



pretixPOS User Manual

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Note

This manual aims to give clear explanations of all functions of pretixPOS. Despite the authors' best efforts and diligence we cannot guarantee that the information herein is correct, up-to-date, and complete.

Screenshots are for illustrative purposes only and may not have been taken in the latest version of pretixPOS. Wording or design may have changed; however, the contents should have remained largely the same.

If you have any questions, please do not hesitate to contact our support at support@pretix.eu and +49 6221 32177-50.

1 Introduction

1.1 Basic functionality

pretixPOS is a point-of-sale system closely integrated with the pretix online ticketing system. As master data and product data are always inherited from a pretix system, pretixPOS does not have its own dedicated management interface for them. All sales in pretixPOS are also recorded as order data in pretix so that all data may be analysed together regardless of distribution channel. For many actions, this does not happen in real time but is instead achieved through regular synchronization intervals as internet connectivity allows.

In order to use pretixPOS, one *event* must be selected from the pretix system. This determines which product data and master data will be used and to which event the order data will be assigned.

1.2 Purposes

pretixPOS is intended as a point-of-sale system for box office sales by organizers using the pretix online ticketing system.

While the sale of other items such as merchandise or food and beverages can of course be recorded with pretixPOS, its main functionality are ticket sales. For larger gastronomical ventures, we recommend the use of an additional specialized point-of-sale system. We are happy to advise you on this matter and recommend several suitable partners.

1.3 Regions

pretixPOS is currently intended for use in the following countries:

- Germany
- Austria

Any use in other countries than the listed above is at your own risk as we did not test pretixPOS functionality for compliance with other countries' taxation laws and regulations.

1.4 System requirements

1.4.1 Device and operating system

pretixPOS can generally be run on all devices with a complete Android operating system version 5.0 or higher. We recommend a diagonal screen size of at least 7 inches, preferably 10 inches.

Some functionalities such as the connection to certain hardware require more recent Android versions.

Warning (as of September 2021): There are currently problems with the Swissbit TSE and Android 11+. If you are operating in Germany, we strongly recommend not yet updating to Android 11.

1.4.2 Internet connection

pretixPOS is capable of executing numerous functions offline and only occasionally requires an internet connection for synchronization with the pretix system. Current master data and product data are transferred to the pretixPOS system. Conversely, pretixPOS uploads to the pretix server all transaction data and cash register balances which have occurred since the last synchronization.

The following functions require a real-time internet connection and cannot be executed without an internet connection:

- System setup.
- Switching between events.
- The sale of items with limited availability due to set quotas.
- The redemption of a voucher.
- The sale of items for which a ticket or badge has to be printed.
- The sale of items with assigned seating.
- The acceptance or sale of gift cards.
- The editing of orders made outside the point-of-sale, e.g. in the online shop (search, cancellation, payment, changes, et al.)
- The processing of returns.
- The processing of card payments with most payment devices.

The pretix server has to be running a sufficiently current version of pretix with the *pretixPOS Backend*¹ plug-in.

¹<https://marketplace.pretix.eu/products/posbackend/>

1.4.3 Compatible hardware

pretixPOS is regularly tested on the following Android devices. This does not mean that compatibility with other devices is limited; however, we may not be able to easily retrace device-specific errors.

- HP Engage One Prime
- HP Engage One Prime Plus
- HP Engage One Essential
- Lenovo Tab M10 FHD Plus (2nd Generation)
- Samsung Galaxy Tab A T580 (TSE only with Android 10)
- Samsung Galaxy Tab A T510 (TSE only with Android 10)
- Samsung Galaxy Tab A T500 (Swissbit TSE only with Android 10)
- Sunmi T2s lite
- iMin Falcon 1

Furthermore, we regularly test pretixPOS with the following peripheral hardware. Thanks to relatively uniform communication protocols, other models and manufacturers are mostly supported; however we cannot offer support for them.

Receipt printers

- EPSON TM-m30, TM-m30ii (network, USB, Bluetooth)
- EPSON TM-T88VII (network, USB)
- Metapace T-40 (network, USB)
- SNBC BTP-S80, BTP-R880 (network, USB)
- BIXOLON SPP-R200iii (Bluetooth)

Ticket and badge printers

- BOCA Lemur X (network, USB)
- BOCA Lemur C (network, USB)
- BOCA Lemur (network, USB)
- Practical Automation uTL+2003 (network)

1 Introduction

- Bixolon SLP-DX420 (network, USB)
- Bixolon XD5-40d (network, USB)
- Zebra ZC300 (network, USB)

Card terminals

- SumUp Air
- SumUp Solo
- iZettle Reader 2
- Stripe Terminal (BBPOS Chipper 2X, BBPOS WisePad 3)
- Ingenico Move/5000
- CCV Mobile Premium

German fiscal device (TSE), microSD

- D-Trust / Bundesdruckerei TSE for Germany²
- Swissbit TSE for Germany³
- Epson TSE for Germany in a network-connected printer
- Deutsche Fiskal: Fiskal Cloud

NFC reader

- Built-in reader of the Android devices listed above
- ACS 1252U (USB)

1.5 Audit compliance

pretixPOS does not allow the editing or deleting of recorded transactions. To correct errors, new transactions have to be created instead. Thus pretixPOS is audit-compliant for taxation purposes.

On non-rooted devices, the internal pretixPOS database cannot be accessed manually; making the Android system functions another layer of protection against tampering.

²**Attention:** Compatibility with Android 11+ limited: Core functionality works, but performance is degraded and export cannot be performed, non-functional with Samsung T510

³**Attention:** not currently compatible with Android 11+

The automatic synchronization of all transactions to pretix means automatic redundant storage and thus reduces the risk of intentional or unintentional data loss.

Depending on laws and regulations in the country of operation, the use of a fiscal security device, which signs transactions and thus shows any deletion of transactions after the fact, may be advisable or mandatory.

1.6 Functional limitations

pretixPOS does not support all functions of pretix. The following non-exhaustive list lists pretix functions not currently supported in pretixPOS:

- Proper support for currencies that do not allow for two decimal places (i.e. JPY)
- Add-ons products with manual pricing
- All functionalities contributed by plug-ins
- Entering customer data at order level (may be entered at item level)
- Extended validation of customer data (name formats, date ranges, ...)
- Automatic discounts
- Invoice printing
- Transfers
- Administration and use of customer accounts
- Redemption of vouchers which almost used up their discount budgets

1.7 Data sheet

For your internal documentation, we recommend that you go to the *Box office* section of your pretix organizer account and download the *Data sheet* for every pretixPOS installation. You can fill out the remaining blanks and then file it with your accounting to create a written record of the cash registers you use.

2 Setup

pretixPOS may be downloaded from the Google Play Store or obtained directly from us as an APK file. At first start, a welcome dialogue opens, asking for confirmation of operating instructions. Afterwards the operating system will prompt you to grant the app permission to access the Android device's camera and file system. Both functions are strictly necessary for the correct operation of the app.

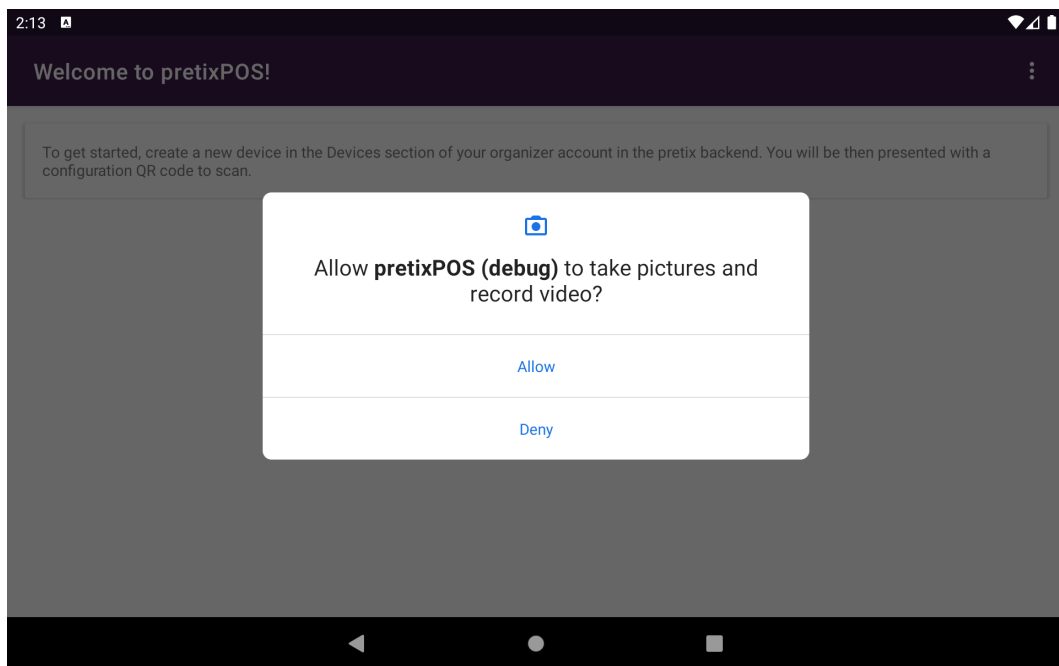



Figure 2.1: Permission request

2.1 Connecting to pretix

As mentioned in the introduction, pretixPOS is an extension of the pretix online ticketing system and thus inherits data from the pretix database. To get started, first you need to create a new device under *Devices* in your organizer account (Fig. 2.2). The name of the POS terminal can be changed to make it more easily identifiable later. At the same time, the device's access can be extended to all of the organizer's events, or limited to certain events only.

2 Setup

Afterwards, pretix will show a QR code which you can scan with the camera view in the app's setup dialogue to connect the device automatically. If the device does not have a camera or the QR code cannot be used for any other reason, the connection can be set up manually. To do so, select the *Manual setup* option from the menu. Depending on your device, you can reach the menu either through the  button in the upper right corner or via a hardware button.

Enter the pretix server URL as well as the initialising token shown in pretix into the open dialogue window (fig. [2.3](#)).

If the connection is successful, you now need to select a country to determine applicable laws and regulations for the taxation modules. This selection cannot be changed later.

After selecting the country, the cashier selection described in the next chapter will open for the first time.

2 Setup

The screenshot shows the pretix web interface for setting up a new device. The page title is 'Neues Gerät verbinden' (Connect new device) under the 'Allgemein' (General) tab. The form includes a 'Name' field, a checkbox for 'Alle Veranstaltungen (auch zukünftig erstellte)' (All events (including those to be created in the future)), and a dropdown menu for 'Auf Veranstaltungen einschränken' (Restrict by event) with options 'Alle / Keine' (All / None) and 'Nur ausgewählte' (Only selected). Below this is a list of events, including 'Michael Jackson live' on '1. November 2022' by 'michaeljackson'. The 'Erweiterte Einstellungen' (Advanced settings) section includes a 'Security profile' dropdown set to 'Voller Gerätezugriff (Lese- und Schreibzugriff auf Bestellungen und Wertgutscheine, Lesezugriff auf Produkte und Einstellungen)' (Full device access (read and write access to orders and vouchers, read access to products and settings)) and a 'Station' dropdown. A 'Speichern' (Save) button is at the bottom right. The footer indicates 'Zeiten angezeigt in Europe/Berlin - Event-Ticketing-Software von pretix'.

Figure 2.2: Setting up a new device in pretix

The screenshot shows the pretixPOS mobile app interface. At the top, it says 'Welcome to pretixPOS!'. Below this is a message: 'To get started, create a new device in the Devices section of your organizer account in the pretix backend. You will be then presented with a configuration QR code to scan.' A dialog box is open in the center, titled 'Manual setup', with fields for 'URL' (https://pretix.eu) and 'Token' (edsv7pnmo5h11fge). The dialog has 'CANCEL' and 'OK' buttons at the bottom right. The background shows a blurred image of a stage or event space.

Figure 2.3: Dialogue box: Manual setup

2 Setup

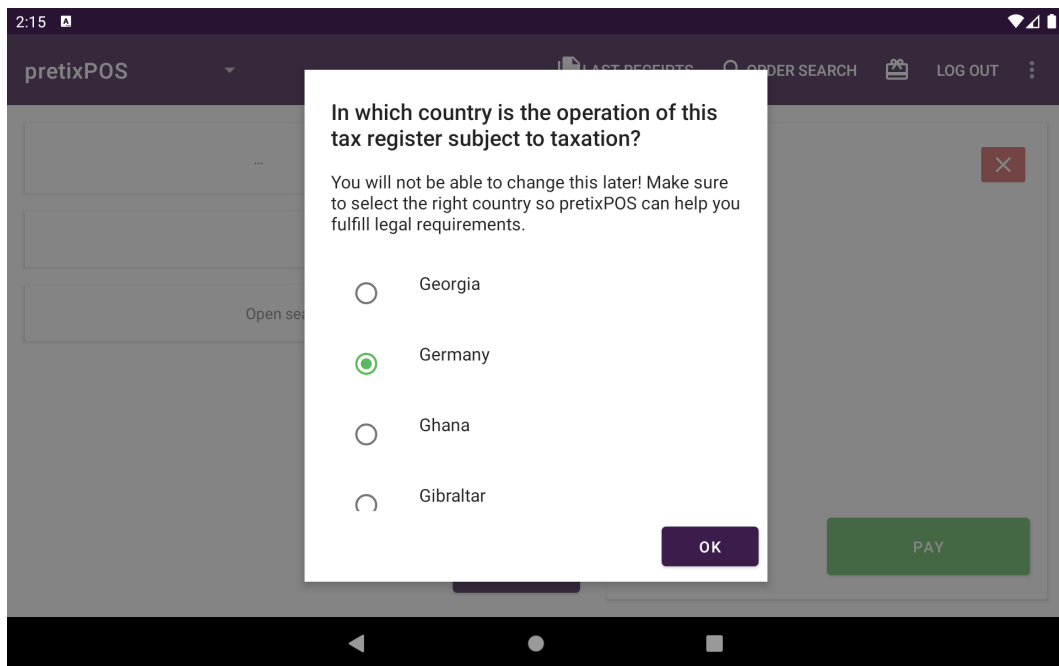


Figure 2.4: Dialogue: Country selection

2.2 Region-specific notes

2.2.1 Germany

Currently, it is not required in Germany to report usage of a cash register to the Finanzamt. This will be required in the future. We recommend recording the setup of the cash register (used hard and software, configuration, ...) and storing the data sheet (see 1.7).

2.2.2 Austria

In Austria, it is required to report both the cash register as well as the signature unit to the Finanzamt using FinanzOnline¹.

To register the cash register, you will need the *Kassenidentifikationsnummer*, with is called *POS serial number* in our software and contains 24 characters (e.g.. KKSR7QREA8SB8JNBEISPIEL0) as well as the AES key which you can find in the fiscalization settings of pretixPOS or on the data sheet (see 1.7).

Please note: The temporary failure or permanent deprovisioning of a cash register must also be reported through FinanzOnline.

Special receipts In Austria, you need to create a so-called *null receipt*, a receipt without any actual sale, in a number of cases:

- As the very first receipt of the POS (*Startbeleg*)
- As the last receipt of a month (*Monatsbeleg*) or, if not possible, as the first receipt of the following month
- As the last receipt of a year (*Jahresbeleg*) or, if not possible, as the first receipt of the following year
- As the first receipt after a temporary failure of the signature unit
- As the last receipt before deprovisioning the cash register

At least the *Startbeleg* und der *Jahresbeleg* **must** be scanned with the app *BMF Belegcheck* and thereby transmitted to FinanzOnline. For the *Startbeleg* you should do this immediately, for the *Jahresbeleg* it must be completed before February 15 of the following year. The receipt and the check result must be kept with your records.

pretixPOS will always try to detect these cases automatically and recommend the creation of a null receipt. This does not release you from the obligation to create these receipts whenever required and to perform the required checks. A null receipt can be created at any time through the main menu on a POS device configured for use in Austria.

¹see Handbuch Registrierkassen in FinanzOnline, https://finanzonline.bmf.gv.at/eLearning/BMF_Handbuch_Registrierkassen.pdf

3 Basic functions

3.1 Cashier login

After setup has been completed and, subsequently, upon starting the app, the app will show the list of all cashiers available to log in. At first start, there may not be any available cashiers for a brief moment. In this case the system will automatically initiate synchronization. At least one cashier access should be shown afterwards. If exactly one cashier is found and no PIN has to be entered for that cashier, the system will select this cashier automatically and skip the selection.

Cashiers and their permissions can be edited in the pretix online system organizer account at *Box office* in the *Cashiers* submenu.

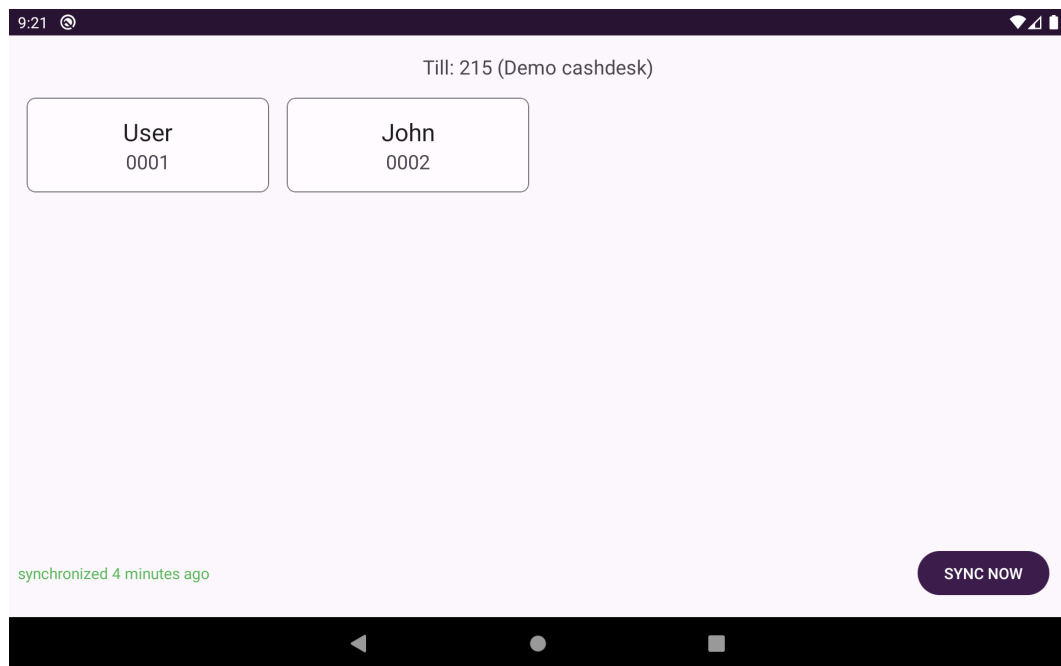


Figure 3.1: Cashier selection

You log in by tapping your chosen cashier account. Depending on prior configuration, it may be necessary to enter a previously defined numerical PIN. If no PIN has been set, you will not need to enter one.

To log out the cashier, click the menu item *Log out* in the main view.

3 Basic functions

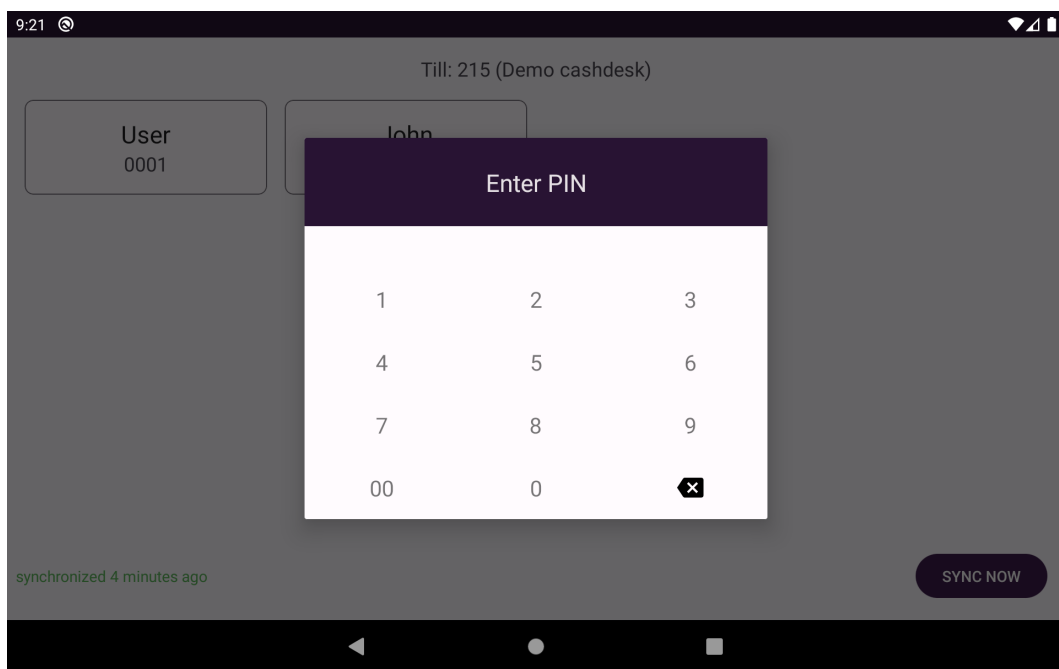


Figure 3.2: Entering the PIN

3.2 Event selection

At initial setup or when tapping on the event name in the menu bar, the event selection dialogue will open (fig. 3.3). Only active events can be selected. If changes to the event list are made in the pretix system, the list can be reloaded by pulling it down with your finger.

