

RITRON, INC.

Quick Talk Voice Notification Radio Transmitter Basic Owner's Manual



- CONSTRUCTION
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Ritron Publication RQT-UM1 14500006 Revision B 02-12-1999

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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 19' Flexible Whip Antenna
ABD-1545	High Performance External Antenna
RAC-02BN	Coaxial Cable for External Antenna, 20 ft.
RQT-UM2	Advanced Features Applications Manual

WHAT THIS MANUAL COVERS

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

In addition, 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
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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

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

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 are connected to a high voltage a hazardous condition may exist in that contact with the antenna may prove injurious or even fatal.
6. In general, the switches you connect to the Quick Talk should be independent dry contact switches and not a 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 or portable radios. Quick Talk transmits your voice message when the switch change occurs and at intervals you select.

Because you provide and connect the switches to your Quick Talk units, they can report changes due to intrusion, tamper, equipment malfunction, liquid level, machinery, pressure, temperature, power, smoke or leakage.

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

Quick Talk is housed in a weather-resistant enclosure so that it can be installed in a wide variety of indoor and outdoor locations. You don't have to supply AC line power to the Quick Talk because its six internal AA Alkaline batteries will power the unit for about a year.

QUICK TALK MODELS AND FREQUENCIES

There are two separate 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 a second label is placed 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, and pioneered the use of Color Dots on radios to identify frequencies. The factory-programmed, default frequencies for Quick Talk are Blue Dot (154.570 MHz) for VHF units, and Blue Star (467.925 MHz) for UHF units. The instructions on page 4 describe how easy it is for the owner to change the Quick Talk transmit frequency to match that of 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 (but not waterproof or 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 MANUAL:

- Use of the Second Switch Input Terminals.
- 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.

2 TELEPHONE JACK

The modular telephone jack is for temporary connection to a standard pulse or rotary mode telephone which is used by the owner to program the 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 Quick Talk and void its warranty.

3 BATTERY HOLDER

This holds the six (6) standard "AA" alkaline cells required to power the Quick Talk.

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

4 SWITCH TERMINALS

These terminals are for connection to two (2) external, user-supplied switches (SW1 and SW2). This manual covers applications that use Switch 1 only. Refer to the Advanced Features Manual for information about using the second switch.

5 EXTERNAL POWER TERMINALS

Refer to the Advanced Owner's manual for information about connecting an external 12 Volt DC power supply to these terminals.

6 WATERTIGHT STRAIN RELIEF CABLE FITTING

The cable to your external switches passes through this fitting. When used with recommended cable sizes, the strain relief fitting provides a watertight enclosure. Do not overtighten the strain relief fitting.

NOTE: You may use Radio Shack Telephone Station Wire, 6-conductor, solid 24-AWG In-wall Type CM, Cat. No. 278-874, or round cable of equivalent diameter (between 0.114 and 0.250 inches). If you cannot find suitable wire, call Ritron at 1-800-872-1872.

