

Quick Assist[®] II

WIRELESS CALLBOX TRANSMITTER



Designed for indoor use only

Owner's Manual

**MODELS: RQA-150 (VHF)
RQA-450 (UHF)**

TABLE OF CONTENTS

DESCRIPTION	PAGE
WHAT THIS MANUAL COVERS	ii
WARNINGS AND CAUTIONS	ii
FEATURES	ii
INTRODUCTION	1
General	1
Model Identification	1
DEFAULTS	1
Factory Programmed Defaults	1
Resetting Factory Programmed Defaults	1
CARE AND MAINTENANCE	2
Battery Installation/Replacement	2
Low Battery Alert Message	2
CONTROLS & CONNECTORS	3
PROGRAMMING	4
Frequently Asked Questions	4
Testing Your Programming Telephone	4
Programming Transmitter Frequency	6
Programming Quiet Call Coded Squelch Codes	6
Programming Digital Quiet Call Squelch Codes	6
TABLE 1: Transmitter Frequency Codes	7
TABLE 2: Quiet Call Tone Codes	7
TABLE 3: Digital Quiet Call Tone Codes	7
Recording Voice Messages	8
Playing Back Voice Messages	8
Programming Voice Phrase Repetitions	8
TABLE 4: Time Between Repeat Messages	8
Limiting the Number of Transmissions	8
TABLE 5: Message Repeat Limit	8
Recording a Unique Low Battery Message to Identify a Quick Assist II	8
Programming a Transmission Schedule	8
Quick Assist II Pre-installation Checklist	8
ADVANCED FEATURES	9
Selecting Narrow or Wide-Band Channels	9
Selecting Audio Selector Jumper	9
Important Note	9
Battery Type Settings	10
Connecting to External Power Source	10
INSTALLATION	11
RITRON WIRELESS SOLUTIONS	12
F.C.C. LICENSING	14
WARRANTY	14

WHAT THIS MANUAL COVERS

This manual covers basic operation of the **Quick Assist II** Wireless Callbox Transmitter. For most applications, this is all the information you will need.

— — — WARNING — — —

IMPORTANT SAFETY INFORMATION

NOTICE: The Quick Assist II 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. If you are unsure whether your installation will be safe, contact an experienced electrician or electronics technician.

QUICK ASSIST® II FEATURES

DESCRIBED IN THIS MANUAL:

- Internal radio transmitter (separate VHF and UHF models).
- User-recorded voice messages; total recording time of 16 seconds.
- Typical range of 1/2 mile. Longer range is possible using an optional antenna.
- Internal battery holder for six (6) AA Alkaline cells.
- Typical operating battery life of 1 year.
- Automatic low battery message.
- Jumper Selectable Features
 - Setting Narrow (12.5 kHz) or Wide-band (25 kHz) Channel Spacing.
 - Compressed or Non-compressed Audio Transmitter.
 - Battery Type Settings (Alkaline or Rechargeable Ni-Cd).
- Connection and use of an external 12 Volt DC power supply.
- The following features are programmable using a dial pulse telephone:
 - Transmit Frequency;
 - Tone Coded Squelch Encoder (Quiet Call® Interference Eliminator);
 - Digital Coded Squelch Encoder (Digital Quiet Call™ Interference Eliminator);
 - Message transmission schedules and limits.
- Limited One-year Factory Warranty.

NOT DESCRIBED IN THIS MANUAL:

- Use of solar power panels to operate and charge internal Ni-Cd batteries.
- Enabling and disabling the low battery or external power failure messages.
- Battery saver options.
- External antenna.

ABOUT THE QUICK ASSIST® II WIRELESS CALLBOX TRANSMITTER

GENERAL INFORMATION

The **Quick Assist II** is a RITRON Wireless Callbox Transmitter, specialized for indoor retail or commercial use, and pre-programmed to transmit a custom-recorded "assistance needed" message when the Message push-button is pressed for customer assistance. Personnel know from these message transmissions in which specific areas a customer needs assistance.

The **Quick Assist II** 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.

The **Quick Assist II** can be installed in a wide variety of indoor locations. Because its six internal AA Alkaline batteries will power the unit for about a year, the **Quick Assist II** does not require AC line power.

QUICK ASSIST II MODELS AND FREQUENCIES

There are two **Quick Assist II** models, one for each of the most popular professional radio communications bands. The model number appears on a label on the bottom of the case.

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

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

QUICK ASSIST II FACTORY PROGRAMMED DEFAULTS:

Since the radio board assembly in the Quick Assist II can be programmed to meet a wide variety of uses, programming options may be different for each use. For Models RQA-150 and RQA-450, the programmed Factory Defaults are as follows;

Default	Model RQA-150	Model RQA-450
Transmit Frequency	154.570 MHz	467.850 MHz
Coded Squelch	none	none
Assistance Needed Message	"Switch 1 Closed"	"Switch 1 Closed"
Time Between Messages	30 sec	30 sec
Low Battery Message	"Low Battery"	"Low Battery"
Message Repeat Limit	2 times	2 times

QUICK ASSIST II RESET DEFAULTS:

If for some reason a reset is performed on the Quick Assist II (refer to page 4), the reset defaults may be different from the Factory Programmed Defaults. They are as follows;

Default	Model RQA-150	Model RQA-450
Transmit Frequency	154.570 MHz	467.925 MHz
Coded Squelch	none	none
Assistance Needed Message	last message programmed	
Time Between Messages	on changes only - message will be transmitted anytime the button is pressed	
Low Battery Message	last message programmed	
Message Repeat Limit	forever	forever

Note: Even though the messages do not change, it is recommended that they be re-recorded after a reset has been performed. Even if your message is shorter than the allotted message time, the transmitter will be on for the full amount of allotted message time.

