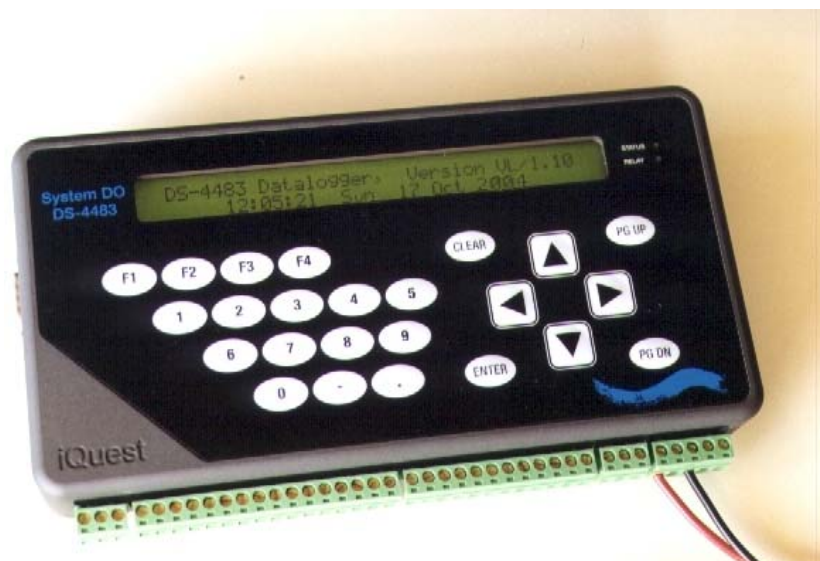


# DS-4483

## Standard Logger Program Quick Reference

**For Software  
Version: 4.06**

Requires Firmware  
Version: VL/2.17+



ISO9001  
Certified

**Revision History:**

Version 1.00	02 February 2004	Preliminary release version
Version 4.01	21 February 2005	Update for standard logger program V4.01
Version 4.06	11 August 2005	Update for standard logger program V4.06

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# DS-4483 Standard Logger Program

## 1 Top Level Status Display

If the logger display has powered down, the logger is in 'sleep' mode and can be woken by pressing any key on the keypad (or by pressing the optional display switch connected to DI2). An 'Easy Reference' flowchart showing the available menu screens is included at the end of this guide.

At the top level, the LCD display scrolls repeatedly through a number of screens:

- Main Title screen
- Logger identification and version screen
- Time/Date/Status screen
- Sensor 1 screen
- .....
- Sensor x screen

After the Title and Time/Date screens, the logger will scroll through the display for each *enabled* sensor in turn. Disabled sensors are not shown, therefore the logger may, for example, only display sensors 1,2,5 and 7 before returning to the main title screen.

At any time, the right arrow may be pressed to move on to the next screen.

To 'Freeze' the LCD on a particular screen, press the [F3] key. A flashing asterisk in the top right-hand corner indicates that the LCD screen is frozen. Press [F3] again to re-enable automatic scrolling.

NOTE: It is not possible to step backwards by using the left arrow.

### 1.1 Main Title Screen



```
- Standard DS-4483 Datalogger Program -  
Site: iQuest Demo
```

This shows a description of the user program currently running in the logger together with the configured site name.

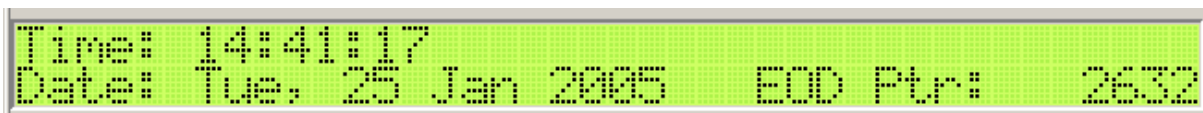
### 1.2 Logger Identification and Version Screen



```
Comms Addr: 1 Serial No: AL1-0227  
Version: 4.00XM Firmware: UL/2.17
```

This shows the address of the logger and the version of the user program currently running within the logger. If the logger is able to support multiple programs, the version message has an "M" suffix following the X, as in the example above. The logger's firmware version and unique serial number are also displayed.

### 1.3 Time/Date Screen



```
Time: 14:41:17  
Date: Tue, 25 Jan 2005 EOD Ptr: 2632
```

The internal time and date of the logger are displayed, together with the end of data pointer.

