Operating manual

MITAX-500

2026.10 FI/EN

Trippi Oy
Hiltusentie 23 A 5
90620 Oulu, Finland

Puh. +358 10 5792 300
www.trippi.fi
tuki@trippi.fi

Table of Contents

1. General....4
2. Using Mitax-500....5
2.1. Function button....6
2.2. Switching between displays....6
2.3. Entering numbers....7
3. Starting work....9
4. Metered drives....9
4.1. Fare selection....10
4.2. Metered drive....10
4.3. Meter drive payment....11
4.3.1. Supplementals....13
4.3.2. Changing VAT....13
4.3.3. Tip....14
4.3.4. Discount....14
4.3.5. Payment....14
4.3.6. Normal payment....15
4.3.7. Partial payment....15
4.3.8. Shared payment (KELA payment)....16
4.3.9. Shared payment – Customer in....16
4.3.10. Shared payment – dividing by distance....17
4.3.11. Shared payment – invoice and direct deposit....18
4.3.12. Shared payment – SOTE card....19
4.3.13. Shared payment - end....20
5. Maintenance drive....21
6. Special drives....21
6.1. Special drive payment....22
6.2. Shared payment of special drives....23
7. Reports....24
8. Settings....25
8.1. User settings....25
8.1.1. Bluetooth settings....26
8.1.2. WLAN settings....26
8.1.3. 4G asetukset....26
9. Meter verification....27
9.1. Measurement verification....27
9.2. Failure states....27
9.3. Legal meter information....28
9.4. Totalizer data view....28
9.5. Event log view....29
9.6. Technical information....29
10. Declaration of Conformity....31

1. General

Thank you for purchasing reliable Mitax-500 taximeter. Please read this manual carefully to get most out of your new meter from the very start.

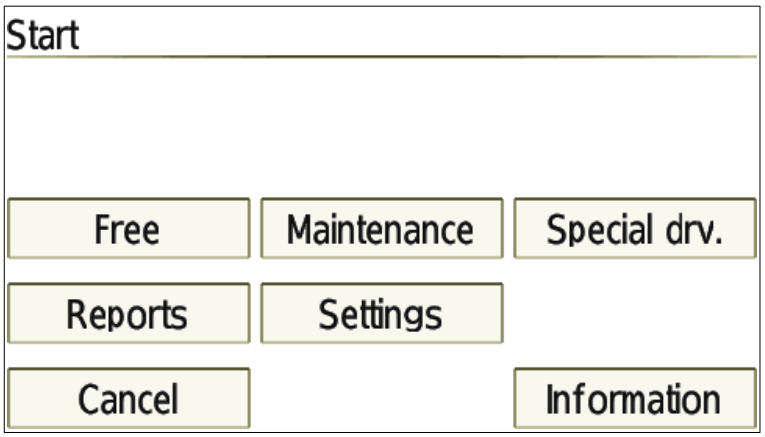
Many features of the meter are governed by meter’s legal configuration set during the installation. Some of the features and functions mentioned in this manual may not be available in your meter for this reason. For more information, contact your local representative or Trippi oy.



When your meter reaches end if its life, please return it to dealer or directly to Trippi oy so it can be recycled properly. Returning the meter does not cost you anything.

2. Using Mitax-500

Meter has touch screen from which it is mainly used. When meter is dark (turned off, own drives) touch the screen to start the meter. Meter will present start menu.



Mitax-500 start menu

Select operation to start meter:

- Free – Start shift / taxi drives
- Maintenance – Start maintenance drive
- Special drv. - Start special drives
- Reports – View meter reports
- Settings – Open meter settings
- Information – Open meter information screen
- Cancel – Turn meter off

2.1. Function button



In the meters side, upper right corner is a wake up button. Meter can be started by using this button, and during use (if no other operation is pending) it is used to open quick select screen where there is brightness adjustment and other helper functions.

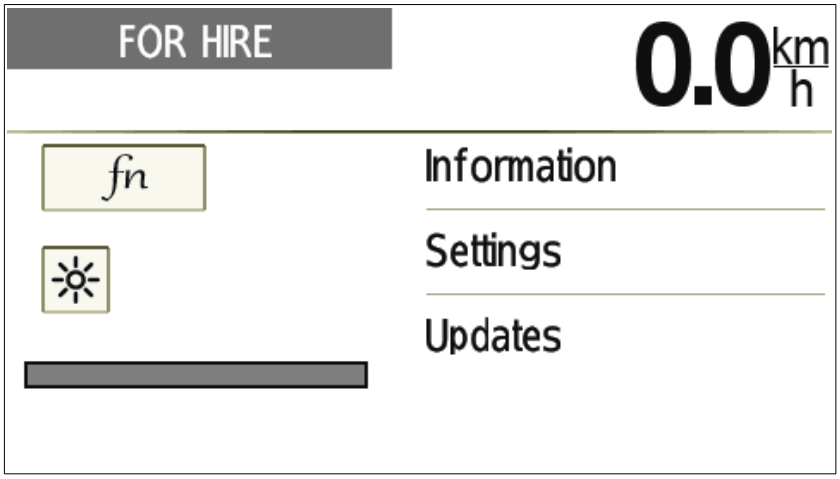
By pressing this button down few few seconds meter will reset touch screen. This can be done if touch screen is not working properly.

In quick select screen display brightness can be adjusted for normal brightness (sun icon) and dimmed (moon icon; when meter is unused for a while). Change selection by touching the icon and adjust desired brightness with adjacent slider.

By pressing *fn* button on this screen meter enters function code selection. These are used for maintenance operations.

You can also select Information (meter general information), Settings (user settings) and Updates (fare and other remote updates).

