

User Guide

TLS-400



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1 General

This user guide describes how to operate the light rig. If something not described in this user guide happens, contact your manufacturer immediately.

This system is not constructed to be driven high frequency up and down.

If there is too much wind the rig will lower itself down without any warning!

1.1 Secure the rig

1. Place the rig on a flat surface
2. Establish outriggers
3. Make sure the wind sensor is intact.
4. Turn the boom section extensions (if desired).

1.2 Connecting power

1. Connect **400V 63A (L1, L2, L3, N, PE)** on each socket on leg 1.
2. Strain relief both cables.

2 Operating the system

This chapter will describe how to operate the system.

2.1 Daily use on/off

After connecting the power the buzzer and the blitz will be activated. This is because the emergency stop function needs to be reset!

Mode On procedure;

1. Ensure that the emergency stop button is not activated [2.3](#).
2. Push the emergency reset button at main page. The buzzer and the blitz will be deactivated.
3. Ensure that there are no alarms on the alarm banner.
4. Push system start button on the main page [2.2.4](#).
5. Ensure that mode in the screen heading changes to Mode: On [2.2.4](#).

Mode Off procedure;

If emergency stop has been activated the rig enters off mode automatically!

1. Lower the rig to the bottom position
2. Push the system off button on the main page [2.2.4](#).

2.2 Operator screen

This chapter describes how to use the operator screen.

2.2.1 Physical Buttons



Each button beside the screen represent the action described in the nearby text. This changes from page to page.

- "PREV" allows you to enter previous page.
- + "NEXT" allows you to enter next page (if prev has been used).
- HOME opens Main page.
- ALARM open alarms page.

2.2.2 Menu



This is the general heading.



This represents real time and date. (hh:mm:ss yyyy-mm-dd)

The system clock is very important because off the weekly timer function!!



This is the alarm banner. This shows you the latest alarm.



This is located leftside of Mode.

This indicates light rig is moving/moving soon or emergency stop is released.

Mode:

This indicates the mode of the rig. Off/On

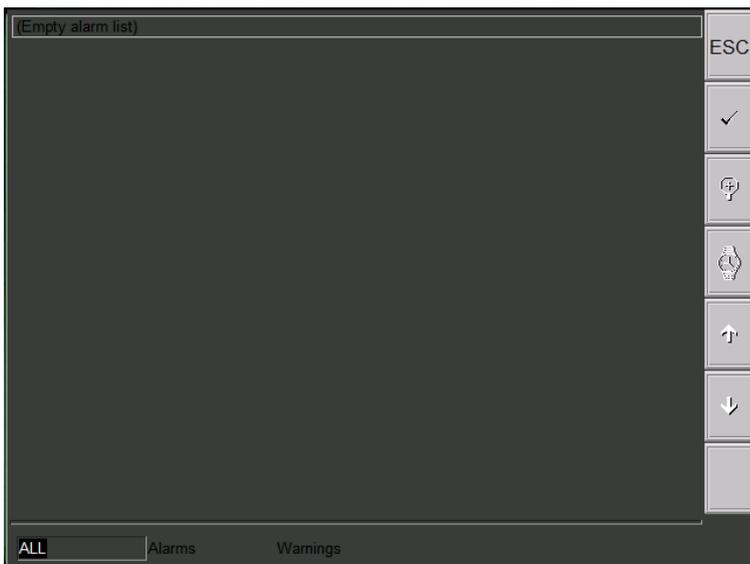


The “Legs” text indicate which page you’re on.



This allows you to navigate to your desired destination.

2.2.3 Alarm page



Colors code alarms:

Active background/foreground: Red/Black

Inactive background/foreground: Black/Red

Acknowledge background/foreground: Orange/Black

Colors code warnings:

Active background/foreground: Yellow/Black

Inactive background/foreground: Black/Yellow

Acknowledge background/foreground: Orange/Black

Active: Not acknowledge active alarm

Acknowledge: Acknowledge active alarm

Inactive: Not acknowledge inactive alarm



Returns to previous page.



Acknowledge selected alarm.



Increases text size.



Shows object info, if any.



