Congratulations on the purchase of your new advanced Bullard T4MAX Thermal Imager. The Bullard T4MAX combines advanced thermal imaging technology with our expertise in high heat, impact resistant engineered polymers to bring you the most durable thermal imager on the market. The T4MAX’s innovative, compact design and logical, easy-to-use interface presents a truly personalized thermal imaging tool to today’s firefighters.

The benefits of using thermal imaging technology as a firefighting tool encompass nearly every aspect of a firefighter’s job. Thermal imaging is not, however, a technology designed to replace current firefighting tactics. Rather, it is a tool that allows the firefighter to be more effective and make better decisions. Some of the many uses for your Bullard T4MAX Thermal Imager include:

- Search and rescue
- Scene assessment
- Locating the seat of the fire
- Determining the spread of the fire
- Locating hot spots
- Identifying potential flashover situations
- Determining ventilation points
- Determining entry and exit points
- Overhaul
- Hazmat
- Wildland firefighting
- Incident investigation
- Training

To ensure that we are able to reach you with any product or software updates, please fill out the warranty card enclosed with your Bullard T4MAX Thermal Imager.

WARNING

Read all instructions and warnings before using this product. Your thermal imager is like any other tool. It must be used properly and safely. All users should be trained on the proper and safe use of thermal imaging prior to using the T4MAX Thermal Imager. This is especially important for users who may use the T4MAX Thermal Imager in hazardous or IDLH (immediately dangerous to life and health) environments. Failure to follow this information could result in death or serious injury.
Use and Operation

Power
To turn on your Bullard T4MAX Thermal Imager, depress and release the large, red power button under
the LCD display (Figure 2). Upon pressing the power button the thermal imager will display the Bullard
logo and initiate a calibration sequence. The thermal image will appear within four seconds. To turn off
power, depress and hold the power button for three seconds and release.

NOTE
You will periodically observe a momentary freeze in the image. This is normal and is a function
of the self calibration shutter. The shutter will activate every 30 seconds to three minutes,
depending on the environment.

Relative Heat Indicator (RHI)
The T4MAX is equipped with temperature measurement capability. The right side of the display will show
a bar graph or Relative Heat Indicator (RHI). The RHI will indicate the approximate temperature of the
object viewed within the “crosshairs” shown in the middle of the screen. The accuracy of the indicators
is dependent on numerous factors including the distance from the object being viewed and its emissivity,
which is the object's ability to radiate heat. Units are calibrated with a preset emissivity corresponding
with normal construction materials. Objects with emissivities that vary greatly from this, such as metals
and shiny objects, will reduce the accuracy of the temperature indication. Additionally, temperature
measurement accuracy decreases as the distance from the object in the “crosshairs” increases.

NOTE
The RHI provides a quick reference to compare objects of similar emissivities to serve as a guide
to pinpoint intense heat sources. Due to the inherent issues with accuracy, use this feature with
care and verify indicated heat levels through traditional means whenever possible.

Super Red Hot Feature
The T4MAX features Super Red Hot high heat colorization. With the Super Red Hot feature, heat levels
are identified by various color hues. Starting at 500 degrees, heated objects are tinted yellow and
gradually transition to orange and then solid red as heat levels rise. The Super Red Hot feature identifies
specific heat layers alerting firefighters to areas of intense heat. This feature provides an enhanced visual
awareness of the hottest objects in a scene.

Electronic Thermal Throttle®
The T4MAX incorporates a highly useful and unique feature, the Electronic Thermal Throttle. The
Thermal Throttle is ideal for pinpointing hot spots during overhaul, searching for overheated electrical
equipment, or clarifying objects in ambient temperature situations. To activate the Thermal Throttle
option, locate the two black buttons on the top of the T4MAX (Figure 1). Press the down button (the
button closer to the front of the imager) to activate the Thermal Throttle. The Electronic Thermal Throttle
will automatically sense the hottest area in the scene and color it blue. Continuing to press the down
button (or holding it down) will further engage the Thermal Throttle and will color more of the scene blue,
eventually coloring even the coolest objects blue.

NOTE
As the throttle engages more of the scene, the blue will become lighter in hue to help differentiate
objects in the scene. As you cycle through the scene, you’ll see the symbol “TT” and a corresponding number in the bottom
left corner of the display. The “TT” indicates “Thermal Throttle” mode. The number (0-100) is a point of reference
to indicate the level of Thermal Throttle engagement; by itself it has no specific meaning. To
least the amount of blue in the scene, press (or hold) the up button. Alternatively, pressing both buttons
simultaneously for one second will deactivate the Thermal Throttle.

NOTE
The T4MAX Thermal Imager takes approximately eight seconds to calibrate from initial startup.
During this short startup period, the Electronic Thermal Throttle or Digital Zoom will not engage.