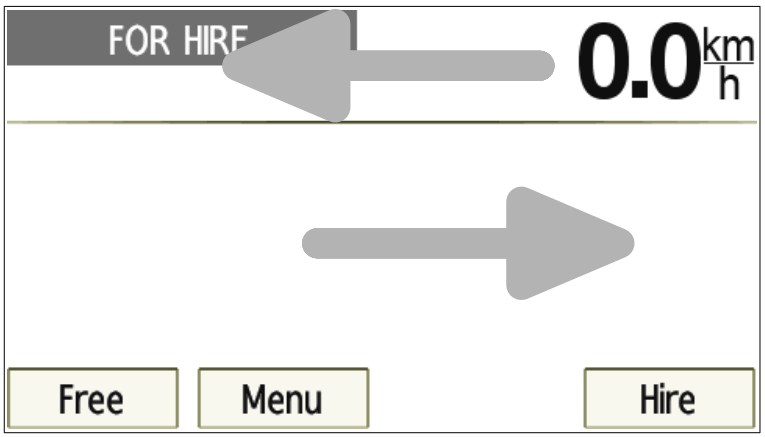
Close quick select screen by touching the upper part of the screen.



Quick select screen

2.2. Switching between displays

In all basic modes (for hire, hired, stopped, special drives) upper- and lower screen contents can be changed by swiping this part sideways left or right. Different modes have different screens that can be selected, and in some modes upper part of the screen is fixed and cannot be changed (for example during Hired measured amount is always shown)



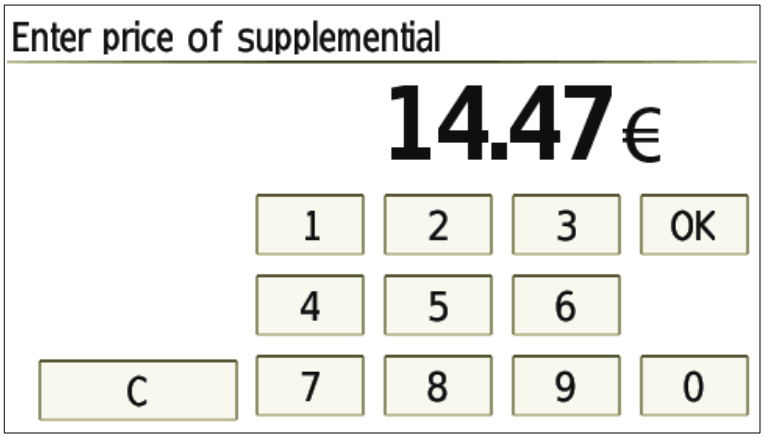
Change display by swiping left or right

Lower part of screen has following information selectable:

- Date, time and speed (presented differently on different screens)
- Network connection state (4G and/or WIFI, depending which is used) and unsent drive data remaining on meter
- Fare information (prices, tariff, measured time and distance) and VAT-%
- Drive extras, discounts and tip
- Customers added to drive
- Drive's price listing and VAT information

2.3. Entering numbers

Numbers are always entered from common screen, shown below. Enter number without decimal points as is (2.80€ → enter 280) and press ok.



Last number is erased with C button, and you can cancel numeric entry by pressing and holding C button for about a asecond.Some modes can have also other buttons, for example during discount entering there is button to select eur- or percentage discounts.

3. Starting work

When meter is off (dark), a shift is closed. To start work a shift must be opened first. Select desired drive mode from start menu (Free, Maintenance, Special drives) and enter driver number. Meter verifies driver number and starts shift.

Maintenance can be started also with driver number zero ("maintenance between shifts"). In this case it is not possible to move to other work drives without closing maintenance first and starting new shift.

4. Metered drives

Metered drives are started from meter's Free mode. Meter's state is always shown on upper left corner of the screen (here "Free"), and here this also indicates taxi light state (white/bright background – light on; black background – light off). *Free* button switches taxi light on or off.



Meter Free, taxi light off

Hire button is used to start drive. Vehicle must be stationary when starting a drive. *Menu* has additional selections:

Mid-shift report – shift report up to this point

Receipt copy – print copy of most recent receipt

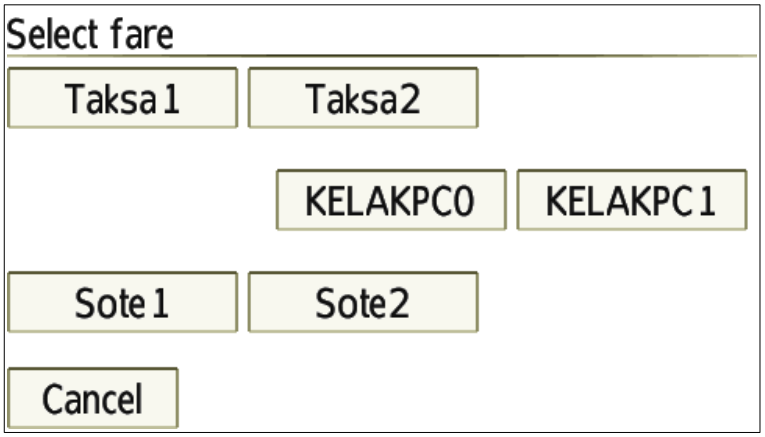
Break – Set meter to break

Change work – Switch to different work modes or end shift, settings

4.1. Fare selection

When starting drive, meter will first query fare which is to be used. Select desired fare from fare selection screen. Available fares may depend on time of day and date, depending on how fares are programmed in the meter. If there are many fares, you may need to change page with *Next* button to find correct fare

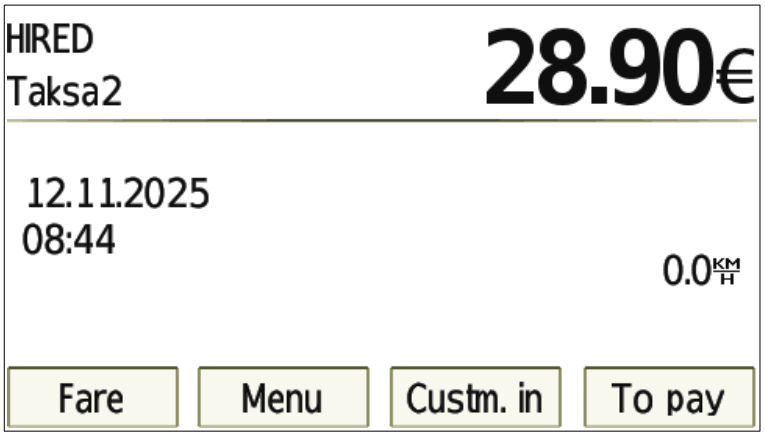
This same selection screen is also used to change fare during drive.