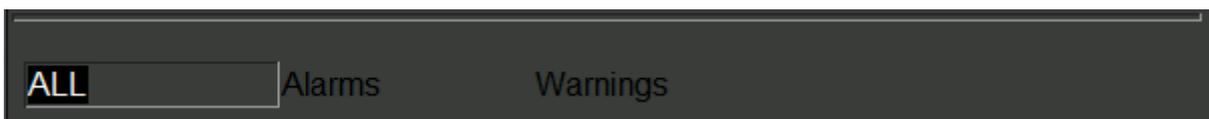
Scrolls one page up.



Scrolls one page down.

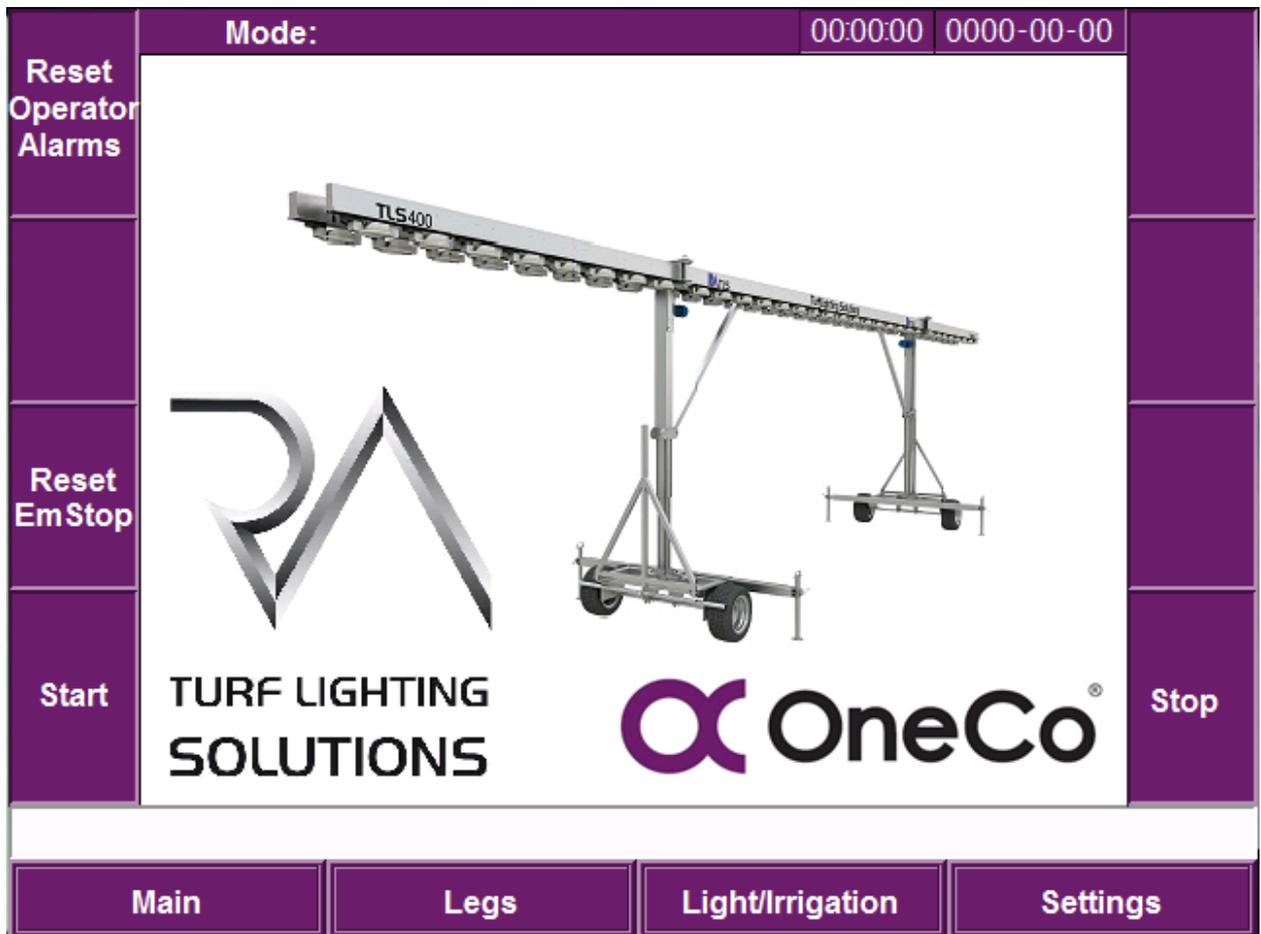


Jumos to info block conncted to the alarm.



