SAFE-AID TS 7000 LATTICE CRANE OPERATORS MANUAL VERSION II

! WARNING !

THE PURPOSE OF THIS MANUAL IS TO PROVIDE THE CUSTOMER WITH THE OPERATING PROCEDURES ESSENTIAL FOR THE PROMOTION OF PROPER MACHINE OPERATION FOR ITS INTENDED USE. THE IMPORTANCE OF PROPER USAGE CANNOT BE OVERSTRESSED. ALL INFORMATION IN THIS MANUAL SHOULD BE READ AND UNDERSTOOD BEFORE ANY ATTEMPT IS MADE TO OPERATE THE MACHINE.

SINCE THE MANUFACTURER HAS NO DIRECT CONTROL OVER MACHINE APPLICATION AND OPERATION, CONFORMANCE WITH GOOD SAFETY PRACTICE IN THIS AREA IS THE RESPONSIBILITY OF THE USER AND HIS OPERATING PERSONNEL.

ALL PROCEDURES ARE BASED ON THE USE OF THE SYSTEM UNDER PROPER OPERATING CONDITIONS, WITH NO DEVIATIONS FROM THE ORIGINAL DESIGN. ALTERATION AND OR MODIFICATION OF THE EQUIPMENT IS STRICTLY FORBIDDEN WITHOUT PRIOR WRITTEN APPROVAL FROM ELEC-MECH (PTY) LTD.

THE SAFE-AID TS7000 (RATED CAPACITY INDICATOR (RCI)/LOAD MOMENT INDICATOR (LMI)) IS ONLY TO BE REGARDED AS AN AID TO THE OPERATOR. WHEN THE PARAMETERS ARE SET CORRECTLY, THE INDICATOR WILL WARN THE CRANE OPERATOR OF AN APPROACHING OVERLOAD CONDITION OR A CONDITION THAT COULD CAUSE DAMAGE TO EQUIPMENT, PROPERTY, AND/OR INJURY TO THE OPERATOR OR THE SITE WORKERS IN THE VICINITY OF THE CRANE AND ITS LOAD.

THIS SYSTEM UNDER NO CIRCUMSTANCES MUST BE USED AS A SUBSTITUTE FOR THE GOOD JUDGEMENT OF A CRANE OPERATOR WHEN CARRYING OUT APPROVED CRANE-OPERATING PROCEDURES, THERFORE THE RESPONSIBILITY FOR THE SAFE OPERATION OF THE CRANE LIES WITH THE CRANE OPERATOR. THE SYSTEM WILL NOT NECESSARILY PREVENT DAMAGE DUE TO OVERLOADING AND RELATED CAUSES, IF NOT SET PROPERLY.

BEFORE OPERATING A CRANE EQUIPPED WITH A SAFE-AID TS7000 RCI THE OPERATOR MUST READ THE INFORMATION IN THIS MANUAL CAREFULLY. CORRECT FUCTIONING OF THE SYSTEM DEPENDS UPON ROUTINE DAILY INSPECTION AND ANY SUSPECTED FAULTS OR APPARENT DAMAGE SHOULD BE IMMEDIATELY REPORTED TO THE RESPONSIBLE PERSON BEFORE USING THE CRANE.

Contents

SYSTEM USE

The TS7000 unit is designed with ease of operation in mind. The crane setup is selected and confirmed by the operator before the system goes into its normal operating/monitoring screen requiring no further input from the operator unless the crane configuration changes. Before this is done the crane will remain in safe mode, i.e. the dump circuit will be operational (if the crane has a dump system fitted). All inputs to the system are done by the operator via the touch screen including the buzzer override function and momentary bypass. The touch screen is sensitive to touch therefore it is **not** necessary to **push hard** on the screen (*if touch screen does not work or selects incorrectly see Touch Screen Calibration).*

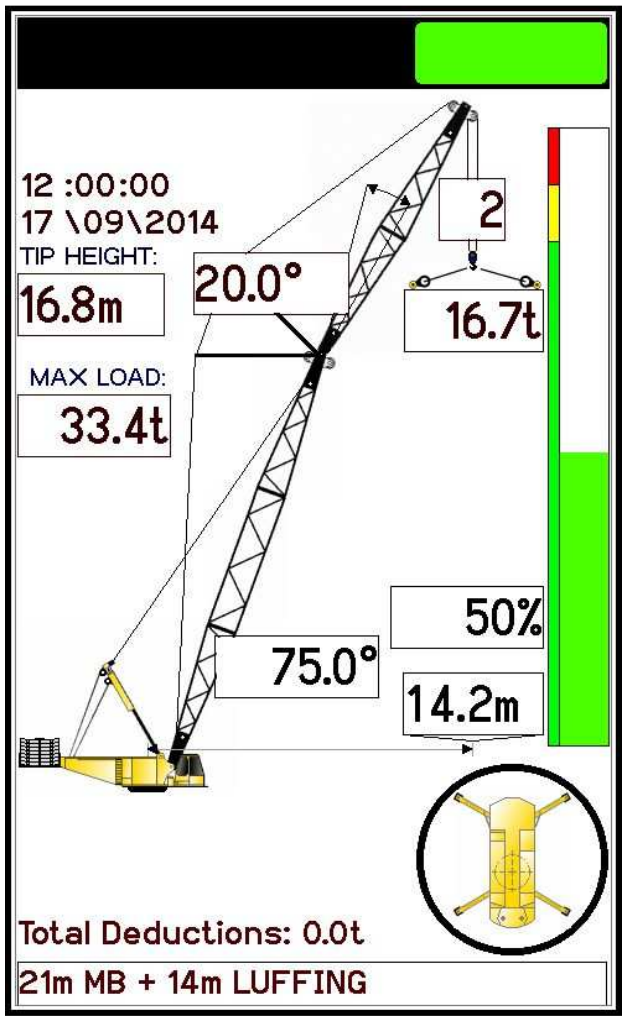


Figure 1

SYSTEM STARTUP – FIGURE 2 & 3

The TS7000 display (LMI) will automatically come on when you switch the crane on and the buzzer will sound once. The system will run a CRC (cyclic redundancy check) to make sure that all raw data is correct.

Once the system has completed the CRC the buzzer will sound again and a set of internal diagnostics (watchdogs) will be utilised to verify that all inputs and outputs are working correctly.

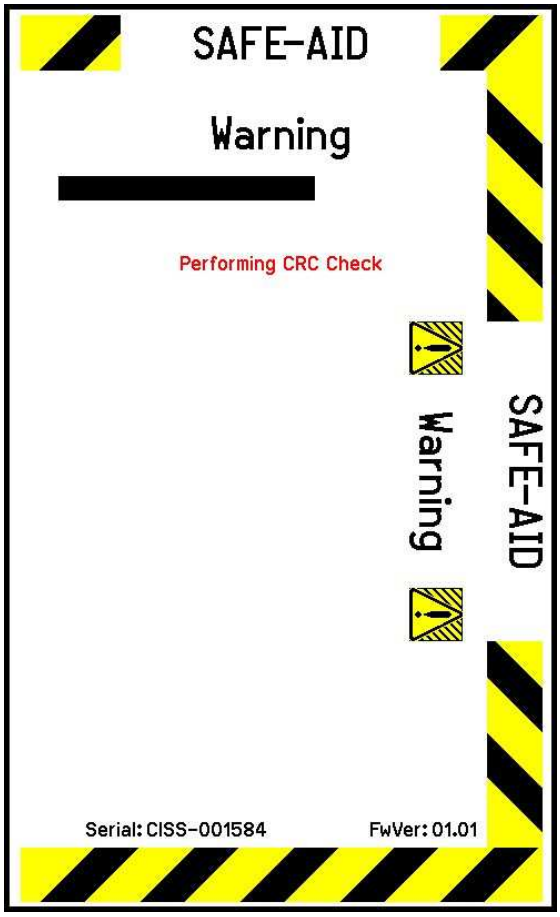


Figure 2

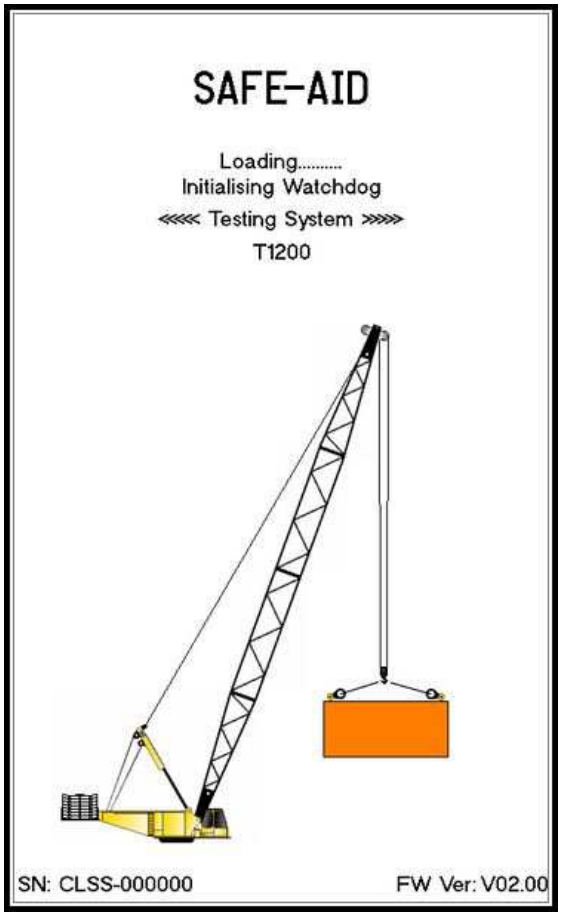


Figure 3

TILT OR LEVEL SET-UP – FIGURE 4

This step will be skipped in the following conditions:

- ***No tilt board is fitted***
- ***Tilt board is fitted but no tilt values have been entered***

The following option is to determine whether the crane is level along the X & Y axis. Level the machine using the dark black lines running along the axis lines. Once the lines are as close to the centre forming a cross the machine should be level, press the **Exit** button to continue.

