WinFrog Device Group:	**COUNTER**
Device Name/Model:	**Etisalat Counter**
Device Manufacturer:	For interfacing to the LCE and Cable Drum on the C/S Niwa
Device Data String(s) Output to WinFrog:	See below
WinFrog Data String(s) Output to Device:	See below
WinFrog Data Type(s) and their RAW record	COUNT 492 Set speed is recorded in the Cable Model 494 record.

DEVICE DESCRIPTION:
The Etisalat Counter provides a cable speed, count and tension at about 2 hz. The interface is RS232 serial. When enabled, the device driver will output the desired set speed on the same serial port. To output the set speed the cable model must be running.

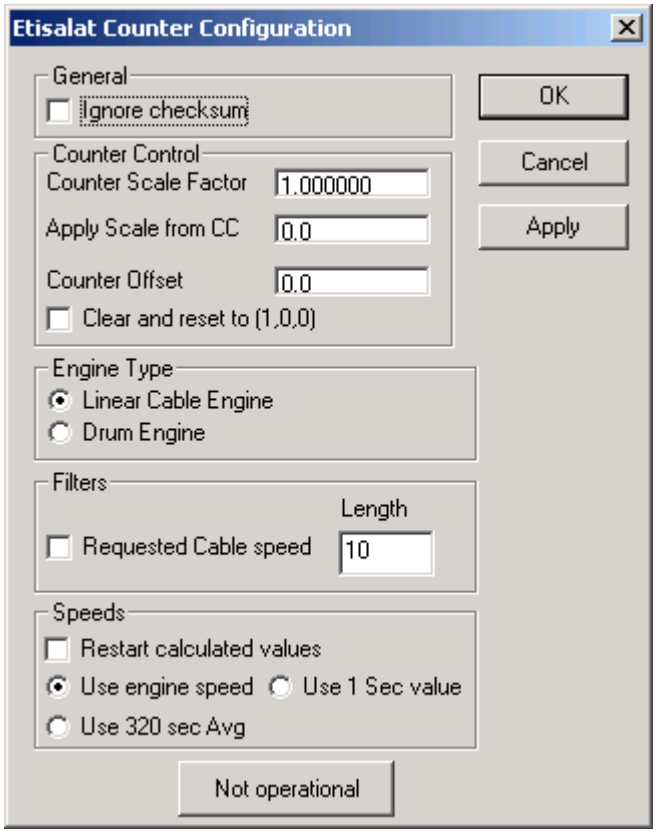
Note: There are two Etisalat counters; one for the C/S NIWA, named Etisalat Counter, which uses the Parkburn LCE and one for the C/S Umm al Anber, named Etisalat Counter UAA, which uses a Fraser Hydraulic LCE.

DEVICE CONFIGURATION INSTRUCTIONS:

WINFROG I/O DEVICES > EDIT I/O:
Baud Rate: (Adjustable) 9600
Bits Per Character: 8
Stop Bits: 1
Parity: NONE

WINFROG I/O DEVICES > CONFIGURE DEVICE:
The Etisalat Counter device is added to WinFrog from the COUNTER device group. Adding the Etisalat Counter device to WinFrog creates one data item: COUNT.

The Etisalat Counter device must be configured at the I/O Devices level. In the I/O Devices window, highlight the Etisalat Counter device, right-click and select Configure Device. The Configure Etisalat Counter dialog box will appear, as seen below.



General
Ignore checksum
This should be left unchecked for operational use.

Counter Control
Scaling within WinFrog should only be used as a last resort. It is always better to have the cable engine output the correct cable count.

This scale factor can be applied along the entire length of cable or you can choose to apply the scale factor from a certain cable count onward. Enter the desired cable count from which to start applying the scale factor in the “Apply scale from CC” edit box. An offset can also be added to the cable count from the cable engine; scale is applied first, followed by the addition of the offset. All scale factor applications are accumulative, i.e. all previous scale factors entered are also applied. Only the last application is displayed when the dialog is opened.

To clear all scaling and offsets, select the Clear and reset (1,0,0) checkbox.

Care is required when entering values here, as applying a scale to the current cable count can result in a cable count jump that will adversely affect the cable model. If the cable model is running, apply new scale factor changes to the current count. You

will not see an immediate change in the count. All entries should to be logged, as the INI and CFG files only record the accumulated effect of all the scale changes.

Engine Type
Select either the LCE or drum, whichever is to be used. The LCE has its data in the first half of the telegram and the drum the last half.

Filters
Select the checkbox to filter the set speed that is sent to the cable engine. Enter the desired filter length within a range from 2 to 30. The larger the number that is entered, the more filtering is applied. Note that filtering the set speed can also be done within the cable model itself.

