

Ti32, TiR32

Thermal Imagers

Users Manual

PN 3433221

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Fluke Corporation
P.O. Box 9090
Everett, WA 98206-9090
U.S.A.

Fluke Europe B.V.
P.O. Box 1186
5602 BD Eindhoven
The Netherlands

11/99

To register your product online, visit <http://register.fluke.com>.

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Introduction

The Fluke Ti32 and TiR32 Thermal Imagers (hereafter “the Imager”) are handheld thermal imagers used for preventive and predictive maintenance, equipment troubleshooting, repair verification, building inspections, restoration and remediation work, energy audits, and weatherization purposes. The Ti32 is optimized for industrial and commercial equipment maintenance, and the TiR32 is optimized for building envelope inspections and building diagnostics. Both Imagers have high-performance 320 X 240 focal-plane array (FPA) sensors and produce thermal and visual images on a 640 X 480 display.

The temperature measurement range starts at -20 °C, and goes up to +600 °C for the Ti32, and starts at -20 °C and goes up to +150 °C for the TiR32. The thermal image can be displayed using any one of a number of standard color palettes or Ultra Contrast™ color palettes.

Both Imagers have IR-Fusion® technology, only available from Fluke, where a full visual image (640 X 480) can be displayed, blended, and stored with each IR image. Thermal and visual images can be presented simultaneously as a full thermal image or as a Picture-In-Picture (PIP) image in various blend modes.

Thermal and visual images are displayed on the Imager LCD and can be saved to a removable SD memory card. Transferring images to a PC is accomplished by removing the SD memory card and connecting it to a PC through the included, multi-format USB card reader. SmartView® software is included for image analysis and report generation from these saved images.

Imager power is supplied by one of two included, field-swappable, rechargeable Lithium-ion smart battery packs, with 4+ hours of continuous operation each.

In addition to the features mentioned above, the Ti32 and TiR32 provide voice recording capabilities for annotating saved images, emissivity correction, reflected background temperature compensation, transmission correction, and many other useful, easy-to-use features.

How to Contact Fluke

To contact Fluke, call one of the following telephone numbers:

- USA: 1-800-760-4523
- Canada: 1-800-36-FLUKE (1-800-363-5853)
- Europe: +31 402-675-200
- Japan: +81-3-3434-0181
- Singapore: +65-738-5655
- Anywhere in the world: +1-425-446-5500

Or, visit Fluke's website at www.fluke.com.

To register your product, visit <http://register.fluke.com>.

To view, print, or download the latest manual supplement, visit <http://us.fluke.com/usen/support/manuals>.

Safety Information

Use the Imager only as specified in this manual. See Table 1 for a list of symbols used on the Imager and in this manual.

A **Warning** identifies hazardous conditions and actions that could cause bodily harm or death.

A **Caution** identifies conditions and actions that could damage the Imager or cause permanent loss of data.













⚠ Warning

To avoid a burn hazard, remember that highly reflective objects will result in lower than actual temperature measurements. See Emissivity information later in this manual for more information.

Do not use in a manner other than specified in this manual or the protection provided by the equipment may be impaired.

To avoid injury from explosion, chemical burns, or fire, follow all battery care and charging instructions in this manual.

Table 1. Symbols

Symbol	Description	Symbol	Description
	Battery condition.		Battery charging.
	Conforms to requirements of European Union and European Free Trade Association.		Important information. See manual.
	Imager connected to battery charger.		Audio recording associated with the displayed image.
	On Off Symbol		Imager in sleep mode.
	Conforms to relevant Australian standards.		Conforms to relevant Canadian and US standards
	This camera contains a Lithium-ion battery. Do not mix with the solid waste stream. Spent batteries should be disposed of by a qualified recycler or hazardous materials handler per local regulations. Contact your authorized Fluke Service Center for recycling information.		
	Do not dispose of this product as unsorted municipal waste. Go to Fluke's website for recycling information.		

Unpacking the Imager

Carefully unpack the following items:

- Ti32 or TiR32 Thermal Imager
- AC Power Adapter
- Two-Bay Charging Base
- Two Lithium-ion Smart Batteries
- Rugged Carrying Case
- SD Memory Card
- Multi-format USB Memory Card Reader
- Soft Transport Bag
- Imager Hand Strap (Left-hand or Right-hand use)

- User Manual (in various languages)
- SmartView[®] Software
- Warranty Registration Card

Note

Fluke recommends the use of the supplied SD memory card with the Imager. Fluke does not warrant the use or reliability of aftermarket SD memory cards of different brands or capacities.

See Table 2 for a list of accessories that are available for the Imager.

Table 2. Accessories

Model	Description	PN
FLK-TI-LENS/WIDE1	Wide Angle Infrared Lens	3441183
FLK-TI-LENS/TELE1	Telephoto Infrared Lens	3441176
FLK-TI-SBP3	Smart Battery Pack	3440365
FLK-TI-SBC3	Charging Base/Power Supply with Adapters	3440352
TI-CAR CHARGER	12 V Vehicle Charger Adapter	3039779

Charging the Battery

Before using the Imager for the first time, charge the batteries in the included two-bay charging base for at least two and one-half hours. The charging status of each battery will be shown on the five-segment battery charge indicator on each battery.

Note

New batteries are not fully charged. Two to ten normal charging/discharging cycles may be required before the battery charges to its maximum capacity.

To charge the Imager's battery, select one of the options that follow:

Two-Bay Charging Base

1. Plug the ac power supply into an ac wall outlet and connect dc output to charging base.
2. Insert one or two smart batteries into bays of charging base.
3. Charge batteries until charge indicators show "full".



4. Remove smart batteries and unplug power supply when batteries are fully charged.

On-Imager AC Power Socket

1. Plug the ac power supply into an ac wall outlet and connect dc output to the Imager's ac power socket.
2. Charge until on-screen indicator shows "full".
3. Disconnect ac power supply when smart battery is fully charged.

Note

Ensure the Imager is near room temperature before connecting it to the charger. See the charging temperature specification. Do not charge the Imager in hot or cold places. Charging in extreme temperatures reduces the battery pack's ability to hold a charge

While the battery is charging, the battery icon appears as  while the Imager is operating. With the Imager off,  appears in the display while connected to the battery charger.

Keep the Imager attached to the charger until the battery condition icon indicates a full charge. With the Imager off, the battery charge icon will have four full bars. With the Imager on, turn the Imager off to view the battery condition icon. Removing the Imager from the charger before a full charge is indicated will deprive the battery of a full charge and thus shorten the run time


Optional 12 V Vehicle Charger

1. Plug the 12 V adapter accessory plug into the vehicle's 12 V accessory socket and connect the output to the Imager's ac power socket.
2. Charge until on-screen indicator shows "full".
3. Disconnect the 12 V adapter and Imager when smart battery is fully charged.

⚠ Caution

To avoid damage to the Imager, remove it from the DC car charger before starting or jump starting the vehicle.

Turning the Imager On and Off

To turn the Imager on or off, press the center softkey () for two seconds.

