



View Tech Load Moment Indicator Operator Manual



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Software
TXW001OPE

3B6 Technologies

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Introduction

WARNING

The View system is an LMI, Virtual wall limiting and Engine monitoring features.

The system should be checked for the shutoff functions prior to programming the Operating mode and confirming by trying to move the boom functions to ensure the shutoff is disabled.

A full check confirming all features on the system are functioning properly prior to lifting any loads!

To obtain the optimum performance from this system we recommend that you read and understand this manual before using the system.

Thank you for choosing 3B6 !

WARNING

For proper use of the system, carefully read and understand this page.

MAINTENANCE *The View-Tech system power and engine monitoring cables must be disconnected when welding, battery replacement, charging or jump starting the battery. Failure to comply will result in serious damage to the system.*

MACHINE WASHING *If washing the machine with a high pressure power washer, you must protect all the system components from direct spraying to avoid damage to the components.*

Failure to comply with the above warnings will result in voiding the warranty!

Lockout Bypass Switch;

The machine is equipped with an emergency bypass feature. When enabled for any reason, it is active until the machine power is turned off.

WARRANTY

THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, MADE BY EITHER THE DISTRIBUTOR OR THE MANUFACTURER ON NEW 3B6 SYSTEMS AND COMPONENTS, EXCEPT THE MANUFACTURER'S WARRANTY AGAINST DEFECTS, MATERIAL AND WORKMANSHIP SET OUT BELOW.

NEW EQUIPMENT WARRANTY

“The manufacturer warrants each new product made by the manufacturer to be free from defects in material and workmanship, its obligation and liability under this warranty being limited to replacing free of charge at its factory any part proving defective under normal use and service within twelve (12) months from the date of initial sale, providing the product is on record with the manufacturer as being installed by the distributor. If the product is not on record as being installed by the distributor, the manufacturer will consider the date of shipment from the factory as the date of initial sale. This warranty is in lieu of all other warranties, expressed or implied and the obligation and liability of the manufacturer under this warranty shall not include any transportation or other charges or the cost of installation or any liability for direct, indirect or consequential damages or delay resulting from the defect. Any operation beyond rated capacity or the improper use of the product or the substitution upon it of parts not approved by the manufacturer shall void this warranty. This warranty covers only the products of 3B6. The products of other manufacturers are covered only by such warranties as made by their manufacturers.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND OF ANY OTHER OBLIGATIONS OR LIABILITY OF THE PART OF THE MANUFACTURER, AND 3B6 NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR IT ANY OTHER LIABILITY IN CONNECTION WITH SUCH EQUIPMENT.

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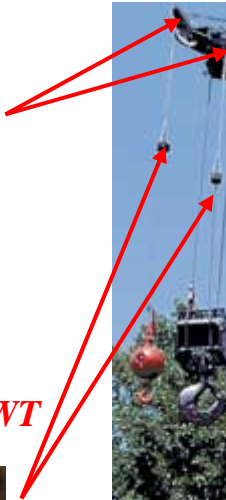
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System Layout