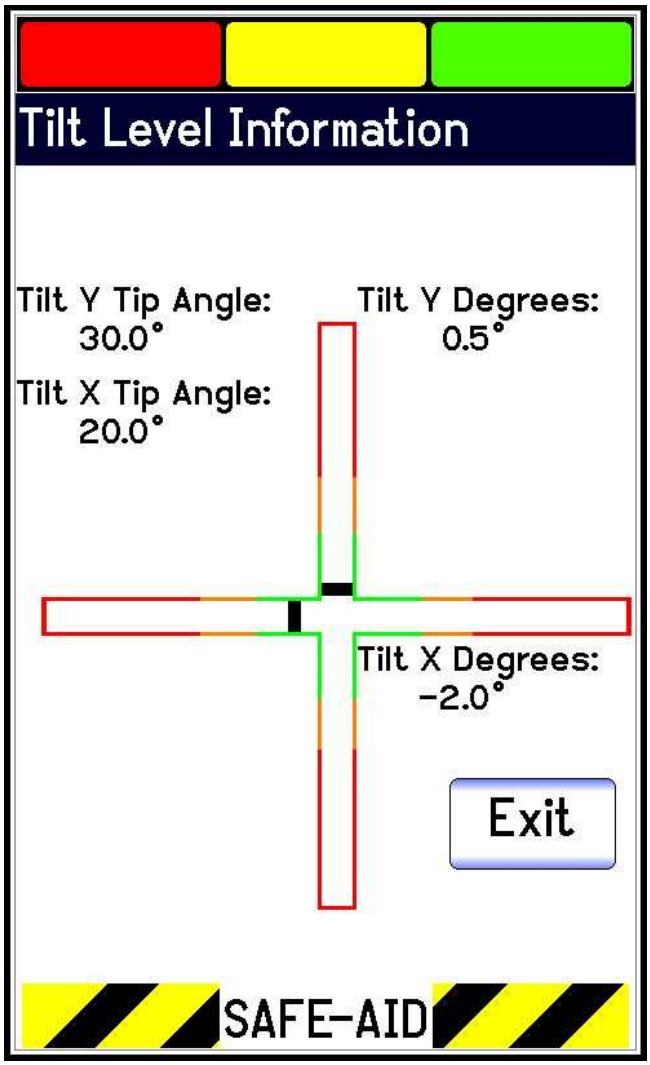


Figure 4

MAIN OR AUXILARY WINCH SELECTION – FIGURE 5

This step will be skipped in the following conditions:

- ***The system has been programmed with only one winch.***
- ***The program selection has been fixed (see Program Lockout).***

The following option is to determine whether the main winch or the auxiliary winch is being used for lifting. Simply key the option required - if the main winch is being used select **Main** and if auxiliary winch select **Aux**. To go back to the previous screen press the **Back**.

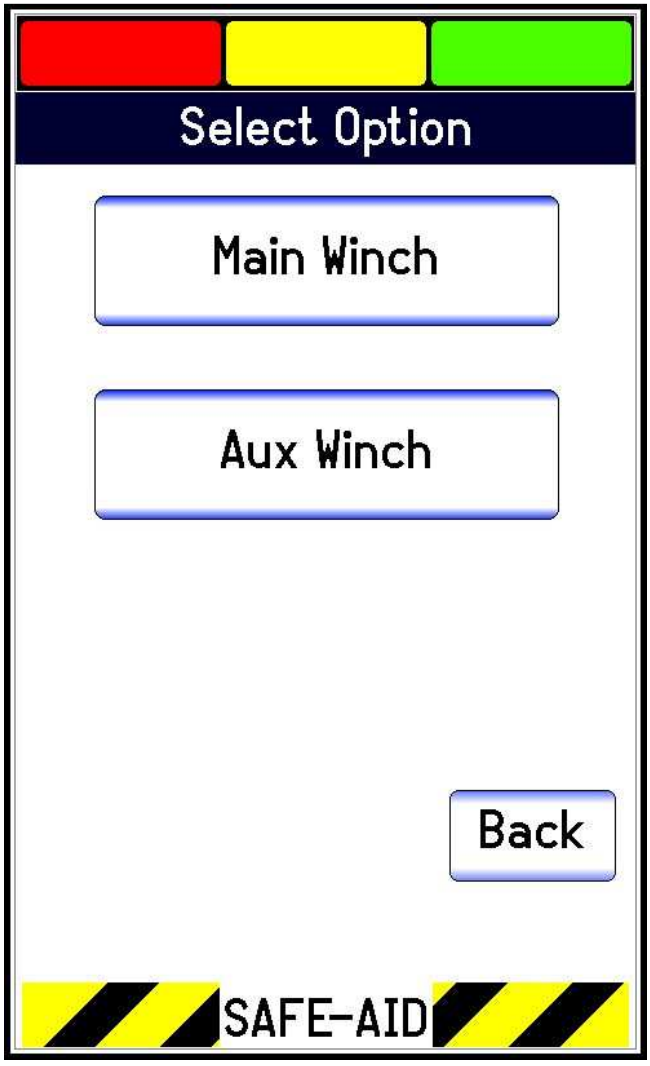


Figure 5

PROGRAM SELECTION – FIGURE 6

This step will be skipped in the following conditions:

- ***The system has only one main or auxiliary program.***
- ***The program selection has been fixed (see Program Lockout).***

Each program can be selected by pushing on the program name that is required; this will then highlight the selected program. If needed scroll down through the programs either using the up and down arrow keys or by running a finger up and down on the scroll bar on the right of the screen. This will enable scrolling through all the programs. Once the applicable program has been highlighted, press the Select button to select the desired program (configuration).

The correct selection of the program is imperative as this determines the correct rated capacities and work areas. If selected incorrectly, a higher rated capacity than allowed could be selected for that crane configuration, this is very dangerous as it can cause the boom to bend / break or the crane to tip / fall over.

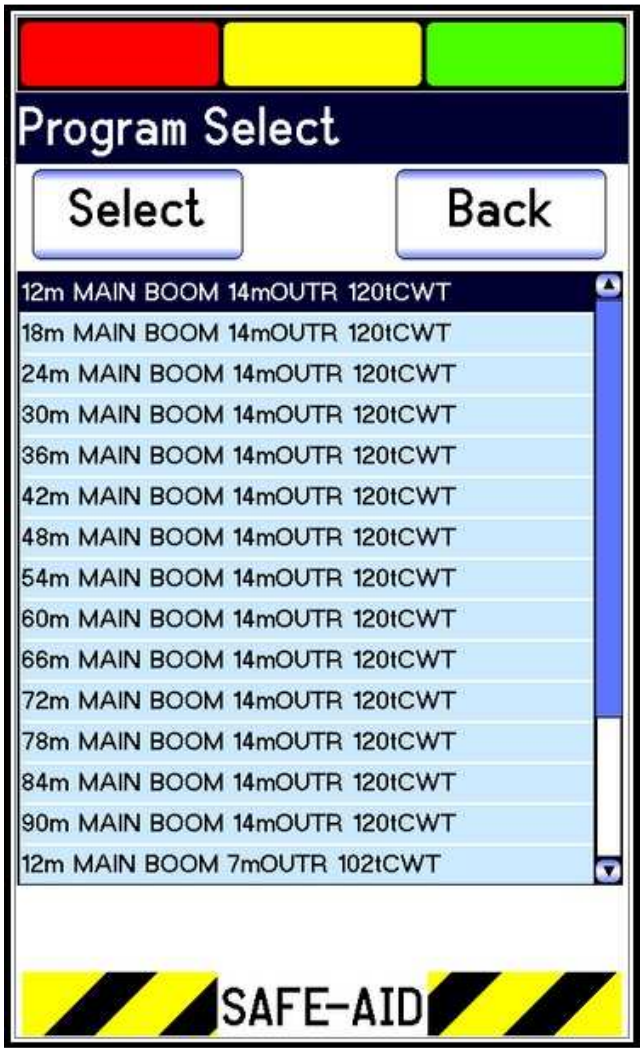


Figure 6

REEVING – FIGURE 7

This step will be skipped in the following conditions:

- ***The system has been programmed with fixed reeving.***
- ***The reeving has been fixed (see Program Lockout).***

After program selection, how many reeves (falls) the hook is reeved to (total parts of line between hook block and sheave wheels) must be selected. A numerical keypad will be displayed. Key in the number of reeves on the winch (i.e. Main or Aux), followed by the Enter key (e.g. if main winch was selected Reeving Main will be displayed). If the incorrect number is keyed in, press the Clear button and start again. Once the Enter button is pressed the next selectable option or the operating screen will appear.

