

# ST-760

## Digital Night Vision



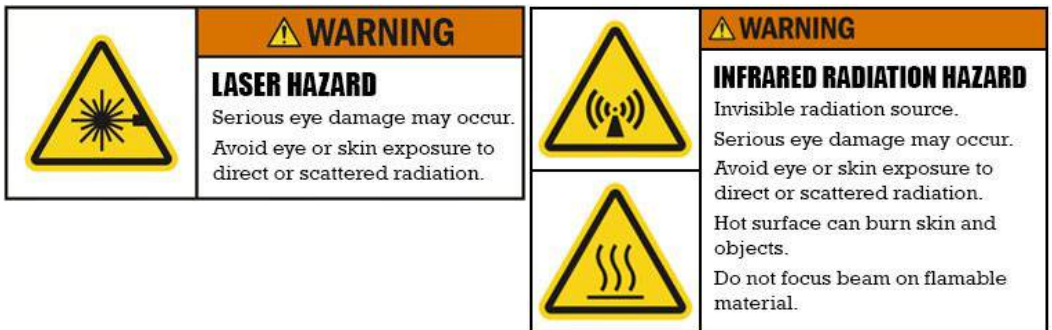
## Operation Manual

1.0.0 AU

# Important Notes

- ◆ Spectra Tactical advocates safe and responsible firearms use at all times. Always use your firearm responsibly with or without the ST-760 unit.
- ◆ This device emits invisible infrared radiation which may cause permanent damage to eyes. Do not look into infrared emitters. Avoid exposure and/or exposing others to the infrared radiation. Serious eye damage may occur. Always use the appropriate protective equipment. Always consider the wellbeing of wildlife and/or animals in addition to humans when activating and/or using infrared radiation emitters.
- ◆ The infrared radiation from this device may cause a fire if trained on and/or focused on flammable material. Always switch off the infrared emitter, switch off the device, and/or place the device in sleep mode to avoid causing a fire and/or burns.
- ◆ This device is equipped with a laser emitting module which has been factory disabled for the Australian market as it exceeds permissible laser emitter power regulations for import.
- ◆ Invisible and visible laser radiation may cause permanent damage to eyes. Do not look into laser emitters. Avoid exposure and/or exposing others to laser radiation. Serious eye damage may occur. Always use the appropriate protective equipment. Always consider the eyes of wildlife and/or animals in addition to humans when activating and/or using a laser.
- ◆ This device is designed to be used with telescopic devices and/or optical devices or “scopes” which have an adjustable objective lens otherwise known as “AO scopes” or “parallax adjustable scopes”. Modern variants have this adjustment built into the side of the device and this is preferable over rotating objective bell type devices. This device cannot perform optimally without parallax adjustment or adjustable objective feature.
- ◆ Some telescopic devices and/or optical devices may not be compatible with this unit due to their specific design. Scopes with an eyepiece housing with a diameter greater than 45mm, devices with a rotating collar near the eye piece, and/or devices with infrared filtering coatings may be incompatible as an example.
- ◆ Note that the sleeve, if left attached to your scope, will modify the eye-relief of your scope. Ensure that sufficient clearance exists between each of the sleeve or your scope, and your eye. Exercise extreme caution when testing to ensure you do not injure yourself.

- ◆ Caution must be exercised with rifles using “hot-loads” or larger calibers which yield a robust recoil. Your eye will be positioned close to the scope and recoil may cause the scope to come into contact with your eye forcefully, which may result in serious injury. We advise extreme caution in rifles chambered above .223 Remington caliber.
- ◆ Night Vision devices, including this ST-760 unit are not a replacement for positive target identification. Always properly identify your target before engaging it.
- ◆ The ST-760 is not waterproof. Avoid exposure to moisture. Exposure to moisture may permanently damage your unit and will void your warranty.
- ◆ Installation of a sleeve and/or this unit to a scope may cause marks or scratches to the finish of your scope. In some cases this will be unavoidable. If you do not wish to damage the finish of your scope, do not use this unit and return it to your retailer, unused and as a complete set, for a refund.



