Proprietary Information

Please read this User Manual carefully before using this product.

This specification is proprietary property of VALOR. It shall not be duplicated, used, or disclosed in whole or in part for any purpose other than official VALOR business activities, including evaluation by prospective customers as identified by designated VALOR employees.
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User Manual Overview

Description of Device

1. There are 3 buttons for navigating the screens through an intuitive menu system.

2. Back-lighting can be controlled through the panel lamp dimmer input through the menu screen. A dead-fronted warning indicator is positioned above the graphic display window and is capable of illuminating as an amber or red warning.

3. This user guide is intended to help you understand functionality of the C-COM 2G module.
User Manual Overview

Device Specifications

Physical Characteristics

- Housing and Bezel Material: Chrome or Black polycarbonate ABS plastic
- Connector: Single Deutsch DT06, polarized and locking

Environmental Characteristics

- Temperature, Humidity, Shock, Vibration, and Salt Spray: Meets or exceeds SAE #J1455-1994-08
- Operating Temperature: -30 to +85°C
- Storage Temperature: -55 to +105°C

Electrical Characteristics

- Operating Limits: 9 to 32 VDC, reverse polarity protected
- Transient Protection: Meets or exceeds SAE #J1455-1994-08
User Manual Overview

Device Specifications

Electrical Inputs

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Battery/Ignition</td>
<td>9 to 32 volts</td>
</tr>
<tr>
<td>Input Current</td>
<td>500 mA</td>
</tr>
<tr>
<td>Backlighting</td>
<td>Variable through pin-3 input with 12v or 24v PWM dimmer or menu setup screen.</td>
</tr>
</tbody>
</table>

Data Bus: SAE J1939 (CAN) 250K

Electrical Outputs

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch To Ground Control</td>
<td>One, 500 mA</td>
</tr>
</tbody>
</table>

Display Characteristics

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Positive mode, transflective, LCD dot matrix, FSTN</td>
</tr>
<tr>
<td>Aperture Size (inches)</td>
<td>1.21W × 0.64H</td>
</tr>
<tr>
<td>Pixel Dimensions</td>
<td>106 pixels wide, 56 pixels high</td>
</tr>
<tr>
<td>Viewing Angle</td>
<td>12:00</td>
</tr>
<tr>
<td>Backlight Color</td>
<td>Standard is Amber (can be customized to any color)</td>
</tr>
</tbody>
</table>
User Manual Overview

Physical Device Characteristics

Back of Device:  
Front of Device:
User Manual Overview

Device Dimensions

Gauge Dimensions:

Panel Cut-Out Dimensions:

Dimensions measured in inches (mm)
User Manual Overview

Device Rear Electrical Connections

<table>
<thead>
<tr>
<th>PIN</th>
<th>SIGNAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Battery/Ignition</td>
</tr>
<tr>
<td>2</td>
<td>Ground</td>
</tr>
<tr>
<td>3</td>
<td>Backlight (optional Analog input)</td>
</tr>
<tr>
<td>4</td>
<td>J1939+</td>
</tr>
<tr>
<td>5</td>
<td>J1939-</td>
</tr>
<tr>
<td>6</td>
<td>Output, switch to ground</td>
</tr>
</tbody>
</table>
Default Settings

The following settings will be the default for initial programming.

- Default contrast set to 50%.
- Default backlighting control set by pin 3.
- When manually backlighting control selected, default set to 50%.
- Units set to English.
- C-COM 2G source address is 40 (0x28).
- Address claim NAME information:
  - Arbitrary Address Capable=0
  - Industry Group=0 (Global)
  - Vehicle System Instance=0
  - Vehicle System=0 (Non-specific)
  - Function=60 (Cab Display)
  - Function Instance=0
  - ECU Instance=0
  - Manufacturer Code=4 (Ametek-Dixson)
  - Identity Number=0
User Manual Overview

Device Software Versions

The following show the variations between the different software versions of each device. Due to the fact that each device operate at different data rates, they cannot be interchanged.