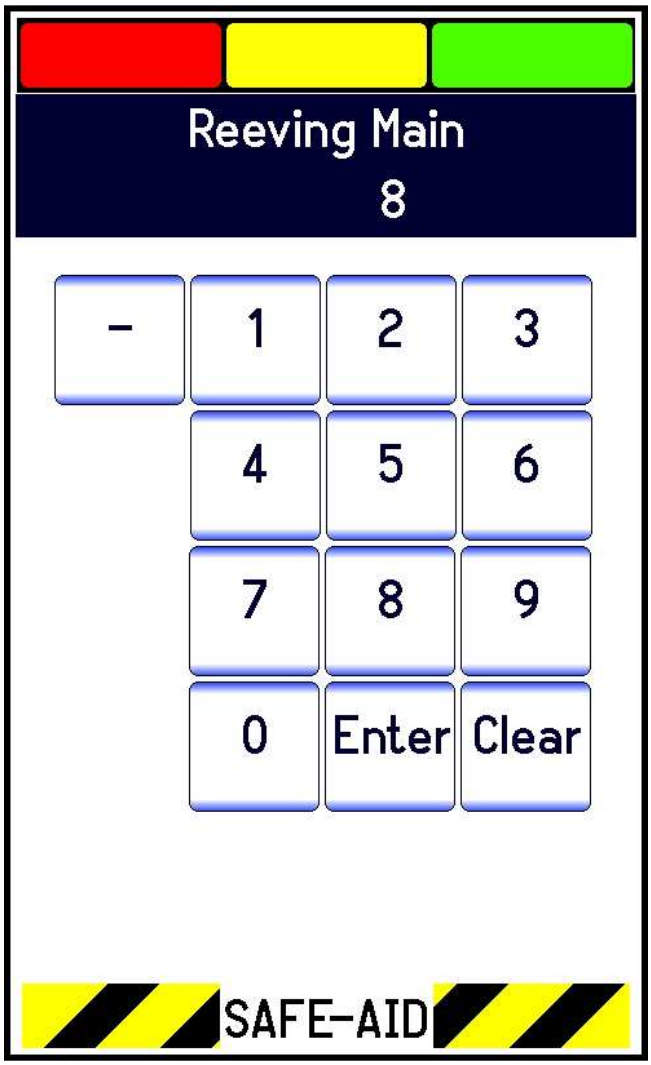
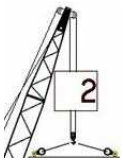


Figure 7

While working in the main running screen or if an error has been made and the reeving needs to be changed, press the block on the main running screen where the winch rope goes down to the lifted load and the system will respond by changing to the Reeving entry screen.



DEDUCTIONS – FIGURE 8 & 9

This step will be skipped in the following conditions:

- ***No deductions for the relevant program are available.***

On cranes where the main boom can be used with the fly jib erected or the main hook block is on while the fly jib is being used, the crane manufacturer may give deductions that must be taken off the rated load when using that particular configuration. The total of all the selected deductions will be shown in the working screen above the program name and will be automatically deducted from the rated capacity. This is done by the TS7000 once the correct options have been selected when prompted (figure 8). Press the deduction required and **Selected** will be displayed on the right of the selected deduction, if more than one deduction is required select all the deductions (figure 9). Once all the deductions have been selected press **Next** to continue.

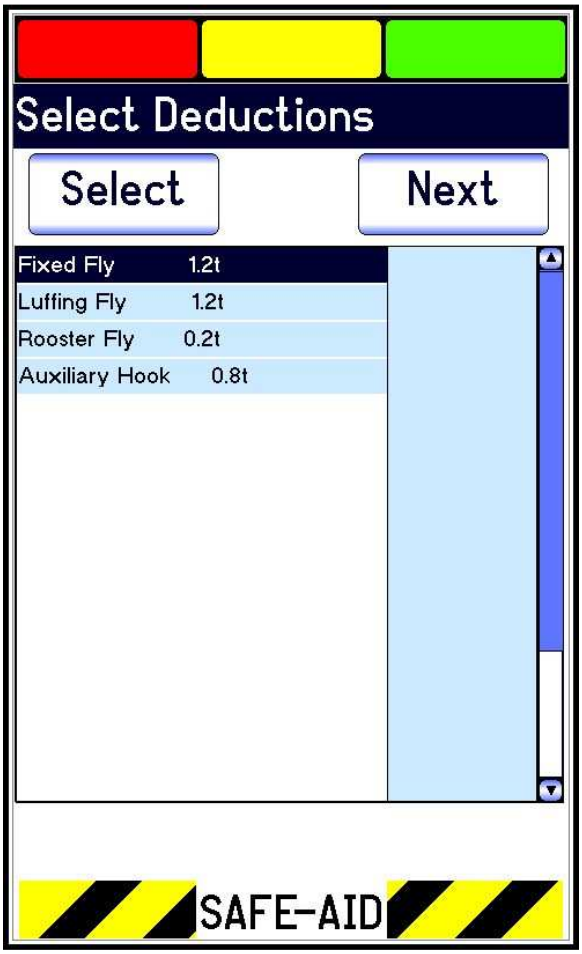


Figure 8

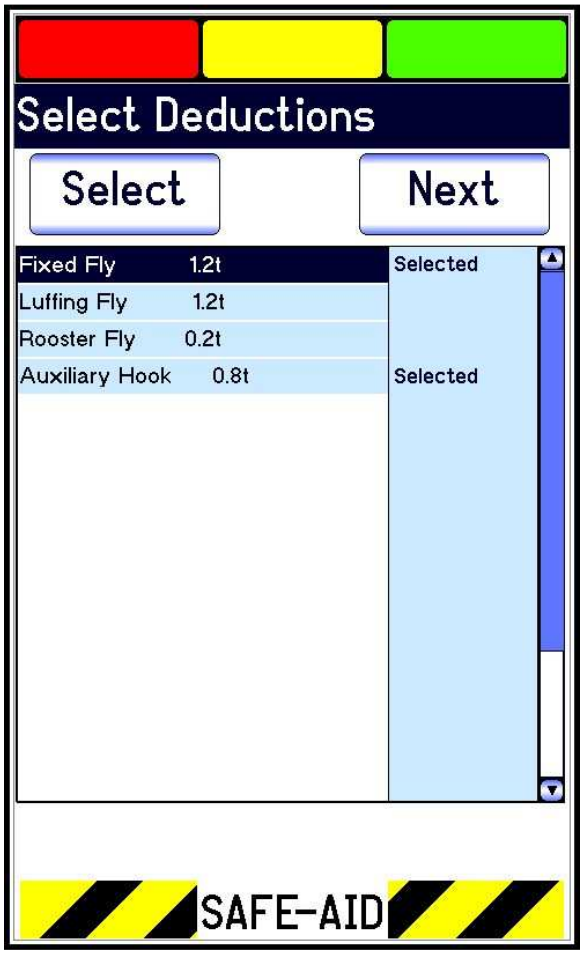


Figure 9

OPERATING SCREENS – FIGURE 10, 11, 12 & 13

All the crane and system information can be viewed from here including all the parameters selected from power up. Should a different program need to be selected, press the crane graphic on the screen, the system will go back to the beginning as on system start up. Repeat the steps above.