## Package Contents

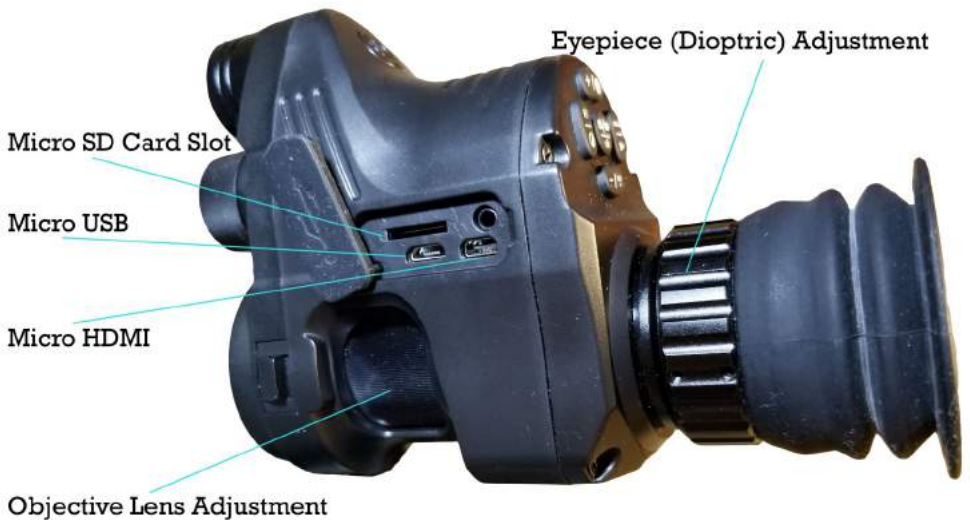
The package contains the following items:

- ST-760 Night Vision Device
- 45mm Sleeve
- USB Data Cable
- PVC Electrical Tape
- 1.5mm and 2.5mm hexagon (Allen) wrenches
- 2 x Spare O-Rings

# Front Components



# Side Components



# Rear Components



## Specifications

<b>Model</b>	ST-760	<b>HDMI</b>	Micro HDMI	<b>USB</b>	Micro USB
<b>Magnification</b>	1x-3.5x Digital	<b>IR Wavelength</b>	850 nm	<b>IR Power</b>	5 w
<b>Photo Resolution</b>	2592 x 1944 pixels	<b>Storage Type</b>	Micro SD Up to 32 gb	<b>Max IR Illumination Distance</b>	200 m
<b>Video Resolution</b>	1920 x 1080 pixels	<b>Frame Rate</b>	30 fps	<b>Output Type</b>	AVI
<b>Eyepiece Resolution</b>	800 x 600 pixels	<b>Voltage</b>	3.7 V	<b>Battery</b>	1 x 18650 Flat Top
<b>Focussing</b>	3cm - ∞	<b>Lens</b>	16 mm	<b>WiFi Capability</b>	Yes
<b>Weight</b>	285 g (no battery)	<b>Dimensions</b>	138 mm length 48 mm width 97 mm height	<b>Sleeve Size</b>	< 45 mm

# Battery Installation

The ST-760 uses 18650 type batteries of 3.7 Volts. We recommend using 3.7 V Lithium re-chargeable flat top batteries of good quality. Some batteries with protection circuits may be too long to fit.

66 mm 18650 button-top batteries fit, but it is a tight fit and you may damage the springs and screw threads of the battery compartment. We do not recommend using these batteries for this reason.

🔌 70 mm protected circuit button top batteries will not fit.

Install the battery with the positive terminal to the inside of the ST-760 unit. Carefully replace the cap and ensure it is firmly screwed on. Failure to tighten the cap will cause the unit to restart or power off unexpectedly - especially under recoil.

## Power-On and Dioptic Adjustment

Turn on the power by holding the power button for approximately 2 seconds.