1700 Device Software

Baud Rate 250 KB
Same alerts display as all other versions of the Valor Display firmware. Same information displayed as all other version of the Valor firmware. Works with 4.0 KPA per bite versions of Valor TPMS firmware. *Does not have the Baseline confirmation screen.*

1701 Device Software

Baud Rate 250 KB
Same alerts display as all other versions of the Valor Display firmware. Same information displayed as all other version of the Valor firmware. Works with 5.5 KPA per bite versions of Valor TPMS firmware. *Includes Baseline confirmation screen.*

*Device Software Versions continued on the next page.*
Device Software Versions

The following show the variations between the different software versions of each device. Due to the fact that each device operate at different data rates, they cannot be interchanged.

1702 Software Device

Baud Rate 500 KB
Same alerts display as all other versions of the Valor Display firmware. Same information displayed as all other version of the Valor firmware. Works with 5.5 KPA per bite versions of Valor TPMS firmware. Includes Baseline confirmation screen.
User Manual Overview

Main Screens

**LEFT HOLD** will start 2.5 second automatic rotation *decrementing* through Tire position, then Axle position. When on the lowest Axel-Tire position, it will then repeat from highest Axle-Tire position. ANY button press will stop rotation.

**RIGHT HOLD** will start 2.5 second automatic rotation *incrementing* Tire position, then Axle position. When on the highest Axle-Tire position, it will then repeat from lowest Axle-Tire position. ANY button press will stop rotation.

*Diagram continued on the next page.*
Main Screens

Axle 1 Tire 1
123 °F 123 PSI
RIGHT PRESS

Axle 2 Tire 1
123 °F 123 PSI
RIGHT PRESS

Axle N Tire 1
123 °F 123 PSI
LEFT PRESS
(Returns to Axle 1 Tire 1)

Axle 1 Tire 2
123 °F 123 PSI
RIGHT PRESS

Axle 2 Tire 2
123 °F 123 PSI
RIGHT PRESS

Axle N Tire 2
LEFT PRESS
(Returns to Axle 1 Tire 2)

Axle 1 Tire 3
123 °F 123 PSI
RIGHT PRESS

Axle 2 Tire 3
123 °F 123 PSI
RIGHT PRESS

Axle N Tire 3
LEFT PRESS
(Returns to Axle 1 Tire 3)

Axle 1 Tire 4
123 °F 123 PSI
RIGHT PRESS

Axle 2 Tire 4
123 °F 123 PSI
RIGHT PRESS

Axle N Tire 4
123 °F 123 PSI
LEFT PRESS
(Returns to Axle 1 Tire 4)

RIGHT PRESS
(Returns to Axle 1 Tire 1)

RIGHT PRESS
(Returns to Axle 2 Tire 1)

RIGHT PRESS
(Returns to Axle N Tire 1)

LEFT PRESS
(Returns to Axle 1 Tire 2)

LEFT PRESS
(Returns to Axle 1 Tire 3)

LEFT PRESS
(Returns to Axle 1 Tire 4)

HOLD CENTER BUTTON
(Takes You To Setup And Info Screens)
User Manual Overview

Setup And Info Screens

Active Warnings Intro

Press Center Button

Right Button

Diagram continued on the next page.

Active Warnings

Press Center Button

To return to Active Warnings Intro Screen

No Warnings

1 Active Warnings

1+ Active Warnings

Display Next Active Warning

1 Over Pressure

1 Over Pressure

Press Left Button

www.valortpms.com
User Manual Overview

Setup And Info Screens

Baseline Intro

Baseline

×

✓

PRESS CENTER BUTTON

(Diagram continued on the next page.)