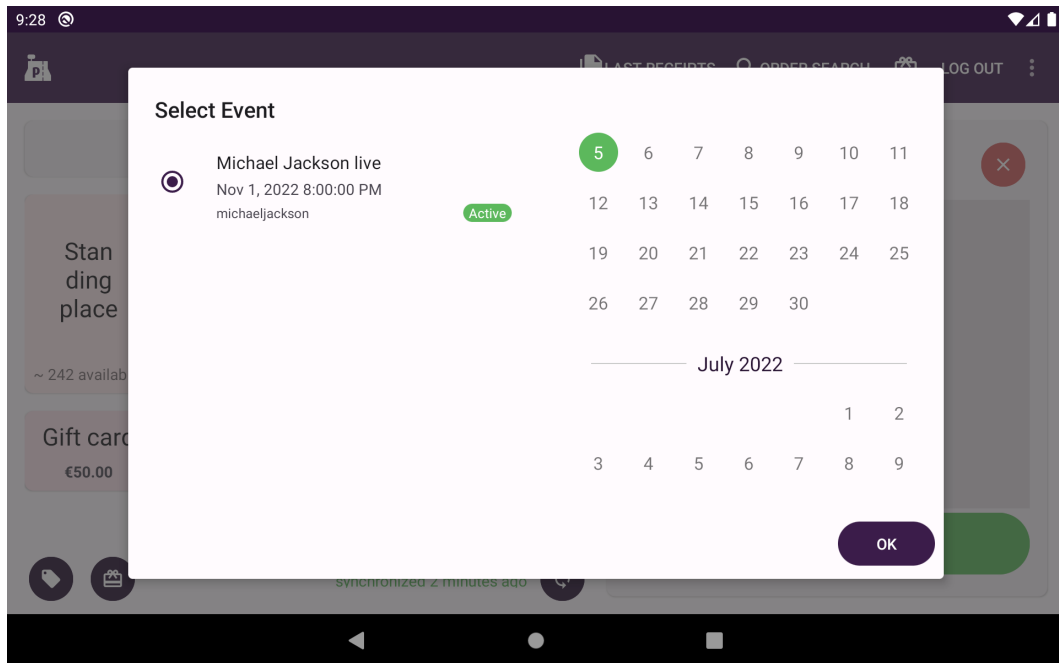


Figure 3.3: Event selection

Events are sorted in ascending order by beginning; the current day's events are generally listed first. If you need events which took place in the past or which will start in the more distant future, the calendar to the right of the list allows you to enter the relevant date and search for it. This will then show you the first several events starting from the selected date.

The calendar is not available on devices with very small screens.

The event selection can be confirmed with **OK**. This initiates a synchronization of event dates with the server and will download the event dates. Afterwards, the sales view will open.

3.3 Validation errors

To ensure compliance with e.g. taxation laws, pretixPOS will regularly perform certain checks. If one of these checks fails, an error message will pop up (fig. 3.4), informing you of the errors and how to resolve them.

On one hand, this may be due to issues with the settings, for example if the details of the issuer of the invoice haven't been set or if the configured tax rates are invalid for the set

3 Basic functions

country. In these cases, the settings need to be adjusted and updated on the device through synchronization to resolve the error.

In other cases, it may be an invalid setting within pretixPOS settings, such as a missing TSE device while cash payments are enabled. Some of these issues may be skipped with the *Ignore* button while others must be resolved for the POS device to work.

The message will also appear when the cash register session needs to be closed, e.g. following a software update.

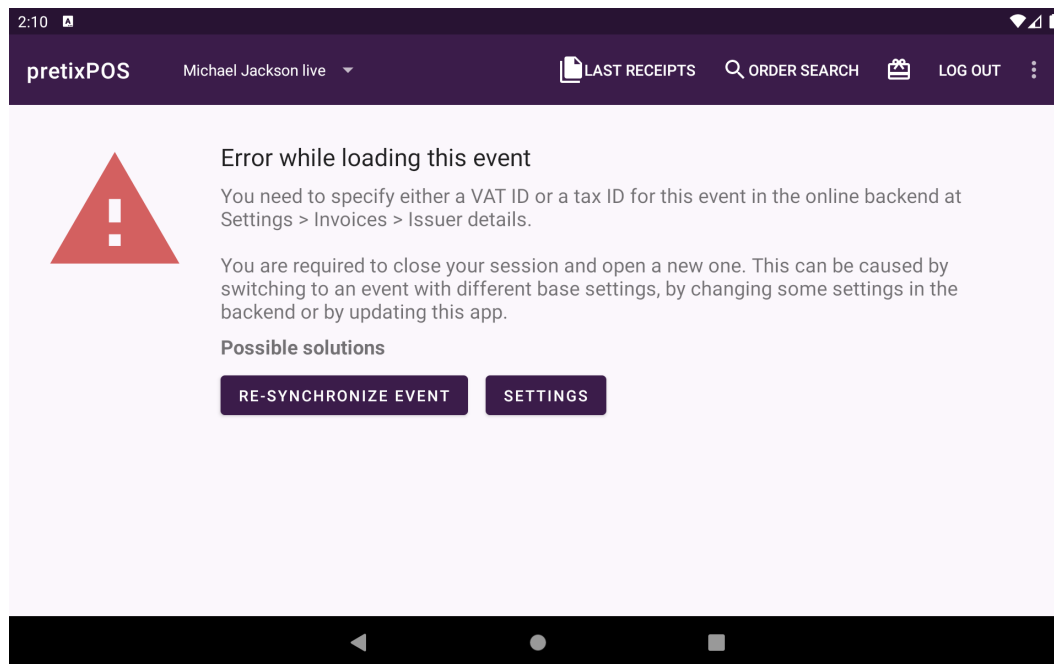



Figure 3.4: Error message for invalid events

3.4 Synchronization

The sales view will show the current synchronization status at the bottom left. This will let you know when the most recent full synchronization with the pretix server, i.e. the download of products and order data and upload of cash register transactions, occurred.

Please ensure synchronization before switching off the unit for an extended period of time. The *Sync now* button to the right of the synchronization status lets you synchronize manually.

3.5 Main menu

The main menu of pretixPOS can be accessed via the  button in the upper right corner. On older Android devices, the physical menu button will open the main menu. The main menu options will be explained in the subsequent sections.

3 Basic functions

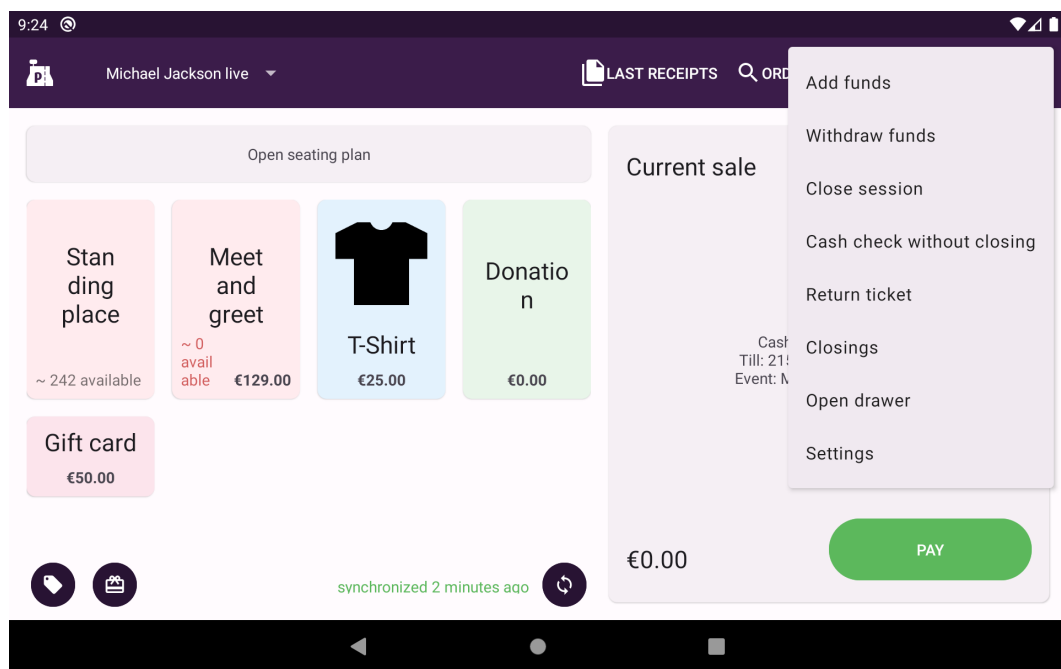













Figure 3.5: Main menu








3.6 Keyboard navigation

pretixPOS is designed to be mainly operated through a touch screen. However, most important features are also usable using keyboard navigation. In almost all dialogs, you can use the  key or your arrow keys to switch between various selectable elements and confirm your selection with the  key.



Almost all dialogs can be aborted using the  key. In many dialogs, in which  just selects one of different options, you can use  +  to confirm the entire dialog.

You can reach the main menu using your  key (often next to your right Windows key). The icons next to the main menu can be reached using  +  on most Android devices. You can then switch between the different icons with the   keys.

Keyboard shortcuts in the sales view

-  Open the order search view
-  Synchronize with the pretix server
-  +  Clear the current receipt (receipt cancellation)
-  Confirm the current receipt / Finalize order
-  +  Cashier logout

Keyboard shortcuts in the order list and receipt list

-  Start a search
-  Clear search filter

4 Sales transaction

4.1 Sales view

The sale of one or more items always occurs in a receipt (also referred to as transaction). The right side of the sales view will show the currently created transaction on a white tile while the available products are displayed on the left side (fig. 4.1).

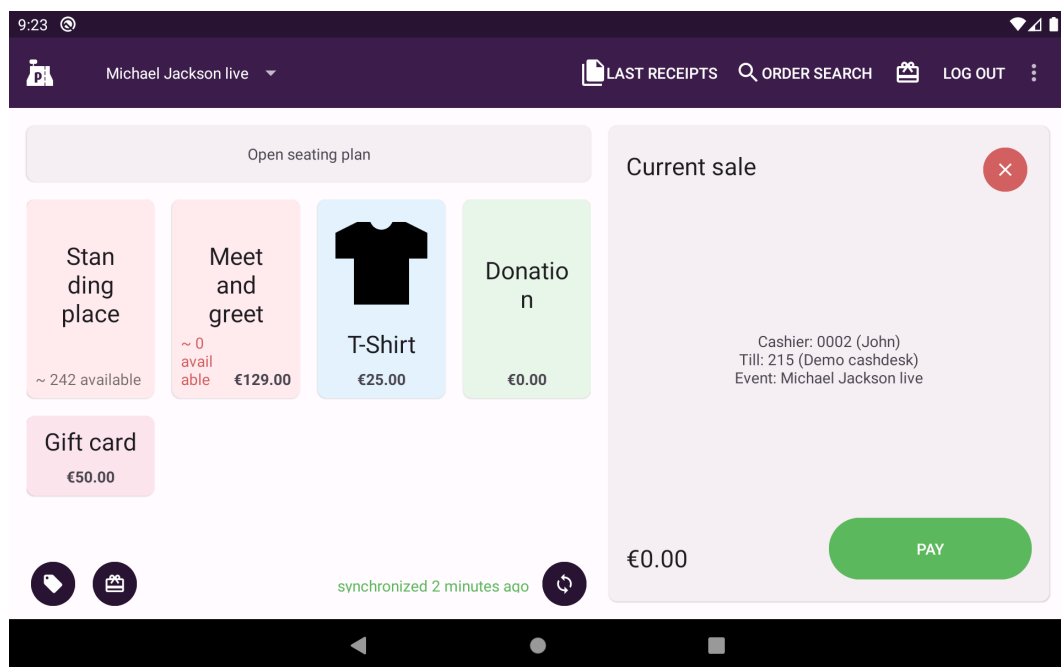


Figure 4.1: Sales view

If the screen is too narrow for this horizontal layout, only the product list will be shown with the current receipt value and a button for order finalization (fig. 4.2). The complete current receipt can be viewed by pulling this part upwards with a finger. Swiping down lets you return to the product list.

Tapping a product will add it to the current receipt immediately (fig. 4.3). This creates an audit-compliant record. Products can be removed from the receipt using the delete symbol to the right. This will remove their value from the total receipt value but leave them visible (fig. 4.4). Deleted lines are marked with red font colour and a visible strikethrough of the letters.

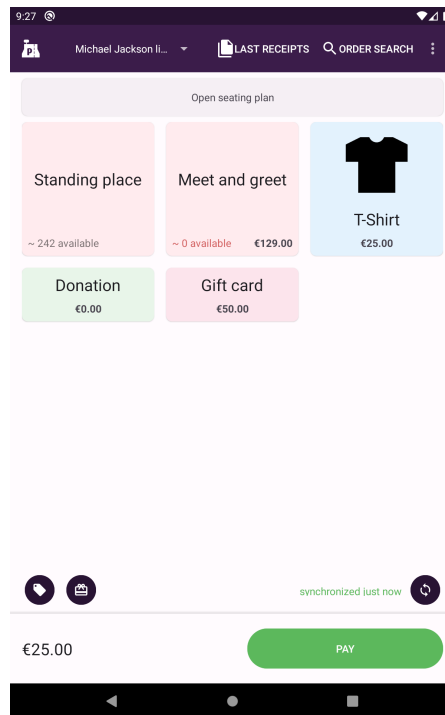
If a rotating loading symbol appears next to the price instead of the delete symbol, pre-

4 Sales transaction

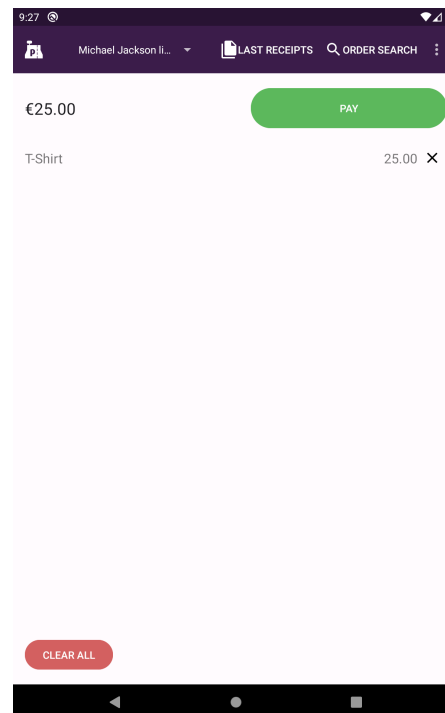
POS is attempting to poll the server to check whether the product is still available for sale. You cannot finalise the order before this check is complete. If the product cannot be sold, e.g. if a quota is sold out or if the server cannot be reached, the product will be deleted from the receipt automatically. In this case, a red warning symbol will appear next to the price (fig. 4.5). Tapping the warning symbol will show the exact error message.

If possible, the system will show availability below the product name (for example "approx. 99 available"). It is important to note that this is not a real-time value but is only updated during regular system synchronization. As a result, the product list may still show a product as available only for product selection to then fail as the product was sold online or at another POS in the meantime.

4 Sales transaction



(a) Product list



(b) Current receipt

Figure 4.2: Sales view for narrow displays

4 Sales transaction

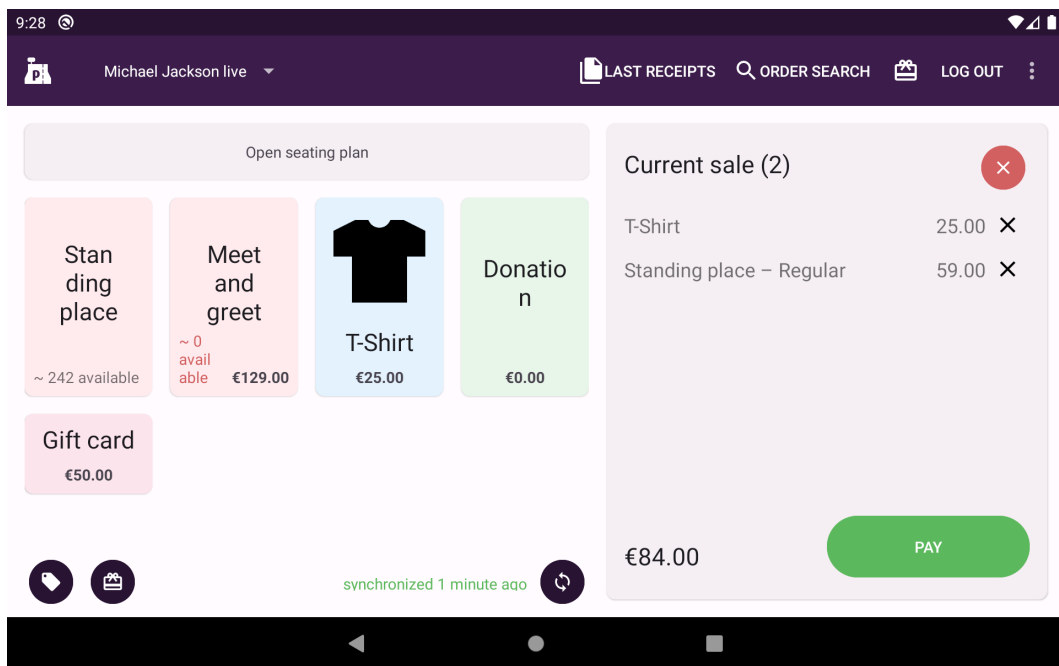


Figure 4.3: Sales view with selected products

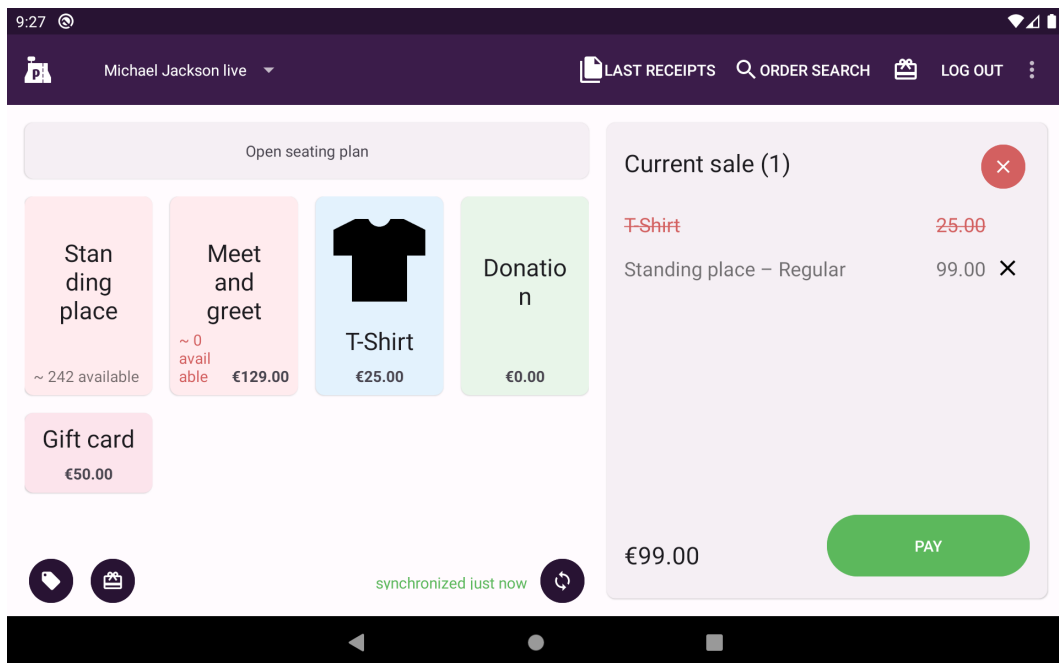


Figure 4.4: Sales view with line cancellation

4 Sales transaction

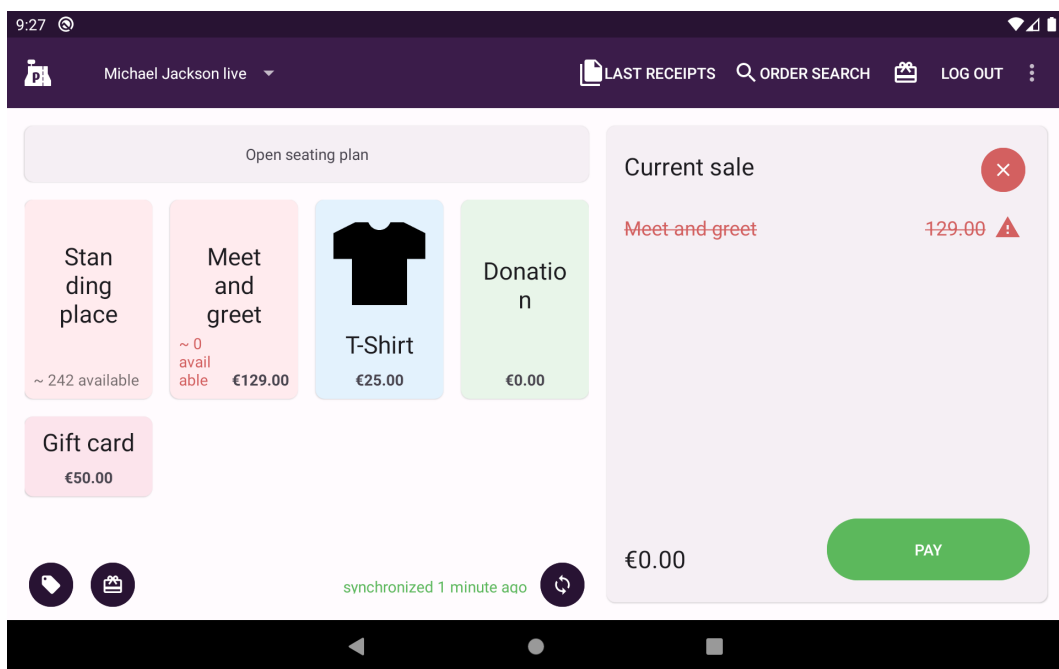



Figure 4.5: Sales view with unsaleable item

4.1.1 Multi-selection

If you long-click a product, you will be prompted to enter a number of times you want to sell the product.