## 1.4 Sensor Screen for the First Enabled Sensor



In the above example, Sensor 1 is enabled, so it is shown first.

The display indicates that sensor 1 is logging temperature. The current measured value is 22.3 degrees Celsius and the last logged value was 22.3 degrees Celsius at 14:30h.

NOTE: From any sensor screen, the last ten logged values for this sensor can be viewed in the Last Logged field by using the Up and Dn arrow keys. Each value is prefixed with a number showing how far back it is in the sequence from the most recent logged value. E.g. Last Logged [-2] is two samples prior to the latest logged value.

*Any other enabled sensors will be displayed in turn before returning to the main title screen.*

## 2 LCD Display Preferences

This sub-menu is reached by pressing [F2] from the top-level menu. It is used to set the desired contrast and backlight intensity for the display. Note that these settings only apply when the logger display is active. If the logger is in 'sleep' mode the display will always be de-powered. In addition, the LCD backlight turns off after one minute of keypad inactivity.

### 2.1 LCD Display Preferences



Use the left and right arrow keys to reduce or increase the contrast between 0 and 100%.

Use the up and down arrow keys to reduce or increase the backlight intensity between 0 and 100%.

Press [F1] to alter the LCD screen timeout. The LCD will turn off automatically if no keys are pressed for the specified time.

Press the [PgUp] key to return to the top-level menu.

## 3 Login Menu



This screen is accessed by pressing [F1] from the top-level menu. A passcode is required before proceeding to the configuration screens to prevent unauthorised changes to the logger setup.

Enter the default passcode of 1234. When the last digit of the code is entered, the display briefly shows a welcome message with the name of the logged in user, and the associated access rights.



After a few seconds the display changes to show the logger configuration menu.

## 4 Configuration and Calibration Menu

```
F1=Log Visit      F2=Calibration  [CONFIG]
F3=Sensor Info   F4=Misc Menu    PgUp=Exit
```

This menu provides access to the configuration and calibration settings of the logger.

Select [F1] to add an entry to the site visit log  
 Select [F2] to set calibration levels  
 Select [F3] to view sensor and alarm configurations  
 Select [F4] to clear totals, clear memory and configure communications  
 Select [PgUp] to return to the Top Level Menu

### 4.1 Log Visit

```
LOG ENTRY FOR THIS VISIT (ARRAY 0)
Enter Value: 134          PgUp=Exit
```

This option allows the user to enter a numeric code, which is then timestamped and logged into the reserved site visit array (array id 0). This feature is useful for loggers that are deployed remotely and provides a mechanism for recording maintenance and calibration visits to the site. For example, pre-determined codes could be assigned to common tasks such as resetting totalisers or changing batteries. The site visit log can be unloaded in the same manner as any other sensor array to provide a record of all such site visits.

### 4.2 Calibration Levels

```
01: Stage Level      7.600    ( 76mV)
F1 to Edit          PgDn=View Offset  PgUp=Exit
```

Use the left and right arrow keys to scroll through each of the 20 sensors. Each enabled sensor will display its current scaled input value as read directly from the sensor, but with any offset removed. Additionally, if the sensor is an analogue input, the actual input voltage value is also displayed (as in the screen shot above).

To enter an offset corrected value, press [F1], followed by the correct value (e.g. from a staff gauge), followed by the [Enter] key. This user offset is applied in addition to the logging offset and multiplier specified in the sensor template.

If the sensor has an offset corrected value applied, the offset value can be viewed by pressing [PgDn].

If the selected sensor is a rainfall level sensor, then the current count total is displayed and can be changed in the same way.

### 4.3 Sensor Configuration

```
01: Temperature, (SDI-12 0,1)    F1=Edit
ID: 1, Lo9: 15 mins.           PgUp=Exit
```

Each of the 20 sensors is shown in turn, beginning with sensor 1. Use the left and right arrow keys to move back and forth between the sensors. Press the down arrow to check alarm status for a sensor.

The sensor configuration is generally determined by the profile loaded into the logger, using the iLink software utility, but some settings can be configured directly using the keypad. To access the user-configurable settings, press the [F1] key.