QUICK ASSIST® II APPLICATION

The Quick Assist II is a RITRON *Wireless Callbox Transmitter*. It is deigned for indoor in retail or commercial applications. A custom-recorded "assistance needed" message is transmitted when the push-button is pressed. The customer assistance message is instantly transmitted to all radio equipped personnel.

INSTALLATION / REPLACEMENT OF BATTERIES

CAUTION ! !

Remove the **Quick Assist II** unit from the wall or other mounting surface before changing batteries.

- a. Remove the four (4) screws from the corners of the front cover (refer to FIG-1 at right).
- b. Note the polarities of the batteries when installing new batteries. Refer to FIG-1.
- c. Replace the front cover and four (4) screws. Snug down, but do not overtighten the screws; excessive force can break the plastic enclosure material.

Battery
Polarity

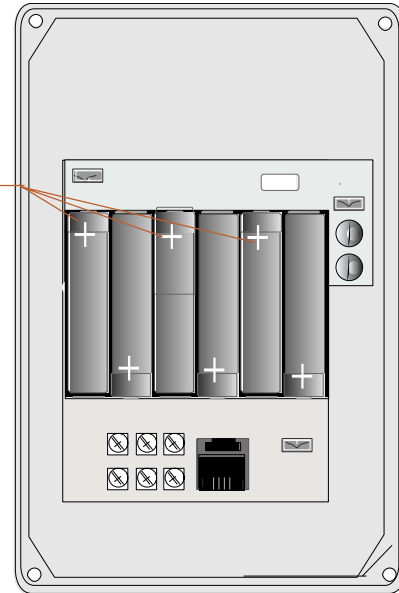


FIG-1: BATTERY INSTALLATION

CARE & MAINTENANCE

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

NOTE: Refer to page 8 for information on using rechargeable Ni-Cd 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 Assist II** can transmit about 7,000 voice messages over a period of one year before the batteries will need replacement.

Automatic Low Battery Alert Message: If the battery voltage drops below approximately 6 Volts, the **Quick Assist II** transmits the factory prerecorded message "Low Battery" every 60 minutes. When this occurs, replace the batteries promptly — within a day or so. Refer to page 10 for "unique" low battery message.

Temperature: The **Quick Assist II** is designed to operate between -22 and +140°F. Within this temperature range, good radio performance also depends on specifications of batteries powering the unit. Alkaline battery power decreases in extreme cold—e.g.: a power loss of 20% at 14°F. Like all electronic equipment, **Quick Assist II** should not be subjected to extreme heat.

Moisture: Keep the **Quick Assist II** away from any moisture. This unit is designed for indoor use and it is not environmentally sealed.

Vibrations/ Shocks: Although it is of rugged design, the **Quick Assist II** cannot be expected to survive extreme abuse.

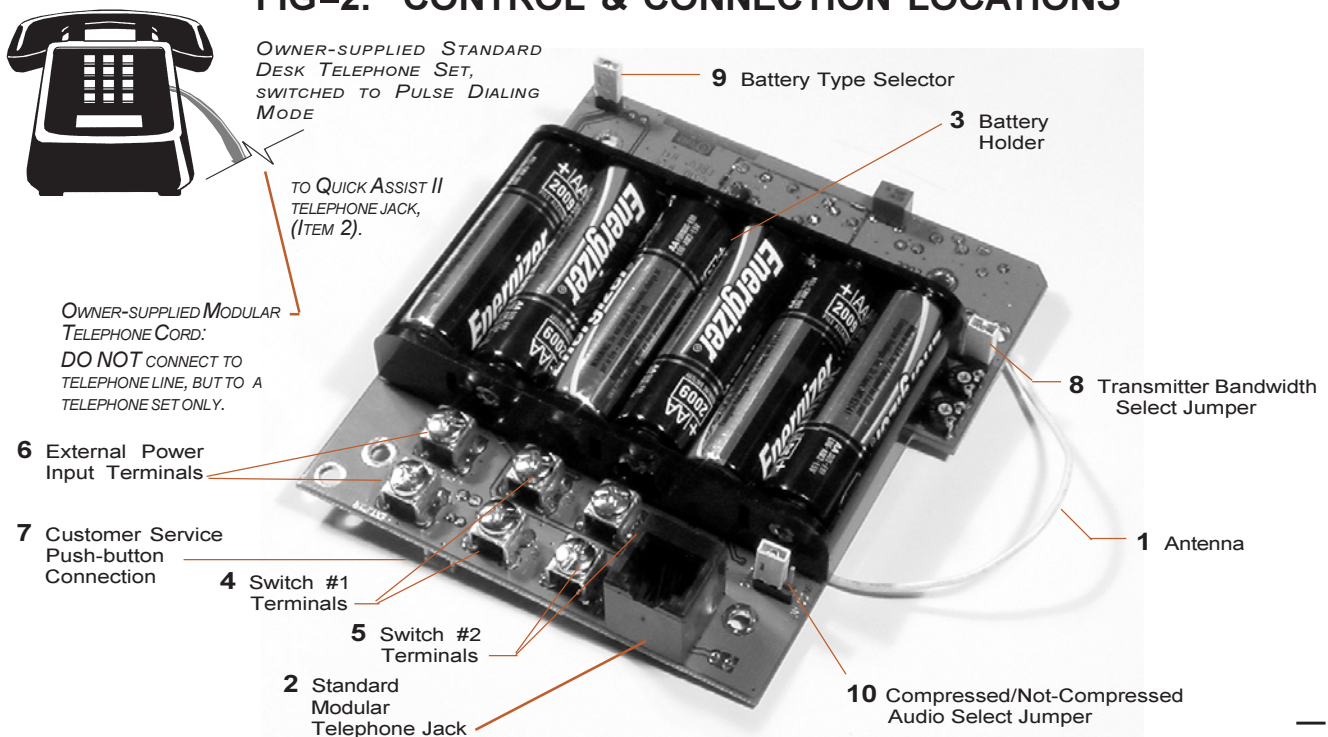
Chemicals: Do not use harsh, corrosive or abrasive chemicals to clean the **Quick Assist II** case; use only a cloth moistened with water. Do not attempt to clean the printed circuit board, which is located inside the housing.

