Basic Startup

1. Press the Power button to turn on the Viper system.
Viper Do’s and Don’ts

1. **Do** have a flashdisk in the Viper at all times, including for Power-on.

2. **Don’t** remove the flashdisk when the Viper 2 program is running.

3. **Do** have the Viper serial number and firmware revision available when calling for technical assistance. It is best if the user is in the machine and in front of the Viper when calling for tech support.

4. **Do** read the manual in its entirety before using Viper.

5. **Do** power the DGPS receiver and the Raven console or CANBus system before powering Viper.

6. **Don’t** turn Viper off when in a job, without properly closing the job first. If Viper loses power when in a job, job files will not be saved and the associated files will be corrupt.

7. **Don’t** connect Viper to a switched source. Always connect to a battery or other unswitched source.

Backlight Adjustment

**Increase Intensity**
1. Hold the **Menu** button and press the **Up** arrow key.

**Decrease Intensity**
1. Hold the **Menu** button and press the **Down** arrow key.
Main Screen Areas

See the screen below and the corresponding numbers on the next page for a description of each screen area.
1. **Profile** - The machine profile contains configuration settings for specific vehicles, when created by the user.

2. **Current Heading** - The current heading of the vehicle in compass degrees.

3. **Speed** - The current speed of the vehicle. CAN or GPS.

4. **Map Area** - Information that is associated with the current tab.

5. **Tabs** - Used to access the features, functions, and screen displays for the Viper console. Press a tab to access.

6. **Application Rates** - Target Rate (R_T) and Actual Rate (R_A). Press in this area to set or change rates (Available for CAN systems only).

7. **Booms** - Booms turn green when on, gray when off. Press in this area to configure AccuBoom Control.

8. **AutoBoom** - A's turn green when on, gray when off. Background turns red if there is an error condition. Press in this area to configure AutoBoom Control.

9. **GPS Status Indicator** - Status of the DGPS receiver displays in this area. Press this area for additional GPS information.

10. **Product Control Status** - Product Control Status of the Raven console or the Raven CAN system displays in this area. Press this area to modify Product Control settings.

11. **Display Data** - Status of CAN Tally Register. Press this area to view the CAN Tally Register data. Press the area again to hide the data.
CAN Controller Status Screen Areas

See the screen below and the corresponding numbers on the next page for a description of each screen area.
1. **Boom Cals Area** - Current booms that have been configured. Press in this area to access the Boom Select screen and assign booms to products.

2. **Miscellaneous Area** - Various system settings and actual system readouts. Press in this area to change the settings.

3. **Data Box 1** - User configuration settings and product node selector. Press in this area to access and/or change the user configuration.

4. **Data Box 2** - More user configuration settings. Press in this area to access and/or change the user configuration.

5. **Pressure Area** - Dual pressure readouts for two different systems. Press in this area to calibrate pressure readouts.

6. **Application Area** - Valve and application types used to apply the product. Press in this area to select a different valve type and/or application type.

7. **Tally Registers** - Press this button to access the tally registers. Also displays the distance traveled by the vehicle. All values can be reset to zero.

8. **Current Alarms** - Press this button to access the current system alarms.
## Screen Icons & Symbols

### Map Symbols

<table>
<thead>
<tr>
<th>Icon Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cursor Lock</td>
<td>When the <strong>Cursor Lock icon</strong> is active, Viper is in the auto-pan mode. Select this mode when running a job.</td>
</tr>
<tr>
<td>Information</td>
<td>The <strong>Information icon</strong> is only available when you are not running a job and you have selected the Main tab on the Viper console, or when you have selected the Scout tab when in a job.</td>
</tr>
<tr>
<td>Prescription</td>
<td>The <strong>Prescription icon</strong> is only available when on the Rx tab (if a prescription map had been previously loaded) or the Cov tab.</td>
</tr>
<tr>
<td>Pan</td>
<td>The <strong>Pan icon</strong> is used to move screen information up/down or left/right.</td>
</tr>
<tr>
<td>Zoom Out</td>
<td>The <strong>Zoom Out icon</strong> zooms the map area displayed out to view a larger area on the map.</td>
</tr>
<tr>
<td>Zoom In</td>
<td>The <strong>Zoom In icon</strong> zooms into the map area display and allows more detailed viewing of information contained within the display.</td>
</tr>
<tr>
<td>Zoom Extents</td>
<td>The <strong>Zoom Extents icon</strong> allows you to quickly bring all map information back on to the display.</td>
</tr>
</tbody>
</table>

### Status Symbols

<table>
<thead>
<tr>
<th>Icon Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thumbs Up</td>
<td><strong>Thumbs Up</strong>: System is normal and all operating conditions are met.</td>
</tr>
<tr>
<td>Caution</td>
<td><strong>Caution</strong>: There is a system alert. User should investigate cause of condition and correct it.</td>
</tr>
<tr>
<td>Red 'X'</td>
<td><strong>Red 'X'</strong>: The system is down and requires immediate attention. This problem must be corrected before proceeding with application.</td>
</tr>
</tbody>
</table>
Setting Application Rates

1. Press the **Application Rates Area**.
2. Press the **Node** you want to set/change.
3. Enter **Target Rate**. Press **Next** to change other Nodes or **OK** to save changes and close.