Fare selection

4.2. Metered drive

On upper left corner of meter status "Hired" is shown, and below it is fare name. On right accumulated fare is shown. Lower part of screen shows information, for example time, date and speed; this can be changed by swiping it left or right.



Fare display

Fare-button allows changing fare within currently active fare selection.

Menu opens additional selections;

- Hold stops measurement, for example when looking for correct address. Meter does not measure distance, time or fare at this time. Fare name is also shown as HOLD then.
- *Max price* sets maximum price for drive. When this price is reached, meter stops measurement and moves to Stopped mode automatically. Drive can be resumed however by moving meter back to fare. NOTE! If currently accumulated fare is higher than one entered to max price, meter will reduce current fare to that amount.
- *Max time* sets maximum price for wait fares, for situations where for example social services only covers limited amount of waiting. This will only affect wait fares (i.e. fares with only time price set). Time is entered in minutes or euros as needed.
- *Cost ct.* defines cost center for drive. Cost center is freely set numeric (max 8 numbers) id for drive which can be used to select for example different company-invoiced customers afterwards. After cost center is set, it is kept for entire drive unless manually changed, even if there are multiple payments made.

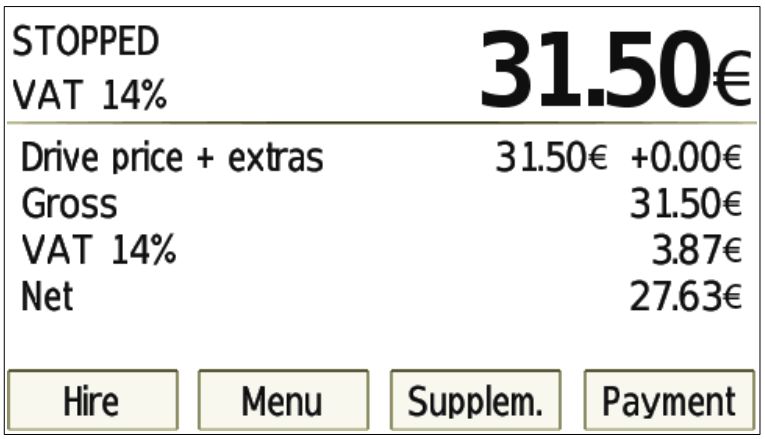
Custom. In -selection is used to inform meter is specific customer coming in in cases where drive costs are split over multiple customers (such as KELA drives). See page 16.

To pay- button moves meter to payment (stopped) mode.

4.3. Meter drive payment

Stopped (payment) mode always has *Stopped* as state in upper left corner. Below it current VAT percentage is shown. On right is total price for payment, and below is information part which can be changed by swiping left or right.

When moving to sopped, meter always selects page with drive and VAT information by default, this can be changed afterwards by swiping left or right. Other screens have further information such as distances, wait times, extras, time and customers.



Stopped mode payment

Supplem. menu lists selectable extras/supplementals.

Menu opens furhter selections:

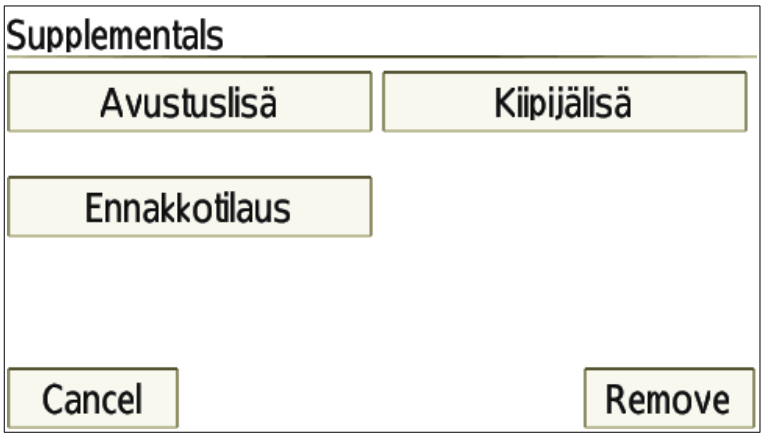
- *Contr.price* allows fixed contract price for drive. It is still possible to return to fare after this is set, in case of unexpected detour or waiting for example.
- *VAT* allows changing selected VAT percentage, see separate chapter below.
- *Reference* allows entering customer reference to this drive. This is shown on receipt and is separate information field from cost center and order id.
- *Lost drive* sets this drive as lost.
- *Tip* selects tip amount. Tip is passed directly to driver and is not included in VAT of receipt, see separate chapter below.
- *Discount* allows eur- or percentage discounts, see separate chapter below.
- *Cost ct.* allows entering cost center for drive. See hired-mode cost center selection on page 11.

Hire moves meter back to hired mode.

Payment starts actual payment.

4.3.1.Supplementals

Supplemental selection is started from Stopped mode by pressing *Supplem.* button. Meter presents list of selectable supplementals.



Supplemental selection

By selecting supplemental meter adds it to price using default value of supplemental in fare listing. By holding supplemental button down for approx 1 second meter allows entering different, but lower price to supplemental.

Lower right corner *Remove* button will remove all added supplementals, for example in case of incorrect selection. After removal supplementals can be added again if needed.

If percentage discount needs to apply to supplementals, add supplemental first, and only then add discount.

If discounts should not apply to supplementals, add discount first and then supplemental.

4.3.2.Changing VAT

VAT can only be changed at the start of the journey.

Select *Menu*, then *VAT* to change current VAT from ones listed in price list. Meter will automatically calculate new price according to VAT difference.

4.3.3.Tip

Tip is entered in euros; either by entering tip as is ("add tip in euros") or by entering new total including tip (for example 50e; "enter total with tip").

Tip is passed to driver directly and is not included in drive VAT calculation.

Tip is always specific to next payment made, so in case of multiple customers, add tip only just before handling that customer's payment.

