the state of this switch.

5 SWITCH #2 TERMINALS

These terminals are for connection to an optional user-supplied switch. This manual describes how to use Switch #2 as an On/Off switch to enable or disable the Quick Talk transmitter; see page 11. Other programmable features of Switch #2 are covered in the Advanced Features Owner's Manual (RQT-UM2).

6 EXTERNAL POWER TERMINALS

Refer to the Advanced Features Owner's Manual (RQT-UM2), for information about connecting an external 12 Volt DC power supply to these terminals.

7 WATERTIGHT STRAIN RELIEF CABLE FITTING

The cable to your external switches passes through this fitting. When the strain relief fitting is used with recommended cable sizes, it provides a water-resistant enclosure. **Do not overtighten this fitting.**

NOTES: Use Radio Shack Telephone Station Wire, 6-conductor, solid 24-AWG In-wall Type CM, Cat. No. 278-874, or round cable of equivalent size (0.114 to 0.250 inches in diameter).

If you cannot find suitable wire, call Ritron at 1-800-872-1872.

8 TRANSMITTER BANDWIDTH SELECT JUMPER

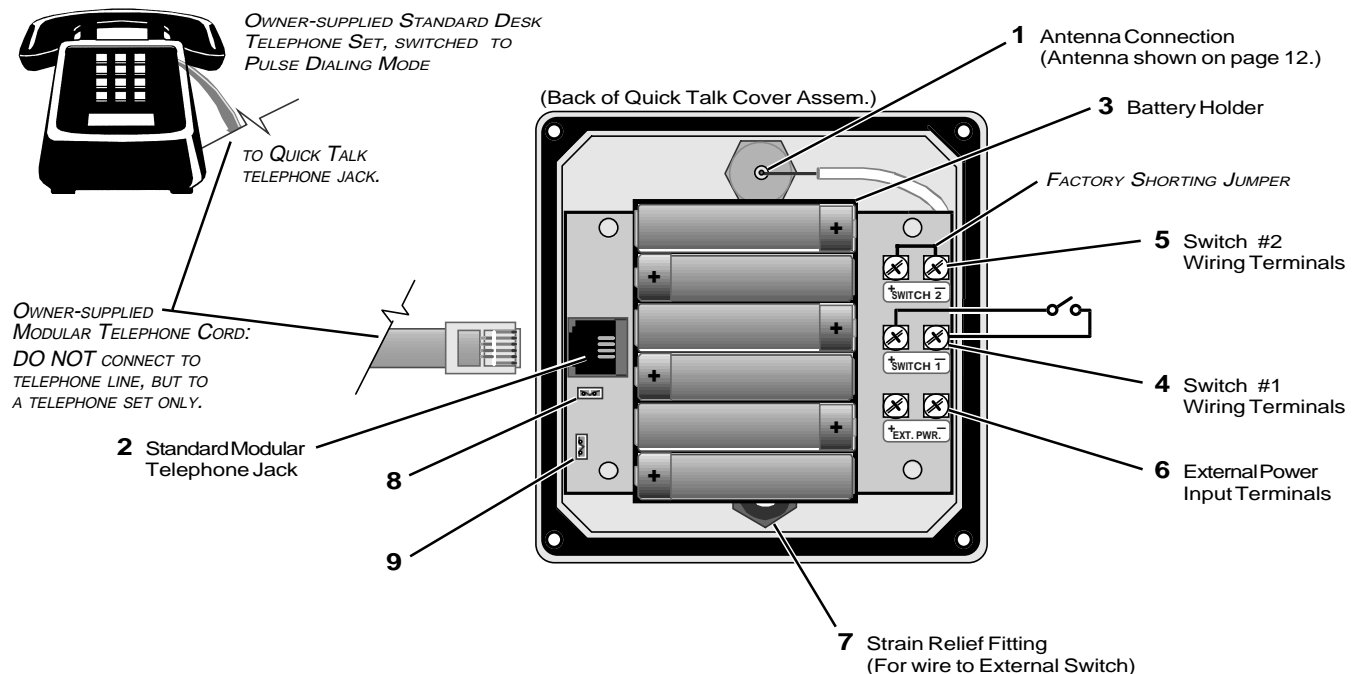
Do not remove this jumper. See the Advanced Features Owner's Manual (RQT-UM2).

9 BATTERY TYPE SELECTOR

Do not remove this jumper. As described in the Advanced Features Owner's Manual (RQT-UM2), this jumper controls charging of optional NiCad batteries.

NOTE: Do not remove any other fasteners or further disassemble the Quick Talk unit; doing so risks damage to the unit, and the voiding of the manufacturer's warranty.

FIGURE 1: CONTROL & CONNECTION LOCATIONS



PROGRAMMING YOUR QUICK TALK

FREQUENTLY ASKED QUESTIONS ABOUT QUICK TALK:

Do I have to program my Quick Talk? You may not need to program your Quick Talk at all. If you purchased a Quick Talk that is factory-programmed to your radio system frequency (check the Color Dots on your radios and the Quick Talk), and you do not use a form of Quiet Call coded squelch, you can connect your switch to the terminals marked "Switch #1", install the batteries and start using Quick Talk. The factory default voice messages are "Switch Open" and "Switch Closed". Otherwise, read this manual, then program your Quick Talk.

Do I need to program every feature? In many cases, no. The factory pre-programmed settings, explained in the instructions, may meet many of your needs.

How do I program my Quick Talk? Quick Talk is designed to be programmed using a commonly available standard telephone unit to enter programming information and also to record custom voice messages. However, the telephone must be both capable of and also switched to "Pulse" operation. The telephone is used only for programming; it is to be disconnected when the Quick Talk is operating normally.

What if I don't find what I need in this manual? Call Ritron; we will be glad to help you. For most applications, this manual should cover everything you will need to know. However, the Quick Talk has more capabilities and features than described here. The Advanced Features Owner's Manual, or the Application Notes listed on the inside cover may also be of help. Contact us at Ritron; we can make Quick Talk do just about anything.