4.1.2 Variation selection

If you select a product that has multiple variations, you will be prompted to select a variation (Abb. 4.6). You can select a variation by clicking on the name of the variation. The selection dialog will then close.

Alternatively, you can use the button **+1** to select a variation without closing the dialog, such that you can quickly add other variations as well. Using the button , you can add the variation multiple times in one go.

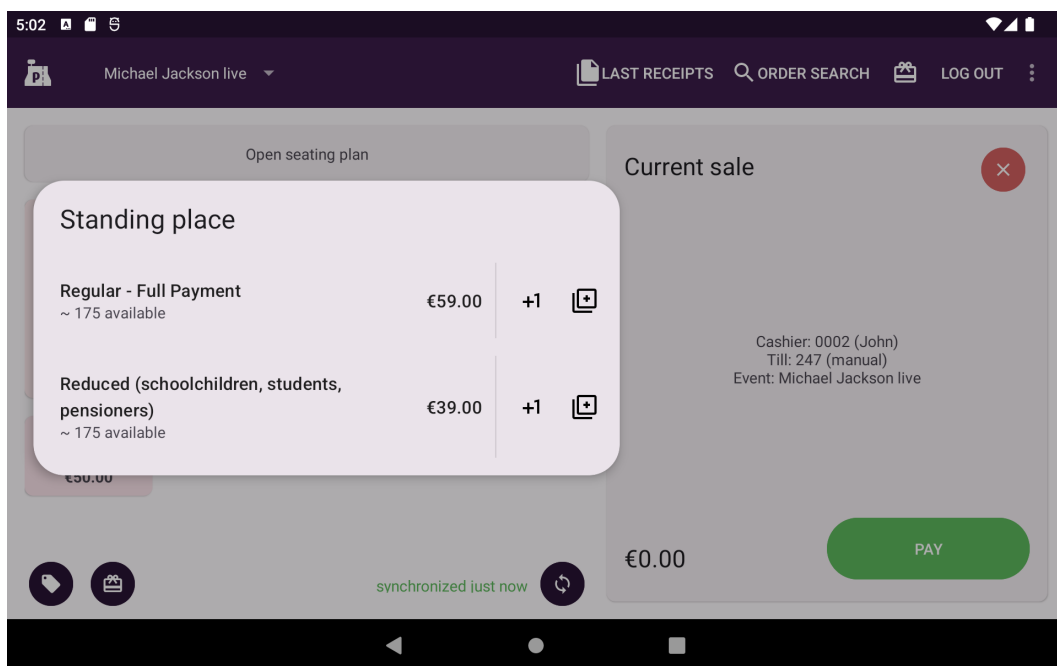


Figure 4.6: Sales view with multiple variations

4.2 Order finalization

To finalize the receipt, press the green *Pay* button. Subsequently, one or more dialogues with several options may appear depending on prior configuration.

If digital receipt delivery is enabled, you will be prompted to enter the customer's e-mail address. This prompt can be confirmed without entering an e-mail address if the customer does not wish to receive a receipt.

4 Sales transaction

If several payment methods have been configured, e.g. cash and card payments, you will be prompted to select a payment method after pressing *Pay*.

Depending on payment method, payment at the external terminal will be started or the order will be finalized.

After successful completion, a white checkmark on green background will appear in the order view with the order total beneath it. For cash payments, a calculator function appears to facilitate correct calculation of change (fig. 4.9). The latter is optional and any numbers entered will not be recorded. Alternatively, you may move on to the next transaction immediately.

The button *Next customer* lets you return to the sales view. If the screen is wide enough to still be showing the product list to the left, selecting the next product will also automatically return you to the sales view.

If automatic receipt or ticket printing are enabled, the data will now be transferred to the respective printer. If printing is set to manual or if you wish to print the receipt or ticket again, the cog wheel icon in the lower right corner allows you to access a menu with relevant options (fig. 4.10).

4 Sales transaction

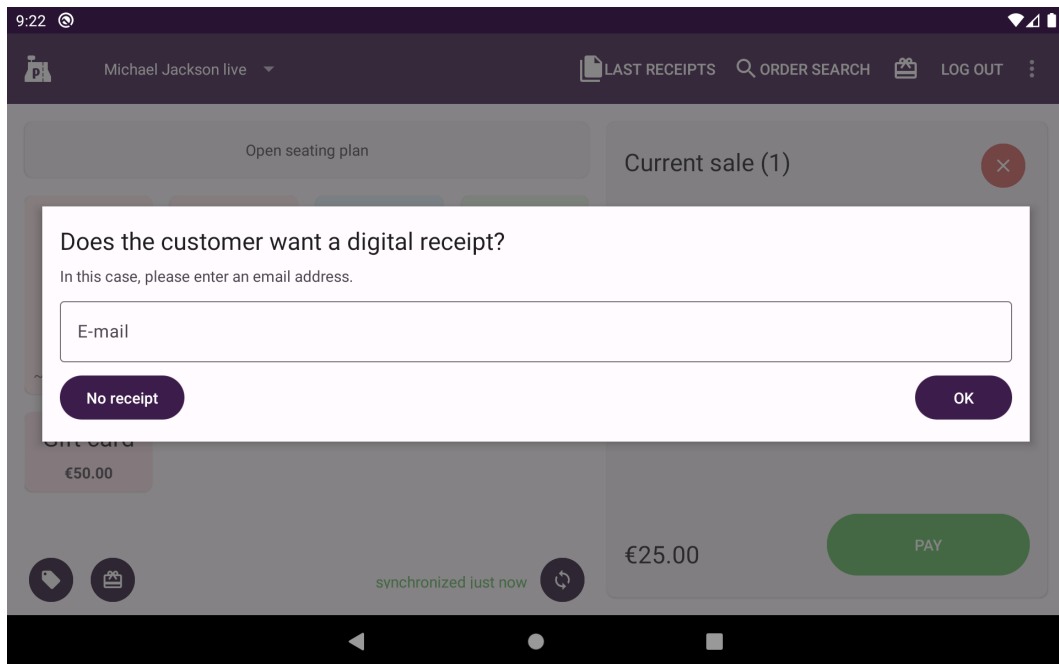


Figure 4.7: Prompt for e-mail address for digital receipt delivery

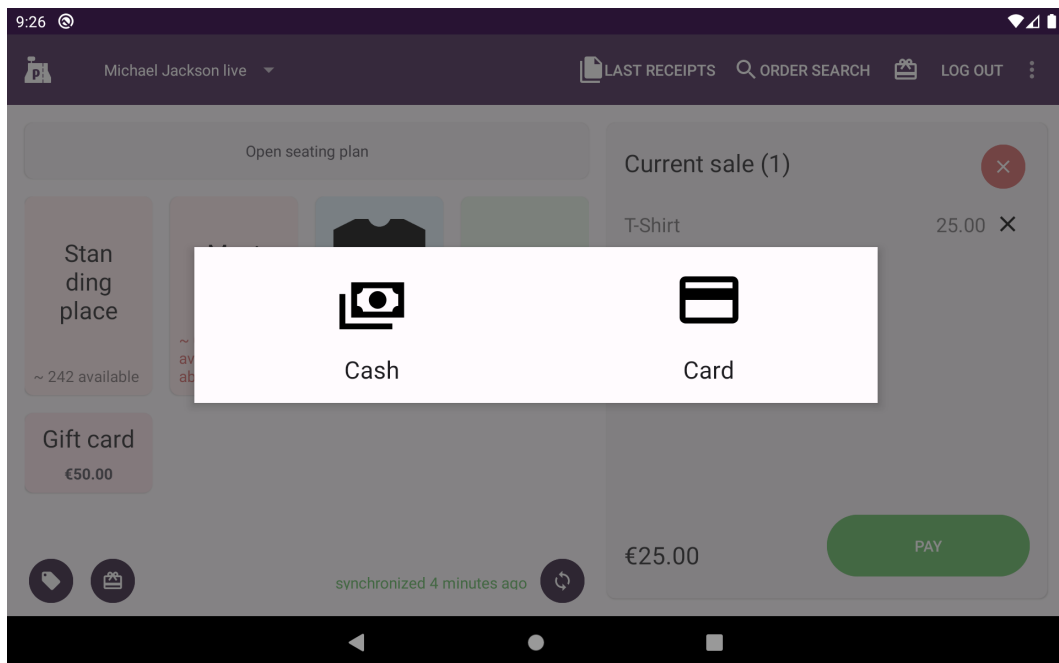


Figure 4.8: Prompt for desired payment method

4 Sales transaction

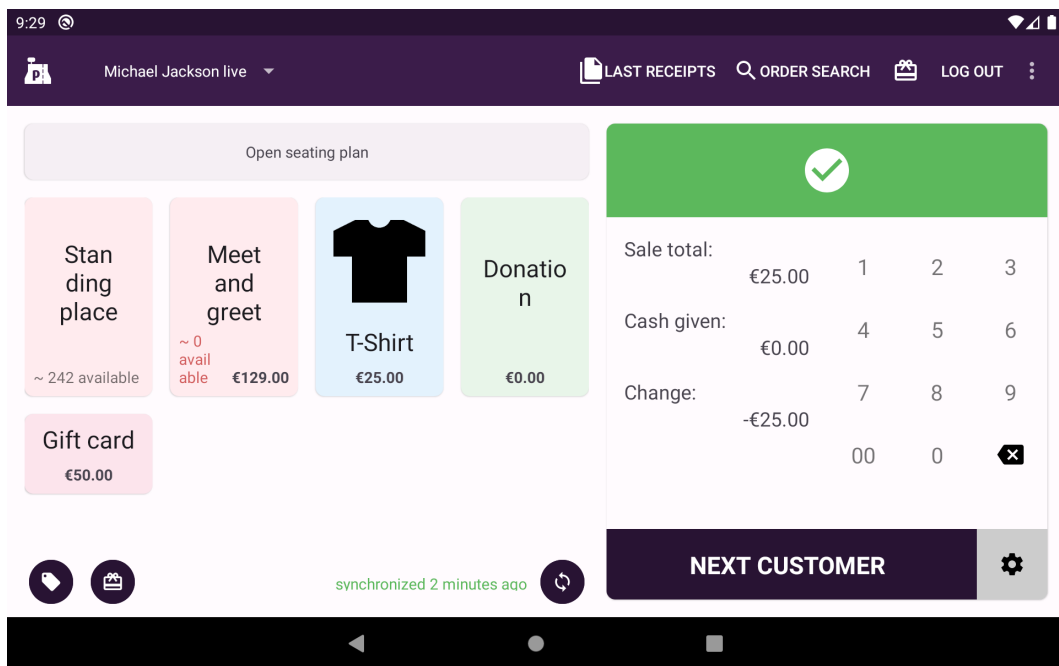


Figure 4.9: Successfully completed order

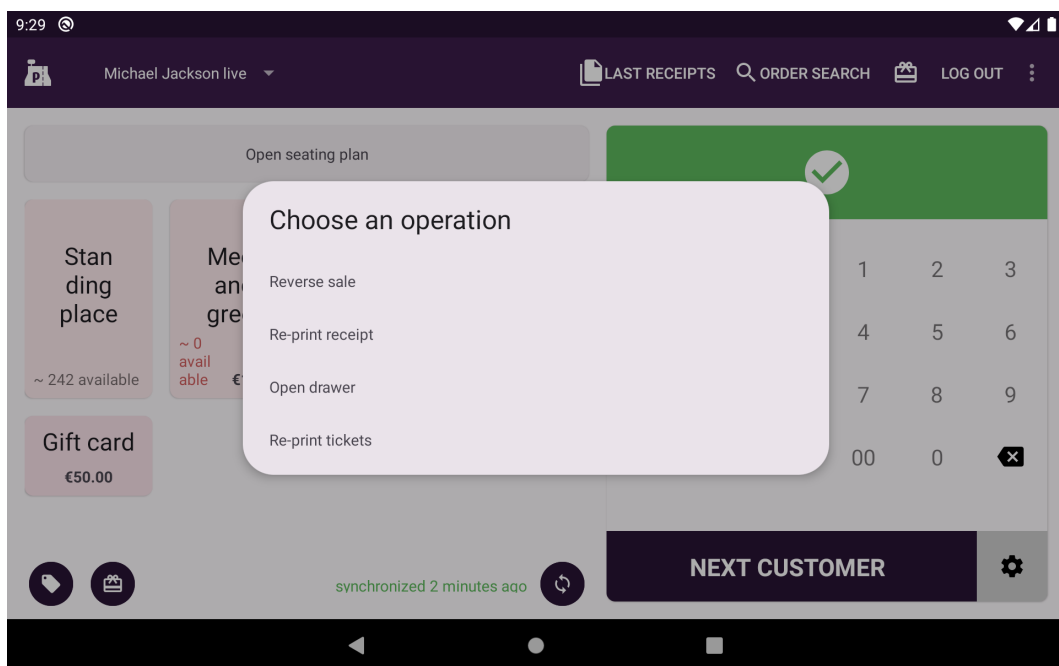


Figure 4.10: Options after order completion

4.3 Immediate cancellation and receipt cancellation

Until payment is completed, items can be removed from the order via the delete symbol in the order view. The *Clear all* button in the order view cancels all items from the current receipt and completes the receipt. This will not delete the receipt but record it as a cancelled receipt and save it audit-compliantly.

After the receipt has been completed, cancellation is no longer possible. As long as the view showing the data of the successful receipt is still visible, the receipt can be reversed quickly and easily.

To do so, select *Reverse sale* from the menu behind the cog wheel icon (fig. 4.10). This does not change the just-completed receipt but instead creates a new receipt with reverse transactions (e.g. return of a product instead of sale of a product and vice versa) and a reversed total.

4.4 Special case: add-on products and bundles

Some products may be configured to include add-on products or bundled products. In both cases, additional tickets will be added that have a special connection to the selected main ticket. The difference is that bundled products are always added automatically while add-on products usually come with a choice between different options for the customer.

When selecting a product that includes add-on products, a dialog will be shown with all available options to choose from (fig. 4.11). After the selection has been performed (or, in case of bundles, directly), multiple lines will be added to the receipt. You can see their relationship due to the way the second line is indented (fig. 4.12). The combined products can only be removed as a whole, not individually.

4 Sales transaction

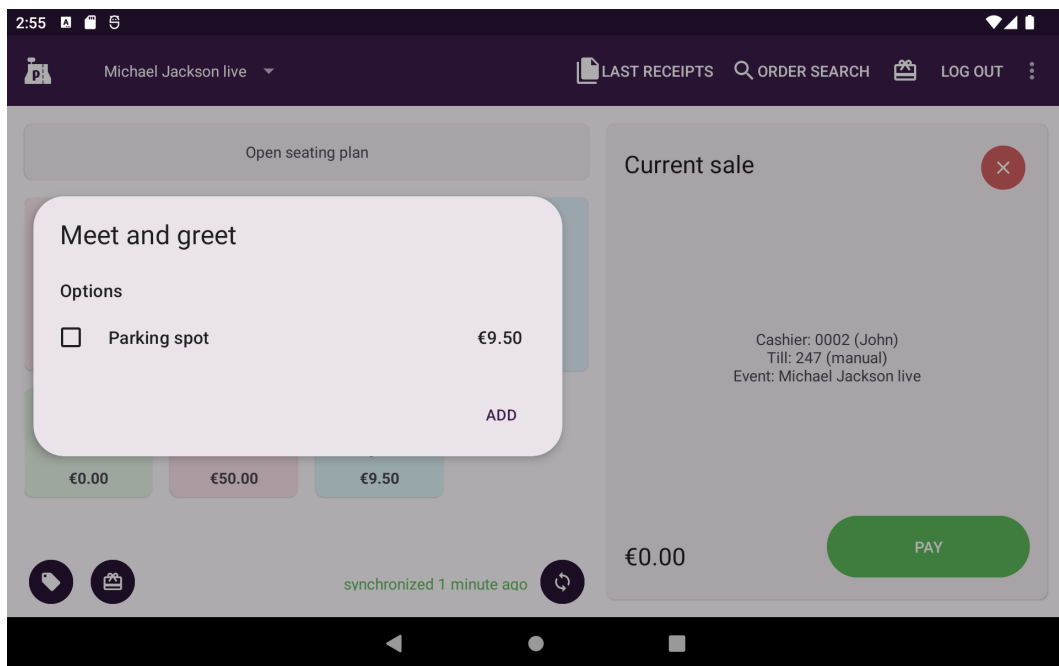


Figure 4.11: Selection of add-on products

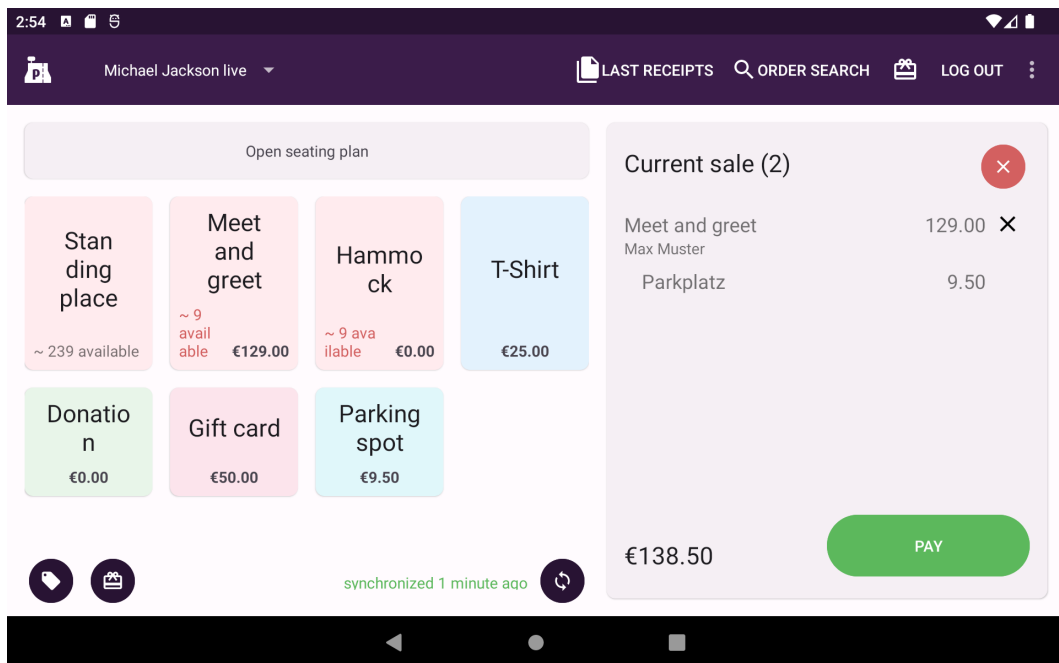


Figure 4.12: Add-on or bundle product on a receipt

4.5 Special case: manual pricing

Products, for example gift cards and donations, can be configured with manual price input. In this case, the price has to be set manually after selecting the product. The product can have a pre-set minimum price. If the pre-set price is negative, all input will also be considered to be a negative number.

Products that allow manual price input will show a small pencil icon next to their price in the sales view.

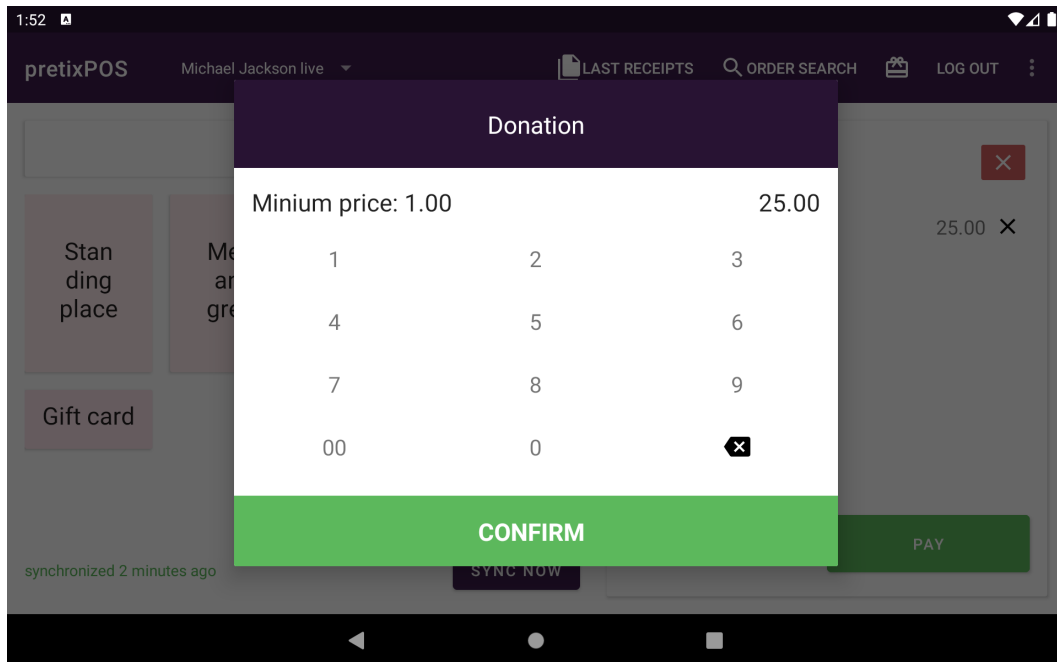


Figure 4.13: Manual price input

4.6 Special case: Vouchers

Vouchers (not to be confused with gift cards, which are described in chapter 7) allow certain user groups to buy different products or regular products at different prices.