Digital Zoom Feature
The T4MAX enables magnification of far away scenes at both 2x and 4x zoom. With one simple push of the black
“z” button, located next to the power button under the LCD
display, the 2x zoom is enabled (Figure 2). A second
push of the button activates the 4x zoom. A third push of the
button disables the zoom function. The Digital Zoom feature
also works seamlessly with Electronic Thermal Throttle and
Super Red Hot.

Using the Battery Charger
The battery should be charged in the battery charger base
using the AC adapter provided. Before using the AC adaptor, attach
the appropriate AC plug insert on to the power pack transformer and
twist to the right to lock it into place. To charge a battery, insert the
battery into the charger base so that the metal contacts on the battery
are aligned with the metal contacts in the charger base (Figure 3). A
red light will illuminate on the charger base to indicate that the battery
is charging. When the light on the charger base turns to green, the
battery is fully charged. You may leave the battery in the charger base
indefinitely as the battery will not overcharge and the charger base
will initiate a trickle charge to maintain the battery's charge. For maximum
battery life and performance, you should remove the battery from the
charger base and discharge it on a monthly basis.

NOTE
If you do not see the red LED illuminate when you
place a battery into the charger, the battery is not
charging.

Loading/Unloading the Battery
Loading and unloading the battery on the Bullard T4MAX
is straightforward (Figure 4). To install a battery, slide
the battery into the groove on the bottom of the unit and
ensure that the battery is properly seated. To remove a
battery, depress both battery locking buttons simultaneously
and slide the battery out of the unit. Since it can only be
loaded one way, the battery is easily replaced in the dark.
Additionally, as with all batteries, your Bullard rechargeable battery will experience a slow drain of
its charge during storage. The amount of drain varies widely based on storage conditions. For best
performance, charge each of your batteries every two weeks.

WARNING
Do not allow the metal contacts on the label side of the battery to come in contact with a
conductive surface, such as a metal table or another battery. This can complete the battery
circuit and cause the battery to overheat or melt. Failure to observe this warning may result in
permanent battery damage, property damage and/or serious injury.

NOTE
Fully charged NiMH batteries will provide a run time of more than three hours. This run time will
be less in extreme heat or extreme cold conditions and/or if the transmitter is in use. To extend
the potential lifespan of your batteries, fully drain and recharge each battery monthly. To help
extend the life of the rechargeable batteries and prevent unexpected instances of uncharged
batteries, develop a clear formalized plan for maintaining, charging, and replacing your batteries.
Bullard provides an optional AA Alkaline battery case which can be used as an alternative to the standard
10 V NiMH rechargeable batteries. The AA alkaline battery case requires eight AA alkaline batteries.
Once the batteries are installed, the case loads into the unit in the same manner as the standard NiMH
battery. Due to the unique way that alkaline batteries disperse power to the unit, the LED indicators will
report battery levels that are not necessarily indicative of the battery’s actual remaining charge. Fully
charged AA Alkaline batteries will typically operate a Bullard T4MAX Thermal Imager for two hours. Do
not insert the AA Alkaline battery case into any Bullard battery chargers, including the Powerhouse.

www.bullard.com
**WARNING**
The T4MAX thermal imager is extremely sensitive to intense, radiant heat sources. Never point the T4MAX at the sun or any other source of extreme radiant heat, as this could severely damage the thermal imager.

**Strap Assemblies**

**Side Straps**
The side straps are designed to be field replaceable. Users can order replacements and install them without having to return the thermal imager to the factory.

**Removing/Installing the Side Straps**
To remove either of the right or left side straps, loosen the strap and pull it through the strap loop located on either side of the LCD display (Figure 5). Remove the screw that holds the strap to the imager. To install, fasten the strap to the unit using the screw provided. Do not over-tighten. Feed the strap through the strap loop and adjust to the desired length.

**Combination Strap**
The combination strap (Figure 6) can be used either as a wrist strap to keep the imager from falling if it should slip from your hand, or as a gear strap, hooked directly onto your turnout gear or SCBA. As a wrist strap, the adjustable strap fits over the sleeve of your turnout gear and can adjust to any size wrist. The strap can be easily attached to either D-ring located on the thermal imager. As a gear strap, the strap can be attached to a D-ring on your turnout gear or SCBA and to a D-ring on the thermal imager. A quick release buckle serves as a safety release mechanism in case the thermal imager ever becomes lodged inhibiting movement. Simply depress the buckle and the thermal imager releases from the strap.

