

TT8900 Outdoor Payment Terminal

User Manual

September 2021



* TT8900 OPT shown as mounted
inside optional supporting cabinet



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1. Introduction

This document is intended for use by personnel operating the TT8900 OPT (Outdoor Payment Terminal), covering daily operation and general housekeeping tasks, such as changing the receipt paper and cleaning the card reader.



Consumable Items

- » Receipt paper roll - TT Part Number 091385.
- » Card reader head cleaning pads - TT Part Number 094820.

Credit and EFTPOS Cards

The TT8900 OPT accepts most major debit and credit cards including standard EFTPOS cards, VISA, MasterCard, American Express and WEX Motorpass cards.

Note: The TT8900 OPT accepts American Express cards if merchant has applied for and received approval. OPT accepts WEX Motorpass cards if merchant has applied for and received approval.

However, some cards or account types may be declined or limited by restrictions put in place by the card issuer. The customer should contact their card issuer (bank) if their card is declined or the transaction amount is limited to below what is acceptable for their circumstances.

Transaction Processing

Credit and debit cards are checked ("pre-authorised") after the cardholder has entered their PIN to verify there are available funds on the card before the fuel transaction commences.

In a similar way to securing a hotel room or hire car booking, the selected amount is authorised before the transaction takes place. Once the transaction is completed, only the actual amount of the fuel purchase is charged to the card. The "pre-authorised amount" is then released.

For example, a customer selects to fill their car up to \$75 and only fills \$50. The \$50 will be charged to the customer's credit card. The pre-authorised \$75 will be released after the transaction.

Pre-Authorisation Release

Important: The release of the "pre-authorised" amount may not occur immediately. The time of the release is dependent on the card provider.

The OPT will display the following message after the selected pre-authorisation amount has been entered:

Your bank will hold the pre-authorisation amount above.
It may take up to 7 business days to be released.
To choose a different amount press CANCEL and
insert your card into the reader below.

1.1 Key Information

All TT8900 OPT keys are secured registered keys, unique to TT Fuel. In case the OPT has been purchased with its supporting tower, two additional smaller keys (per OPT) are supplied for opening the lower access panel.

Note: The installer must liaise with the customer to determine who will hold the keys and the nominated person should give signed notification to the installer that they have received them.



Replacement keys cannot be made by the general public and have to be ordered from TT Fuel by contacting our customer support at:

✉ sales@ttfuel.com ☎ +61 88215 5000

1.2 TT8900 OPT Specifications

EFTPOS / Card Specifications	
Cards Supported	Debit and Credit including Visa / MasterCard / WEX MotorPass / Amex
PIN Pad Payment Security Standards	PCI PTS 5.x with SRED; GBIC, and CCcompliant; EMV Contact L1 & L2 EMV Contactless L1; Mastercard TQM (PCD/IFM); PayPass, PayWave, DPAS, ExpressPay, Interac Flash
Card Reader Standards	Magnetic Stripe Reader (ISO 7811 AAMVA Tracks 1/2/3, Bi-directional); Smart Card Reader (asynchronous ISO 7816) – EMV 4.0 Contact L1 compliant; Contactless.
Acquirer	First Data Interchange (FDI).
Receipt Printer	Thermal receipt printer with approximately 1000 receipts per paper roll.
GST Compliance	Produces GST compliant Tax Invoices.

Loyalty / Account Features	
Discount Schemes	Supports a range of discount options including discounts applied to local account cards, loyalty cards associated with EFTPOS transactions and discount applied to EFTPOS transactions in general.
Product Restrictions	Support for product (fuel) restrictions on local cards / accounts.

Forecourt Specifications	
Protocols Supports	Supports NZPP / PEC / Gilbarco / Dresser Wayne pump protocols.

No. of Supported Hoses	Supports up to 32 hoses on the forecourt.
ATG Interface	Interfaces with Veeder-Root, OPW, Holykell, Senix, PV4, Weldann and Windbell.
Forecourt Controller	Supplied with internal forecourt controller and also interfaces with POSTEC FCC.
NMI Compliance	Fully NMI compliant for re-sale of fuel.
Attended / Unattended	Supports both modes of operation with arbitration of on-site PCC if required.