You can activate a voucher using the **Voucher** button in the sales view. After entering a voucher code, the product list will only show products that are available with this specific voucher, possibly with adjusted prices (fig. 4.14). The selected voucher will be shown above the list of products and can be removed using the **×** next to it in case you want to add products without the voucher again.

4 Sales transaction

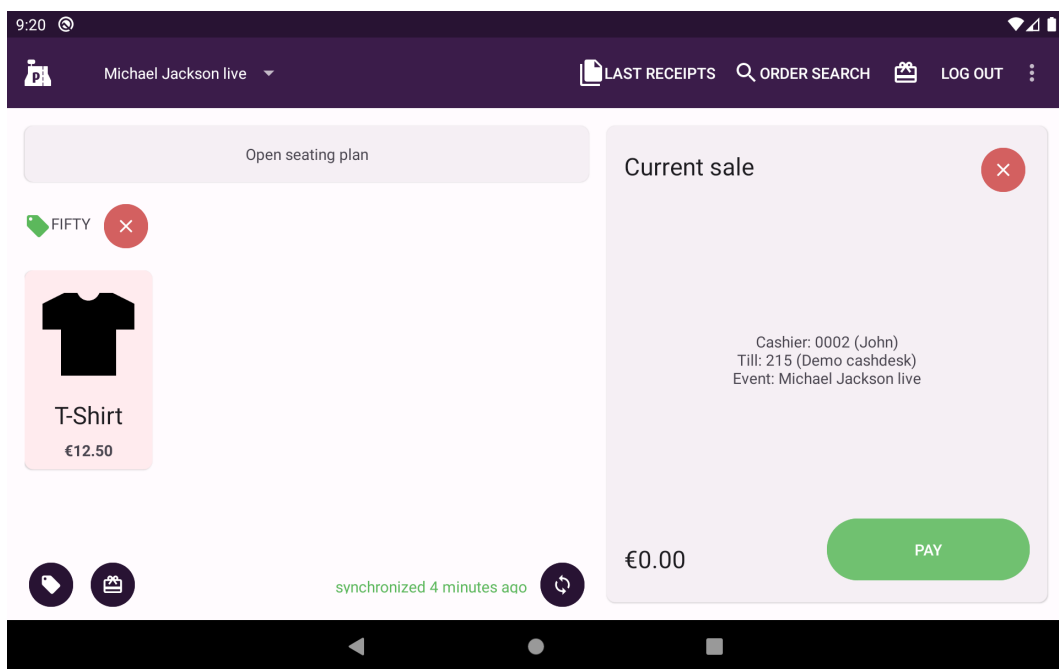


Figure 4.14: Sales view with selected voucher

4.7 Special case: Seating plan booking

For events with reserved seating, a button to open the seat selection will appear at the top of the product list (fig. 4.15). The seating plan can be enlarged and moved using touch gestures. Tapping seats adds them to a collection at the right side of the screen. Depending on the seat, you may be able to choose between different pricing options (fig. 4.16).

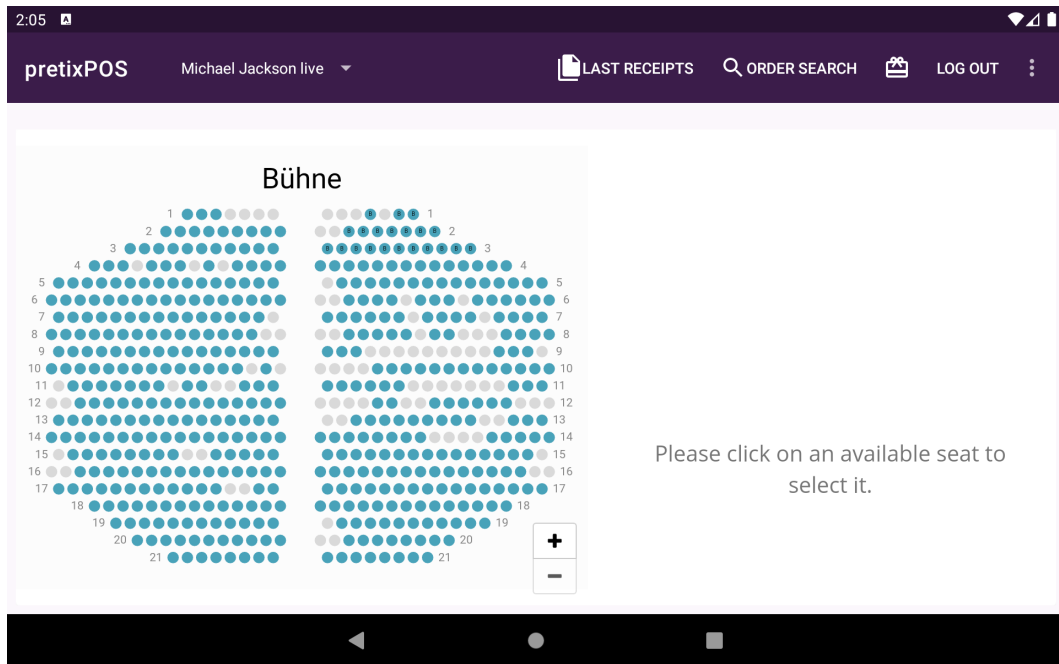


Figure 4.15: Seating plan view

Tapping the confirmation button in the lower right corner adds the seats to the receipt. On narrow screens, the selection list is below the seating plan and not next to it.

4 Sales transaction

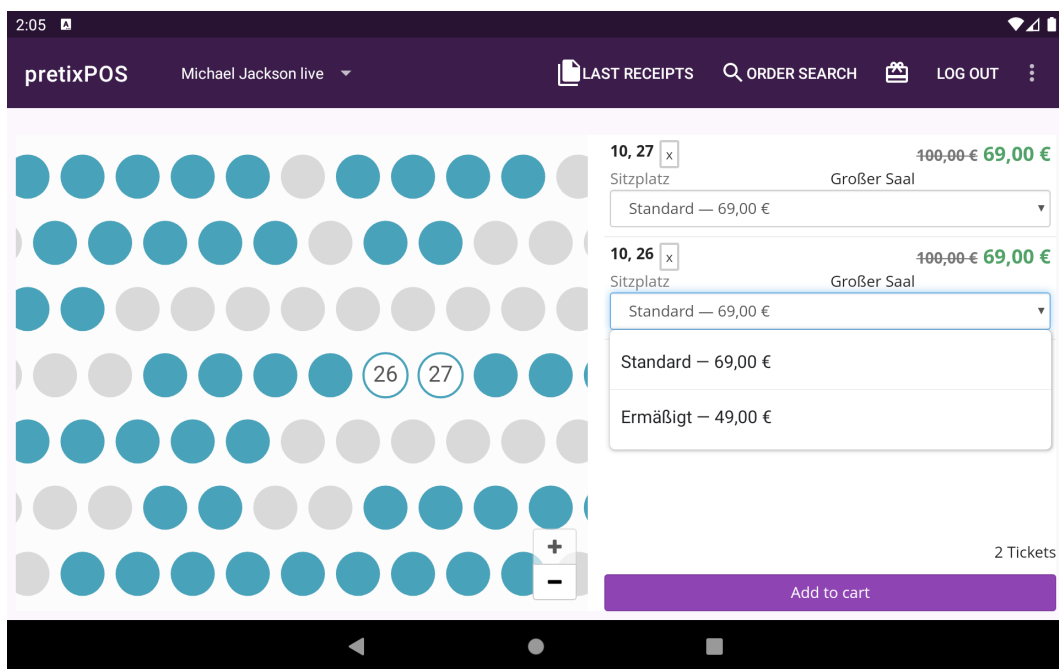


Figure 4.16: Seating plan view with selection

4.8 Special case: Data collection

Some events require the ticket holder's personal information to issue a ticket. In these cases, a dialogue box for the entering of said data will appear after selecting the product (fig. 4.17).

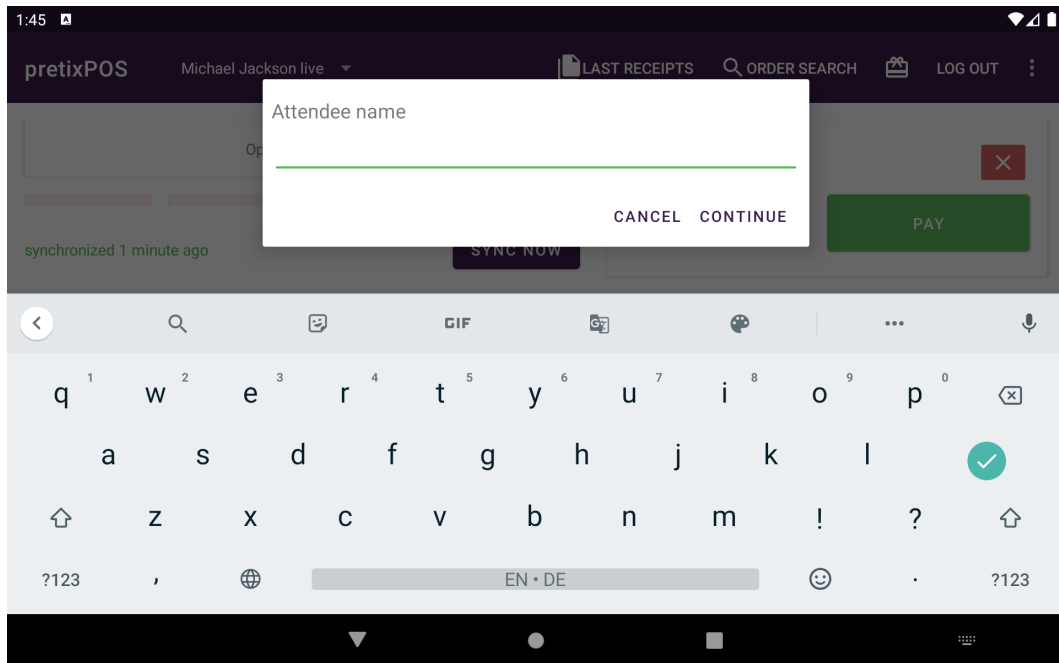


Figure 4.17: Prompt for ticket data

This is usually a text box, but e.g. a picture of the ticket holder for a badge could also be requested. In this case, you need to press the *Take a photo* button to take a picture (fig. 4.18).

A preview of the current camera image will open (fig. 4.19). Tapping the camera symbol at the bottom of the screen will take the photo. Tapping the three-dot menu in the upper right corner lets you switch between different device cameras.

After pressing the shutter release, the photo will be shown again (fig. 4.20). The left button below the image discards the photograph so a new picture can be taken. The right button saves the picture for use in the ticket.

4 Sales transaction

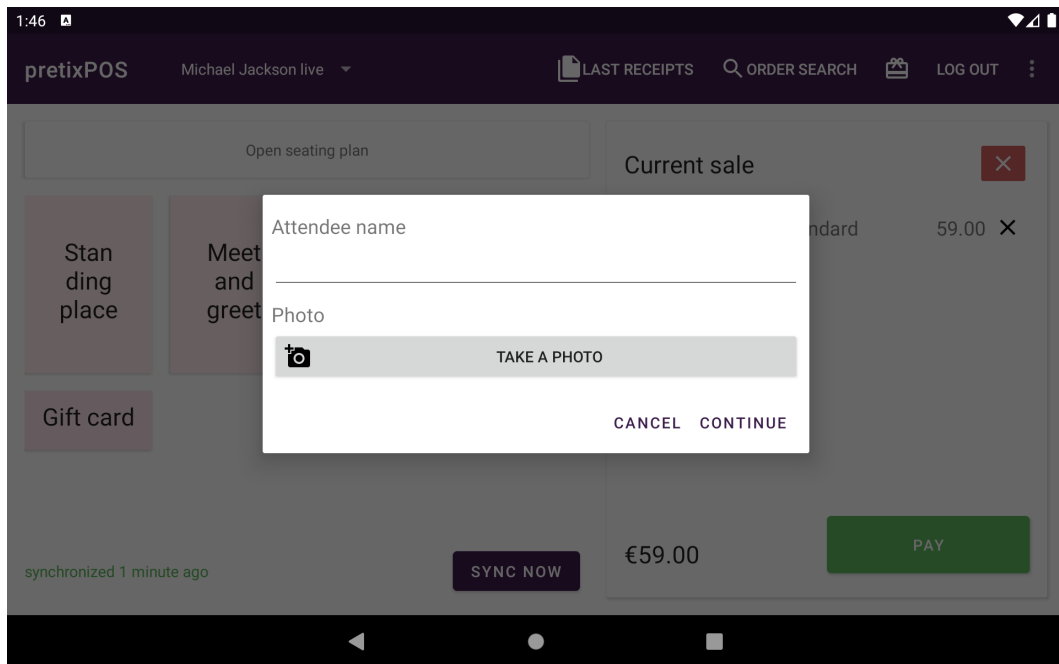


Figure 4.18: Prompt for ticket data with photo

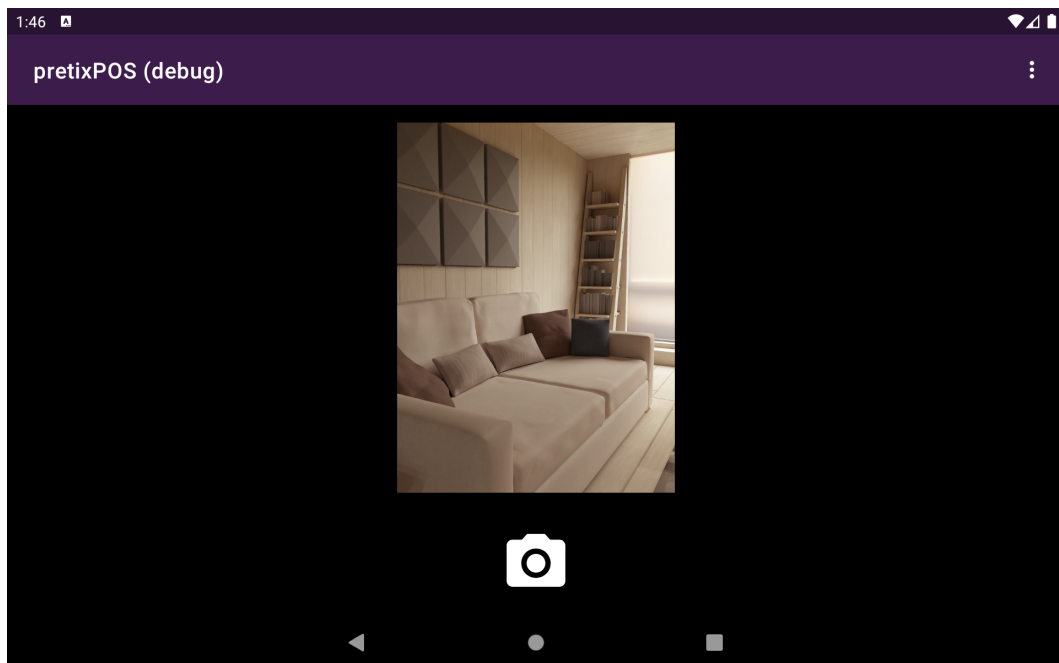


Figure 4.19: Camera image preview

4 Sales transaction

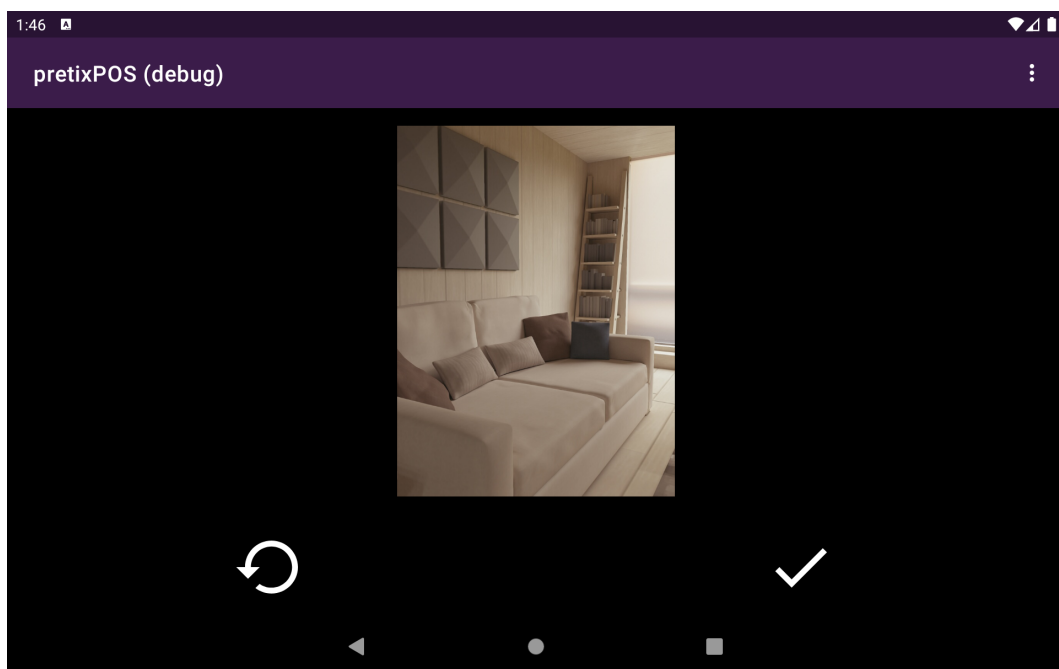


Figure 4.20: Picture preview

4.9 Special case: Reusable media

If a product is configured to either create a new ticket medium or reuse an existing ticket medium, a dialog will open after product selection allowing to choose between the two options (fig. 4.21).

If the product is configured to always reuse an existing medium (e.g. the renewal of a season pass), this dialog will be skipped and the option *Reuse an existing medium* will be chosen automatically.

With the option *Issue a new medium*, the transaction continues as usual. With the option *Reuse an existing medium*, you will need to choose a medium e.g. by scanning a barcode. After the medium was chosen, the transaction continues as usual, possibly with copying data from the medium. Printing of tickets or badges will be skipped for this product.

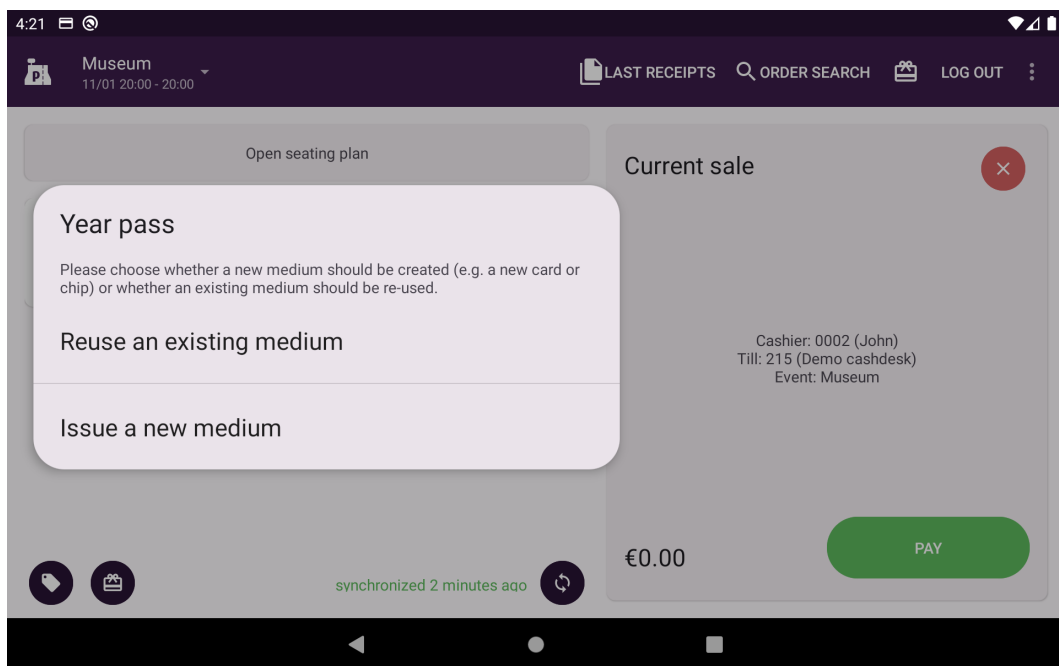


Figure 4.21: Choice for usage of re-usable media

5 Cash management

To ensure orderly cash management, incoming and outgoing cash payments, cash register counts as well as cash balances can all be recorded with pretixPOS; these functions will be explained in this chapter.

5.1 Cash management

The main menu options *Add funds* and *Withdraw funds* allow you to record cash flow outside of regular sales transactions. The amount is entered in a dialogue window (fig. 5.1) and recorded as a new receipt.

