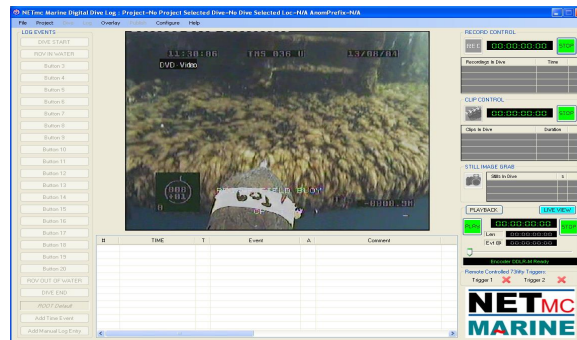


# USER GUIDE FOR NETmc MARINE

## *Digital Dive Log DDL software*



Rev 1  
DDL Software version 1.0.37  
July 2015

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## 1. **Set-up**

### **THIS PRODUCT MUST BE EARTHED**

- 1.1. Mount the **DVR** in a suitable rack mount system, supporting it at the rear as well as at the front. Ensure there is sufficient ventilation around the unit.
- 1.2. Connect the power supply. **Note:** we highly recommend connection to a UPS (uninterruptible power supply) to prevent data loss.
- 1.3. Connect audio and video input. We recommend that the best quality input is connected i.e. the feed should be 1V pk-pk and come directly from the camera or via a good quality video distribution amplifier.
- 1.4. Connect audio and video output.
- 1.5. Connect VGA monitor.
- 1.6. Power on.

**IMPORTANT: Please plug in and switch on all video and audio input connections before switching on the DVR.**

## 2. **Introduction**

The NETmc Marine Digital Dive Log (DDL) software is a software based event log and media controller allowing the management of a variety of NETmc Marine DVRs, with the option of controlling other NETmc Marine equipment

The events are actuated by use of a set of multi-functional buttons which can be individually configured with frequently used commands, hardware actions and workflows to enable the user to complete a set of tasks in a consistent and orderly fashion. The DDL software also generates "Dive Reports" in Docx and HTML formats, with optional hyperlinks to media files in the HTML report.

### 3. Overview

#### 3.1. Hardware

The DDL software will work with several NETmc Marine DVRs including DVR Inspector, HD DVR Inspector, X-Ops and the DDL-R. The 73fifty is not supported directly; however it can be controlled when used in conjunction with a DDL-R.

#### 3.2. Software

The DDL GUI has 22 configurable eventing buttons and two non configurable event buttons. Each of the buttons are multifunctional and can be independently configured to do either one or several of the following; instigate a media file, cause the event to be labelled as an anomaly, or instigate a Work flow instruction and outcome e.g. Take CP stab and record the value.

If a button instigates a media file, either a video recording or a still, the media file can be seen being generated in the 'Record Control' panel, from where, if clicked, the media can be reviewed.

At any point in a Dive, the user can generate a report, this is done in the 'Publish' tab, several reports can be generated, and these can be either in .docx format or as an HTML report. There is a bundled HTML with embedded hyperlinks to the media files. HTML reports are viewed in Internet Explorer.

**NOTE: The DDL software can run without a video input, however the media controls will not work without a relevant composite video input.**

### 4. File Structure

The DDL software is a 'Project' driven package, a project could be the inspection of a single asset or a year long drill support project. Within each project there can be one or several dives (max 999), all the log entries and media files are stored in the relevant Dive files which are then stored in the associated Project folder and data from all Projects are stored in a master Root folder.

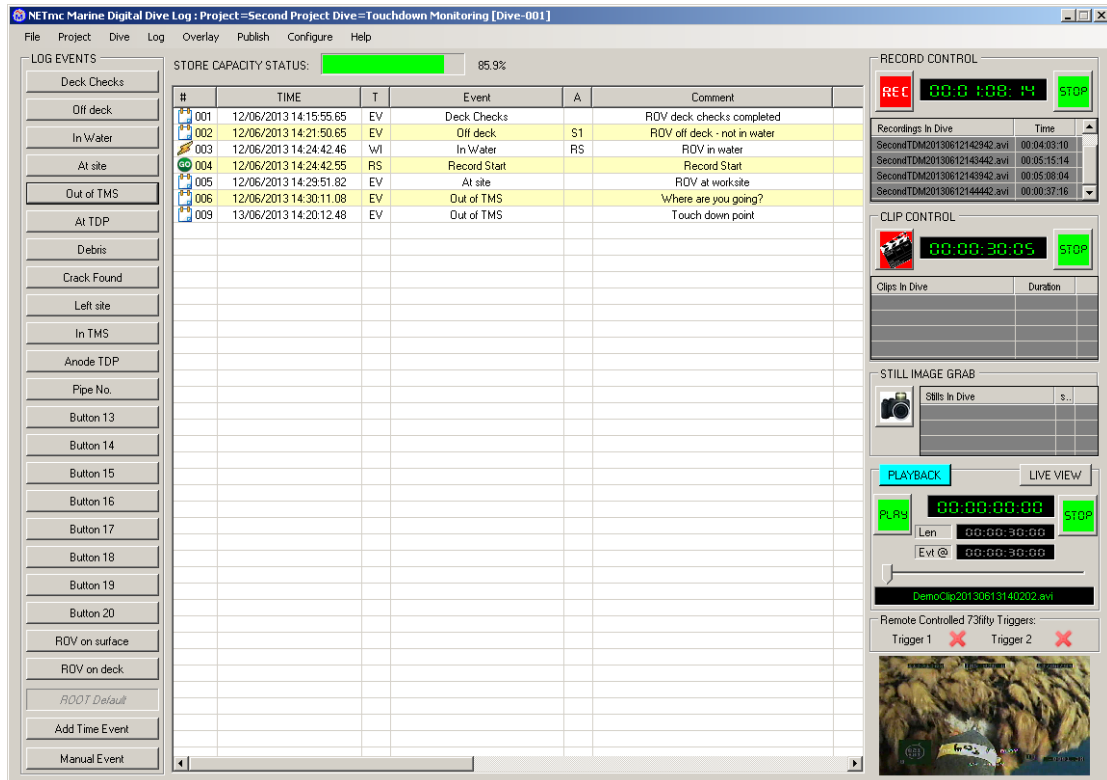
**NOTE: There is an automated file structure in the DDL software, do not delete folders or files without contacting your ROV manager for advice. The file structure is such that, changes to the global configurations must be made prior to creating a project. If a project is open when the configuration is made, the changes to the configuration will only apply to that project.**

When delivered a root folder called 'DDL Projects' will already be set up on the 'Data (D)' drive.

**DO NOT CREATE PROJECT FILES OUT WITH THE ROOT FOLDER.**

## 5. Description of GUI

The GUI is split in to five main areas, the Video Display in the bottom right hand corner, the Eventing Buttons, the Recording controls, the Log Table and the Tabs line.



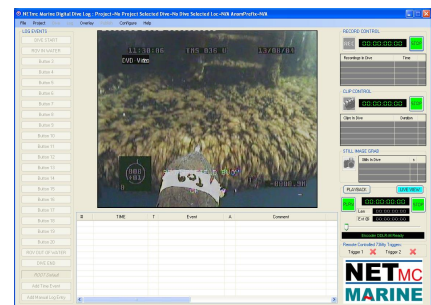
5.1. Event Buttons: There are 22 standard configurable "Event" buttons on the left of the screen, all DVRs will have a default "demo" set of buttons configured which can be overwritten with a company specific configuration. It is also possible to save several button files (button.dbf). These files will also be called button .dbf but will have a friendly name when loaded into the database. These saved files would have to be saved in an appropriate folder.

Below the 22 buttons are two extra buttons, firstly the "Add Time Event" button, this can be used to record a pending event e.g. watching the lowering of an anchor so the exact time of touch down can be recorded; the "Add Time Event" window can be kept open all the time.

The second button is the "Add Manual Log Entry" this allows on the fly events to be added that are not already on a pre-programmed button, such events are just logged as Manual Event in the log table. However, it is possible to launch an "Edit Manual Event" window to complete the event details straight away, this is set up in the "Configure" tab, see more in later chapter.

- 5.2. Recording Controls: On the right hand side of the screen are the recorder controls; a different section for each of Record (Master recording), Clip, Stills and Playback. All controls can be operated manually or via clicking on a suitably configured Event Button. Each section is split into two areas, the operational area with clickable controls and a display area where the most recent files are displayed; clicking on any of these files will make them play in the Video Display area. Whilst the recorded media is being played there is no display of the "live video".
- 5.3. Video Display: Media, including live video; video replay and stills, is shown in the Video Display in the bottom right hand corner of the screen.

Tip; there is an option to have a larger Video Display in the middle of the GUI, if this is enabled then, when replaying recorded media, the live video moves to the bottom right hand corner video display. More details on this are given later in the manual.



- 5.4. Log Table: In the centre of the GUI is the Event Log Table, this is a list of the events and is updated as buttons are clicked.

The content of the Log Table is dependant on the way the system has been configured, but basically, it displays at least one line every time an "Event Button" is clicked. Other entries will depend on the set up of the systems and may include logged entries of "Video Loss" or "No Encoder".

The columns in the "Log Table" are also selectable, right click the title of a column and select the parameters for display.

If a log entry has an associated media file then this file can be played by right clicking on the file and clicking the appropriate command.

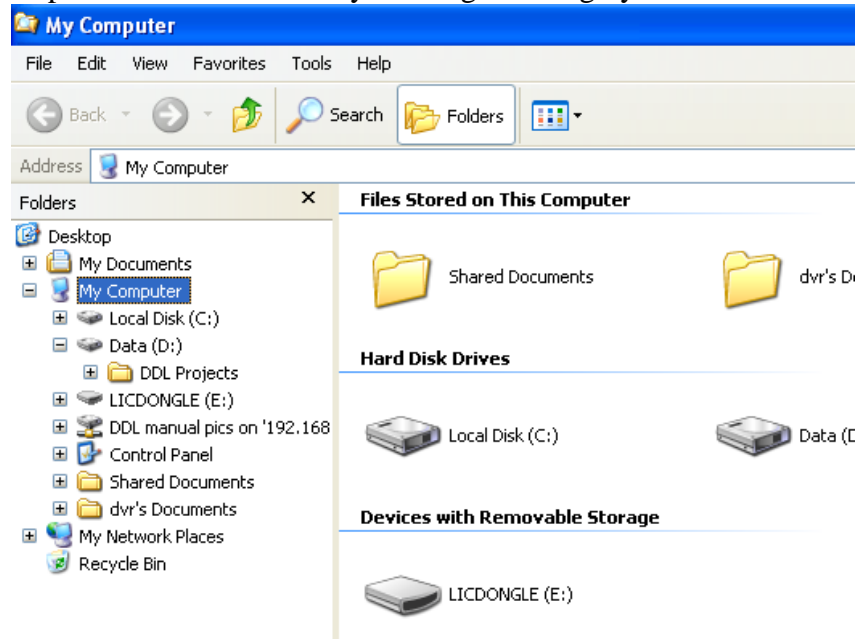
- 5.5. Tab Line: This displays the current dive log project/dive information and the various Windows Tabs used to set up the system.

## 6. Getting started - file structure

As supplied a new DVR will already have the "DDL Project" folder set up on the "Data" (D) drive this is where ALL DDL project and dive data will be stored.

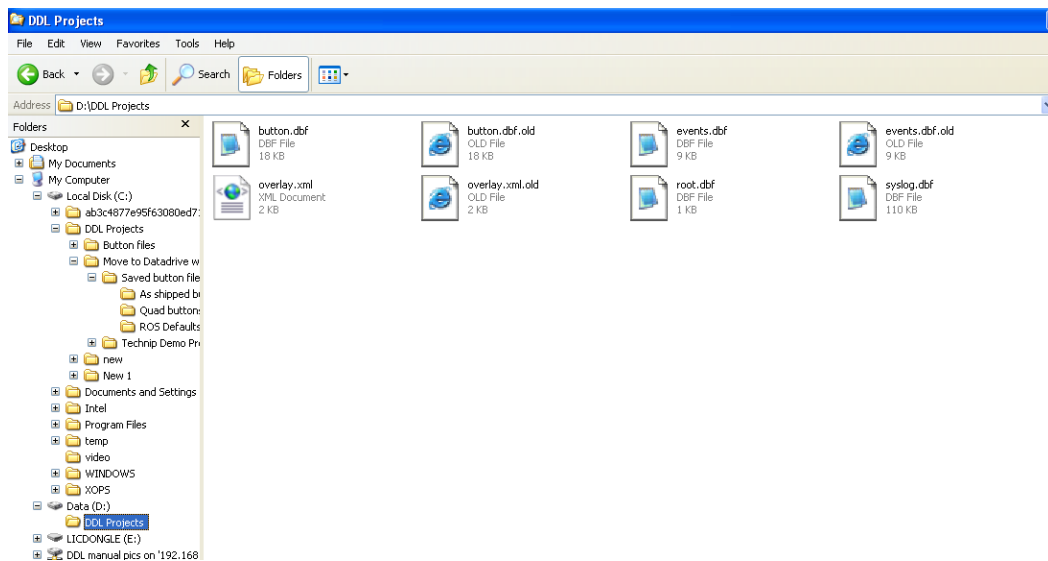
**NOTE: DO NOT create another root folder, there should only be one "root" location.**

6.1. To check your DVR has this file right click on "My Computer" on the desk top and expand the "Data" drive by clicking the + sign you should see the "DDL



Projects" folder as below:

6.2. Now double click on the "DDL Projects" folder, this will show files that were automatically loaded during the setting up of the "DDL Projects" folder; see below.