Speeds (observed output speed of the cable)
There are three output cable speeds that are displayed in the decoded data window: 1) speed from the cable engine read from the telegram, 2) WinFrog calculated speed between two successive telegrams received from the cable engine and 3) a speed calculated over about 320 seconds (i.e. the two telegrams are about 320 seconds apart). Both calculated speeds use the count and corresponding time within the telegram. The 320 seconds was chosen, as this is the range of the counter in the telegram (0 to 32000 in 10 millisecond units).

The three radio buttons allow you to select which speed is assigned to the vehicle and stored in the raw file. Regardless of which speed is selected, the time and count from the telegram is stored in the raw file.

The restart checkbox starts the WinFrog calculation over. This may be necessary if the cable engine is stopped or reset.

Control Button(s)
There will be either one or two buttons at the bottom of the dialog. Either button may display different captions depending upon the current status of the LCE and WinFrog.

The left hand button at the bottom allows WinFrog to control the cable engine's speed. It will display one of several messages depending upon the current status.

1) **Not Operational**
This is displayed when the correct telegram is not being received from the cable engine.

2) **Request Control**
This is displayed when WinFrog is receiving a telegram from the cable engine and the cable engine is in manual mode. Click the button to request control. However, before doing so, the cable model must be running and **you** and **WinFrog** must be ready to control the cable engine. Also, the cable engine must already be paying out

at a speed within 0.1m/sec of the desired speed called for by the cable model. The cable engine operator needs to be informed verbally to match the speeds. Click the button once the speeds are close. WinFrog will request control by placing an A in the telegram sent to the cable engine and Control Requested will be displayed at the top of the decoded data window. The cable engine will acknowledge receipt and set a D in the message to WinFrog, also a light will flash on the cable engine control console. When the cable engine operator is ready he will push a button allowing WinFrog to take control. When control is passed, WinFrog will display Under WinFrog Control in the decoded data window.

3) **Output Manual Mode**
This button will be present when the telegram is not being sent and the LCE is in manual mode. If the LCE has timed out and has taken back control, it requires WinFrog to send a message with the manual mode set before it will allow WinFrog to take back control. Thus, if the LCE did time out, click this button to send a few messages to the LCE. Close and reopen the dialog and the *Stop Output* caption will be displayed along with *Request Control*. If, while WinFrog was in control, the LCE operator took *emergency* control away from WinFrog, WinFrog will automatically send the manual message. To stop the manual message see below. It should not be necessary to send the manual mode message before requesting control again. As long as the LCE is in manual mode already it will ignore manual mode messages from WinFrog.

4) **Stop Output**
If WinFrog is sending messages with the manual mode, this caption will be displayed on the button. Click it to stop sending these messages then close and open the dialog to send the *Request Control*.

5) **Relinquish Control**
If WinFrog has control and the dialog is opened, *Relinquish Control* will be displayed. Click the button to pass control back to the cable engine operator.

OPERATIONS

1) When starting any lay, the LCE will be in manual mode, operated by the LCE operator. During large cable body deployment it is recommended that the LCE also be in manual mode operated by the LCE operator. During alter courses and other operations the LCE can be controlled by WinFrog.
2) Before gaining control of the LCE the ship speed should be constant.
3) To gain control of the LCE, first observe the LCE speed and the WinFrog set speed in the cable model window. The LCE operator has a smart remote and can

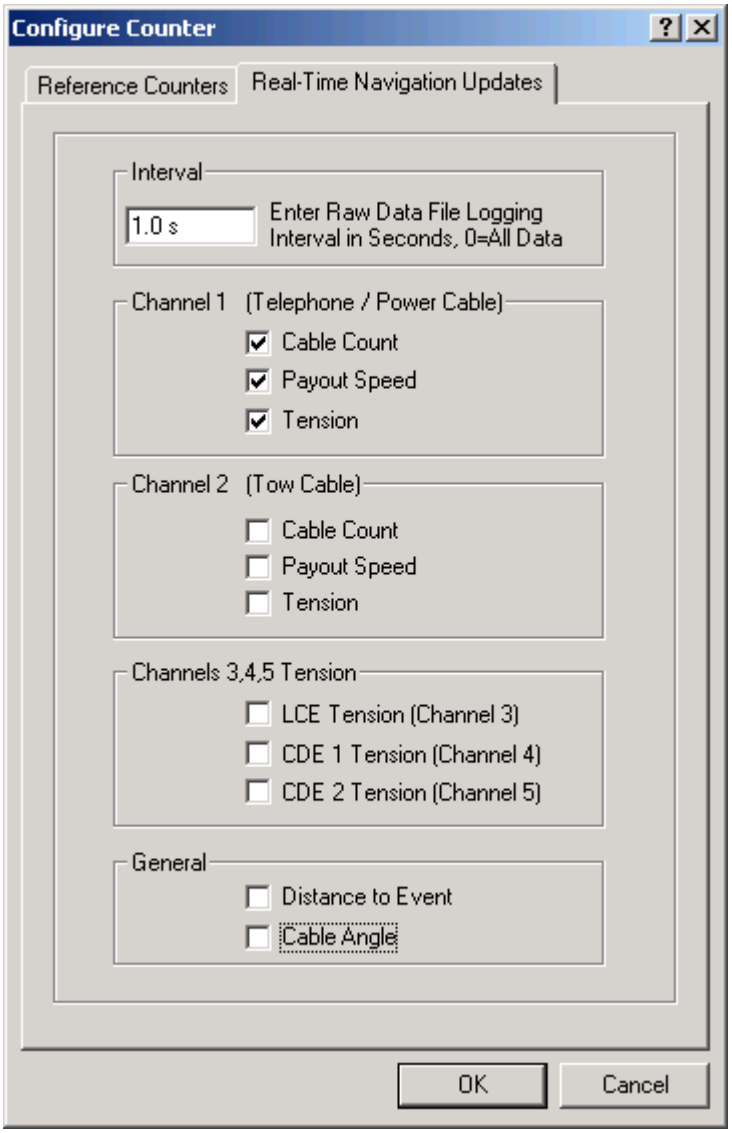
see this value as well. The LCE needs to match the WinFrog set speed before control can be passed.

