



Ref: FAQ0051

Version: 1.0

## Title – Permanet LX Configuration

Made By: AB 18/06/14

(Issue 1)

### Question – How do I configure a single channel Permanet LX including setting up on Datagate and viewing on HWM Online

The general configuration for a Permanet LX is as per a normal Multilog LX – the specific requirements for this variant are as follows -

During logger configuration Channel 1 will be the 'Noise' channel

Set the calibration value to 1.0 and ensure it is 'Enabled'

The screenshot shows the 'Configure Logger Wizard' dialog box. The 'Configuration Summary' pane on the left lists the following settings: Logger Type: Multilog LX GPRS, Connection Type: Direct (Cable), Baud Rate: 9600, Zone: EH2\_, Location: 4SD, Connection Type: GPRS, Baud Rate: 9600, Telephone Number: +447713369404, and Channel 1. The 'Configuration Option' pane on the right is titled 'Channel 01 Configuration:' and contains the following options: 'Enable the channel if required and set the logging mode for digital channels. Select the required transducer type' (checked), 'Enabled' (checked), 'Transducer' (Analogue (Pressure)), and 'Calibration' (0.100000). There are buttons for 'Enter Calibration values', 'Advanced...', '<< Previous', 'Next >>', and 'Cancel'.

Channel 2 will be the 'Level' Channel

Set the calibration value to 1.0 and ensure it is 'Enabled'

This screenshot is identical to the one above, showing the 'Configure Logger Wizard' dialog box for Channel 01 Configuration. The settings are: Logger Type: Multilog LX GPRS, Connection Type: Direct (Cable), Baud Rate: 9600, Zone: EH2\_, Location: 4SD, Connection Type: GPRS, Baud Rate: 9600, Telephone Number: +447713369404, and Channel 1. The 'Channel 01 Configuration' options are: 'Enable the channel if required and set the logging mode for digital channels. Select the required transducer type' (checked), 'Enabled' (checked), 'Transducer' (Analogue (Pressure)), and 'Calibration' (0.100000). Buttons include 'Enter Calibration values', 'Advanced...', '<< Previous', 'Next >>', and 'Cancel'.



Ref: FAQ0051

Version: 1.0

## Title – Permanet LX Configuration

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(Issue 1)

Channel 3 is the 'Leak/No leak' channel –  
Set the calibration value to 1.0 and ensure it is 'Enabled'

Configure Logger Wizard

Configuration Summary:

- Logger Type: Multilog LX GPRS
- Connection Type: Direct (Cable)
- Baud Rate: Baud Rate: 9600
- Logger Type: Multilog LX GPRS
- Zone: EH2
- Location: 4SD
- Connection Type: GPRS
- Baud Rate: Baud Rate: 9600
- Telephone Number: +447713369404
- Channel 1:
- Channel 2:
- Channel 3:

Configuration Option:

**Channel 03 Configuration:**

Enable the channel if required and set the logging mode for digital channels. Select the required transducer type

☒ Enabled

Transducer: Analogue (Pressure)

Calibration: 0.100000

Enter Calibration values Advanced...

<< Previous Next >> Cancel

Select 'Next'

At the next screen configure the Sample rate to be '24 Hours' as below -

Configure Logger Wizard

Configuration Summary:

- Logger Type: Multilog LX GPRS
- Connection Type: Direct (Cable)
- Baud Rate: Baud Rate: 9600
- Logger Type: Multilog LX GPRS
- Zone: \_154
- Location: \_23
- Connection Type: GPRS
- Baud Rate: Baud Rate: 9600
- Telephone Number: +447765525750
- Channel 1:
- Sample Rate: 24 Hours

Configuration Option:

**Sample Rate:**

Select the required data logging interval. 15 minutes is advisable for standard applications.

