

FLIR makes night trips easier

Night vision aids have been around for a long time.

A staff member, in the army in a former life, recalls using night-vision goggles to seek out the 'enemy' during war games played in the 1980s.

Since then thermal imaging technology has become much more sophisticated and less costly, to the point it is now an option on recreational pleasure craft.

Like GPS and radar, it is another tool at the skipper's disposal to ensure safe navigation in inclement and difficult conditions. It can see through fog, heavy rain or smoke, and can even be used in broad daylight, such as when driving towards the sun, where glare makes seeing what is directly in your path difficult.

FLIR works by detecting an image's thermal infrared light – even an ice cube emits a thermal signature – enabling it to differentiate between an object floating in the water and the water itself.

It has a number of advantages over conventional radar, which finds it difficult to identify objects, such as smaller fiberglass craft and channel marker poles and the like, which poorly reflect the radar's beam. It is also much simpler to operate.

Whangaroa-based charter operator Rick Jacobson has had a FLIR unit fitted to his charter vessel, the 51ft Riviera *Reel Awesome*, and speaks highly of its performance.

He fitted the FLIR unit over the summer season and says it totally exceeded his expectations. Rick purchased the system so he could detect and avoid craypots as he made his way around North Cape heading towards Tom Bowling Bay. At the height of the cray season this region is littered with craypot buoys, and tangling with the ropes can be disastrous.

While this was what initially motivated the purchase, Rick quickly found it had many other benefits.

"The picture image was much sharper than expected, so I can see the sea state, ripples on the water and even small birds," Rick says.

From a gamefishing perspective, the FLIR system had an unexpected bonus.

"Even in daylight I can pick up small temperature variations (as little as 0.2C), which are clearly shown as black against white where the two merged, and then troll along them, as that is where the fish often are. Previously I would not have

picked up the temperature breaks until I was on top of them, as indicated by the sounder readout."

Rick says the unit has superseded his radar, which is rarely used.

"It is great for navigating in and out of bays and is particularly useful at close range – less than 100 metres – where radar is not suitable."

The camera unit is mounted high up on the flying bridge, where it is exposed to all elements and the picture quality does not appear to suffer. Even lashings of salt water do not degrade the image.

The FLIR unit has an effective range of up to two nautical miles, although Rick says he has picked up the Three Kings Islands in ideal conditions at up

to four nautical miles. Rick opted for a unit (there are several models available) that could be both panned and tilted, enabling him to more effectively judge distances and objects on either side of the boat. While his system has a variation of colour palettes selectable by the user, Rick tends to use the function where the hotter objects are presented in black and the cooler in white.

"All of our charter guests have been completely blown away by the amazing clarity, resolution and detail of the thermal imaging that the FLIR has been able to deliver on screen. It makes navigation at night a much safer and more interesting prospect."

-Grant Dixon



Leaving the Three Kings South West Bay at 5:00am in the morning. It's pitch black due to 75% cloud cover, and everything is at it's coldest, so the least discrimination is apparent between objects temperature-wise. The screen clearly shows a boat off the starboard bow.



Leaving Whangaroa Harbour at 8:30pm in pitch-dark as the moon is not yet up. Kingfish Lodge is on starboard near the entrance to the harbour. An excellent example of what the FLIR can achieve in detail – even the pine trees show up clearly.



The FLIR display on Reel Awesome's flybridge helm station.



Navigating at Night has never been easier



Flir's ThermoVision line of marine sensors are powerful all-weather thermal imagers that enable you to see through total darkness, fog and smoke. They can be used for collision avoidance, security and navigation to clearly see obstructions, buoys and other vessels. The stabilised image can be displayed on standard video monitors and many multifunction displays.

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