Page for future use

System Components

A2B Switch



A2B Switch CWT



Pressure Sensors



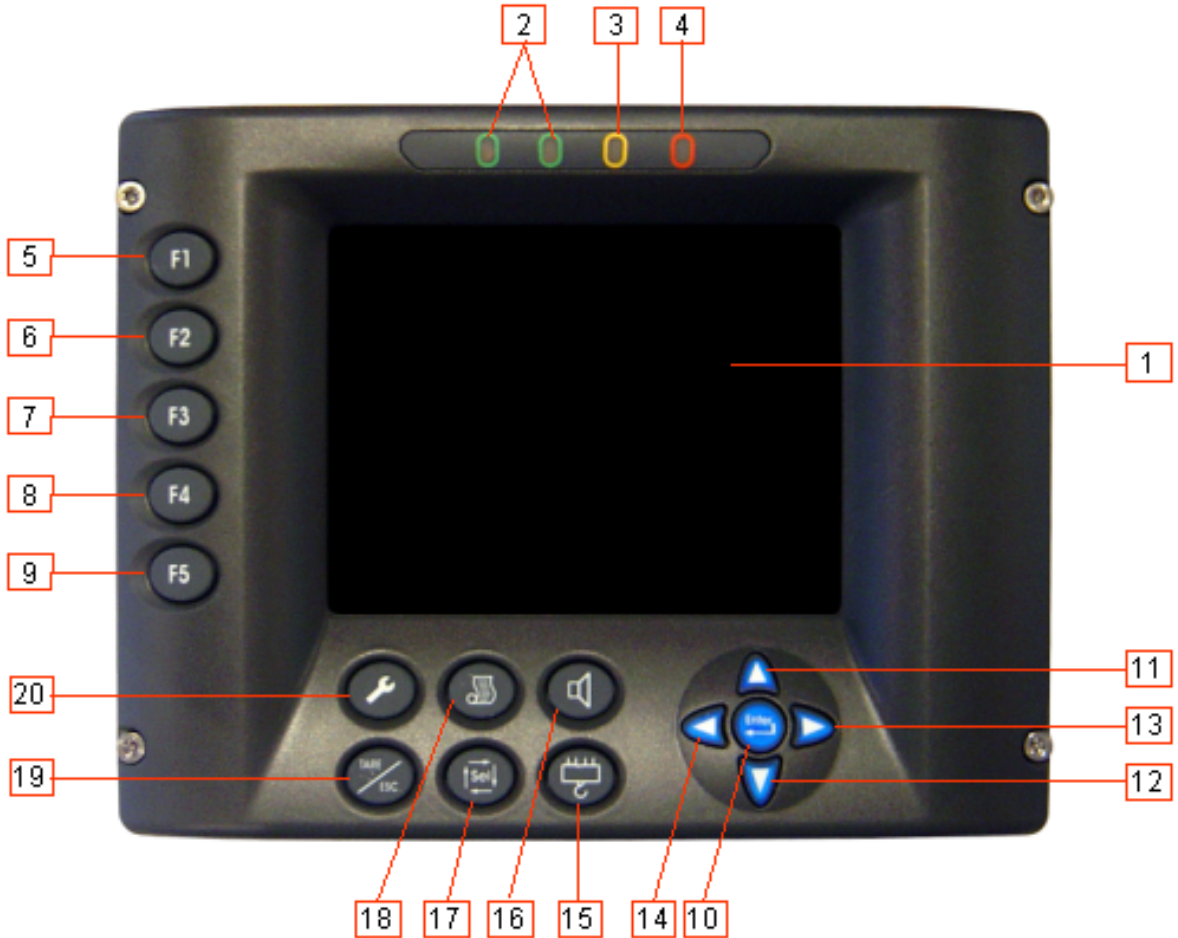
ACMCP Cable Reel



View Display





View Tech Display



Ref.	Icon	Description
1		Working data display (4 display pages for data)
2		Two Green lights indicating normal operating (0-89% of capacity)
3		Yellow light indicating pre alarm condition (90-99% of capacity)
4		Red light indicating the Overload (100% or higher of capacity/A-2-B condition)
5		Function pushbutton to select outrigger or rubber configurations
6		Function pushbutton to select the counter weight configuration

View Tech Display

<i>Ref.</i>	<i>Icon</i>	<i>Description</i>
7		<i>Select the block and winch configuration</i>
8		<i>Select the boom configuration</i>
9		<i>Select the jib stowed configuration</i>
10		<i>Confirm an action (operating mode, procedure, limit, etc)</i>
11		<i>Increase contrast in normal operation mode or Scroll up inside the menu in calibration mode only</i>
12		<i>Decrease contrast in normal operation mode or Scroll down inside the menu in calibration mode only</i>
13		<i>Page back for the screen mode or Shift Left in Calibration mode</i>
14		<i>Page next for the screen mode or Shift Right in Calibration mode</i>
15		<i>Select the Part of Line</i>
16		<i>Disable audible alarm</i>
17		<i>Select Rigging & Travel mode and scrolling in Calibration Mode</i>
18		<i>N/A</i>
19		<i>Clears the alarm messages on the display</i>
20		<i>Select setting page for Language and Unit of measurement</i>