Sample Rate: 24 Hours

<< Previous Next >> Cancel

Select 'Next'

The logger start time needs to be set for 5.30am (as this defines the time the data will be downloaded from the Permalog to the LX logger each day)



Ref: FAQ0051

Version: 1.0

## Title – Permanet LX Configuration

Made By: AB 18/06/14

(Issue 1)

The 'Configure Logger Wizard' window shows the 'Recording' configuration screen. The 'Configuration Summary' on the left lists: Logger Type: Multilog LX GPRS, Connection Type: Direct (Cable), Baud Rate: 9600, Zone: EH2, Location: 4SD, Connection Type: GPRS, Baud Rate: 9600, Telephone Number: +447713369404, Channel 1, Channel 2, Channel 3, Sample Rate: 24 Hours, Record Start Time: 05:30:00 23/10/2013, and Memory Mode: Cyclic Memory. The 'Configuration Option' on the right is titled 'Recording' and includes instructions to enter recording start and stop times. The 'Record Start Time' is set to 05:30:00 on 23/10/2013, and the 'Record Stop Time' is set to 17:06:16 on 22/10/2013. The 'Enable Stop' checkbox is unchecked, and 'Cyclic Memory' is selected over 'Block Memory'. Navigation buttons at the bottom are '<< Previous', 'Next >>', and 'Cancel'.

Call in should be set at twice per day at 5.40am and 6.00am

The 'Configure Logger Wizard' window shows the 'GPRS Call Times' configuration screen. The 'Configuration Summary' on the left lists: Logger Type: Multilog LX GPRS, Zone: EH2, Location: 4SD, Connection Type: GPRS, Baud Rate: 9600, Telephone Number: +447713369404, Channel 1, Channel 2, Channel 3, Sample Rate: 24 Hours, Record Start Time: 05:30:00 23/10/2013, Memory Mode: Cyclic Memory, Data: GPRS UDP, [1] UDP: lgrudp.hwm-wat..., [2] UDP: lgrudp.hwm-wat..., and GPRS Call Times: Call Times Table. The 'Configuration Option' on the right is titled 'GPRS Call Times' and includes instructions to select the calling mode and configure call times/frequency. The 'Call Times' section shows a dropdown menu set to 'Call Times Table'. Below this is a table with columns 'Enable', 'Time', and 'UDP'. The table contains four rows: Row 1: Enable (checked), Time 05:40:00, UDP [1] lgrudp.h...; Row 2: Enable (checked), Time 06:00:00, UDP [1] lgrudp.h...; Row 3: Enable (checked), Time 00:00:00, UDP [1] lgrudp.h...; Row 4: Enable (unchecked), Time 00:00:00, UDP [1] lgrudp.h... Navigation buttons at the bottom are '<< Previous', 'Next >>', and 'Cancel'.

Enable	Time	UDP
<input checked="" type="checkbox"/>	05:40:00	[1] lgrudp.h...
<input checked="" type="checkbox"/>	06:00:00	[1] lgrudp.h...
<input checked="" type="checkbox"/>	00:00:00	[1] lgrudp.h...
<input type="checkbox"/>	00:00:00	[1] lgrudp.h...

All other settings as per normal Multilog LX and then 'Upload' the settings to the logger -



