



USER GUIDE
for the
RPR 750 SERIES RADIO PAGER

Part No. 9261 - 7646 Issue 4

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CE Compliance

This product complies with the requirements of the EU Radio & Telecommunications Terminal Equipment Directive 99/5/EC. A complete copy of the associated Declaration Of Conformity for this and other Multitone products, may be found at the Multitone Internet address www.multitone.com

FCC & Industry Canada Statement Of Compliance

This device complies with Part 15 of the FCC Rules and Industry Canada Standard RSS 210.

Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference that may cause undesired operation.

Unauthorised modification to this equipment will void the user's authority to continue to operate the device within the scope of the Industry Canada and FCC Part 15 Rules.

A full technical specification for this product may be obtained from your Multitone representative.

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1. GENERAL USER INFORMATION

Radio Reception

Your pager has been designed to give optimum performance within the coverage area of the transmitting system. As with any radio system there may be areas of poor coverage, where reception may be sporadic, or non-existent. If necessary, consult your system administrator in order to familiarise yourself with these areas.

Hazardous Areas

Standard versions of this pager should not be taken into areas where explosive gas, or dust products, may be present. Intrinsically Safe versions are available for use in such environments, details of which may be obtained from your distributor, or direct from Multitone.

Pager Care

Protect your pager from liquids, extreme temperatures and strong magnetic fields. Do not leave your pager exposed to strong sunlight e.g. on a car dashboard, or a window sill.

Servicing

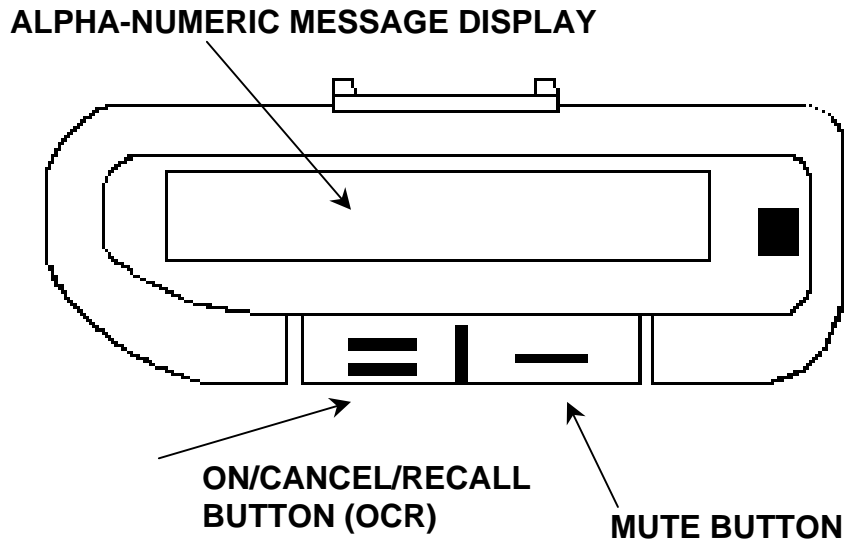
Should your pager need repair, return it to the designated service agent, or Multitone Electronics. Do not attempt to open or repair the product, as it contains delicate components and requires specialised test equipment. Repairs should only be performed by qualified personnel, in authorised workshops.

Wearing Your Pager

Your pager is supplied with a detachable 'Griptite' clip, which is specifically designed to enable a tight grip-fit when used for 'in-pocket', or 'belt' applications. The tightness of the clip may be adjusted, by varying the clip slider on the underside of the clip assembly.

An elasticised detachable Lanyard option with a metal retaining clip, is also supplied. This may be used in conjunction with the 'Griptite' clip, or as a separate method of attachment.