Will it harm the Quick Talk if I program it improperly? No; however, you may need to erase all programming and start over; see page 10 to do this. Feel free to experiment with the various features and possible configurations.

Can my settings or messages get lost or erased if the battery runs down, or if my Quick Talk is disconnected? No. The settings and voice messages you enter are stored in special electronic memory devices in the Quick Talk that do not require power to hold the information. This means that if the batteries run down or if you remove them, you will not need to reprogram the unit. All your settings and messages will be there for you when you install fresh batteries.

What if I need more range? To increase the range of your Quick Talk transmissions, we suggest you first **relocate the unit**. Depending on the type of switch and wiring, you may use several hundred feet of wiring to connect the switch — this allows installation of the Quick Talk and its attached antenna for the best range, at an unobstructed and elevated position.

Also, Ritron offers several **optional "high gain" antennas**.

And, Ritron can provide a **radio repeater** to increase the range not only for your Quick Talk, but also for your entire radio system.

TEST THE TELEPHONE YOU WILL USE TO PROGRAM THE QUICK TALK:

A telephone that generates only Touch Tones CANNOT BE USED to program the Quick Talk.

Most special office telephones, speaker phones, and telephones with lighted dials usually cannot be used to program the Quick Talk.

- Remove the screws from the Quick Talk, then remove the cover from the unit. Use care to not damage or disturb any exposed internal components.
- Install six new alkaline "AA" batteries in the Quick Talk, matching the polarity marks on the batteries with the marks on the battery holder.
- Be sure your telephone is capable of "Pulse" mode. Most modern telephones have a selection switch for "P" (Pulse) and "T" (Tone). A "Pulse" mode telephone generates a rapid series of clicks (rather than Touch Tones) with the input (dialing) of each digit. If the telephone has this switch, it must be set to "P" (Pulse) to program the Quick Talk.
- The telephone must have a cord with a standard modular plug attached; insert the plug into the telephone jack in the Quick Talk.
- Test the telephone for suitability by plugging it into the Quick Talk's telephone jack and dialing "0" (Operator). A repeating busy signal in the telephone earpiece indicates it is acceptable for programming the Quick Talk.

If this telephone does not check out, try another.

Using the Telephone to Program Quick Talk

- Program the Quick Talk by dialing telephone numbers representing commands and settings, as this manual instructs.
- If you make a dialing error while programming, hang up the handset, then pick it up and dial again.

What the Tones (Beeps) in the Telephone Receiver Mean

- Quick Talk sounds a **brief acknowledgment tone** when you pick up the telephone handset; wait to hear this tone before you dial.
- Quick Talk emits a **series of repeating tones** until you hang up, if you mis-dial or if you use an invalid command; you may then pick up the handset and try your command again.
- Quick Talk responds with a **confirmation tone** after you dial command and setting numbers; you may then either hang up or dial another command.
- A series of **three short tones** cues you to begin speaking when you dial the command for recording a voice message into Quick Talk.

PROGRAMMING YOUR QUICK TALK TRANSMITTER FREQUENCY

What is my Radio System Frequency? Ritron pioneered the Color Dot system to simplify the identification of radio system frequencies for Ritron Jobcom radios. Color Dots are placed on the bottoms of and inside the enclosures of all Jobcom radios. Other manufacturers have also adopted this idea.

To identify your assigned frequency if your radios do not have a color dot, locate a label identifying the receiver frequency in megahertz (MHz). Your assigned frequency is also shown on your F.C.C. Station License. Call your radio dealer or Ritron for help if you cannot determine your radio's receiver frequency.

Do I need to program my Quick Talk's transmitter frequency? The original factory-programmed transmitter frequency of your Quick Talk is marked on the outside of the shipping box, and is also indicated by a color dot on the inside the unit case. If the Quick Talk frequency matches your radio system frequency, and if the Quick Talk has not been reprogrammed since it left the factory, you may skip this section and proceed to the next.

TO PROGRAM THE QUICK TALK TRANSMITTER FREQUENCY:

- Determine the frequency of your radio system.
- Find your frequency in the appropriate table at right, and determine its corresponding two digit code. If your radio system frequency is not in the chart, your Quick Talk must be programmed by a radio dealer or by Ritron.
- Pick up the telephone receiver, and listen for the acknowledge tone. Dial "11", then the digits of the selected frequency code from the table.

Examples: If the Quick Talk is a VHF RQT-150 model, and the radios operate on 154.570 MHz (Blue Dot frequency), dial "11-02".

If the Quick Talk is a UHF RQT-450 model, and the radios operate on 467.925 MHz (Blue Star frequency), dial "11-08".
- Quick Talk responds with a single beep to indicate it has programmed the transmitter frequency.
- You may either hang up or continue programming.

NOTES: If you make a dialing mistake while programming, hang up the telephone handset, then pick it up and dial again.

If you reprogrammed the Quick Talk frequency, you may wish to remove the Color Dot from inside the case, to avoid later confusion.

What the Tones (Beeps) in Your Earpiece Mean:

- A series of **three short tones** cues you to begin recording a message.
- A **single brief tone** means your command is accepted and stored.
- A series of **long repeating tones** means your command was not understood; hang up and dial again.

TABLE 1: TRANSMIT FREQUENCY CODES

(VHF Business Band)

QUICK TALK FREQ. CODE	Model RQT-150	
	MHz	Frequency Color
01	154.600	Green Dot
02	154.570	Blue Dot
03	151.625	Red Dot
04	151.955	Purple Dot
05	151.925	
06	154.540	
07	154.515	
08	154.655	
09	151.685	
10	151.715	
11	151.775	
12	151.805	
13	151.835	
14	151.895	
15	154.490	
16	151.655	
17	151.745	
18	151.865	

(UHF Business Band)

QUICK TALK FREQ. CODE	Model RQT-450	
	MHz	Frequency Color
01	467.7625	J
02	467.8125	K
03	464.5500	Yellow Dot
04	464.5000	Brown Dot
05	467.8500	Silver Star
06	467.8750	Gold Star
07	467.9000	Red Star
08	467.9250	Blue Star
09	469.2625	
10	462.5750	White Dot
11	462.6250	Black Dot
12	462.6750	Orange Dot
13	464.3250	
14	464.8250	
15	469.5000	
16	469.5500	
17	463.2625	
18	464.9125	
19	464.6000	
20	464.7000	

PROGRAMMING THE QUIET CALL SUB-AUDIBLE CODED SQUELCH INTERFERENCE ELIMINATOR

What is Quiet Call Sub Audible Coded Squelch?

