

Using the CR3600 Simulator

Changes From Last Release

Description	Section(s)	By
Updated to cover the CR3600 Simulator instead of the CR3500 Simulator	All	David Thai

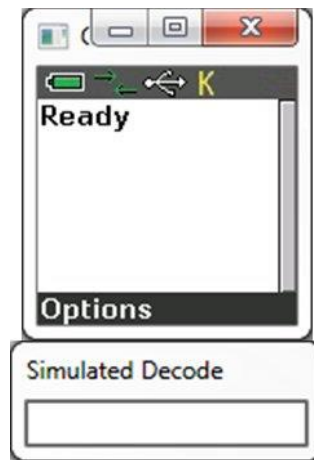
Using the CR3600 Simulator

The CR3600 Simulator is intended to simulate the operation of a Code Corporation Code Reader 3600 Scanner on your PC. The CR3600 Simulator will run under Windows 2000, Windows XP, Windows Vista, and Windows 7 including 64-bit versions of the operating system.

The CR3600 Simulator (jsSim3600.exe) can be run as a standalone application or in conjunction with the included editor SciTE. Documentation for SciTE can be found in the SciTEDoc.html file in the editor folder.

Running CR3600 Simulator in standalone mode

Simply execute the jsSim3600.exe file to bring up the CR3600 Simulator. The application will appear in the upper left corner of the screen as two windows.



The top window, named CR3600 Simulator, is an analog of the display screen on your scanner. The bottom window, named Simulated Decode, allows you to simulate scanned, decoded input to the scanner by typing characters into the dialog box and pressing enter.

At the top of the simulated display screen there is a dark gray status bar that contains icons for battery strength, communication status, communication type, and communication type option. In the example above the battery is at full strength (which will always be the case in the simulator), the communication status is connected (indicated by the opposing arrows), the communication type is USB (indicated by the three-pronged USB logo) and the communication option is the Keyboard type of USB connection (indicated by the letter 'K'). Other information icons will appear on this status bar as the application running in the main display area indicates a need for them. These icons will be explained later in this document.

The middle of the simulated display screen is a white main display area for the scanner. In the example above the scanner is indicating 'Ready'. There is a gray scroll bar on the right side of the main display area that shrinks to indicate that the display content is larger than the display area.

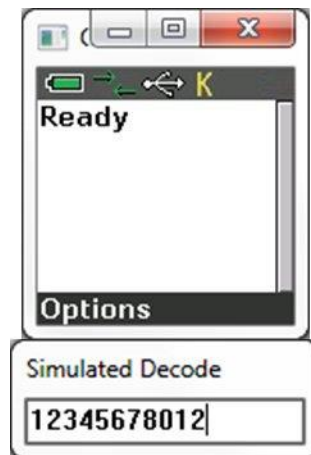
At the bottom of the simulated display screen is a dark gray soft button bar. This bar has the capability to display two soft buttons, one on the right and one on the left. The term soft button refers to the functionality of the buttons to change in response to the mode or application running in the simulator. The text of the soft button will change to indicate a new function for that button. In the example above, only the left soft button is shown with the text 'Options'. Use the F1 key on the computer keyboard to activate the left soft button and the F2 key on the computer keyboard to activate the right soft button.

The Enter key on your computer keyboard acts as an OK command. What the OK command does changes based on the mode or application running in the simulator. For more consistent results, use the F1 and F2 keys to activate the left and right soft buttons.

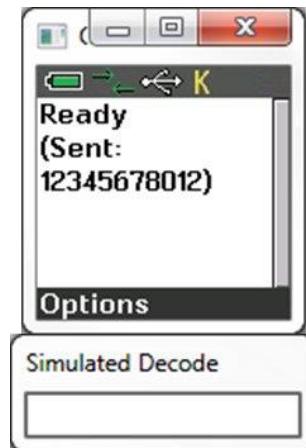
The Simulated Decode window can be used at any time to simulate using the Code Reader 3600 to scan a symbol. Text that is typed in the input box is the decoded information from the symbol. For example, using a Code Reader 3600 to scan the simple bar code below would result in the text '123456789012' being transferred to the application running on the scanner.



To simulate scanning such a bar code, simply type the text '123456789012' into the input box in the Simulated Decode window.



