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OPERATION MANUAL

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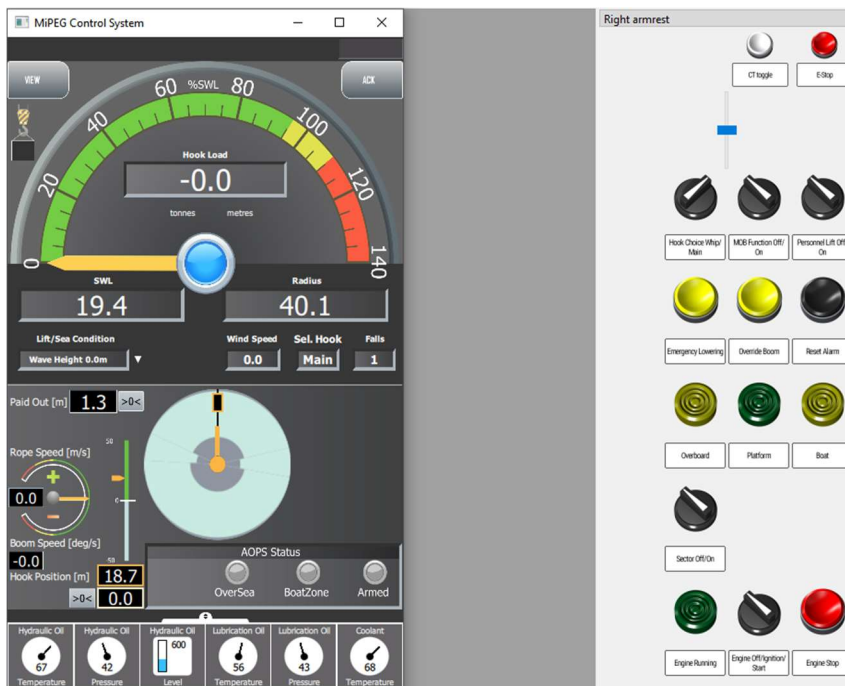
Introduction

Rather than using fixed panniers, the mobile simulator makes a number of crane operations available from on-screen panniers displayed on a pair of touch screen displays. The left hand touch screen display has left hand pannier actions, the right hand display has right hand pannier actions.

The left and right hand touch screens also display other information. The left hand touch screen includes a CCTV view and the right hand touch screen includes a Mipeg RCI.

Offshore Crane

Right hand touch screen display.



Left hand touch screen display.



The touchscreen displays will only display as shown above when a simulation is running.

Operating the crane touchscreen controls

Starting / stopping the crane engine

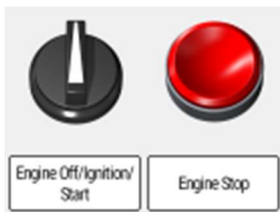
On the **right hand touchscreen**, double tap on the **Engine Off/Ignition/Start** switch.

The switch should be seen to rotate from the position shown through vertical to a position pointing to the right before coming back to rest in a central position.



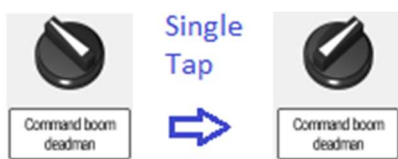
At this point, the **Engine Running** light will illuminate and a steady note should be heard. This tone represents the background hum of the crane engine.

The crane engine may be stopped either by tapping the **Engine Stop** button or by tapping the **Engine Off/Ignition/Start** switch on the **right hand touchscreen**.



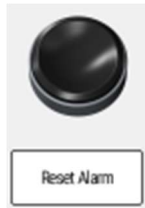
Activating Joystick Control

To allow the crane to respond to joystick input, the **Command boom deadman** switch on the **left hand touchscreen** must be rotated with a single tap. This will move the switch to point towards the right.



Acknowledging Alarms

When an alarm is raised, an audible tone will be heard. To acknowledge the alarm and to cancel the alarm tone, tap the **Reset Alarm** button on the **right hand touch screen**.



Note that the Mipeg display (on the right hand touchscreen) will also show a text message describing the alarm condition.

Main / Aux hook selection

The selection of main or auxiliary hook is made using the **Hook Choice Whip/Main** switch on the **left hand touchscreen**. A single tap will change from Main to Aux or vice versa.



Other controls

Personnel lift



Personnel lift mode is enabled or disabled by tapping the **Personnel Lift Off/On** switch on the **right hand touchscreen**.

Personnel lift mode is disabled when the switch points to the left as shown, and enabled when pointing to the right.

