

## 1.1 DataSure Wireless Data Collection Software

### 1.1.1 Introduction

QC-Gage is now able to read data from DataSure software by the L.S. Starrett Company. This document discusses issues that need to be addressed for proper setup and running of the two software packages.

From the DataSure User's Manual...

#### *Home:*

The **Homepage** serves as a central location for inspection of tool measurements, tool status, EndNode status, battery levels. It also shows association maps linking tools, multiplexers/channel numbers, and applications/com ports.

#### *Tools:*

The **Devices (Tools) page** displays device summary details. It shows a list of all measuring tools attached to the wireless network and provides links to their detail pages. All device statistics can be reset from the sidebar menu.

#### *Multiplexer:*

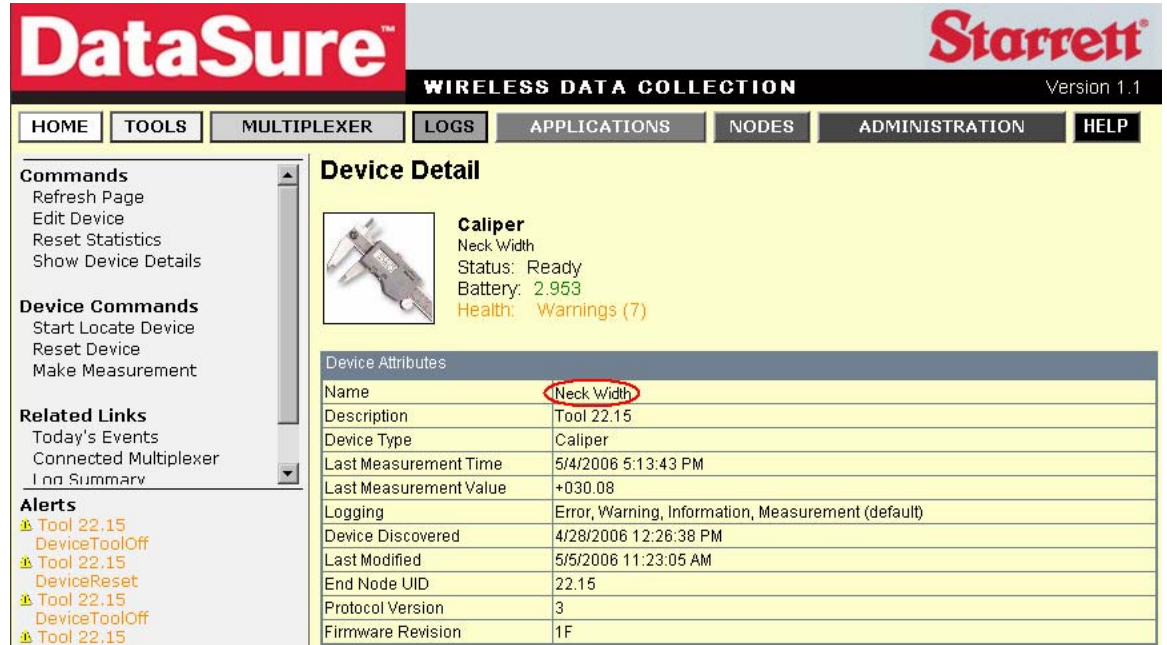
The **Multiplexers page** displays the multiplexer summary details. It lists each virtual multiplexer identified within the *DataSure™* manager and provides links to their detail pages. New multiplexers can be created from the sidebar menu.

Here we address each of these three DataSure settings pages.

## 1.1.2 Devices (Tools) page

### Introduction

Before data can be collected with DataSure and sent to QC-Gage, you must connect your gages to the DataSure system using a transmitter. Once you have established communication with the receiver you must configure the DataSure software to receive the data on a particular channel. This data is then presented to a virtual COM port in the PC the DataSure software is running. QC-Gage then “talks” to the virtual COM port in the same way it “talks” to a physical COM port with other multiplexers such as the Starrett 761.



The screenshot displays the DataSure software interface. The top navigation bar includes 'HOME', 'TOOLS', 'MULTIPLEXER', 'LOGS', 'APPLICATIONS', 'NODES', 'ADMINISTRATION', and 'HELP'. The 'TOOLS' menu is active, showing a 'Device Detail' page for a 'Caliper'. The device status is 'Ready' with a battery level of 2.953 and 7 warnings. A table of device attributes is shown below, with 'Neck Width' circled in red.