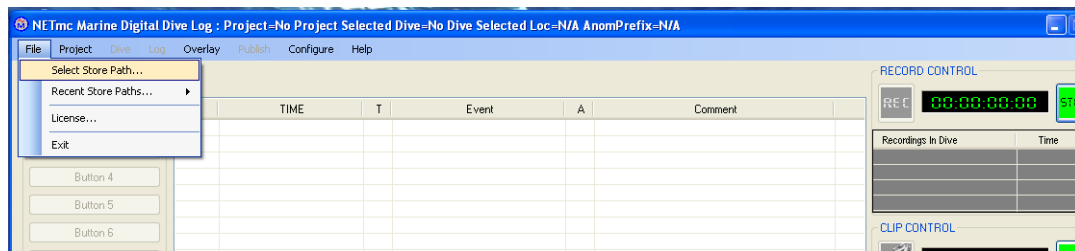
**DO NOT DELETE OR ALTER THESE FILES WITHOUT  
CONTACTING THE ROV OFFICE STAFF**

6.3. Close Windows Explorer

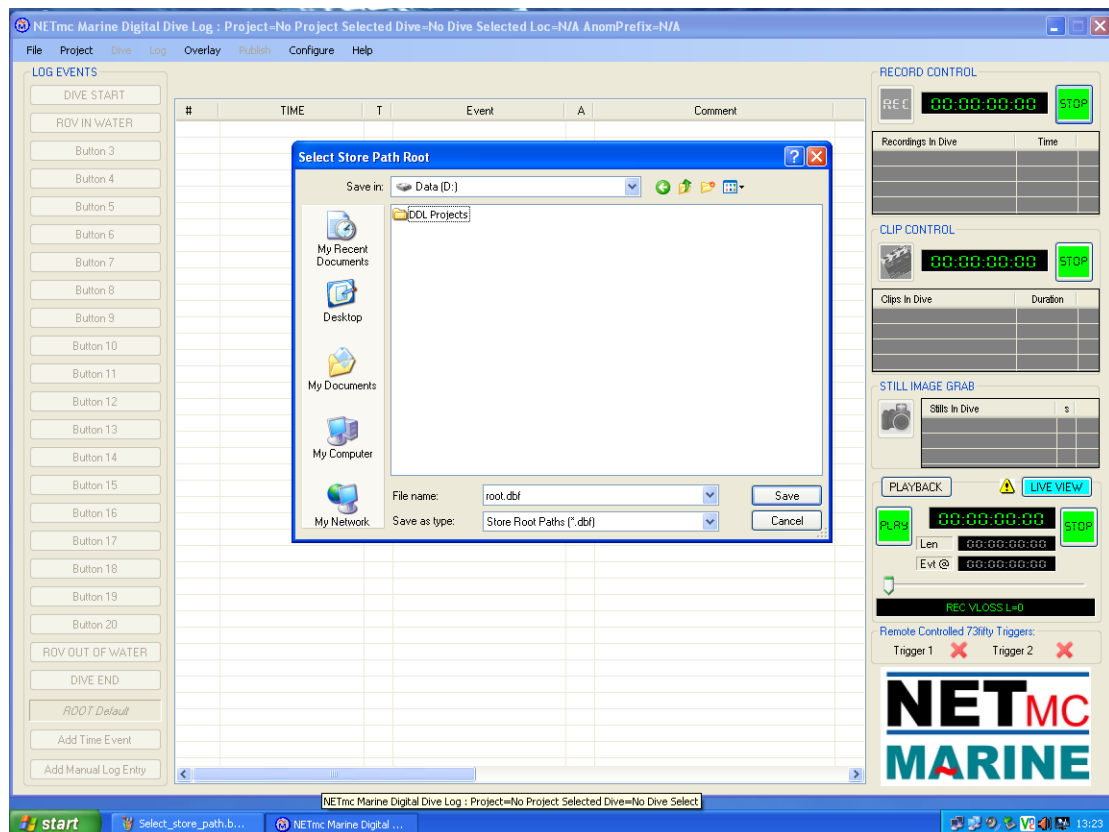
6.4. Double click on the desktop short cut to "DDL" to open the DDL GUI.



6.5. Click on the "File" tab then on "Select Store Path" in the drop down menu



and navigate to the "DDL Project" folder as below.



NOTE: the file name "root.dbf" is auto-generated

**DO NOT CHANGE THIS FILE NAME**

6.6. Click on the "DDL Project" folder and click "Save"

**NOTE: These files are used as templates for the projects and dive files  
DO NOT DELETE OR AMEND THESE FILES**

We are now ready to configure the DDL software.

## 7. Configuring the software

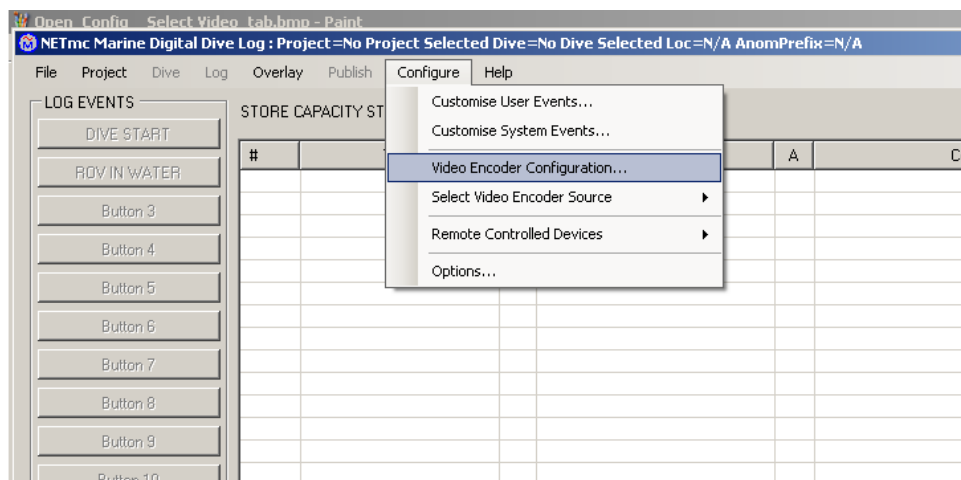
In this section we will look at how to;

- set file durations and pre-recording durations
- investigate optional functions
- learn about Events

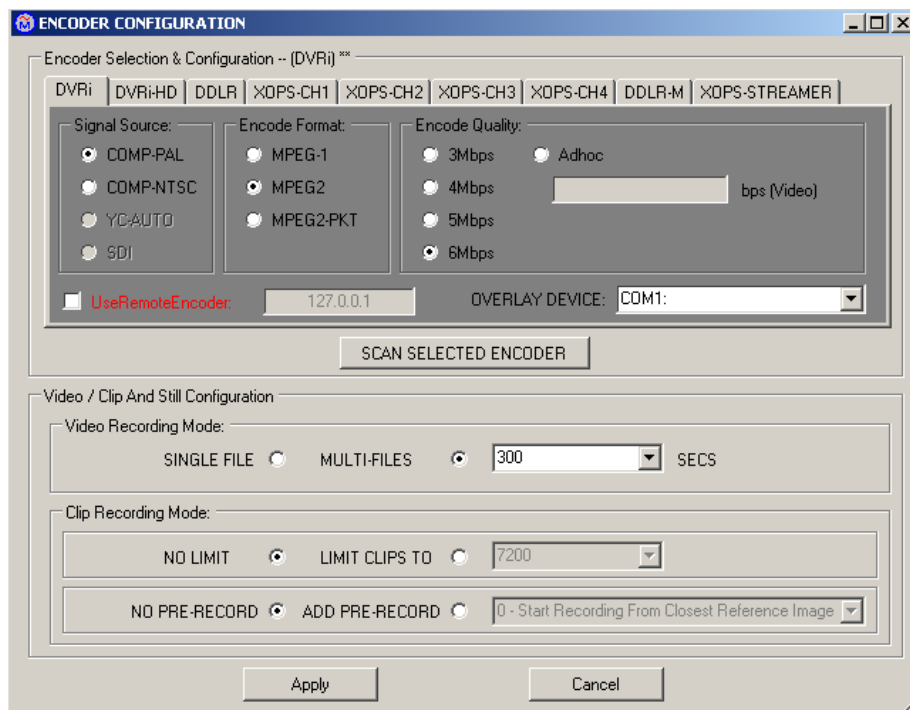
### 7.1. DVR selection and configuration

The DDL software can be used with a range of DVRs so the first thing to do is to check the software is configured for your DVR.

#### 7.1.1. Click on the "Configure" Tab



then select "Video Encoder Configuration" from drop down menu; a new window will pop up as below.



- 7.1.2. The correct tab for your DVR type should already be displayed, if not click on the tab associated to your DVR type, for the X-Ops select the tab associated to the specific X-Ops channel required.
- 7.1.3. Select the Signal Source of the camera
- 7.1.4. Select the encoder format.

**NOTE; Selection of the encoder format may be decided by the client's specification, the company's standard settings or the application. Also some encoder formats may require specific codecs.**

- 7.1.5. Select the Encoder Quality
- 7.1.6. The "Use Remote Encoder" is for future use; ignore this.
- 7.1.7. Video Recording Mode; What's the difference?

If you click "Single File" the DVR will generate one long file for the duration of the recording; if you click "Multi-Files", and set a duration in seconds, then the DVR will create a set of chapters of the same duration e.g. 300sec = 5min.

**WE STRONGLY SUGGEST YOU SELECT "MULTI-FILES"**

**Check with your ROV manager if there is a client or company designated setting for above**

#### 7.1.7.1.Clip Recording Mode

- 7.1.7.1.1. When a clip is taken, either manually or by the pressing of an "Event Button", you can let the clip duration be controlled manually "NO LIMIT", this will generate very long files if you forget to stop the clip. Clicking "LIMIT CLIPS TO" and selecting a duration in seconds, ends the clip after the predetermined time.

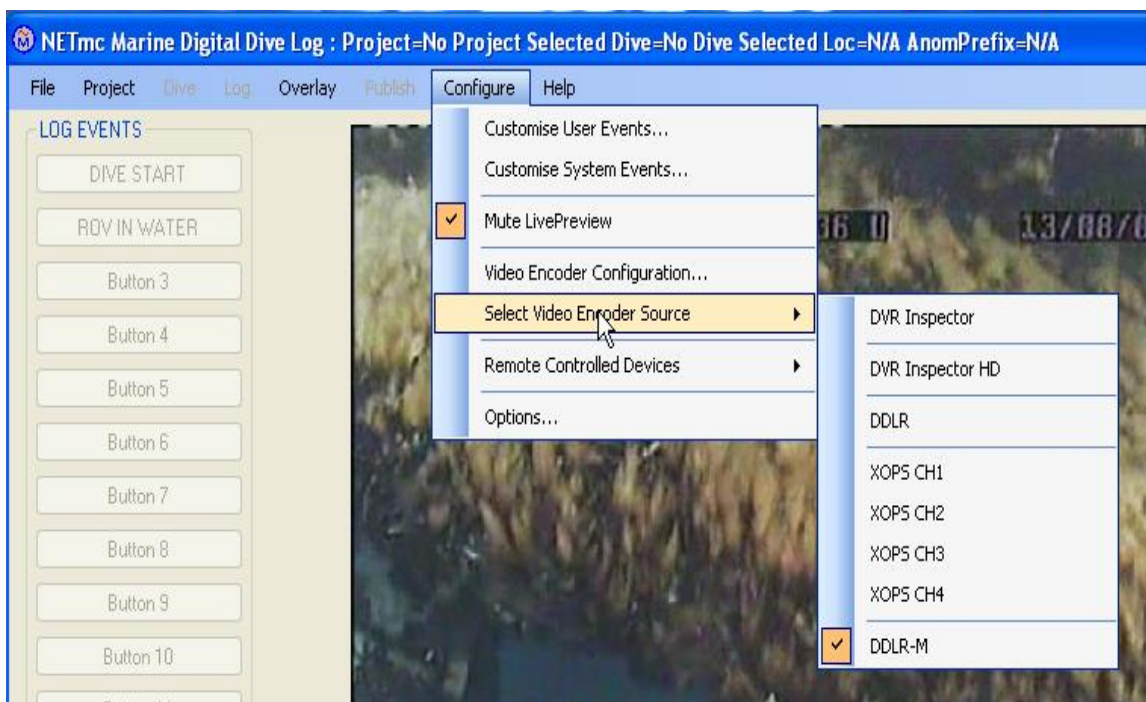
**WE SUGGEST YOU SELECT THE "LIMIT CLIPS TO" OPTION.**

**Check if there is a client or company designated setting for this**

7.1.7.1.2. When a button is clicked that actuates a "Clip" the beginning of the clip may be lost, this is just down to reaction time. DDL allows you to start the clip some time before the button was clicked by up to 4seconds. Click "ADD PRE-RECORD" then select the desired pre-record time.

**Check if there is a client or company designated setting for above**

7.1.8. If you have more than one DVR with which you use the DDL software e.g. a multi-channel X-Ops, you may want to configure each DVR differently. Once you have done this you can then just use the "Select Video Encoder Source" option in the "Configure" tab to select your DVR; see below.



## 7.2. DDL Optional functions

There are several options that can be set for the DDL software start-up condition, store paths etc, so lets look at these in turn.

Click on the 'Configure' Tab and select 'Options' you will see the screen below. Here is a description of each section.

**APPLICATION OPTIONS**

**PRODUCT INFORMATION**

Module Name: DDL  
Module Version: 1.0.36  
Module Date: 11 July 2013

**START-UP OPTIONS**

☐ Open Last Project  
☐ Open Last Dive  
☐ Show Tooltips ☒ Edit Log Event/Comments InLine  
☒ Show Only Event Log (Disable Split Preview/Log)  
☒ Enable Event Button Menu  
☒ Single Project Event Button Configuration  
☒ Single Project Encoder Configuration  
☐ Show DISK Status in Log Only Mode  
☒ Enable Report Template Expression Designer

**STORE PATH (Base Folder Containing Projects)**

LOCAL: D:\DDL Projects  
REMOTE: CAUTION: REMOTE ENCODER OVERRIDE

**WORKFLOW LOCKS AND CHECKPOINTS**

Log Entry Time Format: dd/MM/yyyy HH:mm:ss.ff **RESET TO DEFAULT**  
☒ Always Edit MANUAL Log Event After Capturing MetaData  
☒ Do Not Allow Partially Completed Workflow Events in Log (Do It Later)

**Remote Controlled Devices (mediaNET General Purpose Control Module Support)**

<input checked="" type="checkbox"/> Enable 73fifty Trigger 1	<input checked="" type="checkbox"/> Enable 73fifty Trigger 2
IP: 194.36.79.207	IP: 194.36.79.207
ID: a	ID: b

**Apply** **Cancel**

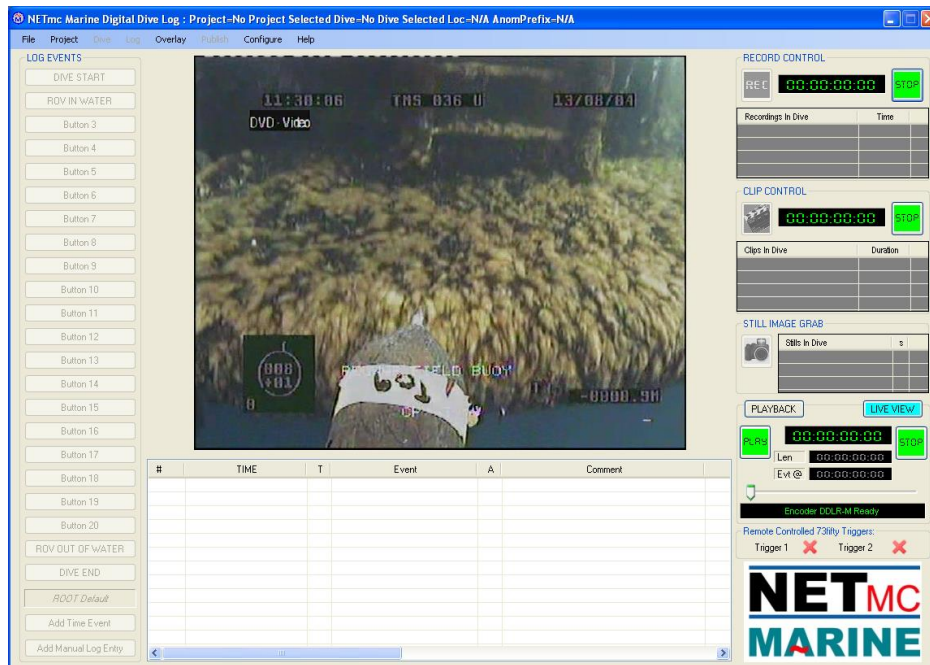
### 7.2.1. Start up options;

7.2.1.1. 'Open Last Project'; if this box **IS** ticked then the software will open the same project as you were in when you closed the application. If it **IS NOT** ticked, the software will open with no project selected.