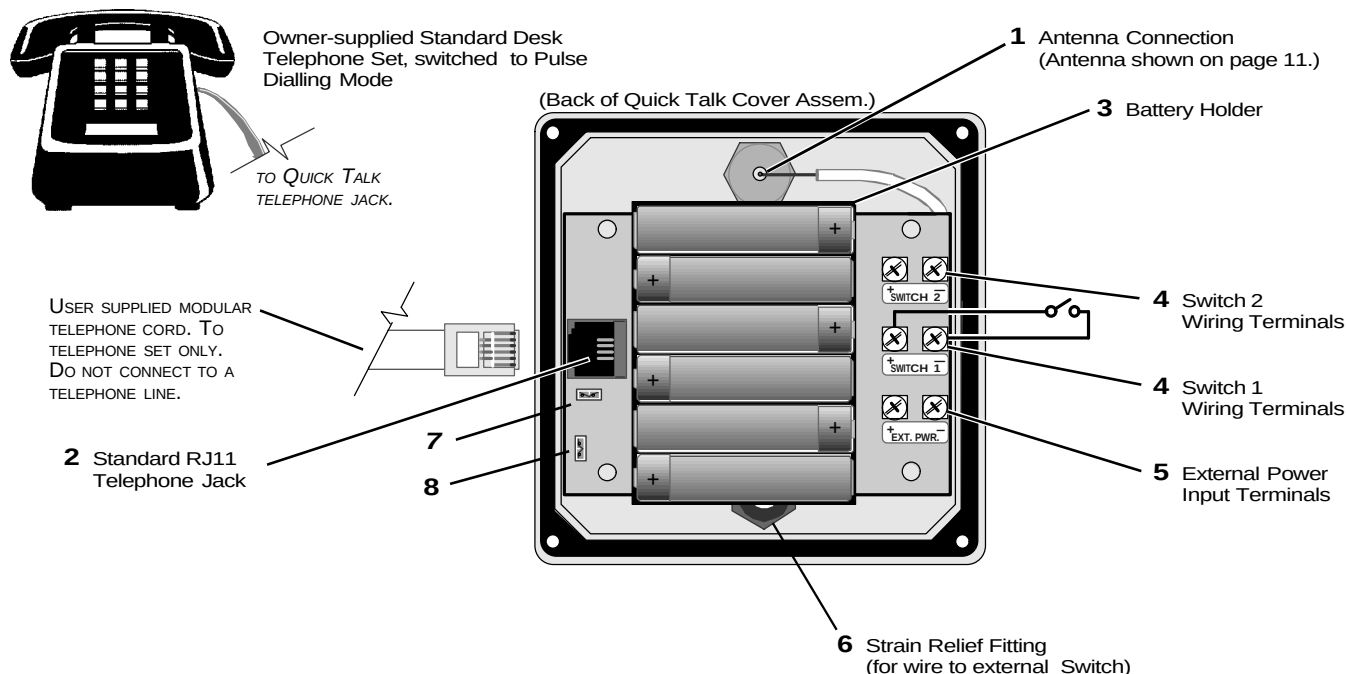
7 TRANSMITTER BANDWIDTH SELECT JUMPER

Do not remove. See the Advanced Features Manual.

8 BATTERY TYPE SELECTOR

As described in the Advanced Features Manual, this jumper controls charging of optional NiCad batteries.

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 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 "SW#1" install the batteries and start using Quick Talk. The factory default voice messages are "Switch Open" and "Switch Closed". Otherwise, yes you will need to use this manual.

Do I need to program everything? No. In many cases the factory preprogrammed settings which are explained in the instructions will meet your needs.

How do I program my Quick Talk? Quick Talk is designed to use a commonly available standard telephone set to enter programming information and your custom voice messages. However, the telephone must be capable of "Pulse" operation and switched to that mode. The telephone is only used for programming and is disconnected when the Quick Talk is operating normally.

What do I do if I don't find what I need in this manual? Call Ritron. We are glad to help. For most applications, we hope this manual covers everything you need to know. However, the Quick Talk has even more capabilities and features than are described here. The Advanced Owner's Application Manual or the other Application Notes listed on the inside cover may also help you. Again, just contact us. We can make Quick Talk do just about anything.

Can I hurt the Quick Talk by programming it improperly? No. You just may need to erase everything and start all over again. See page 10 to do this. So feel free to experiment with the various features and configurations possible.

Can my settings or messages get lost or erased if the battery runs down or 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 Quick Talk batteries run down or you remove the batteries, you will not need to reprogram the unit. All of your settings and messages will be there for you to use when you install fresh batteries.

What if I need more range? To increase the range of your Quick Talk transmissions, we first suggest changing where the unit is installed. Depending on the type of switch and wire you connect to the Quick Talk, you could run the wire to the switch for several hundred feet. This lets you install the Quick Talk and its attached antenna at some unobstructed and elevated position for the best range. Also, Ritron offers several optional "high gain" antennas. Finally, we can provide a radio repeater which can increase the range not only of your Quick Talk but all of the radios in your system.