This shows which collation you have, and allows you to sort alarms by pushing alarms or warnings.

2.2.4 Main page



This page is the start-up page.

By pushing the RA logo it will take you directly to the contact info page.

Rest Operator Alarms reset all operator alarms.

Reset EmStopp resets emergency stop.

Start/Stop Changes the rig mode On/Off.

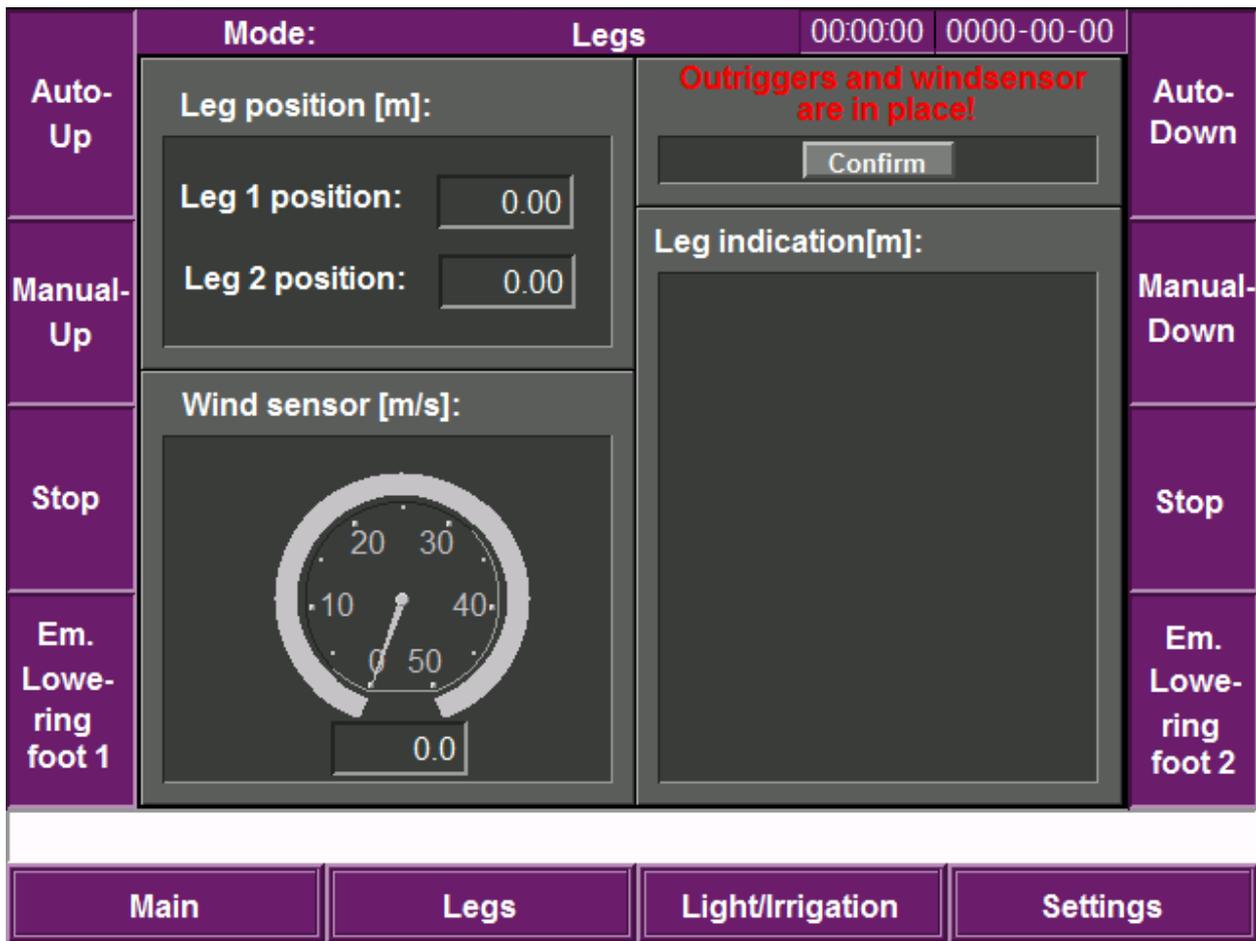
System start is interlock with;

- No encoder faults

System stop is interlock with;

- Rig must be at bottom position.