7.2.1.2. 'Open Last DIVE'; if this box **IS** ticked then the software will open the same DIVE as you were in when you closed the application. If it **IS NOT** ticked, the software will open in the project but will need you to select a dive.

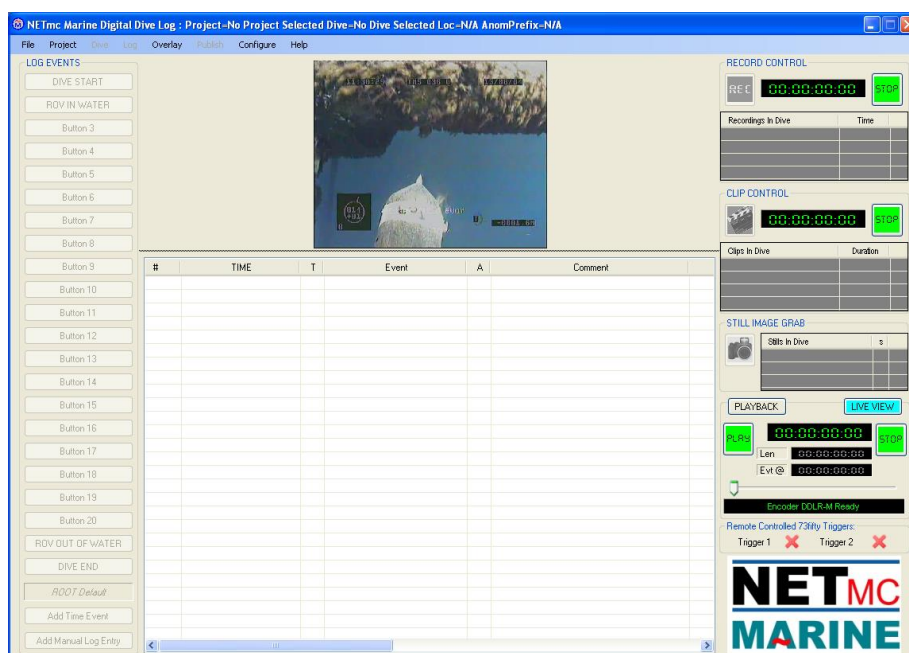
7.2.1.3. Show Tooltips; this allows you to turn on and off tips that appear in parts of the software when you hover the mouse over them.

7.2.1.4. Disable Split Preview/Log or Show Only Log; by default the DDL software has a large video viewing area above the log table, as seen below:



ticking this box will remove the video screen and extend the log to the top of the page.

If you **do not** tick this box, it is possible to click and drag the log table up the screen, in doing this the video area will decrease proportionally, as shown below:



7.2.1.5. "Show DISK Space in LogOnly Mode"; with the "Disable Split Preview/Log" or "Show Only Log" box ticked; this function allows you to display the available space left in the allocated storage device as a fraction of the original space capacity.

7.2.1.6. "Single Project Event Button Configuration"; Each Project can have its own set of buttons if you want the Project buttons to apply to all dives tick this box.

7.2.1.7. "Single Project Encoder Configuration";

**NOTE: This is not applicable to the DDL-R.**

7.2.2. Store Path (Base Folder Containing Projects);

7.2.2.1. LOCAL: From the factory this will display "D:\DDL Projects" unless changed by user.

7.2.2.2. REMOTE;

**NOTE: This is not applicable to the DDL-R**

7.2.3. WORKFLOW LOCKS AND CHECKPOINTS

7.2.3.1. Log Entry Time Format; the DDL software times each system and user event to 1000<sup>th</sup> of a second, this allows the events to be logged in the correct sequence if multiple events happen at the same time. However the format can be changed for display purposes here.

7.2.3.2. "Always Edit MANUAL Log Event After Capturing METADData"; There is an "Add Manual Event" button on the main GUI, just below the 22 buttons, this is used for on-the-fly adding of events,, basically unexpected events. If you tick this box, using the "Manual Event" button will automatically open a new screen that allows you to edit the description of the "Manual Event" there and then. If this box is left un-ticked, the text "Manual Event" will be entered in to the log.

7.2.3.3. "Do not allow Partially completed Workflow events in Log"; with this box ticked the operator is forced to perform a "Workflow Event" or at least "Do it Later" with it un-ticked he can ignore the "Workflow" requirement by clicking "Apply"

7.2.4. "Remote Controlled Devices (mediaNET General Purpose Control Module Support)";

This applies when using a DDL-R, this section allows for the enabling to trigger up to two external 73fifty DVRs via a 12V source in the DDL-R. This area is for information only and is greyed out. Ignore this section if you do not operate 73fifty DVRs.



Click "Close" after applying any changes made.

### 7.3. Events Description

An "Event" is created each time one off the Event buttons on the GUI is pressed. Each event is allocated a unique two-digit alpha-numeric code and a description; these will be used in setting up the button configurations.

There are two main types of events – System Events and User Events".

#### 7.3.1. System events

These are mostly used in the back ground of the system; checking the operation of the DVR hardware or the video signal e.g. if a button is configured to start a clip, then a system event called "clip start" or "CS" will be logged in the back ground. These events can be displayed in the log file but tend to clutter up the log and so it is not recommended to display the majority of them in the log. However, some system events might be useful to be displayed in on screen log e.g. "Video Signal Lost" or "VL". See below for table.

CUSTOMISE SYSTEM EVENTS					
Include	Event	Description	Show in Overlay	Show in Export	
<input type="checkbox"/>	False	DO	Dive Open	<input type="checkbox"/>	False
<input type="checkbox"/>	False	DC	Dive Close	<input type="checkbox"/>	False
<input type="checkbox"/>	False	DS	Dive Start	<input type="checkbox"/>	False
<input type="checkbox"/>	False	DE	Dive End	<input type="checkbox"/>	False
<input type="checkbox"/>	False	BS	Blackbox Start	<input type="checkbox"/>	False
<input type="checkbox"/>	False	BE	Blackbox End	<input type="checkbox"/>	False
<input type="checkbox"/>	False	BR	Blackbox Recorder	<input type="checkbox"/>	False
<input type="checkbox"/>	False	BF	Blackbox File \$(blackboxFile)	<input type="checkbox"/>	False
<input type="checkbox"/>	False	BK	Blackbox Error	<input type="checkbox"/>	False
<input checked="" type="checkbox"/>	True	RS	Record Start	<input type="checkbox"/>	False
<input checked="" type="checkbox"/>	True	RE	Record End	<input type="checkbox"/>	False
<input type="checkbox"/>	False	RR	Record Recorder	<input type="checkbox"/>	False
<input type="checkbox"/>	False	RF	Record File \$(recordFile)	<input type="checkbox"/>	False
<input checked="" type="checkbox"/>	True	RK	Record Error	<input type="checkbox"/>	False
<input type="checkbox"/>	False	CS	Clip Start \$(clipFile)	<input type="checkbox"/>	False
<input checked="" type="checkbox"/>	True	CF	Clip File \$(clipFile)	<input type="checkbox"/>	False
<input checked="" type="checkbox"/>	True	CE	Clip End \$(clipFile)	<input type="checkbox"/>	False
<input checked="" type="checkbox"/>	True	CX	Clip Error	<input type="checkbox"/>	False
<input type="checkbox"/>	False	PK	Still Request \$(stillFile)	<input type="checkbox"/>	False
<input checked="" type="checkbox"/>	True	PF	Still File \$(stillFile)	<input type="checkbox"/>	False
<input type="checkbox"/>	False	VO	Video Signal Detected	<input type="checkbox"/>	False
<input checked="" type="checkbox"/>	True	VL	Video Signal Lost	<input type="checkbox"/>	False
<input type="checkbox"/>	False	VN	Encoder Connection Lost	<input type="checkbox"/>	False
<input type="checkbox"/>	False	GS	730ityTrigger \$(device) State=\$(state)	<input type="checkbox"/>	False
<input type="checkbox"/>	False	GC	730ityTrigger \$(device) State=\$(state)	<input type="checkbox"/>	False

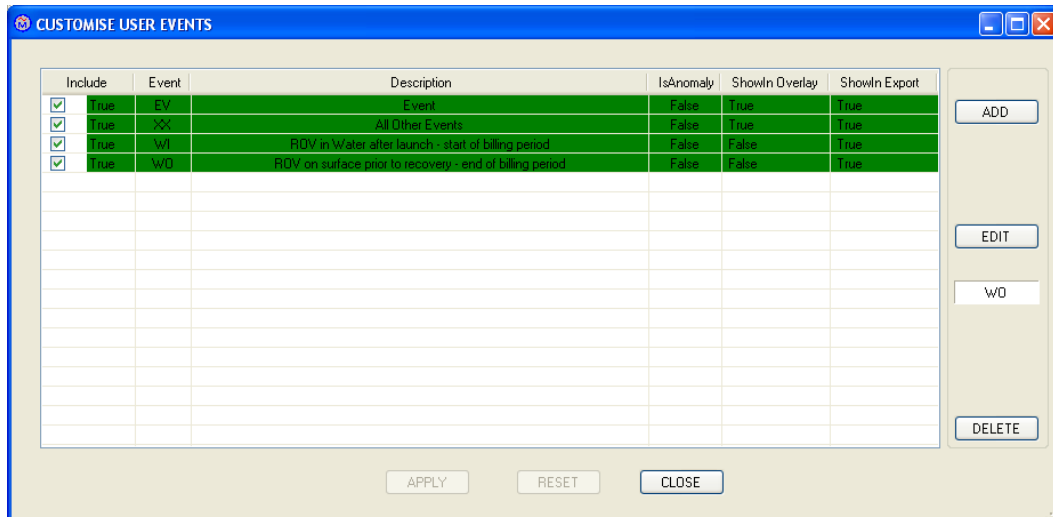
**NOTE: It is envisaged that only a designated system manager would configure the "System Events" or add a new "System Event".**



### 7.3.2. User Events

δUser Eventsö are created by the user, these are related to the operation in hand e.g. Visual Inspection or Taking of CP readings etc. associated codes could be VI and CP. The system checks all new codes to ensure they are not duplications of existing codes.

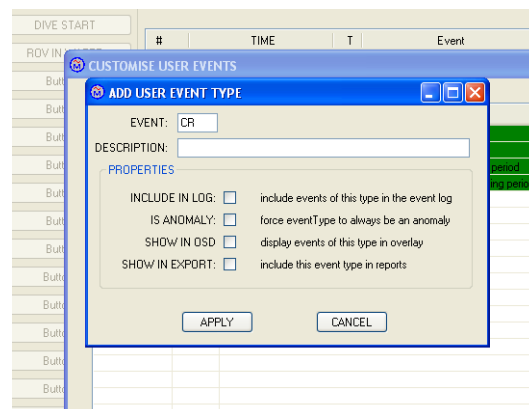
The Events configuration is done under the "Configuration" tab, select "Customise User Events".



7.3.3. To create or edit a `δUser Event`, click the `δConfigure` tab then `δCustomise User Events`, you will see a table with two default events, `δEV` and `δXX`; these cannot be deleted but can be edited. All events buttons default to `δEV`, this will become clearer when we look at Button configuration. There will be two further events in the table, `δWI` for `δROV in Water` and `δWO` for `δROV on surface prior to recovery`, these are just examples left in and CAN be deleted if preferred.

7.3.4. The best way to understand creating user event is to make one; let's create a new `UserEvent`, called `CR` and give it a description of `Crack Found`.

#### 7.3.4.1. Click the "ADD" button and type "CR" in the "EVENT" window



7.3.4.2. Now type "Crack Found" in the "DESCRIPTION" box.

Now let's look at the properties we want to allocate to this event type.

7.3.4.3. Ticking "INCLUDE IN LOG" will populate the log table with the description programmed in to the button to which we allocate this type of event, so we will nearly always want to tick this box.

7.3.4.4. Ticking "IS ANOMALY" will flag this type of event as an anomaly; finding a crack would generally be considered an anomaly so we would tick the box if appropriate.

7.3.4.5. The DVR can be hooked up to a NETmc Marine videoTXT overlay, if it is then the DDL software can send text to the screen, we call this "On Screen Display" or "OSD". If we want this event type to be displayed in the video image then we would tick the "SHOW IN OSD" box. See section later in manual for more details.

7.3.4.6. If we tick "SHOW IN EXPORT" then this event would, by default, be exported as part of the published report, however this can be overwritten when it comes to designing the report. See section on "Publishing" for more details.