4) Have the LCE operator adjust the LCE set speed to within 0.1 m/s. Note if the bottom is sloped and the WinFrog set speed is varying you may have to do some anticipating.
5) Open the Etisalat counter configuration dialog and click the Request Control button.
6) Observe in the decoded data window *Control Requested* is displayed at the top. On the line underneath the time, *Cable Engine: In Manual Mode* will change to *Cable Engine: Received WinFrog request for control.* At this same time a light will flash on the LCE console that the LCE operator will push to pass control.
7) Should the display remain as *Cable Engine: In Manual Mode,* abort this message and send the manual mode message. Then try requesting control again.
8) When in automatic mode and you want to pass control back to the LCE operator, open the Etisalat counter configuration dialog and click the *Relinquish Control* button. It is better to do this than have them take emergency control if it is not an emergency.
9) Once in automatic mode changes to ship speed, bottom slope, cable type and slack will affect the set speed.
10) Similar to manual LCE control the LCE does not follow exactly the set speed. Over a period of time a small speed difference can become a large cable difference, thus it will be necessary to monitor the ahead/behind display **(Noting the direction)**. To adjust the payout, use the *Additional Slack* edit box on the Slack tab of the cable model configuration dialog.

Also see the Parkburn document Interfacing between: Parkburn Cable Engines and Slack Cable Management Software.

WINFROG VEHICLE > CONFIGURE VEHICLE-DEVICES > DEVICE > EDIT:

The **Etisalat Counter COUNT** data item must be edited once it is added to a vehicle's device list. Highlight the **COUNTER, Etisalat Counter, COUNT** data item in the vehicle's device list and click the **Edit** button. The **Configure Counter** dialog box appears as seen below.



This dialog has two tabs. The first, **Reference Counters**, does not apply to this counter and should be left at the defaults. The second, **Real-Time Navigation Updates**, enables or disables this device's data from being passed to the vehicle. The three values available from this device must be placed into channel one. Uncheck all remaining values, as this counter does not read them.

You can control the amount of data written to the raw file by changing the value in the interval box.

If another counter is attached to this vehicle you must place its data into another channel. If this is not done, the other device will overwrite the values from this device. For example, if a tow winch counter and load cell is available, this same configuration dialog is used for that device's COUNT data item. Its data must be placed into channel two and all the other boxes left unchecked.

TELGRAM SPECIFICATION:
Sent by the cable machinery to WinFrog.

Field	Data
1	Header $PDWA
2	LCE Time in 10 millisecond units. Range 0 to 32000
3	LCE Cable count in centimetres Range +/-0 to +/-999999999
4	LCE Speed of LCE in cm/sec
5	LCE Tension in kiloNewtons in units of 0.1kN
6	LCE Mode byte. A= automatic, D= acknowledge WinFrog has requested control, and M= manual.
7-11	Fields 2 to 6 are repeated for the drum engine.
12	*hh Asterisk delimiter followed by 2 character check sum.

Sent by WinFrog to the cable machinery.

Field	Data
1	Header. $PMAA
2	LCE Cable set speed cm/sec with leading sign
3	LCE Mode byte M= manual, A= automatic.
4	DE Cable set speed cm/sec with leading sign
5	DE Mode byte M= manual, A= automatic.
6	*hh Asterisk delimiter followed by 2 character check sum.