IDENTIFICATION OF CONTROLS & CONNECTIONS

1. **ANTENNA**
The **Quick Assist II** contains an internal antenna. This antenna radiates radio signals.
2. **TELEPHONE JACK**
The modular telephone jack provides for a temporary connection to a standard pulse or rotary mode telephone unit, used to program Quick Assist II voice messages and other settings. Refer to FIG-2, below.
CAUTION: Do not connect the Quick Assist II 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 that are required to power the Quick Assist II.
IMPORTANT: Always install a fresh set of alkaline batteries before programming the Quick Assist II.
4. **SWITCH #1 TERMINALS**
Switch #1 terminals connect to the unit's front panel (Customer) push-button. When this push-button is pressed and released, the Quick Assist II transmits a voice message (typically, a Customer-assistance message).
5. **SWITCH #2 TERMINALS**
Switch #2 terminals are connected together for the Quick Assist II. (a Re-set button version is not available).
6. **EXTERNAL POWER TERMINALS**
Refer to the page 10 for information to connect an external 12 Volt DC power supply to these terminals.
7. **FRONT PANEL (CUSTOMER SERVICE) PUSH-BUTTON NOT SHOWN ON DIAGRAM**
When this push-button is pressed and released, the Quick Assist II transmits a voice message (typically a Customer-service message).
8. **TRANSMITTER BANDWIDTH SELECT JUMPER**
Do not remove this jumper. As described on page 9 this jumper controls selection of wide or narrow bandwidth.
9. **BATTERY TYPE SELECTOR**
Do not remove this jumper. As described on page 10 this jumper controls charging the optional NiCad batteries.
10. **COMPRESSED/NOT-COMPRESSED AUDIO SELECTOR**
Do not remove this jumper. The Quick Assist II can be used with two-way radios that use "companded audio." For radios with Companded Audio - place the jumper in the COMP position. For radios without Companded Audio - place the jumper in the NON-COMP position. To determine if your radio uses companded audio, call Ritron or your radio supplier.

IMPORTANT: Do not remove any other fasteners or further disassemble the Quick Assist II unit; doing so risks damage to the unit and voiding the manufacturer's warranty.

FIG-2: CONTROL & CONNECTION LOCATIONS



PROGRAMMING YOUR QUICK ASSIST ® II

FREQUENTLY ASKED QUESTIONS :

1. Do I have to program my Quick Assist II?

You may not need to program your **Quick Assist II** at all. If you purchased a **Quick Assist II** unit that is factory programmed to your radio system frequency (check the frequency on your radios and the **Quick Assist II**), and you do not use a form of Quiet Call coded squelch, you can install the batteries and start using **Quick Assist II**. The factory default voice message is "Switch 1 Closed". Otherwise, read this manual, then program your **Quick Assist II**.

2. 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.

3. How do I program my Quick Assist II?

This unit 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 unit is operating normally.

4. What if I don't find what I need in this manual?

Call Ritron (317-846-1201); we will be glad to help you. For most applications, this manual should cover everything you will need to know. However, the **Quick Assist II** has more capabilities and features than described here.

5. Will it harm the Quick Assist II if I program it improperly?

No; however, you may need to erase all programming and start over; see page 5 to do this. Feel free to experiment with the various features and possible configurations.

6. Can my settings or messages get lost or erased if the battery runs down, or if my Quick Assist II is disconnected?

No. The settings and voice messages you enter are stored in special electronic memory devices in the **Quick Assist II** 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 **Quick Assist II**. All your settings and messages will be there for you when you install fresh batteries.

7. What if I need more range?

To increase the range of your **Quick Assist II** transmissions, we suggest you first **relocate the unit**.

Ritron manufactures **radio repeaters** to increase the range not only for your **Quick Assist II**, but also for your entire radio system.

8. What the Tones (Beeps) in the Telephone Receiver Mean?

- **Quick Assist II** sounds a **brief acknowledgment tone** when you pick up the telephone handset; wait to hear this tone before you dial.
- **Quick Assist II** 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 Assist II** 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 the unit.