4.3.4.Discount

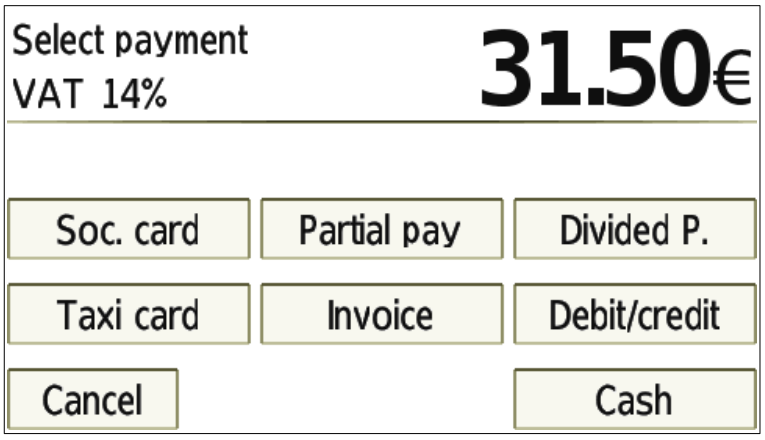
Discount is entered according to user's selection directly in euros or as percentage of total.

If you want discount to apply to supplementals, add percentage discount only after supplementals have been added.

If discount should not apply to supplementals, add discount first, and only then supplementals.

4.3.5.Payment

By selecting *Payment* meter moves to payment mode. First meter presents list of available payment methods. Payment can be cancelled by selecting *Cancel.*



Payment method selection

Available payment methods, and exact payment process depend on fare and user printing device. Selectable payment methods are:

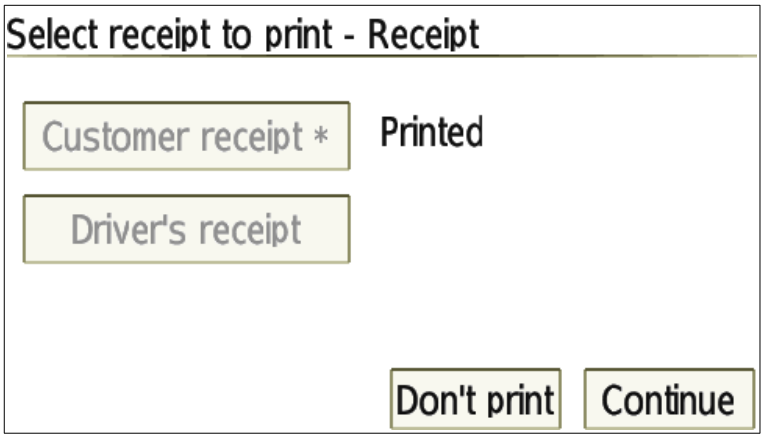
- Cash: Cash payment. Receipt printing can be selected during payment.
- Debit/Credit: Normal Debit or credit card.
- Invoicing: Invoice to customer
- Soc. Card: Social services card used for some society paid fares.
- Taxi card: Company- or single-use taxi card.
- Shared payment: Sosial services fares, such as SOTE and KELA.
- Partial payment: Partial payment of total. See separate chapter below.

4.3.6.Normal payment

When selecting any other payment method than partial or shared payment, meter will process payment and (depending on selected payment method and payment terminal or printer) either prints receipt automatically, or waits for receipt selection.

Receipt selection screen shows customer's and driver's receipt selection. Star symbol after titles refers to automatically printed receipts, in case user select *Continue* without other selection.

User can also select either of these receipts for printing (as a copy after first print), or *Don't print* to skip printing completely.



Selection of receipts, customer's copy already printed

4.3.7.Partial payment

Partial payment is used to pay part of total, for example when there are multiple different passengers where one passenger pays 20€ for first part of the total journey.

Select Partial payment as payment method, then enter paid sum in euros (for example 20,00€).

After price selection meter asks for payment method. Select payment method, after which meter processes payment normally (see previous chapter), and then returns to *Stopped* mode where next payment can be processed or drive resumed.

4.3.8.Shared payment (KELA payment)

Shared payment divides payment between passengers, and further each passenger's payment to passenger's deductible and invoicing portions.

If costs are to be divided in proportion of distance traveled by each person, *Customer in* selection must be used for each passenger when they come in (see chapter below). In this case is is absolutely required that this is used for each individual passenger in time for division to be correctly.

If *customer in* is not used, meter will divide payment evenly according to entered customer count.

Shared payment also can be used for consumer drives by selecting invoicing based on payment method passenger wants to use (e.g. debit/credit) and entering zero as deductible.

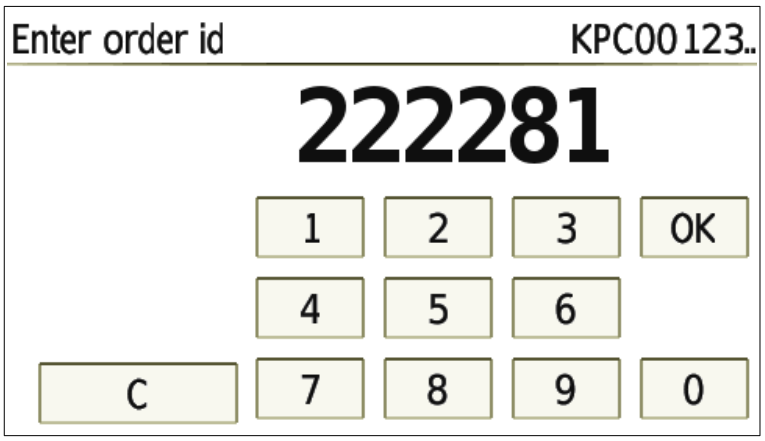
4.3.9.Shared payment – Customer in

When customer enters vehicle, select *Customer in* in Hired mode.

Meter will prompt for customer order id, which in case of KELA is 6-figure provided for customer along the drive order. Enter id to meter and press ok.

If supplementals can be used, meter will ask which supplementals apply to this customer. Supplementals selected here always apply fully to this customer. Select either wanted supplementals (one or multiple) and select *Accept*, or directly *No extras* to add none.