The Quick Talk radio transmitter is compatible with two standard communications industry sub-audible signaling formats: QC® (Quiet Call Interference Eliminator), and DQC™ (Digital Quiet Call Interference Eliminator). Both Quiet Call formats unlock receivers programmed to require these codes -- they screen out interference from other radio systems operating on your same frequency.

QC® Quiet Call is Ritron's trade name for what the communications industry calls sub-audible (below the range of human hearing) tone squelch, or CTCSS (Continuous Tone Coded Subaudible Squelch). Other radio manufacturers use different trade-names for essentially the same system. You may program a specific QC code into your Quick Talk to transmit with the voice messages, which will "unlock" the receivers in your radio system.

DQC™ Digital Quiet Call is Ritron's digital coded squelch, and works the same as QC, except it is a **digital** code that is transmitted with the voice messages.

Do I need to program my Quick Talk with a Quiet Call Code? Your radio system may or may not use coded squelch signaling. If you have programmed the Quick Talk to match your radio frequency, and your radios are not receiving Quick Talk transmissions unless the "monitor" or "test" button is pressed, your system is probably using Coded Squelch. Refer to your radio manual, or contact your radio dealer or Ritron if you are unsure about this issue.

If your Quick Talk was previously programmed with a Quiet Call code and you need to remove it, follow the procedure below, using No Tone code, "44", as shown in the table.

To Program A Quiet Call Sub-Audible Squelch Code:

- a. Determine the Quiet Call code tone that your radio system uses. If your system uses Digital Quiet Call, go to the next page.
- b. Select the desired Tone Code from Table 2 at right; write down the code.

NOTE: If your radio system does not use coded squelch, program **No Tone**, code, "44".

- c. Pick up the telephone receiver and listen for the acknowledge tone.
- d. Dial "21", then the 2-digit QC Code you have selected.

For example, if your Quiet Call frequency is 103.5 Hz (Code 13), dial: "21-13".

Quick Talk will respond with a confirmation tone.

- e. You may either hang up or continue programming additional features.

WRITE DOWN your frequency (from page 4), and your QC code (from page 5 or page 6).

Frequency: _____ ; QC code: _____

TABLE 2: QUIET CALL TONE CODES

QUICK TALK QC CODE	Freq. (Hz)	Other Radio Brands Tone Code	QUICK TALK QC CODE	Freq. (Hz)	Other Radio Brands Tone Code
01	67.0	XZ	27	167.9	6Z
02	71.9	XA	28	173.8	6A
03	74.4	WA	29	179.9	6B
04	77.0	XB	30	186.2	7Z
05	79.7	SP	31	192.8	7A
06	82.5	YZ	32	203.5	M1
07	85.4	YA	33	210.7	--
08	88.5	YB	34	218.1	--
09	91.5	ZZ	35	225.7	--
10	94.8	ZA	36	233.6	--
11	97.4	ZB	37	241.8	--
12	100.0	1Z	38	250.3	--
13	103.5	1A	39	69.4	--
14	107.2	1B	40	159.8	--
15	110.9	2Z	41	165.5	--
16	114.8	2A	42	171.3	--
17	118.8	2B	43	177.3	--
18	123.0	3Z	*44	No Tone	--
19	127.3	3A	45	183.5	--
20	131.8	3B	46	189.9	--
21	136.5	4Z	47	196.6	--
22	141.3	4A	48	199.5	--
23	146.2	4B	49	206.5	--
24	151.4	5Z	50	229.1	--
25	156.7	5A	51	254.1	--
26	162.2	5B			

* **Use Code "44"** to program No Tone for systems without a Coded Squelch Interference Eliminator feature. Refer to the text at left.

PROGRAMMING DIGITAL QUIET CALL SUB-AUDIBLE CODED SQUELCH INTERFERENCE ELIMINATOR

What is Digital Quiet Call? Digital Quiet Call (DQC) is a digital sub-audible coded squelch system.

Do I need to program my Quick Talk with a Digital Quiet Call code? If your radio system does not use Digital Quiet Call, or any other tradename equivalent, skip this section and go to the next programming feature.

TO PROGRAM A DIGITAL QUIET CALL CODE:

- a. Determine the specific Digital Quiet Call (DQC) code used for your system, then make sure this code is listed in Table 3, which shows all of the possible DQC codes for Quick Talk. If your system code is not listed, call your radio service provider or Ritron.
- b. Write down your code.
- c. Pick up the telephone receiver, and listen for the acknowledge tone.
- d. Dial "22" followed by the selected 3-digit DQC code. For example if your DQC code is "131", dial "22-131".
Wait for the Quick Talk Confirmation Beep.
- e. You may either hang up or continue programming.

TABLE 3: DIGITAL QUIET CALL CODES

Normal	Invert	Normal	Invert	Normal	Invert
023	047	174	074	445	043
025	244	205	263	464	026
026	464	223	134	465	331
031	627	226	411	466	662
032	051	243	351	503	162
043	445	244	025	506	073
047	023	245	072	516	432
051	032	251	165	532	343
054	413	261	732	546	132
065	271	263	205	565	103
071	306	265	156	606	631
072	245	271	065	612	346
073	506	306	071	624	632
074	174	311	664	627	031
114	712	315	423	631	606
115	152	331	465	632	624
116	754	343	532	654	743
125	365	346	612	662	466
131	364	351	243	664	311
132	546	364	131	703	565
134	223	365	125	712	114
143	412	371	734	723	431
152	115	411	226	731	155
155	731	412	143	732	261
156	265	413	054	734	371
162	503	423	315	743	654
165	251	431	723	754	116
172	036	432	516		

TEST YOUR QUICK TALK RADIO TRANSMITTER

What is the purpose of testing the Quick Talk radio transmitter?