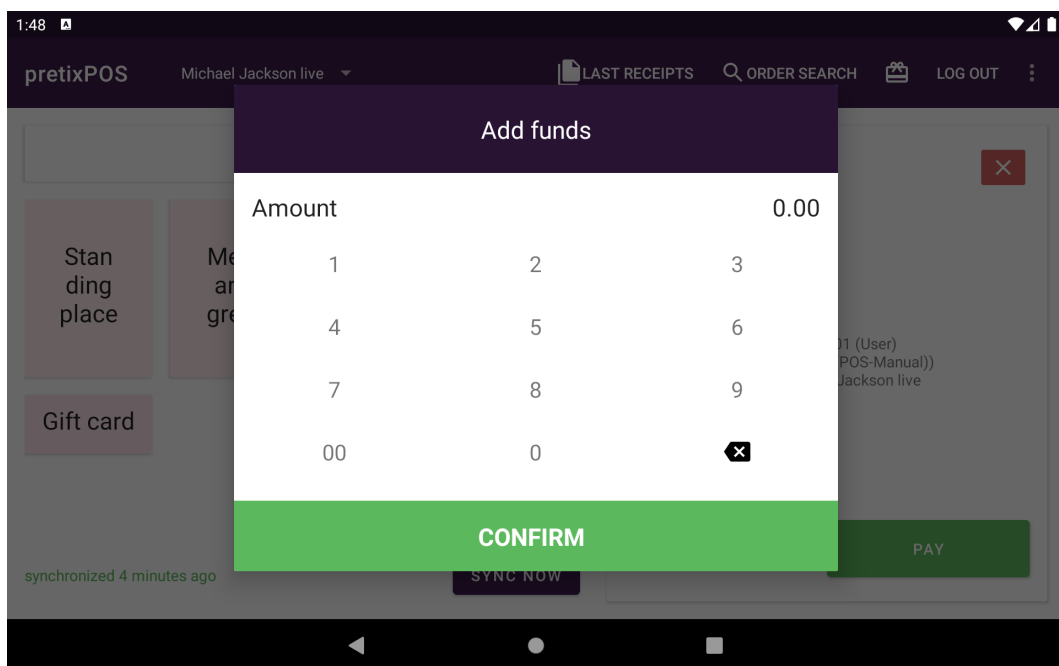


Figure 5.1: Dialogue: registration of funds

You can use the *Open drawer* option in the main menu to open the cash drawer without needing to perform a sale (only available with sufficient permission and if a receipt printer is connected).

5.2 Cash check

To check the cash in a cash register without closing the session, tap *Cash check without closing* in the main menu. The operator will need to count the cash in the register and enter the number in the dialogue window (fig. 5.2). If this amount differs from the electronically calculated amount in the register, an error message will appear, prompting the operator to re-count (fig. 5.3). If the second attempt also produces a difference, an error message will *not* appear and the input will always be accepted. In this case, a new receipt reconciling the cash register difference will be created before the result is shown. The cash register difference shown in the end result includes the recorded differences from all cash checks in the current cash register session.

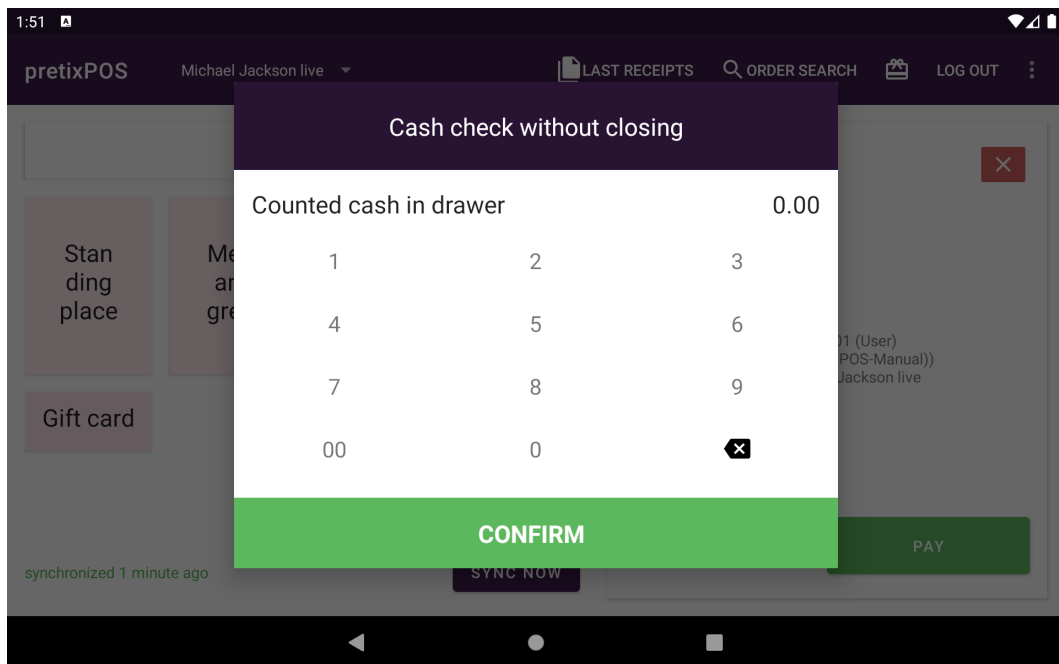


Figure 5.2: Cash check dialogue

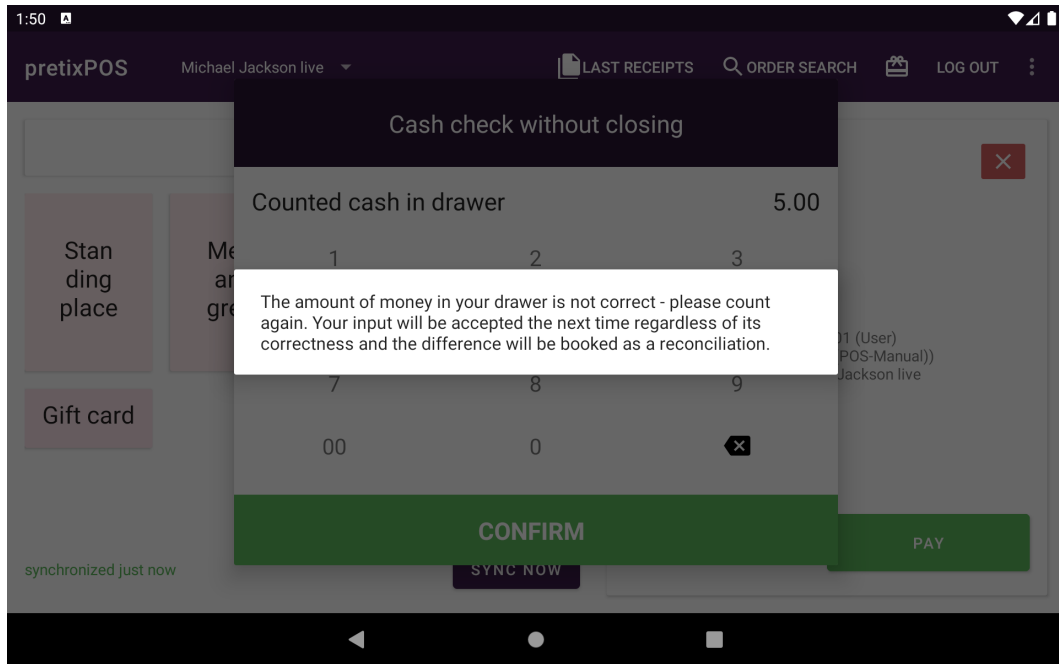


Figure 5.3: Error message for incorrect cash check

5.3 Cash register session closing

The cash register session should be closed at least once per day or at the end of any cashier's shift. If the app is operated in Germany, it will show a warning if the session has not been closed 24 hours after the session's first receipt was created (fig. 5.4).

You should perform a session closing soon. The current session is in use since 04/20 21:29.

Figure 5.4: Reminder to close session

You can close the session by tapping *Close session* in the main menu. This will open a dialogue window showing the automatically calculated sum of cash in the drawer. A digit input field will then prompt you to enter the sum that was manually counted. The register will immediately show the resulting difference (fig. 5.5). If a cash register balance with a difference is confirmed, the difference will be recorded as a receipt and marked in reports.

Tapping the button *Take all cash out* below the digit input informs the system that all cash is being removed from the drawer during this balancing. This option is enabled in the default settings, this results in the cash register having 0 cash funds after balancing and closing, for example due to the cash being moved into a safe at the end of the day. If the counted cash

5 Cash management

remains in the cash register for use as the next session's opening balance, disable this option.

If supported by the connected card payment terminal, there will be an additional option below the digit input that allows triggering an *end of day* operation on the card terminal. If the end of day command on the card terminal fails, the session inside pretixPOS will still be closed.

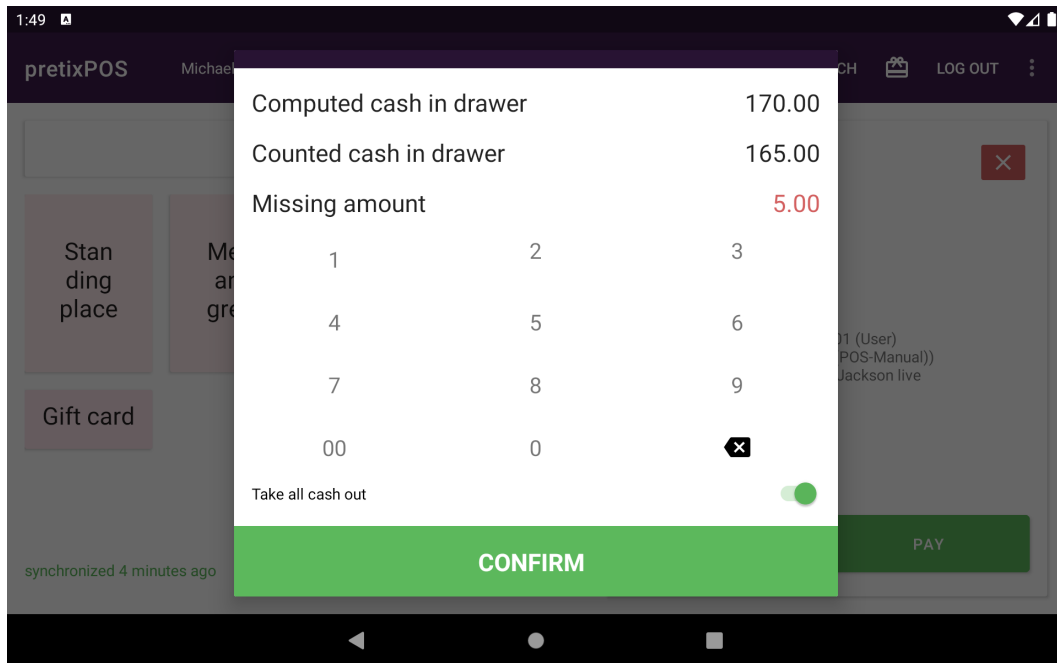


Figure 5.5: Dialogue: cash register balance

After confirmation, the cash register balance will be recorded, including any differences and withdrawals, and saved in an audit-compliant way. The display shows a brief summary of results regarding the cash remaining in the register only. Depending on prior configuration, an extended cash register session report including card payments and taxation will be printed on the receipt printer. It is also available as a PDF file on the online system. The cash register difference shown in the final total includes the recorded differences from all cash checks within the cash register session (fig. 5.6).

The times of past cash register sessions can be accessed via the *Closings* button in the main menu (fig. 5.7). Tapping a single report will re-print it on the receipt printer.

5 Cash management

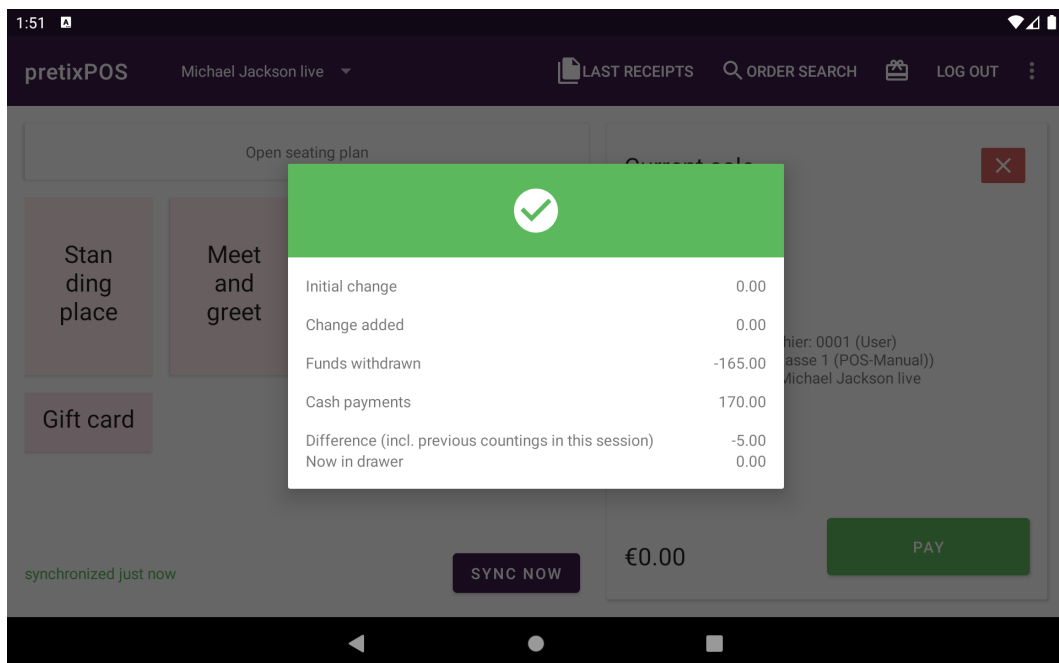


Figure 5.6: Confirmation after successful cash register balance

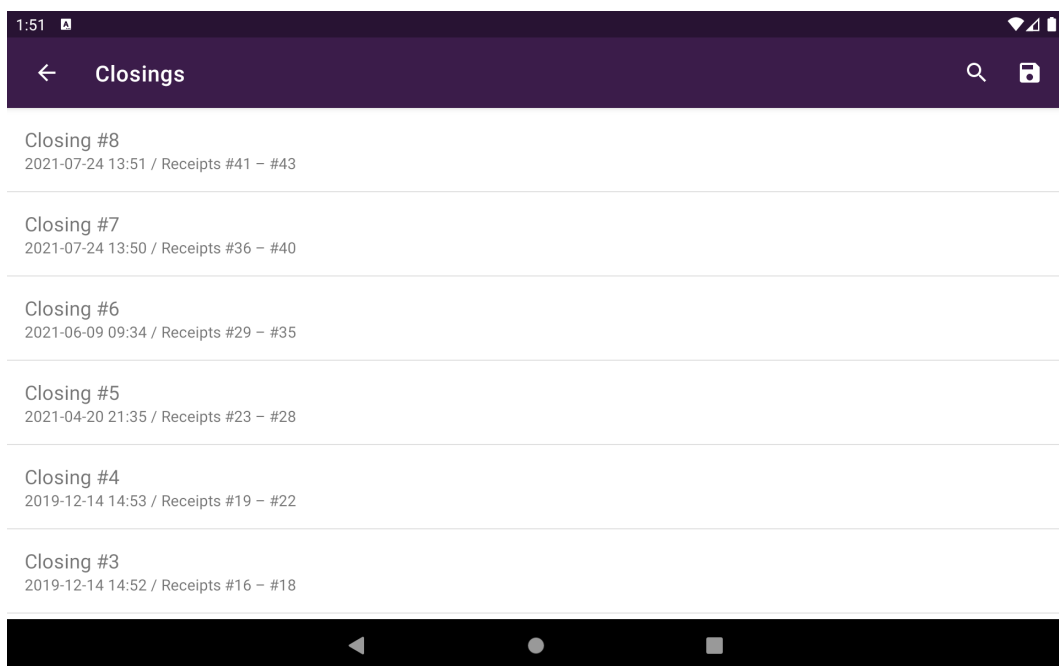


Figure 5.7: List of past cash register balances

5.3.1 Export as DSFinV-K

To export cash register session reports in DSFinV-K format for archiving or tax audit purposes, please go to *Closings* in the main menu and select the *Export* (floppy disk icon in the upper right corner) option. Enter the numbers of the first and last cash balances into the dialogue window to be exported to narrow down the scope of the export as desired (fig. 5.8). The exported file will be saved in the Android device's internal storage, notifying you of the storage location.

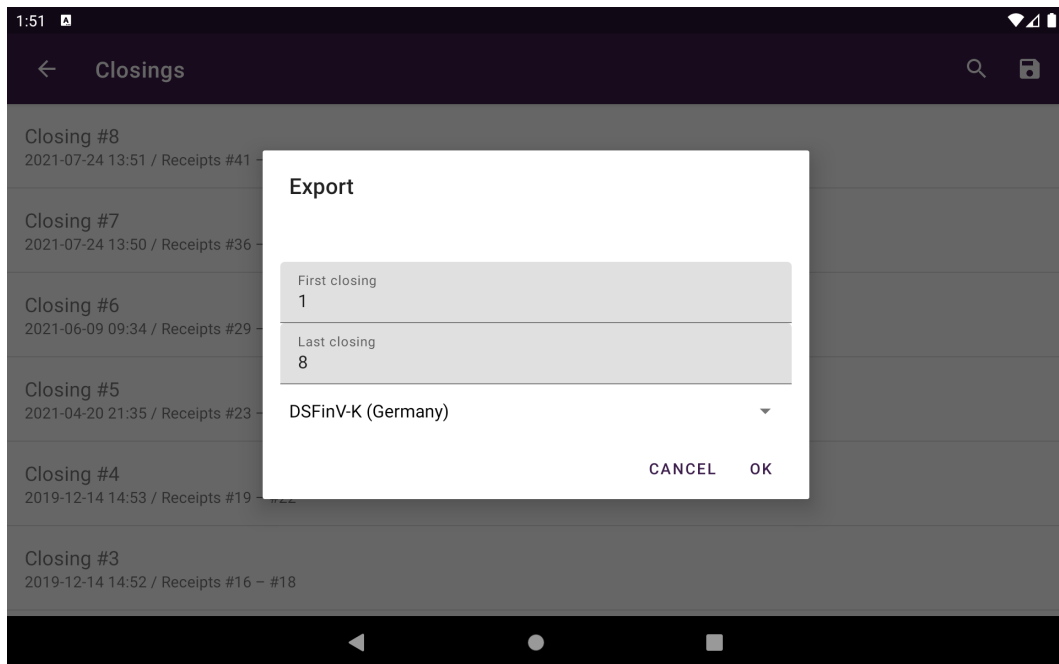



Figure 5.8: Export dialogue of past cash register balances

5.4 List of last receipts

The *Last receipts* option can be found in the main menu or via the  symbol in the menu bar. This opens a list of the most recent receipts completed on this point-of-sale (fig. 5.9). Listed are the receipt number, event slug, online order number (if applicable), and total, as well as date and time of the receipt. Receipt numbers and order numbers can be searched via the search symbol.

Tapping a receipt opens a detailed view showing an receipt's individual items and their prices. Where such data exists and the app settings have been configured accordingly, both the receipt and the tickets can be re-printed from this view. The *Order* button lets you jump to the respective online ticketing order, for example allowing you to return tickets as described in 6.1.

5 Cash management

The screenshot shows a mobile application interface for cash management. At the top, there's a status bar with the time 9:23 and battery level. Below it, a header bar with a back arrow, the text "Last receipts", and a search icon. The main content area is divided into two parts. On the left, a list of receipts is shown, each with a receipt number, customer name, date, and amount. On the right, a detailed view of receipt #20 is displayed, including a "TICKETS" button, the receipt date and cashier information, a list of items with their prices, and buttons for "RECEIPT" and "ORDER" at the bottom.

Receipt #	Customer Name	Date	Amount
#24	MICHAELJACKSON	2022-06-05 21:23	€0.00
#23	MICHAELJACKSON-GR99N	2022-06-05 21:15	€25.00
#22	MICHAELJACKSON-CGMLX	2022-06-05 21:13	€25.00
#21	MICHAELJACKSON-EBVTU	2022-06-05 21:12	€25.00
#20	MICHAELJACKSON-BN7JZ	2022-06-05 21:11	€84.00
#19	MICHAELJACKSON	2022-06-05 21:08	€0.00

Receipt #20 MICHAELJACKSON-BN7JZ	
2022-06-05 21:11 / Closing #3 / Cashier 0002 (John)	
T-Shirt	25.00
Stehplatz – Standard	59.00
€84.00	

Figure 5.9: View of last receipts

6 Order management

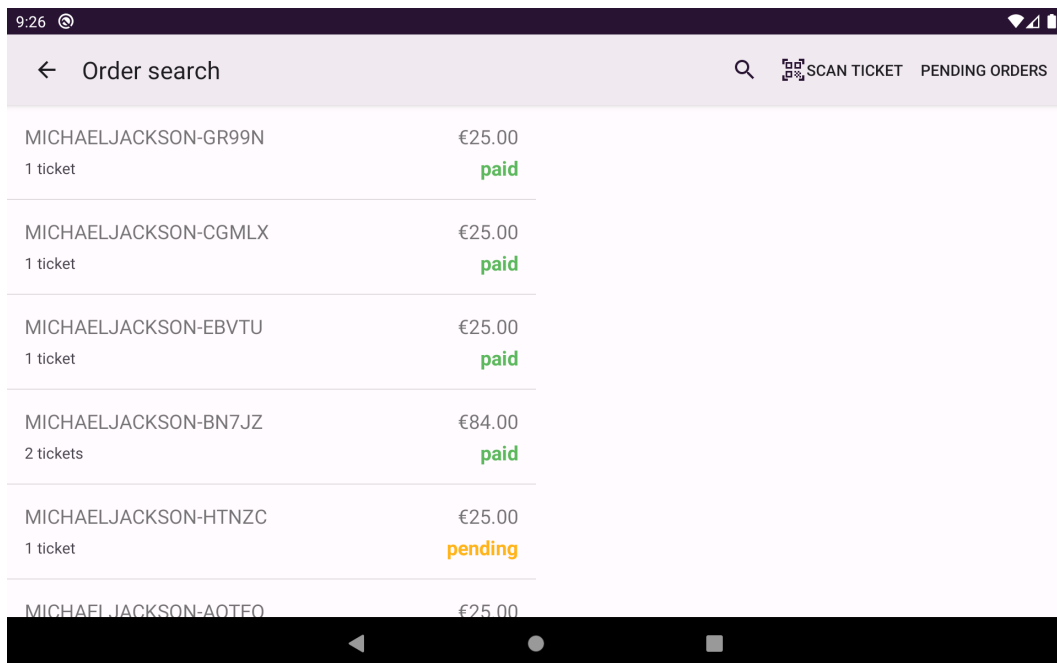
“Orders” are records in the pretix online system. Every receipt containing tickets corresponds to one order. However, both receipts without an associated order (e.g. cash deposits) and orders without a corresponding receipt (e.g. orders placed in the online shop) exist.