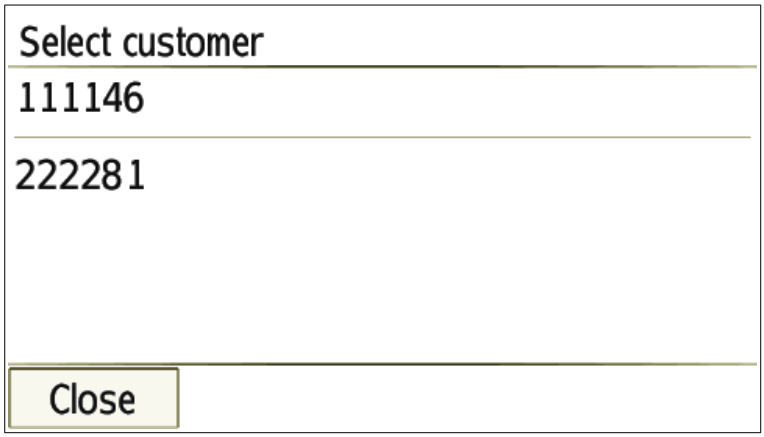
Repeat this to each incoming customer separately. Note that if order id is entered to one customer, it must be entered to every customer: without number meter cannot process payment correctly during cost division.



Customer in – entering order ID

4.3.10. Shared payment – dividing by distance

When customer whose order id has been entered via *customer in* function is leaving, select *Payment* and *Divided Payment*. If there are multiple customers in, meter will first ask which one is leaving;

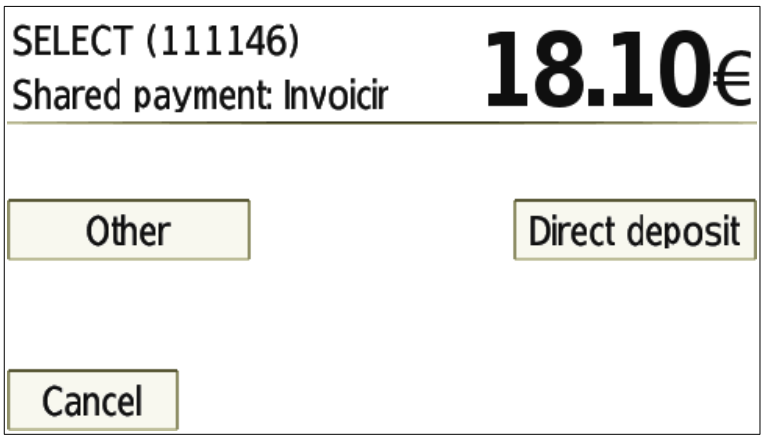


Selection of deparing customer

Select number of customer who is leaving. If there is only one customer in, meter will automatically skip to next ste.

Meter will then ask for *invoicing* payment method, and on top of the screen order number is shown. *Cancel* allows cancelling payment in case there were an error. Available payment method depend on connected printer and fare definitions. For KELA *Direct deposit* must always be used.

Here *Invoice* refers to invoice that is printed only on paper, and *direct deposit* to invoice that is electronically transferred to invoicee, such as KELA.

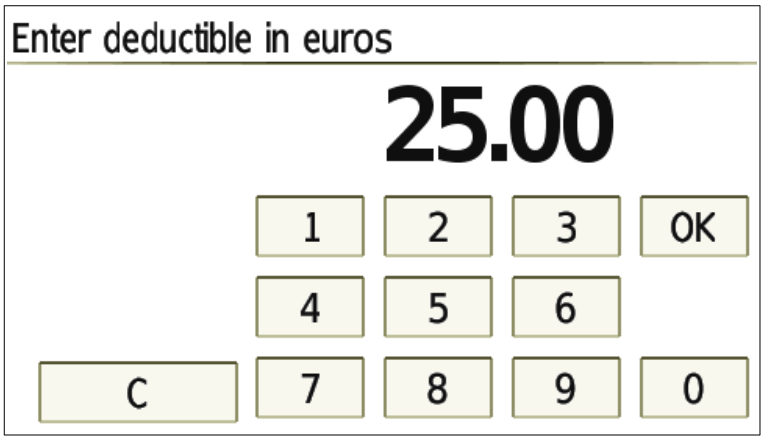


Shared payment: Invoicing method

4.3.11. Shared payment – invoice and direct deposit

If payment is made with SOTE card, see separate chapter on next page.

When using other invoicing method than SOTE card meter will ask for customer's deductible. Accept suggested amount, enter new amount, or clear deductible by setting it to zero, and press ok



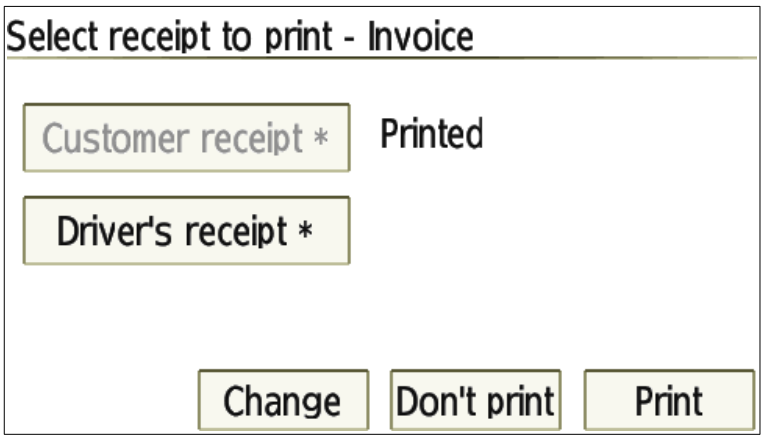
Entering deductible

If deductible exceeds invoicing amount, meter will automatically correct amounts. Do not change deductible to custom value in that case.

If deductible is zero (deductible ceiling reached, or this is consumers' shared payment), meter will proceed to invoicing handling.

If payment has deductible, after deductible sum the payment method for deductible is selected. After selection meter will handle deductible payment similarly to normal payments. Select *Continue* after payment is handled.