After following the previous instructions, your Quick Talk will be programmed to transmit on the same frequency as your radio receivers, and you also will have programmed your Quick Talk to transmit any coded squelch signals required for your radio system.

Do I need to test my Quick Talk Transmitter? Yes; performing this test now will save you time and confusion later.

TO TEST THE QUICK TALK RADIO TRANSMITTER:

- a. Attach the Quick Talk flexible antenna.
- b. Turn on your radio receiver.
- c. Momentarily place a screwdriver, paper clip or other electrically conductive item across the Switch #1 terminals.
- d. Quick Talk transmits the Closed and Open Switch messages, which you should be able to hear on your radio receiver.

If you do not hear the messages, you have probably not properly programmed the Quick Talk transmitter frequency or the Quiet Call Coded Squelch. In this case, repeat the programming, then perform this test again.

TEST YOUR SWITCH'S OPEN AND CLOSED CONDITIONS

What is the purpose of testing my switch? In Quick Talk's basic operating mode, you may record two (2) voice messages for the Quick Talk to transmit. One message is transmitted when the switch is Opened and the other is transmitted when the switch is Closed. Each message must be eight (8) seconds or less in length.

Before you record these switch condition messages, determine how your switch works by using the factory prerecorded messages in the Quick Talk. After you have programmed the Quick Talk with your radio system frequency and with any required sub-audible squelch codes, use the following procedure.

Do I need to test my switch? If you are certain of the conditions which cause your switch to open and close, you do not need to perform this test. However, we recommend you do test your switch, because doing so will confirm you have properly programmed the Quick Talk transmitter frequency — and, if required for your radio system, the Quiet Call Interference Eliminator squelch code.

To Test Your Switch and Verify Reception of Messages by Your Radios

1. Remove the batteries from the holder.
2. **Review the safety precautions on Page ii of this manual before connecting your switches. When you are sure your connections will be safe, connect your switch to the Quick Talk terminals labeled Switch #1. See Figure 2 below.**
3. Reinstall fresh AA Alkaline batteries in the Quick Talk according to the polarity marks.

4. Activate your switch; listen to your two-way radio as the factory default messages are transmitted. (The message will be either "Switch One Open" or "Switch One Closed".)

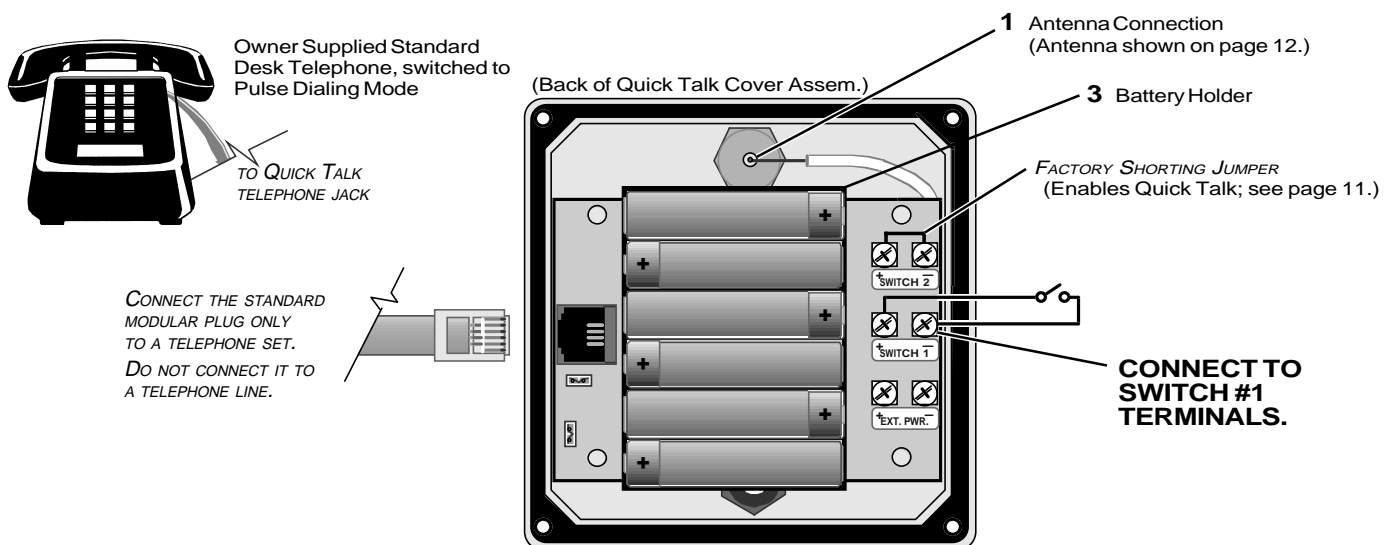
Write down a description of how the condition of your switch corresponds to the transmitted message. Then deactivate the switch and listen to the other transmitted message; again, write down the results.

5. From performing Step 4, above, you should understand how your switch works, and the meaning of its open and closed states — essential knowledge to program a descriptive voice message for each switch condition.

For example, if your switch is a magnetic reed switch on a door, and the switch closes when the door is opened, you can record the phrase "Door three open" for the switch closed condition, and then "Door three closed" for the switch open condition. Note that magnetic reed switches are available which work in the opposite way.

NOTE: We suggest that you **do not record over** the factory prerecorded messages until you are sure how your switch works. If the factory-programmed messages have been erased, you will have to use an electrician's continuity tester or similar instrument to determine how your switch works.

FIGURE 2: CONNECTIONS FOR TESTING YOUR SWITCH



RECORDING VOICE PHRASES FOR YOUR SWITCH CONDITIONS

What is the purpose of Recording Voice Phrases?

