

# 4140 Pager Programming Manual for DOS

Version 3.00 (Australian Edition)



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## 1. ABOUT THE 4140 PAGER



Figure 1-1: The 4140 Pager

### About

Commtech's 4140 Pager is a lightweight, super-compact, numeric pager. Easy to operate and packed with extra features, Commtech's 4140 is the smartest numeric pager around. With LCD illumination so you can read your messages in poorly lit conditions, reminder alert and vibrate mode, the 4140 provides the best value for money pager on the market.

### Reliability

Reliability is one of the key factors when considering a pager. Not only does this determine how reliably the pager receives the message but it also determines the expected life span of the pager. That's why the 4140 is backed by a full 12 month warranty and is available in over 30 countries across the globe. Coupled with this, all repairs and warranty claims are conducted locally, by Commtech.

### Ease of Use

Plain and simple. That was the specification for the design of the 'user interface'. All instructions are in plain English - simply select the option you require, then push the button to change.

### Features

The 4140 is a no nonsense pager, boasting simple delete, delete all and message reading facilities. It is also possible to flip from silent to audible mode (and back again) with just three key presses. One of the great features of the 4140 is the low purchase price, and the low cost for spare parts. We believe that you won't find a better pager for your money! Commtech has ensured that the 4140 meets many requirements, including capital budgets!

### Synthesised

Do you have multiple frequencies and require one pager to solve all your problems? The Commtech 4140 provides the solution. The 4140 is a fully synthesized pager - simply program in the frequency you require any time you need to change the frequency. What's more, frequency AND capcode programming can be done on the pager itself! This translates to less stock and much faster supply times.

## 1.1 About This Handbook

This handbook is designed to assist users in programming the 4140 pager.

This handbook is set out in a series of easy to follow step by step instructions followed by a checklist to confirm the steps as outlined. Following the steps and checklists correctly will ensure that there will be no problems when using the 4140 pager. Some additional special elements in the handbook's text are designed to make the installation process easier.

**❖ NOTE: A note preceded with this symbol indicates secondary information pertaining to the topic under discussion.**

**➔ IMPORTANT: A Right-pointing arrow followed by text in this manner presents important information.**

**⚠ WARNING: Warnings like this alert you to the fact that you might damage your equipment or lose data if you don't follow instructions carefully.**

## 2. THE 4140 PAGER

### 2.1.1 Case Layout

The 4140 Pager has three buttons on its case.

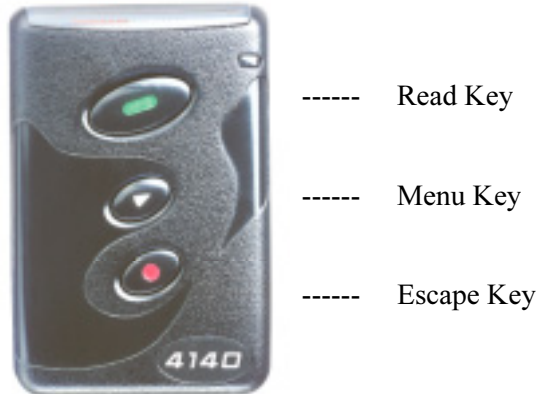


Figure 2-1: Button Layout

## 2.2 Prerequisites

Before programming the 4140 pager, the following will be required:

### 2.2.1 Components

Each Programming Kit contains:

- The 4140 programming cradle with cable
- This 4140 DOS programming manual
- A software floppy disk containing
  1. 4140 DOS programming software
  2. 4140 DOS programming manual

### 2.2.2 Additional Components

In order to use the programming kit, you will also require:

- At least one 4140 pager that requires programming.

### 2.2.3 Pagers and Programming Details

The following information will be required to program the pagers.

- The address or capcode(s) that the pager will respond to.
- The baud rate of POCSAG data that is being transmitted.
- The frequency of the transmitter.
- A start up message that will be observed when turning on the pager.

### 2.2.4 IBM compatible PC

An IBM compatible PC is required with the following attributes:

- A standard 3.5 inch floppy disk drive.
- A standard parallel port (printer port)

### 2.3 Skills

It is recommended the programming be performed with background knowledge of the following:

- Basic IBM Compatible PC knowledge.
- Sound technical working practices for electronic equipment.
- Basic understanding of POCSAG paging principles.