**Be careful to point the unit in a safe direction as the unit may power up in Night Mode and the Infrared Illuminator may turn on.**

The first thing to do is to adjust the eyepiece dioptic adjustment ring until the characters on the screen appear sharp and in focus. You don't need to have a clear image to achieve this, and in most cases a totally blurry picture will assist you in getting the focus right as your eye won't be trying to focus on a secondary item at the same time.

Once you have the dioptic adjustment right, you can adjust the focus of the objective focus until the picture is focused. In this mode you can now use the unit as a spotter or as a stand-alone night vision unit.

Dioptic adjustment is generally a one time adjustment. Once it has been adjusted for your eye you won't need to adjust it again, except for minor adjustments should you bump it out of focus by accident.

# Sleeve Installation

1. Ensure the ST-760 is switched off.
2. If fitted, remove the sleeve from the ST-760 unit.
3. Carefully put the eye piece of the selected telescope into the sleeve (approximately 35 mm) until the end of the telescope reaches the milled shelf inside the sleeve. Adjust the angle of the sleeve and tighten the screws until the connection is firm and stable.

The sleeve in the box will fit 43-45 mm diameter telescopes without modification. If your scope is < 43 mm diameter, use the supplied PVC tape to build it up to the right diameter. Larger sleeves are available from your retailer.

3. Line up the lugs on your ST-760 with the grooves on the sleeve. Insert the ST-760 and rotate gently until you hear or feel a click from the sleeve lock engage. Check that your ST-760 is lined up square with your scope. Adjust if necessary. You will need to loosen the screws on the sleeve to do so. Take care not to damage the finish of your scope in this process.

If you have a flip up objective lens protector on your telescope, rotate it so it opens out of the way of the IR Illuminator.

You can place a little white-out dot on the sleeve to help with alignment of the lugs in the dark.

3. Turn on the ST-760 taking care to **point it in a safe direction to avoid unintentional injury or damage in the event the infrared illuminator is set to turn on**. Use the objective focus on the ST-760 to focus the cross hairs on your telescope until they are sharp.
4. Finally use the AO-Focus or Parallax Adjustment feature of your scope to sharpen the picture in the scope.
5. To remove the ST-760, first turn it off. Then slide the scope-lock to the rear and rotate gently until the unit will slip off the sleeve.



# Shortcut Operation



## Power Button

Pressing this button for approximately 2 seconds will switch the unit on or off.

Momentarily pressing this button when the unit is on will send the unit into sleep mode. Pressing the button again in sleep mode will bring the unit out of sleep mode.



## Day/Night mode and Infrared Illumination Brightness Button

This unit can operate in good light - Day mode (Colour) or in poor light - Night mode (Black & White).

Pressing and holding this button for approximately 2 seconds will switch the unit between day mode and night mode.

Pressing this button momentarily will cycle the unit through the Infrared brightness settings. There are four settings which cycle through in a loop as below. Attempting to cycle in Day mode (Colour) will have no effect and you will receive an error message asking you to turn the unit to Night mode (Black and White).

Off -> Level 1 -> Level 2 -> Level 3 -> Off

## Zoom In and Laser Button



Pressing this button momentarily will zoom in the unit from 1x to 3.5x in 0.5x increments.

**[Disabled in Australia]** Pressing and holding this button for approximately 2 seconds will switch the laser sight on or off.



## Zoom Out and WiFi Button

Pressing this button momentarily will zoom out the unit from 3.5x to 1x in 0.5x increments.

Pressing and holding this button for approximately 3 seconds will switch the unit's WiFi feature on and off. See the WiFi section for more detail on how to use this feature.



Pressing this button momentarily will enter the menu of this unit. See the menu section for further details.



Pressing and holding this button for approximately 3 seconds will enter or exit the replay feature of this unit. See the Replay section for more detail on how to use this feature.

## Zoom In and Laser Button

Pressing this button momentarily will take a photo and store it on the SD Card.



Pressing and holding this button for approximately 2 seconds will start or stop a video recording. Video is stored on the SD Card.

Loss of power or switching off the unit without stopping the recording will damage the recording irretrievably.

This button is used as an ok button when in the menu. See the menu section for further details.