Recording customized voice phrases gives Quick Talk messages unmistakable meaning and significance. The standard factory prerecorded messages of "Switch Open" and "Switch Closed" require the listener to know how the switch works and what it does. However, when a user hears a custom message such as "Water pump three running hot", the meaning is clear.

Do I need to program Voice Phrases? If the factory-recorded messages "Switch Open" and "Switch Closed" suit your application, you may skip this section.

Your recorded voice message will sound only as good as the telephone set you use. If your message has the audio too low, record it again, speaking louder. If your message is distorted, record it again, speaking softer. If you are dissatisfied with the audio quality, try a different telephone set.

When the Quick Talk is transmitting, it draws maximum power from the battery, and can also interfere with other transmissions. Therefore, when you record a voice phrase, hang up when you are finished speaking. Otherwise, the Quick Talk transmitter will be on for the full eight seconds, regardless of the actual message length.

To Record Your Switch Open Condition Phrase

- a. Pick up the telephone receiver, wait for the beep and dial "**311**".
Quick Talk sounds three short tones to prompt you to begin speaking . . .
- b. Record a phrase no longer than eight seconds, describing the open condition of your switch.
Example: "Pump motor temperature OK".
- c. Hang up the telephone when you complete your phrase.
- d. Pick up the telephone and dial "**411**". Your phrase will be played back through the telephone receiver.
- e. Return to Step a above and record again if you are not pleased with the results.

To Record Your Switch CLOSED Condition Phrase

- a. Pick up the telephone receiver, wait for the beep and dial "**312**".
Quick Talk sounds three tones to prompt you to begin speaking . . .
- b. Record a phrase no longer than eight seconds, describing the closed condition of your switch.
Example: "Pump motor over temperature".
- c. Hang up the telephone when you complete your phrase.
- d. Pick up the telephone and dial "**412**". Your phrase will be played back through the telephone receiver.
- e. Return to Step a above and record again if you are not pleased with the results.

PLAYING BACK THE OPEN AND CLOSED VOICE PHRASES FOR YOUR SWITCH CONDITIONS

To Play Back the Switch Open Condition Phrase

- a. Pick up the telephone.
- b. After the tone, dial "**411**". Quick Talk plays the Switch Open condition phrase.
Example: "Pump motor temperature OK".
- c. Wait for the confirmation beep, then hang up the telephone, or continue programming.

To Play Back the Switch Closed Condition Phrase

- a. Pick up the telephone.
- b. After the tone, dial "**412**". Quick Talk plays the Switch Closed condition phrase.
Example: "Pump motor running hot".
- c. Wait for the confirmation beep, then hang up the telephone, or continue programming.

PROGRAMMING HOW MANY TIMES YOUR RECORDED VOICE PHRASES ARE REPEATED IN EACH TRANSMISSION

What is the purpose of setting the number of times the Voice Phrase is repeated in each Transmission? Your previously recorded voice phrase can be programmed to repeat from one time to nine times in each Quick Talk radio transmission, depending on how you program this feature. More urgent messages may have more phrase repeats.

Example: You previously recorded the message "Pump Motor Hot", then programmed Quick Talk to repeat the phrase two (2) times in each transmission. In this case, activating the switch results in the Quick Talk transmitting:

"...beep. Pump motor hot. Pump motor hot. beep..."

The beginning and ending beeps are added automatically to attract attention to Quick Talk transmissions.

Do I need to program this feature? The Quick Talk is set at the factory to play each recorded voice phrase one time in each transmission. If this is sufficient for your application, you can skip to the next section, in which we explain how to program the transmission itself to be repeated at different intervals.

To Program the Number of Times the Switch Open Phrase is Repeated in Each Transmission:

1. Pick up the telephone receiver; listen for the tone.
2. Dial "711" then a single digit indicating how many times you want the voice phrase repeated in each transmission, as shown in Table 4.

Example: To repeat the phrase three times, dial "711-3".

Wait for the confirmation tone after dialing.

3. Hang up the telephone or continue programming.

To Program the Number of Times the Switch Closed Phrase is Repeated in Each Transmission:

1. Pick up the telephone receiver, listen for the tone.
2. Dial "712", then a single digit indicating how many times you want the voice phrase repeated in each transmission, as shown in Table 4.

Example: To repeat the phrase five times, dial "712-5".

Wait for the confirmation tone after dialing.

3. Hang up the telephone or continue programming.

— TABLE 4 —

VOICE PHRASE REPEATS IN EACH TRANSMISSION	CODE NUMBER
1 time	1 — DEFAULT
2 times	2
3 times	3
4 times	4
5 times	5
6 times	6
7 times	7
8 times	8
9 times	9

PROGRAMMING A BROADCAST SCHEDULE FOR SWITCH STATUS TRANSMISSIONS

What is the purpose of programming a Broadcast Schedule for Switch Status Transmissions? You can program different switch status transmission schedules for the open condition, and for the closed condition of your switch.

Example: The switch status message for **switch open** is "Pump motor temperature OK". You may schedule the Quick Talk to transmit this message once every two hours; this way, you know the Quick Talk is operating properly.

If the corresponding switch status message for **switch closed** is "Pump Motor Over Temperature", you may schedule the Quick Talk to broadcast this message every two minutes, so the situation would receive prompt attention.

Do I need to program this feature? The Quick Talk is set at the factory to transmit a switch status message one time with each switch change. If this is sufficient for your application, you can skip to the next section.

To Program a Broadcast Schedule of Switch Status Transmissions for the Switch Open Condition:

1. Pick up the telephone receiver; listen for the tone.
2. Dial "511", then dial the one-digit code number from Table 5 below.

The Factory Default is "511-1", which means the transmission is sent one time when the switch changes to open condition.

Wait for the confirmation beep after dialing.