**Care Instructions**
The Bullard T4MAX Thermal Imager requires little maintenance. For best results, after each use:
- Clean the outside of the unit with mild soap or detergent.
- Wipe the lens with a soft cloth.
- Clean the display with a soft cloth.
- Check screw tightness on side straps and cover display.
- Store your thermal imager in the optional truck mount or in the delivery case provided.
- Clean the display with a soft cloth.
- Wipe the lens with a soft cloth.
- Turnout gear or SCBA and to a D-ring on the thermal imager. A quick release buckle serves as a safety release mechanism in case the thermal imager ever becomes lodged inhibiting movement. Simply depress the buckle and the thermal imager releases from the strap.

**Cleaning the Lens**
The Bullard T4MAX lens is recessed in an impact resistant bezel. The lens can be cleaned with a soft cloth and soapy water as required.

**Replacing the Video Display Cover Window**
The display cover (Figure 7) has a scratch resistant hard coating to minimize marring. However, if heavy scratching or gouging does occur, the cover window can be replaced. To do this, simply remove the six screws along the top, bottom, and sides of the window. Remove the plastic display cover window and replace with a new one (part number T4WINDOW) making sure that the countersink slots around the mounting holes are facing outward. Do not over-tighten.

**Service**
If your Bullard Thermal Imager is not performing properly, please contact Bullard Customer Service at 877-BULLARD (285-5273). Outside the US & Canada, call 1-859-234-6611. Describe the problem to the Bullard representative as completely as possible. For your convenience, your representative will try to help you diagnose or correct the problem over the phone. Before returning your Bullard Thermal Imager, you should verify with your representative that the product should be returned to Bullard. Bullard Customer Service will provide you with written permission and a return authorization number.

If the return is a non-warranty repair, a Bullard Customer Service Representative or your local distributor will provide you with a repair invoice estimate. To authorize repair, you must provide a purchase order to your distributor for the amount of the estimate. Once Bullard receives authorization from your local distributor, we will issue you a return authorization number so that you can return the unit to Bullard. Bullard will repair the unit and ship it from our factory within 48 business hours. If the cost of repairs exceeds the stated quote by more than 15% or by more than $100, a Bullard representative will re-estimate your repair and your local distributor will contact you for authorization to complete repairs. After repairs are completed and the goods have been returned to you, your distributor will invoice you for the actual repair amount.

**NOTE**
Do not attempt to disassemble the Bullard T4MAX Thermal Imager. If the unit is not functioning properly, return it to Bullard – Thermal Imager. If the unit is not functioning properly, return it to Bullard (as described in the Service section) for evaluation.

**Disassembling the unit voids all warranties.**
Prior to returning your Thermal Imager, decontaminate and clean your Thermal Imager to remove any hazardous or contaminated materials that may have settled on the product during use. Laws and/or shipping regulations prohibit the shipment of hazardous or contaminated materials. Products suspected of contamination will be professionally decontaminated at the customer’s expense.

Returned products will be inspected upon return to the Bullard facility. If the repair is under warranty, Bullard will repair the unit and ship it from our factory within 48 business hours.
Warranty

Bullard warrants to the original purchaser that the Bullard T4MAX and all features/accessories installed in the unit are free of defects in materials and workmanship under intended use and service for a period of one (1) year from date of manufacture. Bullard’s obligation under this warranty is limited to repairing or replacing, at Bullard’s option, articles that are returned within the warranty period and that, after examination, are shown to Bullard’s satisfaction to be defective, subject to the following limitations:

a) Article must be returned to Bullard with shipping charges prepaid.
b) Article must not be altered from its original configuration.
c) Article must not have been misused, abused, or damaged in transport.
d) Maintenance and field replaceable items, if defective, are covered under warranty for a ninety (90) day period. These items include:
   • Batteries
   • Straps
   • Display covers
   • AC/DC adapters
   • All accessories except transmitter and Mobile Link or Mobile Command Center remote receivers

Bullard provides a limited lifetime warranty on the T4MAX outer shell. This warrants that the outer shell is free of defects in materials and workmanship under intended use and service for the original purchaser. Bullard’s obligation under this warranty is limited to repairing or replacing, at Bullard’s option, articles that after examination are shown to Bullard’s satisfaction to be defective, subject to the following limitations:

1. Article must not be altered from its original configuration.
2. Article must not have been misused, abused, or damaged in transport.
3. When the outer shell is obsolete and Bullard no longer stocks the part, the limited lifetime warranty will be terminated.

In no event shall Bullard be responsible for damages, loss of use, or other indirect, incidental, consequential or special costs, expenses or damages incurred by the purchaser, notwithstanding that Bullard has been advised of the possibility of such damages.

Any implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to one (1) year from the date of manufacture of this.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Extended Warranty

The extended warranty has all the same terms and conditions as the one-year warranty, except it is for a period totaling two years (standard one-year warranty plus one additional year). This warranty can be purchased through any authorized Bullard distributor.

For accessories, upgrades and replacement parts, visit www.bullard.com, call 877-BULLARD or contact your local Bullard distributor.