System Start Up

The View-Tech is equipped with multiple pushbutton functions and display pages to indicate the crane condition information such as, LMI and Engine data. The View display will automatically power up once the machine is started. The unit will indicate the software version crane model number and perform a self test.

NOTE!

If you press and release the ENTER pushbutton during the self test the display will indicate a PASSWORD 4477 in the information box. Recycle the power and let the system complete the self test!



The display will change to the LMI SET-UP screen for Configuring the crane setup. The system will store the last configuration that was confirmed. Press and release the ENTER pushbutton to confirm or re-configure and press and release the ENTER pushbutton to confirm the new configuration. The system will be in an inactive mode and audible alarm enabled until the system is setup and confirmed.



System Start Up

To setup the system:

F1: Selects the Outrigger or Rubber configurations

F2: Selects the Counter weight options

F3: Selects the block and winch

F4: Selects the Main boom, aux or jib configuration

F5: Selects the jib stowed or erected on the boom

Hook Block pushbutton: Selects the proper Parts of line.

ENTER pushbutton: confirms selection (**once confirmed the screen automatically changes to the Status LMI screen**)

Right Arrow pushbutton: Scroll to the next screen

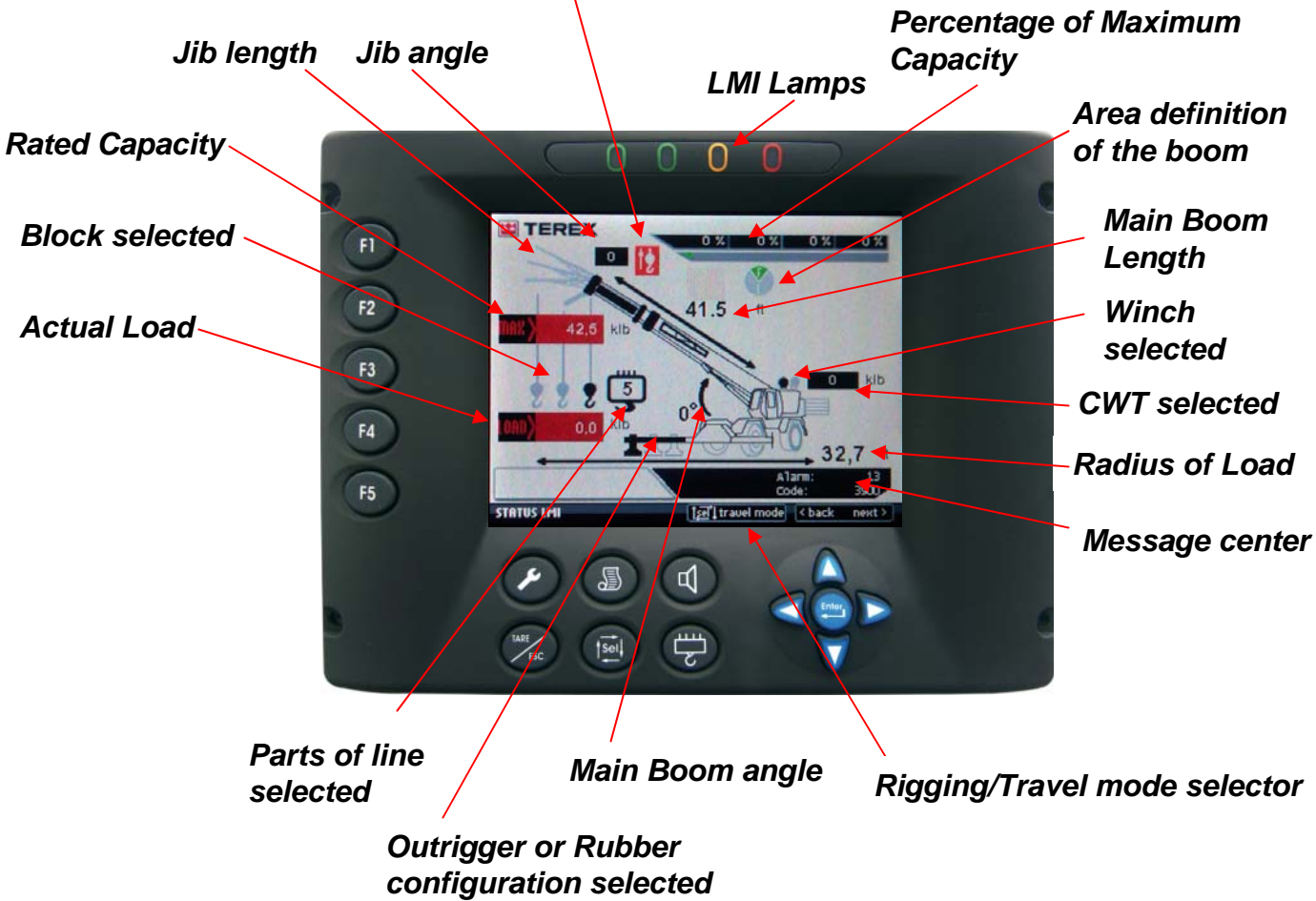
Left Arrow pushbutton: Scroll to previous screen