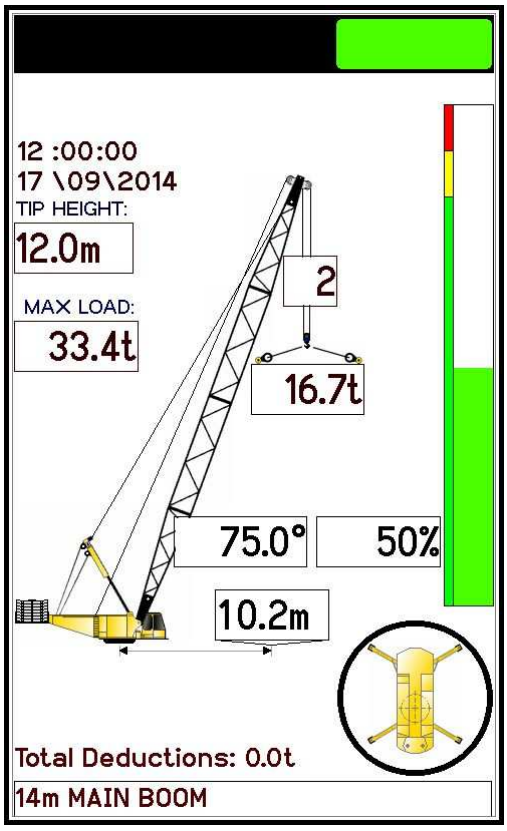


Figure 10

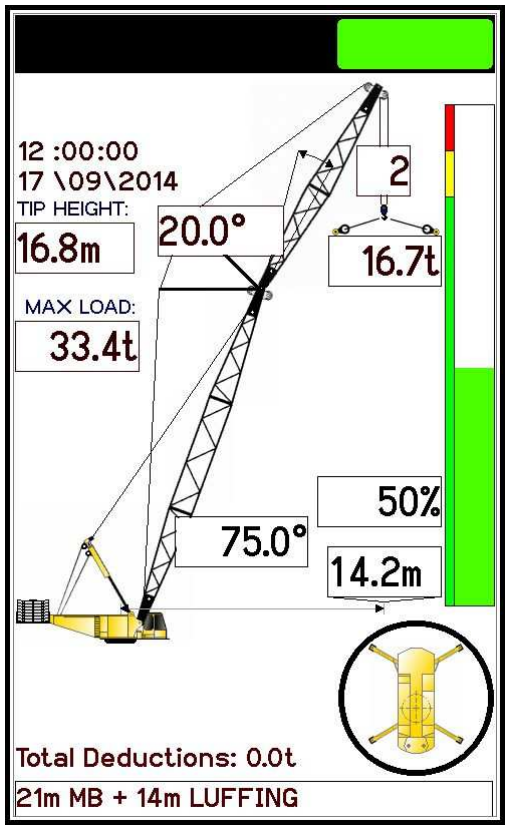


Figure 11

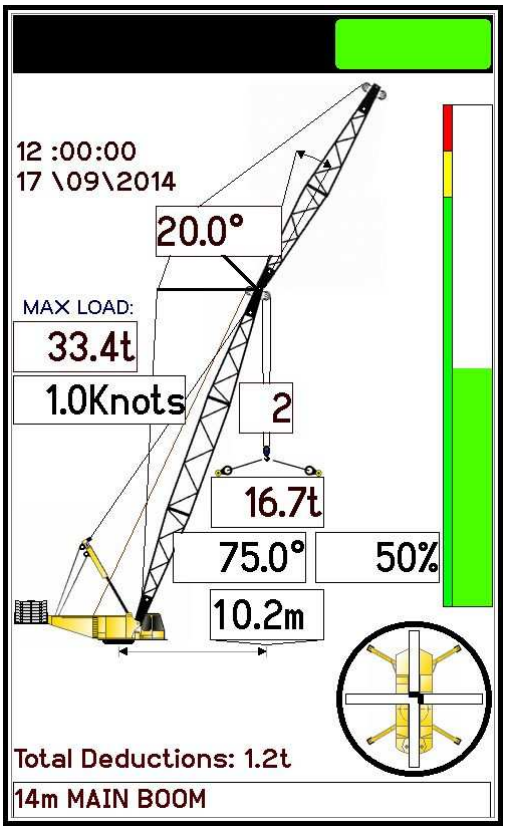


Figure 12

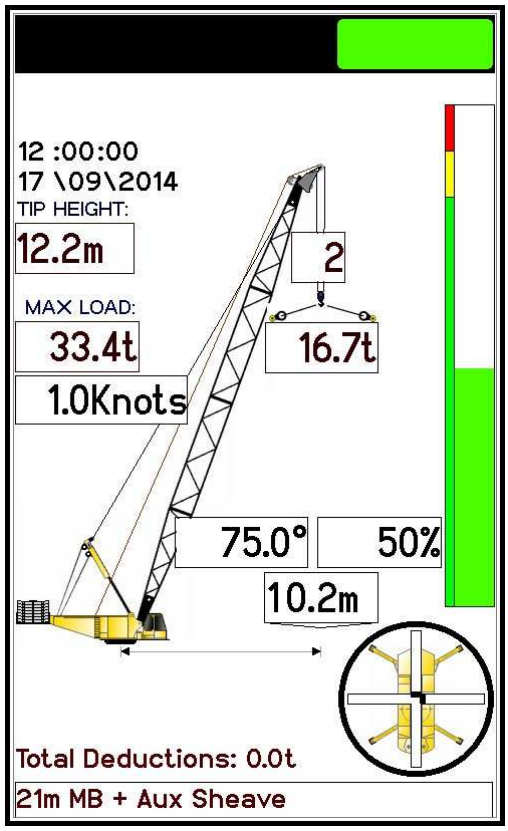


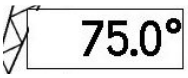
Figure 13

In operating mode, you can see all the current parameters of the crane.

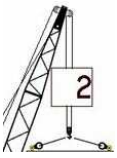
Program: This is the current program selected and all error messages will be displayed in this block (see error messages).

Radius: This is the current radius from centre line of rotation to the centre of the hook block (load) if the hook block (load) is suspended and hanging vertical.

Tip Height: This is the vertical distance from the ground to the highest point of the boom.



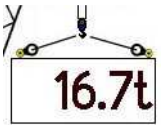
Main Angle: This displays the angle of the main boom.



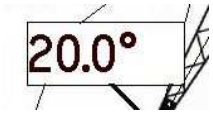
Reeving: This is the current reeving (number of falls or parts of line) selected.

Rated Capacity: This is the maximum permitted load that may be lifted with the selected configuration at that current radius or angle and length as specified by the manufacturer.

Total Deductions*:* This is the total load that is deducted (subtracted) from the rated capacity after the user has selected the ancillary lifting equipment that requires deduction as per the manufacturer's specifications.

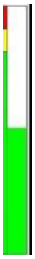


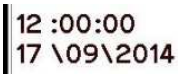
Lifted Load: This is the load on the hook at the present moment, if the green light and the load are flashing it is a tare load (the tare has been pressed).



Fly Angle*:* If a fly is fitted, the fly angle will be shown in the fly angle box. A fixed angle will be shown for a fixed fly and for a monitored fixed fly or luffing fly the angle will change as the fly angle changes. The fixed fly angle is measured relative to the main boom i.e. 0° being straight with the main boom and increasing as the offset to the main boom increases while the luffing fly angle is measured relative to ground level i.e. 0° is the fly jib parallel to the level ground.

Utilisation*:* Percentage utilisation is the percentage of rated load used by the current lifted load.


Utilisation Bar*:* The percentage utilisation is also displayed graphically by a bar graph, going from green (0% - 89%), then amber (90% - 99%) and finally red (100% and above) increasing incrementally with the percentage utilisation.



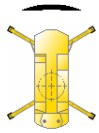
Date & Time*:* This is the current date and time but is an optional extra and will only be shown if a data logger (real time clock) is fitted.

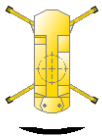
Wind Speed*:* This is the current windspeed (live value) in the units of measure selected.

Area Selection: This is not user selectable and shows the current area the crane is working in:


360 Degrees


Over Side & Rear


Direct over front

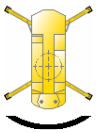

Direct Over Rear

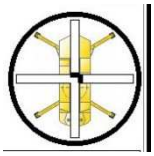

Direct Over Front & Rear


Over Side


Over Front and Side


Over Front Outrigger to Outrigger


Over Rear Outrigger to Outrigger


Level/Tilt*:* The cross through the area selection represents the X & Y axis while the two lines in the axis are the positioning of the crane (see Tilt or Level setup).