Emergency Lowering



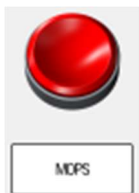
Emergency lowering is activated by tapping and holding the **Emergency Lowering** button on the **right hand touchscreen**

Override Boom



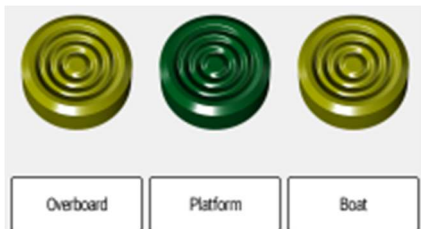
The boom may be lowered below it's maximum radius by tapping and holding the **Override Boom** button on the **right hand touchscreen** while booming down with the joystick.

MOPS



The overload protection system can be manually activated using the **MOPS** button on the **left hand touchscreen**. Note that this will only have an effect when the load is in the boat zone.

Sector Lights



Sector lights are shown on the **right hand touchscreen**. This will be lit in accordance with the sector that the crane / cargo is in - e.g. the Boat sector light will be lit when the crane / load is over the boat and within a certain distance from the boat.

Emergency Driving



Emergency driving, located on the **left hand touchscreen**, may be engaged when the main engine is not running - for example, after a main engine failure. Note also that emergency stop must be disengaged for emergency driving to operate.

To enable emergency driving, tap the **EmDrive Off/On** switch so that it points towards the right



To engage emergency driving, press the **EmDrive Start** button. The button will light up when emergency driving is successfully engaged.



Once engaged, the crane joystick controls will operate but at a much reduced speed.

To disengage emergency driving, press the **EmDrive Stop** button.



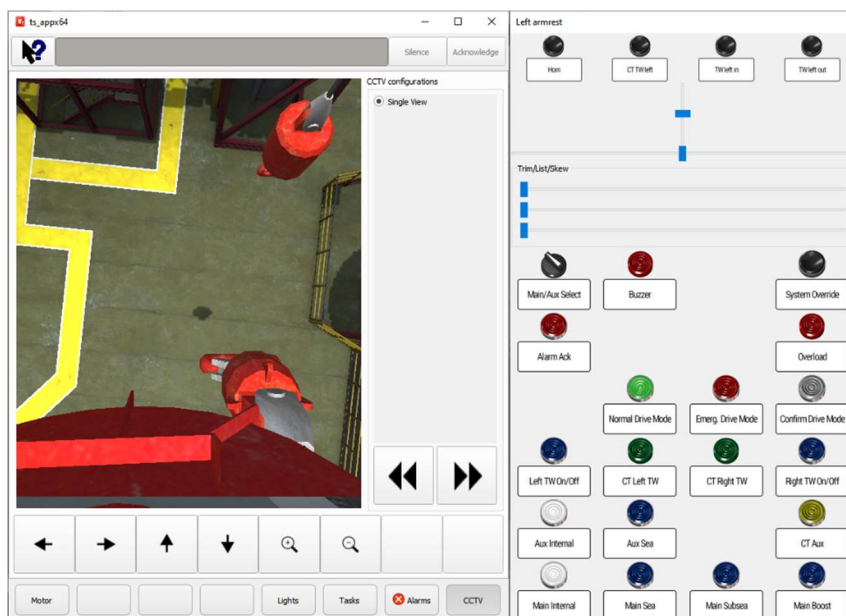
Alternatively, the **EmDrive Off/On** switch may be tapped again to bring it back to the disabled position - i.e. pointing towards the left.

Knuckleboom crane

Right hand touch screen display.



Left hand touch screen display.



Operating the crane touchscreen controls

Starting / stopping the crane engine

The main controls for this are located on the **right hand touchscreen**.

Ensure that the **joysticks on / off** switch is in the off position (down). If it not in the correct position, tap the **joysticks on / off** to change its position.



Flick the **Control on/off** switch from on to off and back to (on the control panel on the mobile simulator it starts up in the on position)



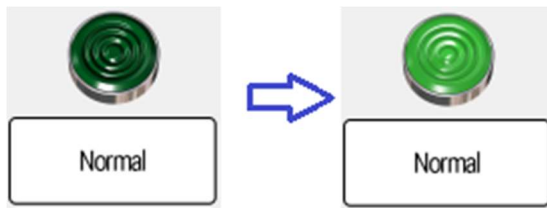
Press the **Power On** button. After several seconds, the light on the **Power On** button will illuminate and you'll hear the main engine sound.



When you first press the **Power On** button you may hear some alarms. Acknowledge them by tapping on the **Alarm Ack** button on the **left hand touchscreen**. Note that the Mipeg display (on the **right hand touchscreen**) will also show a text message describing the alarm condition.



Press the **Normal** button. It should immediately light up.



Switch the joystick to the on position by tapping the **Joystick on/off** control



You should now be able to operate the crane. The joystick console allows control of the inner and outer boom, the crane slew and hoist. The left hand joystick controls the inner boom and slew; the right hand joystick controls the outer boom and the hoist.

Other Controls

Main / Aux hook selection



The selection of main or auxiliary hook is made using the **Main/Aux Select** switch on the **left hand touchscreen**. A single tap will change from Main to Aux or vice versa.