**➔ IMPORTANT: If you are not familiar with these concepts, contact your place of purchase before you proceed.**

### 3. HARDWARE INSTALLATION

- Ensure you have a clear, static proof work space.
- With the computer turned off, connect one end of the supplied cable into the parallel port (printer port) on the back of the PC. This is a DB25 female connector on the back of the computer case.

**▲ WARNING: Do not connect the programming lead to a computers serial port and ensure the power to the computer is disconnected before plugging in any cables.**



Figure 3-1: Connect the programming cable to the PC

- Plug the other end of the supplied parallel cable into the programming cradle.
- Remove the battery compartment cover and battery on the rear of the pager and place the pager facing upwards into the programming cradle, as shown below. You will need to make sure the pins are in contact with the pager and press down hard just prior to reading/writing so that there is a good contact between the pager and programmer pins.



Figure 3-1: Place the pager in the programming cradle

- The pager is now ready to be read from, or written to.

## 4. SOFTWARE INSTALLATION

The 4140 programming software must be run in a native DOS environment. It cannot be run from a DOS window within any Windows operating system. A native DOS environment can be achieved by one of the two following ways:

1. Shutdown the computer in “MS-DOS mode”. (Only available in 95,98,ME)
2. Use a boot disk to start the computer up in an MS-DOS prompt. (Available for all operating systems)

❖ **NOTE: Never run the programming software from a DOS Window.**

### 4.1 Shutdown or Start-up in MSDOS mode

If your computer uses an MSDOS based operating system such as Windows 95/98/ME, you can shutdown the computer in MSDOS mode and then run the programming software. Follow the directions below:

1. With the power to the computer disconnected, install the hardware as described the in the *Hardware Installation* section above
2. Start-up the computer into the Windows operating system (95/98/ME) as normal
3. Once in the Windows operating system, select the *START* button, followed by *SHUTDOWN*. From the menu that appears, select *SHUTDOWN IN MSDOS MODE*. The computer will shutdown into native DOS mode
4. Insert the supplied 4140 software disk into the 3.5 inch floppy drive on the PC
5. At the DOS prompt, change to the drive where the software floppy disk is located. In most cases this is drive “a”. Type `cd a:` followed by the *ENTER* key to change to drive “a”.
6. Once you have changed to the correct drive, type `414040` followed by the *ENTER* key
7. The software will start automatically

### 4.2 Using a Boot Disk

If you have an operating system installed that is not DOS based, a DOS boot disk will be required to run the software. Read the *Making a DOS Boot Disk* section below if you do not have one already. Follow these directions if you have a DOS boot disk.

**▲ WARNING: In order to proceed, the computers BIOS settings must be set up to enable it to boot off the floppy drive *first*, rather than the hard disk. BIOS settings should only be changed by persons experienced in this area. Contact your network administrator or place of purchase before proceeding if you are unsure.**

1. Shutdown the computer, if it is ON
2. Insert the DOS boot disk into the floppy drive
3. Turn on the computer. The DOS boot disk will take you to a DOS prompt after a minute or so, instead of starting up the Windows operating system.
4. Once you have reached a DOS prompt, remove the DOS boot disk from the floppy drive and insert the 4140 software disk into the floppy drive.

5. At the DOS prompt, change to the drive where the software floppy disk is located. In most cases this is drive “a”. Type `cd a:` followed by the *ENTER* key to change to drive “a”.
6. Once you have changed to the correct drive, type `414040` followed by the *ENTER* key
7. The software will start automatically

### 4.3 Making a DOS Boot Disk

**➔ IMPORTANT: A blank floppy disk will be required to complete this task.**

#### 4.3.1 Windows 95/98/ME

DOS boot disks are usually included with new computers. If you do not have a DOS boot disk you will need to locate a computer that has a DOS based operating system (such as Windows 95/98/ME) and manually create one. Follow these directions:

1. Start-up the computer into the Windows operating system (95/98/ME) as normal
2. Click the *START* button, followed by *SETTINGS*, then *CONTROL PANEL*.
3. There will be a tab labelled *STARTUP DISK* within this window, select this tab.
4. Follow the directions within this tab to create a DOS boot disk.