6.1 Order search

The *Order search* option in the main menu allows you to retrieve the list of all orders associated with the event (fig. 6.1). This does not merely show purchases made on the respective point-of-sale but also online shop orders and products sold at other terminals.

If a product was sold entirely offline, it will only appear in this list after being transmitted to the server in the course of the following synchronization and receiving a uniform order number.

The list can be filtered by order numbers as well as names and e-mail addresses (for online orders) via the search symbol in the menu bar. The *Pending orders* menu item filters the list for orders which have not yet been paid in full.



Order search		Q	SCAN TICKET	PENDING ORDERS
MICHAELJACKSON-GR99N	€25.00			
1 ticket	paid			
MICHAELJACKSON-CGMLX	€25.00			
1 ticket	paid			
MICHAELJACKSON-EBVTU	€25.00			
1 ticket	paid			
MICHAELJACKSON-BN7JZ	€84.00			
2 tickets	paid			
MICHAELJACKSON-HTNZC	€25.00			
1 ticket	pending			
MICHAELJACKSON-AQTEO	€25.00			

Figure 6.1: Order search

6.2 Order view

Tapping an order opens its detail view (fig. 6.2). This lists not only order number and total, but also products, ticket codes, and individual amounts.

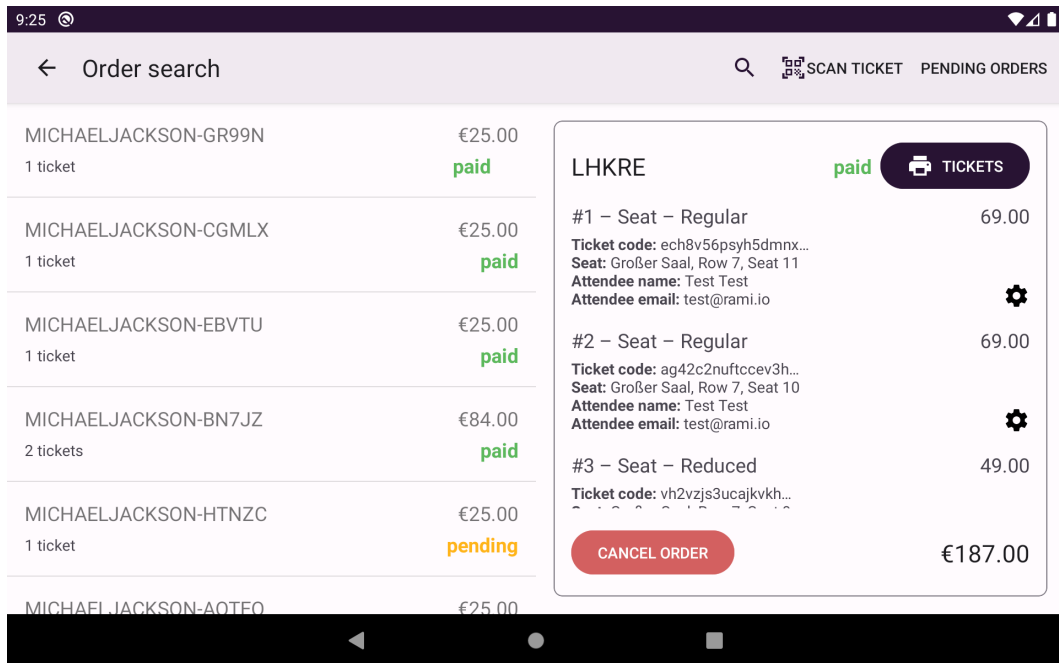


Figure 6.2: Detailed view of an order

If ticket printing is enabled, tapping the button labelled *Tickets* with a printer symbol reprints all tickets in the order; the *Badges* button does the same for badges.

Tapping a single line in the order pulls up a menu for that ticket (fig. 6.3). The options in that menu will be explained hereafter.

6 Order management

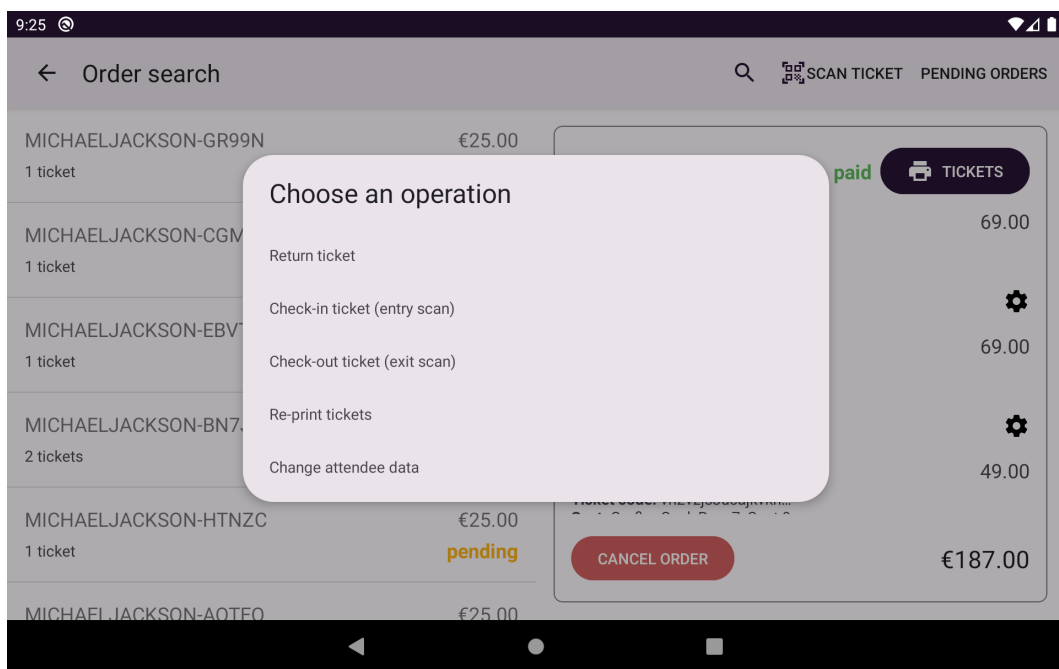


Figure 6.3: Menu for an individual ticket

6.2.1 Return ticket / Cancel order

The *Return ticket* option lets you record the return of a ticket. This reverses the ticket order in the online system and creates a receipt for the reverse amount so it may be paid out to the customer.

The *Cancel order* button allows you to perform this for all tickets within the order at the same time.

6.2.2 Check-in ticket (entry scan)

The *Check-in ticket* option records an entry scan, validating the ticket. For this action, a check-in list onto which to register the scan must be selected, e.g. according to event area (fig. 6.4).

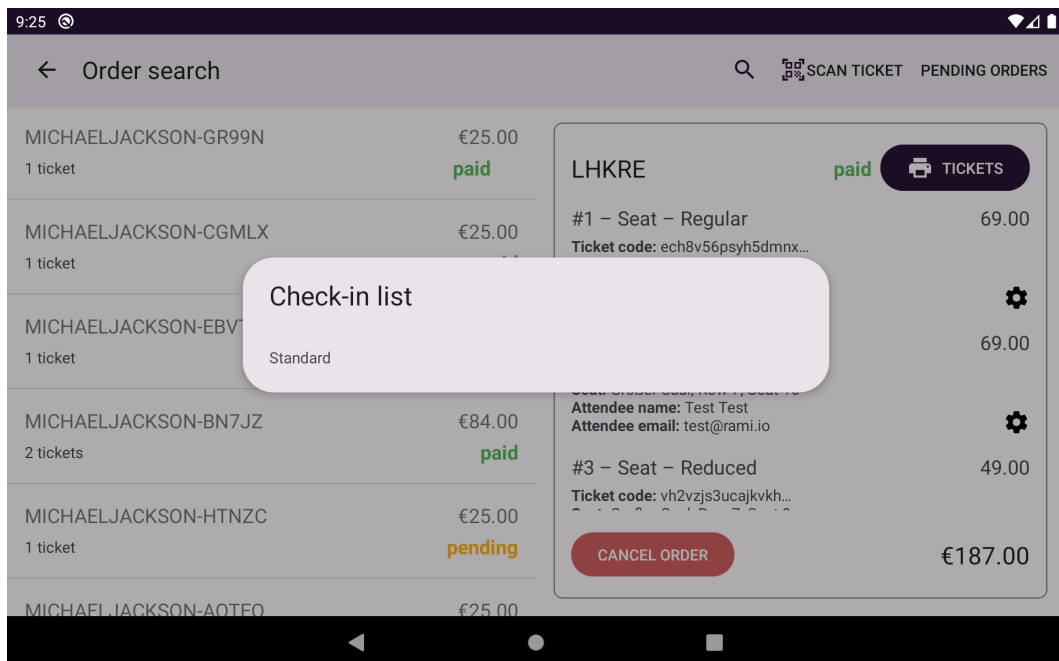


Figure 6.4: Check-in list selection

6.2.3 Check-out ticket (exit scan)

The *Check-out ticket* option lets you record the exit scan of a ticket. For this action, a check-in list onto which to register the scan must be selected, e.g. according to event area (fig. 6.4).

6.2.4 Re-print ticket(s) / re-print badge(s)

The *Re-print ticket(s)* and *Reprint badge(s)* options will re-print the ticket or badge on the respective printer.

6.2.5 Change attendee data

The *Change attendee data* option opens a data entry dialogue (fig. 6.5) letting you change name, address, and other data fields. Any change to the data will be directly saved to the online system.

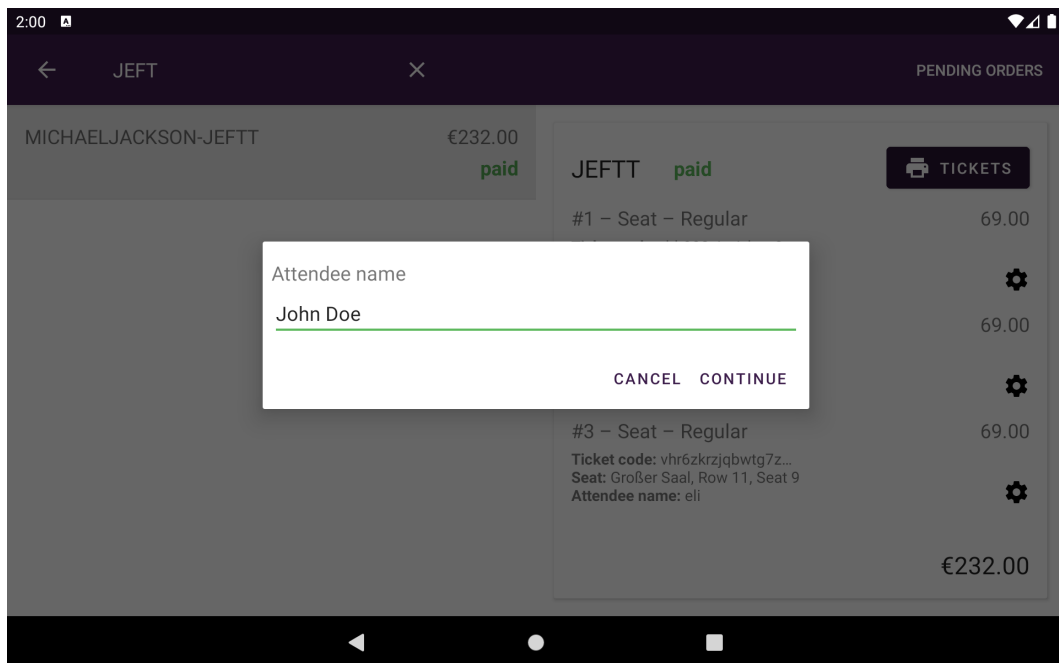


Figure 6.5: Change of an order item

6.3 Acceptance of payments or issuing of refunds for online orders

If an order with *Payment pending* status is called up, pretixPOS can record the receipt of payments. In this case, the order will have a button labelled with the outstanding amount, e.g. *Pay €64.00*, which will start the process.

The process will then continue similarly to any other receipt (fig. 6.6).

In the same way, if an order has a positive balance, e.g. if it was canceled but not yet refunded, you can refund the balance using a button that will say *Refund € 64.00*.

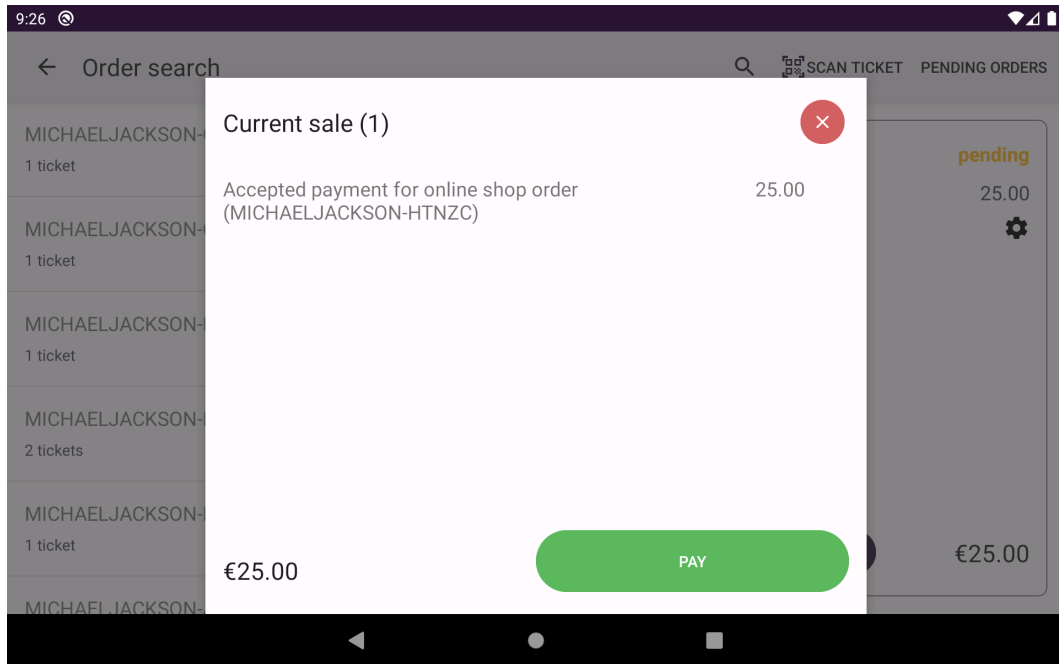


Figure 6.6: Acceptance of payments for online orders

6.4 Return via scan

In addition to the *Return ticket* option in the order menu, described above, a *Return ticket* option also exists in the main menu.

This opens a scan window (fig. 6.7) with which the ticket code can be scanned. If the ticket is found, it is cancelled in the online system and a receipt for the reverse amount is created and fully processed immediately so the ticket price can be paid out to the customer.

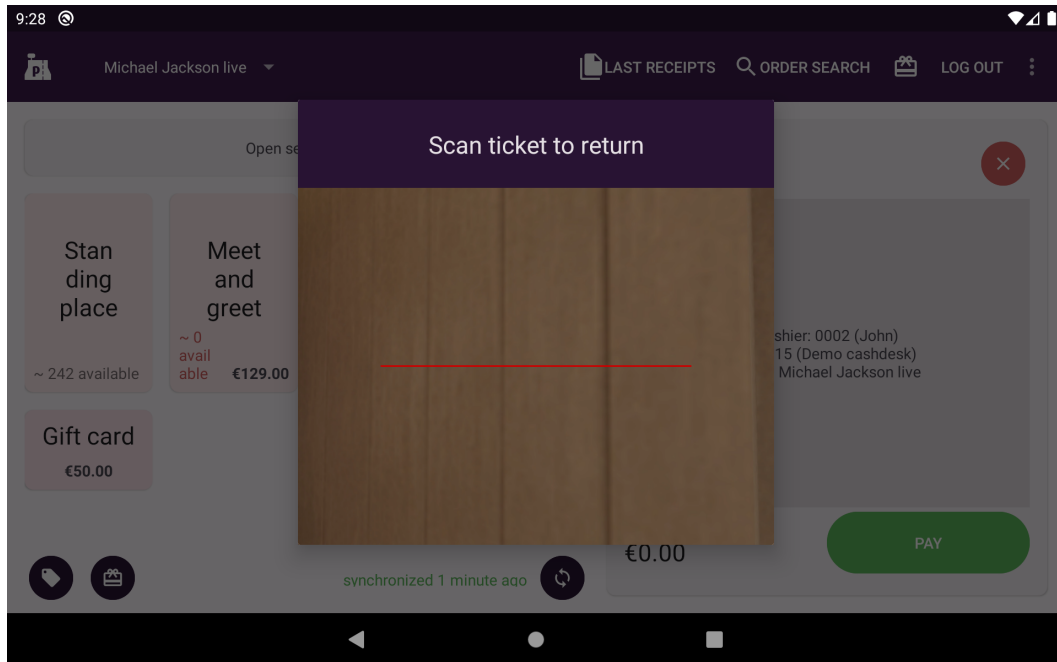


Figure 6.7: Scan dialogue for ticket returns

7 Gift cards


The system supports the issue and redemption of gift cards. For taxation purposes, these are considered multi-purpose vouchers and only incur VAT upon redemption.

7.1 Sale of gift cards

The sale of a gift card is identical to the sale of any other product. The product must have been configured correctly as a gift card in the pretix online system. A gift card code will be issued instead of a ticket code.

7.2 Redemption of gift cards

To redeem a gift card, the products for which the gift card is used must be added to the receipt **first**. The redemption of a gift card should be the last action before the completion of the transaction.

Afterwards, the gift card can be accessed through the *Gift card* option in the main menu or via the  symbol. The gift card code can be entered manually on the keyboard or through a scan of the QR code with the device's camera (fig. 7.1).

If the gift card is valid, the current value will then be shown (fig. 7.2). The button *Use* will subtract the value of the gift card from the receipt total. If the value of the gift card exceeds the receipt total, only the receipt total will be subtracted and the remaining value of the gift card can be used at a later time. If the receipt total exceeds the value of the gift card, the remainder must be paid in the regular fashion.

Multiple gift cards can be used per receipt.