**ADD USER EVENT TYPE**

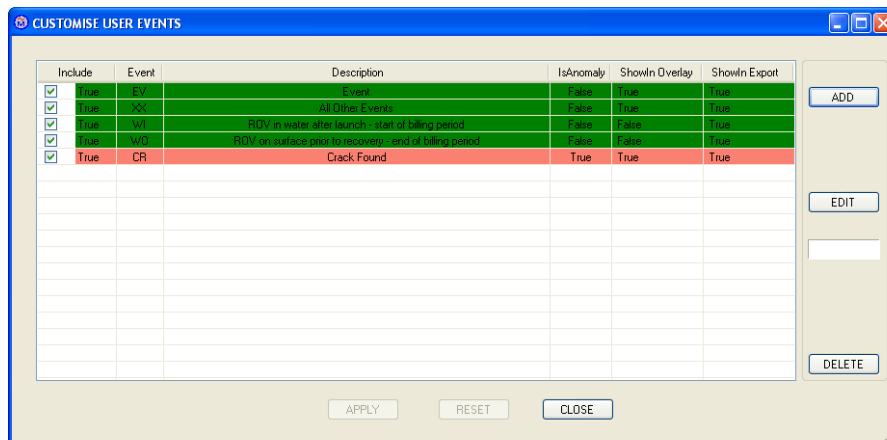
EVENT:

DESCRIPTION:

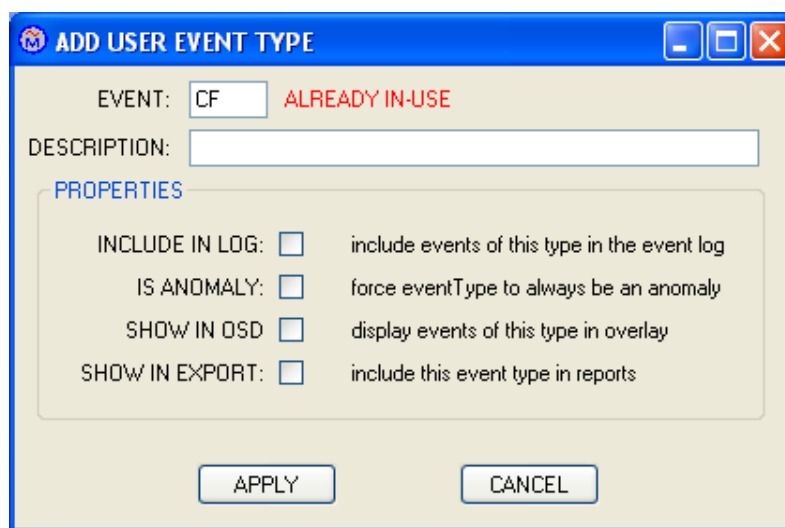
**PROPERTIES**

INCLUDE IN LOG:	<input checked="" type="checkbox"/>	include events of this type in the event log
IS ANOMALY:	<input checked="" type="checkbox"/>	force eventType to always be an anomaly
SHOW IN OSD	<input checked="" type="checkbox"/>	display events of this type in overlay
SHOW IN EXPORT:	<input checked="" type="checkbox"/>	include this event type in reports

7.3.4.7. Once we have ticked the required boxes, click "APPLY", you will now see the new code in the table.



TIP; if we had tried to use the code `õCFõ` the system would have alerted us that this code is already in use, it is the `õClip Fileõ` code, and so we would not be able to use it. As shown below



- 7.3.4.8. Let's create another new "User Event", we will call it "D1" and give it a description of "Debris".
- 7.3.4.9. Click the "ADD" button and type "D1" in the "EVENT" window, now type "Debris" in the "DESCRIPTION" box. Now let's look at the properties we want to allocate to this event type.
- 7.3.4.10. "INCLUDE IN LOG" ☒ Yes
- 7.3.4.11. "IS ANOMALY" some debris will be considered an anomaly e.g. an anchor on a pipeline, however a sand bag under a platform might not be considered an anomaly, so let's say NO here
- 7.3.4.12. "SHOW IN OSD" ☒ Yes, if an overlay is connected.
- 7.3.4.13. "SHOW IN EXPORT" ☒ Yes.

#### 7.3.4.14. Click Apply to close the window

Below is the table with the two new events.

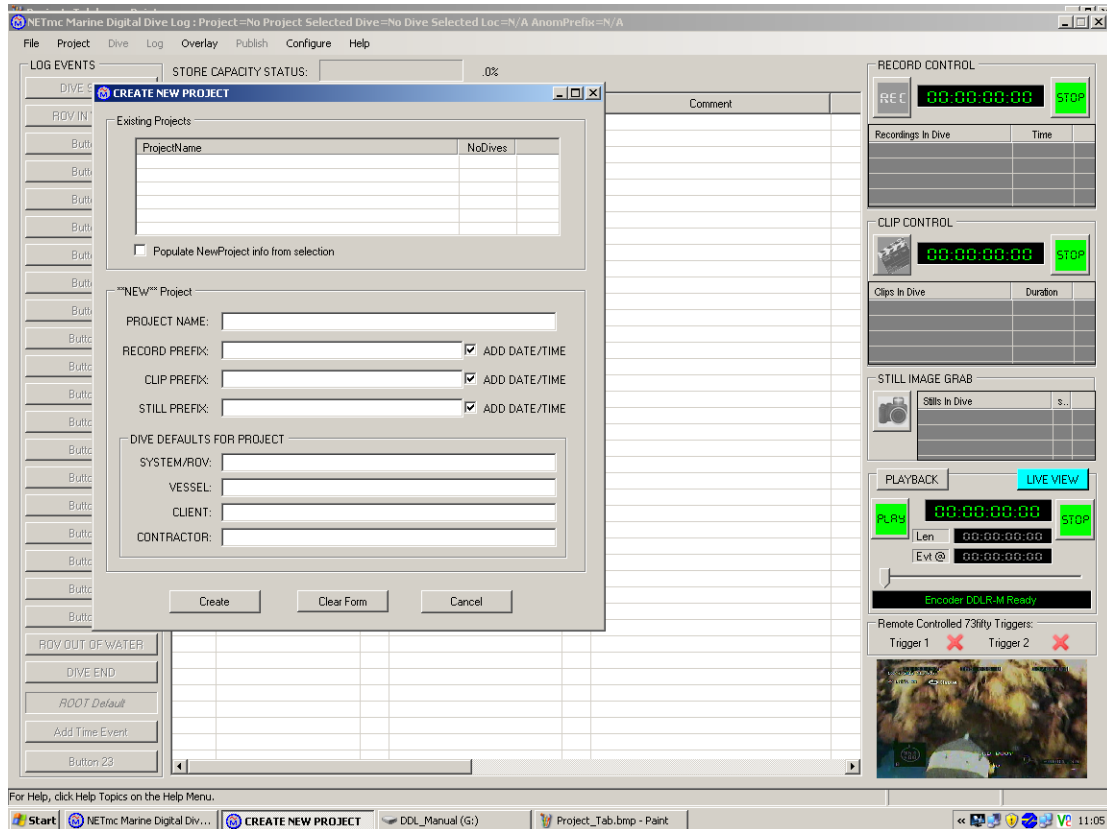
[illegible]

### 7.3.5. Click "CLOSE" to save the new User Events

Once we get to the button configuration, we will see the affect of setting codes as being "IS ANOMALY" OR NOT.

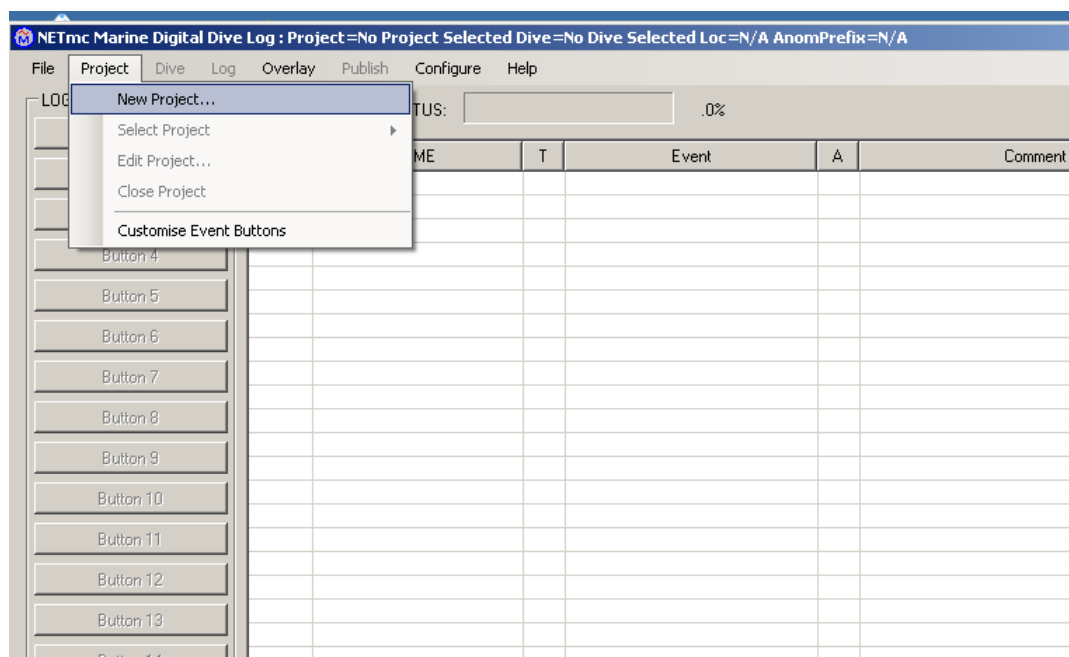
## 8. Selecting a Project

Once the system has been configured we are ready to prepare a project which can either be a new project or an already existing one.



8.1. With the DDL GUI running, click on the **Project** tab

8.2. For a new project select **New Project** from the menu. This will open a new window called "Create New Project", see image below.



Note there are no "Project Names" in the "Existing Projects" box.

- 8.2.1. Fill in the required information in the ""NEW" Project" box
- 8.2.2. Give the project a name; we have used "First Project" as the name.
- 8.2.3. Add a "prefix" name e.g. "First" or other text for each media type of media file; this name will appear on all the media files for this project.
- 8.2.4. If you want to add date and time to the file name then tick the "ADD DATE/TIME" boxes
- 8.2.5. Fill in the other data

accordingly. Here is an example

- 8.2.6. Click "Create" to finish

You will now see the name of the project above the tab line, but no dive has been selected so the title says "Dive = No Dive selected".

### 8.3. Copy existing project

If there is an existing project (First Project), from which you want to copy all the names, events and button configurations, then;

- 8.3.1. Click on the project name you want to "copy" in the list; in this example the only one is "First Project", so click on this.
- 8.3.2. Tick the "Populate New Project info from selection" box.

The system will now populate the "New Project" with the names from the "First Project", give this second project a new name e.g. "Second Project".

Tip: copying a "Project" not only copies the names etc, but also copies the configuration, had we set up "user event" codes or configured the "Buttons" this data would also be copied into the new project.

- 8.3.3. Change the Media files "Prefix" to "Second" to reflect the new project name.
- 8.3.4. Click "Create" to close the window.

Tip; up to the point that you click "Create" you can clear all the data by clicking "Clear Form".

Note: when you create a new project then click "Create" DDL then opens that project automatically, even if you were in a different project before; however the other project is still "open". So you will now see, from the page header, that we are in Project = Second Project.....

ProjectName	NoDives
First Project	0

☒ Populate NewProject info from selection

NEW Project

PROJECT NAME: Second Project

RECORD PREFIX: Second ☒ ADD DATE/TIME

CLIP PREFIX: Second ☒ ADD DATE/TIME

STILL PREFIX: Second ☒ ADD DATE/TIME

DIVE DEFAULTS FOR PROJECT

SYSTEM/ROV: WROV

VESSEL: DP1

CLIENT: OilCo

CONTRACTOR: MyCo

Create Clear Form Cancel

- 8.4. You can Edit Project data at any time by clicking on the "Edit Project" title in the "Project" tab.
- 8.5. When a project is finished you can close it by choosing "Close Project" in the "Project" menu, but this is not a requirement, however it is good file management.

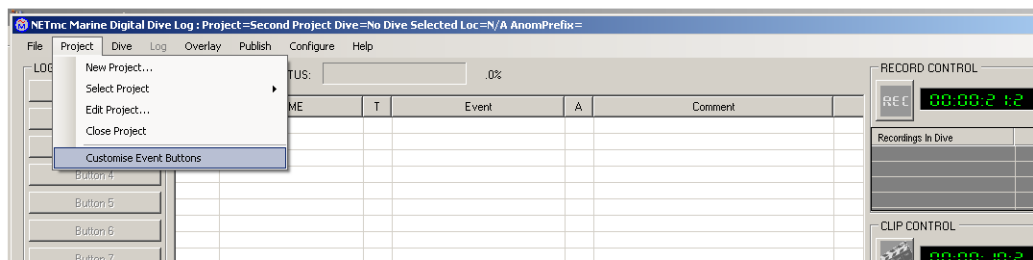
The next step is to configure the "Event Buttons" for the project. This should be done prior to opening a Dive.
- 8.6. If you want to select an existing project
  - 8.6.1. click on the "Project" tab
  - 8.6.2. chose "Select Project" from menu
  - 8.6.3. then select the project name

## 9. Event Buttons - overview

The "Event Buttons" are configurable, each one can be set to perform one or several functions. In this section we will look at the different functions available for programming these buttons and use.

**NOTE;** Configuring the event buttons prior to selecting a project stores the configuration in the root data base, configuring the buttons with a project open stores the configuration in the Project's Button configuration.

9.1. To configure the "Event Buttons" click on the "Project" tab.



9.2. Then select "Customise Event Buttons", you will now see the table below.

9.3.

CUSTOMISE EVENT BUTTONS						
EVENT (BUTTON NAME)	ETYPE	ANOM	W/FLO	EVENT COMMENT/MESSAGE (EVENT IS USED IF BLANK)	ACTION	ACTIONS
Button 01: [Button 1]	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	[v] EDIT
Button 02: [Button 2]	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	[v] EDIT
Button 03: [Button 3]	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	[v] EDIT
Button 04: [Button 4]	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	[v] EDIT
Button 05: [Button 5]	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	[v] EDIT
Button 06: [Button 6]	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	[v] EDIT
Button 07: [Button 7]	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	[v] EDIT
Button 08: [Button 8]	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	[v] EDIT
Button 09: [Button 9]	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	[v] EDIT
Button 10: [Button 10]	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	[v] EDIT
Button 11: [Button 11]	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	[v] EDIT
Button 12: [Button 12]	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	[v] EDIT
Button 13: [Button 13]	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	[v] EDIT
Button 14: [Button 14]	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	[v] EDIT
Button 15: [Button 15]	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	[v] EDIT
Button 16: [Button 16]	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	[v] EDIT
Button 17: [Button 17]	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	[v] EDIT
Button 18: [Button 18]	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	[v] EDIT
Button 19: [Button 19]	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	[v] EDIT
Button 20: [Button 20]	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	[v] EDIT
Button 21: [Button 21]	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	[v] EDIT
Button 22: [Button 22]	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	[v] EDIT
MANUAL: [Button 23]	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	[v] EDIT

LOAD FROM    SAVE AS    APPLY    RESET    CLOSE    Button Configuration Name: [ROOT Default]



### 9.3. General description of table

The "Customise Event Buttons" table consists of a number of columns, some are purely tick boxes others have drop down menus and others are text fields. There are 22 numbered buttons and one button called "Manual", this is for manual events. We shall look at each column in depth here.