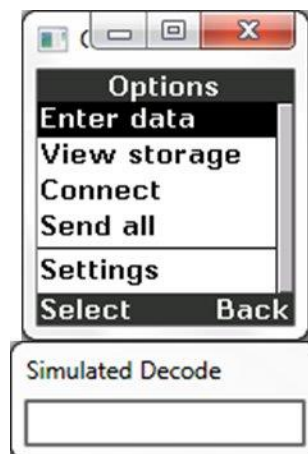
After typing the text, press Enter.



In the example above, the CR3600 Simulator is in Ready mode when text is typed into the Simulated Decode window, therefore the display shows that the text was sent.

Options in the CR3600 Simulator

Press the F1 key on the computer keyboard to activate the 'Options' soft button on the CR3600 Simulator screen. The options available in the simulator will be displayed:



The gray status bar is replaced with the text 'Options'. The list of options available is displayed in the main display area - the first highlighted as black with white text, the rest of the list white with black text. The soft buttons change to 'Select' on the left and 'Back' on the right.

Navigate up and down the list of options using the up and down arrows on your computer keyboard. Select an option using the F1 key to activate the left soft button 'Select'.

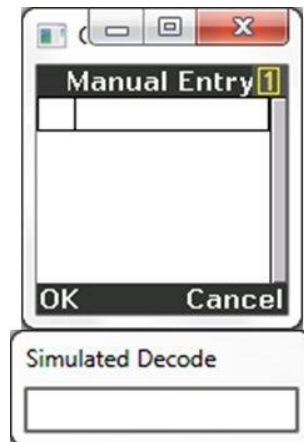
The list of options consists of the following five entries:

- Enter Data
- View storage

- Connect
- Send all
- Settings

Enter Data

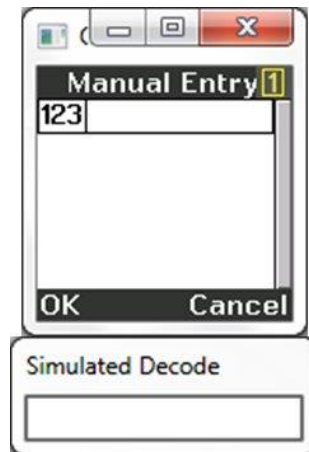
In the 'Options' screen, use the computer keyboard up and down arrow keys to select 'Enter Data'. Press the F1 key on the computer keyboard to select the 'Enter Data' option on the CR3600 Simulator screen. The Manual Entry screen will be displayed in the simulator:



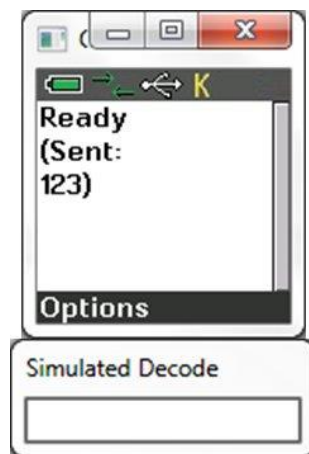
The gray status bar text is replaced with the text 'Manual Entry' and a small icon of the numeral 1 inside a box appears on the right side of the status bar.

The numeral 1 inside a box icon indicates that the input mode is numerals only. Similar icons depicting a character inside a box indicate the input mode for the application running in the CR3600 Simulator. Pressing the Shift key on the computer keyboard will cycle through the input modes. Valid characters in the input mode icon include 1, A, a, *, C. For a key mapping for each mode, see appendix 2.

The cursor will be in the white input box at the top of the white main display area. Pressing the 1, 2 and 3 key on the computer keyboard will input those characters into the input box.

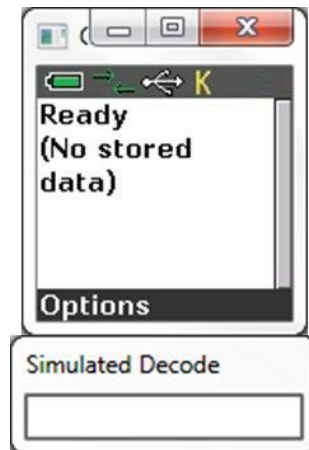


Pressing F1 to select the 'OK' soft button will send the information in the input box and the display will change to indicate that the information was sent. Pressing F2 to select the 'Cancel' soft button will change the display to the default the 'Ready' screen.