After deductible meter will handle invoicing payment (either card payment, or directly by printing invoicing receipts). After invoicing has been processed, select *Continue* and meter will return to payment mode for next payment.



Customer's invoicing receipt printed

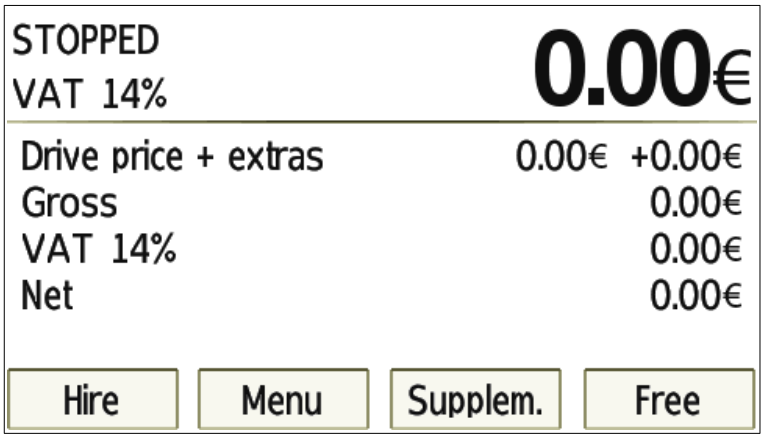
4.3.12. Shared payment – SOTE card

With SOTE card payment meter will hand payment to payment terminal for processing. Terminal will handle payment and print receipts. Deductible is handled after this on meter, see below.

During initial SOTE card payment meter waiting to continue. Only after payment terminal is ready to accept next event select *Continue* on meter, after which meter will ask for deductible (same which was used for terminal) and accept it. Meter will then ask for deductible payment, after which it will proceed to payment.

4.3.13. Shared payment - end

When payment has been processed, meter will return to Stopped mode for handling either next payment, ending drive or resuming driving by switching back to Hired mode.

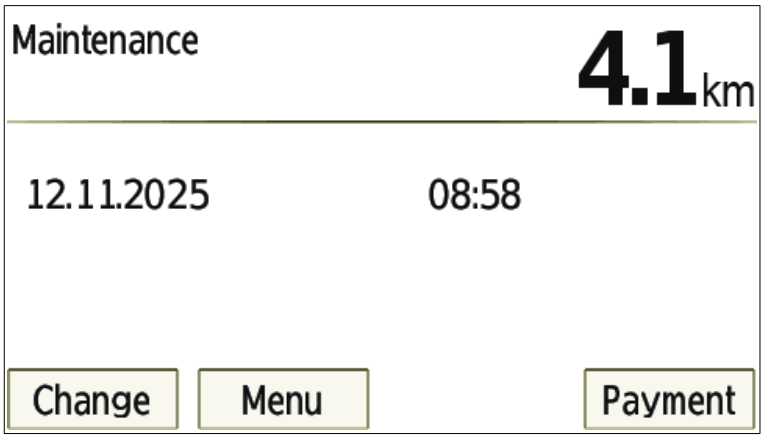


Stopped mode after last payment

After last payment meter will show zero total sum. Here *Free* can be selected to end drive, or *Hire* to resume driving.

5. Maintenance drive

Maintenance drive, or non-profitable work drive includes all driving that is no directly profitable, such as refueling, maintenance, washing and such. Distance driven in this mode is listed in meter reports separately, as distance and (if added) costs. Meter does not separate VAT in these costs, so costs can be entered as VAT 0% or with VAT applied. Always enter costs in same way.

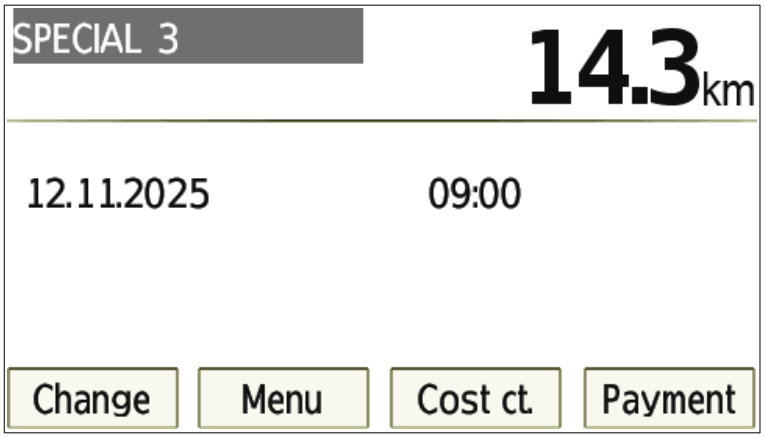


Maintenance drive

Maintenance can be switched to other mode with *Menu → Change Work*. You can switch between maintenance and special drives mode with *Change* button, and enter costs with *Payment* button. Entered cost is listed in meter reports as entered.

6. Special drives

Special drives here mean drives done with separate contract where cost is not based on distance or time measurement, such as school transportation, main deliveries, service drives and other such cases.



Meter in special drive 3

There are 8 different classes or special drives. If there are no separately programmed information of these classes, taxi light is enabled in classes 3 and 4. With separate programming each can have title (e.g. School drive) and whether taxi light needs to be on when using this class.

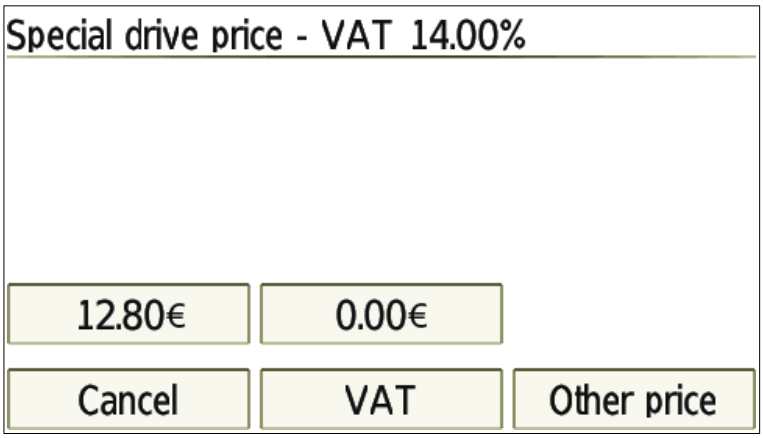
Distance driven on special drives is added in meter reports each separately, along with payments made on these classes.