2.2.5 Legs



Wind sensor indicates wind in real-time (0-50m/s).

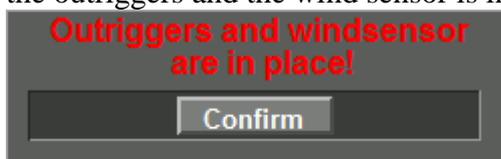
Leg positions and leg indication simulates the position off the legs.

Some alarms will make the rig stop and the Emergency lowering button can be used.

Hold the button for 5 sec to release the brake for the desired leg. The rig will then lower itself down by gravity.

Leg control:

Auto/Manual up raises the rig to the top position (See settings) but first you have to confirm that the outriggers and the wind sensor is in place.



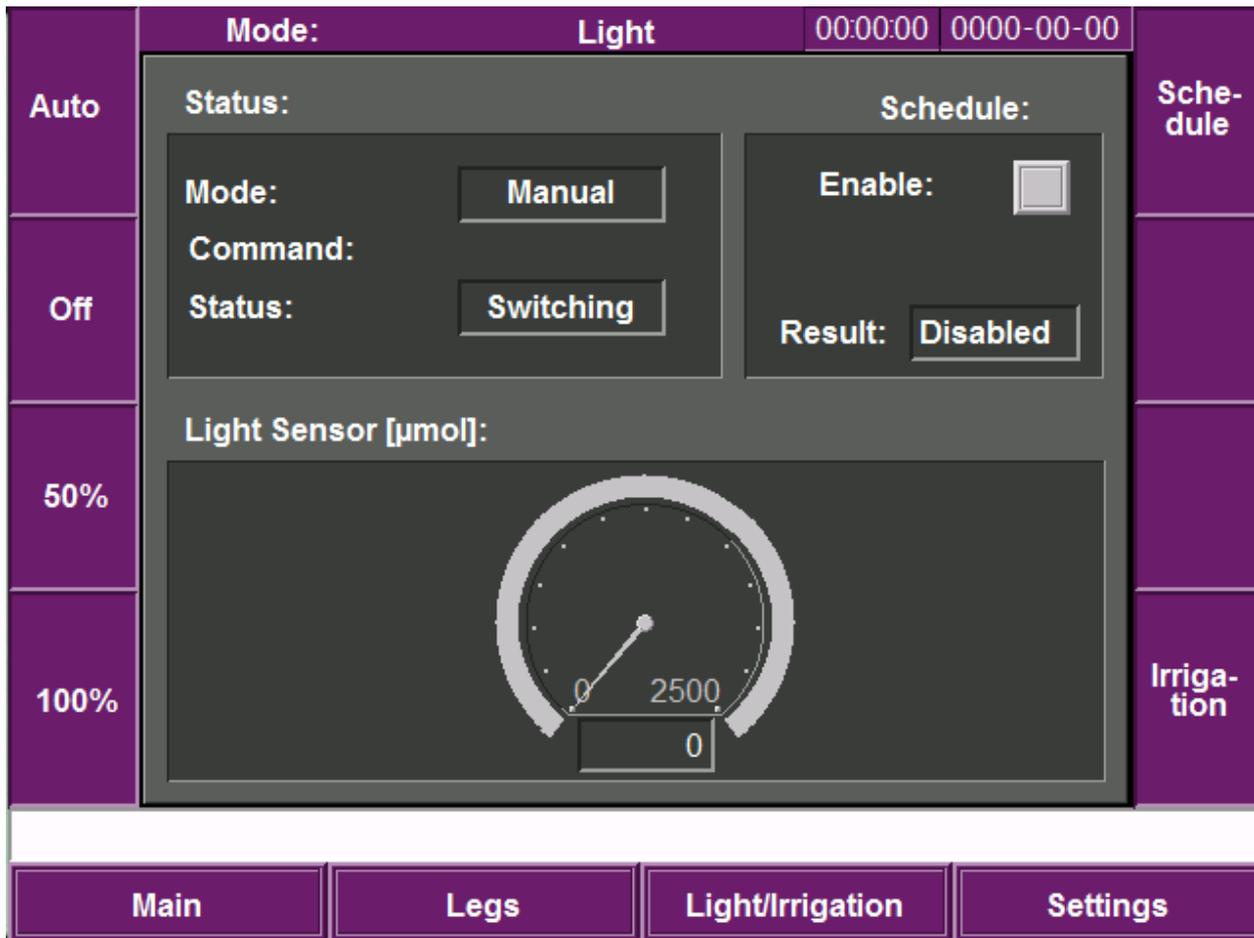
By pushing auto up/ hold manual up, the rig will rise until it reaches top position.