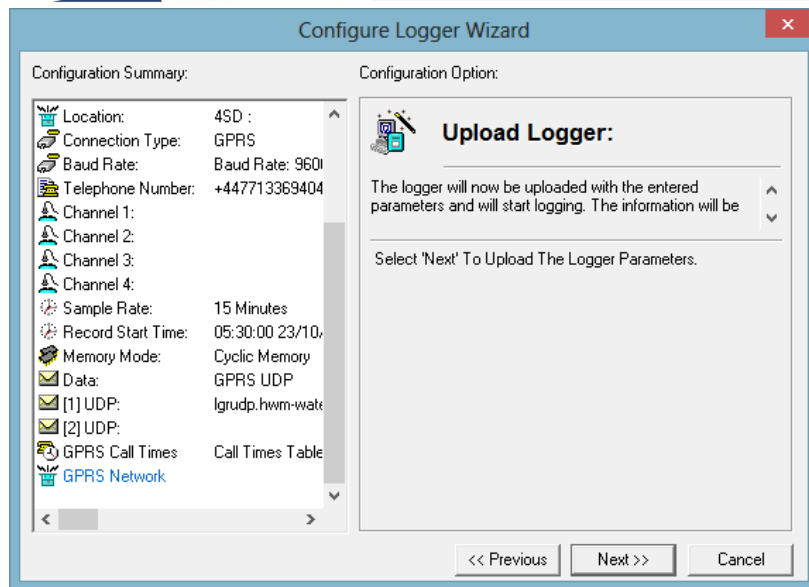
Ref: FAQ0051

Version: 1.0

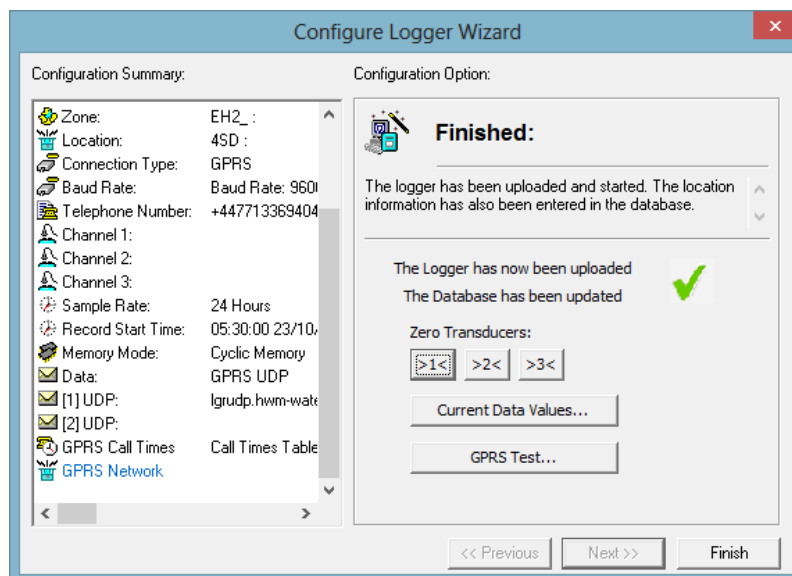
## Title – Permanet LX Configuration

Made By: AB 18/06/14

(Issue 1)



Carry out a GPRS test to ensure you have communications to Datagate.



### IMPORTANT

Now ensure the Permalog is 'woken up' from its transport mode by swiping the side of it using the magnetic base of the LX Antenna and ensuring there is a short sequence of Red and Green LED flashes visible in the window in the top of the yellow moulding -





Ref: FAQ0051

Version: 1.0

## Title – Permanet LX Configuration

Made By: AB 18/06/14

(Issue 1)

### Datagate /HWM Online

Open the correct Datagate account and locate the logger and 'open' it –

Select the 'Channels' tab –

If no channels are showing then select the 'Add new channel' button



Ref: FAQ0051

Version: 1.0

## Title – Permanet LX Configuration

Made By: AB 18/06/14

(Issue 1)

Create the channels as follows –

Ch1 = Leak/no leak      Offset 0.0      Cal = 1.0

Ch2 = Noise              Offset 0.0      Cal = 1.0

Ch3 = Spread            Offset 0.0      Cal = 1.0      then select 'Update logger channels' button

Number	Flow pulse factor	Meter read value	Meter read date	Analog low	Analog high	Name	Offset	Measurement	Delete
1	1.0		2012-04-27 00:00:00					Leak	
2	1.0		2012-04-27 00:00:00					Noise	
3	1.0		2012-04-27 00:00:00					Spread	

Once configured and calling in data you will be able to View the graphs on HWM Online – the longer the equipment operates the easier it is to understand the results. Following are examples of what you could see and how to interpret the graphs -



Ref: FAQ0051

Version: 1.0

Title – Permanet LX Configuration

Made By: AB 18/06/14

(Issue 1)

1. This graph indicates a no leak situation – the leak line is at zero. The noise and spread lines shows the ambient level of noise recorded and the spread of the noise being comparatively consistant over a 3 month period.