ERROR MESSAGES - FIGURE 14 AND TABLE 1

The TS7000 will sound a buzzer and the green block will be replaced by an orange or red block at the top of the screen if any error occurs on the system. These errors are displayed at the bottom of the screen e.g. Anti-2-Block where program selection is normally displayed. If more than one error occurs the errors will scroll on the bottom until rectified

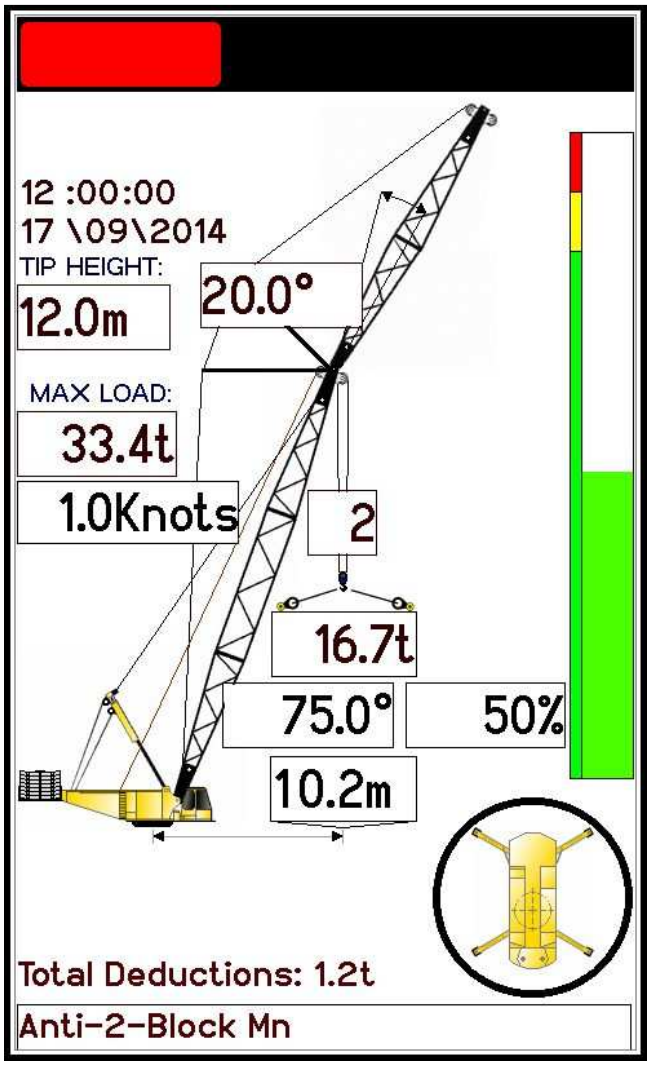


Figure 14

For all the errors we have given an indication of the problem and the common solution to the problem. These can be done by the operator or an individual who has some basic crane knowledge. If the given solution does not work please contact the original installer or someone from our service network where we can try and help telephonically or send a technician to repair the system.

SAFE-AID TS7000 SYSTEM ERROR TABLE – TABLE #1

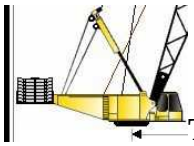
SCREEN DISPLAY	INDICATION	OPERATOR SOLUTION
Slew Error	Boom is not over an area covered by the current duty selected.	Slew the boom into a safe working area.
High Angle	The angle of the boom is above the crane manufacturer's maximum specification.	Lower boom.
Low Angle	The angle of the boom is below the crane manufacturer's minimum specification.	Raise boom.
M400 No Coms	No communication between mother board and display.	Call installer or service technician.
Anti-2-Block Main	The main or auxiliary sheave hook has been pulled up too close to the boom head sheave wheels.	Lower Main or Auxiliary Winch.
Anti-2-Block Auxiliary	The hook has been pulled up to close to the fly jib tip sheave wheel.	Lower fly jib winch.
Main A400 No Coms	No communication between main angle board and motherboard/display.	Call installer or service technician.
Aux A400 No Coms	No communication between auxiliary angle board and motherboard/display.	Call installer or service technician.
Overload	The maximum rated capacity has been reached - you are in overload.	Move load into safe working position - winch down or boom up.
R400 No Coms	No communication between relay board and motherboard/display.	Call installer or service technician.
No Load Chart Data	You are working out of the manufactures specified working range – incorrect working radius.	Lower Boom to within the manufacturers specified working range.
No Moment Value	Moment Error.	No empty and loaded moment data at specific length and angle.
Tilt Error X Axis	Crane has tilted over maximum allowed tilt on the X axis (Left & right of carrier).	Level crane to within specified tilt range.
Tilt Error Y Axis	Crane has tilted over maximum allowed tilt on the Y axis (Front & rear of carrier).	Level crane to within specified tilt range.
Anti-2-Block Main Short Circuit	There is a short circuit between the two A-2-B wires.	Call installer or service technician.
Anti-2-Block Aux Short Circuit	There is a short circuit between the two A-2-B wires on the fly jib.	Call installer or service technician.
A400 Tilt No Coms	No communication between A400 Tilt board and motherboard/display.	Call installer or service technician.

SCREEN DISPLAY	INDICATION	OPERATOR SOLUTION
O/R Front Left Error	Front Left Outrigger is not extended to the correct length.	Extend Front Left Outrigger to correspond to program selection.
O/R Front Right Error	Front Right Outrigger is not extended to the correct length.	Extend Front Right Outrigger to correspond to program selection.
O/R Rear Left Error	Rear Left Outrigger is not extended to the correct length.	Extend Rear Left Outrigger to correspond to program selection.
O/R Rear Right Error	Rear Right Outrigger is not extended to the correct length.	Extend Rear Right Outrigger to correspond to program selection.
Main Dump Short Circuit	Short circuit on the Main Dump Output.	Call installer or service technician.
Main Dump Open Circuit	Open circuit on the Main Dump Output.	Call installer or service technician.
Output #2 Short Circuit	Short circuit on Output 2.	Call installer or service technician.
Output #2 Open Circuit	Open circuit on the Output 2.	Call installer or service technician.
No Dump Supply	No supply (power or ground) on the selected dump supply.	Check 5A dump fuse.
A400 Windspeed No Coms	No communication between A400 Windspeed board and Main A400/motherboard/display.	Call installer or service technician.
Rope Overload	The maximum line pull specified by the manufacturer has been exceeded.	Put Load down – check correct reeving selected.
Maximum Windspeed	Maximum wind speed limit specified by the manufacturer has been reached.	Check manufacturers limit has been set correctly.
Output #3 Short Circuit	Short circuit on Output 3.	Call installer or service technician.
Output #3 Open Circuit	Open circuit on the Output 3.	Call installer or service technician.
Output #4 Short Circuit	Short circuit on Output 4.	Call installer or service technician.
Output #4 Open Circuit	Open circuit on the Output 4.	Call installer or service technician.
Output #4 Error	Error on Output 4.	Call installer or service technician.
Output #5 Error	Error on Output 5.	Call installer or service technician.
Output #6 Error	Error on Output 6.	Call installer or service technician.
Keyswitch Override	Override Key has been turned to the override position - key cannot be removed from the switch.	Turn the override key to a position where the key can be removed.
Raise Boom	Main boom is below manufacture's specified boom angle – for fly jib use only.	Raise the main boom - check program selection.
Lower Boom	Main Boom angle is higher than pre-set maximum boom angle.	Lower the main boom.

SCREEN DISPLAY	INDICATION	OPERATOR SOLUTION
User Minimum Radius Limit	Radius is less than the user selected minimum radius setting.	Lower main boom to increase working radius or clear user selected minimum radius.
User Maximum Radius Limit	Radius is greater than the user selected minimum radius setting.	Raise main boom to decrease working radius or clear user selected maximum radius.
User Minimum Angle Limit	Boom angle is less than the user selected minimum angle setting.	Raise main boom or clear user selected minimum angle.
User Maximum Angle Limit	Boom angle is greater than the user selected maximum angle setting.	Lower main boom or clear user selected maximum angle.
User Minimum Tip Height Limit	Tip Height is less than the user selected minimum tip height setting.	Raise main boom or clear user selected minimum tip height.
User Maximum Tip Height Limit	Tip Height is greater than the user selected maximum tip height setting.	Lower main boom or clear user selected maximum tip height.

WORKING OPERATIONS – FIGURE 15

As an operator, there are SEVEN different areas/places on the operating screen which can be pressed to initiate a function.

1.  **The program selection** is the crane graphic on the screen. If at any given time the current program needs to be changed, press on the crane graphic and this will return to the selection process as if powering up for the first time. For example, if the crane is working Main Boom and now the fly jib is being used, change the program as to suit as the cranes rated capacities and limits will be different.

   Note: In certain circumstances Program Lockout has been enabled which allows one Main Program and one Auxiliary Program with a fixed reeving for each. This is a rigging selection so consult the riggers manual for more information.

2.  **The buzzer override** which is located at the **bottom left** of the screen; it will only be displayed 5 seconds after an error condition occurs. When the buzzer override is pressed the AMBER BLOCK will flash intermittently, a red cross will be placed through the picture of the buzzer and the buzzer will shut off.
    The buzzer override is needed for each alarm condition i.e if one error has been overridden and another error occurs the buzzer will sound again.

3. **The Tare** which is activated by pressing directly on the lifted load when a load is displaying on the hook. The Lifted Load will be zeroed allowing for a reading excluding the original weight. The original weight is still taken into account when calculating the percentage of utilisation therefore the TS7000 will still give the correct 90% and 100% warnings. Once pressed the numbers under the lifted load will flash showing no value, only 0,0t and the GREEN LED will flash intermittently. Thereafter, if a weight is lifted, only the weight lifted up will be displayed and not the weight together with hook block or any other additional weight. To return to the gross weight, press the lifted load again, it will stop flashing and the gross weight will be displayed.

4.  **The momentary override** which is the utilisation bar graph on the screen. By holding your finger anywhere in this area the dump solenoids (lever cut-off) can be overridden momentarily (while pushing on the screen in that area) to allow the crane to be folded up.

