WatchDog
Alert Monitor
Receiver

USER GUIDE

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This User Guide has been developed for the WatchDog Paging Alert Receivers.

The USAlert WatchDog pager has been developed specifically for the public safety environment for alerting firemen and other emergency personnel. In addition to public safety systems, the WatchDog pager can be used in any radio system that requires tone alerting and channel monitoring. The all new WatchDog pager offers many new and exciting features over any previous generation of voice pager.

WATCHDOG DISPLAY ICONS

O This ICON will be displayed in the lower left side of the display when power is turned on to the pager.

CH 12345 The channel in current operation will be displayed as **CH** and the corresponding channel number in the left center of the display.

 This ICON will be displayed when the pager has tone alert enabled.

((o)) This is the ICON displayed when the pager has vibrate alert enabled.

 The battery ICON is located in the lower right corner of the display. There are three bars indicating the level of charge remaining. Three bars indicate a fully charged set of batteries.

CHANGING BATTERIES

Locate the metal tab under the top of the belt clip. Lift the tab slightly towards the belt clip and slide the belt clip up from the bottom of the pager and remove the belt clip.

Remove the captive screw located under the belt clip location. Lift off the battery door and remove and replace the batteries. Note that the batteries all face in the same direction. Observe proper polarity when reinserting the batteries.

Turn the pager on to make sure the batteries are inserted properly and then turn the pager back off. Replace the battery door and tighten the captive screw. Caution to not over tighten the screw.

Reinstall the belt clip by depressing the tab and the metal latch inwards towards the top of the belt clip.

Note that there are two slide rail features on both sides the metal latch on the belt clip. These features mate with groves in the back cover for the belt clip. Slide the belt clip back into place. You will feel and hear a click sound when the belt clip has been fully positioned into its proper location.

WATCHDOG DISPLAY TEXT AND ALERT STATUS INFORMATION

The WatchDog pager provides start up screen text that can be customized in the WatchDog programmer. There is also a provision to add standby text if desired. Both features are available in the WatchDog programmer.

Additionally, the WatchDog pager will display TEXT assigned to an address, date and time that an alert was received, and the sequence number of the alert.

The WatchDog allow programming special text in the code plug programmer of up to 14 characters to be displayed when that address has been alerted. The display will alternately show the pre-programmed text, then the alert number with date and time stamp.

WATCHDOG PAGER CONTROLS AND FUNCTIONS

On / Off and Volume Control

The on / off volume control is located on the top of the pager and allows turning the pager on or off and provides a continuous adjustment for the audio and alert levels providing the alert is not set for the maximum volume option.

Three Position Function Switch

The three position function switch is located on the top of the pager in the center. Each position can be individually programmed for the channel desired and type of alerting. Scan is only selectable in switch position two.

Reset Switch

The reset switch is located on the top of the pager and is typically used to reset the audio and put the pager back into the standby mode. It can also be used to place the pager into the "quick monitor" or "audio lock on" mode of operation. Depress the reset button and release in less than .75 seconds and the pager will return to the standby mode. Press and hold for .75 but less than 1.5 seconds and the pager will enter monitor mode. Press for more than 1.5 seconds and the audio will lock on and remain on continuously until reset.

Front Control Buttons

There are three buttons located on the front of the pager. The far left button provides entry into the pagers menu and controls advancing thru the menu in a forward direction. The center button also provides entry into the pagers menu and controls advancing thru the menu in a reverse direction. The right button provides the playback function for models with voice memory and the select function if any item needs to be changed as selected in the pagers menu.

Pager Display Menu Items
Set time and date - To set the time and date depress either the left or center button and then the right select button. Use the left or center buttons to change the date and then use the right button to advance to the next date field. When the last data field is highlighted and flashing and changed to the correct data then use the right button once again to confirm the change.

Set frequency - In the WatchDog five channel models, there is a menu provision to select the frequency of operation for F2. F2 can be any of four frequencies.

Once the frequency is selected for F2 operation, use the right button to confirm. The pager will now operate on the new frequency when the three position switch is placed in any position pre-programmed for F2 operation.