Communication Specifications

EFTPOS Interface	3G, 4G, NBN (with suitable router).
Local Card Authorisation	Internal verification or 3G/4G real time on-line (includes local pre-paid cards).
Transaction Reporting	Store and Forward (SAF) or 3G/4G real time on-line.
Remote Management	TCP/IP over Ethernet / 3G / 4G / NBN.

Remote Monitoring and Management

Remote Alarming	<p>Internally generated alarms notified to central back-office server for SMS / Email notification. Alarms, amongst others, include:</p> <ul style="list-style-type: none"> » Emergency Stop activation, mains power failure, UPS battery state. » Low receipt paper, paper out » Pin Pad status (offline detection), pump offline, missed heartbeat » Intrusion detection on access door. » Price change (pumps) confirmation, Price Sign change confirmation. » Tank level alarms low, low low, high, high high, leak (if suitable ATG fitted).
Remote Management	<p>Remote management interface to central back-office server provides:</p> <ul style="list-style-type: none"> » Transaction & inventory management. » Real-time and scheduled price changes. » Vehicle & Driver ID Management. » Scheduled data import / export to third party software applications. » Alerts & Notifications Management.
Audit	Internal audit log which can be accessed by central back-office server for post-analysis of events.

General Specifications	
Environment	-10C to +50C with 95% non-condensing humidity. Pin Pad IP65, Card Reader IPX4, Printer IP23.
Electrical	230V AC 1A maximum - UPS and power filter included All electrical and communications connections protected by surge arrestors.
Security	<ul style="list-style-type: none"> » Tower and fascia manufactured from powder-coated 304 stainless steel. » Option for 316 grade stainless steel tower for marine environments. » Separate internal cabinet with 19mm aluminium fascia. » High security key system with optional site-specific keys available.
Physical Dimensions	Height: 1804mm, Width: 655mm, Depth: 473mm.

1.3 Referenced Documents


The TT8900 OPT User Manual should be read in conjunction with the following referenced documents:

Document Title	Document Source
TT8900 OPT Installation & Servicing Manual	TT Fuel
AS1940 (2017) Storage and Handling of Flammable and Combustible Liquids	SAI Global
AS/NZS2229 (2004) Fuel dispensing equipment for explosive atmospheres	SAI Global
AS/NZS3000 (2016) Electrical installations	SAI Global
NMI R 117 Measuring Systems for Liquids Other than Water	National Measurement Institute

2. Daily Operations and Maintenance

2.1 Using the PIN Pad and the Card Reader


Before attempting card operations, make sure the following message is displayed on the screen: “INSERT CARD AND PLEASE WAIT – DO NOT REMOVE”.

1. Contactless (tap) cards displaying the  symbol can be touched on the PIN Pad screen.
2. Smartcards are inserted and must remain in the reader until the “REMOVE CARD” message is displayed. Card must be orientated as shown on the graphic panel located above the card reader.

Note: If a Smartcard chip cannot be read, a “remove card” message is displayed and the reader will attempt to read the magnetic stripe on the rear of the card when it is removed from the reader.



Figure 1: TT8900 OPT Front Panel

3. Magnetic stripe only cards  are fully inserted and a “remove card” message is displayed. The card is read on removal.

After the card is read, the TT8900 OPT will request **ENTER PIN** (if used) – use the number keys and press **ENTER**. If the card’s PIN is correct, **ENTER PUMP NUMBER** is displayed. Select the desired pump number and press **ENTER**.

The following messages may also show:

1. **PUMP UNAVAILABLE (in use)** is displayed if the pump chosen is currently being used. The customer needs to restart the transaction.
2. **PUMP UNAVAILABLE (offline)** will be shown if the selected pump is switched OFF or is faulty. The customer needs to restart the transaction.
3. **PUMP UNAVAILABLE (invalid pump number)** will be shown if the selected pump number is invalid, then the message. The customer needs to restart the transaction.