   Note: This function can only be used if activated by the programme/installer.

5. **Password Access -** This is accessed by pressing the top left hand corner. Once pressed a password screen will be displayed, enter the relevant password to access the required menu. To exit and return to the operator's screen press **Enter** button.

6. 

Wind Speed – Press on the windspeed block to enter the wind speed setup (see Wind Speed Setup).

Note: This function can only be used if fitted & activated by the programmer/installer.

7. **User Limit Setup –** Press the screen in the bottom left hand corner to access the User Limit Setup screen. Highlight the required limit to be set by pressing on the description, press the Select button to access the keypad and type in the limit that is required. Once all the limits have been set press the Back button to return to the working screen. To disable the limit highlight the limit by pressing on the description and press [Disable Limit] this will then put Disabled next to the description and the limit will now be disabled.

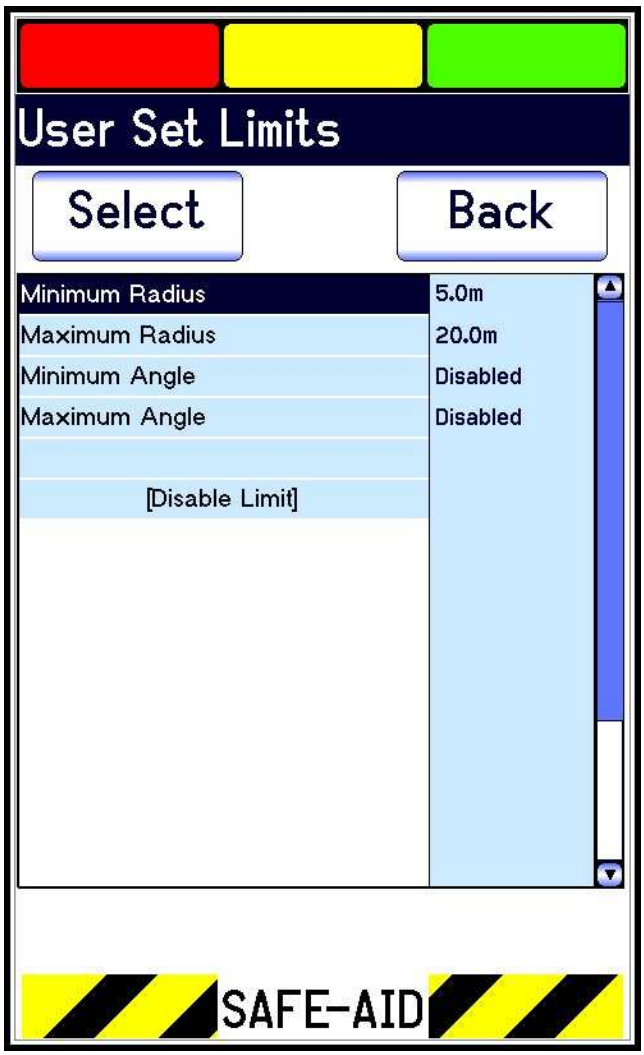


Figure 15

INDICATING STATUS LIGHTS AND DUMP OUTPUT (LEVER CUT-OFF) – TABLE # 2

There are **Three BLOCKS** (RED, YELLOW & GREEN) that are illuminated like a traffic robot situated on the top of the display screen.

These BLOCKS are illuminated depending on the working state and error conditions. These BLOCKS are a basic way of checking the LMI.

The following chart gives you the BLOCK status, buzzer status as well as the status of the DUMP (Lever Cut-off). DUMP the crane will cut-out and NO DUMP you are able to work. To rectify or check the error, please check the error message chart (Table 1).

The GREEN BLOCK will be permanently on when the system is in the correct working condition i.e. no errors

SYSTEM MESSAGE	BLOCK STATUS	DUMP STATUS	BUZZER STATUS
No Selection	ALL FLASHING	ON	INTERMITTENT
Slew Error	RED	ON	ON
High Angle	RED	ON	ON
Low Angle	RED	ON	ON
Raise boom	YELLOW	OFF	ON
Lower Boom	YELLOW	OFF	INTERMITTENT
M400 NC	RED	ON	ON
Anti-2-Block	RED	ON	ON
Anti-2-Block Fly	RED	ON	ON
Main A400 NC	RED	ON	ON
Aux A400 NC	RED	ON	ON
Overload	RED	ON	ON
≥90% Loading	YELLOW	OFF	INTERMITTENT
R400 NC	RED	ON	ON
No Load Chart Data	RED	ON	ON
No Moment Value	RED	ON	ON
Tilt Error X Axis	RED	ON	ON
Tilt Error Y Axis	RED	ON	ON
Anti-2-Block Short	RED	ON	ON
Anti-2-Block Fly Short	RED	ON	ON
A400 Tilt NC	RED	ON	ON
O/R Front Left Err	RED	ON	ON
O/R Front Right Err	RED	ON	ON
O/R Rear Left Err	RED	ON	ON

SYSTEM MESSAGE	BLOCK STATUS	DUMP STATUS	BUZZER STATUS
O/R Rear Right Err	RED	ON	ON
Main Dump Short	RED	ON	ON
Main Dump Open	RED	ON	ON
Output 2 Short	RED	ON	ON
No Dump Supply	RED	ON	ON
Keyswitch Override	RED	ON	ON
A400 Windspeed NC	RED	ON	ON
Rope Overload	RED	ON	ON
Maximum Windspeed	RED	OFF	ON
Output 3 Short	RED	ON	ON
Output 3 Open	RED	ON	ON
Output 4 Short	RED	ON	ON
Output 4 Open	RED	ON	ON
Output 4 Error	RED	ON	ON
Output 5 Error	RED	ON	ON
Output 6 Error	RED	ON	ON
Keyswitch Override	RED	ON	ON
Minimum Radius Limit	YELLOW	OFF	INTERMITTENT
Maximum Radius Limit	YELLOW	OFF	INTERMITTENT
Minimum Angle Limit	YELLOW	OFF	INTERMITTENT
Maximum Angle Limit	YELLOW	OFF	INTERMITTENT
Minimum Tip Height Limit	YELLOW	OFF	INTERMITTENT
Maximum Tip Height Limit	YELLOW	OFF	INTERMITTENT

NOTES:

- The **YELLOW BLOCK** will flash when buzzer override is activated. If a new error occurs the buzzer will be reactivated and will have to be overridden again.

- The **green BLOCK** will flash when TARE function is used and the crane is within the limits specified by the manufacturer.

TOUCH SCREEN CALIBRATION – FIGURES 16, 17 & 18

If the touch screen is not responding correctly, the touch screen may need to be calibrated.

Switch the TS7000 system power off then power up the TS7000 and wait for the splash screen (Figure 15) to appear.

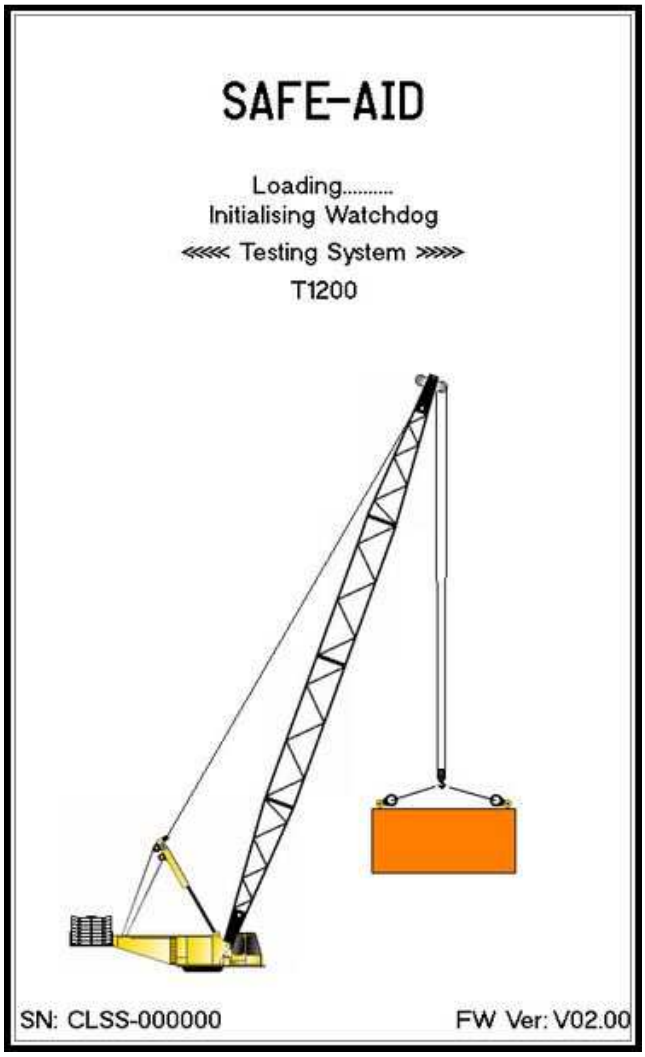


Figure 16

While the splash screen is on (Figure 16), press and hold the screen for five full seconds in the centre until the touch calibration is activated and loaded (Figure 17).