#### 9.3.1. Button text

Column 1 (EVENT (BUTTON NAME)) of the "Customise Event Buttons" screen shows the text allocated to each button. By default the text in each button is "Button xx" where "XX" is the number of the button, except for the most basic operations this nomenclature would not be of much use so we can change the name of each button by simply highlighting the existing text and over writing it. The text we write on the button will be seen "in" the button on the DDL GUI. This text should be a short description (max 20 characters) of the event the button relates to e.g. "ROV in Water" or "Crack"

#### 9.3.2. Event type

Column 2 (ETYPE) allows us to allocate an "Event Type" to the button. In section 6.3 we have seen how we create events, we can now allocate each button with a general "EV" code or a specific code of our making e.g. the CR code we create for "Crack Found" or "D1" for Debris.

To allocate a different "Event Type" to a button, click the down arrow to the right of the existing "Event Type" code and select the new "Event Type".

#### 9.3.3. Anomaly tick box

Column 3 (ANOM) lets us decide if the action of clicking the button should allocate the event as an Anomaly or not. When we created the "CR" code we ticked the "Is Anomaly" box, if we allocate an "Event Button" as a "CR" event, then the ANOM box beside it will default to being ticked, it will also be greyed out indicating that we cannot stop this type of event being an anomaly. When we created the "Debris" code "D1", we did not tick the "Is Anomaly" box, so the ANOM box is unticked, however some debris may be considered as anomalous so we could have more than one Debris button for different types of debris.

Here is an example; if we name button 01 as "Soft Debris" and button 02 as "Hard Debris" we could make the "Hard Debris" anomalous by clicking the "ANOM" button, but if we leave the "ANOM" button next to the "Soft Debris" button then it will not be an anomaly. In this way, the same "Event Code" can be used to fine tune the reporting in the log.

#### 9.3.4. Workflow

Column 4 (WFLO), when this box is ticked the associated "Event Button" will open a new "Work Flow" window in the GUI, this window would contain additional instructions for the operator to follow or it may request an input of data from the operator. See the section 8.6.2 for more details.

#### 9.3.5. EVENT COMMENT/MESSAGE (EVENT IS USED IF BLANK)

##### 9.3.5.1. Workflow not selected

As described in 8.2 above, each button can have text written on it, this would generally be a short form name of the action e.g. "Soft Debris", if a more definitive description is required it can be written in the "EVENT COMMENT/MESSAGE " cell.

To replace the text, click and highlight the existing text and over write it for instance we named a button . "Soft Debris" so the extended description may be " Soft debris e.g. sand bag, plastic bucket, nylon rope"; this text would then appear in the Log Table for that event. the event can be edited to further specify the type of debris found.

##### 9.3.5.2. Workflow selected

If the "Event Button" has it's WFLO box ticked then when the button is clicked in the GUI a new window pops up with further instructions. These instructions are in two parts part 1 is the instruction and part2 is the required feedback, the two parts of the text should be separate by two vertical lines"||", this character is normally found by pressing "Shift" and "\" keys on the keyboard.

An example of a workflow might be;

"Part 1" = "ROV leaving TMS"; "Part 2" "Where is the ROV going?", this would be entered as " ROV leaving TMS|| Where is the ROV going?"

See section 8.9 "Event Buttons Configuration Shortcut" for more on Workflows.

##### 9.3.5.3. Action

Column 6; this is another tick box, it indicates that when the associated button is clicked an "Action" will be performed, see section 8.8 below for more on possible Actions.

##### 9.3.5.4. Actions

Column 7; when the "Action" box is ticked the "Actions" window is un-greyed giving access to a drop down menu of possible actions.

These actions are "System Events" and as such control the behind the scenes working of the DDLR. The list of actions include "73fifty trigger" or "Record Start".

#### 9.3.5.5.EDIT

Note at the end of each line there is an EDIT button, clicking this brings up an "Button Configuration EDITOR" screen that allows all the above parameters to be set from a single screen; this is especially useful for setting up Workflows as you do not have to remember to include the "||" character.

### 9.4. Configuring event buttons

Let's configure a few buttons column by column.

- 9.4.1. Rename "Button 01" as "Deck Checks"
- 9.4.2. Leave it's "ETYPE" as "EV"
- 9.4.3. Leave "ANOM" un-ticked
- 9.4.4. Leave "WFLOW" un-ticked
- 9.4.5. Type " ROV deck checks completed"
- 9.4.6. Leave "Action" box un-ticked; this makes the "Actions" box greyed out.
- 9.4.7. Rename "Button 02" as "Off deck"
- 9.4.8. Leave it's "ETYPE" as "EV"
- 9.4.9. Leave "ANOM" un-ticked
- 9.4.10. Leave "WFLOW" un-ticked
- 9.4.11. Type " ROV off deck - not in water"
- 9.4.12. Tick "Action" box
- 9.4.13. Select "S1 73fifty - Trigger 1 Set " from the drop down menu. this would start a 73fifty Black Box.
- 9.4.14. Rename "Button 03" as "In water"
- 9.4.15. Change "ETYPE" to "WI" from the drop down list.
- 9.4.16. Leave "ANOM" un-ticked
- 9.4.17. Leave "WFLOW" un-ticked
- 9.4.18. Type " ROV in water - start of billing"
- 9.4.19. Tick "Action" box
- 9.4.20. Select "RS record Start" from drop down menu. this will start the main DVR recording.
- 9.4.21. Rename "Button 04" as "At Site"
- 9.4.22. Leave it's "ETYPE" as "EV"
- 9.4.23. Leave "ANOM" un-ticked
- 9.4.24. Leave "WFLOW" un-ticked
- 9.4.25. Enter the following into the "Comment" field "ROV at worksite"

EVENT (BUTTON NAME)	ETYPE	ANOM	WFLOW	EVENT COMMENT/MESSAGE (EVENT IS USED IF BLANK)	ACTION	ACTIONS
Button 01: Deck Checks	EV	<input type="checkbox"/>	<input type="checkbox"/>	ROV deck checks completed	<input type="checkbox"/>	
Button 02: Off deck	EV	<input type="checkbox"/>	<input type="checkbox"/>	ROV off deck - not in water	<input checked="" type="checkbox"/>	S1 73tity-Trigger1 S
Button 03: In Water	WI	<input type="checkbox"/>	<input type="checkbox"/>	ROV in water	<input checked="" type="checkbox"/>	RS Record Start
Button 04: At site	EV	<input type="checkbox"/>	<input type="checkbox"/>	ROV at worksite	<input type="checkbox"/>	
Button 05: Button 5	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 06: Button 6	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 07: Button 7	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 08: Button 8	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 09: Button 9	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 10: Button 10	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 11: Button 11	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 12: Button 12	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 13: Button 13	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 14: Button 14	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 15: Button 15	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 16: Button 16	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 17: Button 17	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 18: Button 18	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 19: Button 19	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 20: Button 20	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 21: Button 21	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 22: Button 22	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
MANUAL: Button 23	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	

LOAD FROM SAVE AS APPLY RESET CLOSE Button Configuration Name: ROOT Default

9.4.26. Leave "Action" box un-ticked; this makes the "Actions" box greyed out.

This is how the screen should be looking now:

9.4.27. Rename "Button 05" as "Out of TMS"

9.4.28. Leave "ANOM" un-ticked

9.4.29. Tick the "WFLOW" box; NOTE the "Comments" field goes yellow, this is to indicate it is a workflow field.

EVENT (BUTTON NAME)	ETYPE	ANOM	WFLOW	EVENT COMMENT/MESSAGE (EVENT IS USED IF BLANK)	ACTION	ACTIONS
Button 01: Deck Checks	EV	<input type="checkbox"/>	<input type="checkbox"/>	ROV deck checks completed	<input type="checkbox"/>	
Button 02: Off deck	EV	<input type="checkbox"/>	<input type="checkbox"/>	ROV off deck - not in water	<input checked="" type="checkbox"/>	S1 73tity-Trigger1 S
Button 03: In Water	WI	<input type="checkbox"/>	<input type="checkbox"/>	ROV in water	<input checked="" type="checkbox"/>	RS Record Start
Button 04: At site	EV	<input type="checkbox"/>	<input type="checkbox"/>	ROV at worksite	<input type="checkbox"/>	
Button 05: Out of TMS	EV	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Button 06: Button 6	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 07: Button 7	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 08: Button 8	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 09: Button 9	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 10: Button 10	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 11: Button 11	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 12: Button 12	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 13: Button 13	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 14: Button 14	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 15: Button 15	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 16: Button 16	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 17: Button 17	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 18: Button 18	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 19: Button 19	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 20: Button 20	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 21: Button 21	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 22: Button 22	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
MANUAL: Button 23	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	

LOAD FROM SAVE AS APPLY RESET CLOSE Button Configuration Name: ROOT Default

**REMEMBER:** there are two parts to a Work Flow event separated by "||".

- 9.4.30. Click in the "Comments" field and type "ROV out of TMS||Where are you going?" We will see how this looks in the log later in the manual.
- 9.4.31. Leave "Action" box un-ticked; this makes the "Actions" box greyed out.
- 9.4.32. Rename "Button 06" as "At TDP"
- 9.4.33. Leave "ETYPE" as "EV"
- 9.4.34. Leave "ANOM" un-ticked
- 9.4.35. Tick "WFLO" box
- 9.4.36. Click in "Comments" field and type "ROV at Touch down point||How far from pipe is ROV?"
- 9.4.37. Leave "Action" box un-ticked; this makes the "Actions" box greyed out.
- 9.4.38. Rename "Button 07" as "Debris"
- 9.4.39. Change "ETYPE" to D1, remember we created an event called "D1" "Debris" in the "User Events" section of the "Configure" tab.
- 9.4.40. Tick the "ANOM" box
- 9.4.41. Tick the "WFLO" box
- 9.4.42. Type "Debris found on route?||List type of debris - has it been cleared?"
- 9.4.43. Tick "Action"
- 9.4.44. Select "PX Still Image"
- 9.4.45. Rename "Button 08" as "Crack Found"
- 9.4.46. Change "ETYPE" to "CR", we created this event earlier

**NOTE: "ANOM" tick box is already ticked as we configured the "CR" event type this way, it is also greyed out so cannot be un-ticked.**

- 9.4.47. Tick "WFLOW"
- 9.4.48. Type "Crack found in pipe?||STOP laying -visually inspect - log thickness of crack"
- 9.4.49. Tick "Actions" box
- 9.4.50. Select "CS Clip Start" from drop down menu
- 9.4.51. Rename "Button 9" as "Left Site"
- 9.4.52. Leave "ETYPE" as "EV"
- 9.4.53. Leave "ANOM" un-ticked
- 9.4.54. Leave "WFLO" un-ticked
- 9.4.55. Type "ROV left worksite, returning to TMS" in "Comments" field.
- 9.4.56. Leave "Action" box un-ticked; this makes the "Actions" box greyed out.
- 9.4.57. Rename "Button 10" as "In TMS"
- 9.4.58. Leave "ETYPE" as "EV"
- 9.4.59. Leave "ANOM" un-ticked
- 9.4.60. Leave "WFLO" un-ticked
- 9.4.61. Type "ROV secured in TMS ready for recovery to surface"
- 9.4.62. Leave "ETYPE" as "EV"

Leave Buttons 11-20 unchanged, this will allow us to add events later if required,

- 9.4.63. Rename "Button 21" as "ROV on Surface"
- 9.4.64. Leave "ETYPE" as "WO"
- 9.4.65. Leave "ANOM" un-ticked
- 9.4.66. Tick "WFLO" box
- 9.4.67. Type "ROV on surface||record weather conditions" in the comment box.
- 9.4.68. Tick "Action Box"

- 9.4.69. Select "RE Record End"
- 9.4.70. Rename "Button 22" as "ROV on Deck"
- 9.4.71. Leave "ETYPE" as "EV"
- 9.4.72. Leave "ANOM" un-ticked
- 9.4.73. Tick "WFLO" box
- 9.4.74. Type "ROV on deck||post dive checks complete?"
- 9.4.75. Tick ""Actions" button
- 9.4.76. Select "CL 73fifty-Trigger1 Close"; this will stop the 73fifty Black Box.
- 9.4.77. Finally rename "Button 23" as "Manual Event"
- 9.4.78. Leave all other fields of "Button 23" as they are.

The screen should now look like the picture below.

