

CalAmp Industrial Monitoring & Controls Group

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Application Note 043 Site Survey

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Site Survey Utility Program for Integra-TR or Integra-H wireless modems

Application

Provide a Utility program to collect, monitor and store the diagnostic stream from two (2) Dataradio Integra-TR or Integra-H wireless modems.

The diagnostic information can provide site survey data such as local and remote RSSI and other diagnostic data. The data can be used to determine if sites will have enough radio signal strength to perform adequately. The diagnostic information can be displayed in real time and logged automatically to a user defined file every 2 minutes. The user can trend the diagnostic information in a basic Windows screen plot (provided) or in a Windows "Excel" demo worksheet (provided).

An "Excel" demonstration worksheet will plot the RSSI automatically for the master and remote locations is supplied with the application. However a copy of the Excel application program must be installed on the computer. *Note: The Excel worksheet contains macros. Certain Internet programs and security programs may prompt the user to disable the macros. The Site Survey Utility program will not function if the macros are disabled.*

The "Excel" demonstration worksheet is locked and cannot be modified by the user. A new worksheet must be created if the user needs more functionality than what is provided by the demonstration worksheet and the user needs to program that functionality within his spreadsheet.

The user should refer to the appropriate Integra manual for a thorough explanation of the diagnostic information.

Set-up

The Site Survey Utility program can be downloaded from the CalAmp website at

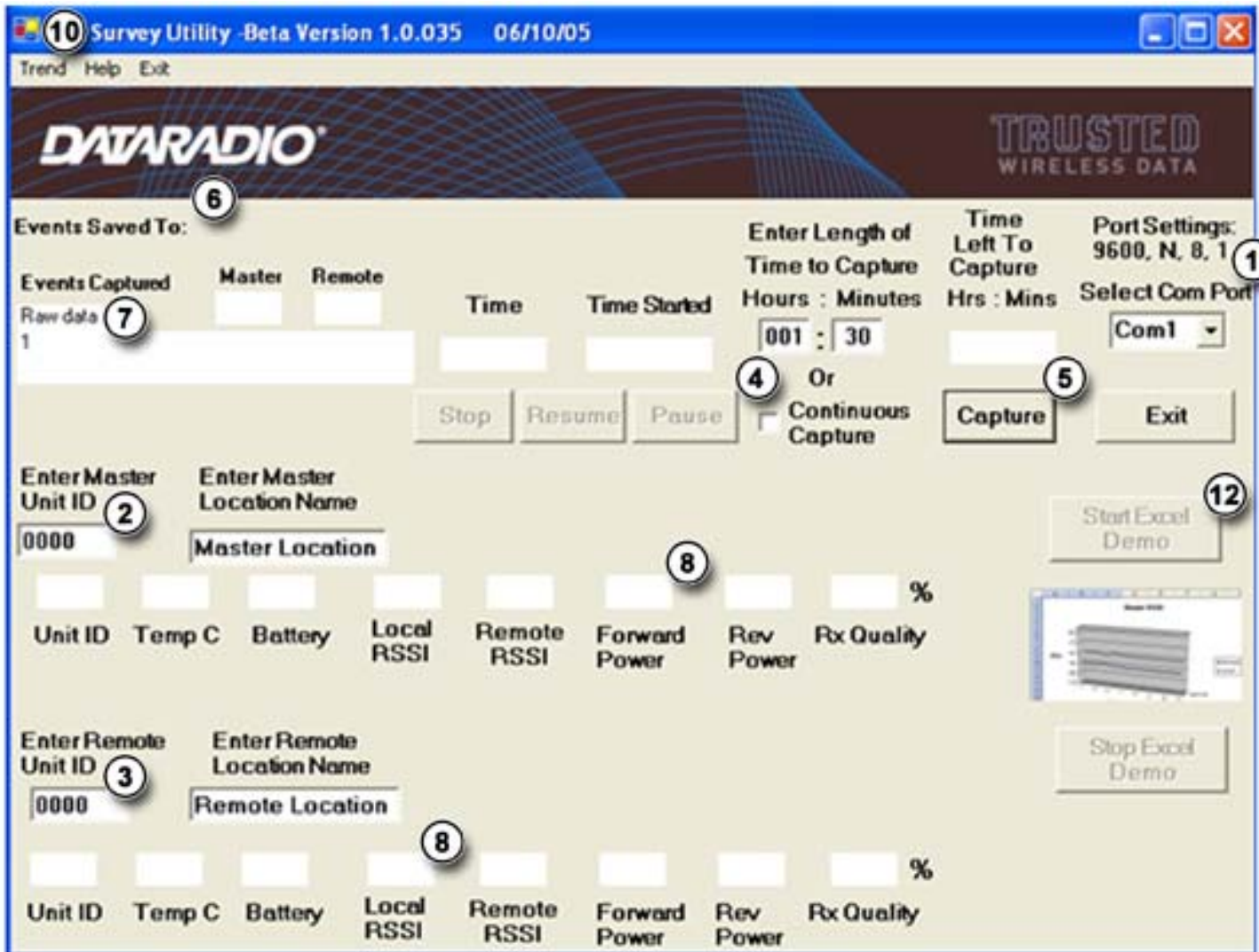
[http://www.calamp.com/pdf/023-999-8801\(sitesurvey\).zip](http://www.calamp.com/pdf/023-999-8801(sitesurvey).zip)