Most special office telephones, speaker phones, and telephones with lighted dials usually cannot be used.

- a. Remove the screws from the **Quick Assist II**, then remove the cover from the unit. Use care to not damage or disturb any exposed internal components.
- b. Install six new alkaline "AA" batteries in the unit, matching the polarity marks on the batteries with the marks on the battery holder.
- c. **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 unit.**
- d. The telephone must have a cord with a standard modular plug attached; insert the plug into the telephone jack on the **Quick Assist II**.
- e. Test the telephone for suitability by plugging it into the **Quick Assist II's** telephone jack and dialing "0" (Operator). A repeating busy signal in the telephone earpiece indicates it is acceptable for programming the unit. **If this telephone does not check out, try another.**

USING THE TELEPHONE TO PROGRAM QUICK ASSIST II

- Program the **Quick Assist II** 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.

9. 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. Consult your radio user manual, your dealer, or call Ritron for help if you cannot determine your radio's receiver frequency.

TEST THE TELEPHONE YOU WILL USE TO PROGRAM YOUR QUICK ASSIST II:
A telephone that generates only Touch Tones CANNOT BE USED for programming purposes.

Do I need to program my Quick Assist II transmitter frequency?

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

What is Quiet Call Sub Audible Coded Squelch?

The **Quick Assist II** 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) or Interference Eliminator. Other radio manufacturers use different trade-names for essentially the same system. You may program a specific QC code into your **Quick Assist II** 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 Assist II with a Quiet Call Code?

Your radio system may or may not use coded squelch signaling. If you have programmed the **Quick Assist II** to match your radio frequency, and your radios are not receiving **Quick Assist II** transmissions unless the "monitor" or "test" button is pressed on your radio, 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 Assist II** 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.

What is Digital Quiet Call?

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

Do I need to program my Quick Assist II 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.

What is the purpose of testing the Quick Assist II radio transmitter? After following the previous instructions, your **Quick Assist II** will be programmed to transmit on the same frequency as your radio receivers, and you also will have programmed your **Quick Assist II** to transmit any coded squelch signals required for your radio system.

Do I need to test my Quick Assist II Transmitter?

Yes; performing this test now will save you time and confusion later.

TOTEST THE Quick Assist II RADIO TRANSMITTER:

- a. Turn on your radio receiver.
- b. Momentarily place a screwdriver, paper clip or other electrically conductive item across the Switch #1 terminals.
- c. **Quick Assist II** transmits the Closed Switch #1 message, 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 Assist II** transmitter frequency or the Quiet Call Coded Squelch. In this case, repeat the programming, then perform this test again.

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 Assist II** will transmit one time each hour the factory-programmed message: "Low Battery". If you maintain several **Quick Assist II** 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.

What is the purpose of restarting the Quick Assist II?

If you have changed message schedules or limits, restarting the **Quick Assist II** ensures that all of internal clocks and counters are set properly.

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

To Leave Telephone Programming Mode and Restart the Quick Assist II:

- Pick up the telephone receiver, wait for the beep and dial "999".

The unit responds with a single short tone.

NOTE: Be certain to hang up and to disconnect the telephone from **Quick Assist II**.

BEFORE PROGRAMMING THE QUICK ASSIST II:

1. Remove the four (4) screws at the corners of the enclosure.
2. Lift the cover from the unit. Use care to not damage or disturb any exposed internal components.
3. Plug a telephone unit that passes the following test into the telephone jack on the radio board.

IMPORTANT

The telephone must be capable of "Pulse" mode dialing. Most specialized and office telephones, speaker phones, those with lighted dials and that generate only Touch Tones CANNOT BE USED to program the Quick Assist II.

If the telephone has a mode selection switch, it must be set to "P" (Pulse), rather than "T" (Tone), to program the Quick Assist II.

- The telephone must have a cord with a standard modular plug.
- Test the telephone for suitability by plugging it into the telephone jack of the Quick Assist II, then dialing "O" (Operator). A repeating busy signal in the telephone earpiece indicates it is acceptable for programming the Quick Assist II.

4. Remove batteries from the unit. Install a **fresh set** of six AA alkaline batteries, matching polarity marks on the batteries with the marks in the battery holder.
5. Program the **Quick Assist II** as follows:

A. TO PROGRAM THE TRANSMITTER FREQUENCY:

1. Determine the frequency of your radio system.
2. Find your frequency in Table 1, page 7, then determine its corresponding two-digit code. If your frequency is not listed in Table 1, skip to Step 7. Otherwise, go on to Step 3:

For frequencies listed in Table 1:

3. Pick up the telephone receiver and listen for the acknowledge tone.
4. Dial "11", then enter the digits of your frequency code from Table 1.

EXAMPLES: If your **Quick Assist II** is a **VHF RQA-150** operating on the frequency 154.570 MHz, dial "1102".

If your **Quick Assist II** is a **UHF RQA- 450** operating on the frequency of 467.925 MHz, dial "1108".

5. **Quick Assist II** responds with a single beep to indicate the transmitter frequency programming is completed.
6. You may either continue programming additional features, or you may dial "999" and hang up to stop programming.

For frequencies not listed in Table 1:

7. Pick up the telephone receiver and listen for the acknowledge tone.
8. Dial "12", then the first six digits of your frequency.

EXAMPLES: If your **Quick Assist II** is a **VHF RQA-150** operating on a frequency of 153.220 MHz, dial "12153220".