By selecting *Menu → Change work* you can change between drive types. *Change* changes between special drive classes and maintenance, and *Payment* enters payment for special drive.

Cost ct. selects cost center for drive. Cost center is free, maximum 8-number id that can be used for separating for example company invoices or invoices for separate customers.

6.1. Special drive payment

By selecting *Payment* meter enters payment mode. Top of the screen will show current VAT percentage (here 14%) which can be switched with *VAT* button.

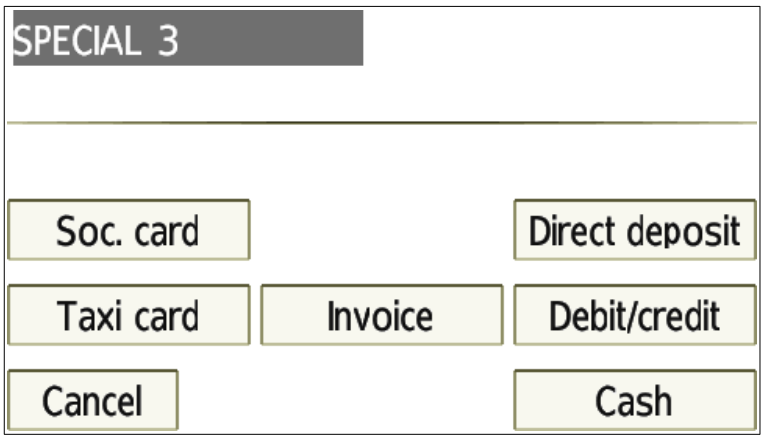


Special drive sum selection

By selecting *Other price* meter asks for price that is used only once. By selecting zero sum (*0.00€)* you can enter amount that meter will remember for future use, for example agreed price that is used every time for this customer.

Here 25.00€ sum was added previously, which can be selected quickly from the screen. After sum has been entered meter moves to payment method selection.

By pressing previously added sum for longer it can be changed to new value.



Selecting payment method of special drive

After sum has selected, meter will ask for payment method. After this meter will handle payment and print receipts.

6.2. Shared payment of special drives

In special drives, all payments other than *Shared payment* will accumulate deductible counter in meter's memory. Switching to other special drive class or drive mode will reset this counter.

Take first all deducitble payments separately, each as its own payment. There can be one or multiple payments as needed. Select then *Payment* and *Shared payment.*Meter will ask whether deductibles are to be deduced from entered invoicing amount: If no, deductibles are listed on receipts as-is and invoiced amount is entered amount directly. If yes, previous deductibles are first taken from entered invoicing sum, and receipt has thus reducted invoicing amount.

After payment deductible is cleared and next payments will start accumulating it again.

7. Reports

By selecting *Reports* in start menu the meter's report view is opened. Meter will first ask for Pin code. Default is 20, but it can be changed from meter's settings.

Meter has three kinds of reports: Shift, Month and Year.

Shift report is from start of shift to its end. Driver can print shift report when ending shift, and it can be printed later from reports menu as well.

Month report is over one calendar month. If shift is open when month changes, meter will force closing of shift. If drive was in progress at the turn of the month, last drive is still listed on previous month's report.

Year report is like month report, but over calendar year.

Meter's report menu contents depend on meter state and cab be as follows:

- Mid-shift report – parial report during shift
- Mid-month report – partial report in middle of month
- Mid-year report – partial report in middle of year
- Drive list – list of all recent drives on meter
- Shift reports – previously finished shift reports
- Month reports – previous monthly reports
- Year report – last year's report
- Counters – legally relevant totalizer counters
- Events – legally relevant event log of meter

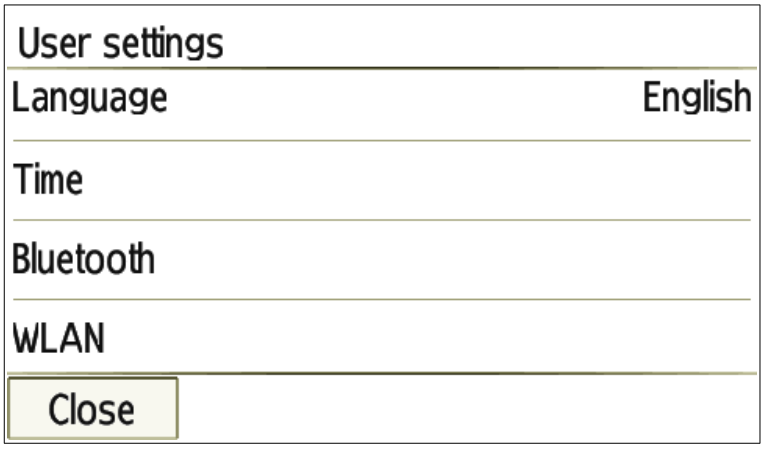
8. Settings

Meter settings are divided in two parts: user settings and sealed settings.

User settings can be changed at any time. Settings are locked with PIN code which is 1234 by default. This can be, and is recommended to be changed when first starting to use the meter.

Critical measurement parameters are locked with seal and can only be changed by authorized maintenance personnel.

8.1. User settings



User settings menu

User settings are:

- *Language* – set meter's language
- *Time* – time can be adjusted +/- 2 minutes, once per week
- *Bluetooth* – Bluetooth settings, see separate chapter below (quick select 760)
- *WLAN* – See separate chapter below (quick select 750)
- *4G/GPRS* – 4G state (quick select 740)
- *Power saving* – Set time after end of shift before printer power is turned off
- *Shift report drive listing* – Print drive list at the end of shift report
- *Odometer* – Car's odometer at the moment. This should be set regularly to match car's reading.

- *Change report PIN* – default 20. PIN should be changed to more secure number.
- *Change settings PIN* – default 1234. Change PIN to access settings. WARNING: If you forget the value, only maintenance personnel can reset this.
- *Debug logging* – Used for troubleshooting. Should only be set if requested by Trippi oy.