Microsoft .NET Framework is required on each system that runs Visual Basic .NET applications. Before you can install the Site Survey Utility program the dotnetfx.exe must be installed on the computer the site Survey Utility program intends to run on. The dotnetfx.exe can also be downloaded from the CalAmp website at <http://www.calamp.com/pdf/dotnet.zip>

A pair of Dataradio wireless modems needs to be configured in a master/remote polling configuration. An application polling program or hardware running on both the master and remote Integra's or dedicated hardware such as the DCI Data Generators (available from Dataradio) must be used in a master/remote polling configuration. The master sends a poll request to the remote and the remote must respond back to the master request.

Once the Site Survey Utility program has been installed and a pair of Integra's has been configured and deployed the Integra raw diagnostic ASCII stream can be collected, monitored and stored. The Site Survey Utility Help menu contains instructions on how to use the Site Survey Utility program. The Site Survey Utility is not recommended to be run when the Dataradio Field Programming Software is running.

- Step 1. Select the PC com port connected to the Integra setup port. Com ports 1 thru 8 are available. The PC port is programmed to 8 bits, no parity, and 1 stop bit to match the Diagnostic port of an Integra wireless modem.
- Step 2. Enter in the Radio Diagnostic ID and location name for the master radio unit. The unit ID must not be zero and must be numeric. Leading zeros not required.
- Step 3. Enter in the Radio Diagnostic ID and location name for the remote radio unit. The unit ID must not be zero and must be numeric. Leading zeros not required.
- Step 4. Enter length of time to capture or check the continuous capture box.
- Step 5. Click the "Capture" button to start the capture process.
- Step 6. The Site Survey Utility program will query the user for a filename in which to save the information captured. The file name will be displayed in the upper left hand corner of the utility window. The default file location is c:\Program Files\Dataradio Utils\Site Survey Utility\SiteSurvey.txt. The stored data is available for the end user's own purposes.
- Step 7. Once the capture process has started the raw data will be displayed in the raw data area. This will allow the user to see if the diagnostic stream has the right data format.
- Step 8. If the raw data has the proper format the data will be displayed in the assigned named display blocks in a modified format. If the data format is incorrect then the data will not be displayed in the assigned blocks. However the raw data will be displayed in the Raw Data display block. The data are buffered and stored every 2 minutes in the user selected location name as a text file. The data will be Date and Time stamped for each event. The data are stored in a comma delimited format for easy transportation to other applications. Date and time are based on the PC system clock.
- Step 9. If there is an error in the format the program will display a "Windows Error message" window explaining the error.
- Step 10. Under the "Trend" menu the user has a selection of different trending screens. In the "Trend Master" menu the user can select to trend the master radio's diagnostic information.
- Step 11. In the "Trend Remote" menu the user can select to trend the remote radio's diagnostic information.
- Step 12. An "Excel" worksheet supplied with the program is opened if the "Start Excel Demo" button is clicked.



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