3. Hang up the telephone or continue programming.

To Program a Broadcast Schedule of Switch Status Transmissions for the Switch Closed Condition:

1. Pick up the telephone receiver; listen for the tone.
2. Dial "512", then the one-digit code number from Table 5.

The Factory Default is "512-1", which means the transmission is sent one time when the switch changes to closed condition.

Wait for the confirmation beep after dialing.

3. Hang up the telephone or continue programming.

— TABLE 5 —

MESSAGE SCHEDULE	CODE NUMBER
Never send messages for this condition	0
On switch condition change only	1 — DEFAULT
Every 30 seconds	2
Every (1) minute	3
Every (2) minutes	4
Every (5) minutes	5
Every (10) minutes	6
Every (30) minutes	7
Every (1) hour	8
Every (2) hours	9

PROGRAMMING A LIMIT TO THE NUMBER OF SCHEDULED TRANSMISSIONS

What is the purpose of limiting the number of times a scheduled voice message is transmitted? In the previous section, you have programmed the Quick Talk to transmit a switch status message at regular intervals. In this section, you can set a limit to the number of times the message will be transmitted at the scheduled intervals.

Example: Suppose you have a vehicle detector switch that closes when it detects a vehicle at the delivery door of your building. Your recorded message might then be "Vehicle at Delivery Door". You may want this message to be transmitted every two minutes for approximately a quarter hour after a vehicle is detected, then to stop transmitting until the vehicle is moved. In this case, you would program the message schedule (in the previous section of this manual), for every two minutes, and set the message limit to "8", as described here.

When a vehicle arrives, the switch closes and the message is transmitted every 2 minutes until it has been sent 8 times over a span of 16 minutes, unless the vehicle leaves before 16 minutes has lapsed. In this case, the switch opens and the message ceases when the vehicle is moved.

When another vehicle arrives, the Quick Talk again transmits the message every two minutes for about a quarter of an hour, or until the vehicle leaves.

Do I need to program this feature? The Quick Talk is set at the factory to transmit switch status messages without limit. For example, if you programmed the Quick Talk to transmit a status message every hour, it would continue to do so until the battery runs down. If this programming is sufficient for your application, you can skip to the next section.

Set Scheduled Message Repeat Limit for Switch Open

- From Table 6 below, select the code number for the desired number of messages.
- Lift the telephone receiver and dial "611", then dial the selected Code Number.
Quick Talk responds with the single confirmation tone.
- You may either hang up or continue programming.

Set Scheduled Message Repeat Limit for Switch Closed

- From Table 6 below, select the code number for the desired number of messages.
- Lift the telephone receiver and dial "612", then dial the selected Code Number.
Quick Talk responds with the single confirmation tone.
- You may either hang up or continue programming.

— TABLE 6 —

MESSAGE SCHEDULED REPEAT LIMIT	CODE NUMBER
1 time	1
2 times	2
3 times	3
4 times	4
5 times	5
6 times	6
7 times	7
8 times	8
Repeat Forever, No Limit	9 — DEFAULT

TO ERASE AND REPROGRAM THE QUICK TALK TO ITS ORIGINAL FACTORY SETTINGS.

What is the purpose of erasing and reprogramming the Quick Talk to its original factory settings? You can erase all your programming to return Quick Talk to its Factory Default Settings with this command.

NOTE: This command does not restore the Factory Default recorded voice messages. Any recorded messages may be lost by use of this command; you will have to record them again, using the instructions in this manual.

Do I need to use this feature? If you are unsure how the Quick Talk features are programmed, and want to start over again, use this feature.

To Erase and Reprogram the Quick Talk Settings as Originally Factory Programmed:

- Pick up the telephone receiver, wait for the acknowledgment tone.
- If your Quick Talk is a VHF-FM RQT-150 model, dial "978", **OR**
If your Quick Talk is a UHF-FM RQT-450 model, dial "979".
- After you hear the confirmation tone, hang up the telephone.
- Play back your voice phrases and re-record them as necessary.

RECORDING A UNIQUE LOW BATTERY MESSAGE TO IDENTIFY A QUICK TALK

What is the purpose of recording a unique Voice Phrase for the Low Battery Message? When it senses the installed batteries are nearly run down, Quick Talk will transmit one time each hour the factory-programmed message: "Low Battery". If you maintain several Quick Talk transmitters within radio range of each other, you may customize this feature to easily determine which unit needs new batteries.

Do I need to program this feature? If you use only one Quick Talk in any area, or if you regularly change Quick Talk batteries, the factory-programmed message may be sufficient for your application. You can skip to the next section.

To Program the Low Battery Alert Phrase:

- a. Pick up the telephone receiver, wait for the beep, then dial "35".
Quick Talk sounds three short tones to prompt you to begin speaking . . .
- b. Record a phrase no longer than one and one-half (1.5) seconds, indicating Low Battery, and identifying the Quick Talk unit.
For example say: "Low Battery Five".
- c. Hang up the telephone when you are done speaking.
- d. Pick up the telephone and dial "45" to hear your phrase played back through the telephone receiver.
- e. If you are not pleased with the results, you may return to Step a above and record again.

NOTE: We suggest you physically mark the Quick Talk with the same unique identifier (number) you recorded.

RESTART THE QUICK TALK WHEN YOU ARE DONE PROGRAMMING

What is the purpose of restarting the Quick Talk? If you have changed message schedules or limits, restarting the Quick Talk ensures that all of internal clocks and counters are set properly.

Do I need to restart the Quick Talk? It is best if you do.

To Leave Telephone Programming Mode and Restart the Quick Talk:

- Pick up the telephone receiver, wait for the beep and dial "999".
Quick Talk responds with a single short tone.

NOTE: Be certain to hang up and to disconnect the telephone from Quick Talk.

ADDING A SECOND SWITCH TO DISABLE THE QUICK TALK TRANSMITTER

What is the purpose adding a second switch to disable the Quick Talk? There may be times you want the Quick Talk to **not transmit** messages.

Example: If you use the Quick Talk to report the status of an entry door for the night watchman, you may wish to not hear the status messages throughout the day. You can use the second switch to disable the Quick Talk during the day.