EVENT (BUTTON NAME)	ETYPE	ANOM	WFLO	EVENT COMMENT/MESSAGE (EVENT IS USED IF BLANK)	ACTION	ACTIONS
Button 01: Deck Checks	EV	<input type="checkbox"/>	<input type="checkbox"/>	ROV deck checks completed	<input type="checkbox"/>	
Button 02: Off deck	EV	<input type="checkbox"/>	<input type="checkbox"/>	ROV off deck - not in water	<input checked="" type="checkbox"/>	S1 73fifty-Trigger1 S
Button 03: In Water	WI	<input type="checkbox"/>	<input type="checkbox"/>	ROV in water	<input checked="" type="checkbox"/>	RS Record Start
Button 04: At site	EV	<input type="checkbox"/>	<input type="checkbox"/>	ROV at work site	<input type="checkbox"/>	
Button 05: Out of TMS	EV	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ROV out of TMS  Where are you going?	<input type="checkbox"/>	
Button 06: At TDP	EV	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ROV at Touch down point  How far from pipe is the ROV?	<input type="checkbox"/>	
Button 07: Debris	D1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Debris found on route?  List type of debris - has it been cleared?	<input checked="" type="checkbox"/>	PX Still Image
Button 08: Crack Found	CR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Crack found in concrete coating?  STOP laying - visually inspect - log thickness of	<input checked="" type="checkbox"/>	CS Clip Start
Button 09: Left site	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 10: In TMS	EV	<input type="checkbox"/>	<input type="checkbox"/>	ROV secured in TMS	<input type="checkbox"/>	
Button 11: Button 11	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 12: Button 12	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 13: Button 13	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 14: Button 14	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 15: Button 15	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 16: Button 16	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 17: Button 17	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 18: Button 18	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 19: Button 19	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 20: Button 20	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	
Button 21: ROV on surface	WO	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ROV on surface  record weather conditions	<input checked="" type="checkbox"/>	RE Record Stop
Button 22: ROV on deck	EV	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ROV on deck  post dive checks complete?	<input checked="" type="checkbox"/>	C1 73fifty-Trigger1 Cl
MANUAL: Manual Event	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	

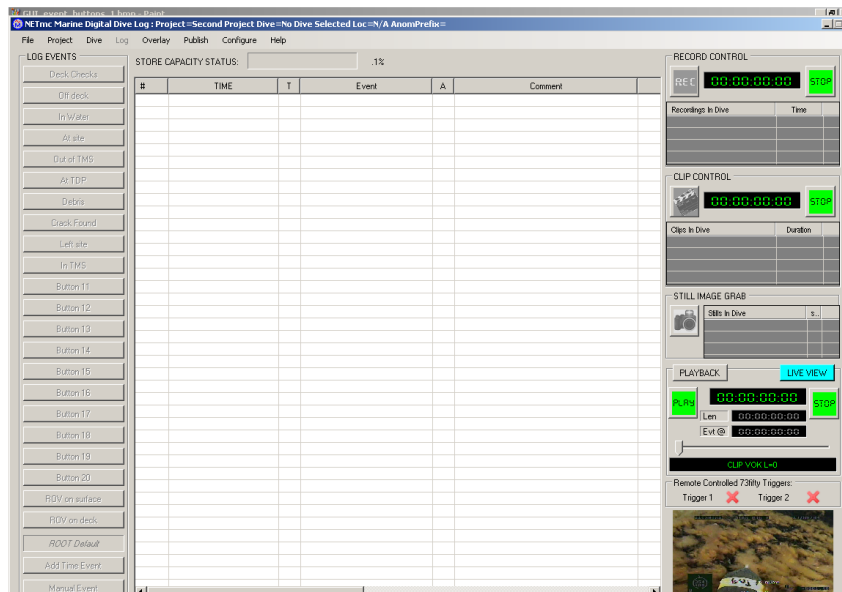
LOAD FROM SAVE AS APPLY CLEAR CLOSE

Button Configuration Name: ROOT Default

NOTE: the "Button Configuration Name" window, the name "ROOT Default" is the system default name for the project button configuration, as we have now changed the configuration of the buttons, if we click "Apply" the "Root Default" button will also be changed. If we want to keep the default settings for the buttons configuration, we can change the "Button Configuration Name" and "Save" it as a different file, we will cover this later in this section.

9.4.79. Click on "Apply" to save and load the new configuration.

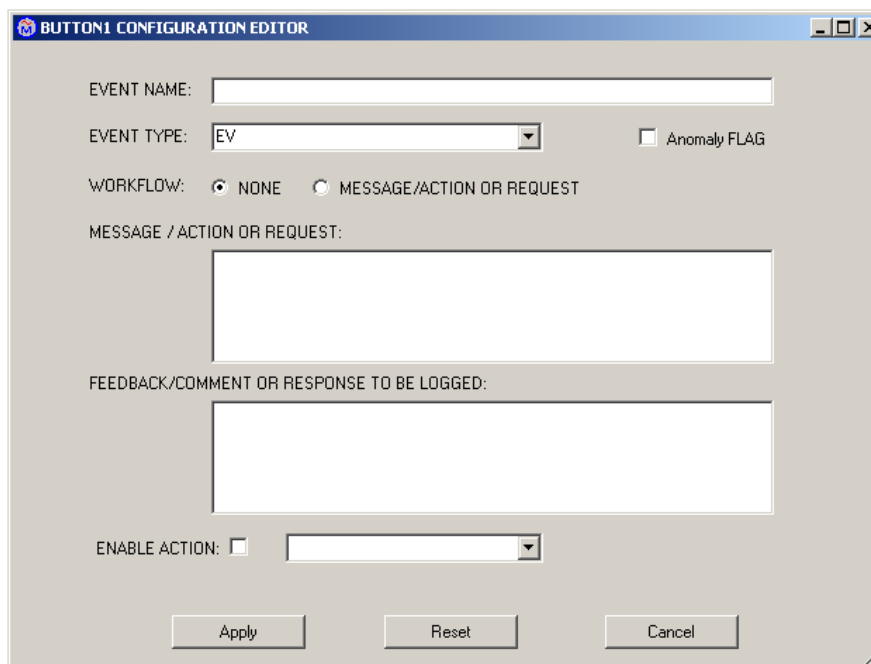
You should now be back at the main screen as shown below.



**NOTE:** the buttons are still greyed out, this is because we have not yet selected a dive. Before we select a dive let's look at a short cut to configuring the buttons.

#### 9.5. Using the "EDIT" button

As seen above each parameter in the "Customise Event Buttons" screen can be configured individually, however if you double click on the "EDIT" button at the end off each line then a new window pops up as below.

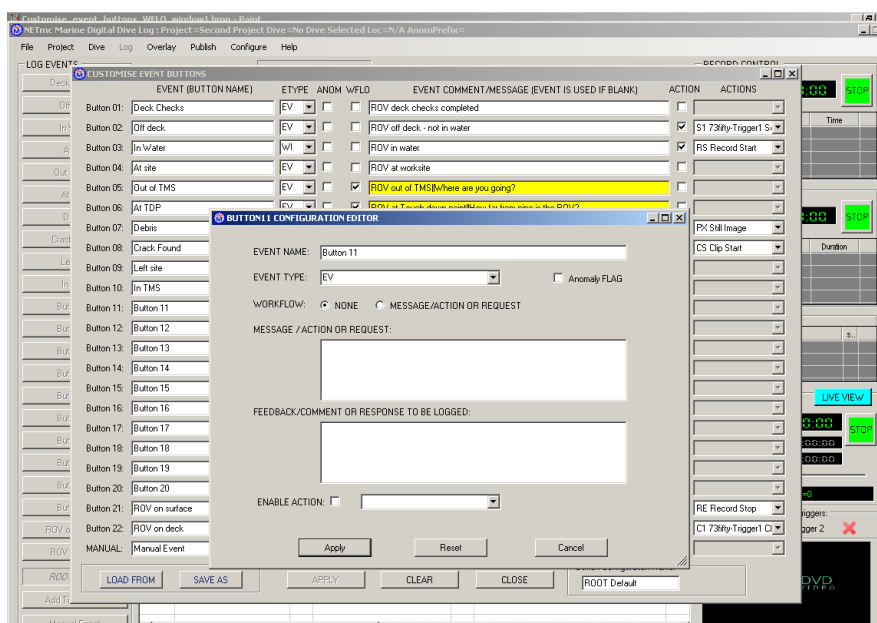


As you can see it is possible to configure all button functions from within this screen, from changing the Button's name to selecting an "Action".

To describe this window let's amend "Button 11" of the current button configuration.

- 9.5.1. Click the "Project" tab then select "Customise Event Buttons"
- 9.5.2. Double Click in the "EVENT COMMENT/MESSAGE" field of Button 11, this will open the window for this event.

**Tip:** Event Buttons can be customised at any point in a Project, so the Buttons do not have to be configured in the order that they would be used, though of course this would be best.



- 9.5.3. Rename Button 11 as "First TDP"
- 9.5.4. Leave the Event Type as EV, a general event.
- 9.5.5. Leave the Anomaly box un-ticked
- 9.5.6. Tick the "NONE" box beside the WorkFlow title

**Note:** you cannot click in the first box "Message/Action" text box; this is because we have selected NONE above.

- 9.5.7. Click in the "FEEDBACK/Comment" box
- 9.5.8. Enter the text "Anode touchdown point"
- 9.5.9. Tick the Enable Action box
- 9.5.10. Select PX from the drop down menu beside the tick box.
- 9.5.11. Click apply
- 9.5.12. Click on the "Edit" button for button 12
- 9.5.13. Rename "Button 12" as "Pipe No."
- 9.5.14. Leave the Event Type as EV, a general event.
- 9.5.15. Leave the Anomaly box un-ticked



9.5.16. Tick the "Message/Action" box beside the WorkFlow title

**Note:** you can now click in the first box "Message/Action" text box

9.5.17. Click in the "Message/Action" box.

9.5.18. Type "Enter the pipe ID number painted on the pipe"

9.5.19. Click in the "FEEDBACK/Comment" box

9.5.20. Enter the text "Pipe ID No. = ???"; the ??? tells the system that there should be a response to this question; if no answer is input, then DDL will check how you wish to proceed.

9.5.21. Tick the Enable Action box

9.5.22. Select PX from the drop down menu beside the tick box.

The screen should now be as shown;

The screenshot shows a Windows-style dialog box titled "BUTTON12 CONFIGURATION EDITOR". The dialog has a blue title bar with standard minimize, maximize, and close buttons. The main area is light beige and contains several configuration fields:

- EVENT NAME:** A text box containing "Pipe No".
- EVENT TYPE:** A dropdown menu showing "EV". To its right is an unchecked checkbox labeled "Anomaly FLAG".
- WORKFLOW:** Two radio buttons. The first is labeled "NONE" and is unselected. The second is labeled "MESSAGE/ACTION OR REQUEST" and is selected.
- MESSAGE / ACTION OR REQUEST:** A large text box containing the text "Enter the pipe ID number painted on the pipe".
- FEEDBACK/COMMENT OR RESPONSE TO BE LOGGED:** A large text box containing the text "Pipe ID no = ???".
- ENABLE ACTION:** A checked checkbox (indicated by a green checkmark) followed by a dropdown menu showing "PX Still Image".

At the bottom of the dialog are three buttons: "Apply", "Reset", and "Cancel".

### 9.5.23. Click apply

The screen should now look like this:

CUSTOMISE EVENT BUTTONS						
EVENT (BUTTON NAME)	ETYPE	ANOM	WFLO	EVENT COMMENT/MESSAGE (EVENT IS USED IF BLANK)	ACTION	ACTIONS
Button 01: Deck Checks	EV	<input type="checkbox"/>	<input type="checkbox"/>	RoV deck checks completed	<input type="checkbox"/>	<input type="text"/> EDIT
Button 02: Off deck	EV	<input type="checkbox"/>	<input type="checkbox"/>	ROV off deck - not in water	<input checked="" type="checkbox"/>	S1 73fifty-Trigger1 S EDIT
Button 03: In Water	WI	<input type="checkbox"/>	<input type="checkbox"/>	ROV in water - start of billing	<input checked="" type="checkbox"/>	RS Record Start EDIT
Button 04: At site	EV	<input type="checkbox"/>	<input type="checkbox"/>	ROV at worksite	<input type="checkbox"/>	<input type="text"/> EDIT
Button 05: Out of TMS	EV	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ROV out of TMS  Where are you going?	<input type="checkbox"/>	<input type="text"/> EDIT
Button 06: At TDP	EV	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ROV at touchdown point  How far from pipe is ROV?	<input type="checkbox"/>	<input type="text"/> EDIT
Button 07: Debris	D1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Debris found on route  List type of debris - has it been cleared?	<input checked="" type="checkbox"/>	PX Still Image EDIT
Button 08: Crack found	WO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Crack Found in Pipe?  Stop laing - visauilay inspect - log thickness of crack	<input checked="" type="checkbox"/>	CS Clip Start EDIT
Button 09: Left Site	EV	<input type="checkbox"/>	<input type="checkbox"/>	ROV left worksite, returning to TMS	<input type="checkbox"/>	<input type="text"/> EDIT
Button 10: In TMS	EV	<input type="checkbox"/>	<input type="checkbox"/>	ROV secured in TMS ready for recovery to surface	<input type="checkbox"/>	<input type="text"/> EDIT
Button 11: Anode TDP	EV	<input type="checkbox"/>	<input type="checkbox"/>	First touchdown point	<input checked="" type="checkbox"/>	PX Still Image EDIT
Button 12: Pipe No	EV	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Enter the pipe ID number painted on the pipe  Pipe ID no = ???	<input checked="" type="checkbox"/>	PX Still Image EDIT
Button 13: Button 13	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="text"/> EDIT
Button 14: Button 14	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="text"/> EDIT
Button 15: Button 15	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="text"/> EDIT
Button 16: Button 16	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="text"/> EDIT
Button 17: Button 17	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="text"/> EDIT
Button 18: Button 18	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="text"/> EDIT
Button 19: Button 19	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="text"/> EDIT
Button 20: Button 20	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="text"/> EDIT
Button 21: ROV on surface	WO	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ROV on surface  Record weather conditions	<input checked="" type="checkbox"/>	RE Record Stop EDIT
Button 22: ROV on deck	EV	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ROV on deck  post dive checks complete?	<input checked="" type="checkbox"/>	C1 73fifty-Trigger1 C EDIT
MANUAL: Manual Event	EV	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="text"/> EDIT

LOAD FROM SAVE AS APPLY RESET CLOSE

Button Configuration Name:

Notice the "Comments" field of "Button 11" has a white background, where as that of "Button 12" is yellow, this is because "Button 12" has a Question and a required Feedback. Also note the character "||" has automatically been inserted in the "Comments" field for "Button 12" thus indicating a response is required.

### 9.5.24. Now Click "Apply" to close the "Customise Event Button" screen.

Now let's select a dive and start to use the DDL software.

## 10. Selecting a Dive

- 10.1. From the main screen click on the "Dive" tab.
- 10.2. Click on "New Dive". A new window will open, the top of this indicates the dive will be in "Project [Second Project]", it also shows that there are no other dives in the project and that the "New Dive" will be called "Dive-001": see image below.