Status LMI information

The View monitors and indicates all crane geometry and conditions. If the symbol on the display is highlighted in **black** it is what is selected for current crane configuration

A2B condition (Icon is red when approaching A2B condition)



LMI Alarm or Fault information

The View also monitors the boom proximity (RT130 model only) and Engine Conditions and will alert the operator in the event of a fault. If the ICON is visible It indicates a fault condition.

A2B condition (Icon is present when approaching A2B condition)



Boom mode or proximity fault RT130 only

Engine alarm (Icon present when condition is active) If equipped

Alarm code message center
See page 19-20 for definition of codes

Rigging & Travel Mode

The Rigging and Travel mode can be selected from the STATUS LMI screen. To select this mode press and release the SEL pushbutton. See below



Press and release the SEL pushbutton. Display changes



To Confirm select ENTER for YES or TARE/ESC pushbutton for NO.

Rigging & Travel Mode

The Rigging and Travel mode is selected. The display will indicate the Rigging and Travel mode is enabled every 5 seconds with an audible alarm. Audible can not be silenced!



To Exit, press and release the SEL pushbutton and select No (Tare/ESC pushbutton). The screen will change back to the SETUP screen. Once setup is complete press and release the ENTER to confirm.



View Engine Monitoring information

Press and release Right Arrow pushbutton to View Engine data

Engine RPM



Engine Oil Temp
Not used on all
models

Fuel Level
Not used on all
models

Engine Oil Pressure

Water Temp

Engine FMI

Engine Oil temp and Fuel gauge level are not active until later 2010 models.

Prior to troubleshooting the View system, a simple check of the unit is necessary to avoid extended time. When the system is powered up it performs a self test of all components. During this self test if any components are disconnected or faulty it will indicate alarms in the message area code 6, 12, 13 and 190. Typically the result of pressing the ENTER pushbutton prior to the self-test completing.

This indicates that components did not pass the self test for communication, which creates the 190 communication code. A simple check is required to see the true faults if any by confirming the system by program, then once the unit has cleared and alarm codes are present press and release the Tare/ESC pushbutton on the display. The system will clear all non-faulted alarm code and display the faulted components codes only. To clear the fault memory leave power on for 20 seconds prior to turning the machine off.