# Installing SD Card

1. Turn the ST-760 unit off.
2. Insert the SD card into the slot keeping it square to the slot (see image)
3. Carefully push the card in allowing the spring mechanism to engage and hold the SD card in place.
4. To remove the SD card, ensure the unit is off, then carefully press the SD card in and the spring mechanism should release and return the card to you.

Be careful inserting or releasing the SD card from the slot. Releasing the spring tension suddenly whilst removing or before it is fully inserted can result in the spring mechanism flicking the card clear of the unit. Due to the small size of the card, considerable difficulty may result in attempting to locate the SD card in this event.



## Activating WiFi

The WiFi feature is activated by pressing the Zoom Out/WiFi Button for approximately 3 seconds. You will see the icon change in the bottom left of the screen as below:

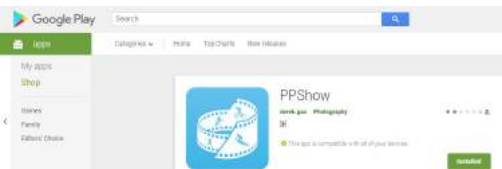


To turn it off, press the same button (Zoom Out/WiFi Button) again for approximately 3 seconds. The icon will return to the struck out WiFi symbol indicating that the feature has been disabled.

## Using The WiFi Feature

The WiFi feature allows the user to view the screen on an Android or Apple iPhone. Some features are disabled when in this mode. Recorded video or photos are always stored directly to the SD card installed in the ST-760. Using the WiFi feature will reduce the operating time on battery considerably.

You will need to download the Android or Apple iPhone app from the Google Play store or Apple AppStore accordingly.



1. Install the appropriate application to your phone or tablet.
2. Activate the WiFi feature on the ST-760
3. Connect your phone or tablet to the WiFi of the ST-760 as follows

**WiFi Name:** NVT... (eg: NVT\_CARDV0c8c243ed7bd)  
**WiFi Password:** 12345678

4. Enter the PPSHOW application and tap “Add Other Device”
5. Select the NVT... (eg: NVT\_CARDV0c8c243ed7bd) and tap “Add”

You should now see the camera image streamed from the ST-760 unit.

**Do not use this feature to shoot with as there is lag between the camera and the image display. Shot placement may be affected and it is inherently dangerous shooting with lag.**

## Activating

The Infrared Illuminator has 4 modes which cycles from off through 3 intensity levels then back to off as follows:

Off -> Level 1 -> Level 2 -> Level 3 -> Off



Correspondingly the display will show in the top right of the screen when looking through the viewfinder the levels as follows:

IR OFF -> IR 1 -> IR 2 -> IR 3 -> IR OFF

Intensity can be controlled via the menu as well. See the menu section for further information.

The Illuminator will only operate when in night mode (Black and White).

## Focusing


The built in Infrared Illuminator is able to be easily focused to a narrow spot for long distance targets or for a wider view when searching. The collar on the illuminator slides in and out allowing you to choose the optimal focus for your current scenario. Sliding the collar all the way out narrows the beam as shown on the left below. The image below is taken approximately 3.5 meters away. The right image shows the widest setting with the collar all the way in.

The inbuilt illuminator is built to be effective to 200 meters in clear conditions, but with the right optics, target, and conditions we have had good results out to 300 meters.

The addition of an external, separately powered illuminator, such as the commonly available T75 torch, will not only extend the operating run time, but give you a more versatile light and extend the range further.



## Accessing The Menu

 To access the menu of the ST-760 unit, momentarily press the menu button shown to the left.

The menu will appear as below. To access other pages of the menu, simply navigate up past the first option or down past the last option.