From this point forward, the messages displayed will vary depending on whether the card used is a local account card (white card) or an EFTPOS (debit or credit) card. The customer must follow the prompts carefully and enter the numbers or press the keys requested.

If the card is EFTPOS, the OPT will now contact the bank for authorisation. While it is doing this, the display will show **PROCESSING PLEASE WAIT**. If an error occurs, or authorisation is declined, a receipt is printed with the error code number shown (refer next section).

When authorisation is received from the bank, **PLEASE GO TO PUMP AND TAKE FUEL** is displayed. The customer should refuel their vehicle and hang-up the hose when finished.

2.2 Getting a Receipt

If a receipt is required, please follow these steps:

1. Return to the OPT and insert the same card again.

Note: At this point, the message **RECEIPT AVAILABLE – PRESS OK TO PRINT OR CLR TO CONTINUE** is displayed.

2. Press **ENTER** to print.
3. Alternatively, press **CLEAR** and follow the subsequent prompts if you want to refuel again without reprinting a receipt for a past transaction.

2.3 Turning the OPT ON and OFF

The TT8900 OPT is hardwired to the customer's junction box. If instructed to power the TT8900 OPT ON or OFF, please follow the steps below:

To **turn ON** the OPT:

1. Open the OPT front door.
2. Switch ON the UPS battery.

Note: At this stage, the OPT still needs mains power to turn ON.

3. Switch ON the OPT connected circuit breaker inside the customer's junction box.



Figure 2: TT8900 OPT UPS Switch

To **turn OFF** the OPT:

1. Switch OFF the OPT connected circuit breaker inside the customer's junction box.

Note: At this stage, the UPS circuit becomes active, powering the OPT from the battery.

2. Open the OPT front door.
3. Switch OFF the UPS battery.

2.4 Cold Start Time

If the TT8900 OPT is powered OFF for an extended period (30 minutes or more), the controller unit and card reader / PIN Pad will need to perform a “cold start-up”.

The cold start-up takes approximately four (4) minutes and the OPT cannot be used until the start-up has completed.

During this time, the front panel will display **PLEASE WAIT** message. When finished, the **INSERT CARD DO NOT REMOVE UNTIL PROMPTED** message is shown.

2.5 Card Operation Messages

Covered in this chapter are all the messages that may appear on the OPT display.

2.5.1 Standard Messages

These messages will appear on the TT8900 OPT as part of the normal transaction process or while the unit is idle (waiting for the next transaction).

Message	Description
INSERT CARD DO NOT REMOVE UNTIL PROMPTED	The OPT is ready to start a new transaction.
PROCESSING PLEASE WAIT	The OPT is contacting the bank for authorisation or to finalise the last transaction. May also occur when the OPT is performing the daily settlement.
POWER ON SELF TEST	The OPT is currently starting up. This message should only be displayed temporarily.
PLEASE WAIT *	This text-only message can be displayed for one of two reasons. It will be displayed when the OPT is starting up in which case it should disappear after 1 minute. It will also be displayed briefly between other messages as the OPT processes the transaction.
PLEASE WAIT	This message, together with an animated picture, is displayed when the OPT is logging on to the bank network. It should disappear after 1 minute.
CANCELLED CANCELLED BY PIN Pad	This message appears briefly when the customer cancels the transaction by pressing the CLR key during the dialogue.
TRANSACTION CANCELLED (timed out)	This message appears briefly when the customer takes too long to respond.
PRINTING PLEASE WAIT...	This message appears briefly when the OPT is printing a receipt.
PLEASE TAKE YOUR RECEIPT	This message appears briefly when the OPT has finished printing a receipt.

2.5.2 General Error or Alert Messages

These messages will appear as a result of either a general error occurring or are displayed for the customer or operator's attention.