Manual down lowers the rig as long as the button is pushed. For safety reasons you have to hold the button for 5 sec before the rig starts to move.

Auto down lowers the rig to the bottom position automatically. For safety reasons you have to hold the button for 5 sec before the rig starts to move.

If the rig rises or lowers in auto, you can use the stop button to stop the rig.

2.2.6 Light/Irrigation



Light:

Status shows you which mode the light is in, manual or automatic. Command shows which status is commanded, and status shows which state the lights are at.

In auto mode the light will be controlled by the light sensor and the schedule (if enabled). In manual mode, you choose the commands off to 100% the schedule will work on the chosen command (if enabled).

The lights are equipped with time delay between modes. Se Settings page [2.2.9](#). When entering 100% from off mode the light start at 50% and after the decided time it switch on 100%. It's the opposite from 100% to off mode.

Schedule allows you to enable and disable the weekly timer schedule, the result is the output off the schedule. By pushing the schedule button it navigates you to the light-schedule page [2.2.7](#)

Irrigation:

To enter Irrigation push the Irrigation button.

The screenshot displays a control panel for irrigation. At the top, the mode is set to 'Irrigation' with a timer at '00:00:00' and a date at '0000-00-00'. The 'Status/Control' section shows the current status as 'Disabled' and the 'Time on' set to '0 m'. An 'Enable' button is present. The 'Schedule' section shows the 'Enable' checkbox is unchecked and the 'Result' is 'Disabled'. The interface is framed by a purple border with labels 'Enable', 'Schedule', 'Disable', and 'Light'. A bottom navigation bar includes 'Main', 'Legs', 'Light/Irrigation', and 'Settings'.

Status/control allows you to enable the irrigation system if the schedule is disabled. When enabling the irrigation system manually, there will be a **1 minute delay before it starts**. The Time on desires how long the irrigations system shall be enabled. If the schedule is enabled it overrides the operator command.

Schedule allows you to enable and disable the weekly timer schedule, the result is the output off the schedule. By pushing the schedule button it navigates you to the irrigation-schedule page [2.2.8](#)

2.2.7 Light schedule

Mode:		Light schedule				00:00:00		0000-00-00	
En.	Starttime:		Stoptime:		Mon	Wed		Fri-Sun	
<input type="checkbox"/>	0h	0m	0h	0m	<input type="checkbox"/>				
<input type="checkbox"/>	0h	0m	0h	0m	<input type="checkbox"/>				
<input type="checkbox"/>	0h	0m	0h	0m	<input type="checkbox"/>				
<input type="checkbox"/>	0h	0m	0h	0m	<input type="checkbox"/>				
<input type="checkbox"/>	0h	0m	0h	0m	<input type="checkbox"/>				
<input type="checkbox"/>	0h	0m	0h	0m	<input type="checkbox"/>				
<input type="checkbox"/>	0h	0m	0h	0m	<input type="checkbox"/>				
<input type="checkbox"/>	0h	0m	0h	0m	<input type="checkbox"/>				
<input type="checkbox"/>	0h	0m	0h	0m	<input type="checkbox"/>				
<input type="checkbox"/>	0h	0m	0h	0m	<input type="checkbox"/>				
<input type="checkbox"/>	0h	0m	0h	0m	<input type="checkbox"/>				

Main
Legs
Light/Irrigation
Settings

Check the system clock before use!