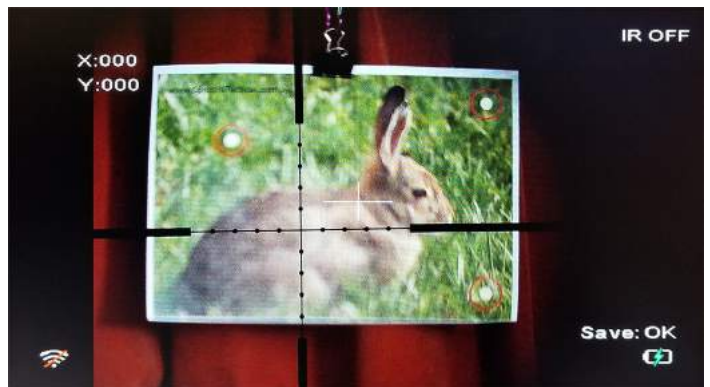
To navigate the menu use the keys as shown

The next sections will describe each of the menu options

## Reticle Centre Position Adjustment

This feature allows the image to be centered in the view finder. It does not change the point of impact as this is controlled by the adjustment on your scope.

Upon entering the menu option you will see a white cross appear indicating the center of the ST-760 screen. Use the buttons as shown below, to adjust your reticle as desired. X adjustment (horizontal) is limited from -328 to 328, and the Y adjustment (vertical) from -66 to 66. In some situations the sleeve installation will be too far off-center to be able to be 100% corrected.



This feature allows you to set the startup mode of your ST-760 unit. Using the same Up, Down, and Select buttons as you did navigating the menu you will be able to select between [Color] and [Black & White]. The next time you start the ST-760 it will default to the mode selected.

A default of Black & White (Night) mode will always turn on the Infrared Illuminator upon start up.

**Caution is required when using this default to ensure that emitted infrared radiation does not cause unintended damage each time you start the ST-760 unit.**

**NOTE: Selecting the mode will immediately change your current mode as well. The inbuilt infrared illuminator may switch on. Ensure you point the ST-760 in a safe direction before selecting this option.**

## Brightness Of IR

This feature allows you to set the brightness of the inbuilt Infrared Illuminator. Using the same Up, Down, and Select buttons as you did navigating the menu you will be able to select between Off, 1, 2, and 3. This is an immediate setting which will activate or disable the illuminator as soon as the respective option is selected.

**Caution is required when activating the illuminator to ensure the Infrared Radiation does not cause unintended damage.**

## Brightness

This feature allows you to set the brightness of the internal screen. Using the same Up, Down, and Select buttons as you did navigating the menu you will be able to select between Level 0, Level 1, Level 2, Level 3, and Level 4. Level 0 being the dimmest to Level 4 being the brightest.

## Auto recording

Activating this feature allows you to automatically begin recording when the ST-760 unit turns on. Using the same Up, Down, and Select buttons as you did navigating the menu you will be able to select this feature Off or On.

Using the same Up, Down, and Select buttons as you did navigating the menu you will be able to select between Off, 3 Minutes, 5 Minutes, and 10 Minutes.

When one of the options, except off, is selected, the ST-760 will record video files of the corresponding length until all space is consumed on the SD card. Thereafter, it will overwrite the oldest file in the current recording series.

Three (3) times the length of the selected interval in available space on the SD card is recommended to ensure you retain enough video history when overwriting occurs.

Stopping and restarting the recording WILL NOT stop previous video(s) from being overwritten.

As a rough estimate, 100 mb of space corresponds to 1 minute of video. So as an example, if you select 10 minute loop recording, at least 3 gb (~3,000mb) SD card storage space available is recommended.

## Date Stamp

This feature controls if the date and time stamp will be imprinted onto the video recorded.

Using the same Up, Down, and Select buttons as you did navigating the menu you will be able to select between Off, and On.

Taking a photo with the ST-760 always records the date and time.

## Record Audio

This feature controls if the ST-760 will record audio from the environment around it. If switched on, the unit will record ambient sound. If switched off, no sound will be recorded.

Using the same Up, Down, and Select buttons as you did navigating the menu you will be able to select between Off, and On.

## Beep Sound

This feature is not implemented. The mechanical sound of the operation of buttons on the unit is clearly audible on the recording in any case.

Using the same Up, Down, and Select buttons as you did navigating the menu you will be able to select the exposure bias between +1/3, +0.0, -1/3, -2/3, and -1.0

This allows you some control over the exposure of the recorded video and photos. The following illustrates changes in the exposure bias.