Message	Description
INSERT CARD DO NOT REMOVE UNTIL PROMPTED RECEIPT PAPER LOW	The OPT is ready to start a new transaction however there is not much receipt paper left.
INSERT CARD DO NOT REMOVE UNTIL PROMPTED RECEIPT UNAVAILABLE	The OPT is ready to start a new transaction but cannot produce any receipts. This may be because the printer is out of paper or because there is a fault with the printer itself.
INSERT CARD DO NOT REMOVE UNTIL PROMPTED PRINTER ERROR	The last receipt generated by the OPT may not have been printed correctly. This error should clear when the next receipt is generated. If not, contact your service agent.
INSERT CARD DO NOT REMOVE UNTIL PROMPTED POWER FAILURE	The OPT has lost mains (240V) power (possibly due to a power black-out) and is currently running on power from its UPS. No new transactions will be allowed to start but past receipts can still be issued. Contact your service agent if this message is displayed but it is known that there is no power black-out.
INSERT CARD DO NOT REMOVE UNTIL PROMPTED BATTERY LOW	The UPS battery in the OPT is not fully charged. This could be either because the OPT has been running from its UPS for a long period of time or the battery is faulty and needs replacing. Contact your service agent if this message persists.
INSERT CARD DO NOT REMOVE UNTIL PROMPTED EMERGENCY STOP	The OPT has detected that the emergency stop system has been activated. No new transactions are allowed while this message is being displayed. Contact your service agent if the emergency stop system has been reset and this message is still showing.
INSERT CARD DO NOT REMOVE UNTIL PROMPTED READ ERROR please try again	The OPT could not read the card correctly. The customer should try again. Check the following if the problem persists: <ol style="list-style-type: none"> 1. Card is inserted with the correct orientation. 2. Card is not dirty or damaged. 3. There are no foreign objects stuck in the card reader. 4. Try another card. If a known good card also doesn't work then the card reader may be dirty or require servicing. Contact your service agent.

2.6 General Maintenance

2.6.1 Opening and Closing the OPT Cabinet

Follow these steps to properly open and close the TT8900 OPT cabinet:

1. Insert either a “local Site” key (yellow dot) or a “Master” key (blue dot) into the cabinet lock.
2. Use one hand to apply pressure to the top of the door whilst turning key clockwise until it stops.
3. Pull the door open and support it as it opens downwards. The key cannot be removed when the door is unlocked.
4. To close the door, ensure the lock is in the open position, then gently lift the door.
5. Apply pressure to the top of the door and turn the key anti-clockwise until it stops.



Figure 3: TT8900 OPT Cabinet Door

2.6.2 Cleaning the Card Reader

Regular cleaning of the card reader chute is recommended to remove any dirt that may accumulate on the Smartcard sensor and the magnetic stripe read heads. For this purpose, an alcohol impregnated cleaning card must be used.



ORDERING: Reader Cleaning Cards (TT Part Number 094820) can be ordered from TT Fuel:

✉ sales@ttfuel.com

☎ +61 88215 5000

Follow the directions provided with the product and insert/remove the cleaning pad 5-6 times. This will clean both sensors in the reader.

Note: OPTs that are located in dusty areas, or close to salt water (for example at Marinas), more frequent cleaning, for example weekly, is recommended to minimise any build-up of salt and abrasive particles in the reader.



Figure 4: TT8900 OPT Inserting a Reader Cleaning Card

2.6.3 Cleaning the Aluminium Fascia

Important: Do not hose down any parts of the OPT or warranty may be void.

The OPT cabinet fascia should be cleaned only with plain soap and water. To remove stubborn marks a non-metallic scrubbing brush should be used instead of a cleaning cloth as the slightly abrasive finish of the fascia will cause the cloth to leave lint behind. Take care to not let any cleaning liquid enter the card reader chute. Wipe dry with a clean cloth when finished.

Note: For OPTs installed in marine or coastal environments regular cleaning of the fascia should be performed to reduce the build-up of salts to assist in reducing possible corrosion.

2.6.4 Cleaning the Supporting Tower

Important: Do not hose down any parts of the OPT or warranty may be void.

The supporting tower is manufactured from powder-coated 304 grade stainless steel. For maritime environments there is an option for 316 grade stainless steel to be used.