PROJECT [Second Project] : EXISTING DIVES

DIVE NAME	V	C	S	ID

NEW DIVE DETAILS

DIVE: Dive-001 DIVE FRIENDLY NAME

SYSTEM/ROV: WROV

VESSEL: DP1

CLIENT: OilCo

CONTRACTOR: MyCo

PROJECT RECORD PREFIX: Second ☒ ADD DATE/TIME

DIVE RECORD PREFIX:

PROJECT CLIP PREFIX: Second ☒ ADD DATE/TIME

DIVE CLIP PREFIX:

PROJECT STILL PREFIX: Second ☒ ADD DATE/TIME

DIVE STILL PREFIX:

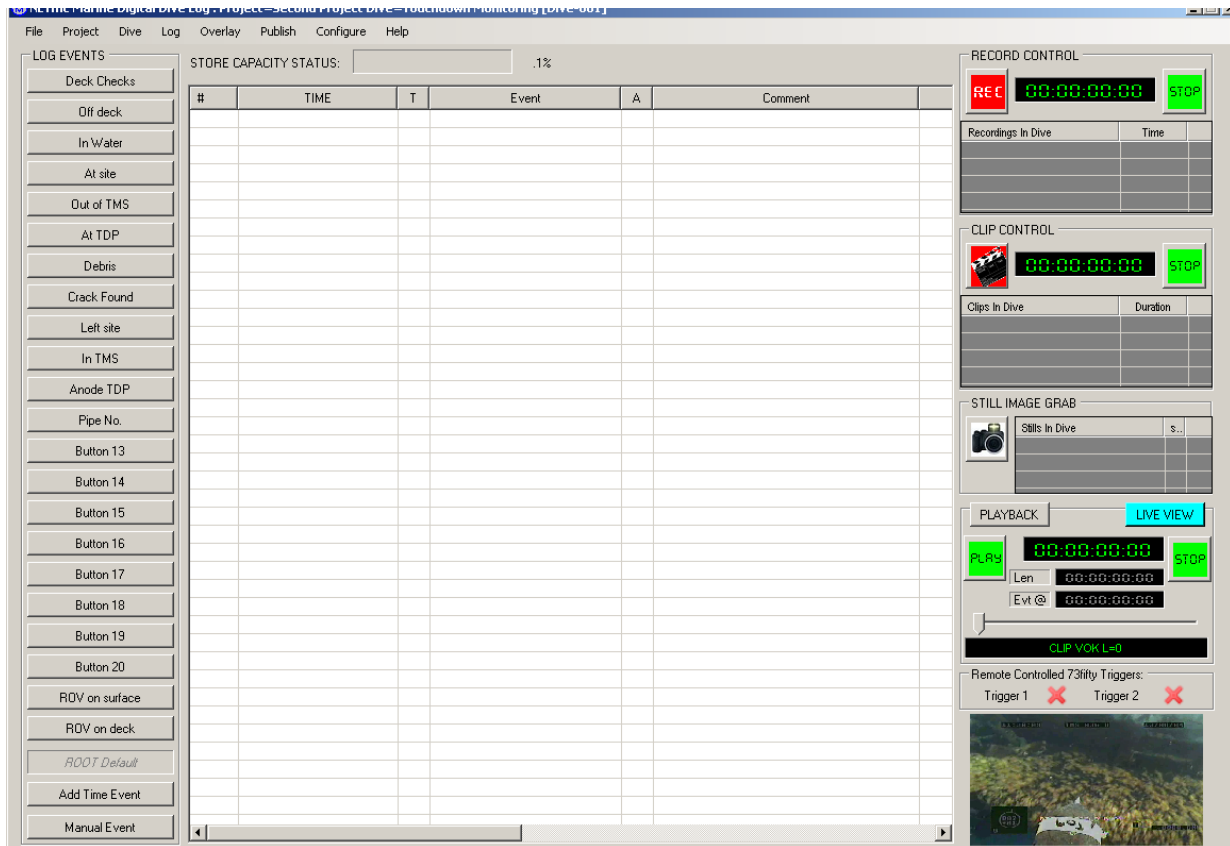
Create New Reset Cancel

Note; all the Project data has automatically been copied into the window for you, as has the Project media prefix names, in this case "Second"

- 10.3. You can give the dive a friendlier name than "Dive-001" if you wish e.g. "Touchdown Monitoring" as we have used in the example below.
- 10.4. You can now add a media prefix specific to this dive if required, we will use "TDM"

10.5. Now click "Create New" to finalise the new dive.

**NOTE:** shown below, the Buttons are no longer greyed out and the title bar indicates the project name and dive name.



## 11. Summary of configuration

So far we have seen how to:

- set up a file structure for the DDL project tree
- select the bit rate and input to the DVR
- configure the various DDL options
- create and configure "User Events"
- set actions
- configure "Event Buttons" both column by column and via the "Button Configuration Editor"

It is now time to start using the "Eventing Buttons" to populate the Log Table.

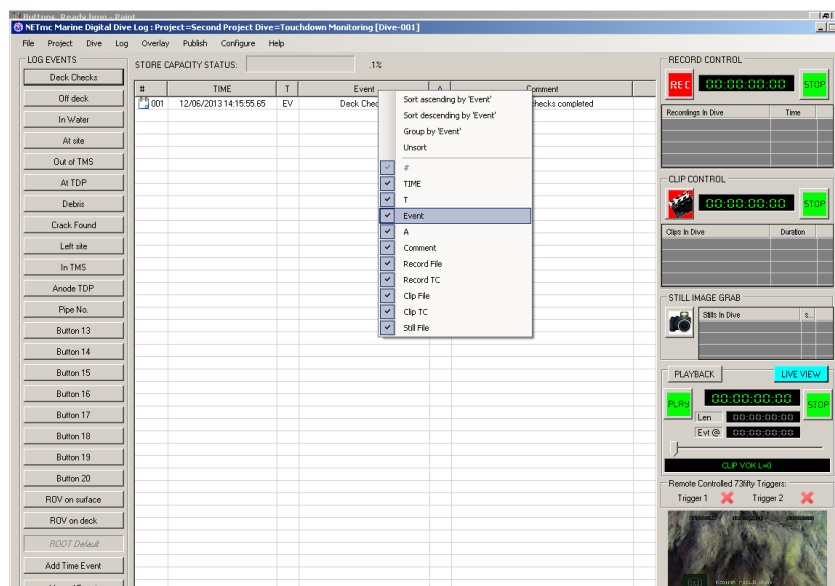
## 12. Using the "Event Buttons"

**REMEMBER** for the media controls to work there must be a video source connected. If you do not see a video picture on the screen **STOP** and check the source before proceeding.

- 12.1. Click button "Deck Checks"; note in the log this generates an entry called "001", subsequent Button clicks will generate sequentially numbered events.

**Note;** no media recordings have been instigated as this button had no actions associated to it.

Move the slider at the bottom of the screen to see cells further to the right; "right" clicking on any of the columns displays a drop down list of possible parameters to be displayed, see below.



- 12.2. Click "Off Deck"; this has generated "S1" in the "A" (Actions) column indicating that it would start a 73fifty if connected.

**NOTE;** 73fifty media file names are NOT displayed in the log table.

- 12.3. Click "In Water";

Note this button was configured to start the master recording, see "Record Controls" section on the right of the screen; you can see the duration of the file counting up and the name of the file that includes the Project and Dive prefixes that we set up earlier.

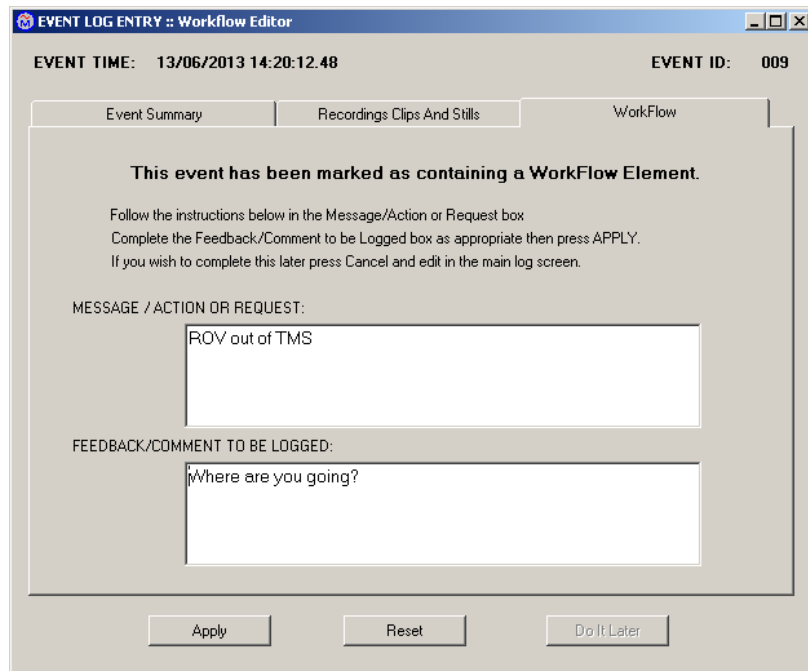
**Remember;** the duration of these files is dependent on the settings in the configuration screen, currently this is set to 5min (300secs)

Also note the Log Table has an entry 004, this is a "System Event" and indicates the DVR has started recording.

12.4. Click "At Site"

12.5. Click "Out of TMS" button

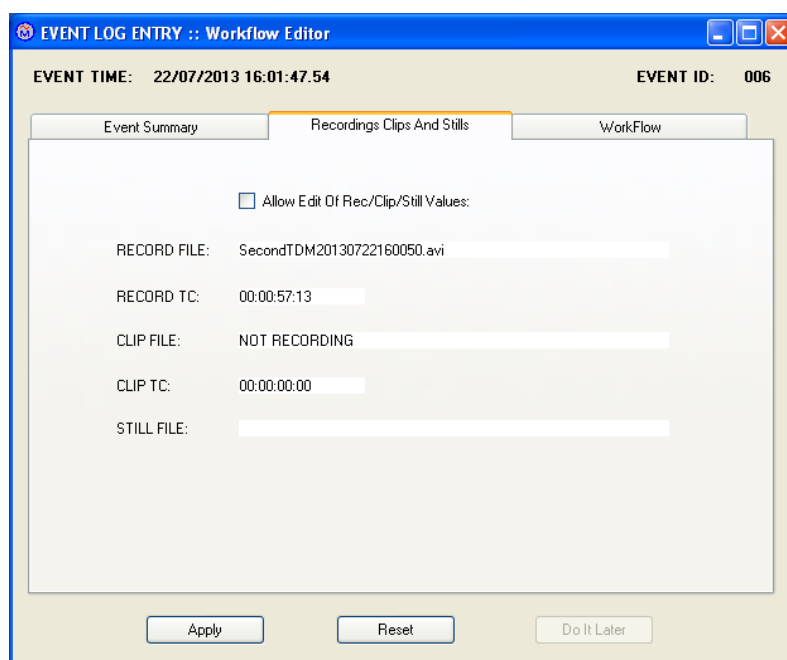
This pops up the "WorkFlow" window with the cursor blinking in the



"Feedback" box as shown below.

12.6. Enter the ROVs destination in the "Feedback" box, we have entered "Touch down point".

There are two other tabs in this window



- 12.6.1. Click on the "Recording Clips and Stills" tab; this shows if any media files were open, or have been opened, when the event button was clicked.

e.g. here we are advised that a file "SecondTDM20130722160050.avi" was in progress when the event occurred and that the event happened 57.13 seconds into the file. If the event button was clicked too late, and the recorder was recording at the earlier time, then clicking the "Allow Edit" tick box enables you to look at the video file and change the "Time Code" (TC) of the event. By doing this if you play the media from within the log, the video will start at the TC of the event, rather than at the start of the video file.

In the example above, change the TC of the event to 56:1, see below.

**EVENT LOG ENTRY :: Workflow Editor**

**EVENT TIME:** 22/07/2013 16:01:47.54 **EVENT ID:** 006

Event Summary | **Recordings Clips And Stills** | Workflow

☒ Allow Edit Of Rec/Clip/Still Values:

RECORD FILE: SecondTDM20130722160050.avi

RECORD TC: 00:00:56.13

CLIP FILE: NOT RECORDING

CLIP TC: 00:00:00:00

STILL FILE:

Apply Reset Do It Later

12.6.2. Click "Event Summary"; this is effectively a preview of what will be logged in the Log Table.

**EVENT LOG ENTRY :: Workflow Editor**

**EVENT TIME:** 22/07/2013 16:01:47.54 **EVENT ID:** 006

Event Summary | Recordings Clips And Stills | Workflow

EVENT TIME: 22/07/2013 16:01:47.54 ☐ Allow Edit Of EventTime

EVENT NAME: Out of TMS

EVENT TYPE: EV ☐ Anomaly FLAG

COMMENT: Where are you going? Touchdown Point

Apply Reset Do It Later

12.6.3. Tick the "Allow Edit Of Event Time"; you can now change the time of the event if critical.

12.6.4. If no editing of the event is required click "Apply"

The screen should now look as follows:

**NETmc Marine Digital Dive Log : Project-Second Project Dive- Touchdown Monitoring [Dive 001]**

File Project Dive Log Overlay Publish Configure Help

**LOG EVENTS**

#	TIME	T	Event	A	Comment
001	22/07/2013 15:59:09.43	EV	Deck Checks		ROV deck checks completed
002	22/07/2013 16:00:45.51	EV	Off deck	S1	ROV off deck - not in water
003	22/07/2013 16:00:50.18	WI	In Water	RS	ROV in water - start of billing
004	22/07/2013 16:00:50.20	RS	Record Start		Record Start
005	22/07/2013 16:01:44.48	EV	At site		ROV at work site
006	22/07/2013 16:01:47.54	EV	Out of TMS		Where are you going? Touchdown Point

**RECORD CONTROL**

REC 00:03:10:06 STOP

**CLIP CONTROL**

00:00:00:00 STOP

**STILL IMAGE GRAB**

00:00:00:00 STOP

**PLAYBACK**

00:00:00:00 STOP

**Remote Controlled 731ty Triggers**

Trigger 1 X Trigger 2 X



### 13. Manual eventing

There is more than one way to add a manual event to the log and these depend on the settings in the "Options" screen under the "Configure" Tab. Let's quickly look in the "Options" screen;

**APPLICATION OPTIONS**


**PRODUCT INFORMATION**

Module Name: DDL  
Module Version: 1.0.36  
Module Date: 11 July 2013

**START-UP OPTIONS**

☐ Open Last Project  
☐ Open Last Dive  
☐ Show Tooltips ☒ Edit Log Event/Comments InLine  
☒ Show Only Event Log (Disable Split Preview/Log) ☐ Show DISK Status in Log Only Mode  
☒ Enable Event Button Menu ☒ Enable Report Template Expression Designer

**STORE PATH (Base Folder Containing Projects)**

LOCAL D:\DDL Projects   
REMOTE  CAUTION: REMOTE ENCODER OVERRIDE

**WORKFLOW LOCKS AND CHECKPOINTS**

Log Entry Time Format: dd/MM/yyyy HH:mm:ss.ff   
☒ Always Edit MANUAL Log Event After Capturing MetaData  
☒ Do Not Allow Partially Completed Workflow Events in Log (Do It Later)

**Remote Controlled Devices (mediaNET General Purpose Control Module Support)**

<input checked="" type="checkbox"/> Enable 73fifty Trigger 1	<input checked="" type="checkbox"/> Enable 73fifty Trigger 2
IP 194.36.79.207	IP 194.36.79.207
ID a	ID b

Currently the "Always Edit Manual log event....." is ticked, so when we click on the "Manual EVENT" screen.