Enable; Enable/Disable the whole line.

Start time; Real-time (0-24h, 0-59m)

Stop time; Real-time (0-24h, 0-59m) ***Stop time cannot pass midnight.***

To make the light stay on by passing midnight, you have to set on line with stop time 24.00 and one line with start time 00.00.

Checkboxes from Monday to Sunday decides which day the start and stop time is going to be enabled. The box between Monday and Wednesday represents Tuesday and so on.

2.2.8 Irrigation schedule

Mode:		Irrigation schedule				00:00:00		0000-00-00	
En.	Starttime:	Overtime:		Mon	Wed	Fri-Sun			
<input type="checkbox"/>	0h 0m	0h 0m	0h 0m	<input type="checkbox"/>					
<input type="checkbox"/>	0h 0m	0h 0m	0h 0m	<input type="checkbox"/>					
<input type="checkbox"/>	0h 0m	0h 0m	0h 0m	<input type="checkbox"/>					
<input type="checkbox"/>	0h 0m	0h 0m	0h 0m	<input type="checkbox"/>					
<input type="checkbox"/>	0h 0m	0h 0m	0h 0m	<input type="checkbox"/>					
<input type="checkbox"/>	0h 0m	0h 0m	0h 0m	<input type="checkbox"/>					
<input type="checkbox"/>	0h 0m	0h 0m	0h 0m	<input type="checkbox"/>					
<input type="checkbox"/>	0h 0m	0h 0m	0h 0m	<input type="checkbox"/>					
<input type="checkbox"/>	0h 0m	0h 0m	0h 0m	<input type="checkbox"/>					
<input type="checkbox"/>	0h 0m	0h 0m	0h 0m	<input type="checkbox"/>					

Main
Legs
Light/Irrigation
Settings

Check the system clock before use!

Enable; Enable/Disable the whole line.

Start time; Real-time (0-24h, 0-59m)

On time; Period (0-24h, 0-59m) ***on time cannot pass midnight.***

To make the irrigation stay on by passing midnight, you have to set on line with on time that ends at 24.00 and one line with start time 00.00.

Checkboxes from Monday to Sunday decides which day the start and stop time is going to be enabled. The box between Monday and Wednesday represents Tuesday and so on.

2.2.9 Settings

This is the operator settings, to change any parameters you have to be logged in as operator. If you forget to log out, you will be auto logged off after 10 minutes.

	Mode:	Operator Settings	00:00:00	0000-00-00	
	Light settings:		Runtime lights [h]:		Set Time Date
	Mode 50/100 del:	<input type="text" value="0 m"/>	Total	Trip	
			Boom 1:		
			<input type="text" value="0"/>	<input type="text" value="0"/>	
			<input type="button" value="Reset"/>	<input type="button" value="Reset"/>	
	Auto mode light settings [μmol]:		Boom 2:		
	Low limit:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	
	High limit:	<input type="text" value="0"/>	<input type="button" value="Reset"/>	<input type="button" value="Reset"/>	
	Hysteresis:	<input type="button" value="?"/> <input type="text" value="0"/>			Admin-Settings
	Limit delay:	<input type="text" value="0 m"/>	Language		
	Encoder settings [m]:		<input type="button" value="Turkish"/>		
Log in	Top position:	<input type="text" value="0.00"/>	<input type="button" value="English"/>		Log out
	Main	Legs	Light/Irrigation	Settings	

Light settings:

Mode 50/100 delay: Delay from off mode to 100% light and conversely. The light will be set at 50% at the decided time.

Auto mode light settings [μ mol]: (0-2500)

Low limit: If the light gets under this, the lights will be set at 100%.

High limit: If the light gets over this, the lights will be set off.

In between low and high limit the lights will be set at 50%.