2. This demonstrates a leak situation developing following a no leak period – the leak line moves from zero to 1 to show the detection of a leak. Also notice how the noise increases when there is a leak and the spread reduces. Generally the narrower the spread of noise the more likely it indicates a leak.





Ref: FAQ0051

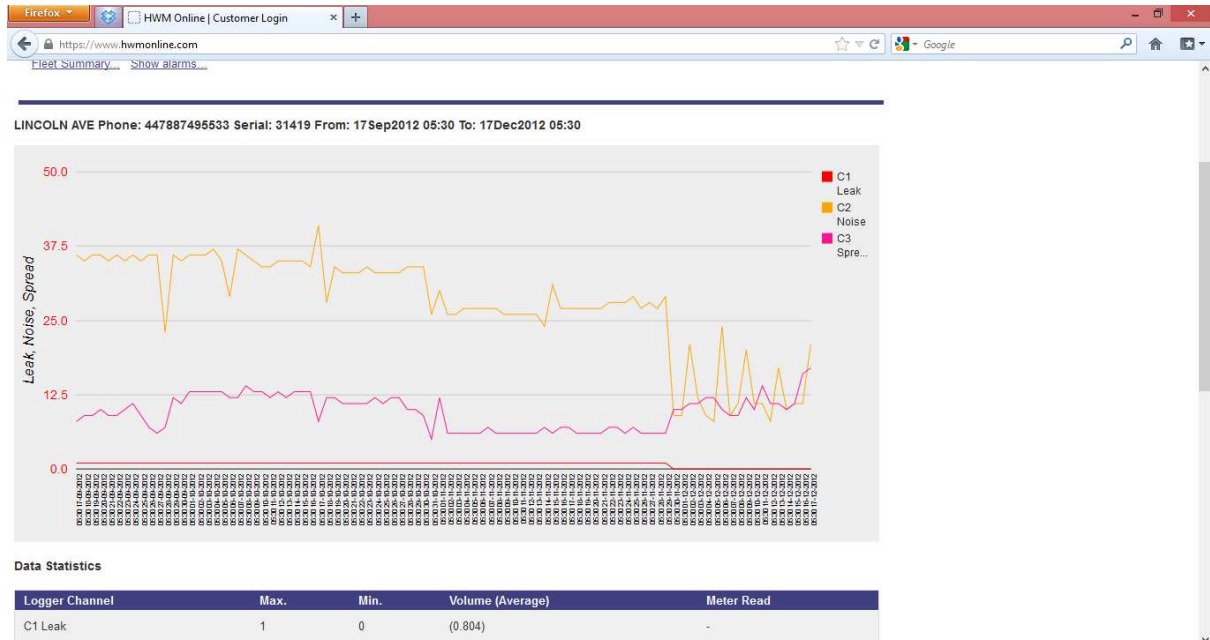
Version: 1.0

Title – Permanet LX Configuration

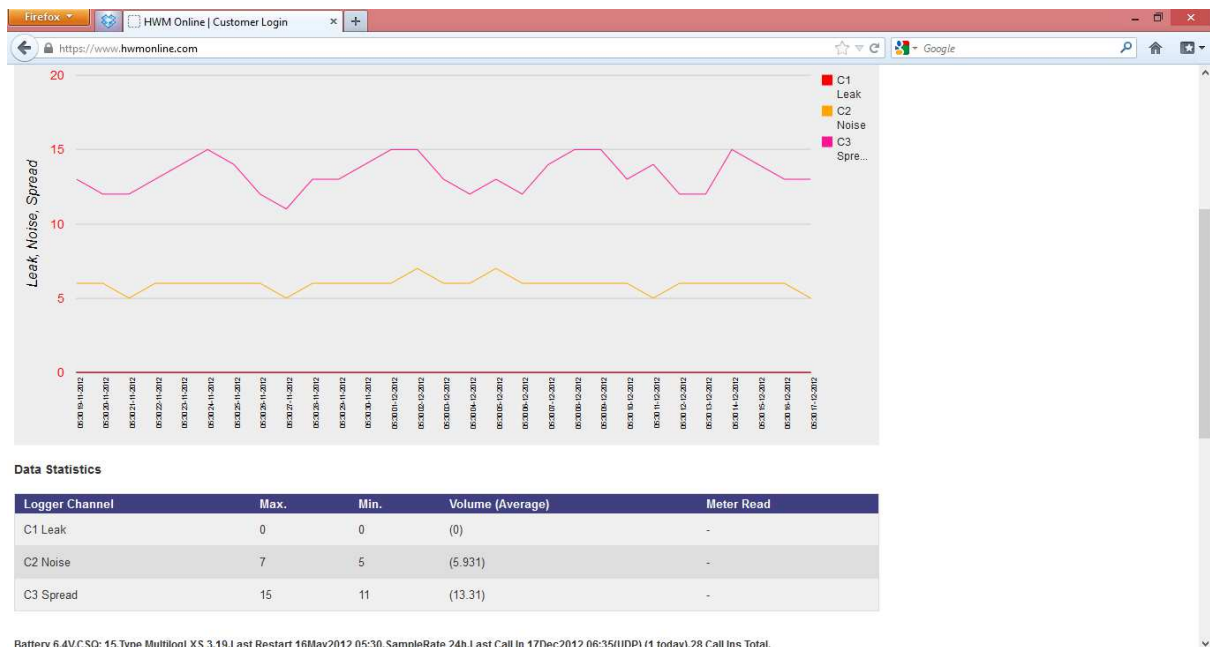
Made By: AB 18/06/14

(Issue 1)

3. This demonstrates a leak situation – leak line at 1, high noise and narrow (low) spread then the leak has been corrected and the leak line goes to zero, reduced noise, higher spread.



4. This is a no leak situation – leak line at zero, level of noise moderate and spread of noise wide



5. Leak indicated by leak line moving to 1, noise increasing dramatically and spread reducing. Notice how a later increasing noise event is not a leak because the spread also increases indicating a general increase in ambient noise level.