Alarm Message Reset

In the event there is a component failure within the system, a fault code is displayed. After the repair of the fault condition, the system must be cleared of the fault alarm by pressing and releasing the **Tare/ESC pushbutton**.



**Tare/ESC pushbutton
To Clear Alarm
messages**

Message Center

Alarm/Fault codes

MESSAGE	CAUSE	SOLUTION
<ul style="list-style-type: none"> • <i>ALARM 1</i> 	<ul style="list-style-type: none"> • <i>E2Prom fault</i> 	<ul style="list-style-type: none"> • <i>Call Service</i>
<ul style="list-style-type: none"> • <i>Alarm 6 or 8</i> <i>Length output or signal to Low</i> 	<ul style="list-style-type: none"> • <i>Potentiometer inside Reel is faulty .</i> • <i>Possible lack of continuity in wires carrying the signals</i> • <i>Fault in Head unit connector</i> • <i>Length min out of adjustment</i> 	<ul style="list-style-type: none"> • <i>Check Wiring from cable reel to Head Unit</i> • <i>Check 12vdc supply to length pot in cable reel</i> • <i>Replace pot if damaged</i> • <i>Check spooling on cable reel</i> • <i>Call service</i>
<ul style="list-style-type: none"> • <i>ALARM 7 or 9</i> <i>Length output or signal to High</i> 	<ul style="list-style-type: none"> • <i>Potentiometer inside Reel is faulty.</i> • <i>Possible lack of continuity in wires carrying the signals</i> • <i>Fault in Head unit connector</i> • <i>Length out of adjustment</i> 	<ul style="list-style-type: none"> • <i>Check Wiring from cable reel to Head Unit</i> • <i>Check 12vdc supply to length pot in cable reel</i> • <i>Replace pot if damaged</i> • <i>Call service</i>
<ul style="list-style-type: none"> • <i>ALARM 12 or 30</i> <i>Piston side</i> <i>pressure sensor</i> <i>output or signal to low</i> 	<ul style="list-style-type: none"> • <i>Piston Pressure sensor faulty.</i> • <i>Lack of continuity in wiring</i> • <i>Moisture in connector.</i> • <i>Sensor broken or disconnected</i> 	<ul style="list-style-type: none"> • <i>Check Wiring from pressure sensor to display</i> • <i>Check 15vdc supply to pressure sensor</i> • <i>Check output on pressure sensor</i> • <i>Check connector for moisture or hydraulic fluid</i> • <i>Check CAN BUS lines</i>
<ul style="list-style-type: none"> • <i>ALARM 13 or 32</i> <i>Rod side Pressure</i> <i>Sensor output or signal to Low</i> 	<ul style="list-style-type: none"> • <i>Rod pressure sensor faulty</i> • <i>Lack of continuity in wiring</i> • <i>Moisture in connector.</i> • <i>Sensor broken or disconnected</i> 	<ul style="list-style-type: none"> • <i>Check for 15vdc supply</i> • <i>Check for output 0.5 vdc min</i> • <i>Check for moisture or fluid.</i> • <i>Check insertion of connector on transducer and wiring</i> • <i>Replace Transducer if faulty</i> • <i>Check CAN BUS lines</i>
<ul style="list-style-type: none"> • <i>ALARM 15 or 26</i> <i>Angle sensor</i> <i>output or signal to Low</i> 	<ul style="list-style-type: none"> • <i>Angle sensor faulty</i> • <i>Lack of continuity in wiring</i> • <i>Moisture in connector.</i> • <i>Angle out of adjustment</i> 	<ul style="list-style-type: none"> • <i>Check for 15vdc supply</i> • <i>Check for output 0.5 vdc min</i> • <i>Check for moisture or fluid.</i> • <i>Check insertion of connector on transducer and wiring</i> • <i>Replace Transducer if faulty</i> • <i>Check CAN BUS lines.</i>