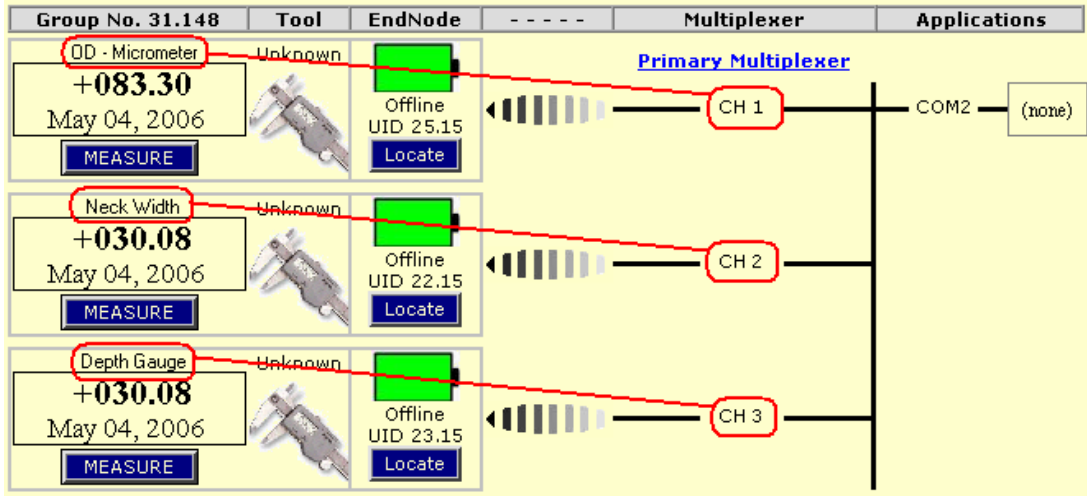
| Device Attributes      |  |
|------------------------|--|
| Name                   | Neck Width   |
| Description            | Tool 22.15   |
| Device Type            | Caliper  |
| Last Measurement Time  | 5/4/2006 5:13:43 PM                                |
| Last Measurement Value | +030.08  |
| Logging                | Error, Warning, Information, Measurement (default) |
| Device Discovered      | 4/28/2006 12:26:38 PM                              |
| Last Modified          | 5/5/2006 11:23:05 AM                               |
| End Node UID           | 22.15  |
| Protocol Version       | 3  |
| Firmware Revision      | 1F   |

### 1.1.3 Device Description

When you click on the Tools menu you can edit the Name of the Device among other things. You should change the text found in the Name text box to help identify the feature you are measuring. This improves the setup and running of the software. It makes it easier in later steps when you are matching the label of the feature with the Device measuring it.

## 1.1.4 DataSure Homepage

The Homepage shows each Virtual Multiplexer that has been created, and all of the Tools that are connected. You can see the Name of each Tool, and the Channel on which they are sending circled here in red.



Each **Tool** on a Multiplexer in DataSure must be matched by a **Feature** on a Spec Plan in QC-Gage.

The **Channel** that the Tool is being received on must match the **Channel** that the Feature in QC-Gage is assigned to.

This QC-Gage diagram shows the three features to be inspected on a part. The last one, labeled "Depth Gauge", is set to Channel 3. This matches the feature with the same name in DataSure. The other two were set with the appropriate Channels as well.

The order that the Features are listed in QC-Gage must be the order in which they are measured. You can change the listing order of any QC-Gage feature by clicking on the feature and pressing the **Move** button.

QC-Gage: Editing C:\ProLink\QC-Gage 3.0\Data\DataSure sample.SPL

Describe all the features you want to measure with this Spec Plan. Selecting a feature in the table displays the details for that feature below. The order features have in the table is the order QC-Gage collects them in. Press Control+Z to Zoom/UnZoom the picture.

Features List  Show picture

| Seq | Label           | Connection                       |
|-----|-----------------|----------------------------------|
| 1   | DD - Micrometer | COM2 Accepting Starrett DataSure |
| 2   | Neck Width      | COM2 Accepting Starrett DataSure |
| 3   | Depth Gauge     | COM2 Accepting Starrett DataSure |

Connection: COM2 Accepting Starrett DataSure

Label: Depth Gauge Units: mm

Nominal Value: 8.6 Channel: 3

Plus Tolerance: 0.15 Decimal Places: 1

Minus Tolerance: -0.15 Actual Offset: 3

Pass/Fail Dimension

Notes: Place notes here

## 1.1.5 DataSure Multiplexer Detail Page


On the Mux Detail page we can see all of the tools that are connected to the Mux. We can also see the Virtual COM Port where this data is being sent. This COM Port is where QC-Gage must listen.

### Multiplexer Detail

#### Multiplexer

Primary Multiplexer  
Emulating: Starrett\_761

| Multiplexer Attributes     |   |
|----------------------------|---|
| Name                       | Primary Multiplexer   |
| Description                | Emulates Starrett_761   |
| Type                       | Starrett_761  |
| Features                   | Starrett_761_A_Command, Starrett_761_B_Command, Starrett_761_M_Command, Starrett_761_N_Command, Starrett_761_P_Command, Starrett_761_R_Command, Starrett_761_S_Command, Starrett_761_SV_Command, Starrett_761_U_Command, Starrett_761_V_Command |
| Virtual Communication Port | COM2  |
| Multiplexer Created        | 4/28/2006 12:25:30 PM   |
| Last Update                | 4/28/2006 12:25:30 PM   |

| Tool Connections   |                                |        |         |          |
|--|--------------------------------|--------|---------|----------|
| Name   | Type                           | Status | Battery | Port No. |
|  <a href="#">Tool 22.15</a> | Starrett Optical RS232 Caliper | Ready  | 2.954   | 1        |

### Matching COM Ports

Look at the **Multiplexer Detail** information in DataSure. See which COM Port is being used by the Virtual Communication Port. When you add a **Spec Plan Connection** in QC-Gage, it must be using the same COM Port.