Push-to-Listen - If this option is enabled in the WatchDog programmer, the option will also appear in the pagers menu. The selections are "PTL YES" and "PTL NO". If "PTL YES" is selected, then the option is enabled in the pager and any address selected for on / off duty will be disabled. You can turn off PTL by selecting "PTL NO".

Voice Memory Playback
WatchDog models with voice memory can dynamically record up to 4 minutes of messages. Messages can be played back using the right button to initiate play back and then using the left and center buttons to select which message to replay. If no messages are stored, the display will show "NO VOICE MESSAGE".

Depressing the right front button will start message playback. Each time the right button is depressed, the last message stored will replay or repeat from the beginning. Using the left or center button can change the message to be played once playback has been initiated.

Delete message – To delete a message, first select the correct message to delete. Delete can only occur while a message is being played back unless "Delete All" is selected. When the correct message has been selected, depress and hold the right front button. Delete message will appear on the display. Depress the right button once again to delete the selected message or use the reset button to escape from the delete mode.

Delete all messages – To delete all messages, depress and hold the right front button. Once the "delete message" appears, depress the center button to select "delete all messages". The display will then show "YES". Depress the right button to confirm and delete all messages.

Protect message – To protect a message from accidental removal, you can depress the right button until "delete message" appears on the display. Then use the center or left button to advance thru message control features. When "protect message" appears, use the right button to select.

FEATURES AND OPTIONS

Quick Monitor

The WatchDog pager allows entering the channel monitor mode ("Quick Monitor") by simply depressing the top reset button, holding for 0.75 seconds, then releasing the reset button. The pager will emit a short beep and automatically begin channel monitoring. Any traffic on the channel selected by the three position function switch can now be monitored. If your WatchDog has multi frequency capabilities, channel monitor is active for the channel selected by the function switch. To exit channel monitoring simply depress and release the reset switch. The WatchDog will now return to selective call standby mode.

Audio Lock

The WatchDog "Audio Lock" function allows opening the audio at any time regardless of the three position function switch. Simply depress the reset switch for approximately 1.5 seconds. The pager will emit a short beep at 0.75 seconds (continue to hold the reset switch) and you will hear two short beeps at 1.5 seconds. After the two short beeps, release the reset button and you are in the Audio Lock mode.

Audio Lock mode is useful in lower signal conditions where voice quality (reception) may be changing due to pager movement. With the audio locked on, you might be able to move while listening to a message and achieve best position for reception. If your WatchDog has multi frequency capabilities, then the Audio Lock function is active for the channel selected by the function switch or in the pager's display menu.

To exit the Audio Lock mode, simply depress and release the reset switch. The WatchDog will now return to selective call standby mode.

Audio Function Modes

Revert to Carrier Squelch - Revert operation allows the pager to automatically switch from selective call to channel monitoring after receipt of an alert. The pager will remain in channel monitoring until the reset switch is depressed and released. At this time, the pager will return to selective call standby mode.

Manual Reset - After receipt of an alert, the pager will open the audio channel for messaging and lock the audio on until the reset switch is depressed and released. At this time, the pager will return to selective call standby mode.

Auto Reset - After receipt of an alert, the pager will open the audio channel for messaging. The audio will remain open until the carrier drop at which time the audio will automatically reset. The pager automatically returns to selective call standby mode.

Timeout Reset - After receipt of an alert, the pager will open the audio channel for messaging. The audio will remain open until the pre-programmed "timeout" has expired. The timeout timer is initiated at the start of the alert cycle and ends based on the pre-

programmed timeout time. The pager will then automatically returns to selective call standby mode.

Revert with N Time Delay - Adding the N time delay to revert operation causes the WatchDog pager to disregard the state of the carrier during the N time. The N time begins immediately after the alerting cycle and ends on N timeout. At this time, the WatchDog will enter normal revert to carrier squelch operation.

Auto Reset with N Time Delay - Adding the N time delay to revert operation causes the WatchDog pager to disregard the state of the carrier during the N time. The N time begins immediately after the alerting cycle and ends on N timeout. At this time, the WatchDog will enter normal auto reset operation.

Low Battery Alert
The WatchDog pager will provide an audible tone alert "beep beep" and the display will indicate a low battery condition by no bars being displayed in the battery ICON. Additionally, after alerting or any audio condition ends, the display will show "LOW BATTERY" in text format. The audible low battery reminder is every 2 minutes.