1. TEST THE TELEPHONE YOU WILL USE TO PROGRAM THE QUICK TALK

A telephone that only produces Touch Tones cannot be used to program the Quick Talk.

Also most speaker phones, telephones with lighted dials or special office telephones usually cannot be used to program the Quick Talk.

- a. Remove the screws from the front panel and open the Quick Talk. Use care not to damage or disturb any exposed internal components.
- b. Install six new alkaline "AA" batteries in the Quick Talk. Observe the polarity marks on the batteries and the Quick Talk battery holder.
- c. Check that your telephone is capable of "Pulse" mode. Most modern telephones have a selection switch that must be set to the "P" rather than the "T" position in order to program the Quick Talk. In the "Pulse" mode, each telephone digit generates a rapid series of clicks rather than Touch Tones. The telephone switch must be set to "P" (Pulse) to program the Quick Talk.
- d. Your telephone must have a cord with a standard modular plug attached. Insert the plug into the telephone jack inside the Quick Talk.
- e. Test the telephone for suitability by plugging it into the Quick Talk's Telephone Jack and dialing "0" (Operator). You must hear a repeating busy signal in the earpiece which indicates that the telephone is acceptable for programming the Quick Talk.
- d. If your telephone does not check out, try another telephone.

Using the Telephone to Program Quick Talk

Programming the Quick Talk with the telephone consists of dialing numbers that represent commands and settings. These are explained in this manual.

If you make a dialing mistake while programming, hang up the telephone, then pick it up and start over.

What the Tones (Beeps) in the Telephone Receiver Mean

When you pick up the receiver, Quick Talk sounds a brief acknowledgment tone. You must wait for this tone before you dial any numbers.

After you dial in a command and setting, Quick Talk responds with a confirmation tone. You may then hang up or dial another command.

If Quick Talk does not understand your command because you mis-dialed or the command is invalid, Quick Talk sounds and repeats a series of longer tones until you hang up. You may then try your command again.

When you dial the command for Quick Talk to record a voice message, a series of three short tones cue you to begin speaking.

PROGRAMMING YOUR QUICK TALK TRANSMITTER FREQUENCY

What is my Radio System Frequency? Ritron invented the system of Color Dots to simply identify radio system frequencies for its Jobcom radios. The Color Dot is placed on the bottom and on the inside of the enclosure of all Jobcom radios. Other manufacturers also adopted this plan. If your radios do not have a color dot there may be another label somewhere indicating the receiver frequency in megahertz (MHz). Also your assigned frequency is 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 transmit frequency for your Quick Talk is marked on the outside of the shipping box and indicated by a color dot on the inside of the case. If this is your radio system frequency and the Quick Talk has not been reprogrammed since it left the factory, then 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 to the 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 Ritron.
- Pick up the telephone receiver, and listen for the acknowledge tone. Dial **"11"**, then the digits of the correct frequency code from the table.
For example if your Quick Talk is a VHF-FM RQT-150 model and your radios operate on 154.570 MHz (Blue Dot frequency), dial **"11-02"**.
Or if your Quick Talk is an RQT-450 and the radios operate on 467.925 MHz (Blue Star frequency), dial **"11-08"**.
- Quick Talk will respond with a single beep to indicate that it has set the transmitter to your radio system frequency.
- You may either hang up or continue programming.

NOTES: To avoid confusion later, you might consider removing the Color Dot if you program your Quick Talk to some other frequency.

If you make a dialing mistake while programming, hang up the telephone, then pick it up and start over.

What the Tones (Beeps) in Your Earpiece Mean:

- 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 try again.
- A series of three short tones cues you to begin recording a message.

TABLE 1: TRANSMIT FREQUENCY CODES

QUICK TALK FREQ. CODE	VHF Business Band (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	

QUICK TALK FREQ. CODE	UHF Business Band (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 communications industry standard sub-audible signaling formats: QC® (Quiet Call Interference Eliminator) and DQC™ (Digital Quiet Call Interference Eliminator). Both QC formats function to unlock receivers that are set to require these codes in order to 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 the CTCSS (Continuous Tone Coded Squelch System). Other radio manufacturers have other tradenames for what is essentially the same system. A specific QC code may be set in your Quick Talk and transmitted with voice messages to unlock the receivers in your radio system.