2. CONTROLS AND DISPLAY



3. SWITCHING ON

To switch on your pager, press the ON/Cancel/Recall (OCR) button once. The pager will emit a short beep and enter a self-test routine, which will activate the LED, message display and vibrate motor. The pager will then display it's address and any optional switch-on message that has been programmed. At the end of this sequence, the display will blank and the pager will enter it's quiescent mode ready to receive calls, showing either: -

-- : --	no time, or time of day	12:05
---------	-------------------------	-------

If your pager is programmed with the Permanent ON option, then the switch-on sequence will be automatically initiated when a battery is fitted.

4. SWITCHING OFF

To switch your pager OFF, first press and hold the MUTE button and then press and hold the OCR button. The pager will sequence to "OFF" and then switch itself off after approximately 2 seconds. If either, or both, buttons are released and repressed, the timeout sequence will continue.

If your pager is programmed with the Permanent ON option, then it can only be switched off by removing the battery.

5. DISPLAY OPTIONS

The Liquid Crystal Display (LCD) is a 14 character full alphanumeric device, which in the quiescent state is always active and will show the highest priority status information (without backlight). Where *time* is enabled as an option, this will be displayed.

Display reversal: - The displayed text may be inverted, to suit your method of wearing the pager. To enable this option from the quiescent screen, press the OCR button to display the *status prompt* and then press the MUTE button to reverse the display. The new display direction will be held in the pager's memory and retained, even when the equipment is switched off, until you reset it.

6. RECEIVING A CALL

Your pager is capable of receiving tone, alphanumeric and speech calls. When a call is received, firstly the red 'alert' LED will flash and then an 'alert tone' sound. Additionally if the option is selected, the pager will also vibrate. This alert sequence may be terminated at any time, by pressing the CANCEL button.

A message will be displayed for all types of call, the end of which will be denoted by the ** symbol. Initially any message is displayed without a backlight, until any button is pressed.

Any messages retrieved from the memory, will also be prefixed by either a 'time stamp', or a message number, depending upon your system (see also Section 7).

Tone Only Calls

When used with Multitone MK6/7 code formats, your pager will receive up to 8 different tone calls, each with a distinctive beep alert pattern. For each call received, the pager will display a tone call number for the duration of the alert. If the alert is cancelled by pressing the OCR button, then the call data will be displayed for a further 2.5 seconds.

Example of a tone call with a time stamp; on beep code 3, received at 12.00 noon: -

12:00 tone + call 3**

Example of a tone call with an M (message) number: -

M1 tone call + 3**

Alphanumeric Message Calls

Your pager may receive alphanumeric messages of up to 120 characters in length. When a call is received with an alphanumeric message attachment, if the total length of the message plus the stamp (time or message number) is less than 14 characters, then the whole of the message will be displayed for the length of the alert period, unless cancelled. If the alert is cancelled, then the message will be displayed for a further 2.5 seconds, with the backlight on.

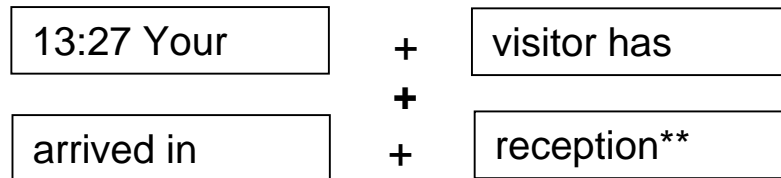
Example of message less than 14 characters in length: -

M2 ring 398**

If a received message is longer than 14 characters, then it is broken into several segments of up to 14 characters in length. These segments are then scrolled through automatically during the alert period, each being displayed for 1.25 seconds except for the final screen, which is shown for 2.5 seconds.

This process is then repeated until the end of the alert period, but if the call is cancelled before this time, the message will be scrolled through again from the beginning and pause on the final screen.

Example of a message larger than 14 characters: -



If a call is cancelled during the alert period, the MUTE button may be used to review the message and to speed-up, or slow-down, the viewing process. If MUTE is pressed and held, the message is held at the current screen; releasing MUTE causes the next screen to be displayed. If MUTE is pressed and released during the final message screen, then the display will revert to the first part of the message and the whole message viewing process may be repeated.