Do I need to add a second switch? If you do not need to enable and disable Quick Talk messaging, there is no need to connect a switch to the Switch #2 terminals. Leave the Switch #2 Factory Jumper in place. You can skip to the next section.

To add a second switch to disable Quick Talk Messaging:

- a. Remove the shorting jumper from the Switch #2 terminals.
- b. Connect an external switch to the terminals marked Switch #2.

NOTE: When Switch #2 is closed, Quick Talk functions normally. When Switch #2 is open, Quick Talk is disabled and will not transmit messages.

When Switch #2 has been open (Quick Talk disabled), and it is then closed, Quick Talk transmits the prerecorded message describing the current condition of Switch #1.

QUICK TALK PRE-INSTALLATION CHECKLIST

Quick Talk Pre-Installation Checklist:

- a. Make sure your radios hear the Quick Talk transmissions.
- b. Review your recorded voice phrases.
- c. Review your message schedules and limits.

QUICK TALK INSTALLATION

WHEN YOU ARE FINISHED PROGRAMMING:

1. **Hang up and disconnect** the telephone from the internal jack on the Quick Talk.
2. **Test the operation** of the Quick Talk before putting it into service by activating the switch and listening to the message(s) received on your radio.
3. **Replace the cover** and (4) cover screws; snug down, but do not overtighten the screws. Excessive force can break the plastic enclosure material.

NOTE: Refer to Figure 3 at right.

4. **Attach the antenna and seal the connection:**
 - a. Insert, rotate and lock the antenna to the Quick Talk antenna jack.
 - b. Orient the antenna in a vertical position.
 - c. Seal the antenna connection to hold the antenna in vertical position, to protect antenna fittings, and to maintain water-resistance of the Quick Talk in wet or outdoor environments.

Use Archer Connector Sealant, Radio Shack Catalog Number 278-1645 or an equivalent. Wrap the connection with the sealant tape and press it securely in place. See Figure 3, at right, and instructions for the sealant.

5. **Test for sufficient broadcast range** when choosing the location. For maximum range and coverage, install the unit as high off the ground as possible. Be aware that metal or wires near the antenna can block or absorb radio transmissions. Choose a well-shaded location.

NOTE: An optional high gain antenna is available from Ritron; call for information.

6. **Position the unit** as shown in Figure 3, and secure it in place with screws through the enclosure flanges. Do not overtighten these screws; you might break the plastic flanges.

IMPORTANT: Contact a qualified technician or electrician if you are not certain your installation will work properly and safely.

CARE AND MAINTENANCE

Moisture: When the antenna sealant and power cable recommendations are followed, the Quick Talk is highly weather-resistant in outdoor environments. Do not immerse the unit in water.

Temperature: The Quick Talk is designed to operate between -22 and +140 degrees Fahrenheit. Like all electronic equipment, Quick Talk should not be subjected to extreme heat. A shaded area is an ideal outdoor location.

Vibrations/ Shocks: Though the Quick Talk is designed to be rugged, it cannot be expected to survive extreme abuse.

Chemicals: Do not use harsh, corrosive or abrasive chemicals to clean the Quick Talk case; use only a cloth moistened with water. Do not attempt to clean the printed circuit board inside the housing.

Batteries: Use only fresh, new alkaline batteries when programming Quick Talk. Acceptable brands and types are: Duracell MX1500B, Eveready E91, Rayovac 815 or equivalent.

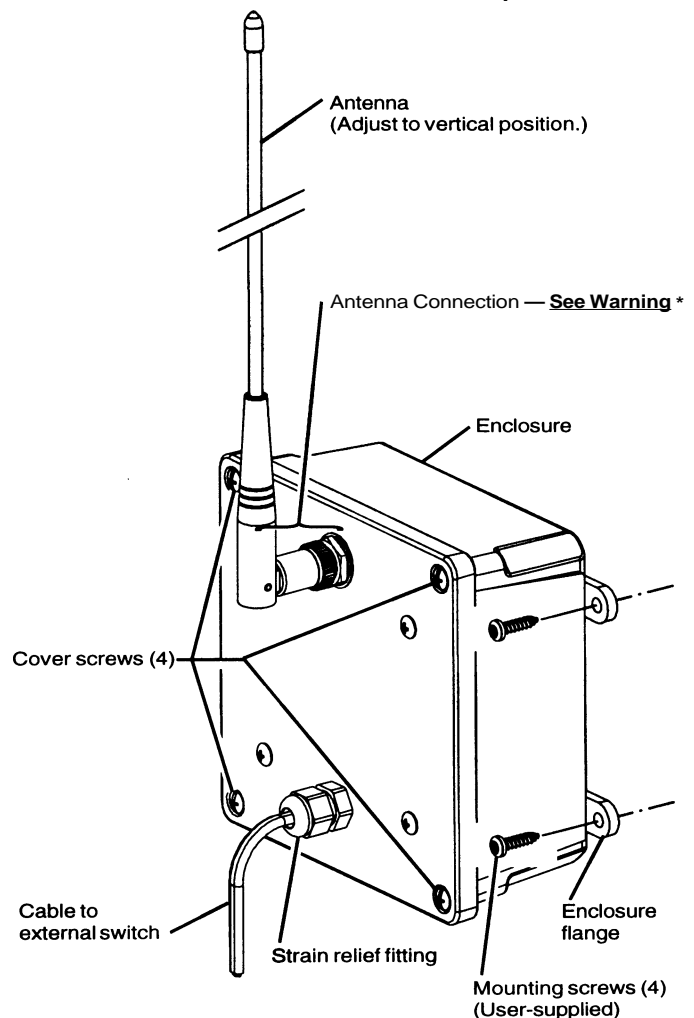
NOTE: Refer to the Advanced Features Owner's Manual for information on using rechargeable NiCad AA batteries, charged by an optional external 12 Volt DC power supply.

Estimated Battery Life: Starting with a fresh set of AA alkaline batteries, Quick Talk can transmit about 7,000 voice messages over a period of one year before the batteries will need to be replaced.