**Important:** You can only set Application Rates if you are using a CAN system.
Profiles

Saving a Profile
1. Select Menu, then Setup, Local, Profile, and Save Profile.

2. Type a Profile name and press OK.
Loading a Saved Profile

1. Select Menu, then Setup, Local, Profile, and Load Profile.

2. Select a profile from the list.
Starting a New Job

1. Select Menu, Start Job, then New Job.

2. Type in a Job Name, select a Swath Pattern (if the Guidance Option has been installed), and enter the number of products.
3. Type a **Product Name**.
4. Select **Booms** (typically ‘All’), if necessary.
5. Select VRC (if variable rating), otherwise, click **OK**.
6. Click **Browse** to find a Rx Map file. Select the file and click **OK**.
7. Click on the **Rate Field** (outlined in red below) and click **Next**.
8. Type in a **Rate Conversion** (if necessary) and click **OK**.

**Note:** The steps above are for a single product. If you have more than one product, you will be guided through the product setup for each product.
Adding to Existing Jobs

1. Select Menu, Start Job, From File, then Add to Job.

2. Select Existing Job and press OK. Then press Menu and Cont Job to un-pause the job.
Resetting Tank Volume

1. Press Product Control.

2. Press Tally Registers.

3. Press Next.

4. Press Next again. Type in a value for the Tank Volume and then press Set. Press Next. Do the same process for all nodes, if needed, and press OK when finished. Press OK again to exit the Product Control screen.
Marking a Field Boundary

1. Press the Scout tab and then Record.
2. Press Zone.
3. The Record Field Feature Screen Displays. Select Field Boundary, choose your options, and press OK.
GPS
2. Select the GPS setting.
3. Press OK.

CAN Startup

If the results show 'Not Found' for all of your nodes, press the Retry CAN Init button. If you still have CAN issues, see Chapter 2 in the Viper Installation and Operators Manual for more information.
AccuBoom Setup

1. Press the **Booms Area**.
2. Enter **Look-Ahead** values and press **Next**.
3. Select the **booms** to control and press **OK**.
AutoBoom UltraGlide Calibration

1. Press in the center of the AutoBoom Area.
2. Select Autoboom ON and UltraGlide for mode.
3. Press the Calibrate button.
4. Press Cal Left and wait for left boom calibration to complete, then press Cal Right and wait for right boom calibration to complete.
5. Press OK.
**AutoBoom PowerGlide Plus Calibration**

1. Press in the center of the AutoBoom Area.
2. Select Autoboom ON and PowerGlide Plus for mode.
3. Press the Calibrate button.
4. Press Cal Boom button.
5. Press OK.

<table>
<thead>
<tr>
<th>R1</th>
<th>R2</th>
<th>Booms:</th>
<th>Display Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.0</td>
<td>12.0</td>
<td>12345</td>
<td>Autoboom Off</td>
</tr>
<tr>
<td>15.0</td>
<td>15.0</td>
<td>Product Control</td>
<td>Menu</td>
</tr>
<tr>
<td>15.0</td>
<td>0.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Diagram of calibration process](image)

Calibration Required

Please press the Calibrate button.

[Diagram showing calibration process]

Boom must be level with gauge wheels raised off ground when starting calibration.

[Diagram showing calibration settings]

**Calibration Settings**

- Pressure Alarm
- Heaviest
- Lightest
- PHM Frequency
  - 1019
  - 15
  - 5
  - 60
On-Screen Lightbar

1. Press Menu, Setup, then Lightbar.
2. Select a Lightbar to use.
3. Press Next to set it up.
4. Press OK when finished.
Troubleshooting
Storage Card (Flashdisk) Warning

Make sure the flashdisk is inserted properly and the storage card door is closed.

**Important:** You must use a flashdisk with a minimum of 128 MB and a maximum of 512 MB for the Viper console. The flashdisk must be a SanDisk brand and either a full size PC card or a compact flashcard in a PC card adapter.
Viper Sub-Menu Structure

* Buttons with arrows go to sub-menus. Buttons without arrows go directly to selection screens.