Alarm/Fault codes

<i>MESSAGE</i>	<i>CAUSE</i>	<i>SOLUTION</i>
<ul style="list-style-type: none"> • <i>ALARM 22 or 31</i> <i>Piston side</i> <i>pressure sensor</i> <i>output or signal to</i> <i>high</i> 	<ul style="list-style-type: none"> • <i>Piston Pressure sensor faulty.</i> • <i>Lack of continuity in wiring</i> • <i>Moisture in connector.</i> • <i>Sensor broken or disconnected</i> 	<ul style="list-style-type: none"> • <i>Check Wiring from pressure sensor to display</i> • <i>Check 15vdc supply to pressure sensor</i> • <i>Check output on pressure sensor</i> • <i>Check connector for moisture or hydraulic fluid</i> • <i>Check CAN BUS lines</i>
<ul style="list-style-type: none"> • <i>ALARM 23 or 33</i> <i>Rod Pressure</i> <i>Sensor output or</i> <i>signal to High</i> 	<ul style="list-style-type: none"> • <i>Rod pressure sensor faulty</i> • <i>Lack of continuity in wiring</i> • <i>Moisture in connector</i> • <i>Sensor broken or disconnected</i> 	<ul style="list-style-type: none"> • <i>Check for 15vdc supply</i> • <i>Check for output</i> • <i>Check connection wires.</i> • <i>Check insertion of connector on transducer and wiring</i> • <i>Replace Transducer if faulty</i> • <i>Lower boom angle</i>
<ul style="list-style-type: none"> • <i>ALARM 25 or 27</i> <i>Angle sensor</i> <i>output or signal to</i> <i>High</i> 	<ul style="list-style-type: none"> • <i>Angle sensor faulty</i> • <i>Lack of continuity in wiring</i> • <i>Moisture in connector.</i> • <i>Angle out of adjustment</i> 	<ul style="list-style-type: none"> • <i>Check for 15vdc supply</i> • <i>Check for output 0.5 vdc min</i> • <i>Check for moisture or fluid.</i> • <i>Check insertion of connector on transducer and wiring</i> • <i>Replace Transducer if faulty</i> • <i>Check CAN BUS lines.</i>
<ul style="list-style-type: none"> • <i>ALARM 40</i> • <i>ALARM 41</i> • <i>ALARM 42</i> • <i>ALARM 120</i> • <i>ALARM 121</i> • <i>ALARM 130</i> • <i>ALARM 201</i> 	<ul style="list-style-type: none"> • <i>CRC fault Run</i> • <i>CRC fault TAB</i> • <i>CRC fault Program</i> • <i>Fault in CAN BUS cable reel</i> • <i>Fault in cable reel Comm</i> • <i>CANBUS Time out OEM</i> • <i>WDO fault</i> 	<ul style="list-style-type: none"> • <i>Check Wiring from cable reel to View</i> <p style="text-align: center;"><i>Call service</i></p>
<ul style="list-style-type: none"> • <i>ALARM 202</i> <i>Lockout</i> 	<ul style="list-style-type: none"> • <i>Wiring faulty or Shutoff alarm</i> 	<ul style="list-style-type: none"> • <i>Check wiring from lockout circuit</i>
<ul style="list-style-type: none"> • <i>ALARM 220</i> <i>Bypass key enabled</i> 	<ul style="list-style-type: none"> • <i>Faulty wiring to bypass key switch</i> • <i>Bypass key switch enabled</i> 	<ul style="list-style-type: none"> • <i>Check wiring from key switch to View</i> • <i>Disable bypass key switch</i> • <i>Call service</i>
<ul style="list-style-type: none"> • <i>ALARM 225</i> <i>Overload</i> <i>condition</i> 	<ul style="list-style-type: none"> • <i>Rated capacity exceeded</i> • <i>Boom cylinder topped</i> 	<ul style="list-style-type: none"> • <i>Reduce capacity or radius</i> • <i>Reduce Boom angle</i> • <i>Call service</i>