#### 4.3.2 Windows XP

If you have a Windows XP installation you can create a DOS boot disk by following these steps:

1. Insert a blank floppy disk.
2. Open “Windows Explorer” from the Start-menu or “My Computer” by double clicking the icon on the desktop.
3. Using the right-mouse button, click the floppy drive icon (usually 3½ Floppy A:) and select *Format* from the menu.
4. A window will be displayed with a checkbox named “*Create an MS-DOS startup disk*”. Tick this box and then click *Start* to proceed with making the boot disk.

## 5. PROGRAMMING SOFTWARE

When the software has started up, you will be presented with the following screen.

```

Page 1 Of 3 Pocsag Pager Writer Model:4130/4140 Company:Commtech Version:3.1e
[No] [Capcode] [Frame] [Status] [AlertRst] [UrgentCall] invalid
1 000008 0 valid off [UrgentAddr] all
2 000016 0 valid off [UrgentFunc] all
3 000024 0 valid off
4 000032 0 valid off

[Serial Number] [Freq] [FreqBand] [IF Multi] [ IF Frequency ]
380100001 4627500 462-470 2 21.4MHz
[ Pll Device ] [ Password ] [Password No.] [Pocsag Polarity]
npc5170 valid 0200 positive
[ BS Setting ] [ BS Level ] [Quick Charge] [ Charge Cyle ]
high 10 high 16
[OTA Auto Time] [OTA Power Off] [OTA Msg Del] [ OTA AlertMode ]
invalid invalid invalid invalid
[ Lcd Phase ] [ Baud Rate ] [ LedDisplay ] [ LcdDispMode ]
normal 1200bps valid Yes
[ Function A ] [ Function B ] [ Function C ] [ Function D ]
Tone A Tone B Tone C Tone D

F1Save F2Load F3Write F4Read F5+1 F6-1 F7Lock-2F8Lock-3F9Lock-4ESCExit ←Edit

```

Figure 5-1: 4140 Programming Software

### 5.1 Using the software

The following keys are used to make your way around the programming software.

<b>ARROW KEYS:</b>	Used to move between fields
<b>F1:</b>	Save the current software settings into a file
<b>F2:</b>	Read an existing settings file into the software
<b>F3:</b>	Write the currently displayed settings to the pager
<b>F4:</b>	Read the currently programmed settings from the pager
<b>F5:</b>	Increment capcode #1 by a value of 1
<b>F6:</b>	Decrement capcode #1 by a value of 1
<b>F7:</b>	Pressing <b>F7</b> toggles between <b>FIX-2</b> and <b>LOCK-2</b> . If <b>FIX-2</b> is selected, capcode #2 will NOT increment/decrement with capcode #1 when <b>F5</b> or <b>F6</b> is pressed. If <b>LOCK-2</b> is selected, capcode #2 will increment/decrement with capcode #1 when <b>F5</b> or <b>F6</b> is pressed.
<b>F8:</b>	Pressing <b>F8</b> toggles between <b>FIX-3</b> and <b>LOCK-3</b> . If <b>FIX-3</b> is selected, capcode #2 will NOT increment/decrement with capcode #1 when <b>F5</b> or <b>F6</b> is pressed. If <b>LOCK-3</b> is selected, capcode #2 will increment/decrement with capcode #1 when <b>F5</b> or <b>F6</b> is pressed.
<b>F9:</b>	Pressing <b>F9</b> toggles between <b>FIX-4</b> and <b>LOCK-4</b> . If <b>FIX-4</b> is selected, capcode #2 will NOT increment/decrement with capcode #1 when <b>F5</b> or <b>F6</b> is pressed. If <b>LOCK-4</b> is selected, capcode #2 will increment/decrement with capcode #1 when <b>F5</b> or <b>F6</b> is pressed.
<b>ENTER:</b>	Switches between available items within the selected field or selects a field for editing.
<b>ESC:</b>	Exits the application.

## 5.2 Programming Software

The following section will describe the various settings within the programming software. The software consists of three pages with the current page number shown in the top left hand corner of the screen at all times. Each page will be discussed in detail below.