If your **Quick Assist II** is a **UHF RQA- 450** operating on a frequency of 464.3125 MHz, dial "12464312".

9. **Quick Assist II** responds with a single beep to indicate it has programmed the transmitter frequency.
10. You may either continue programming additional features, or you may dial "999" and hang up the telephone to stop programming.

B. TO PROGRAM THE QUIET CALL SUB-AUDIBLE CODED SQUELCH INTERFERENCE ELIMINATOR:

1. Determine if your radio system uses QC- or DQC-coded tones. To program DQC tones, skip to Step 7.

For QC codes:

2. Find your QC tone frequency and its corresponding 2-digit code in Table 2, page 2.

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

3. Pick up the telephone receiver and listen for the acknowledge tone.
4. Dial "21", then enter the 2-digit code from Table 2.

EXAMPLE: If your QC frequency is 103.5 (Code 13), dial "2113".

5. **Quick Assist II** responds with a single beep to indicate it has programmed the QC code.
6. You may either continue programming additional features, or you may dial "999" and hang up the telephone to stop programming.

For DQC codes:

7. Find your 3-digit DQC Code in Table 3, page 2. If your code does not appear in Table 3, call your radio service provider or Ritron.

8. Pick up the telephone receiver and listen for the acknowledge tone.

9. Dial "22", then enter the 3-digit DQC code from Table 3.

EXAMPLE: If your DQC code is 131, dial "22131".

10. **Quick Assist II** responds with a single beep to indicate it has programmed the DQC code.
11. You may either continue programming additional features, or you may dial "999" and hang up the telephone to stop programming.

(Programming Instructions continued on page 8)

TABLE 1: TRANSMIT FREQUENCY CODES

(For frequencies not listed in these tables, see page 4, note 9)

(VHF Business Band)

(UHF Business Band)

Bandwidth
Wide = 25 kHz
Narrow = 12.5 kHz

QUICK ASSIST II FREQ CODE	Model RQA-150			QUICK ASSIST II FREQ CODE	Model RQA- 450		
	MHz	Color	Bandwidth		MHz	Color	Bandwidth
01	154.600	Green Dot	25	01	467.7625	J	12.5
02	154.570	Blue Dot	25	02	467.8125	K	12.5
03	151.625	Red Dot	25	03	464.5500	Yellow Dot	12.5/25
04	151.955	Purple Dot	25	04	464.5000	Brown Dot	12.5/25
05	151.925		25	05	467.8500	Silver Star	12.5/25
06	154.540		25	06	467.8750	Gold Star	12.5/25
07	154.515		25	07	467.9000	Red Star	12.5/25
08	154.655		25	08	467.9250	Blue Star	12.5/25
09	151.685		25	09	469.2625		12.5
10	151.715		25	10	462.5750	White Dot	12.5/25
11	151.775		25	11	462.6250	Black Dot	12.5/25
12	151.805		25	12	462.6750	Orange Dot	12.5/25
13	151.835		25	13	464.3250		12.5/25
14	151.895		25	14	464.8250		12.5/25
15	154.490		25	15	469.5000		12.5/25
16	151.655		25	16	469.5500		12.5/25
17	151.745		25	17	463.2625		12.5
18	151.865		25	18	464.9125		12.5
				19	464.6000		12.5/25
				20	464.7000		12.5/25

INTERFERENCE ELIMINATOR CODES

TABLE 2: QUIET CALL TONE CODES

TABLE 3: DIGITAL QUIET CALL CODES

QUICK ASSIST II QC CODE	Freq. (Hz)	Other Radio Brands Tone Code	QUICK ASSIST II 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			

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		

C. TO PROGRAM THE "ASSISTANCE NEEDED" MESSAGE:

1. Pick up the telephone receiver and listen for the acknowledge tone.
2. Dial "312". Quick Assist II responds with three short tones to prompt you to begin speaking, then records the message. This message is to be no longer than 8 seconds. **Remember: speak loudly and clearly.**

EXAMPLE: "Customer needs assistance in Aisle 9."

3. When you have finished speaking, press and release the telephone flash-hook.
4. You may either continue programming additional features, or you may dial "999" and hang up the telephone to stop programming.

NOTE: To review your recorded message, dial "412".

D. TO PROGRAM TIME BETWEEN REPEATED MESSAGES: (DEFAULT SETTING IS 30 SECONDS)

1. Look up the code for the desired time between messages on Table 4, below.
2. Pick up the telephone receiver and listen for the acknowledge tone.
3. Dial "512", then the code digit from Table 4.

EXAMPLE: If you select 2 minutes as the time between messages, dial "5124".

4. Quick Assist II responds with a single beep to indicate it has programmed the time between messages.
5. You may either continue programming additional features, or you may dial "999" and hang up the telephone to stop programming.

TABLE 4:

TIME BETWEEN MESSAGES	CODE NUMBER
No Message	0
On Changes Only	1
30 seconds	2 — DEFAULT
1 minute	3
2 minutes	4
5 minutes	5
10 minutes	6
30 minutes	7
1 hour	8
2 hours	9

E. TO PROGRAM A "UNIQUE" LOW BATTERY MESSAGE:

1. Pick up the telephone receiver and listen for the acknowledge tone.
2. Dial "35". Quick Assist II responds with three short tones to prompt you to begin speaking, then records the message. This message is to be no longer than 1.5 seconds.