7 Gift cards

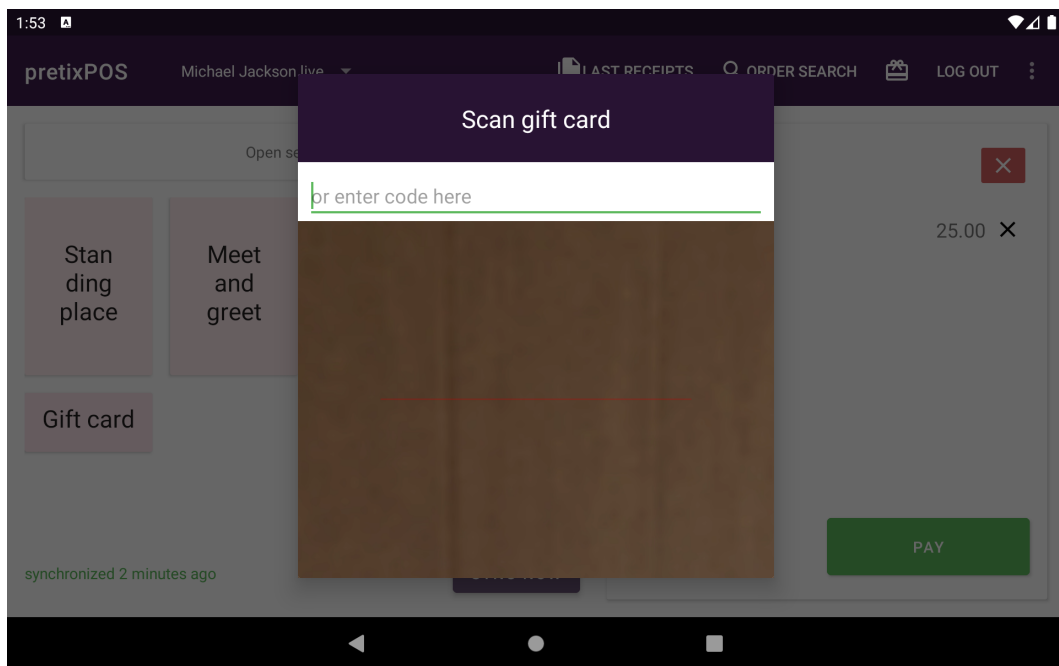


Figure 7.1: Dialogue: scan of gift card

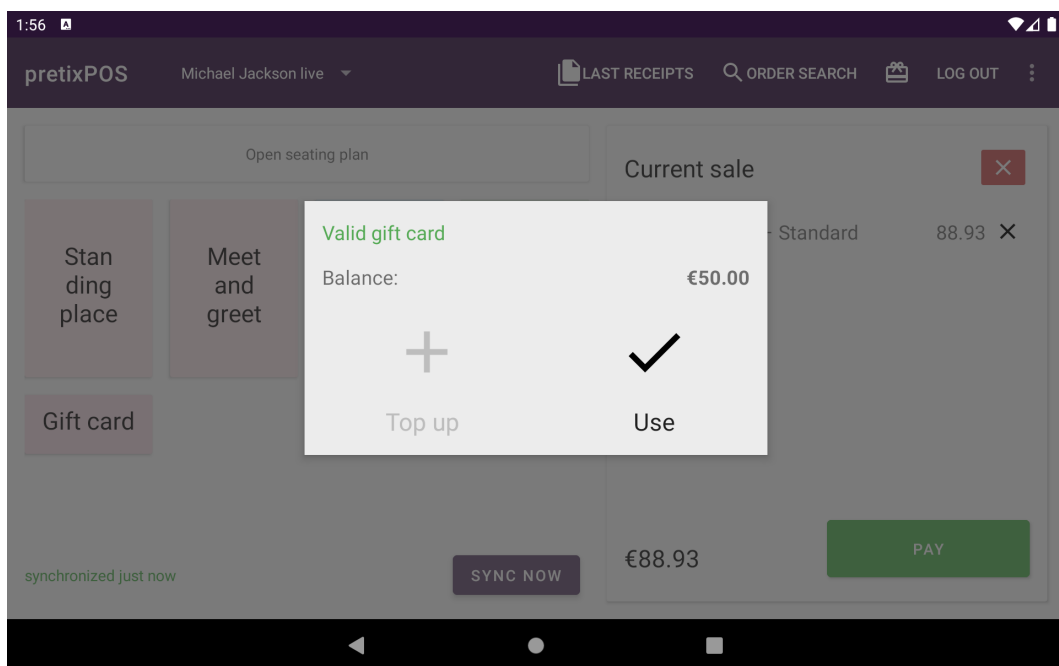



Figure 7.2: Display of gift card value

7.3 Topping up gift cards

Topping up gift cards with additional value is also possible in pretixPOS. The current receipt should be empty. The gift card can be accessed in the same manner as for its redemption, i.e. either through the *Gift card* option in the main menu or via the  symbol. The button *Top up* (fig. 7.3) starts the charging process. The desired amount needs to be entered (fig. 7.4) before the payment transaction for this amount can be made.

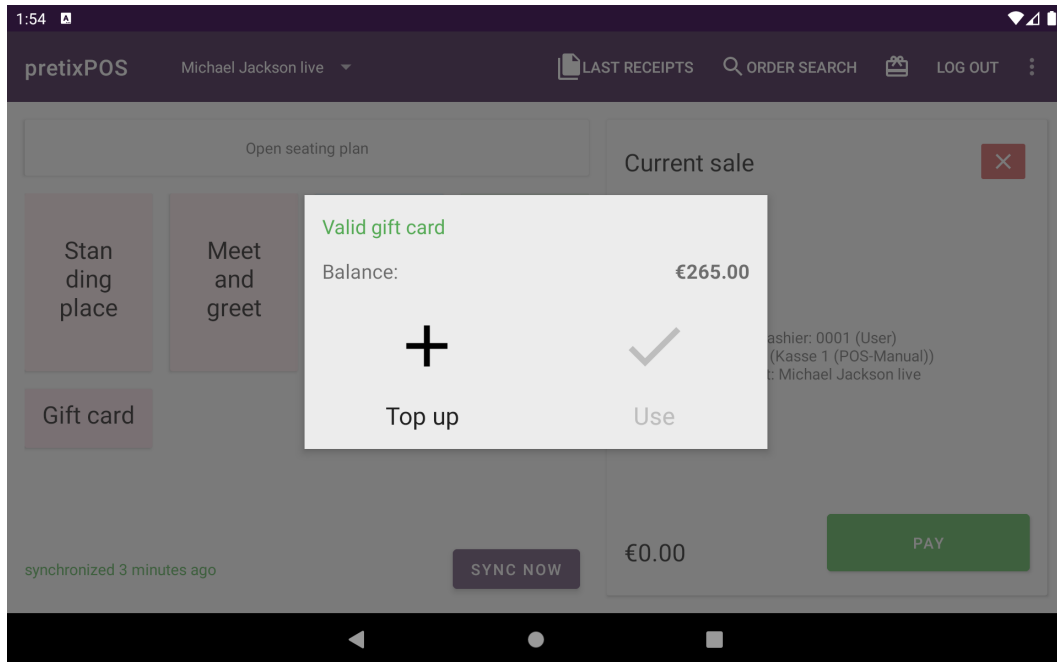


Figure 7.3: Display of gift card value

7 Gift cards

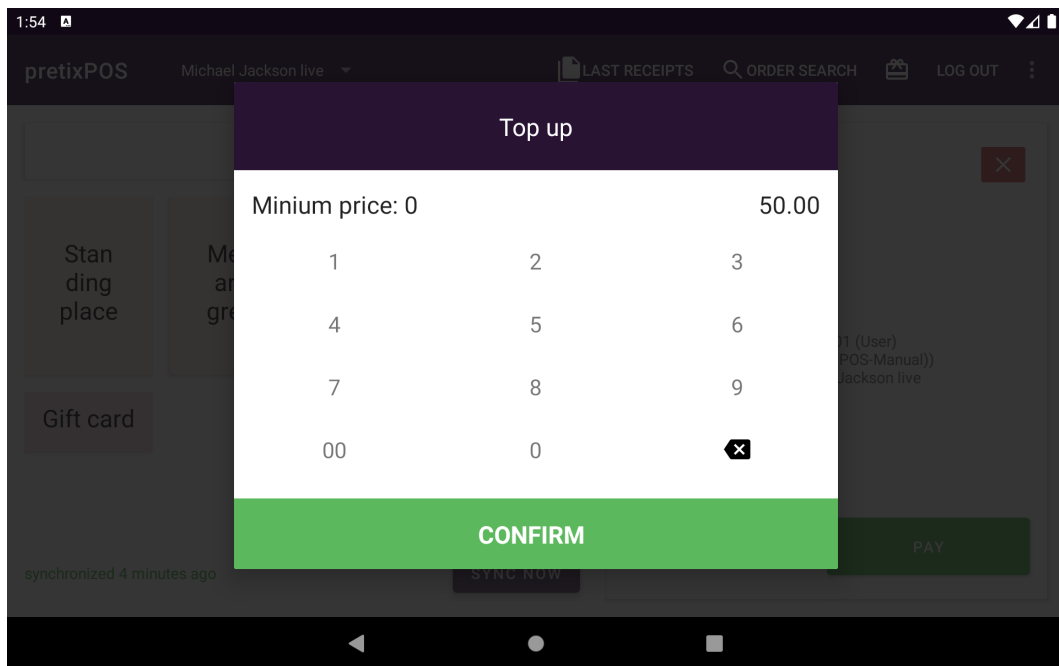


Figure 7.4: Entering the top-up amount

7.4 Paying out gift cards

If the required cashier permission is available, the balance of a gift card can be paid out to the user through the same dialog. This is most useful if the gift card feature is used for prepaid food and drinks and the customer shall be able to retrieve remaining credit after the event.

7.5 Additional options with NFC gift cards

If the gift card is stored on an NFC chip such as a wristband, additional options are available (see fig. 7.5):

- In the upper segment, you can connect the gift card to a ticket by scanning the ticket. The ticket owner subsequently gains access to the gift card's transactions through their order confirmation page.
- Using the button *Take over balance* you can move the balance of a different gift card to this one. For this purpose, you need to scan the other gift card as well. The system will then generate a receipt that will pay out one gift card to charge up the other. This is useful for transforming a gift card bought online into a NFC gift card.

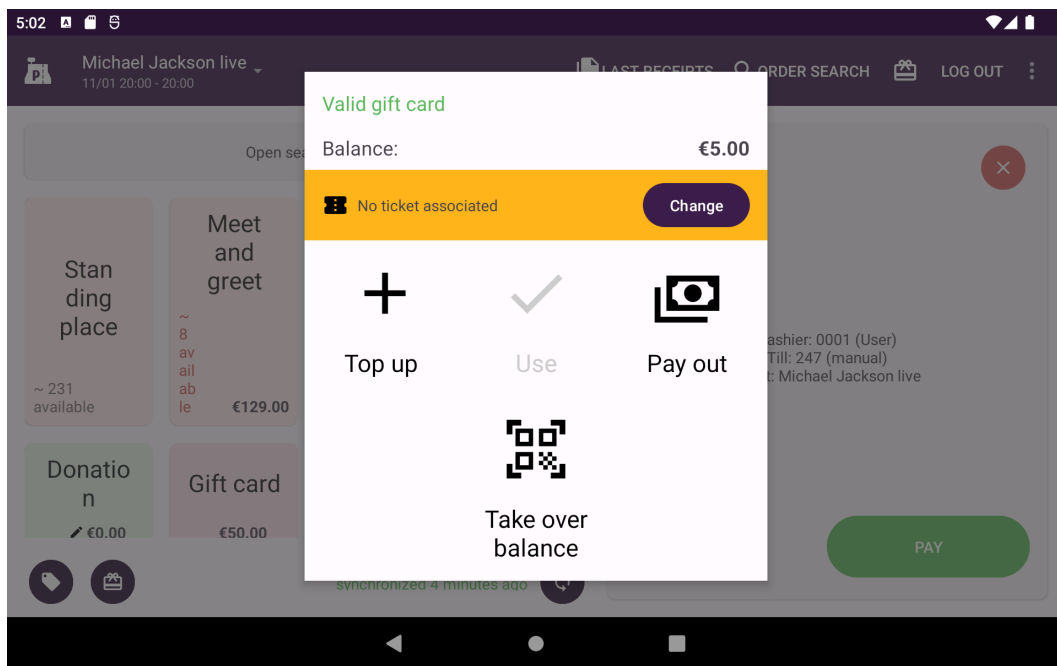


Figure 7.5: Additional options with NFC gift cards

8 Training mode

For testing point-of-sale functionalities and training new cashiers, a training mode exists. If the training mode is active, a very noticeable warning is shown on screen (fig. 8.1) and a headline to that effect is printed on all receipts.

Transactions performed in training mode are marked as such in the receipt history. They are **not** included in the next cash register balance. Due to applicable legal provisions, they will nevertheless be saved in an audit-compliant way and cannot be deleted.

If tickets are created in the training mode, the corresponding orders will be generated in the pretix *Test mode*. The difference in legal basis means that this test mode's structure differs vastly from the pretixPOS training mode. Online test orders are part of the online system's regular reports and quotas and should thus be deleted soon after tests are completed. Deleting test orders from the online system entirely is possible.

Some functionalities such as cash register balances and gift card actions are not available in training mode.

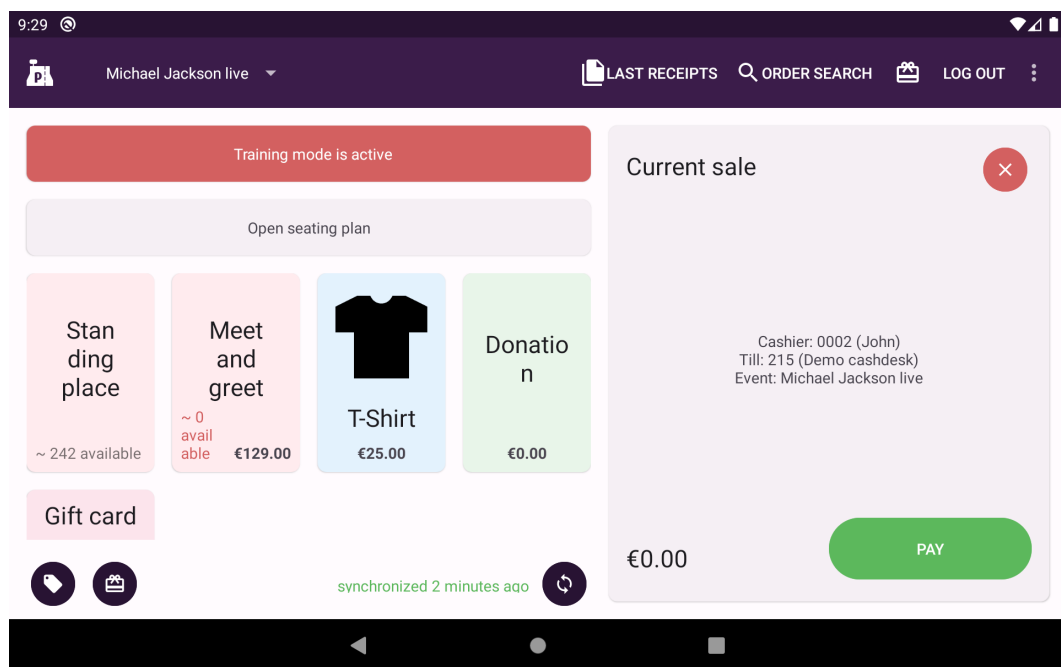


Figure 8.1: Active training mode warning

Warning: Most card payment terminals should not be used in training mode, as every successful transaction of the card terminal will lead in an actual transfer of funds,

causing a mismatch between pretixPOS records and the actual financial movements.

9 Settings

The *Settings* option opens the pretixPOS configuration dialogue. The various settings will be explained in this chapter.

9.1 General settings

Automatic Synchronization If this option is enabled (recommended), pretixPOS will regularly attempt to synchronize data with pretix in the background. If the option is disabled, synchronization will only be performed manually.

Training mode Enables and disables the training mode (cf. chapter 8).

9.2 Payment methods

pretixPOS supports cash-based and cash-less payments. There are various options for processing cash-less payments.

Cash payment This option determines whether cash is an accepted payment method.

Card payment This setting switches between the different card payment options:

- **No Card Payment:** Card payments are disabled.
- **External Card Payment:** Card payments via an external manually-operated terminal not managed by pretixPOS. The cashier thus needs to enter the payment amount into the card terminal and continue the transaction in pretixPOS after payment was successful.
- **SumUp:** Card payments on a terminal by SumUp. A SumUp app does not have to be installed.
- **Stripe Terminal:** Card payments on a terminal by Stripe. A Stripe app does not have to be installed.
- **Square POS:** Card payments via the Square POS app, which has to be installed and configured on the device.
- **Zettle:** Card payments on a terminal by Zettle by PayPal. (Formerly iZettle.) A Zettle app does not have to be installed.
- **ZVT-Terminal via LAN/TCP:** Card payments on a terminal with a network interface and supporting the ZVT700 standard.

CSB60 Model 2: A special kind of external terminal, offered by some payment providers in Spain. Contact pretix support for details on the configuration.

Adyen (Legacy/VX Series): Card payments on a Verifone-Terminal by Adyen, which is part of the discontinued VX series. These terminals are only available to existing users, are losing their certification on 29.03.2024 and cannot be used after that date. Contact pretix support for details on the configuration.

Manage Card Payment Terminal Opens the selected payment terminal's settings.

PayPal QRC via Zettle This option enables payment acceptances through PayPal QR codes. This requires a *Zettle by PayPal* account.

PayPal QRC settings This option (which only shows up if PayPal QRC is enabled) opens the settings of this payment method.

9.2.1 Card payments using SumUp

To enable card payments using SumUp, first you need to log into a SumUp merchant account via the *Log in* option in the *Manage Card Payment Terminal* dialogue. Afterwards the *Connect or configure terminal* option will allow you to connect a terminal via bluetooth. Instructions will appear on the display.

The *Log out* option will log you out of the SumUp merchant account.

Payments processed through SumUp can currently not be refunded from within pretixPOS. You can refund them through the SumUp backend instead.

9.2.2 Card payments using Stripe Terminal

To enable card payments using Stripe Terminal, the selected event must be connected to a Stripe account in the pretix online system. This Stripe account must have a "Location" for terminals configured.

The *Manage Card Payment Terminal* dialogue will then first let you choose the correct location at *Location* and subsequently allow you to select the correct *Connection type* (usually *Bluetooth*) and terminal at *Connect reader*.

Payments processed through Stripe Terminal can currently not in all cases be refunded from within pretixPOS. You can refund them through the Stripe backend instead.

You can use the option *Accept Interac (Canada)* to accept Canadian Interac banking cards. This might only work for merchants with a Canadian Stripe account.

9.2.3 Card payments using Square POS

No further configuration in pretixPOS is required. For optimal results we recommend the following settings for the Square POS app:

- In the "Signatures and Receipt" menu enable the option to skip the receipt screen

- In the "Taxes" menu disable/remove all taxes, set the taxes to be included in item prices, or exempt all items

Please note that pretixPOS limits the payment options in Square POS to card payments. However, your cashiers could still open the Square POS app to process transactions directly through that app.

Payments processed through Square POS can currently not be refunded from within pretixPOS. You can refund them through the Square backend instead.

9.2.4 Card payments using Zettle by PayPal

To enable card payments using Zettle, first you need to log into a Zettle business account via the *Log in* option in the *Manage Card Payment Terminal* dialogue. Afterwards the *Connect or configure terminal* option will allow you to connect a terminal via bluetooth. Instructions will appear on the display.

Payments processed through Zettle can be refunded from within pretixPOS.

9.2.5 Card payments using ZVT terminals

Most terminals issued by traditional network operators in Germany support the ZVT700 communication standard. pretixPOS supports ZVT700 and is tested with the terminals listed in the introduction. Currently only TCP/IP connections are supported, but not USB or serial connections.

ZVT and TCP/IP have to be enabled for the terminal. For instructions, please contact your network operator or us.

The following settings need to be configured in pretixPOS:

IP Address IP address of the terminal in the network

Port Port, usually 5577 (Ingenico) or 20007 (CCV)

Terminal Password Connection password with six numerical digits, usually 000000

Terminal uses its own printer This option must be enabled if the terminal has its own printer and should use it.

Print receipts through pretixPRINT This option must be enabled if the terminal does not have its own printer and receipts should thus be printed on the receipt printer configured in pretixPRINT.

Width of receipt paper This option should be configured as in pretixPRINT to indicate the receipt printer's printing width.

Several of the terminal's options are also accessible through the settings, e.g. initialisation request, diagnostics options, or end-of-day balancing. These can be performed directly through pretixPOS.

Terminals connected using ZVT support issuing refunds, i.e. paying open balances to the customer.

9.2.6 PayPal QRC

To enable mobile payments using PayPal QR codes, first you need to log into a Zettle business account via the *Log in* option in the settings dialogue. If you're using this for the first time, you also need to click the *Activate QRC for account* option to activate the payment method in your Zettle account.

Payments processed through PayPal QRC can be refunded from within pretixPOS.

9.3 Printers

9.3.1 Ticket printing

Print tickets on ticket printer If this option is enabled, tickets will generally be printed on the ticket printer configured in the *pretixPRINT* app.

Print tickets automatically If this option is enabled, new tickets are printed automatically with every successful sale. If it is disabled, tickets can only be printed manually.

Print ticket codes on receipt printer If this option is enabled, ticket QR codes will generally be printed on the receipt printer configured in the *pretixPRINT* app.

Print ticket codes automatically If this option is enabled, new ticket codes are printed automatically with every successful sale. If it is disabled, tickets can only be printed manually.

9.3.2 Receipt printing

Print receipts on receipt printer This option has to be enabled to activate receipt printing in pretixPOS. To use it, the *pretixPRINT* app has to be installed as a printer driver and a receipt printer must have been configured there.

Print receipts automatically If this option is enabled, the receipt is printed automatically after every successful sale. If it is disabled, receipts can only be printed manually.

Print administrative receipts If this option is enabled, receipts for administrative actions such as inserting or removing change money will always be printed.

Print canceled receipts If this option is enabled, a receipt will be printed whenever a sale is aborted.

Open cash drawer automatically If this option is enabled, a cash drawer attached to the ticket printer will be opened after every successful sale.

Offer to send digital receipts If this option is enabled, a dialogue with the option to send a digital receipt via e-mail appears during the sales process.

9.3.3 Badge printing

Enable badge printing This option has to be enabled to activate badge printing in pretixPOS. To use it, the *pretixPRINT* app has to be installed as a printer driver and a badge printer must have been configured there.

Print badges automatically If this option is enabled, new badges are printed automatically with every successful sale. If it is disabled, badges can only be printed manually.

9.4 Product list

Show products even outside their available time frame If this option is enabled, pretixPOS will allow the sale of products even if their availability has been restricted to a certain time frame in the pretix online system.

Ignore voucher limitation If this option is enabled, products that usually require a voucher will be available without a voucher, restoring the behaviour from before pretixPOS supported vouchers.

Ignore add-on/bundle limitation If this option is enabled, products that usually are only available as add-ons or as part of a bundle will be available individually, restoring the behaviour from before pretixPOS supported add-ons and bundles.