### 5.2.1 Page 1

```

Page 1 Of 3 Pocsag Pager Writer Model:4130/4140 Company:Commtech Version:3.1e
[No] [Capcode] [Frame] [Status] [AlertRst] [UrgentCall] [UrgentAddr] [UrgentFunc]
1 0000008 0 valid off invalid
2 0000016 0 valid off all
3 0000024 0 valid off all
4 0000032 0 valid off

[Serial Number] [Freq] [FreqBand] [IF Multi] [IF Frequency]
380100001 4627500 462-470 2 21.4MHz
[Pll Device] [Password] [Password No.] [Pocsag Polarity]
npc5170 valid 0200 positive
[BS Setting] [BS Level] [Quick Charge] [Charge Cyle]
high 10 high 16
[OTA Auto Time] [OTA Power Off] [OTA Msg Del] [OTA AlertMode]
invalid invalid invalid invalid
[Lcd Phase] [Baud Rate] [LedDisplay] [LcdDispMode]
normal 1200bps valid Yes
[Function A] [Function B] [Function C] [Function D]
Tone A Tone B Tone C Tone D

F1Save F2Load F3Write F4Read F5+1 F6-1 F7Lock-2F8Lock-3F9Lock-4ESCExit ←-Edit

```

Figure 5-2: Page 1 of the 4140 Programming Software

#### Capcode

Pagers require an identification address similar to a mobile phone number in order to receive messages. The 4140 pager has four such addresses that it can respond to. Enter the capcode here.

#### Frame

This field shows which frame the capcode is in. Ideally all frames should be the same value. The easiest way to achieve this is to make the capcode jump by a value of eight.

Ie: capcode 1- 0000008, capcode 2- 0000016, capcode 3- 0000024, capcode 4- 0000032 all reside on the same *frame*.

**→IMPORTANT: To conserve battery life, ensure all capcodes reside on the same frame.**

#### Status

This field is used to enable or disable the capcode above. This is useful, as a capcode can be set up ready for use at any time, but not be actually activated. Set this field to *valid* if the pager is to respond on this address. Set this field to *invalid* if the pager is not to respond to this address. At least one address will be required to be enabled for the pager to function.

### **AlertRst**

The *Manual Alert Reset* ability of the pager can be turned on or off here by choosing *valid* or *invalid*. *Manual Alert Reset* is when the pager alert is able to be stopped by pressing a key.

### **Urgent Call**

Select either *valid* or *invalid* here. Select *valid* to enable the *Urgent Call* functionality. When pager receives a message on the capcode(s) or tone(s) assigned the *Urgent* address/function, the pager will emit a special urgent tone with vibration. This urgent call is the highest priority. You can make a capcode or *Function A-D Urgent* by selecting it in the fields below.

### **Urgent Addr**

To assign *Urgent* priority to a specific cap code or all capcodes, select the appropriate option here.

### **Urgent Func**

To assign *Urgent* priority to a specific *Function* or all *Functions*, select the appropriate option here.

### **Serial Number**

This field reads the serial number from the pager. The serial number can also be changed here and written to the pager is required, although this is not recommended. The serial number can be letters or numbers. (0-9 and a-z)

### **Freq**

Enter the frequency that the pager will receive on. This must match the frequency of your transmitter. The frequency must be entered here in kHz. Ie : If your transmitter works on 450.3750 Mhz you would type in 4503750 here.

### **Freq Band**

This field will show what frequency band the pager is capable of receiving in. In order for the pager to receive messages outside this range, a new RF board will need to be installed.

### **Password**

Select *valid* here if you would like a password required to be entered before entering into the *Advanced Setup Menu*. See the *Advanced Setup Menu* section later on for more information.

**Password No.**

When *valid* is selected in the above *Password* field, the number entered here will be required to be entered before access is given to the *Advanced Setup Menu*. See the *Advanced Setup Menu* section later on for more information.

**POCSAG Polarity**

Select either *positive* or *negative* POCSAG polarity in this field. The setting here must match that of your paging terminal.

**Charge Cycle**

This field alters the charge properties of the pager.