Baseline Confirmation

PRESS CENTER BUTTON
To return to Baseline Intro Screen

Baseline

123 PSI

PRESS LEFT BUTTON

DISPLAY NEXT AXLE

PRESS RIGHT BUTTON

DISPLAY NEXT TIRE
User Manual Overview

Setup And Info Screens

Select Units
CENTER – Keep previous selected unit
RIGHT  – Save selected units
LEFT   – Rotate selections

Adjust Contrast
CENTER – Save selected setting. Exit
RIGHT  – Increase contrast
LEFT   – Decrease contrast

(Diagram continued on next page.)
User Manual Overview

Setup And Info Screens

Back-light Control
- Set Manually
- Set By Pin 3

RIGHT BUTTON PRESS

Select Brightness
- CENTER – Keep previous setting. Exit
- RIGHT – Save selected setting. Exit
- LEFT – Rotate selections

PRESS CENTER BUTTON

Intensity

Adjust Intensity
- CENTER – Save selected setting. Exit
- RIGHT – Increase intensity
- LEFT – Decrease intensity

Back-light Control
- Set Manually
- Set By Pin 3

SW: 1.1
SW P/N: 1702A

Software Version
PRESS ANY BUTTON TO RETURN TO MAIN SCREEN
Software version may vary from the one shown in the diagram.
User Manual Overview

Additional Main Screen Displays

Temperature Warning
Axle 1 Tire 1 has temperature warning.

Pressure or Leak Warning
Axle 1 Tire 1 has a pressure or leak warning.

6 Tires Per Axle
User Manual Overview

Additional Main Screen Displays

- 2 Tires Per Axle
- Metric Units Selected
- Tire Communication Issue
  PGN 65268 never received or lost reception for 100 seconds
User Manual Overview

Pop-up Warnings

Tire Communication Issue
PGN 65268 never received or lost reception for 100 seconds

Under Pressure Warning
SPN 2587=011 or 100 Amber LED ON for 011 Red LED ON for 100

Over Pressure Warning
SPN 2587=001 Amber LED ON.
User Manual Overview

Pop-up Warnings

Over Temperature Warning
SPN 1699=01 Amber LED ON

Leak Warning
SPN 1698=01 Red LED ON

Signal Loss Warning
Temperature=401°F, Pressure=188 PSI
Amber LED ON
Screen Descriptions

POWER-UP SCREEN

Description

‣ Performed when power is turned on. Back-light turns on.
‣ All-LCD segments screen displays for 1.5 seconds, then Valor logo screen displays for 1.5 seconds.
‣ Amber LED is on for 1.5 seconds, and then Red LED is on for 1.5 seconds.
‣ After All-LCD segments screen (3 seconds from power on) display will go to a TPMS Initializing Screen.

LED

‣ Amber LED is on for 1.5 seconds, and then Red LED is on for 1.5 seconds.

Buttons

‣ No function.
Screen Descriptions

TPMS Initializing

TPMS INITIALIZING SCREEN

Description
Performed when power is turned on following power-up screen. When same tire location is received twice (assumes all tire locations have been transmitted in rotation) or same tire location is not received for 20 seconds, then exits to Main Screen.

LED
- Off.

Buttons
- No function.
Screen Descriptions

MAIN SCREEN

Description

- Displays tire location, tire temperature and tire pressure. Axle position number is displayed in center.
- Tire position is filled within graphic based on position.
- Tire axle and position display is learned and populated continually.
- If a temperature warning is active for tire location, warning graphic is displayed and temperature display value is highlighted.
- If a pressure or leak warning is active for tire location, warning graphic is displayed and pressure display value is highlighted.
- Temperature value is display in nearest whole Fahrenheit (F) if English units selected, or nearest whole Celsius (C) if Metric units selected.
- Pressure value is display in nearest whole pound per square inch (PSI) if English units selected, or nearest whole kilo pascal (kPa) if Metric units selected.
- TIRE COMM warning is displayed if no sensors are received or all sensors have lost reception for 100 seconds.
MAIN SCREEN