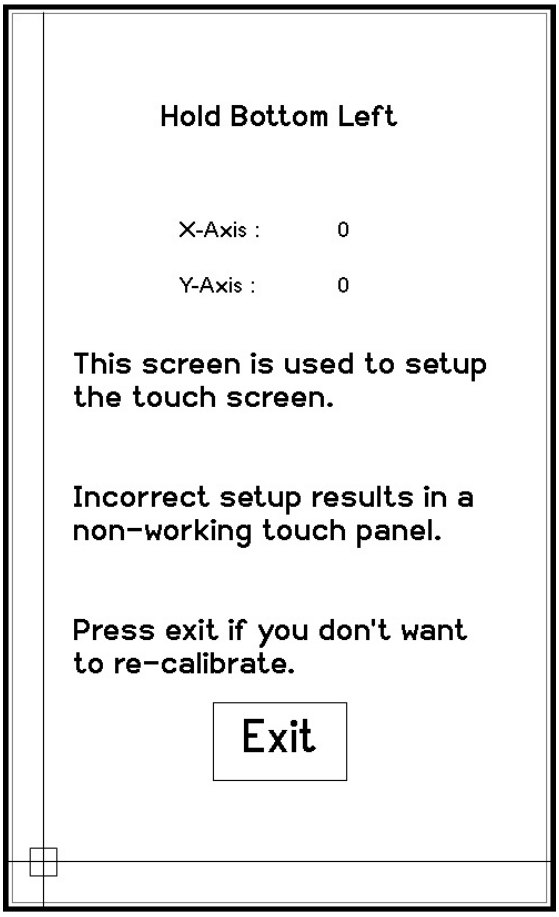


Figure 17

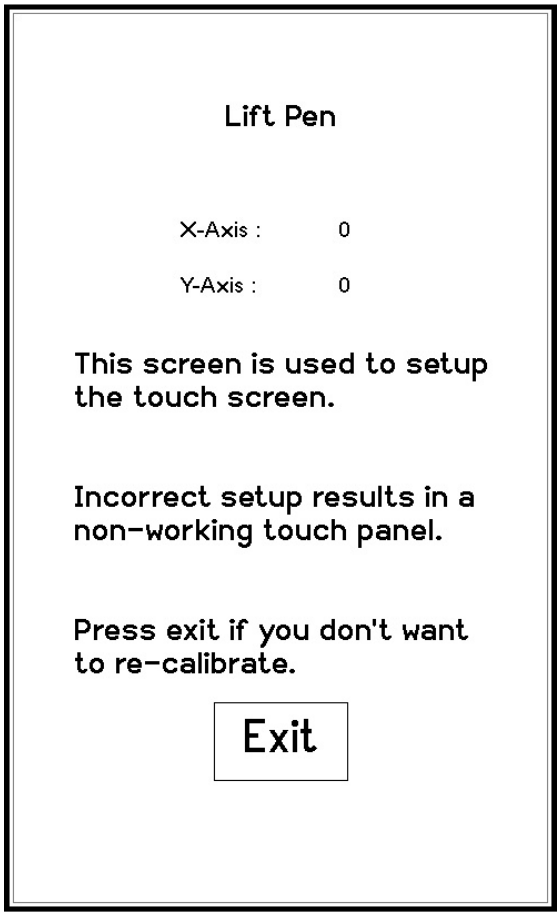


Figure 18

If the calibration screen has been entered by accident and touch calibration is not necessary, press the **Exit** button without pushing anywhere else on the screen. This process exits the touch screen calibration and continues with the standard start up procedure.

If touch calibration is required follow the below procedures:

Press and hold finger where the two lines meet inside the small box (Figure 17 bottom left hand corner). Calibration works fine when using a finger but for better results use a pen taking care not to press too hard or the screen will be damaged.

Hold finger/pen in this area until prompted to lift (Figure 18). The software will then prompt for three more touch zones resulting in co-ordinates for all four corners of the screen.

Once calibration is complete the software automatically begins the standard start up procedure.

WIND SPEED SETUP – FIGURES 19, 20, 21 & 22

Live wind speed is shown on the screen permanently (figure 19) but the units of measure and the maximum wind speed can be adjusted on the screen using the following steps:

1. To access the wind speed menu from the operating screen press the block where the current wind speed is displayed, a **Password** screen will be displayed (figure 20).
2. Enter the four digit password [- - -] followed by the **Enter** button the Set Limit screen will be displayed (figure 21).

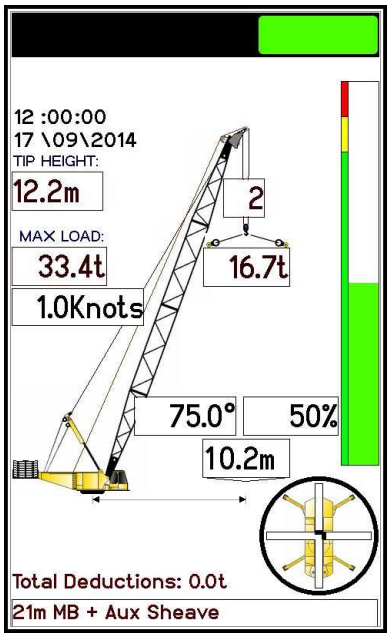


Figure 19

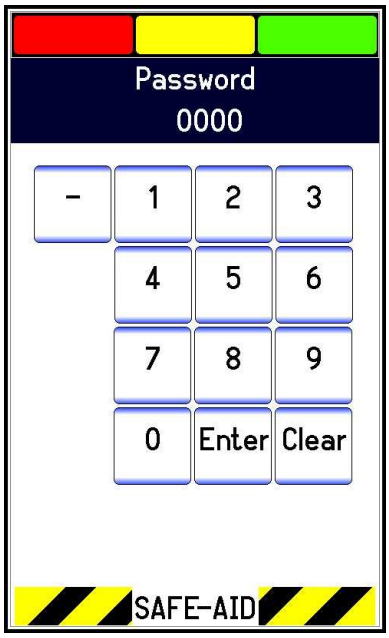


Figure 20

3. Change the units of measure by pressing the blue area of the screen where Set Limit and the limit value are written. The units of measure will change each time the area is pressed i.e. m/s – meters per second, kts - knots, mph – miles per hour and km/h – kilometers per hour.
4. Once you have selected the correct units of measure use the keypad to type in the limit value required then press **Enter**.
5. Enter the source A400 amplifier where the wind speed head is plugged in (figure 22) i.e. if the windspeed meter is plugged into the auxiliary amplifier press **Aux Angle**.

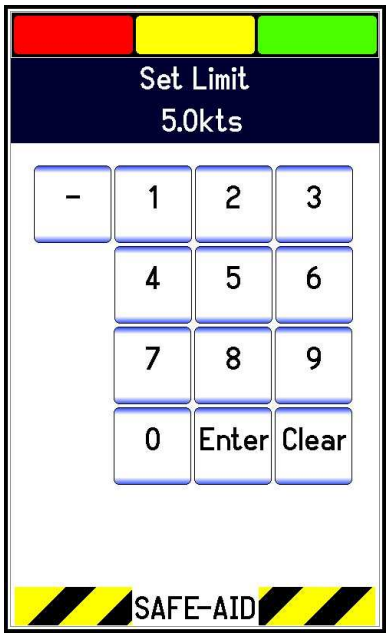


Figure 21

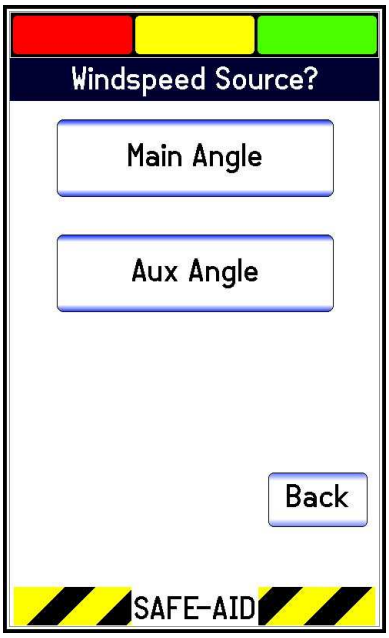


Figure 22

PROGRAM & REEVING LOCKOUT – FIGURES 23, 24, 25 & 26

Programs and reeving can be locked (fixed) to only allow one main program, one auxiliary program, fixed main reeving and a fixed auxiliary reeving by accessing **Program Lockout**.

Use the following steps to lockout programs as required:

1. Press the top left hand corner and the **Password** screen will be displayed (figure 23).

2. Enter the four digit password [- - -] followed by the **Enter** button, the Program Lockout screen will be displayed (figure 24).