Hysteresis: how much the light needs to go under/over the high/low limit to reset itself. By pushing the “?” button, you will get information on how it works.

Limit delay [m]: How long time in minutes the light needs to be under/over the limit before the light changes.

Encoder settings [m]:

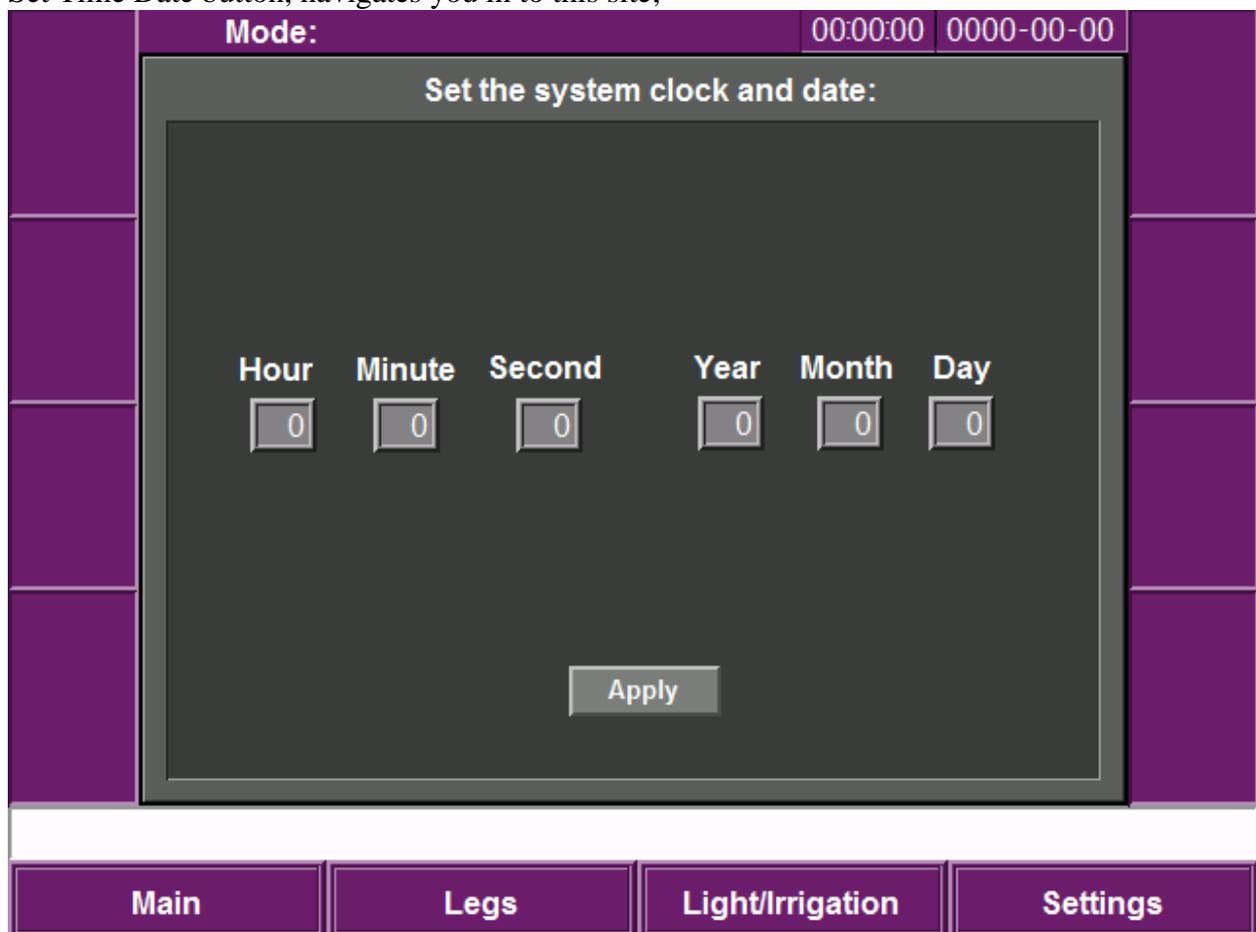
Top position: Top position of the rig according to leg position.