Programmable Text Messaging
The WatchDog pager allows programming up to a 14 character message to be displayed when an alert is received. Each address (cap code) can be programmed with a different message. For example, if your addresses are typically used for specific emergencies such as fire, hazardous material emergency, water rescue, chief's call, etc., then a 14 character message can be displayed depending upon the address alerted. You will immediately know what type of emergency by the address that was alerted.

Alert Time Stamping
The WatchDog will time stamp every alert up to a maximum of 16 alerts. Each will have the month, day and time the alert was detected. The format for the time stamp display can be set in the programmer. The format is MM/DD or DD/MM. The time can be set as AM or PM or in a 24 hour format.

WatchDog Scan Operation
The WatchDog pager has three types of scan, "Channel Scan", "Selective Call Scan" and "Priority Scan".

Channel Scan - When the WatchDog is in the Channel Scan mode, it will alternately search from frequency 1 to frequency 2 looking for the presence of a carrier. The primary function of channel scan is to allow monitoring any activity on either channel. Only one channel can be actively monitored at a time. If activity is detected on either F1 or F2 the, WatchDog pager will lock onto that channel until channel activity ceases. At this time, the pager will resume scanning between channels.

Priority Scan - If Priority Scan is selected, the WatchDog pager will alternately search from frequency 1 to frequency 2 looking for the presence of a carrier. Alerting can only

occur on priority channel (F1). If channel activity is detected on F1, then the WatchDog pager will lock onto F1 and remain on F1 until channel activity ceases. At this time, the scan function will resume. If channel activity is detected on F2, then the WatchDog pager will process voice on F2 and periodically scan back to F1 looking for presence of a carrier. Anytime channel activity is detected on the primary channel, the pager will lock onto that channel.

Selective Call Scan - The Selective Call Scan mode allows the WatchDog to silently scan from channel to channel looking for address tones. The pager will only open the audio path based on detection of an address and not just channel activity. If a proper address is detected, the WatchDog will alert and open the audio path for messaging. After the messaging period the pager will continue to function based on the "audio function" programmed such as "Revert to Carrier Squelch", "Auto Reset", "Manual Reset" and so on.

In order to return to the scan mode, the pager must first enter selective call standby mode. This is done automatically if the audio function is programmed for "Auto Reset" or "timeout". If programmed for "Revert" or "Manual Reset", the reset button must be depressed and released. The WatchDog will then resume selective calls scan.

Alerting Features

The WatchDog pager is capable of alerting in three different ways, tone alerting, vibrate alerting and tone / vibrate alerting. The three position function switch can be pre-programmed for the type of alert desired and in which switch position.

Tone Alerting - If tone alert is selected, the WatchDog pager will emit an audible tone alert immediately following proper address detection. The tone alert duration is generally controlled by the length of a transmitted address tone.

Vibrate Alerting - If vibrate alert is selected, the WatchDog pager will vibrate immediately following proper address detection. The vibrate alert duration is generally controlled by the length of a transmitted address tone.

Tone / Vibrate Alerting - When tone / vibrate is selected, the WatchDog pager will alternately tone alert then vibrate alert for the duration of the alerting cycle. The duration of the alerting cycle is typically controlled by a transmitted address tone.

WatchDog 5 Channel Operation

The WatchDog pager provides operation on up to 5 channels. Operation is very similar to the 2 frequency models except the channel frequency for F2 operation can be selected to be one of four frequencies.

The primary channel is always Frequency 1 (CH1). F2 (CH2) can be selected in the pagers menu to be any of 4 other frequencies and when selected they will appear as F2 (CH2).

Channel frequencies are pre-programmed in the WatchDog programmer and then are available for selection in the pager's display menu.

WatchDog Special Applications to Extend the On / Off Duty Function

The On / Off Duty function is available to be programmed as a function on any position of the three position function switch. The Off Duty function can be assigned to any switch position and to any channel of operation. Check the "Off Duty" box in the programmer for those tones/addresses that you want to DISABLE when the function switch is in the "Off Duty" position.