Speech Calls

When receiving any call that has a speech message attached, your pager will activate the alert sequence. This sequence will include the flashing LED together with the alert tone at normal volume, for a period of 4 seconds and additionally the display of any alphanumeric message and/or call time/number data. After 4 seconds, the speech channel will automatically open and the spoken message will be heard.

The speech channel will close again automatically at the end of a pre-determined time, or upon the receipt of a speech termination signal, depending upon your system.

If during the 4 second alert period the OCR button is pressed, it will terminate the call and a further press will terminate the speech. If the OCR button is pressed again within the speech time-out period, the speech channel will be re-opened.

All speech calls are automatically sent to the speech storage memory for later retrieval (see section 8).

After the alert period, pressing the OCR button will also cancel the call (remove it's new status), but a second press will re-open the speech channel.

If calls remain uncanceled, your pager will enter the extended alert mode, if this option has been selected.

7. RETRIEVING MESSAGES FROM THE MEMORY

Unless cancelled, received calls are automatically entered into your pager's memory. Up to 5 free-format messages of 120 characters in length and up to 4 pre-programmed messages of 14 characters in length, can be stored. When the memory is full, each new message received will erase the oldest one.

Message retrieval is initiated from the quiescent state, by twice pressing the OCR button. If the pager is in *extended alert* mode, then pressing the OCR button once will enter the memory replay mode. The pager will respond by displaying the *time stamp* or *message no.* (header) of the first message. If there are no messages, then the phrase *no messages* will be displayed and the pager will return to the quiescent mode.

To find further messages, each further press of the OCR button will cause the pager to scroll through the stored message headers. The most recent message will be prefixed by "M1", or the time at which it was received. If you wish to view a message, stop pressing the OCR button and the message will automatically scroll through the display.

The MUTE button may be used to stop a message sequence to review the message and to speed-up, or slow-down, the viewing process. If MUTE is pressed and held, the message is held at the current screen; releasing MUTE causes the next screen to be displayed.

8. RETRIEVING SPEECH CALLS

Your pager will store up to 120 seconds of speech in 5 equal memory segments, each of 24 seconds duration. It is not possible to replay a speech message from the memory until the original call has been completed, but it is possible to close the speech channel during the original call. Where any speech message exceeds 24 seconds, then the stored message will be truncated. When the memory is full, any new message will overwrite the oldest stored message.

The speech will automatically be replayed, when it's associated message is retrieved from the memory, as described in Section 7. If the OCR button is pressed at any time, the replay will be terminated and the next message will be retrieved. If the MUTE button is pressed and released, then the message will be re-started again from the beginning.

9. SPEECH VOLUME ADJUSTMENT

To adjust the volume of speech messages, the pager must be in the quiescent state. First push the MUTE button, followed by the OCR button. The display will show the current volume level and this may then be adjusted by further pressing the OCR button to increase the volume, or the MUTE button to decrease. When the desired level is reached, release any buttons and the pager will return to it's quiescent state.

10. ALERT OPTIONS

Your pager has a number of options for alerting you to a call, which may be selected according to the system requirements and in some instances, individual needs.

Audible Alerts

Escalert - a programmable option, which allows the level of the alert beep to increase on a gradual basis. The sequence commences with the flashing LED alert only for 4 seconds, followed by the LED + a low level alert tone for a

further 4 seconds and the sequence is completed by the final selected alert duration (8, 16, 32 seconds, or continuous) of LED + alert tone at full volume. The alert may be stopped at any point in the sequence, by pressing the OCR button once.

Extended Alert - a programmable option, this mode acts as a reminder if an original alert is not cancelled. The sequence will start with the LED flashing every 2 seconds, followed by two pip tones every 120 seconds thereafter, until cancelled by pressing the OCR button. The most recently received message will then be displayed.