**▲ WARNING: Do not change this field – leave it at the default of 16 unless otherwise instructed.**

**OTA Auto Time**

Setting this field to *valid* enables *Over The Air* adjustment of the current time using special commands. A message is sent to the pager in the following format to adjust the time:

[ 0090 ] [ \_\_\_\_ - 0 ] =            \_\_ : \_\_ 24H

[ 0090 ] [ \_\_\_\_ - 1 ] =            \_\_ : \_\_ AM

[ 0090 ] [ \_\_\_\_ - 2 ] =            \_\_ : \_\_ PM

Otherwise set this field to *invalid*.

**OTA Power Off**

Setting this field to *valid* enables the ability to power off the pager *Over The Air* using special commands. A message is sent to the pager in the following format to turn the pager off.

[ 0091 ] [ 0 ]

Otherwise set this field to *invalid*.

**OTA Msg Del**

Setting this field to *valid* enables *Over The Air* deletion of messages stored on the pager using special commands. A message is sent to the pager in the following format to delete all messages.

[ 0092 ] [ 0 ]

Otherwise set this field to *invalid*.

**▲ WARNING: Protected messages will also be deleted if this command is used.**

### OTA AlertMode

Setting this field to *valid* enables *Over The Air* altering of the *Alert Mode* settings using special commands. A message is sent to the pager in the following format to change the alert settings.

[ 0093 ] [ 0 ]	=	Mute Pager
[ 0093 ] [ 1 ]	=	Beep Alert
[ 0093 ] [ 2 ]	=	Vibrator Alert
[ 0093 ] [ 3 ]	=	Beep + Vibrator Alert

Otherwise set this field to *invalid*.

### Baud Rate

This represents the POCSAG baud rate. This value also needs to match the configuration of the transmitter you are using. Select between 512, 1200 or 2400 bps.

### LedDisplay

Select either valid or invalid here. If valid is chosen, the LED on the pager will flash with the tone pattern even if no tone settings are currently active.

### Function A – D

The tone types A, B, C or D can be assigned to function A, B, C or D here.

## 5.2.2 Page 2

```

Page 2 Of 3 Pocsag Pager Writer Model:4130/4140 Company:Commtech Version:3.1e
[UserSelectTone]      valid      [protect Function]   valid
[ ABCD or Tone ]     ABCD+Music 1-8 [Out of Range]      valid
[Vibrate Patern]     B          [In/Out Range]      out
[ Alert Select ]     T/U/T+U/M   [Detect Time]       06 min
[ Alert Time ]       8sec       [Out of Range Display] valid
[Hello Message]     valid      [Dup Msg Rejection] invalid
[Hello Content]     COMMTECH   [Detect Time]       1 min
[CapcodeDisplay]    valid      [Repeat Tone Pattern] short
[Freq Display ]     valid      [Unread Msg Disp]   valid
[Low Batt Display]  invalid    [Reminder Beep]     valid
[Low Batt Reminder] valid      [ReminderTimeOut]   30min
[Msg Status Disp]   valid      [Date Format]        USA
[ Error Deduction ] valid      [Sleep Timer Function] invalid
[Time Stamp Display] valid      [Daily Alarm Function] valid
[All Time Display]  valid      [Tone Only Pager]   invalid
[Msg Full/Over Disp] invalid
[Message Order]     increment

```

F1Save F2Load F3Write F4Read F5+1 F6-1 F7Lock-2F8Lock-3F9Lock-4ESCExit ←Edit

Figure 5-3: Page 2 of the 4140 Programming Software

**User Select Tone**

To allow the user to change tone settings on the pager, select *valid* here. Set this field to *invalid* to disable the ability to change tone settings.

**ABCD or Tone**

If the *User Select Tone* field above has been set to *valid* you can adjust the tone settings of the pager by choosing between *ABCD+Music 1-8* or *Tone+Music 1-8*.

**Vibrate Pattern**

Choose *A* here if you would like the vibrator to behave in a simple on/off manner when paged. You can also choose *B* here which will enable to vibrator to vibrate in time with the beep of the pager.

**Alert Select**

This field enables you to adjust the alert sequence of the pager when it receives a page. T=Tone, V=Vibrate, M=Mute.