EXAMPLE: "Low battery Aisle 9"

3. When you have finished speaking, press and release the telephone flash-hook.
4. You may either continue programming additional features, or you may dial "999" and hang up the telephone to stop programming.

NOTE: To review your recorded message, dial "45".

F. TO PROGRAM THE "ASSISTANCE NEEDED" MESSAGE REPEAT LIMIT: (DEFAULT SETTING IS 2 TIMES)

1. Look up the code for the desired number of message repeats on Table 5, below.
2. Pick up the telephone receiver and listen for the acknowledge tone.
3. Dial "612", then the code digit from Table 5.

EXAMPLE: If you select 3 times as the message repeat limit, dial "6123".

4. Quick Assist II responds with a single beep to indicate it has programmed the message repeat limit.
5. Dial "999" and hang up the telephone to stop programming.

TABLE 5:

MESSAGE REPEAT LIMIT	CODE NUMBER
1time	1
2times	2 — DEFAULT
3times	3
4times	4
5times	5
6times	6
7times	7
8times	8
Repeat forever; no limit	9

!!! IMPORTANT !!!

If your Quick Assist II unit fails to operate correctly, or is programmed incorrectly, put the unit into default Quick Assist II mode using the following procedure:

1. Pick up the telephone receiver and listen for the acknowledge tone.
2. Dial the correct option (A or B as indicated below), to restore factory defaults; a short beep indicates successful completion.
 - A. For RQA-150, dial "978".
 - B. For RQA-450, dial "979".
3. Dial "814" to put the unit into Quick Assist II mode; a short beep indicates successful completion.
4. Dial "5110" to complete the setting of Quick Assist II mode, a short beep indicates successful completion
5. Program Sections A through F, above.
6. Programming of the Ritron Quick Assist II is complete!

Selecting “Wide” (25kHz) or “Narrow” (12.5kHz) Bandwidth/Channel Spacing

The **Quick Assist II** offers selectable bandwidth “Wide” or “Narrow”. The **Quick Assist II** must match the bandwidth setting of your existing 2-way radios for optimal quality.

As a general rule, if the operating frequency of your radios has **less** than three numbers to the right of the decimal point your frequency is “Wide” band.

Example: frequency 154.570 MHz or 462.625 MHz

If **more** than three numbers to the right of the decimal point, your frequency is most likely “Narrow” band.

Example: frequency 467.7625 MHz or 467.8125 MHz

To determine your operating frequency and bandwidth check your 2-way radio, your owners manual, or call Ritron for help. You can also look for your frequency and corresponding bandwidth/channel spacing in the table listed on page 7 of this manual.

If you are unable to determine if your 2-way radios are Narrow or Wide band, we suggest you take the following logical steps:

1. Leave the radio in the **Wide** band factory default mode.
2. If the received audio is acceptable, skip the rest of this section, if it’s not acceptable continue to step #3.
3. Change the jumper setting to **Narrow** and listen to the voice message.

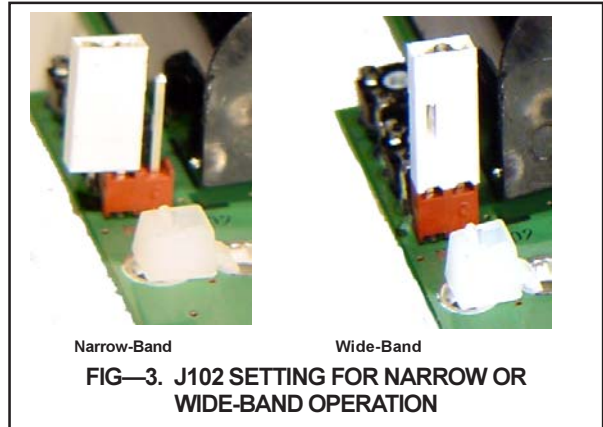
Place the jumper in the setting that produces the best “received” audio message in the radio you will be using.

Wide: (Refer to FIG-3)

To set your **Quick Assist II** into wideband position, place the Transmitter Bandwidth Select Jumper so that both pins of the 2 pin connector are covered by the jumper.

Narrow: (Refer to FIG-3)

To set your **Quick Assist II** into narrowband position, place the Transmitter Bandwidth Select Jumper so that only 1 pin of the 2 pin connector is covered by the jumper.



Selecting Compressed or “Non-Compressed” Transmitted Audio

The **Quick Assist II** offers selectable “compressed” or “non-compressed” transmitted audio. Some manufacturers call this feature “X-pand” or “Comping”. The **Quick Assist II** must match your existing 2-way radios for optimal quality. To determine if your existing 2-way radios are using “companding” you can call the manufacturer of the radio, refer to your owners manual or call Ritron for help.

If you are unable to determine if your 2-way radios are using the “companding” feature, we suggest you take the following logical steps:

1. Leave the jumper in the factory default setting **NON-COMP**.
2. Activate the transmitter of the Quick Talk or Quick Assist (I or II) and listen to the message from your portable radio. If the received audio is acceptable, skip the rest of this section, if it’s not acceptable continue to step #3.
3. Change the jumper setting to the **COMP** position and activate the Quick Talk or Quick Assist (I or II) transmitter again, and listen to the voice message.