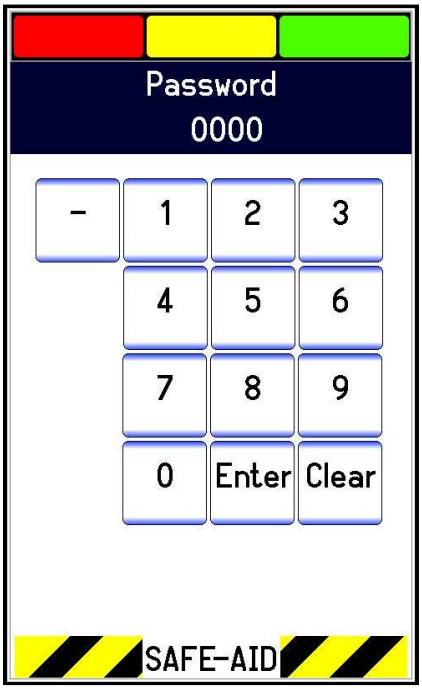


Figure 23

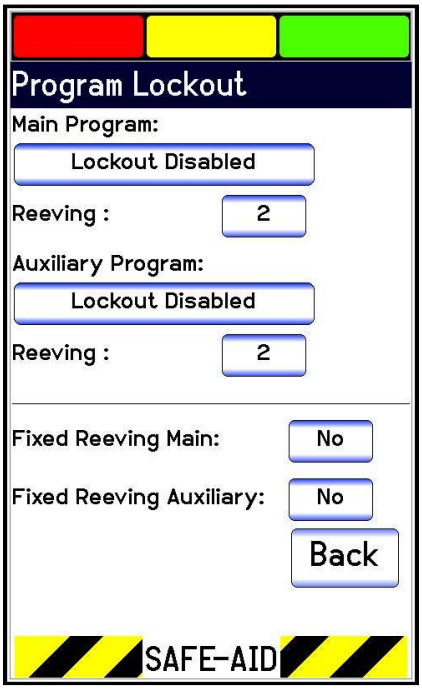


Figure 24

3. To lock or cancel a locked program select either button below the Main or Auxiliary Program, **Enable Lockout** screen (figure 24) will be displayed.

4. 

Select **No** - the screen will to return back to the Program Lockout screen and **Lockout Disabled** will be displayed in the selected button (figure 24). Repeat this for main and auxiliary programs if all programs are to have access.

5. 

Select **Yes** - the complete list of programs for the relative winch will be displayed. Select the required program followed by the Enter button e.g. 14m MAIN BOOM (figure 26) Repeat this for the second winch if required.

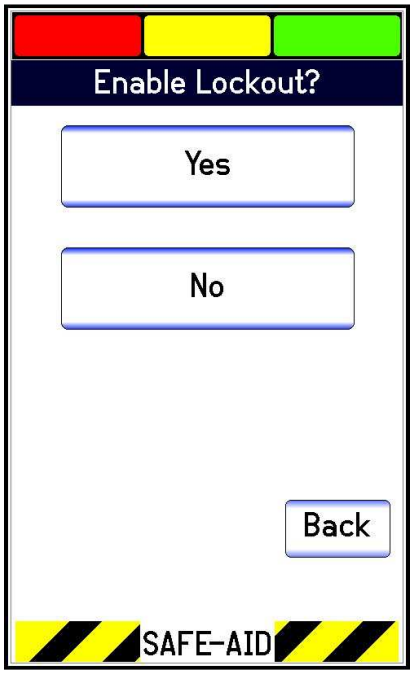


Figure 25

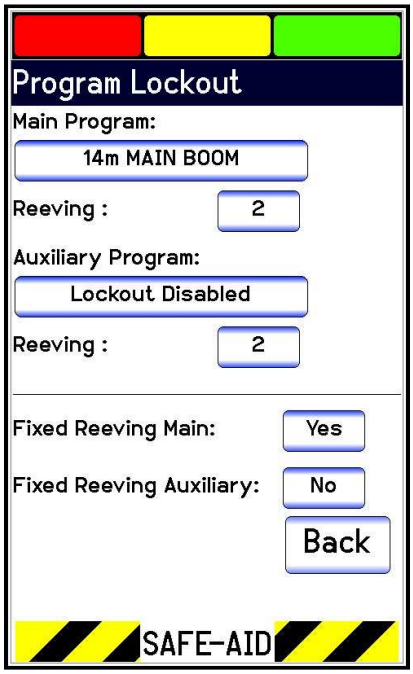


Figure 26

Use the following steps to lockout reeving as required:

1. Press the top left hand corner and the **Password** screen will be displayed (figure 23).

2. Enter the four digit password [- - -] followed by the **Enter** button, the Program Lockout screen will be displayed (figure 24).

3. 

To fix the reeving, set the required winch reeving to the fixed number of reeves required.

4. 

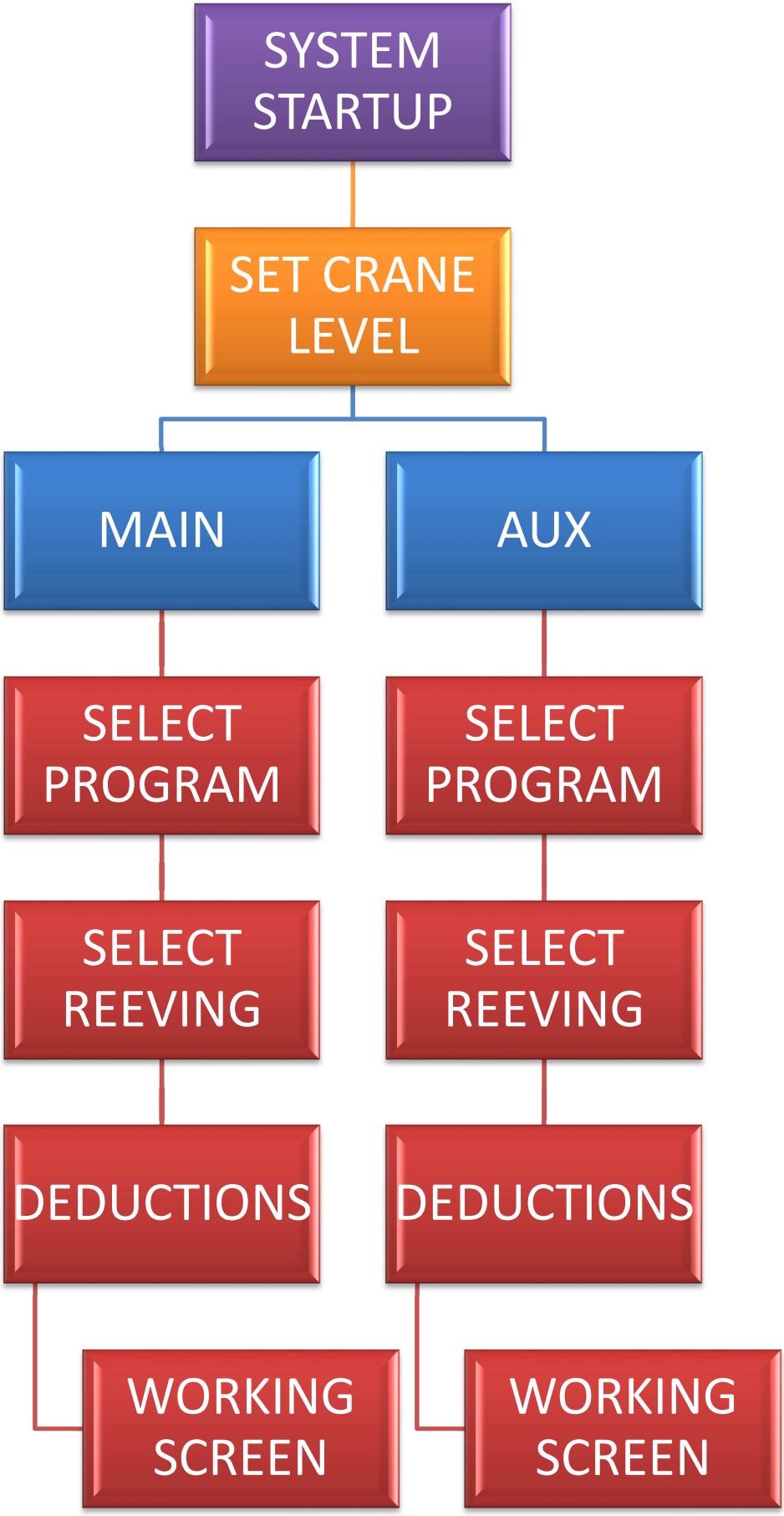
To fix the reeving to the number previously set, press on the button next to the required winch to change from **No** to **Yes.**

5. 

To allow the reeving to be user selectable, press on the button next to the required winch to change from **Yes** to **No.**

Once all the Lockout settings have been confirmed press the **Back** button to return to the operating screen

QUICK USE FLOW CHART



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INSTALLATION DETAILS

Installation Done By:

Notes:

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