## Language

The ST-760 has multiple language options. Using the same Up, Down, and Select buttons as you did navigating the menu you will be able to select the language from the following options:

English, Français, Español, Português, Deutsch, Italiano, 简体中文, русский, 日本語, and Polski.

## Date/Time

The current date and time can be set on the unit by using this function. Once you select this option from the menu, use the following keys to adjust the date, time, and date format. Available date formats are: dd/mm/yyyy, mm/dd/yyyy, and yyyy/mm/dd.



## Format

Selecting this option will allow you to format your SD card. Select the Format menu option, then SD Card, and finally confirm that you are ok with erasing all data on the SD card.

**WARNING:** All data on the SD Card will be erased, including data that was already stored on there, even data which was not stored by the ST-760 unit. This process is irreversible and the data will be irretrievably lost.

## Default Setting

Select this option to return your ST-760 unit back to factory settings. All settings and menu option changes, including the language will be changed.

## Enter Replay (Playback) Mode

If you have photo(s) or video(s) stored on the SD card installed in the ST-760 unit you can view them on the viewfinder.

To enter replay (playback) mode, press and hold the Menu/Playback button for approximately 3 seconds.



## Navigating Replay (Playback) Mode

To navigate through the media files on the SD card the function of the buttons will behave as below.



**Navigate Older** will select the next oldest file, unless no older file exists, in which case it will loop to the newest file.

**Navigate Newer** will select the next newest file, unless no newer file exists, in which case it will loop to the oldest file.

## Playing a Video

When you select a video to replay or playback, you can pause, fast-forward, and rewind during playback. Selecting a photo will have no effect. The buttons will behave as shown.

Pressing the **Rewind** button repeatedly will select a rewind speed of 2x then 4x and finally 8x. Correspondingly you will see -2, -4 and -8 on the screen.

Pressing the **Fast Forward** button repeatedly will select a fast forward speed of 2x then 4x and finally 8x. Correspondingly you will see +2, +4 and +8 on the screen.

To resume normal playback speed. Press the Play/Pause/Resume button.

The **Play/Pause/Resume** button at normal playback speed will pause or play the video as required.

To exit playback of a video, press the **Exit Video** button. If you see the menu appear you are not currently playing a video. Simply press the menu button again to dismiss the menu interface.





When you have finished reviewing the media on your SD card you can return to normal operation of the ST-760 unit by pressing and holding the Menu/Playback button for approximately 3 seconds.



## More Help?

If you need more help with setting up, using, or getting the best out of your ST-760 unit, try getting in touch via our Facebook page at:

[www.facebook.com/SpectraTactical](http://www.facebook.com/SpectraTactical)

Our website will be constantly updated with the latest news and fast links to tutorials and FAQs as we continue to grow the ST-760 community. Find us at:

[www.SpectraTactical.com.au](http://www.SpectraTactical.com.au)

Can you help us? Join the community on our Facebook page and let us know how you went with your rig. We'll add to the knowledge base of known working scopes and that will help everyone!

# WARRANTY

This product is guaranteed to be free from manufacturing defects in material and workmanship under normal use for a period of 1 (one) year from the date of purchase. In the event a defect that is covered by the foregoing warranty occurs during the applicable period stated above, Spectra Tactical Pty Ltd, at its option, will either repair or replace the product, and such action on the part of Spectra Tactical Pty Ltd shall be the full extent of Spectra Tactical's liability, and the Customer's sole and exclusive remedy.

This warranty does not cover a product (a) used in other than its normal and customary manner; (b) subjected to misuse; (c) subjected to alterations, modifications, loss of parts, accident, or repairs by the Customer, or by any party other than Spectra Tactical Pty Ltd without prior written consent of Spectra Tactical Pty Ltd; (d) special order or "close-out" merchandise or merchandise sold "as-is" by either Spectra Tactical Pty Ltd or the Spectra Tactical Pty Ltd dealer; or (e) merchandise that has been discontinued by the manufacturer and either parts or replacement units are not available due to reasons beyond the control of Spectra Tactical Pty Ltd and/or suppliers; (f) consumable items or batteries; (g) used with firearms and or ammunition, which when operated, result in recoil (shock and/or energy) in excess of that normally experienced by the maximum tested calibres, firearms, and/or ammunition.