AUTO DIAGNOSTIC HYDRAULIC PRESSURE DATA

Starting from the Status LMI screen, press and release the **ENTER pushbutton**. The Program/Operating area will indicate the piston pressure values. When raising the boom PL act should increase in value.

```

PL a d c      P L a c t
      3 0 0      5 5 0
  
```

- *PL adc* : Value (bit) directly from the pressure sensor
- *PL act*: Value of the pressure on the piston side in bars (14.6 psi equals 1 bar)

Press and release the Up **pushbutton**. The display will indicate the Rod pressure values. When raising the boom PH act should stay relatively stable at the value displayed.

```

P H a d c      P H a c t
      1 0 0      2 0 0
  
```

- *PH adc* : Value (bit) directly from the pressure sensor
- *PH act*: Value of the pressure on the rod side in bars (14.6 psi equals 1 bar)

Continuing to press and release the UP pushbutton will allow viewing of other system data information for troubleshooting. To return to the main LMI screen, press and release the TARE/ESC pushbutton.

AUTO DIAGNOSTIC
Length and Angle Data

Press and release the **UP pushbutton** the display will indicate the length (L1) values.

```
L1 a d c    L1 a c t
          4 0 0    1 8 7 0
```

- L1adc : Value (bit) directly from the potentiometer of the Length 1
- L1act: Value (centimeters) of the main boom length

Press and release the **UP pushbutton** the display will indicate the main boom angle (A1) values.

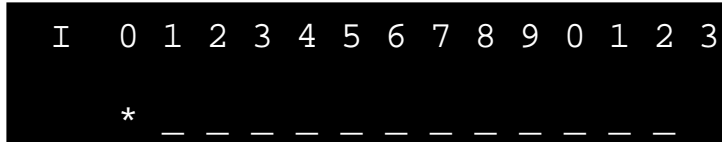
```
A1 a d c    A1 a c t
          7 0 0    7 8 0
```

- A1adc : Value (bit) directly from the angle sensor
- A1act: Value (degree x 10) of the main boom angle

AUTO DIAGNOSTIC

Digital Sensor Inputs

Press and release the **UP pushbutton** the display will indicate the digital input s. if an asterisk is present, the input is active. If the asterisk is not present the input is inactive.



Active inputs for View system RT130 only

0 = Boom Proximity switch 1

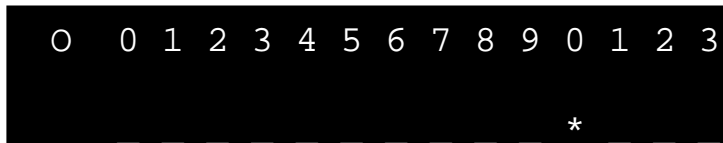
1 = Boom Proximity switch 2

7 = Bypass key switch active

AUTO DIAGNOSTIC

Digital Sensor Outputs

Press and release the **UP pushbutton** the display will indicate the digital output s. if an asterisk is present, the input is active. If the asterisk is not present the output is inactive.



AUTO DIAGNOSTIC

External Components

Press and release the **UP pushbutton** the display will indicate the external component values.

AUTO DIAGNOSTIC*Rotation/Area definition (Swing potentiometer) Angle Data*

Press and release the **UP pushbutton** the display will indicate the rotation 1 (R1) values.
Swing pot

```
R1 a d c      R1 a c t
                4 0 0      1 8 7 0
```

- *R1 adc* : Value (bit) directly from the potentiometer of the Rotation1
- *R1 act*: Value (degrees) of the rotation 1 swing pot angle

Press and release the **UP pushbutton** the display will indicate the rotation 2 (R2) values.
Swing pot

```
R2 a d c      R2 a c t
                7 0 0      7 8 0
```

- *R2 adc* : Value (bit) directly from the angle sensor
- *R2 act*: Value (degrees) of the rotation 2 swing pot angle

Language/Unit of measurement

Changing the Language or Unit of Measurement. Press and release the **Wrench** pushbutton from the **SETUP** page.