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

Do I need to program my Quick Talk with a Quiet Call Code? Your radio system may or may not use coded signaling. If you set the Quick Talk to your radio frequency and your radios do not receive its transmissions unless their "monitor" or "test" button is pressed, then your system probably uses Coded Squelch. Refer to the manual for one of your radios 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, it may be removed by following the procedure below using the "No Tone" code of 44 as shown in the table.

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 select No Tone or for systems without a Coded Squelch Interference Eliminator feature. Refer to text at left.

To Program A Quiet Call Sub-Audible Squelch Code:

- Determine the Quiet Call code tone that your radio system uses. If your system uses Digital Quiet Call, go to the next page.
- Select the desired Tone Code from Table 2 at right. If your radio system does not use coded squelch, use the "44" no-tone code. Write down this Quick Call code.
- Pick up the telephone receiver, and listen for the acknowledge tone.
- Dial "21", then the 2-digit QC Code for the selected frequency.

For example, if your Quiet Call frequency is 136.5 Hz or code 21, dial: **"21-21"**.

Quick Talk should respond with a confirmation tone.

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

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 other tradename equivalent) then you should skip this section and go on 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. Make sure this code is listed in Table 3 which shows all of the possible DQC codes for the Quick Talk. If it is not there, 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 Quick Talk's Confirmation Beep.
- e. You may either hang up or continue programming.

TABLE 3: DIGITAL QUIET CALL CODES

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

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 8 seconds or less in length.

Before you record these messages, you must determine how your switch works. This can be done using the factory prerecorded messages in the Quick Talk. Use the following procedure after you have programmed the Quick Talk with your radio system frequency and any required sub-audible squelch codes.

Do I need to test my switch? If you are certain of what conditions cause your switch to open or close, you do not need to perform this test. However, we recommend that you perform this test because it confirms that you have properly programmed the Quick Talk's transmitter frequency (and if required by your radio, its Quiet Call Interference Eliminator squelch code).

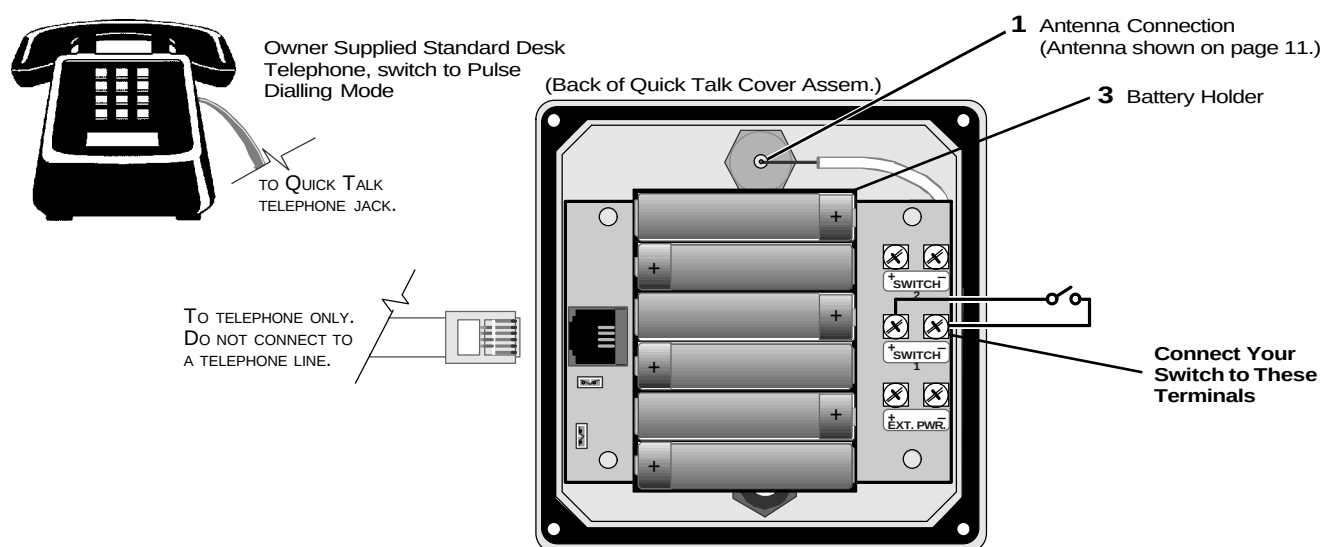
To Test Your Switch and Verify Reception of Messages by Your Radios