Automatic Low Battery Alert Message: If the battery voltage drops below approximately 6 Volts, the Quick Talk transmits a factory prerecorded message, "Low Battery", every 60 minutes. When this occurs, replace the batteries promptly — within a day or so.

FIGURE 3: QUICK TALK INSTALLATION

* **WARNING:** The antenna connection **MUST BE SEALED** if the Quick Talk is to be used outdoors. See the illustration, and Step 4 at left.



F.C.C. LICENSING AND REGULATIONS

The Rules and Regulations of the United States Federal Communications Commission (FCC) require you or your radio service provider to have a license for your radio system before activating the Quick Talk radio transmitter. If you already are operating a licensed radio system, you probably can add a Quick Talk without any changes to that license.

The station licensee is responsible for ensuring that transmitter power, frequency and modulation are within the limits specified by the station license, and also for proper operation and maintenance of the radio equipment. These responsibilities include checking the transmitter frequency and modulation periodically, using appropriate methods.

Ritron or your Ritron Dealer can assist you with all these requirements. You may also contact the FCC directly by any of the following methods:

To obtain copies of FCC forms and instructions use the FCC Fax-On-Demand system at **1-202-418-0177**. Request Document 000600.

For more information, go to the FCC Internet Website at:
< <http://www.fcc.gov> >

SAFETY STANDARDS — The FCC has adopted a safety standard for human exposure to radio frequency electromagnetic energy emitted by FCC regulated equipment. The Quick Talk conforms to the standards effective at the time of its equipment authorization by the FCC. In general these standards recommend that you:

- DO NOT allow the antenna to come very close to, or to touch exposed parts of the body, especially the face or eyes, while transmitting.
- DO NOT transmit near electrical blasting caps or in an explosive atmosphere.
- DO NOT allow children to play with radio transmitters.
- BE AWARE of the conditions which cause the unit to transmit.

SERVICE - Federal law prohibits you from making any internal adjustments to the transmitter, and from changing transmit frequencies unless you are specifically designated by the licensee.

DO NOT ADJUST OR TAMPER with components or the printed circuit board in any manner not directed in this manual. Unauthorized adjustments may render the unit inoperable; repair will be at owner's expense.

If your radio equipment fails to operate properly, or if you wish to have the Ritron Quick Talk serviced, contact your authorized dealer, or call Ritron at 1-317-846-1201 and ask for the Repair Department.

RITRON, INC. LIMITED WARRANTY

WHAT THIS WARRANTY COVERS: RITRON, INC. ("RITRON") provides the following warranty against defects in materials and/or workmanship in **RITRON RQT-150 AND RQT-450 QUICK TALK Voice Notification Telemetry units** under normal use and service during the applicable warranty period, as stated below. "Accessories" means antennas, chargers, wire, cable and items contained in the programming and programming/ service kits.

WHAT IS COVERED	FOR HOW LONG	WHAT RITRON WILL DO
Quick Talk Telemetry Unit	1 year *	During the first year after date of purchase, RITRON will repair or replace the defective product, at RITRON's option, parts and labor included at no charge.
Accessories	90 days *	* After date of purchase

WHAT THIS WARRANTY DOES NOT COVER:

- Any technical information provided with the covered product or any other products;
- Installation, maintenance or service of the product, unless this is covered by a separate written agreement with RITRON;
- Any products not furnished by RITRON which are attached or used with the covered product, or defects or damage from the use of the covered product with equipment that is not covered;
- Defects or damage, including broken antennas, resulting from:
 - misuse, abuse, improper maintenance, alteration, modification, neglect, accident or act of God, or,
 - the use of covered products other than in normal and customary manner, or,
 - improper testing or installation;
- Defects or damages from unauthorized disassembly, repair or modification, or where unauthorized disassembly, repair or modification prevents inspection and testing necessary to validate warranty claims;
- Defects or damages in which the serial number has been removed, altered or defaced.

IMPORTANT: This warranty sets forth the full extent of RITRON's express responsibilities regarding the covered products, and is given in lieu of all other express warranties. What RITRON has agreed to do above is your sole and exclusive remedy. No person is authorized to make any other warranty to you on behalf of RITRON. Warranties implied by state law, such as implied warranties of merchantability and fitness for a particular purpose, are limited to the duration of this

limited warranty as it applies to the covered product. Incidental and consequential damages are not recoverable under this warranty (this includes loss of use or time, inconvenience, business interruption, commercial loss, lost profits or savings). Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitation on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. Because each covered product system is unique, RITRON disclaims liability for range, coverage, or operation of the system as a whole under this warranty.

WHO IS COVERED BY THIS WARRANTY: This warranty is given only to the purchaser or lessee of covered products when acquired for use, not resale. This warranty is not assignable or transferable.

HOW TO GET WARRANTY SERVICE: To receive warranty service, you must deliver or send the defective product, delivery costs and insurance prepaid, within the applicable warranty period, to RITRON, INC., 505 West Carmel Drive, Carmel, Indiana 46032, Attention: Warranty Department. Please point out the nature of the defect in as much detail as you can. You must retain your sales or lease receipt (or other written evidence of the date of purchase) and deliver it along with the product. If RITRON chooses to repair or replace a defective product, RITRON may replace the product or any part or component with reconditioned product, parts or components. Replacements are covered for the balance of the original applicable warranty period. All replaced covered products, parts or components become RITRON's property.

RIGHTS TO SOFTWARE RETAINED: Title and all rights or licenses to patents, copyrights, trademarks and trade secrets in any RITRON software contained in covered products are and shall remain in RITRON. RITRON nevertheless grants you a limited non-exclusive, transferable right to use the RITRON software only in conjunction with covered products. No other license or right to the RITRON software is granted or permitted.

YOUR RIGHTS UNDER STATE LAW: This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

WHERE THIS WARRANTY IS VALID: This warranty is valid only within the United States, the District of Columbia and Puerto Rico.