This function can also be extended in multi-frequency models by programming channels to the same operating frequency. For example, you can program CH2 to be the same operating frequency as CH1. Then you can assign tones and addresses in CH1 and CH2 as you require for the On / Off Duty function. When on duty, you select a three position switch position that is programmed for F1 and when off duty you select a three position switch position that is programmed for F2 operation.

Using this method combined with the On / Off Duty set on the function switch can expand the alerting address capabilities of the pager. This concept can be repeated using CH3, CH4 and CH5. Depending upon your alerting requirements, you can use any combination of channels to provide unique alerting features to accommodate many applications.

You might require more than one primary channel, both having an On / Off Duty function. This can be done using 4 channels, each programmed with specific sets of address tones.

Revert or Auto Reset with N Time Delay and Voice Memory Operation

There are two normal operating modes commonly used in public safety communications systems with reference to transmissions of tones and voice messaging. The first method is to transmit tones with voice messaging immediately following the tones, and no disruption in the continuous transmission of the carrier. If your system uses this mode of operation, then the N time delay should not be used.

The second system mode allows the carrier to drop following the transmission of tones for about one second, then up again to process voice messaging. If your system utilizes this mode and your WatchDog is equipped with voice memory, selection of "revert with N time delay" is recommended. Why?

Message recording in most voice pagers use the end of the alerting cycle to signal the voice memory device to begin recording and use the carrier squelch function to control when to stop recording. The end of a pager's alerting cycle is normally controlled by the end of the second tone in a two tone sequential transmission, or the end of the long tone in a single tone transmission. In systems that drop the carrier after tone transmissions,

the pager would begin recording after the alert cycle but then stop recording immediately because no carrier is present.

The "N Time" function allows the pager to essentially ride thru the carrier drop after tones are transmitted and to continue to record the message. The "N Time" is programmable in length to allow for system variations. Select an "N Time" that is longer than the carrier drop to prevent early termination of message recording. Other words if the carrier typically drops for one second, then program the "N Time" for two seconds. In this case, after the two second N time, the pager will resume watching the carrier to signal when to stop recording.

SPECIAL WATCHDOG APPLICATIONS USING MULTI-FREQUENCIES

There are many advantages to having a pager capable of multiple channels, whether programmed to be the same frequency as another channel or all programmed differently.

One application might be where you prefer to monitor channel activity but no alerting is required or wanted. This can be done by programming the channel operating frequency of any unused channel to equal an existing pre-programmed channel and then simply disable all addresses on that channel. You now have a monitor only function.

There are also applications where a volunteer may belong to more than one system. In this case, there are five frequencies available to program according to multiple system requirements. On / Off Duty can also be applied differently on each channel.

WATCHDOG CHARGER

The WatchDog charger is both a smart charger and a rapid charger. It will charge both the WatchDog pager and a spare set of NiMH batteries simultaneously or individually.

The rapid charge period is approximately 3-4 hours from a completely discharged state. A typical recharge period for moderately discharged batteries is approximately 2 hours.

There are three colored LED's on the front of the charger. The green led indicates power is applied to the charger and the two red LED's indicate charging for the pager and spare batteries.

Recommended Steps to Begin Using the WatchDog Charger

a) Plug the wall transformer into the charger base.
b) Plug the wall transformer into an appropriate AC wall socket. The WatchDog charger will operate from a normal 117 VAC source.
c) The green LED should turn on.

d) Insert the pager or spare batteries or both into their corresponding positions in the charger. The spare batteries all face in one direction as the label indicates in the spare battery compartment.
e) The red LED closest to the green LED will flash when the pager is inserted properly and in a normal charging cycle.
f) The outboard red LED will flash for charging the spare batteries.

Charging Indications
After the pager or spare batteries are inserted into their proper locations, the corresponding red LED will begin to flash. This indicates charging is underway.

When the charge cycle nears completion, the corresponding red LED will begin to flash at a faster rate indicating the batteries are close to a full charge.

When the charge cycle is completed, the red LED will be on continuously. At this time, the charger will enter a trickle charge mode to maintain the charge on the batteries.

If the pager or spare battery red LED does not light with the pager or spare batteries inserted properly, there may be a battery failure.

DO NOT RECHARGE ALKALINE BATTERIES.

The WatchDog charger has been designed to properly recharge and maintain NiMH batteries. Other types of batteries may cause improper operation of the charger.