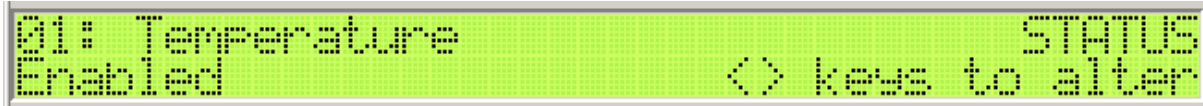
### 4.3.1 Sensor Configuration Options

After pressing [F1] to enter the edit mode for a sensor, the various configuration options can be accessed by pressing the up and down arrow keys. The options are presented in the following order:

1. Enable/disable sensor
2. View/edit logging multiplier
3. View/edit logging offset
4. View/edit/enable/disable alarms 1 - 6

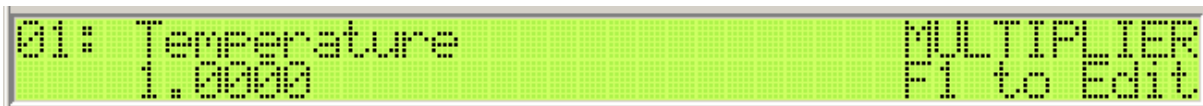
Use [PgUp] from any of these menus to return to the main configuration screen for the sensor (see 4.3).

#### 4.3.1.1 Enable/Disable Sensor



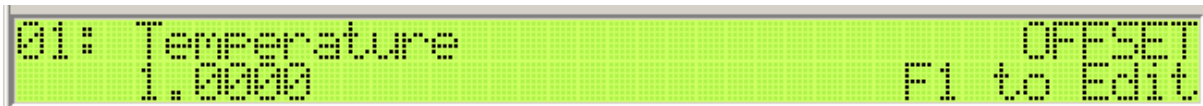
Use the left and right arrow keys to toggle between enabled and disabled. A disabled sensor retains its configuration setup but input readings are not monitored, processed or logged. Press the down arrow to move to the next screen.

#### 4.3.1.2 Logging Multiplier



The current logging multiplier is displayed on the left. To enter a new multiplier, press [F1], followed by the required value, followed by the [Enter] key. Press the down arrow to move to the next screen.

#### 4.3.1.3 Logging Offset



The current logging offset is displayed on the left. To enter a new offset, press [F1], followed by the required value, followed by the [Enter] key. Press the down arrow to move to the next screen.

#### 4.3.1.4 Alarm #1



Each of the 6 possible alarms for the sensor is displayed in turn, by pressing the down key. Each alarm can be independently enabled or disabled and this status is shown at the left-hand edge of the screen. The activation, reset and duration values are also displayed for each alarm. If the alarm is currently active, a flashing 'A' will appear next to the setpoint.

Use the left and right arrow keys to toggle the alarm between enabled and disabled. To change either of the setpoints or the duration, press [F1] to enter edit mode. Once in edit mode, a flashing cursor indicates which value needs to be entered. Enter a value for the reset value (R), then press [Enter]. The cursor will move to the activation value (A) which is entered next. Press [Enter] again and enter the required duration (in minutes). The new settings are saved automatically when the menu is exited by pressing [PgUp].

### 4.3.2 Miscellaneous Configuration and Communications

```

F1=Set Clock      F2=Event Log      [MISC]
F3=Reset Menu    F4=Comms Menu    PgUp=Exit
  
```

Press [F1] to clear all totals stored in the logger. You will be prompted to press [F1] three times to confirm that you wish to clear the pulse totalisers.

Press [F3] to clear all logged samples stored in the logger. You will be prompted to press [F1] three times to confirm that you wish to clear the memory.

Press [F2] to enter the communications setup screen.

### 4.3.3 Set Clock

```

<---> [HHMM] dd  mm  yyyy
F1=Edit  1110  26  01  2005    PgUp=Exit
  
```

Press [F1] to enter edit mode. Use the left and right arrow keys to select the item that you wish to change, then enter the required value. Changes are saved automatically when the screen is exited using [PgUp].

### 4.3.4 Event Log

```

Event [007] View. Use ^v keys, PgUp=Exit
26/01/05 08:28:48 DS-4483 restart
  
```

The DS-4483 datalogger automatically records up to 130 pre-determined events, such as logger power ups, program restarts, call-in attempts and so-on. The most recent event is always displayed first. Use the up key to scroll through previous events. Once 130 events have been recorded, the oldest is overwritten by the next event, and so on to provide a running record of the last 130 events.