**Alert Time**

Select the amount of alert time the pager should give when it receives a message. Choose between *8* and *16* seconds. When a message is received this is the length of time the pagers will beep or vibrate for. (depending on pager alert settings)

**Hello Message**

Set this field to *valid* if you would like a start-up message to be displayed when the pager is turned on. The message that will be displayed is contained in the *Hello Content* field, as described below.

### Hello Content

Enter a message here that you wish the pager to display on start-up. The message can be up to 20 alphanumeric characters long.

### Capcode Display

If this field is set to *valid*, the pager will display the pagers capcode when in *Test Mode*.  
(*Advanced factory use only*)

### Freq Display

If this field is set to *valid*, the pager will display the pagers frequency when in *Test Mode*.  
(*Advanced factory use only*)

### Low Batt Display

If this field is set to *valid*, there will be a special low battery warning when the *Vibrate Pattern* field above is set to B.

### Low Batt Reminder

If this field is set to *valid*, the pager will beep to remind you to replace the battery when it becomes low.

### MsgStatus Disp

When set *invalid*, the pager will not display the received messages capcode and *Function* at the end of each message – however it will display the time-stamp for the message.

### Error Deduction

If this field is set to *valid*, messages that the pager deems to contain errors will not be displayed.


### Time Stamp Display

If this is set to *valid*, the time the message was received will be placed at the end of each message.

### All Time Display

If this is set to *invalid*, the pager will never display the current time, time stamp, date or daily alarm on the LCD.

### Msg Full/Over Disp

If this is set to *valid* and a message is longer than the screen width the LCD will display a small icon indicating it. The  *Read Key* can be pressed again to view the remaining message.

### Message Order

Messages are assigned slot numbers when they are received. The slot number is displayed on the LCD when the message is displayed. If this field is set to *decrement*, the message order will be reduced for each new incoming message. Ie: the newest message will always be #1.

### Protect Function

If *valid* is selected here, the *Protect Menu* will be displayed in the *Delete Menu* within the pager. This gives the user the ability to “protect” messages from being deleted if they are important.

### Out of Range

Set this field to *invalid* if you would like to disable the out of range indication feature. If this field is set to *valid*, you can customise this feature by adjusting the next three fields below.

### In/Out Range

This is used to indicate whether or not you are within range of the transmitter. Select *out* if you would like the antenna icon on the LCD to activate when the pager is out of range. Select *in* if you would like the antenna icon on the LCD to activate when the pager is within range.

### Detect Time

This can be set between 1 and 15 minutes. If the pager does not receive a POCSAG signal within this time frame, it will sense that it is out of range and will act according to the setting in the *In/Out Range* field described above.

### Out of Range Display

When set to *valid* and the pager falls out of range, the LCD will display the text *Out of Service* and perform the *A* type vibration pattern until a key is pressed.

### Dup Msg Rejection

If this field is set to *valid*, then a duplicate message will not be received as a new message – the original message will simply have its received time updated. Select *invalid* to receive duplicate messages as separate messages.

### Detect Time

The duplicate message rejection time can be set to either 1, 2, 3, 4, 5 or 6 minutes. If *Duplicate Msg Rejection* is enabled and the pager receives a duplicate message within this time frame the original message will simply have its received time updated rather than it being received as a new message.

### Repeat Tone Pattern

Select between *short* or *long* for this field. If the pager receives a duplicate message, it can be set to emit a short beep (*short*) or emit a long beep (*long*).

### Unread Msg Disp

If this field is set to *valid*, the unread message icon will appear on the LCD to serve as a reminder that there is unread private message(s) waiting. Otherwise, set this field to *invalid*.

### Reminder Beep

If this field is set to *valid*, a short reminder beep will be generated every 15 minutes to serve as a reminder that there is unread private message(s) waiting. Otherwise, set this field to *invalid*.

### Reminder Timeout

Choose between *30min* or *unlimited* here. This refers to the amount of time the pager will remind the user that there is an unread message waiting.

### Date Format

Use the *ENTER* key to toggle between the date style format displayed on the pager. Select between USA/UK style. UK style – *DD/MM/YY* or US style – *MM/DD/YY*.