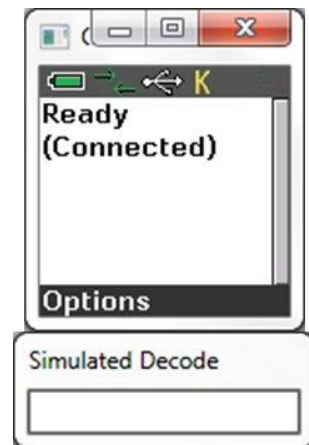
View Storage

In the 'Options' screen, use the computer keyboard up and down arrow keys to select 'View storage'. Press the F1 key on the computer keyboard to select the 'View storage' option on the CR3600 Simulator screen. The resulting information on the screen will be based on the application running in the CR3600 Simulator. Since the default setting on the CR3600 Simulator is to auto-send data, the Ready screen will reappear including a message that there is no stored data:



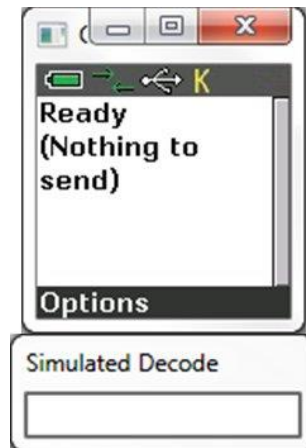
Connect

In the 'Options' screen, use the computer keyboard up and down arrow keys to select 'Connect'. Press the F1 key on the computer keyboard to select the 'Connect' option on the CR3600 Simulator screen. The resulting information on the screen will be based on the application running in the CR3600 Simulator. Since the CR3600 Simulator is currently connected, the Ready screen will reappear including a message that the CR3600 Simulator is connected:



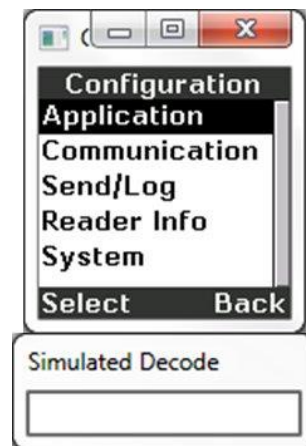
Send All

In the 'Options' screen, use the computer keyboard up and down arrow keys to select 'Send all'. Press the F1 key on the computer keyboard to select the 'Send all' option on the CR3600 Simulator screen. The resulting information on the screen will be based on the application running in the CR3600 Simulator. Since there is currently no application running on the CR3600 Simulator that stores data the Ready screen will reappear including a message that there is no stored data to send:



Settings

Use the down arrow on your computer keyboard to navigate to the 'Settings' option and press the F1 key on the computer keyboard to select the option. The settings available in the simulator will be displayed:



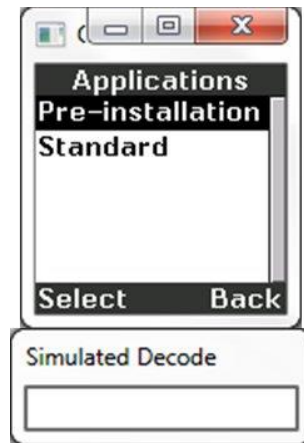
The gray status bar is replaced with the text 'Configuration'. The list of options available is displayed in the main display area - the first highlighted as black with white text, the rest of the list white with black text. The list consists of six entries, but only five fit in the main display area. To indicate that there are more entries than fit in the main display area, the scroll bar on the right side of the screen has shortened, leaving a darker scroll background exposed below.

The list of settings consists of the following entries:

- Application
- Communication
- Send/Log
- Reader Info
- System

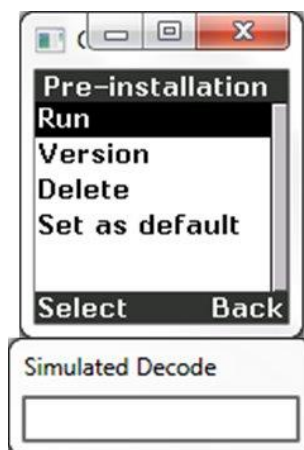
Application

In the 'Configuration' screen, use the computer keyboard up and down arrow keys to select 'Application'. Press the F1 key on the computer keyboard to activate the 'Select' soft button. The applications available in the simulator will be displayed:



The simulator ships with two JavaScript sample applications – Pre-installation and Standard. The Pre-installation sample applications include demo applications (Verification, Inventory, and Admissions). Click 'Run' to start the demo applications. Selecting the Standard menu-item will bring you to the default 'Ready' screen. You can include applications in this list by placing them in the jse directory (the same directory that holds the jsSim3600.exe file). In order for applications you have added to appear in the list you must restart CR3600 Simulator.