1. Remove the batteries from the holder.
 2. **Review the safety precautions at the beginning of this manual when connecting your switches. When you are sure your connections will be safe, connect the switch you intend to use to the Quick Talk terminals labeled Switch #1. See Figure 2 below.**
 3. Reinstall the fresh AA Alkaline batteries in the Quick Talk according to the polarity marks.
4. Activate your switch and 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 the results of how the transmitted message corresponds to the condition of your switch. Deactivate the switch to hear the other message transmitted and again, write down the results.
 5. From the results of Step 4, above, you should now understand how your switch works and what its open and closed states mean. This is essential knowledge for programming a 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 the opposite way.

We suggest that you do not record over the factory prerecorded messages until you are sure of 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 your own voice phrases gives the Quick Talk's 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. When a user hears a custom message like "Water Pump 3 Running Hot" or "Se Habla Español" its meaning is clear.

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

Remember that the quality of your recorded voice message will only sound as good or as poor as the telephone you use. If your message has low audio, record it again, speaking louder. If your message is distorted, try recording 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 the maximum power from its battery. It also can interfere with other transmissions. Therefore, when you record a voice phrase remember to hang up when you are done speaking. Otherwise, the Quick Talk transmitter will be on for the full 8 seconds regardless of the actual length of the voice message.

To Record Your Switch OPEN Condition Phrase

- Pick up the telephone receiver, wait for the beep and dial **"311"**.
Quick Talk sounds three short tones to prompt you to begin speaking . . .
- Record a phrase no longer than 8 seconds describing the open condition of your switch.
For example say, "Pump motor temperature OK".
- Hang up the telephone when you are done speaking.
- Pick up the telephone and dial **"411"**. Your phrase will be played back through the telephone receiver.
- You may return to Step (a) above and record again if you are not pleased with the results.

To Record Your Switch CLOSED Condition Phrase

- Pick up the telephone receiver, wait for the beep and dial **"312"**.
Quick Talk sounds three tones to prompt you to begin speaking . . .
- Record a phrase no longer than 8 seconds long describing the closed condition of your switch.
For example say, "Pump motor over temperature".
- Hang up the telephone when you complete your phrase.
- Pick up the telephone and dial **"412"**. Your phrase will be played back through the telephone receiver.
- You may 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

Play Back the Switch OPEN Condition Phrase

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

Play Back the Switch CLOSED Condition Phrase

- Pick up the telephone,
- After the tone, dial **"412"**. Quick Talk plays the Switch Closed condition phrase:
For example, "Pump motor running hot".
- 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 Quick Talk Transmission? In each Quick Talk radio transmission your previously recorded voice phrases can be repeated from 1 to 9 times depending on the emphasis you wish to put on the message. More important messages can have the phrase repeated more than just once. For example, if you previously recorded the message "Pump Motor Hot" and then set the Quick Talk to repeat the phrase two (2) times in each transmission, activating the switch will result in the Quick Talk transmitting:

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

The beginning and ending beeps are added automatically to attract special 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 once in each transmission. If this is sufficient for your application you can skip to the next section. In that section we explain how to have the transmission itself 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 for how many times you want the voice phrase repeated in each transmission. For example, to repeat the phrase three times dial **"711-3"**. Wait for the confirmation beep 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 for how many times you want the voice phrase repeated in each transmission. For example, to repeat the phrase one time dial **"712-1"**. Wait for the confirmation beep after dialing.
3. Hang up the telephone or continue programming.