Silent Alerts

Mute Mode - a programmable option, which will silence the audible alerts and speech calls. Received calls will be notified by the flashing LED and vibrate where selected. Messages will be displayed and stored as normal, for later recall.

Vibrate Option - a programmable option providing a discreet alert, which may operate in conjunction with or separate from, the audible alert options. Once programmed, this option may be switched on or off by using the MUTE button and stepping through the mute/vibrate option sequence.

The *Silent Alert* configuration may be changed by pressing and holding the MUTE button for approx. 1.5 seconds, whilst the pager is in the quiescent state. Each further press/hold of the MUTE button will cause the pager to cycle through each option, until the desired mode is obtained. Each change is acknowledged by an audible pip and where applicable, short vibration. Pressing the OCR button in the quiescent state, will allow you to check the selected option status.

The available options are: -

On - normal audible alert, no vibrate;

On + vibrate - as for *On*, with vibrate enabled;

Mute + vibrate - alert tones and speech muted, with vibrate enabled.

11. PAGER STATUS

Your pager is equipped to provide status information on-demand. To activate this feature, whilst the pager is in quiescent mode, press the OCR button once. This will cause the message *status >* to be displayed, automatically followed by each programmable status message, as follows: -

Status Message	Condition
1 New message 2 New messages	Message(s) with new status exist.
*Out-of-range	Your pager has not received a valid system signal for 3.5 minutes min.
*Low battery *Time of Day	Battery voltage is low. Dependent upon your pager options, see Section 12.
*Mute	Pager in Mute mode.
*Vibrate	Vibrate option selected.
On	No other messages to display.

***Note:** Your pager has to be programmed for this option, to display this message.

12. TIME OF DAY

Your pager may be programmed to show the time of day, when in quiescent mode. The actual source of the time signal may be from the pager's own internal clock, or an off-air signal from your controlling system, where available. The time data is used to 'time-stamp' incoming messages.

Off-air time signal - If this option has been selected, your pager display will show the symbol --:-- in the quiescent state, until the first valid time signal (transmitted every minute) has been received from the system. If the pager should go out of range of the system and no time signal is received for 2 minutes, then this symbol will also be displayed until a valid signal is again received.

Internal Clock - where the off-air time signal option is not enabled, it is possible to activate and set the pager's internal clock. To set the time, press the OCR button during the switch-on sequence and the time-of-day screen will initially show the hours flashing.

To change the hours repeatedly press, or press and hold the OCR button, until the desired hour is displayed. When this point has been reached, press the MUTE button and the minutes will start to flash. Press the OCR button until the desired minutes are displayed. To complete the set-up, press the MUTE button and the pager will continue the switch-on sequence.

To reset the time on a pager which has already been switched-on, or time incorrectly entered, simply turn the pager off and on again and follow the set-up sequence.

13. OTHER OPTIONS

Your pager is programmable to offer the following additional options.

Group Alert - Your pager may be programmed to operate as part of a 'team'. Any group call to your team will activate your audible alert sequence, even if your pager is in *Mute* mode.

Out of Range - This option will alert you, if you move outside of the radio coverage area for your system. The alert is activated if the pager has not received a valid signal for a pre-set time, typically 3 minutes, 30 seconds.

Combinations of alert options are available, including visual only, audible plus visual, or either option plus vibrate. The audible/visual option enables an *out of range* warning on the display for 4 seconds, accompanied by a 2 second buzz. Pagers with the audible warning enabled, will also produce a buzz when the OCR button is pressed whilst the receiver is out of range (except in *Mute* mode). For the visual only alert, just the message is displayed. In all cases when selected, the *vibrate* option will cause several short pulses during the alert period.

After the 4 second alert period, the pager will either continue to display the *Out Of Range* message, or if a received message is being stored, this will be notified until cleared.