To run an application, navigate to highlight the application name and press F1 to activate the 'Select' soft button. The application screen displays options available in CR3600 Simulator:



The 'Run' option executes the JavaScript code you selected in the last step.

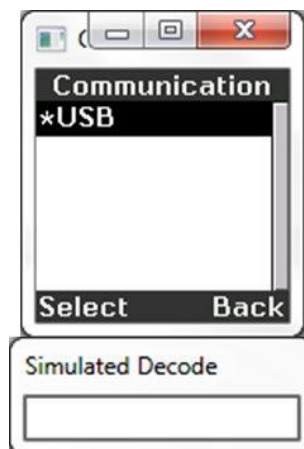
The 'Version' option displays the version of the code you selected.

'Delete' actually does nothing – it does not delete an application from the list of applications in CR3600 Simulator nor deletes files from your computer. It does bring up a confirmation screen that makes you confirm your decision to delete the application by choosing a 'Yes' or 'No' soft button, but whichever button you activate brings you back to the 'Configuration' screen with no changes actually being made. If you would like to remove applications from the list of available applications in the 'Applications' screen, remove them from the jse folder. In order for applications you have removed from the directory to disappear in the list you must restart CR3600 Simulator. If you delete any of the two applications that ship with CR3600 Simulator you must re-download the simulator to replace them.

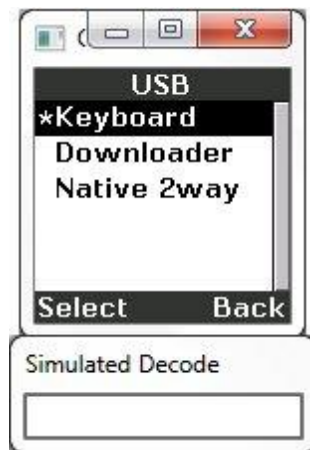
'Set as default' sets the application you have chosen as the default running application when CR3600 Simulator starts. It accomplishes this by editing the .default.js file in the jse folder. **NOTE:** Once an application has been chosen as the default application it will remain so until you edit the .default.js file or replace it with a copy of the original. The original file contains one line – `'include("cr8000.js");'` – without the single quotes.

Communication

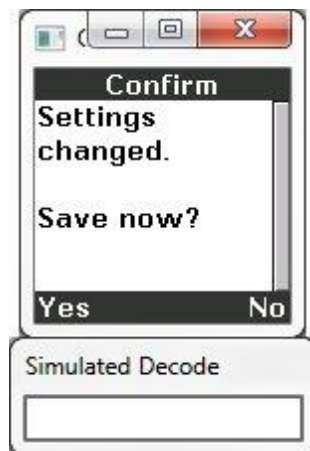
In the 'Configuration' screen, use the computer keyboard up and down arrow keys to select 'Communication'. Press the F1 key on the computer keyboard to activate the 'Select' soft button. The available communication options will be displayed:



The jsSim3600 simulator behaves like the Code Reader 3600 and it connects to the PC via a charging station with/without an embedded CodeXML modem. The 'USB' option in the Communication section behaves as the reader is connected via USB. To select 'USB' press the F1 key on the computer keyboard to activate the 'Select' soft button. The available communication options will be displayed:



The available USB communication options are Keyboard, Downloader, and Native 2way. Highlight the desired option and press the F1 key. The 'Confirm' screen will open and ask if you want to save the setting. Select F1 for 'Yes' and F2 for 'No'. If F1 is selected, a confirmation screen will show verifying that the setting was saved successfully.



From this confirmation screen, selecting 'Yes' softkey (F1) again will display an additional confirmation screen indicating that the system setting was successfully changed.