### 4.3.5 Reset Menu

```

F1=Reset Totals      [RESET]
F2=Clear Memory     PgUp=Exit
  
```

Press [F1] to reset the totalisers for all counter inputs. As this action cannot be undone, confirmation is required in the form of three further presses of the [F1] key.

The datalogger memory can be cleared in a similar manner, by pressing [F2] and then a further three presses of the [F1] key to confirm.

### 4.3.6 Communications Menu

```

F1=Set Address      F2=Gateway      [COMMS]
F3=RS232 Port      F4=Int Modem    PgUp=Exit
  
```

Press [F1] to set the communications address of the logger. This is used by many large-scale telemetry and monitoring systems to uniquely identify the logger within a network.

Press [F2] to set up the gateway feature. Type in the lower value required and press [Enter]. The logger will automatically insert the upper value that is 99 above the low value. For example, an entry of 500 will enable gateway functionality for any addresses between 500 and 599 inclusive. Specify a value of 0 to disable the gateway feature.

Press [F3] to configure the RS232 port. Note: if the baud rate is changed while the logger is currently connected to another device (such as a computer) the connection may be lost. In this event the attached device will need to reinitialise the connection using the new baud rate. Supported baud rates are 1200, 9600 and 19200. Use the [F1] key to toggle between these settings.

Press [F4] to access the setup and diagnostic menu for the modem / communications.

#### 4.3.6.1 RS232 Port Configuration

```

RS232 Port Configuration          ANALYSER
F1= 9600bps; F2=Dia9; F3=Mode    PgUp=Exit
  
```

Press [F1] to set the baud rate for the RS232 port.

Press [F2] to view the two-way serial communications taking place between the analyser instrumentation and logger.

Press [F3] to switch between LAPTOP and ANALYSER modes. This is only applicable if the RS232 port is connected to a serial analyser instrument and the appropriate user script is loaded into the DS-4483.

#### 4.3.6.2 Modem / Communications Diagnostics

The first screen displayed will depend on whether the logger is configured to communicate using its internal modem via radio, using its internal modem via PSTN or via an external RS232 modem. This setting cannot be altered via the keypad – it is determined by settings in the logger personality and logger profile loaded by the iLink software utility.

#### 4.3.6.3 Communications Setup (Logger set to radio mode using internal modem)

```

Base Addr: 0
F2=Dia9 Page                      PgUp=Exit
  
```

The base address is required by some telemetry systems when the logger makes an unsolicited call-in. This value is configured as part of the control block using the iLink utility, and can not be edited using the keypad.

Press [F2] to enter the diagnostic menu.

```

RADIO TEST      Status: IDLE      Ch: FREE
F1:Start F2: 1300Hz F3:Call-In    PgUp=Exit
  
```

Press [F1] to start the radio test. This will activate the radio TX key line and enable a constant test tone. Pressing [F1] again will stop the test. NOTE: the test will automatically terminate after 60 seconds, even if the F1 key is not pressed again.

Press [F2] to toggle the transmitted test tone between 1300Hz and 2100Hz.

Press [F3] to cause the logger to attempt to call-in to a HydroTel 2000™ base via the radio. Once underway, the call-in can be aborted by pressing the [PgUp] key to return to the previous menu.

#### 4.3.6.4 Communications Setup (Logger set to PSTN mode, or radio mode using external modem)



```
Base Addr: 0 +64 7 8570810
Modem: External F1=Diag Page, P9UP=Exit
```

This screen is presented if the logger is configured to communicate over a phone line via its internal modem, or via an external modem, such as a GSM or GPRS unit. A similar screen, without the phone number, is also presented if the logger is configured for radio mode using an external modem.

The base address is required by some telemetry systems when the logger makes an unsolicited call-in. This value is configured as part of the control block using the iLink utility, and can not be edited using the keypad.

The display shows the telephone number to be dialled up (determined by the user template currently loaded into the logger) and whether the logger is using its internal modem or an external modem.

Press [F1] to enter the communications diagnostic screen.



```
Status: IDLE On-Line: NO
F1=1200bps F2=CallIn F3=Abort P9UP=Exit
```

Press [F1] to toggle the baud-rate between 1200bps and 9600 bps.

Press [F2] to cause the logger to attempt to call-in. Once underway, the call-in can be aborted at any time by pressing the [F3] key.

## 5 Standard DS-4483 Logger Program Menu Reference