Low Battery Warning - *It is advised that this option is not enabled for use with rechargeable cells.*

The battery condition of your pager is continually monitored and if a low battery voltage is sensed the pager will continue to operate, but the battery must be changed at the earliest opportunity (within 24 hours), or continued operation and facilities cannot be guaranteed and some features may be inhibited.

When enabled, this option may be programmed for visual, audible and vibrate alert options. A warning may be activated under the following conditions: -

- (i) at switch-on, the switch-on tone will be additionally modulated by a buzz tone and the message *low battery* displayed;
- (ii) any alerts will be modulated with a buzz tone;
- (iii) the battery condition may be checked at any time, using the *status interrogation* mode as described in Section 11. The *low battery* message will be displayed and then the pager will return to its quiescent state, with the message *bat* continuously showing at the edge of the display.

Call Comparator - This option enables the pager to recognise calls that are a repetition of a previous call, sent within a pre-determined time after the original call. The pager will ignore any repeated calls identified by the comparator. The time limit can be programmed for periods of 30s, 120s and 300s after the original call.

The exception to this will be for message calls, where the original call has not been decoded with 100% confidence. In this case the subsequent call will be accepted and will overwrite the original message in the pager's memory. In both cases however, a normal alert sequence will be generated.

14. BATTERIES - Changing The Battery & Battery Care

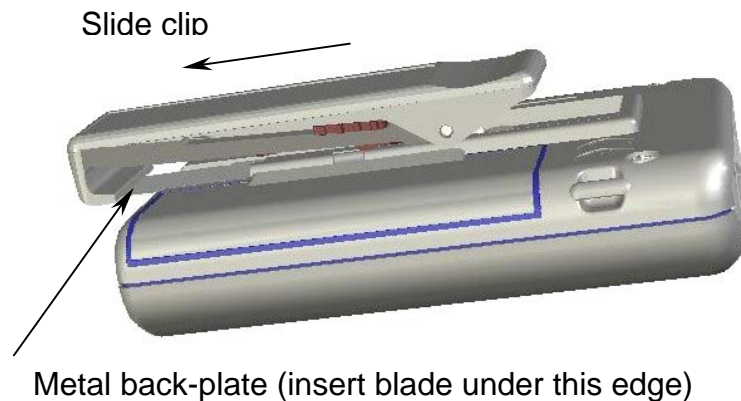
Your pager can be used with any 1.5 Volt nominal AA (LR6) sized primary cell, or for re-chargeable applications, either NiCd or NiMH secondary cells. It should be noted that battery life expectancy may vary greatly with the cell supplier and chemistry, especially with the re-chargeable options.

In order to maximise battery life, cancel any alerts as soon as possible and switch-off your pager when not in use. If your pager is not to be used for a long period, it is recommended that the battery be removed.

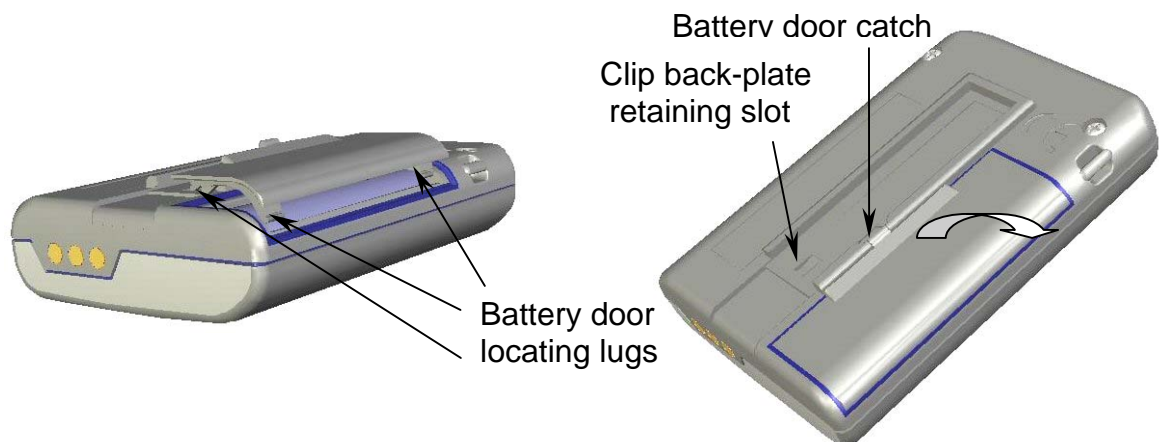
NOTE: Any stored messages will be retained by the pager for approximately 12 hours, when the battery is removed, or the pager is turned off.