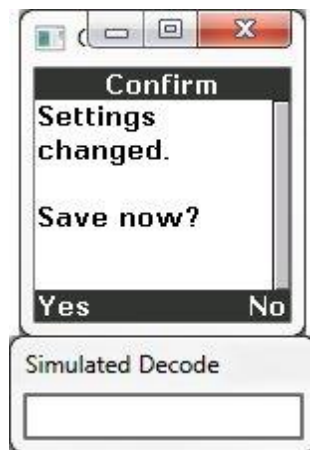


Send/Log

In the 'Configuration' screen, use the computer keyboard up and down arrow keys to select 'Send/Log'. Press the F1 key on the computer keyboard to activate the 'Select' soft button. The available Send/Log options will be displayed:



To select or deselect a setting to the required configuration, click Select softkey (F1). There will be an asterisk (*) next to the selected setting. To deselect a setting, click Select softkey (F1) again to remove the asterisk (*). Selecting the 'Back' softkey (F2) will display a confirmation screen asking if the changes be saved, if setting changes were done. Otherwise, selecting the 'Back' softkey will return the display to the default configuration screen.



If the settings were modified and the confirmation 'Yes' softkey (F2) were selected, the screen will display the settings saved successfully.



Reader Info

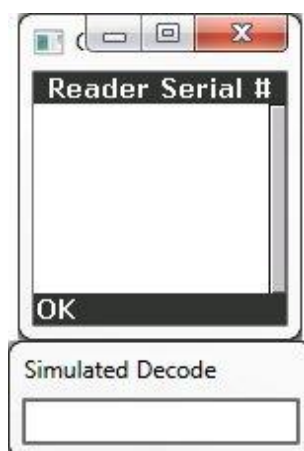
In the 'Configuration' screen, use the computer keyboard up and down arrow keys to select 'Reader Info'. Press the F1 key on the computer keyboard to activate the 'Select' soft button. The available Reader Information options will be displayed:



The available options are Firmware Version, Reader Serial Number, Date/Time, and Radio BD_ADDR. Selecting the Firmware Version will display the firmware build numbers that is currently stored in the reader.



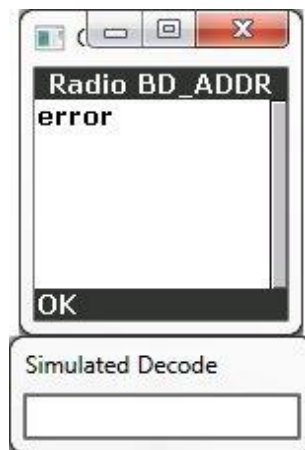
Selecting the Reader Serial Number will display the Serial Number of the reader. This is the display in the simulator but is not connected to a CR3600 reader.



Selecting the Date/Time will display the current date and time setting. Selecting the 'Ok' softkey will return the simulator screen to the Reader Info screen.

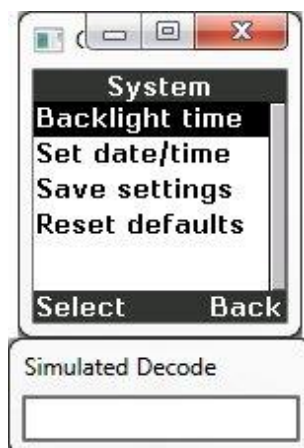


Selecting Radio BD_ADDR will display the Bluetooth address for the Bluetooth radio. The simulator displayed an 'error' since no Bluetooth address is detected. Selecting the 'Ok' softkey will return the simulator screen to the Reader Info screen.

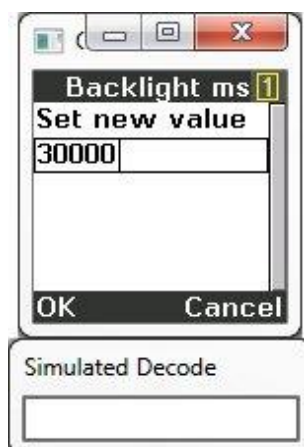


System

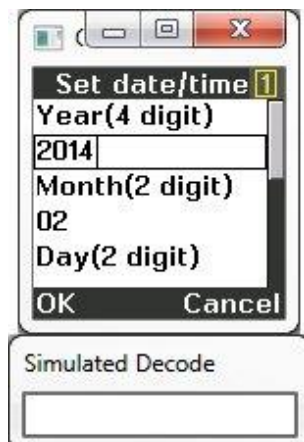
In the 'Configuration' screen, use the computer keyboard up and down arrow keys to select 'System'. Press the F1 key on the computer keyboard to activate the 'Select' soft button. The systems menu will allow systems changes such as date/time, backlight time, and resetting the reader to default settings. The system settings available in the simulator will be displayed:



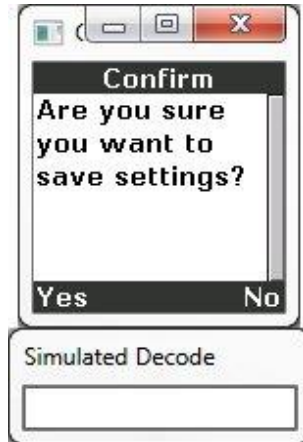
The available options are Backlight time, Set data/time, Save settings, and Reset defaults. Selecting the Firmware Version will display the firmware build numbers that is currently stored in the reader. The Backlight time setting is the length of time elapsed before the reader display screen is screen savings mode.



Selecting the Set date/time will display the date/time stamp for the reader. Selecting the 'OK' softkey (F1) or 'Cancel' (F2) will display the System default menu.



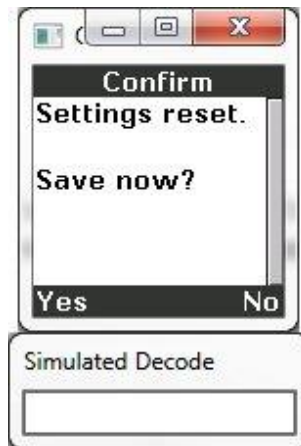
Selecting the Save settings will save the settings that were modified in previous date/time or backlight time selections. Selecting the 'Yes' softkey (F1) or 'No' (F2) will return the display to the System default menu. This is the display in the simulator:



Selecting the Reset default will reset the reader to system defaults. Selecting the 'No' softkey (F2) will return the display to the System default menu.



Selecting or 'Yes' softkey or (F1) will display an additional confirmation screen. The following screen will be displayed from the simulator.



From this confirmation screen, selecting 'Yes' softkey or (F1) again will display an additional confirmation screen indicating that the system reset was successful.



Appendix 1: Main key mappings in the CR3600 Simulator

The key mapping in CR3600 Simulator is highly dependent on the application that is running in the simulator. The main key mappings are listed below.

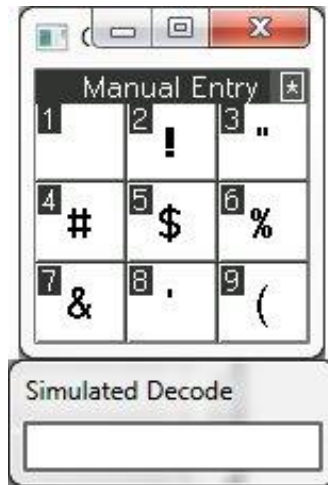
Computer Keyboard Key	CR3600 Simulator Action
Down Arrow	Scroll Down
Up Arrow	Scroll Up
Left Arrow	Cursor Left
Right Arrow	Cursor Right
F1	Left Soft Button
F2	Right Soft Button
Backspace	Clear or Cancel
Enter	OK
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
0	0