13.1. Click on the "Manual Event" button to create entry 007.

**EVENT LOG ENTRY :: Editor**

**EVENT**

EVENT TIME: 22/07/2013 16:41:30.68 metaEDIT ☐ EVENT ID: 007

RECORD FILE: SecondTDM20130722163550.avi

RECORD TC: 00:00:40:17

CLIP FILE: NOT RECORDING

CLIP TC: 00:00:00:00

STILL FILE:

EVENT TYPE: EV ☐ Anomaly FLAG

EVENT: Manual Event

COMMENT: Manual Event

Apply Reset Cancel

This now allows us to edit the manual event, including changing the Time Code of any associated media files.

13.2. To create the next log entry click "Add Time event" the box below will appear.

**ADD NEW LOG EVENTS**

**EVENT DATUM METADATA**

EVENT TIME: 22/07/2013 16:47:11.859

RECORD FILE: SecondTDM20130722164550.avi

RECORD TC: 00:01:20:19

CLIP FILE: NOT RECORDING

CLIP TC: 00:00:00:00

**EVENT**

PAUSE RUN

TYPE: EV - GENERAL EVENT ☐ Mark this Event as an Anomaly

NAME:

COMMENT:

Complete Type, Name & Comment then press ADD to add an Event to the Log. Or press PAUSE to FREEZE Data First.

Add Reset Cancel

Tip; you can now watch the clock and click "Add" when the event happens for higher accuracy, e.g. timing the touch down of a jacket during installation.

Tip: this event window can be kept open and running in the background for instant access.

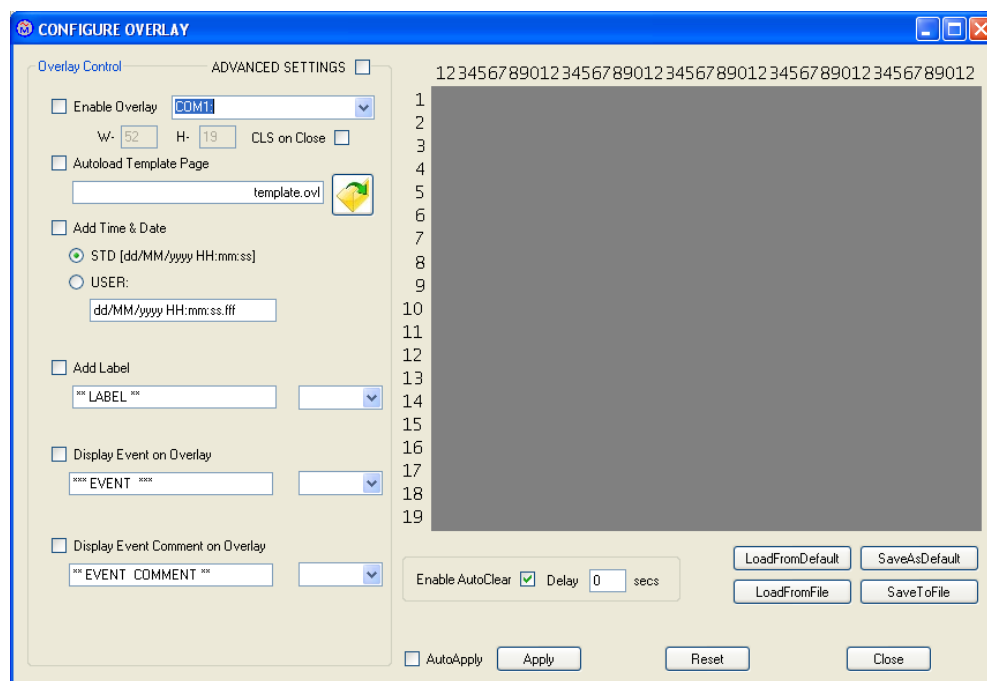
- 13.3. Click "ROV on surface" and record the weather conditions
- 13.4. Click "ROV on deck" and answer the question.
- 13.5. Optionally you can close the Dive from the "Dive" tab. When you do this the buttons are greyed out.
- 13.6. Optionally you can close the Project from the "Project" tab. The header at the top of the screen no says Project = No Project .....
- 13.7. Editing existing events

At any point during the operation an event can be edited, just right click on the event and select "Edit Event."

## 14. Configuring the NETmc Marine videoTXT overlay

As previously stated when setting up new "User Events" DDL can control an external NETmc Marine videoTXT overlay. NB the DDL overlay control only works with NETmc Marine videoTXT overlay, it does not work with other 3<sup>rd</sup> party overlays. In this section we will look at how to configure the On Screen Display or OSD.

- 14.1. Click on the "Overlay" tab to display the sub-menu; here you can enable or disable the OSD, and select what parameters to be show. However it is probably best to configure the overlay from the "Setup Overlay" option.
- 14.2. Click on "Setup Overlay" and the box below opens.



### 14.3. Screen Description

#### 14.3.1. "Advanced Settings"

This allows the overriding of the default figure.

#### 14.3.2. "Enable Overlay"

Tick this box to enable the use of the overlay. Beside this is a COM port window, this should always be COM1.

#### 14.3.3. "Automated Template Page"

If the user saves a template configuration, and want to use this as a default then tick this box.

#### 14.3.4. "Add Time &Date"

Tick this box to display the overlay generated time and date if neither the ROV or the NAV system does not generate it.

Tip: the overlay generated time and date will, by default, be positioned top left, left justified. To move the position of the overlay click on any part of the numbers and drag to the preferred position.

NOTE: where the time and display shows up on the screen will depend on the width and height settings in the Advanced Screen.

#### 14.3.5. "Add Label"

The overlay screen can be used to give the video feed a name e.g. "Centre Camera". To the right of the text field is a drop down menu, this gives the ability to select where to display the "Label"; Left, centre or right.

#### 14.3.6. "Display Event on Overlay"

When ticked, an event configured to be displayed in OSD will have the text from its button displayed on the screen.

#### 14.3.7. "Display Event Comment on Overlay"

When ticked, an event configured to be displayed in OSD will have the text from its comment field displayed on the screen.

#### 14.3.8. "Enable AutoClear"

If this button is ticked then the display parameters will clear from the overlay after the predetermined time, otherwise they will have to be manually deleted.

#### 14.3.9. The load and save buttons are to use previously stored overlay settings.

#### 14.3.10. "Reset"

If after making changes, but before applying them, you want to cancel them, click "Reset".

## 15. Manual control of media

On the right hand side of the event log is the "Record Control" section, the controls will change as a relevant event button is pressed, however the controls can be manually operated as well, though only if a "Project" and "Dive" are selected.

- 15.1. The buttons are operated by simply clicking on the relevant function.
- 15.2. Replay media files from the "Record Control" listing

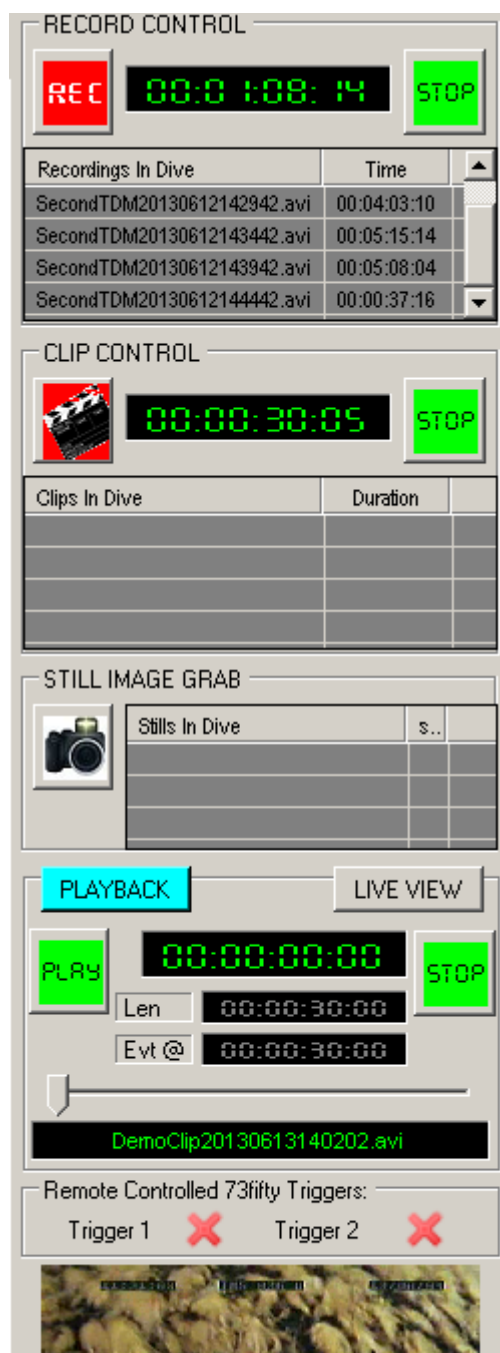
All media files can be replayed immediately after the file is completed. During replay, the file replaces the live view, at any time the "LIVE VIEW" button can be clicked to revert to showing the live view.

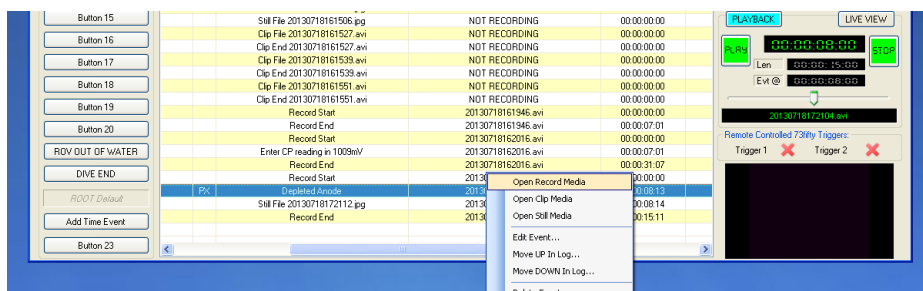
The file is played by clicking on the file name in the "Record Control" area or from the log table. As seen in the image here the "Playback" turns blue when media files are played, in normal mode the "Live View" button would be blue. The image here shows a "Still" being displayed, if the file were a video file the "Play" button would change to a "Pause" button. You can use the slide bar to move back and forward in the video file or for finer control use the left and right arrow keys.

**Tip:** If you enable the display screen in the log, then the media files can be played and the live view can be seen at the same time.

### 15.3.      Replay media files from log table

It may be easier to locate a media file by an "event" in the log, to do this you can locate the event in the log then find the media file you want and play it. To play the file right click on the cell containing the media file and click the relevant command.





In the image above, "Open Record Media" has been selected, look at the time code boxes below the counter screen, there are two one is called "Len" this is the duration of the files selected, the other box is called "Evt @" this indicates that there is an "Event" at the displayed time "into" the file.

In this example, the event is 8s into the file which is 15s long. When we play this file in this manner, the player jumps straight to the event time. Of course you can use the arrow keys or slide bar to go backwards in the file.

## 16. Publishing reports

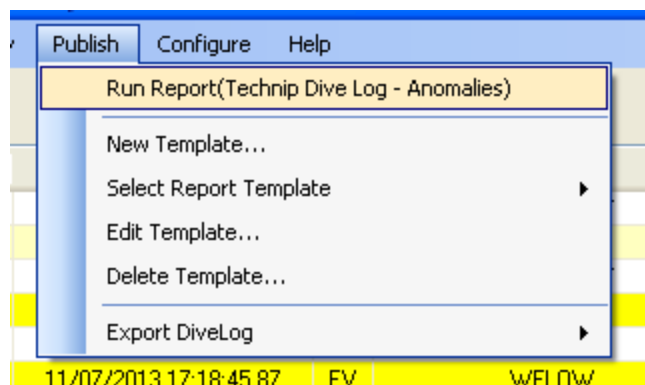
Under the "Publish" tab is the facility to generate reports, these can be either Docx; CSV or HTML format. Each format has a default template that controls the layout of the report and how the logged data is used.

**TIP:** you must have a project open to be able to access the "Publish" menu.

To generate a report click on the "Publish" tab, there are now several options to choose from.

### 16.1. Run Report (Current Report)

If a report has already been used, or selected, the report name will be displayed in the brackets, just click "Run Report" to generate the report. The system then displays a compiler screen and asks where to save the report.



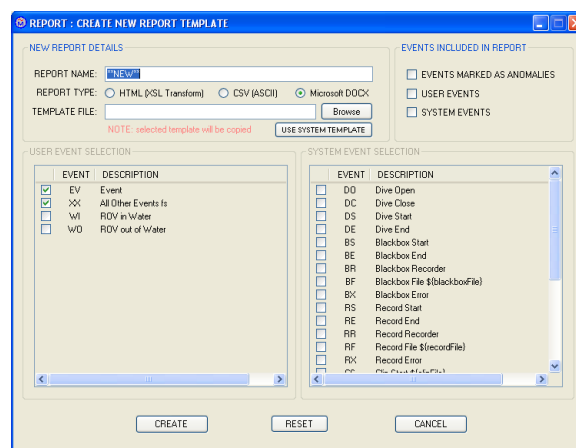
**NOTE:** the reports generated will all have the same default name, so suffix the file name with the time and date generated before saving to identify each report.

## 16.2. New Template

**NOTE:** this is not a function field staff would normally use. More normally field staff would use the "Edit Template" function, however these templates will probably be set by the ROV management.

The "New Template" option allows you to use an EXISTING template and modify the data displayed in the report it generates and save this as a separate template for a new report, with a new name. DO NOT use this function to edit a template which is going to keep the same name, for this use the "Edit Template" function.

- 16.2.1. Select the type of report you want HTML (XSL Transform), CSV (ASCII) or Microsoft DOCX.
- 16.2.2. Browse to select the template you want to use and select it.



- 16.2.3. Select the type of events you want to be included in the report
- 16.2.4. Give the report a new name and "Create" the report template

## 16.3. Edit Template

This allows you to change the events to be displayed in the selected report; the one whose name is in the brackets beside the "Run Report" option.

## 16.4. Delete Template

Select this option to delete unwanted templates.

**NOTE:** You must always have at least one template.

## 16.5. Export DiveLog

This section enables the user to generate an HTML report, viewable in Internet Explorer or a bundled version with hyperlinks to media files.