### Sleep Timer Function

If this field is set to *invalid*, the sleep timer menu will not be displayed in the setup menus of the pager.

### Daily Alarm Function

If this field is set to *invalid*, the daily alarm menu will not be displayed in the setup menus of the pager.

### Tone Only Pager

If this field is set to *valid*, the pager will behave as a tone only pager using only the *Read Key* and the LED.



## 5.2.3 Page 3

```

Page 3 Of 3 Pocsag Pager Writer Model:4130/4140 Company:Commtech Version:3.1e
[Canned Message Enable] valid
[Canned Message Style] Tone only canned message
[Canned Message Command Selection] --
[Canned Message 0] apple [Canned Message 10] date
[Canned Message 1] pear [Canned Message 11] peanut
[Canned Message 2] banana [Canned Message 12] medlar
[Canned Message 3] peach [Canned Message 13] guava
[Canned Message 4] mango [Canned Message 14] walnut
[Canned Message 5] lemon [Canned Message 15] wheat
[Canned Message 6] cherry [Canned Message 16] rose
[Canned Message 7] plum [Canned Message 17] tulip
[Canned Message 8] grape [Canned Message 18] peony
[Canned Message 9] fig [Canned Message 19] coffee

[Function A Tone only Message] watermelon
[Function B Tone only Message] ToneOnlyMess
[Function C Tone only Message] pineapple
[Function D Tone only Message] ToneOnlyMess

F1Save F2Load F3Write F4Read F5+1 F6-1 F7Lock-2F8Lock-3F9Lock-4ESCExit ←JEdit

```

Figure 5-4: Page 3 of the 4140 Programming Software

**Canned Message Enable**

Select either *valid* or *invalid* here. Select *valid* if you wish to enable the *Canned Message* functionality. When enabled, the LCD will can show a short message that correlates to a specific numeric or tone only message.

**Canned Message Style**

Select *Normal Canned Message* if the pager will be sent a numeric message (between 0-19) to activate the *Canned Message*. The twenty canned messages below become active so they can be edited.

Select *Tone Only Canned Message* if the pager will be receiving a tone only message to activate the *Canned Message*. The four *Function A-D Tone Only message* fields will be become active so they can be edited.

**Canned Message Command Selection**

This field refers to the *Canned Message trigger*. Choose between either "--" , "[[" or "[)". For example, if you chose "--" in this field, and the message "--0" is sent to the pager – the screen will display the message in entered into the *Canned Message 0* field. ("apple" in the *Figure 5-4* above)

**Canned Message 0 – 19**

This section contains the twenty canned messages. A short six character message can be assigned to each numeric message here. Select the canned message you wish to edit and press the *ENTER* key to edit the text. Pressing *ENTER* again will save the message.

❖ **NOTE:** This field is only available if the *Canned Message Enable* field is set to *Normal Canned Message*.

**Function A-D Tone only Message**




This section contains four canned messages. A short 12 character message can be displayed on the pager when a tone-only message is received relating to *Function A-D*.

❖ **NOTE:** This field is only available if the *Canned Message Enable* field is set to *Tone Only Canned Message*.




## 6. ADVANCED SETUP MENU

The 4140 pager can be hand programmed using the keys and LCD without the need for connection to a PC or programming adapter. The four capcodes and the frequency can be programmed in via this method.

**▲ WARNING: Do not change any of the following settings unless you are sure of the implications.**

To enter the *Advanced Setup Menu*, hold down the  *Menu Key* and the  *Read Key* simultaneously for two seconds whilst inserting the battery into the pager. You may be confronted with a screen asking for a password if this feature has been programmed in. If the correct password is entered, or no password is required, the *Advanced Settings Menu* will be displayed. If an incorrect password is entered or the  *Escape Key* is pressed, you will be taken to the *Standby Screen*.

### 6.1 Manual Capcode Entry

You can add or view the four capcodes in this first menu, as well as enable/disable each capcode. Use the  *Menu Key* to move between screens or to change fields. Use the  *Read Key* to move along to the next field or character. The  *Escape Key* can be pressed at any time to return you to the *Standby Screen* without saving changes. The first number of the line shows the capcode number. The second field shows if the capcode is enabled (ON) or disabled (--). The third field is the capcode.