Appendix 2: Input Mode Key Mappings

Input mode indicator	Possible input																						
1	Numeric characters using the computer keyboard number pad only																						
A	Upper-case characters using the computer keyboard number pad only. Characters are cycled in the same sequence as a telephone alpha-numeric input <table><tr><th>Numeral</th><th>Character</th></tr><tr><td>0</td><td>0</td></tr><tr><td>1</td><td>Space</td></tr><tr><td>2</td><td>A, B, C, 2</td></tr><tr><td>3</td><td>D, E, F, 3</td></tr><tr><td>4</td><td>G, H, I, 4</td></tr><tr><td>5</td><td>J, K, L, 5</td></tr><tr><td>6</td><td>M, N, O, 6</td></tr><tr><td>7</td><td>P, Q, R, S, 7</td></tr><tr><td>8</td><td>T, U, V, 8</td></tr><tr><td>9</td><td>W, X, Y, Z, 9</td></tr></table>	Numeral	Character	0	0	1	Space	2	A, B, C, 2	3	D, E, F, 3	4	G, H, I, 4	5	J, K, L, 5	6	M, N, O, 6	7	P, Q, R, S, 7	8	T, U, V, 8	9	W, X, Y, Z, 9
Numeral	Character																						
0	0																						
1	Space																						
2	A, B, C, 2																						
3	D, E, F, 3																						
4	G, H, I, 4																						
5	J, K, L, 5																						
6	M, N, O, 6																						
7	P, Q, R, S, 7																						
8	T, U, V, 8																						
9	W, X, Y, Z, 9																						
a	Lower-case characters using the computer keyboard number pad only. Characters are cycled in the same sequence as a telephone alpha-numeric input <table><tr><th>Numeral</th><th>Character</th></tr><tr><td>0</td><td>0</td></tr><tr><td>1</td><td>Space</td></tr><tr><td>2</td><td>a, b, c, 2</td></tr><tr><td>3</td><td>d, e, f, 3</td></tr><tr><td>4</td><td>g, h, i, 4</td></tr><tr><td>5</td><td>j, k, l, 5</td></tr><tr><td>6</td><td>m, n, o, 6</td></tr><tr><td>7</td><td>p, q, r, s, 7</td></tr><tr><td>8</td><td>t, u, v, 8</td></tr><tr><td>9</td><td>w, x, y, z, 9</td></tr></table>	Numeral	Character	0	0	1	Space	2	a, b, c, 2	3	d, e, f, 3	4	g, h, i, 4	5	j, k, l, 5	6	m, n, o, 6	7	p, q, r, s, 7	8	t, u, v, 8	9	w, x, y, z, 9
Numeral	Character																						
0	0																						
1	Space																						
2	a, b, c, 2																						
3	d, e, f, 3																						
4	g, h, i, 4																						
5	j, k, l, 5																						
6	m, n, o, 6																						
7	p, q, r, s, 7																						
8	t, u, v, 8																						
9	w, x, y, z, 9																						

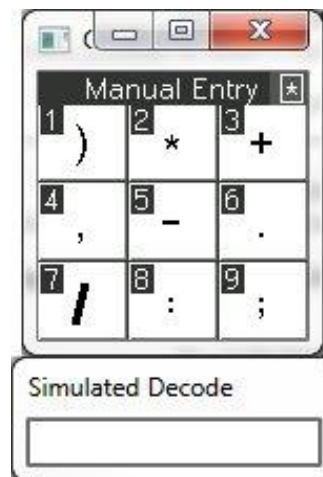
*

Special character input based on the following numeral-character map:



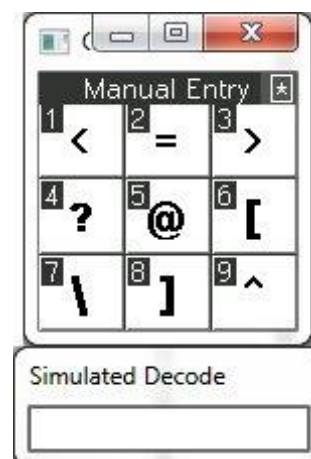
Numeral	Character
1	Space
2	!
3	"
4	#
5	\$
6	%
7	&
8	'
9	(

Pressing the '0' key shifts to a second set of special characters based on the following numerical-character map:



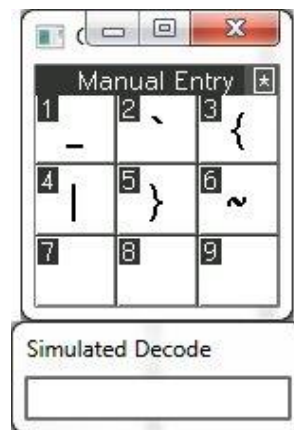
Numeral	Character
1)
2	*
3	+
4	,
5	-
6	.
7	/
8	:
9	;

Pressing the '0' key again shifts to a third set of special characters based on the following numerical-character map:



Numeral	Character
1	<
2	=
3	>
4	?
5	@
6	[
7	\
8]
9	^

Pressing the '0' key shifts to a second set of special characters based on the following numerical-character map:



Numeral	Character
1	-
2	`
3	{
4	
5	}
6	~
7	<no value>
8	<no value>
9	<no value>

C

Numeric characters using the computer keyboard number pad only – but non-repeating numerals. If 3 is pressed more than once, only one 3 will appear.