Personnel lift



Personnel lift mode is enabled or disabled by tapping the **Personnel Lift** button on the **right hand touchscreen**.

Personnel lift mode is enabled when the **Personnel Lift** button is illuminated.

MOPS/MER



The overload protection system can be manually activated using the **MOPS/MER** button on the **right hand touchscreen**. Note that this will only have an effect when the load is in the boat zone.

Tugger Winches

The left and right tugger winches are activated / deactivated using the **Left TW On/Off** and **Right TW On/Off** buttons on the **left hand touchscreen**



The respective buttons will illuminate when the tugger winches are active.

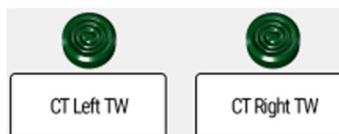


The left tugger winch is controlled using the **TW left in** and **TW left out** buttons on the **left hand touchscreen**.



The right tugger winch is controlled using the **TW right in** and **TW right out** buttons on the **right hand touchscreen**.

Constant tension can be applied to the tugger winches.



Constant tension is enabled by pressing the **CT Left TW** and **CT Right TW** buttons on the **left hand touchscreen**. The respective buttons will illuminate when CT tension is enable for a tugger winch.



To apply constant tension for the left tugger winch press the **CT TW left** button on the **left hand touchscreen**.

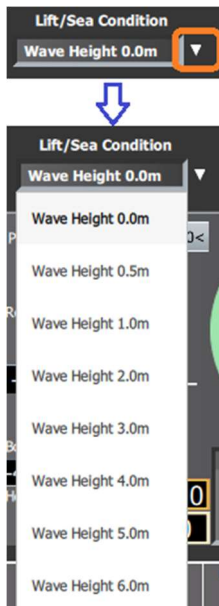
To apply constant tension for the right tugger winch press the **CT TW right** button on the **right hand touchscreen**.

MiPEG



The MiPEG application on the **right hand touchscreen** displays current crane information including the current safe working load, radius, wind speed slew position and rope paid out.

Lift/Sea Condition



The current wave height is entered into the MiPEG display using the Lift / Sea Condition drop down list. To select the current wave height, tap on the down arrow highlighted in orange on the image.

This will present a list of wave heights. Select the appropriate wave height by tapping on that value.

Alarms

Alarm information is accessible at the top of the Mipeg display.



This shows the oldest unacknowledged alarm and also provides an **ACK** button to acknowledge and silence the latest alarm. Tapping the **VIEW** button will display an alarm list in the bottom half of the MiPEG display.



All unacknowledged alarms may be acknowledged by pressing the **ACK ALL** button. Pressing the **VIEW** button again closes the alarm list.

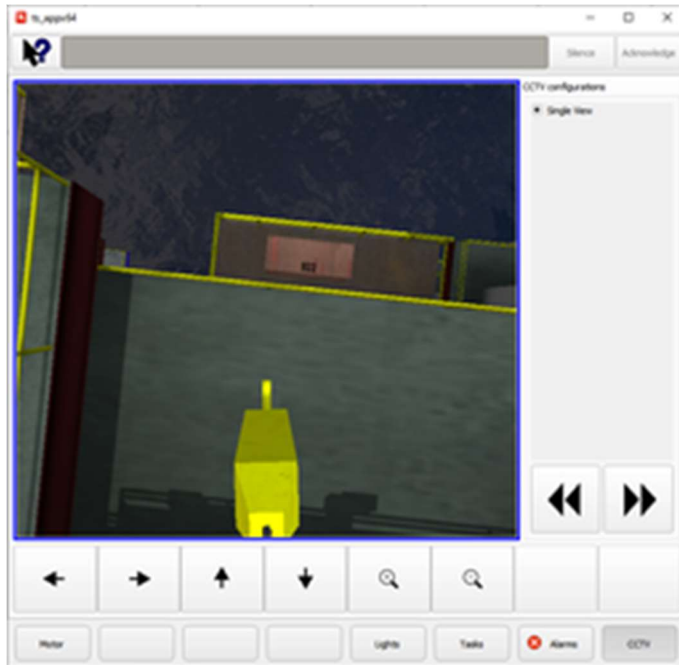
Crane Lights



Crane lights may be turned on or off by pressing the Lights button. The highlight state for the buttons reflects the on / off state for the crane lights.

CCTV

Before the CCTV camera controls can be operated, ensure that the camera view has been selected by tapping on the CCTV image. When selected, a blue border is shown around the camera view - as shown



The CCTV view may be zoomed and rotated using the buttons below the image. To operate these, tap and hold the button in the CCTV application on the **left hand touchscreen**. The button will display as depressed while it is active (pressed). ***Ensure that the CCTV view is activated. This is indicated by it having a blue border as shown. The CCTV view is activated by tapping on the CCTV image.***