Buttons

- Left Button Hold will start forward 2.5 second automatic rotation decrementing Tire position, then Axel position. When on lowest Axle-Tire position, then repeat from highest Axle-Tire position. Any button press will stop automatic rotation.
- Center Button Hold will go to Active Warning Intro screen.
- Right Button Hold will start forward 2.5 second automatic rotation incrementing Tire position, then Axel position. When on highest Axle-Tire position, then repeat from lowest Axle-Tire position. Any button press will stop automatic rotation.
- Left Button Press will go to next available Axle position or rotate back to first axle position.
- Center Button Press if in 2.5 second auto rotate sequence, will stop 2.5 second auto rotate sequence.
- Right Button Press will go to next available Tire position for axle or rotate back to first tire position for axle.
Screen Descriptions

ACTIVE WARNINGS INTRO SCREEN

Description
Active Warnings Intro Screen is an introductory screen for entering and reviewing active warnings.

Buttons
- Center button press will go to Baseline Confirmation Intro Screen.
- Right button press will go to Active Warnings Screen.
- Center button hold will go to Main Screen.
Screen Descriptions

ACTIVE WARNINGS SCREEN

Description
Active Warnings Screen displays a list of all active pop-up warnings that have previously been displayed.

Display Items
- “No Warnings” is displayed if no pop-up warnings are active.
- If at least one pop-up warning is active, the pop-up warning will display in the list.

Buttons
- Center button press will go to Active Warnings Intro Screen.
- Left button press, if at least one pop-up warning is active, will go to next active pop-up warning in list.
- Center button hold will go to Main Screen.
Baseline Confirmation Intro Screen

**Please Note:** If you are using software version 1700, your device **will not** have access to the Baseline Confirmation screens. This function is not available for this particular firmware.

**Description**
Baseline Confirmation Intro Screen is an introductory screen for entering and reviewing baseline pressure value for each tire.

**Buttons**
- Center button press will go to Units Select Screen.
- Right button press will go to Baseline Confirmation Screen.
- Center button hold will go to Main Screen.
Screen Descriptions

BASELINE CONFIRMATION SCREEN

Description
Baseline Confirmation Screen displays each tire’s baseline pressure value.

Display Items
- TIRE COMM warning is displayed if PGN 65268 SA 51 is never received or lost reception for 100 seconds.
- Baseline pressure value is displayed in PSI when English units are selected, and kPa when Metric units are selected. Dashes are displayed if baseline pressure value for tire was not received.

Buttons
- Center button press will go to Baseline Confirmation Intro Screen.
- Left Button Press will go to next available Axle position or rotate back to first axle position.
- Right Button Press will go to next available Tire position for axle or rotate back to first tire position for axle.
- Center button hold will go to Main Screen.
Screen Descriptions

SELECT UNITS SCREEN

Description

‣ Units Select Screen allows the user to switch the displayed units between Metric and English.

Buttons

‣ Left button press will change setting between Metric and English.
‣ Right button press will save selected setting, and go to Contrast Adjust Screen. Center button press will keep setting before screen was entered and go to Contrast Adjust Screen.
‣ Center button hold will go to Main Screen.
Screen Descriptions

CONTRAST ADJUST SCREEN

Description

- Contrast Adjust Screen allows the user to adjust the LCD contrast setting.

Display Items

- Contrast bar graph indication displays the current contrast setting. Range is 0-100% with 5% resolution. Left button will decrease contrast, Right button will increase contrast, and Center button saves contrast.

Buttons

- Left button press will decrement contrast by 5% until it reaches 0%. Left button hold will decrement while button is held until it reaches 0%.
- Right button press will increment contrast by 5% until it reaches 100%. Right button hold will increment while button is held until it reaches 100%.
- Center button press will save contrast setting and go to Back-light Control Screen. Center button hold will go to Main Screen.
Screen Descriptions

BACK-LIGHT CONTROL SCREEN

Description

- Back-light Control Screen allows the user to switch the back-lighting control between an external dimmer “Set by Pin 3” (not available) or set manually in the menu screen “Set Manually”.

Display Items

- “Set Manually” sets back-lighting control to Brightness Adjust Screen setting. “Set By Pin 3” sets backlighting control to pin-3 input via an external dimmer (not available).