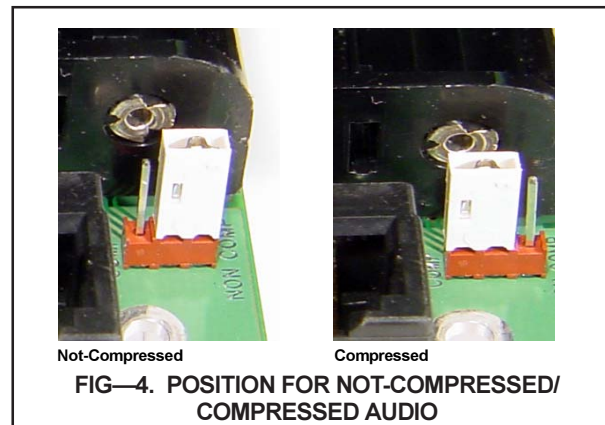
Place the jumper in the setting that produces the best “received” audio message in the radio you will be using.

Not-Compressed: (Refer to FIG-4)

To set the **Quick Assist II** for standard audio or not-compressed, place the jumper so that the middle pin and the pin closest to the word “NON-COMP” are covered by the jumper.

Compressed: (Refer to FIG-4)

To set the **Quick Assist II** for compressed audio, place the jumper so that the middle pin and the pin closest to the word “COMP” are covered by the jumper.



IMPORTANT

You may change the Transmitter Bandwidth and Compressed/Non-Compressed Audio jumper settings without re-recording your custom voice message.

J103 JUMPER SETTINGS FOR BATTERY TYPE

NOTE: When programming, use either fresh Alkaline batteries (or an external power supply), to power the Quick Assist II. When programming is finished, you may either insert Ni-Cd batteries or leave Alkaline batteries in place.

WARNING: DO NOT attempt to charge Alkaline batteries from an external +12VDC power supply.

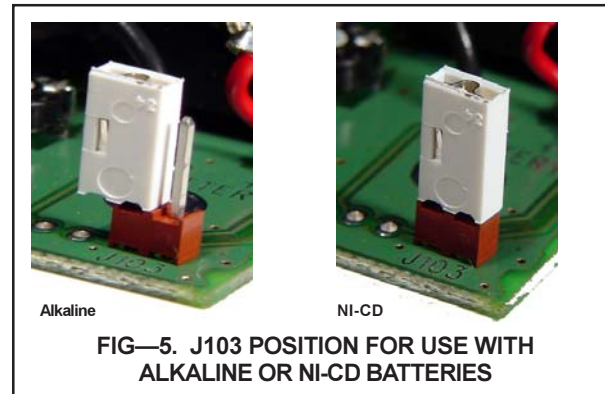
When powering Quick Assist II with **ALKALINE BATTERIES**, set J103 as follows to disconnect the charging current paths:

- a. To set the Quick Assist II for use with alkaline batteries, move Jumper J103 to cover only one pin of the jumper base, as shown in FIG-5; this setting prevents the flow of charging current.
- b. Dial "943" to program the Quick Assist II for use with alkaline batteries.

When powering Quick Assist II with **NI-CD BATTERIES**, set J103 as follows to connect the charging current paths:

- c. Cover both pins with Jumper J103, as shown in FIG-5, to charge the Ni-Cd batteries from the External Power connection.
- d. Dial "944" to adjust the Quick Talk voltage; the unit then transmits a "Low Battery" phrase.

NOTE: Because Ni-Cd batteries self-discharge rapidly, you must constantly charge them with an external +12VDC power.



FIG—5. J103 POSITION FOR USE WITH ALKALINE OR NI-CD BATTERIES

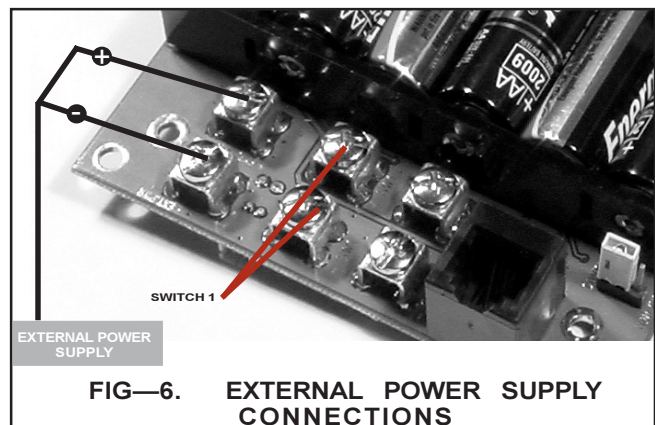
CONNECTING AN EXTERNAL 12 VDC POWER SUPPLY

TO CONNECT AN EXTERNAL 12 VDC POWER SUPPLY:

The standard Quick Assist II may be used with an external 12 VDC power supply. Optional items are not supplied.