Use the **F1** to change the language or **F2** to change the unit of measurement. Press and release the **ENTER** pushbutton to save the changes.



Press and release the **Wrench** or **Right Arrow** pushbutton to return to the **SETUP** page.

ISAAC/Range Limiting feature set up

These features are visual warning only and do not enable the lockout functions of the machine

To set up the limits of the Angle, Height or Radius you must position the boom in the condition and then press and release the F1, F2 or F3 pushbuttons.



To enable the limit settings position the boom in the proper angle, height or radius and press and release the

F1 to set the Angle limit

F2 to set the Height limit

F3 to set the Radius limit

To disable the limit press and release the F1, F2 or F3 pushbutton and limit value will return to the default value of 999, 320.0 or 99.9.

From the Status LMI screen

When any of the above limits are set and active, the text message will flash in the message area at 90% of the limit and stop flashing when the limit is at a 100%

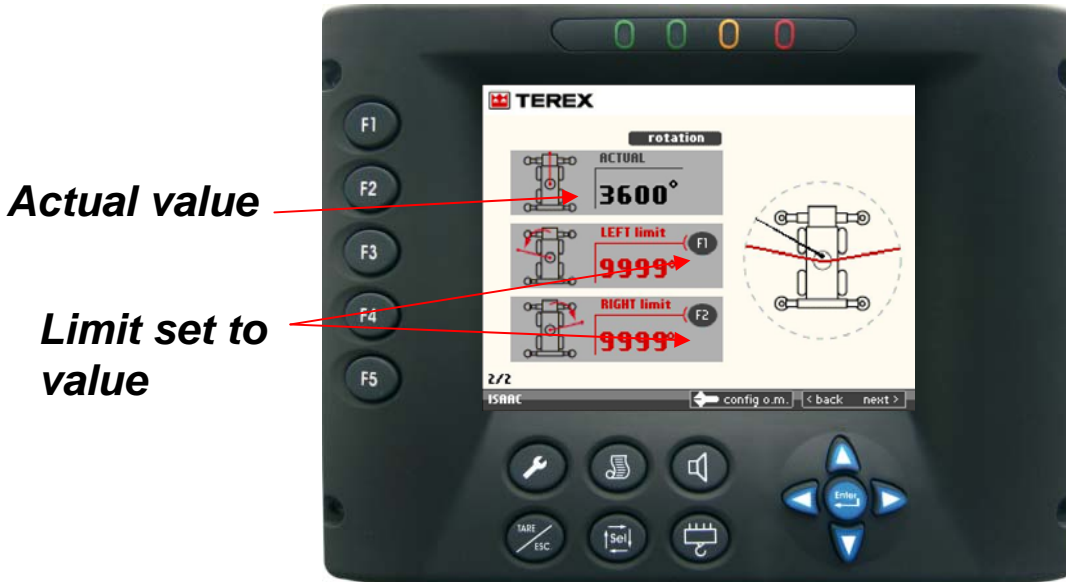
Flashing (90%) or Solid (100%) Message

ISAAC ANGLE
ISAAC HEIGHT
ISAAC RADIUS

ISAAC/Range Limiting set up

These features are visual warning only and do not enable the lockout functions of the machine

To set up the limits of the Rotation you must position the boom in the condition and then press and release the F1, or F2 pushbuttons.



To enable the limit settings position the boom in the proper area and press and release the

F1 to set the Left limit

F2 to set the Right limit

To disable the limits press and release the F1, F2 or F3 pushbutton and limit value will return to the default value of 999, 320.0 or 99.9.

From the Status LMI screen

When any of the above limits are set and active, the text message will flash in the message area at 90% of the limit and stop flashing when the limit is at a 100%

Flashing (90%) or Solid (100%) Message

ISAAC CW (right)

ISSAC CCW (left)