The *Capcode Menu* below shows capcode number one enabled and assigned to capcode 8.

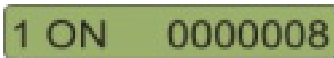





Figure 6-1: Capcode Screen

### 6.2 Manual Frequency Entry



After viewing or editing the data for the four capcodes, pager will automatically display the *Frequency Setting Menu* as shown below.



Figure 6-2: Frequency Screen

Use the  *Read Key* to move along to the next field or character. Use the  *Menu Key* to change fields. The  *Escape Key* can be pressed at any time to return you to the *Standby Screen* without saving changes. The frequency must be entered here in kHz. Ie: If your transmitter works on 450.3375 Mhz you would type in 4503375.

### 6.3 Saving Settings

Once you have entered the requested changes, scroll through the *Advanced Setup Menu* until *Prog Yes* is found. To save the settings to the pager, press the  *Read Key*. The pager will briefly display *Programming* and then go the *Standby Screen*. To return to the *Standby Screen* without saving changes press the  *Escape Key*.

## 7. APPENDIX

### 7.1 Precautions

1. This pager contains precision electronic components. Avoid temperature extremes during use and storage and do not subject it to strong impact.
2. Avoid using the pager in an area where it might come into contact with liquids or very high humidity.
3. Never try to take the pager apart. Doing so can lead to serious damage and malfunction.
4. Replace the battery as soon as possible after you notice it getting low. Leaving a dead battery in the pager can result in damage caused by leaking fluids. The battery should be removed from the pager if you do not plan to use it for a long time.
5. Clean the pager by wiping it with a soft dry cloth. You can also use a cloth moistened with a weak solution of mild neutral detergent and water. Wring as much liquid as possible from the cloth before wiping the pager. Never use thinner, benzine, alcohol or other volatile agents to clean the pager.
6. Do not allow the pager to be exposed to direct sunlight, heat from heaters or other sources of heat (greater than 60°C). Do not leave the pager in a motor vehicle that is parked in the sun.
7. Never expose batteries to direct sunlight or incinerate them. Doing so may cause the batteries to explode.
8. Never try to charge batteries or take them apart. Doing so can cause them to leak fluid.

### 7.2 Further Help and Support

#### 7.2.1 Contact your Place of Purchase

A Commtech Wireless Authorised Distributor or Dealer sets up most systems. Contact your place of purchase with inquiries beyond the scope of this manual.

#### 7.2.2 This Product is Not Field Serviceable

Should a fault develop with the hardware or software, contact your place of purchase for the most appropriate form of action. Do not attempt to open or repair any of the products as this may void any warranty.

### 7.3 Glossary

Table 7-1: Glossary

Term	Definition (Description)
ANSI	American National Standards Institute
Capcode	Seven-digit capacity code number used to identify a pager.
LCD	Liquid Crystal Display
LED	Light Emitting Diode
POCSAG	RF Protocol used to communicate to pagers written by the Post Office Code Standardisation Advisory Group.

## 8. SPECIFICATIONS

*Note : Specifications subject to change without any notice*

### 8.1 Electrical Specification

Rx Frequency .....135MHz~175MHz; 276MHz-284MHz, 446MHz-470MHz, 929Mhz-932Mhz  
Nominal Battery Life ..... around 45 days ('AAA' alkaline battery)

### 8.2 Technical Specification

Code Format.....POCSAG  
Programming ..... Programming lead and software or manually with pager keypad/lcd  
Capcodes ..... 4  
LCD ..... 12 character, backlit, alphanumeric  
Message Capacity .....20 messages  
Approvals..... CE / FCC / ACA C-tick / DOC

### 8.3 Mechanical Specification

Unit size ..... 64 x 43 x 18 mm without holster  
..... 2.5 x 1.7 x 0.7 inches without holster  
Weight ..... 40 grams  
..... 1.4 oz  
Casing Standards ..... Dust Proof  
Working Temperature ..... -10 to +50°C  
Storage Temperature ..... -20 to +60°C  
Working Humidity ..... up to 95% @ 50°C (non condensing)