Spectra Tactical Pty Ltd shall not be responsible for any defects or damage that in Spectra Tactical Pty Ltd's opinion is a result from the mishandling, abuse, misuse, improper storage or improper operation, including use in conjunction with equipment which is for example, but not limited to, electrically and/or mechanically incompatible with or of inferior quality to the product, as well as failure to maintain the environmental conditions specified by the manufacturer.

This warranty is extended only to the original purchaser. Any breach of this warranty shall be waived unless the customer notifies Spectra Tactical Pty Ltd at the address noted below within the applicable warranty period.

Keep your original proof of purchase, docket, tax invoice and/or receipts to validate the date on which purchase was made.

The customer understands and agrees that except for the foregoing warranty, no other warranties written or oral, statutory, expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose, shall apply to the product. All such implied warranties are hereby and expressly disclaimed.

Operation of this device improperly during daylight and/or using this device to view high power radiation sources such as, but not limited to, the sun, welding, electrical arcs, or lasers may cause damage to sensitive internal components and as such will void any warranties.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law.

# Obtaining Warranty Service

To obtain warranty service on your unit, the end-user must notify Spectra Tactical Pty Ltd service department by calling **1300 466 699** (in Australia) or via e-mail **AskSomeone@SpectraTactical.com.au** to obtain return authorisation and further instructions.

When returning please take or send the product, postage paid, with a copy of your sales receipt to our service centre. All merchandise must be fully insured with the correct postage; Spectra Tactical Pty Ltd will not be responsible for improper postage or, missing or damaged merchandise during shipment. Please include a letter that indicates your Name, Return Address, reason for service return, Contact information such as valid telephone numbers and/or e-mail address and proof of purchases that will help us to establish the valid start date of the warranty. Product merchandise returns that do not have a return authority listed may be refused or a significant delay in processing may occur.

End-user/customer is responsible for postage to Spectra Tactical Pty Ltd for warranty service. Spectra Tactical Pty Ltd will cover return postage/shipping to Australian mainland and Tasmanian end-users/customers after warranty repair only if product is covered by aforementioned warranty.

Spectra Tactical Pty Ltd will return product after warranty service by domestic mail or equivalent service. Any other requested, required or international shipping method the postage/shipping fee will be the responsibility of the end-user/customer.

## LIMITATION OF LIABILITY

Spectra Tactical Pty Ltd will not be liable for any, but not limited to: claims, actions, suits, proceedings, costs, expenses, damages, or liabilities arising out of the use of this product. Operation and use of the product are the sole responsibility of the Customer. Spectra Tactical Pty Ltd's sole undertaking is limited to providing the products and services outlined herein in accordance with the terms and conditions of this Agreement. The provision of products sold and services performed by Spectra Tactical Pty Ltd to the Customer shall not be interpreted, construed, or regarded, either expressly or implied, as being for the benefit of or creating any obligation toward any third party of legal entity outside Spectra Tactical Pty Ltd and the Customer; Spectra Tactical Pty Ltd's obligations under this Agreement extend solely to the Customer. Spectra Tactical Pty Ltd's liability hereunder for damages, regardless of the form or action, shall not exceed the fees or other charges paid to Spectra Tactical Pty Ltd by the customer or customer's dealer. Spectra Tactical Pty Ltd shall not, in any event, be liable for special, indirect, incidental, or consequential damages, including, but not limited to, lost income, lost revenue, or lost profit, whether such damages were foreseeable or not at the time of purchase, and whether or not such damages arise out of a breach of warranty, a breach of agreement, negligence, strict liability or any other theory of liability. Spectra Tactical Pty Ltd is not the designer or manufacturer of this unit, therefore is limited to assist with claims against the manufacturer by providing whatever contact details we have for the manufacturer at the time of claim.