The supporting tower can be cleaned with a light non-solvent based cleaning product, for example a dishwashing liquid, or plain soap and water. Avoid scrubbing or scratching any decals/labels on the tower when cleaning. Wipe dry with a clean cloth when finished.

2.7 Receipt Printer Maintenance



ORDERING: Paper rolls (TT Part Number 091385) will print approximately 1000 receipts. Replacement rolls (single or in a box of 10) can be ordered from TT Fuel at:

✉ sales@ttfuel.com ☎ +61 88215 5000

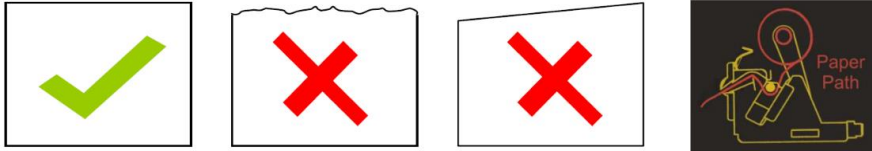


Figure 5: TT8900GN

2.7.1 Loading Printer Paper

Loading a new paper roll into the printer requires the following steps:

1. The new paper roll is loaded as per the Paper Path diagram. To do this, prepare the new roll by first removing approximately 100mm of paper (as this may be dirty or marked) and then cutting the leading edge of the paper cleanly at right angles.



2. Slide the new paper roll onto the support shaft with the paper directed towards the printer body.

Note: The correct orientation of the roll is illustrated in figure 6. Make sure the centre cardboard tube is not pushed out of the roll.

3. Insert the prepared leading edge of the paper into the rear of the pinch roller. The printer should automatically capture the paper and feed a short length out of the exit chute.

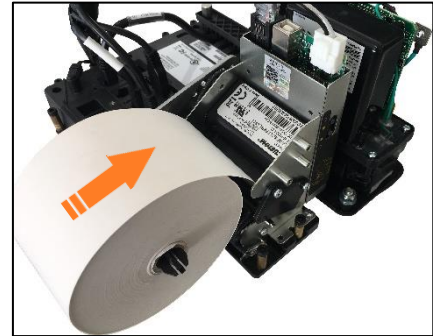


Figure 6: TT8900 OPT Printer Roll Orientation



Figure 7: TT8900 OPT Printer Pinch Roller



Figure 8: TT8900 OPT Printer Paper Feed

4. To obtain a “test print”, press the Form Feed (FF) button on the side of the printer. The test print can be removed by pulling the paper straight out with a little downward pressure.

The printer’s internal cutting edge should leave a clean, slightly serrated edge across the width of the paper.

Note: should the paper advance without any test print, check the orientation of the paper, as it may be upside-down.



Figure 9: TT8900 OPT Printout Example

2.7.2 Clearing a Paper Jam

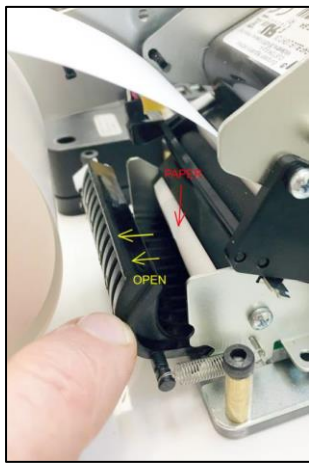


Figure 10: TT8900 OPT Clearing a Paper Jam

If the paper jams either internally or in the exit slide, follow these steps to clear it and resume normal operations:

1. Open the OPT cabinet door.
2. Gently open the spring-loaded paper guide to check and remove any paper jam in this area.
3. Jammed paper is removed from the feed roller by gently pulling backwards.
4. When the area is clear, reload the paper roll as described in [chapter 2.6.1 Loading Printer Paper](#).
5. Use the Form Feed (FF) button to print a test receipt.
6. Close the cabinet door and discard the test receipt.

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We have global experience supporting companies with fuel management systems, outdoor payment terminals, forecourt controllers, point of sale terminals, bulk fuel loading systems, management software services and specialised fuel storage & dispensing solutions.

We are a data rich business that delivers meaningful reporting and information to our customers to help them overcome challenges and manage risk.

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