To change the battery, ensure that the pager is switched off and proceed as follows: -

Hold the pager in one hand, with the front facing downwards. Insert a thin blade (e.g. small screwdriver) under the edge of the metal back-plate of the clip and gently lift enough to release it from its retaining slot. At the same time slide the clip assembly towards the bottom of the pager as shown and remove.

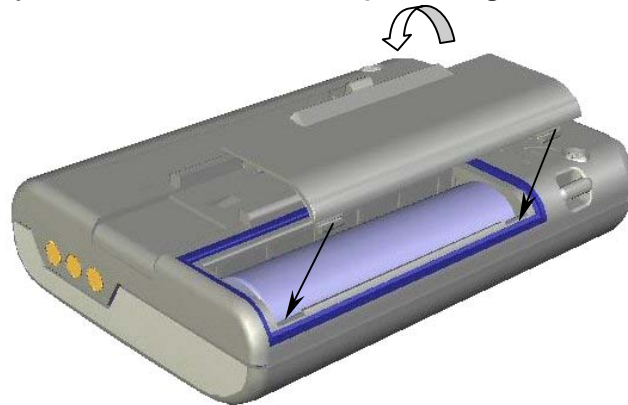


Holding the pager in one hand, lift and release the battery door catch. Using forefinger, pull the door away from the case in the direction shown.



Ensure that the battery door lugs are lifted clear of the case and remove the door. Remove the battery by placing your forefinger onto the positive end-cap and lifting the battery upwards, at the same time pushing slightly backwards against the negative contact spring.

Battery replacement is the reverse sequence. Observing the correct polarity, place the battery against the negative contact spring and compress slightly, at the same time pushing the battery into the compartment and engaging the positive end-cap against the positive contact in the pager.



To replace the battery door, firstly locate the door lugs into the positions shown and then rotate the door downwards, closing the door loosely. Further compress the door at both ends simultaneously and push down until the door clicks shut, compressing the battery and surrounding gasket.

Re-insert the metal clip-back into the guides on the case-back and slide the clip into place, ensuring that the retaining lug re-locates into the slot in the case-back.

15. ABSENCE & CHARGING

When your pager is inserted into an Absence Rack, it will automatically be switched into the *absence mode*. A pager that is already on will reset and a pager that is *off* will switch *on* and enter the *absence mode*. **No paging calls will be accepted whilst the pager is in the rack and any stored messages will be erased.**

When in a rack, your pager may display a programmable message of up to 9 characters. Unless programmed otherwise, the default message will be your pager's RIC (receiver identity code) number. This message may be programmed either prior to bringing the pager into service, or new alphanumeric messages may be transmitted to it via the absence rack data bus.

Your pager's display orientation will be corrected for viewing in the rack, but will revert to your user-programmed direction when removed from the rack. The 'alert' LED will be illuminated at half brightness during the charging cycle.

When a pager is removed from a rack, it will automatically enter its switch-on sequence.

When a single-unit charger or charge-only rack is used, the pager may still receive calls, but its radio sensitivity may be impaired and the vibrate option is inhibited.

16. USER SERVICEABLE PARTS

For replacements, quote the following Multitone Part Numbers: -

Battery Door Dark Blue- 0801-0428

Griptite Clip Dark Blue- 0201-1143

Lanyard - 7961-5055

RPR 750 Series

NOTES