Instructions:

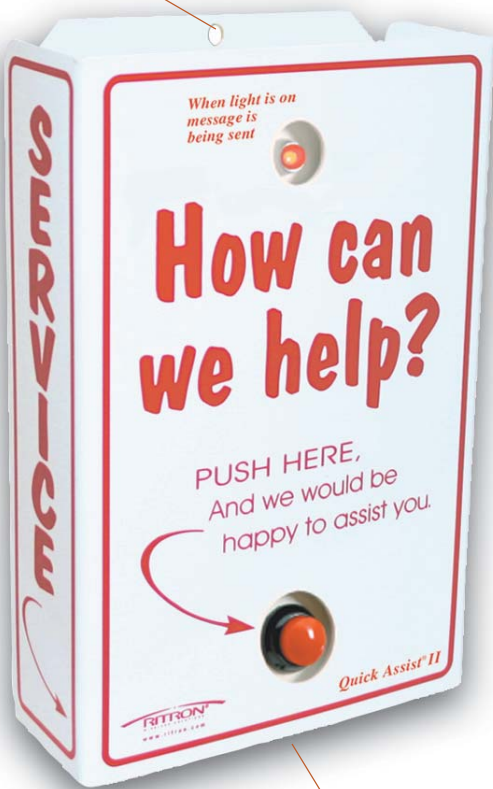
1. Remove the Quick Assist II electronics from the housing.
2. Carefully drill or punch a 0.484" hole in the bottom of the Quick Assist II enclosure.
3. Route the power supply cable through the Ritron #02500127 strain relief fitting. (not supplied)
4. Use Ritron #RPS-203 Power Supply (not supplied), 11-15 VDC, 200mA, or equivalent, to power the Quick Talk. The Quick Assist II requires 11-15 VDC, 150 mA minimum.
5. Connect the positive (+) terminal of the power supply cable to the +EXT. PWR screw terminal on the Quick Assist II, refer to FIG-6.
6. Connect the negative (-) terminal of the power supply cable to the -EXT. PWR screw terminal on the Quick Assist II, refer to FIG-6.



FIG—6. EXTERNAL POWER SUPPLY CONNECTIONS

QUICK ASSIST® II INSTALLATION

Pre-drilled Mounting Hole



Pre-drilled Mounting Hole

FIG.-7: QUICK ASSIST INSTALLATION

WHEN YOU ARE FINISHED PROGRAMMING:

1. **Hang up and disconnect** the telephone from the internal jack on the **Quick Assist II**.
2. **Test the operation** of the **Quick Assist II** before putting it into service by activating the front switch. Listen to the message 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.
6. **Test for sufficient broadcast range** when choosing the location for the **Quick Assist II** unit. For maximum range and coverage, install it as high from ground level as possible. Be aware that metal or wires; such as, steel or concrete walls or metal shelving near the unit can block or absorb radio transmissions.
7. **Position the unit** as shown in FIG.-7, and secure it in place with screws through the enclosure flanges. **Do not overtighten** these screws, as 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.

Complete Wireless Communication Solutions From The Leader in Workplace Two-Way Radio Systems

Ritron - We Build Wireless Solutions

For nearly 3 decades Ritron has been designing, manufacturing, and supplying reliable, professional wireless communication products for users worldwide. Ritron wireless products will improve the operation, safety, and profitability of any organization by providing instant voice communication between key employees throughout the workplace.



D-Series Portable Radios

Communicate with multiple workgroups instantly with a push-of-the-button. Rugged and lightweight with built-in weather scan (VHF models only) automatically finds NOAA broadcasts. Other features include Interference Eliminator, Loud and Clear Audio, Removable Quick Swap Battery, and Drop-in Charging Capability.

Accessories

Ritron offers a wide variety of headsets, earsets, remote speaker microphones, multi-unit chargers, and carry holsters to meet all your wireless communication needs.



Two-way Base Station/ Wireless Intercom Monitor

110 VAC or 12 VDC desktop or wall mountable radio that is compatible with any VHF/UHF radio system. Includes built-in Weather Scan (VHF models only), loud audio output for noisy locations, built-in microphone with automatic gain control, and rugged metal housing. Optional Public Address (PA) modification available.

Ideal for in-plant • schools • retail stores • jobsite vehicles • community repeater systems, loading docks • construction trailers or anywhere that fixed two-way communication is needed.

Advantages of Ritron Wireless Products:

- Unique products and features not available from any other source
- Adds speed, flexibility, and responsiveness to any organization
- Fully compatible with virtually any existing two-way radio system
- Designed to work together as a complete system
- No monthly service fees or airtime charges
- Made in the U.S.A.

OutPost™

Wireless Radio Callboxes

Battery-operated (6 alkaline "D" cells) callboxes, available in basic or rugged models, provide instant wireless communication over existing two-way radio systems without costly trenching, extensive wiring, or dedicated phone lines.

Ideal for Hotels/Motels • Golf Courses • Schools, Public Parks • Playgrounds • Roadsides • Marinas • Parking Lots or Garages • Receiving or Delivery Docks • Campuses • Shopping Malls • Beachs and Pools • Campgrounds and Hiking Trails • Unattended Gates.



Basic Model



XT Model

Quick Talk™

Wireless Voice Alarm Reporter

No need to run wires, phone lines, or pay a person for 24/7 monitoring. The low-cost, battery-operated (6 alkaline "AA" cells) Quick Talk Monitor permits wireless monitoring of virtually any sensor or switch from a two-way radio. When the switch opens or closes, a user recordable "custom" voice message is automatically transmitted to all radios on the same channel frequency.

Ideal for remote monitoring of • power failures • liquid levels • intrusion or tampering • temperature sensing • unattended doors to name only a few of the 1000s of applications.



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 **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 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 RQA-150 AND RQA-450 QUICK ASSIST II Voice Alarm Reporter 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 Assist II	1 year *	During the first year after date of Telemetry Unit 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.