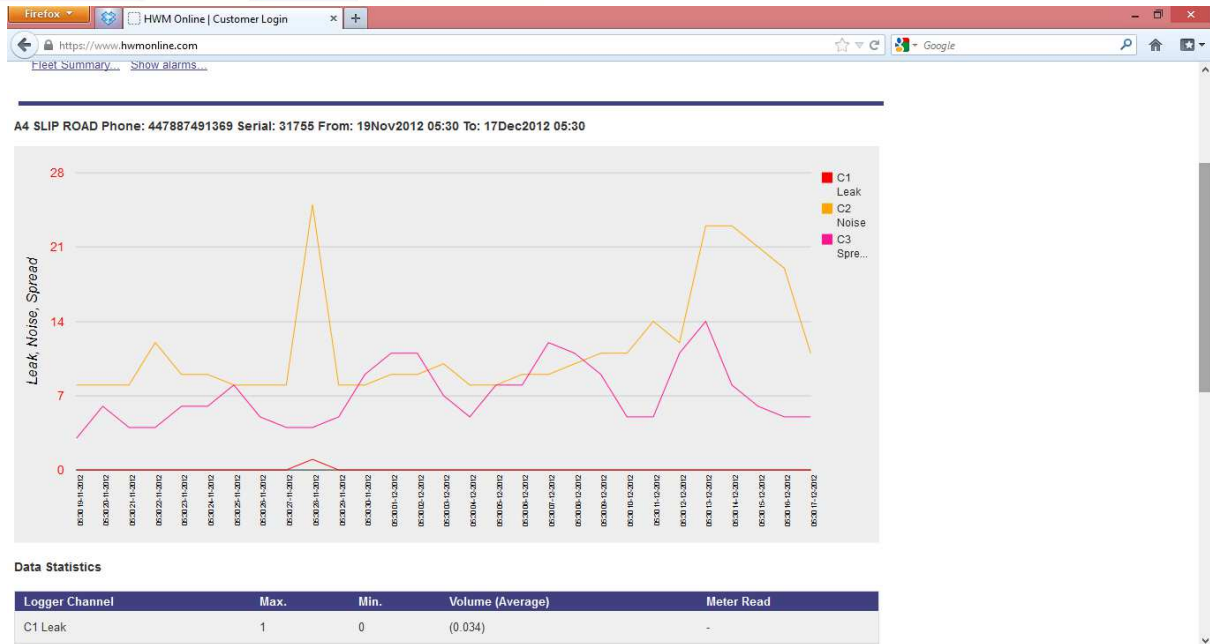
Ref: FAQ0051

Version: 1.0

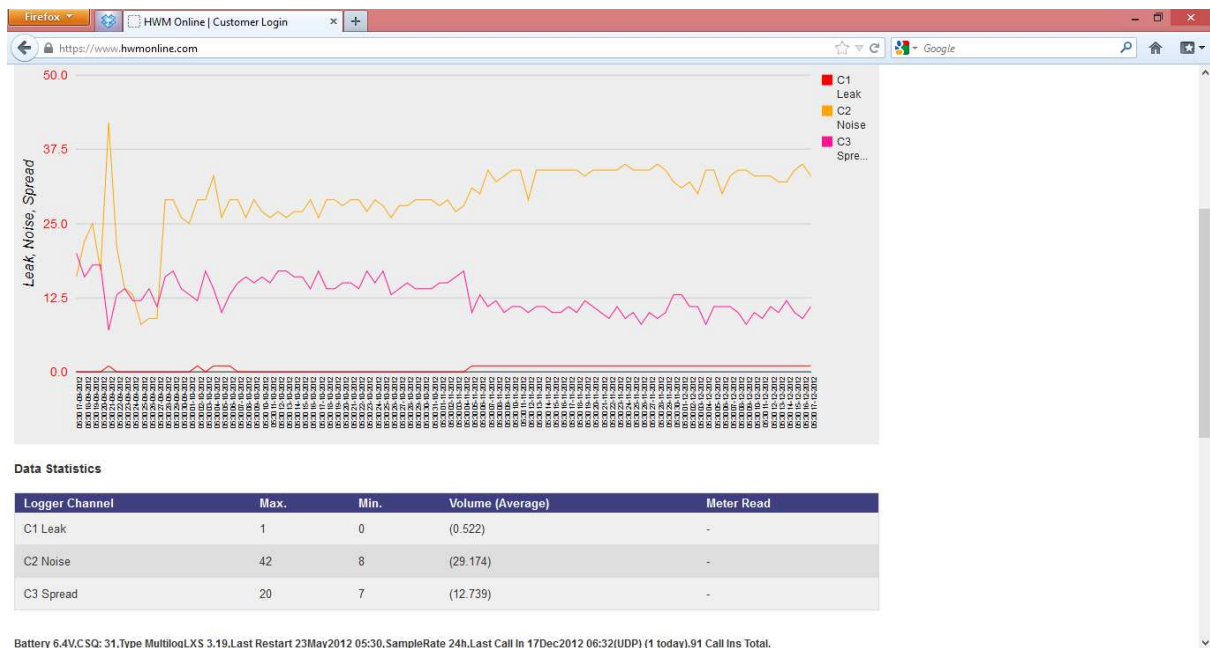
Title – Permanet LX Configuration

Made By: AB 18/06/14

(Issue 1)



6. Several leak conditions denoted by increasing noise but narrowing spread and then an ongonig leak event – again denoted by increased noise and lower (narrower) spread.



You will notice that in each of the above examples above a complete picture only emerges after the logger has been working for a period of time.

### Document History:

Edition	Date of Issue	Modification	Notes
First	24/10/13	Release	
Second	18/06/14	Updated to FAQ format	Added HWMO section