Directions continued on the next page.
Screen Descriptions

BACK-LIGHT CONTROL SCREEN

Buttons

- Left button press will change setting between “Set by Pin 3” (not available) and “Set Manually”.
- Right button press will save selected setting. If “Set Manually” is selected, will go to Brightness Adjust Screen.
- Center button press will keep setting before screen was entered and go to Software Version Information Screen.
- Center button hold will go to Main Screen.

“Set Manually” Back-lighting Control

- “Set manually” back-lighting will set the back-lighting intensity of the LCD to the setting in Brightness Adjust Screen. Range of setting is 0-100% intensity level.
Screen Descriptions

BRIGHTNESS ADJUST SCREEN

Description

‣ Back-light Adjust Screen allows the user to change the back-lighting intensity of the LCD.

Display Items

‣ Intensity bar graph indication displays the current intensity setting. Range is 0-100% with 5% resolution. Left button will decrease intensity, Right button will increase intensity, and Center button saves intensity.

Buttons

‣ Left button press will decrement intensity by 5% until it reaches 0%. Left button hold will decrement while button is held until it reaches 0%.
‣ Right button press will increment intensity by 5% until it reaches 100%. Right button hold will increment while button is held until it reaches 100%.
‣ Center button press will save intensity setting and go to Software Version Information Screen.
‣ Center button hold will go to Main Screen.
Screen Descriptions

SOFTWARE VERSION INFORMATION SCREEN

Description

‣ Software Version Information screen display major and minor version level and software part number. Your software version may vary from the one shown in diagram.

Display Items

‣ “SW:” + major and minor version text is Arial bold 10-point font. Center aligned.
‣ Valor determines major and minor version numbers.
‣ “SW P/N:” + part number text is Arial bold 10-point font. Center aligned. Valor determines 4-digit part number and revision letter.

Buttons

‣ Any Button Press will go to Main Screen.
Pop-up Warnings

UNDER PRESSURE POP-UP WARNING

Description

- Under Pressure Pop-up Warning displays immediately
- Amber LED is on when tire is more than 12.5% below base line.
- Red LED is on when tire is more than 20% below base line.
- Warning can be reviewed in the Active Warning Screen.

Buttons

- Any button pressed will return to previous displayed screen. LED will remain on.
Pop-Up Warnings

OVER PRESSURE POP-UP WARNING

Description

- Over Pressure Pop-up Warning displays immediately
- Amber LED is on when tire is 15% over base line pressure.
- Red LED is on when tire is 30% over base line
- Warning can be reviewed in the Active Warning Screen.

Buttons

- Any button pressed will return to previous displayed screen. LED will remain on
Pop-Up Warnings

OVER TEMPERATURE POP-UP WARNING

Description

- Over Temperature Pop-up Warning displays immediately and amber LED is on, if tire is over 176 degrees F.
- Warning can be reviewed in the Active Warning Screen.

Buttons

- Any button pressed will return to previous displayed screen. LED will remain on.
Pop-Up Warnings

LEAK POP-UP WARNING

Description

- Leak Pop-up Warning displays immediately and red LED is on, if system detects pressure loss of 4.8 PSI (or greater) over 16 seconds.
- Warning can be reviewed in the Active Warning Screen.

Buttons

- Any button pressed will return to previous displayed screen. LED will remain on.
Pop-Up Warnings

TIRE COMMUNICATION POP-UP WARNING

Description

‣ Tire Communication Pop-up Warning displays immediately and no LED is on, if signal from the Valor Can transceiver is never received or lost reception for 100 seconds.

‣ Warning can be reviewed in the Active Warning Screen.

Buttons

‣ Any button press will return to previous displayed screen. LED will remain on.
Pop-Up Warnings

SIGNAL LOSS POP-UP WARNING

Description

- Signal Loss Popup Warning displays immediately and Amber LED is on, if Temperature value is 401°F and Pressure value is 188 PSI.
- Warning can be reviewed in the Active Warning Screen.

Buttons

- Any button press will return to previous displayed screen. LED will remain on.