— TABLE 4 —

VOICE PHRASE REPEATS IN EACH TRANSMISSION	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
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 an individual schedule of Quick Talk transmissions for both the open and closed conditions of your switch. For example, if the message for the switch Open condition is "Pump motor temperature OK" you could schedule the Quick Talk to transmit that message just once every two hours to let you know that the Quick Talk is operating properly. On the other hand, if the message for the switch Closed is "Pump Motor Over Temperature" you might schedule the Quick Talk to broadcast that message every 2 minutes so that the condition 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 once each time the switch changes. If this is sufficient for your application, you can skip to the next section.

To Program the Schedule of Voice Transmissions for the Switch Open Condition:

1. Pick up the telephone receiver, listen for the tone.
2. Dial **"511"** then the one digit code number from Table 5 below. The Factory Default is **"511-1"** which means the transmission is sent just once when the switch changes to this condition. Wait for the confirmation beep after dialing.
3. Hang up the telephone or continue programming.

To Program the Schedule of Voice 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 just once when the switch changes to this condition. Wait for the confirmation beep after dialing.
3. Hang up the telephone or continue programming.

— TABLE 5 —

MESSAGE SCHEDULE	CODE
Never send messages for this condition ..	0
On switch condition change only	1
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? If you have set the Quick Talk to transmit a switch status message at some regular interval as described in the previous section, you can set a limit to the number of times the message will be transmitted at the scheduled interval.

For example, suppose you have a vehicle detector switch that closes when it detects a vehicle present at the delivery door of your building. Your recorded message might then be "Vehicle Detected at Delivery Door".

You may want that message to be transmitted every two minutes for up to about a quarter hour after a vehicle is detected and then stop transmitting until the vehicle leaves. In this case you would program the message schedule to every 2 minutes and set the message limit as described here to 8.

Now 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.

After the vehicle leaves, the switch opens and when another vehicle arrives the Quick Talk would again transmit the message every 2 minutes for about a quarter of an hour.

Do I need to program this feature? The Quick Talk is set at the factory to transmit switch status messages without any limit if a transmission schedule has been set as described in the previous section. This means that if you programmed the Quick Talk to transmit a status message every 1 hour, it would continue to do so without any limit. If this 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 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 number of messages.
- Lift the telephone receiver and dial "612", then dial the selected Code Number.
- You may either hang up or continue programming.

— TABLE 6 —

MESSAGE SCHEDULED REPEAT LIMIT	DIAL 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

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 of your programming and return the Quick Talk to its Factory Default Settings with this command.

Note that this command does not restore the Factory Default recorded voice messages. Any recorded messages may be lost after using this command and you would need to record them again using the instructions in this manual.

Do I need to use this feature? If you are unsure of how the Quick Talk features are programmed and want to "start all over again" you could 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 an RQT-150 VHF model, Dial "978",
- If your Quick Talk is an RQT-450 UHF model, Dial "979",
- After the confirmation tone, hang up telephone.
- Play back your voices messages and re-record them if necessary.

QUICK TALK INSTALLATION

WHEN YOU ARE FINISHED PROGRAMMING:

- **Hang up and disconnect** the telephone from the internal jack on the Quick Talk assembly.
- **Test the operation** of the Quick Talk before putting it in service. Activate the switch and listen to the message received on your radio.

NOTE: Refer to Figure 3 at right.

- **Replace the cover** and (4) cover screws; snug down but do not overtighten the screws. Excessive force could break the plastic enclosure material.
- **Attach and seal the antenna connection.**
 - a. Insert, rotate and lock the antenna to the Quick Talk antenna jack.
 - b. Orient the antenna to a vertical position.
 - c. Seal the antenna connection to hold the antenna in its position, protect the antenna fittings, and 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 package directions.