8.1.1.Bluetooth settings

Bluetooth menu shows devices connected to meter and their type.

New devices can be connected to meter while in bluetooth settings screen. When new device opens connection to meter, meter will ask type of remote device. After correct type is selected, it is added to pairings and can be connected at any time.

There can be multiple dspatch devices connected to meter. With connection the dispatch system can be information of meter’s state and drive information directly from meter.

8.1.2.WLAN settings

WLAN settings is used to connect meter to a WLAN access point to transfer meter data to internet via Access Point (AP).

Setting page shows connected access points. You can open information of AP by selecting it, in which case you can change password or remove it from meter.

Meter will automatically connect to selected access point when it is nearby and connectable. New access point is connected by selecting *Find AP.* If selected AP requires password, meter will ask for it first.

In text edit lower left qQ1 button will change between numbers and lower- and uppercase letters. Top right left arrow (BS) will erase last entered character, and ok will accept entered text. Space is at lower right corner of keyboard.

To cancel text edit, press BS button for longer time.

8.1.3. 4G asetukset

4G settings shows 4G connection state.

9. Meter verification

9.1. Measurement verification

You can verify meter’s time- and distance measurement functionality using following methods:

Time: Meter time measurement is directly linked to meter clock. Set meter to For hire-mode, and select clock with seconds to top display by swiping it sideways. Verify time against accurate reference clock and make note of time difference.

At least 24 hours later verify difference again. Then calculate how much difference has changed over this period. For more information, contact Trippi oy.

Distance: Previous shift must have been closed for this. Drive to start of known-length measurement track, and select Information from lower right corner of start menu. Scroll to end where there is "Imp / distance" reading. Drive through measurement track; meter will show distance in pulses and metres. At the end of track this reading must match length of measurement track or slightly less.

Settings and software version: Version, printing device, k factor, and both combined Sealed settings and User setting values can be seen at meter’s Information screen (S and U values respectively). For help translating these values to actual settings, please contact Trippi oy.

Type designation, approval markings, serial number, manufacturer, and manufacturing year, k factor range: See left end of device.

9.2. Failure states

Following failure states can happen:

- Acceleration limit exceeded – meter has detected implausible acceleration and stopped measurement. This can happen if speed sensor has intermittent failure, or by pulse tampering attempt.
- Unexpected distance signal detected – Meter has detected significant deviation in speed pulse data and stopped measurement. This can be caused by randomly failing sensor or pulse tampering attempt.
- Meter fault detected – Meter has detected system error and must be brought to service for inspection and repairs.

9.3. Legal meter information

Meter’s legally relevant information can found as follows.

First, open Information screen. This can be accessed from Off-state (meter blank) by opening start menu (touch screen) and selecting Information-button, or from any other state by opening quick menu by pressing button at the top-right and side of the meter, and then selecting Information from menu.

Following information is shown:

- Meter type and software versions
- Meter serial number
- Current printing device and its connection type
- Sealed and user setting as numeric values
- Current fare name, effective start date and checksum. Clicking this will print copy of the fares to current printing device.
- Current time and date. This does not update real time.
- Impulses/kilometre calibration value
- Current odometer reading
- Checksums of meter software (P) and its legally relevant part (L)
- Totalizer distance. Clicking this opens view where all meter’s legal totalizer data is shown.
- Latest event log (audit log) entry. Clicking this opens list of all meter events.
- Impulse and distance counters. These update real-time and can be used for meter verification.

9.4. Totalizer data view

Totalizer view can be accessed from Information page (above), or from meter’s Report view (PIN number can be any, for example zero).

Totalizer view has following information:

Page 1: Total payments taken
Total extras taken. Tips count as extra for this counter.

Total journeys started
Total distance traveled, in all operating states
Total distance at Hired state

Page 2: Number of events in event log
Number of suspected pulse forgery/tampering events
Number of fare updates (new fares taken in use)
Number of device constant changes

Page 3: Meter serial number (without dot)
Current impulses/kilometer calibration setting
Current date and time (does not update in real time)
Current taxi fares and their start date
Total distance in Special drives mode
Total payments taken in Special drives

Page 4: Receipt header text, as it is written to receipts

9.5. Event log view

Event log (audit log) view accessed from Information page (above), or from meter's Report view (PIN number can be any). This view shows only limited number of events per page; Next-button will move to next items in memory. Print can be used to print out list of newest entries.

For each entry its date and time are shown with event type, and on second line additional information of event (such as power outage length) is shown.

9.6. Technical information

Supply voltage:	9 .. 16v
Supply current (at nominal 14,4v)	
Meter only:	300mA (average)
With printer:	approx. 3,5A max, pulsed
Operating temperature:	-25 .. +55 C
Storage temperature:	-40 .. +60 C
Humidity:	5 .. 95%, non-condensing
Dimensions (W x H x D):	145 x 95 x 20mm
IP rating:	none
Environmental rating:	E3
Mechanical rating:	M3

10. Declaration of Conformity

CE

CE-162

NB 0122

Trippi oy declares that following devices:

Tyyppi:	Taxi meter
Malli:	Mitax-500
Valmistaja:	Trippi Oy
	Hiltusentie 23 A 5
	90620 Oulu, Finland

conforms with the relevant provisions of following directives:

2014/32/EU
2019/2144/EU
2011/65/EU
2014/53/EU
EU 2024/2847
2025/40/EU
EN 18031
OIML-R21

Following standards have been used:

IEC 60068-2-1	IEC 60068-2-2	IEC 60068-2-30
IEC 60068-2-47	IEC 60068-2-64	IEC 60068-3-8
IEC 61000-4-2	IEC 61000-4-3	IEC 61000-4-6
ISO 7637-2	ISO 7637-3	ISO 16750-2

Product has been tested according to above standards by Nmi. Type approval certificate number is:

T13345

E17*10R07/01*0203*00

This declaration is issued under sole responsibility of the manufacturer.

Allekirjoitus:

Toni Räsänen, CEO

Oulu, 20.10.2026