Run-time counter lights [h]:

Boom 1; Total; total runtime. Trip; Runtime since reset. The reset button allows you to reset the trip meter.

Boom 2; Total; total runtime. Trip; Runtime since reset. The reset button allows you to reset the trip meter.

Set Time Date button, navigates you in to this site;



The screenshot displays a control interface for setting the system clock and date. At the top, a purple bar contains the text "Mode:" followed by two digital displays showing "00:00:00" and "0000-00-00". Below this, a central grey panel is titled "Set the system clock and date:". Inside this panel, there are six input fields labeled "Hour", "Minute", "Second", "Year", "Month", and "Day", each containing the digit "0". A grey "Apply" button is positioned at the bottom center of the panel. The entire interface is framed by a purple border. At the bottom of the screen, there are four purple navigation buttons labeled "Main", "Legs", "Light/Irrigation", and "Settings".

This allows you to set the system clock.

(Hour: 0-23, Minute 0-59, Second 0-59, Year 0-99, Month 1-12, Day 1-31)

Error occurs if the combination is wrong.

This clock is for controlling the system.

2.3 Emergency stop

Emergency stop buttons are located on the pannel! Emergency stop buttons are designed to be used in emergency ONLY!

When connecting the power, you have to push the emergenzly reset button on main page to be able to enter on mode.

Emergency stop procedure;

1. Emergency occurs.
2. Push the emergency button.
3. The unit will stop immediately and enter off mode.
4. Remove the emergency.
5. Turn the emergency button to the right to release it.
6. Push the emergency reset button on main page.
7. Push system start button on the operator screen [2.2.4](#).
8. System is ready to be set in action again.

2.4 Buzzer and blitz

Buzzer and blitz is indicating a moving action. When lowering the unit the buzzer and the blitz will be activated in 5 seconds before the action take place.

2.5 Quick operating procedure

1. Secure the rig [1.1](#).
2. Connect the power [1.2](#).
3. Push the reset emergency button [2.3](#).
4. Push system start [2.2.4](#).
5. Control the light and the irrigation [2.2.6](#).
6. Push auto up button on Legs page [2.2.5](#).
7. Confirm that the outriggers and the wind sensor are in place [2.2.5](#).
8. Push auto down to lower the rig [2.2.5](#).
9. Push system stop [2.2.4](#).
10. Disconnect the power.

3 Troubleshooting

IF ANY ALARM APPEARS; LOWER THE RIG ALL THE WAY DOWN BEFORE ANY ACTIONS ARE TAKEN!

To be able to reset any alarm that concerning the legs, the rig have to be at bottom position.

The rig have an work level between 2.64m up to 4.40m. If under any circumstances the rig is outside this range by more than 0.01m, contact manufacturer!

Alarm text:	Action:
Emergency stop activated	Remove the emergency, releasethe button by turning it to the right. Push the reset button. Push “System start”.
Wind sensor HH alarm	Wait until the wind decreases.
Wind sensor fault	Check that the plug underneath the sensor is in place. Contact manufacturer.
Q10 Motor 1 tripped	Open the cabinet on-top of the rig. Locate component –Q10 Push the switch to on. If this alarm appears again, contact manufacturer.
Q11 Motor 2 tripped	Open the cabinet on-top of the rig. Locate component –Q11 Push the switch to on. If this alarm appears again, contact manufacturer.
Motor 1 starter error	Reset alarm then try again. If it appears again, contact manufacturer.
Motor 2 starter error	Reset alarm then try again. If it appears again, contact manufacturer.
Leg 1 encoder error	Contact manufacturer.
Leg 2 encoder error	Contact manufacturer.
Leg 1 High deviation	Contact manufacturer.
Leg 2 High deviation	Contact manufacturer.
Light sensor fault	Reset alarm then try again. If it appears again, contact manufacturer.
Leg 1 Low deviation	Contact manufacturer.
Leg 2 Low deviation	Contact manufacturer.
Leg 1 wrong direction	Contact manufacturer.
Leg 2 wrong direction	Contact manufacturer.
F13 Phase guard fuse	Open the cabinet and reset Fuse F13, if it appears again, contact manufacturer.

4 Contact information



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