- **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.
- **Position the unit** as shown, and secure it in place with screws through the enclosure flanges. Do not overtighten these screws. You may 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 weather tight 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. An ideal outdoor location is in a shaded area.

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

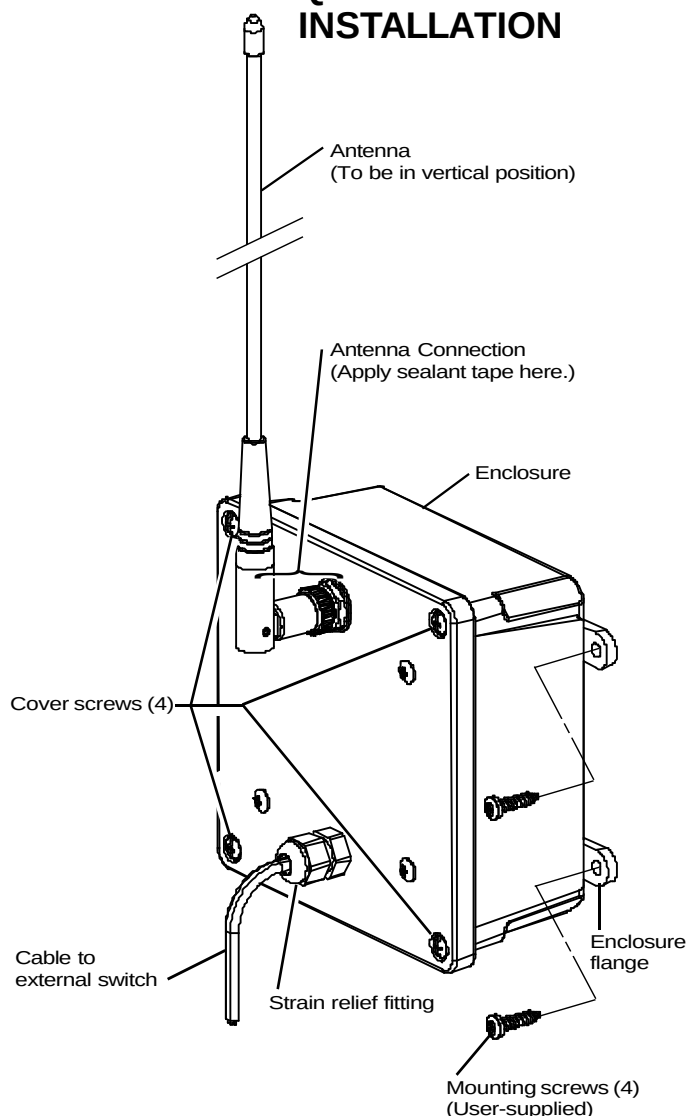
Chemicals: Do not use harsh, corrosive or abrasive chemicals to clean the Quick Talk case. Use only a cloth moistened with water. Do not attempt to clean the electronic printed circuit board.

Batteries: Use only fresh, new alkaline batteries when programming Quick Talk. Acceptable brands and types are: Duracell MX1500B, Eveready E91, Rayovac 815 or equivalent. Refer to the Advanced Owner's Manual for information about using rechargeable NiCad AA batteries that are charged by an optional external 12 Volt DC power supply.

Estimated Battery Life: Starting with a fresh set of AA alkaline batteries, the RQT can transmit about 7,000 voice messages over a period of one year before the batteries need replacement.

Automatic Low Battery Alert Message: When the battery voltage drops below about 6 Volts, the Quick Talk begins transmitting a factory prerecorded message saying "Low Batt" every 15 minutes. This is an indication that your batteries should be replaced sometime in the next day or so.

FIGURE 3: QUICK TALK INSTALLATION



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 most likely 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 help you with all of 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 become very close to or 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 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 transmitters 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. For the Quick Talk unit itself, during the first year from the original date of purchase, and for Accessories, during the first 90 days from the original date of purchase, RITRON will repair or replace the defective product, at RITRON's option, parts and labor included at no charge.

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, - 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 dis-assembly, 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.