

Reader User Interface
Alien Technology 9780 RFID Reader
August 4, 2004

Scanning Devices Inc.
File: ReaderUIA.exe (Windows Executable)

Typical Usage:

1. Upload the Reader parameters to a list box for viewing.
2. Edit reader parameters to build a parameter set for a specific application.
3. Save an edited parameter set for later use or use on a different reader, on a different system, or in a different location.
4. Save the current reader parameter set. (Most common file name: ItWorks.rpf)
5. View two parameter sets side-by-side for comparison or trouble shooting.
6. Save a parameter set for distribution to another installation.
7. Install a parameter set from another source.

Operating Narrative:

Program Start-up

When the program starts, it looks for readers attached to PC com ports. It issues a "Get ReaderName" command, and if it gets the expected response, adds that port to a list in the combo box next to the "Find Readers" button. After completing the search, it makes the first reader found visible and designates it the "selected reader". The sequence through com ports is simple, start at Com1 and proceed through Com8.

If no readers respond to the Get ReaderName command, the combo box will display "No Active Readers Found".

Add Readers to the List

Clicking on the "Find Readers" repeats this process and builds a new list. If you attach or power-on a reader after the program starts, Click "Find Readers" to add it to the list.

Upload Reader Setup Parameters

Once you have selected your active reader, you can upload its setup parameters. Click on the Column Heading Bar at the top of the big List Box. The program issues an information request to the reader, parses out its response and loads it into the first two columns of the List Box. The parameters displayed in the second column are read-only, as they mirror the current reader setup.

Create an Editable Parameter Set

The third column of the List Box headed by "Click to Load Edit Column" is the editable column. You can load this from the reader (it makes a copy of the read-only parameters column) or from a file you have previously saved. The selection is based on the radio buttons in the "Load Edit Column" Group Box above the Reader Parameter Column of the List Box.

If you Select "From Reader" and Click the "Click to Load Edit Column", the program will make a copy of the current reader parameters for you to edit.

If you select "From File" and Click the "Click to Load Edit Column", the program will pop up a File Open dialog box where you can select a file. The program has a default file type of "*.rpf" for "reader parameter file. But you can override this to use any file name.

Editing the Parameter Set

You should now see three columns of text: parameter name, current, read-only setting, edit-able setting. To edit a parameter, click on the row number to the left of the parameter name. The number and name will be displayed in the editing group box above the parameter name column. The current value will be in the edit box. You enter any text in that box. The program does not do any filtering or checking of what you enter, but attempts to process whatever you give it. When you finish, hit the [ENTER] key or click on another number. The program will update the entry for this parameter in the third column.

At this point, only the edit column has been updated. No change has been made to the reader.

You can continue to edit until you are satisfied that column three reflects your reader setup. You are ready for the "Save Edit" button.

Saving the Parameter Set

Where you save is based on the radio buttons in the "Save Edit Column" Group Box above the Edit Parameter Column of the List Box.

If you select "To File" and Click the "Save Edit" button, the program will pop up a File Save dialog box where you can select a file. The program has a default file type of "*.rpf" for "reader parameter file. But you can override this to use any file name.

If you Select "To Reader" and Click the "Save Edit" button, the program downloads parameters from the edit column to the selected reader. The program will download only those parameters where the edit column value differs from the reader column values. The program uses the "Set" verb and verifies the action by testing the reader response. After all edit parameters have been downloaded, the program issues a "Save" command to the reader to put them in reader flash. The process closes by reporting the number of successful parameter downloads occurred and the number of failures, if any.

The "Save Reader To File" button is similar to the "Save Edit" button except it saves the reader parameters from the List Box in a file you select with File Save dialog box.

Dialog Control Definitions:

Find Readers - Button - Scans comports, testing for readers attached and operating. Builds a list in the combo box to the immediate right, displays the first reader found and defines it as the active reader.

Reader - Combo Box - lists active readers. User may select the reader by highlighting it.

Save Reader To File - Button - Opens a "Save File" dialog box so the user can select a file name, saves reader parameters to the file.

Editing - Group Box - When the user clicks on a parameter number, the group box displays the parameter name and number (read-only) and the current edit value of the parameter in the Edit Box. The user can edit the value of the parameter. When the user exits the edit box, either with the [ENTER] key or by clicking on another parameter, the edit value in the list box is Updated from the edit box.

Load Edit Column - Group Box - Allows the user to select the source of the edit parameters in the load operation, either the values uploaded from the reader or a file. The action occurs when the user clicks the "Edit Params" column heading bar.

Save Edit Column - Group Box - Allows the user to select the destination of the edit parameters in a save operation, the parameters are either downloaded to the reader or saved to a file. The action occurs when the user clicks the "Save Edit" button.

Parameter Box - List Box - Four column list box with left-most column the numeric index. Columns are headed "Parameter" for the name, "Reader Parameters, read-only" for values uploaded from the reader, "Edit Params" for those which may be edited.

OK and Cancel - Buttons - Close the program.

Files:

The user has complete control over file names. There are no hidden files or program generated files.

Files are text only. You can view files with a simple text editor like word pad or notepad.

Warning: Modifying the files outside of the readerUI may produce unpredictable results. The reader is keyed to text lines and uses the equal sign "=" as a delimiter.

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Find Readers

Com2: SD RFID Reader

Save Reader To File

OK

Cancel

Editing:

3 ReaderNumber

3

Click on Number to Edit Parameter

Load Edit Column

 From Reader From File

Save Edit Column

 To Reader To File

Save Edit

#	Parameter	Reader Params. (Read-only)	Edit Params. Changes are unsaved
1	ReaderName	SD1 Reader	SD2 Reader
2	ReaderType	Alien RFID Tag Reader, Model: AL...	Alien RFID Tag Reader, Model: AL...
3	ReaderNumber	2	3
4	Username	Dave Chanoux	Peter Stratemeyer
5	AntennaSequence (i, j, k...)	0*	0*
6	Antenna	0	0
7	DHCP (On or Off)	ON	ON
8	IPAddress	0.0.0.0	0.0.0.0
9	MACAddress	00:90:c2:c3:54:ef	00:90:c2:c3:54:ef
10	Gateway	(Not Set)	(Not Set)
11	Netmask	(Not Set)	(Not Set)
12	DNS	(Not Set)	(Not Set)
13	NetworkTimeout	90	90
14	CommandPort	23	23
15	HeartbeatPort	3988	3988
16	HeartbeatTime (secs)	30	30
17	TimeServer	132.163.4.101	132.163.4.101
18	TimeZone (+/- hours from UTC)	-4	-4
19	Time (yy/mm/dd hh:mm:ss - Local ...)	2004/08/03 14:39:35	2004/08/03 14:39:35
20	PersistentTime (secs)	-1	-1