Filter product list by text If you configure a text for this option, products will only be shown if their name includes this text.

9.5 Data input / Questions

Ask questions that are usually asked during check-in If this option is enabled, pretixPOS will ask for attendee data even if the system is configured to only ask that data at the entrance when the ticket is redeemed.

9.6 Session closing

Empty the cash drawer by default Controls how the option to empty the cash drawer will be set by default in the session closing dialog.

Close session on card terminal Controls how the option to send an *end of day* command to the card terminal will be set by default in the session closing dialog.

9.7 Fiscalization device

pretixPOS supports the dynamic selection of fiscalization devices depending on country of operation. In this part of the settings, a fiscalization device can be configured and administered.

Fiscal country Selection of country for which the fiscalization device and other settings will be configured. If a supported country is selected, this selection cannot be changed later.

Set up new fiscalization device Starts the process of setting up a fiscalization device. You will be shown a dialog with the different available signature device types. After selecting one, you can confirm with OK to proceed (see sub-chapter depending on type), or you can click the wrench symbol in the bottom-left corner to access some device management features without setting up the device. This can be useful to check which device is inserted or to unlock a locked device before setting it up.

Print QR codes If this option is enabled (recommended), pretixPOS will print the fiscal signature as a QR code (if supported by the fiscalization module). This is mandatory in many countries but optional in Germany.

9.7.1 Swissbit TSE (Germany)

To configure a Swissbit TSE, it has to be inserted in the device. Then the configuration can be started in pretixPOS. It is possible that the TSE will ask for the device to be restarted at this time.

A PIN (5 digits), PUK (6 digits) and time admin PIN (5 digits) must be set during configuration. If the TSE has never been used before, they can be set at will. If it has been used, the same codes as at first configuration must be set. The chosen codes should be noted down and stored in a safe place. Setup may take several minutes.

After initial setup, the settings menu will show information about the TSE such as serial number, expiration date, storage use and software version. Additionally, the following options can be performed:

Export TSE storage Exports the data saved on the fiscal device, e.g. for archiving or audit purposes.

Change PIN, change time admin PIN, change PUK Changes the respective security code.

Unblock PIN, unblock time admin PIN Unblocks the respective PIN through entering the PUK (after repeated incorrect entries).

Enable CTSS, Disable CTSS To use the TSE, CTSS mode must be enabled. CTSS can be disabled e.g. if you want to send in the TSE for a repair but you do not want the data from the TSE to be extractable without PIN entry.

Initialisation Only required in exceptional cases when the initial setup of the TSE was interrupted.

Pause device Pauses use of the fiscal device, e.g. during a defect. All receipts will be labelled "fiscal device out of order".

Deregister device Deregisters the fiscal device from the point-of-sale. The device can be re-registered or used on other points-of-sale.

Decommission device Puts the device out of order. The device can never be used again except for exporting stored data.

Forget device Removes the connection between point-of-sale and TSE without deregistering the point-of-sale from the device. This is useful if the device is faulty or lost and a regular logout isn't possible. The device can be reused, but not with the same point-of-sale!

9.7.2 Bundesdruckerei TSE (Germany)

To configure a Bundesdruckerei TSE, it has to be inserted in the device. Then the configuration can be started in pretixPOS. It is possible that the TSE will ask for the process to be restarted again if the device is used for the first time.

A PIN (8 digits), PUK (10 digits) and time admin PIN (8 digits) must be set during configuration. If the TSE has never been used before, they can be set at will. If it has been used, the same codes as at first configuration must be set. The chosen codes should be noted down and stored in a safe place. Setup may take several minutes.

After initial setup, the settings menu will show information about the TSE such as serial number, expiration date, storage use and software version. Additionally, the following options can be performed:

Export TSE storage Exports the data saved on the fiscal device, e.g. for archiving or audit purposes.

Change or unblock PIN, change or unblock time admin PIN Changes the respective security code using the PUK code.

Initialisation Only required in exceptional cases when the initial setup of the TSE was interrupted.

Enable workaround for Android 11 Enables the feature that works around operating system issues with Android 11. Blocks the export feature.

Enable workaround for standby issues Enables the feature that works around operating system issues with the SD card going to standby quickly. Degrades performance.

Pause device Pauses use of the fiscal device, e.g. during a defect. All receipts will be labelled "fiscal device out of order".

Deregister device Deregisters the fiscal device from the point-of-sale. The device can be re-registered or used on other points-of-sale.

Decommission device Puts the device out of order. The device can never be used again except for exporting stored data.

Forget device Removes the connection between point-of-sale and TSE without deregistering the point-of-sale from the device. This is useful if the device is faulty or lost and a regular logout isn't possible. The device can be reused, but not with the same point-of-sale!

9.7.3 EPSON TSE (Germany)

To configure a EPSON TSE, it has to be inserted in a compatible printer (e.g. EPSON TM-m30ii, TM-m30ii-NT, TM-m30ii-H, TM-T88VI-iHub) or TSE server. Then the configuration can be started in pretixPOS.

During a setup, the printer's IP address must be entered into the corresponding field. Additionally, a PIN (5 digits), PUK (6 digits) and time admin PIN (5 digits) must be set during configuration. If the TSE has never been used before, they can be set at will. If it has been used, the same codes as at first configuration must be set. The chosen codes should be noted down and stored in a safe place.

The field *TSE ID* can be kept to the default `local_TSE` if the TSE is inserted into a printer. If a TSE server is used, the ID of the slot must be used. The field *Shared secret* should be kept to the default `EPSONKEY` unless the TSE was previously used in a different system that modified this value.

Setup may take several minutes.

After initial setup, the settings menu will show information about the TSE such as serial number, expiration date, signature counter and software version. Additionally, the following options can be performed:

Export TSE storage Exports the data saved on the fiscal device, e.g. for archiving or audit purposes.

Change PIN, change time admin PIN, change PUK Changes the respective security code.

Unblock PIN, unblock time admin PIN Unblocks the respective PIN through entering the PUK (after repeated incorrect entries).

Register printer with TSE This option must be selected once after you moved the TSE to a different printer.

Pause device Pauses use of the fiscal device, e.g. during a defect. All receipts will be labelled "fiscal device out of order".

Deregister device Deregisters the fiscal device from the point-of-sale. The device can be re-registered or used on other points-of-sale.

Decommission device Puts the device out of order. The device can never be used again except for exporting stored data.

Forget device Removes the connection between point-of-sale and TSE without deregistering the point-of-sale from the device. This is useful if the device is faulty or lost and a regular logout isn't possible. The device can be reused, but not with the same point-of-sale!

9.7.4 Fiskal Cloud (Germany)

The *Fiskal Cloud* service of *Deutsche Fiskal* is a signature system that does not require hardware embedded in your device. However, signing a receipt is only possible with a working internet connection.

To set up Fiskal Cloud, you need to install two additional apps by Deutsche Fiskal. pretix-POS will ask you to do so automatically.

Then, you will need to enter a *Fiskal Cloud Connector ID* and a *Password*. You will receive this information after buying a Fiskal Cloud subscription from pretix support.

If you have not booked the additional service Fiskal Archiv from Deutsche Fiskal, your signature data will only be saved in the Fiskal Cloud for 30 days and needs to be archived manually.

After setting up the connection you can see information about the signature device such as the serial number. You can also perform the following operations:

Trigger self-check Tests the connection to Fiskal Cloud.

Trigger data upload Starts uploading files to Fiskal Cloud.

Pause device Pauses use of the fiscal device, e.g. during a defect. All receipts will be labelled "fiscal device out of order".

Disconnect fiscal device Removes the connection between the app and Fiskal Cloud.

9.7.5 a.sign RK HSM (Austria)

The *a.sign RK HSM* service of *A-Trust* is a signature system that does not require hardware embedded in your device. However, signing a receipt is only possible with a working internet connection.

To set up a.sign RK HSM, you will need a username and password which you get from the merchant you purchased your a.sign RK HSM subscription from.

After setting up the connection you can see information about the signature device such as the serial number. You can also perform the following operations:

Pause device Pauses use of the fiscal device, e.g. during a defect. All receipts will be labelled "fiscal device out of order". **Note that you might be required to report usage of this function to FinanzOnline.**

Disconnect fiscal device Removes the connection between the app and a.sign RK HSM.

9.8 Help & About this app

Version Shows the version of pretixPOS currently in use.

pretixPOS serial number Shows the pretixPOS installation's unique serial number which is required for registration with the tax office.

pretix server Shows the URL of the pretix server to which the system is connected.

Android version Shows the installed Android version on your system.

Connection Shows the current method over which your device is connected to the internet.

Author and licences Opens a dialogue with legal notes on the app.

Manual Opens the current version of this manual.

This screen also contains troubleshooting utilities:

Disable customer display Disables the automatic recognition of a second display as customer display. This option will be set automatically if no second display is detected during the first start of the app and therefore must be manually unset if a second display is installed later.

Force full synchronization The next automatic or manual synchronization with the pretix server after the enabling of this option will download not only data which has changed since the last synchronization but all data. This option may help resolve the issue if a software error has caused incomplete data synchronization.

Force stop app and services Stops pretixPOS completely.

Upload a debug data dump This option allows you to upload technical debug data for error analysis to the server after contacting pretix support.

Open AnyDesk (appears only when AnyDesk is installed) Opens AnyDesk which enables pretix support to have a look at your screen and troubleshoot together with you

9.9 Deprovisioning

See chapter [10](#).

10 Deprovisioning

Cash register systems need to be audit-proof, which is why deletion of data is usually not a supported operation. In some cases, however, it is necessary to permanently deprovision an app installation, e.g. if the hardware running the app was rented and needs to be returned or needs to be replaced or disposed of for other reasons.

In these cases, it is essential that all relevant data stays accessible during a tax audit. For this reason, you should never uninstall or reset the pretixPOS app using Android's built-in options without running the deprovisioning process first.

The deprovisioning process can be started using the *Deprovisioning* option in the settings menu. During the process, you will go through multiple stages one by one (see fig. 10.1). Next to every stage that is applicable in your case you will see a button labeled *Go*. Click these buttons one by one, until the deprovisioning process has been completed.

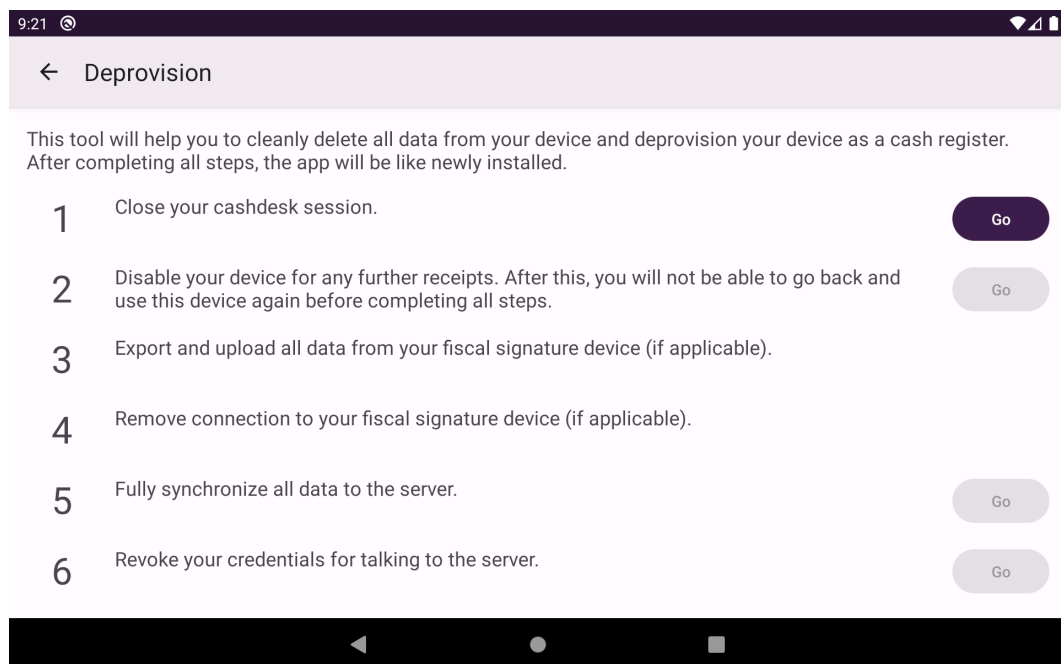


Figure 10.1: Dialogue: Deprovisioning process

In particular, this will perform the following actions:

1. In case any receipts were created in the current session, the session will be closed to make sure the cash drawer is empty and every receipt is part of a completed session.

10 Deprovisioning

2. (Only in Austria.) An empty receipt will be created as the final receipt.
3. The app will be locked for further receipts. This way, we can ensure that the later steps will get a complete picture of the data and no receipts are created after e.g. exports have been performed. After this step, you cannot reverse the process and need to finish the deprovisioning steps.
4. The log files of the fiscalization device (if installed) must be exported. If the fiscalization device is also returned or discarded, you can delete the data from the device in this step as well. As part of the export, data will be uploaded to the pretix server where it can be downloaded and transferred to a suitable archive for long-term storage.
5. The fiscalization device (if installed) must be disconnected from the app using the respective settings.
6. The local database must be synchronized with the pretix server one last time, such that all locally created receipts, session closings, or log files are fully uploaded.
7. The communication credentials for the pretix server are revoked, such that remaining data traces on the device do not pose a risk to the data available online.
8. The app will be reset. This last step is comparable to the *Delete data* option in Android's system settings.

11 Technical annex

11.1 System architecture

pretixPOS is embedded into a context of other system components, such as printers, fiscal signature devices, or payment terminals. The communication with these components uses different communication channels (such as network, USB, or Bluetooth) and communication protocols.

Additionally, there is always at least one component not available locally: The pretix ticket system which provides configuration data and bundles the sales data from pretixPOS with the online shop and other sales channels.

The directions of communication are visualized in fig. 11.1.

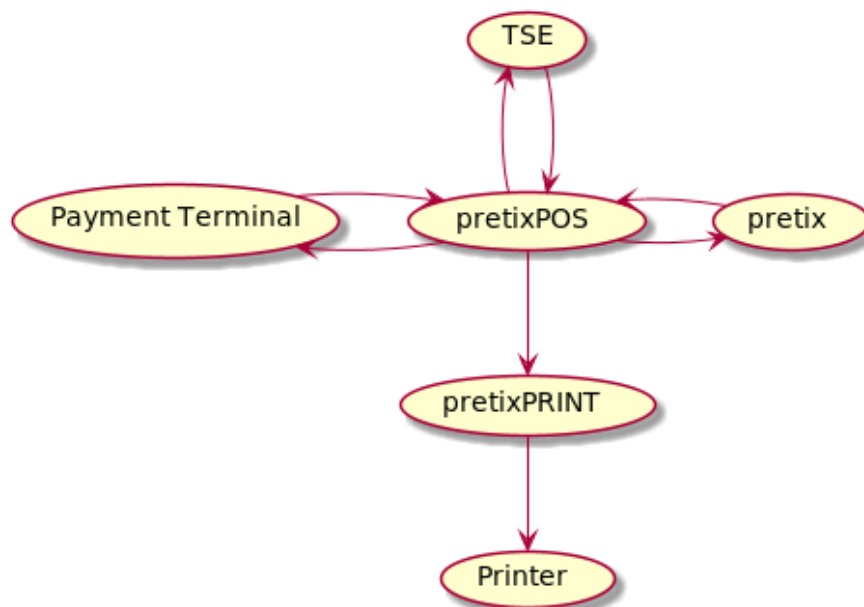


Figure 11.1: System architecture diagram

11.2 Order of operations

With every sale, multiple components are part of the transaction. Of course, some components are not always involved, such as the card terminal if the transaction is paid in cash

or a signature device in a country where it is not required. For simplification, the following sections will show a scenario in which all of the components are in use.

The components will be used in the order shown in fig. 11.2.

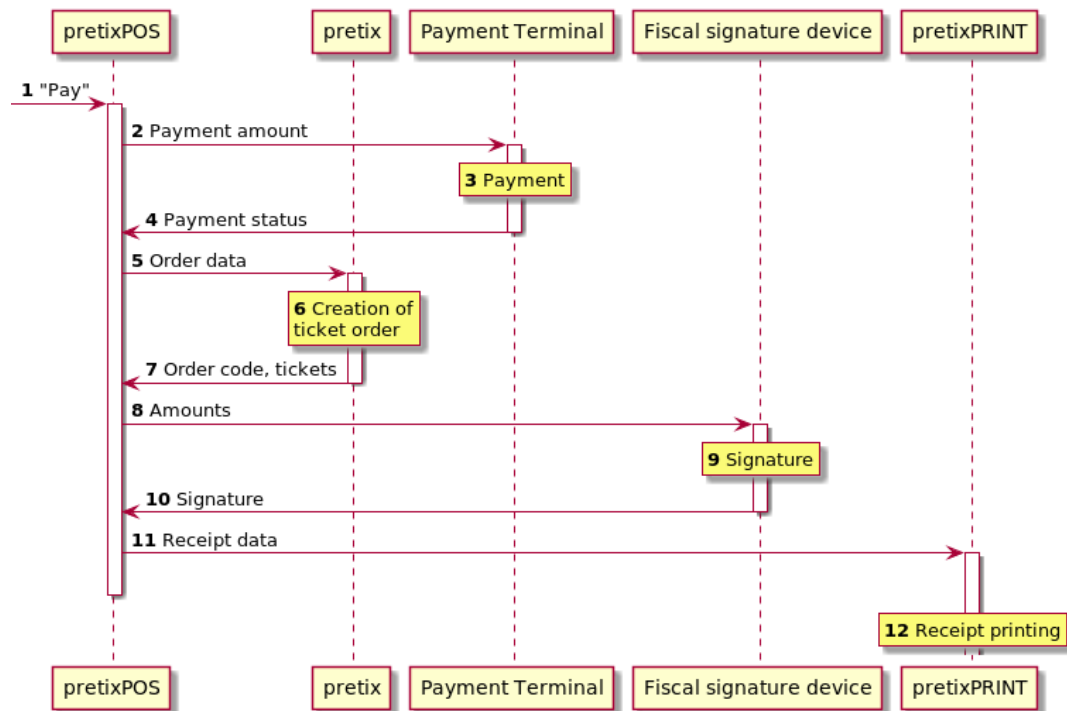


Figure 11.2: Data flow during a receipt confirmation

The diagram shows the order of operations in case of a regular sale. In special cases like returning a ticket or topping up a gift card, the details are a little different or involve more intermediate steps, but the general idea remains the same.

Some components are also used before a receipt is finalized, such as the signature device at the beginning of a transactions or pretix to reserve ticket quota. However, since those operations have no effect on reporting, they are not relevant for the following analysis.

11.3 Error scenarios

When all the components work together, errors can arise in multiple places. The reasons can be software bugs in one of the components, but even in the absence of software bugs, errors can occur at any time, for example if a one of the components unexpectedly stops (e.g. power failure, empty battery) or one of the communication channels suddenly fails or becomes unreliable (e.g. cable removed, bad WiFi connection).

These errors are often harmless, but if they occur at the wrong time, they can lead to mismatches in reporting. The following example illustrates such a situation: If a card payment terminal is used and the terminal loses its power source exactly in the moment *after*

it successfully charged the card but *before* it could tell pretixPOS that the charge succeeded, then pretixPOS *can't* know that the payment was successful. Therefore, the card terminal will report a higher sales volume than pretixPOS.

There are technical mechanisms to handle such problems, in the described example the card terminal could re-try transmitting the charge result once it is operational again. However, many components do not offer such a mechanism and even if they do, it can't be perfect.¹ If the mechanism was attempting to be perfect, it could create additional problems².

In the following sections we'll describe how pretixPOS will react to different failure scenarios. The numbers hereby refer to the steps in fig. 11.2.

2 Error transmitting the payment amount to the terminal

If the transmission of the payment amount to the terminal fails, there are no negative consequences. The payment process is not started and can be restarted manually.

3 Error during payment process

If an error occurs while processing a payment, the relevant distinction is whether the error occurs before or after the charge has been confirmed in the payment system of the terminal provider.

If the payment was not yet confirmed in the provider's system, there are no negative consequences. The payment process can be retried manually.

If the payment was already confirmed, the same situation as in the next section 4 *Error transmitting the payment status* occurs.

4 Error transmitting the payment status

If the payment process is completed, but the completion is not correctly reported back to pretixPOS, an error message will be shown in pretixPOS since from its perspective, the payment was not successful. The following process depends on the type of the payment terminal.

In case of Stripe Terminal, no further steps are necessary, since in this case the actual charge is only performed after the payment was transmitted to pretixPOS and pretixPOS was synced to the pretix server. Therefore, the payment transaction will automatically be canceled in this case.

In case of a ZVT card terminal, it is possible that the terminal completed the payment. pretixPOS therefore shows the error message as shown in fig. 11.3, asking the cashier to manually check if the payment was successful (e.g. by checking a receipt printed by the terminal). In this case, pretixPOS will not be able to store meta data such as the internal

¹In our example, the card terminal would also need to know if the cash register received the confirmation which, again, is a message that could be lost. See also https://en.wikipedia.org/wiki/Two_Generals%27_Problem

²Imagine pretixPOS would block further operations until it received notice from the card terminal. If the card terminal now has a permanent failure and never recovers, pretixPOS could never be used again as well.

receipt number of the card terminal, but as long as the cashier makes the right choice in the dialog, there will be no mismatch in reporting.

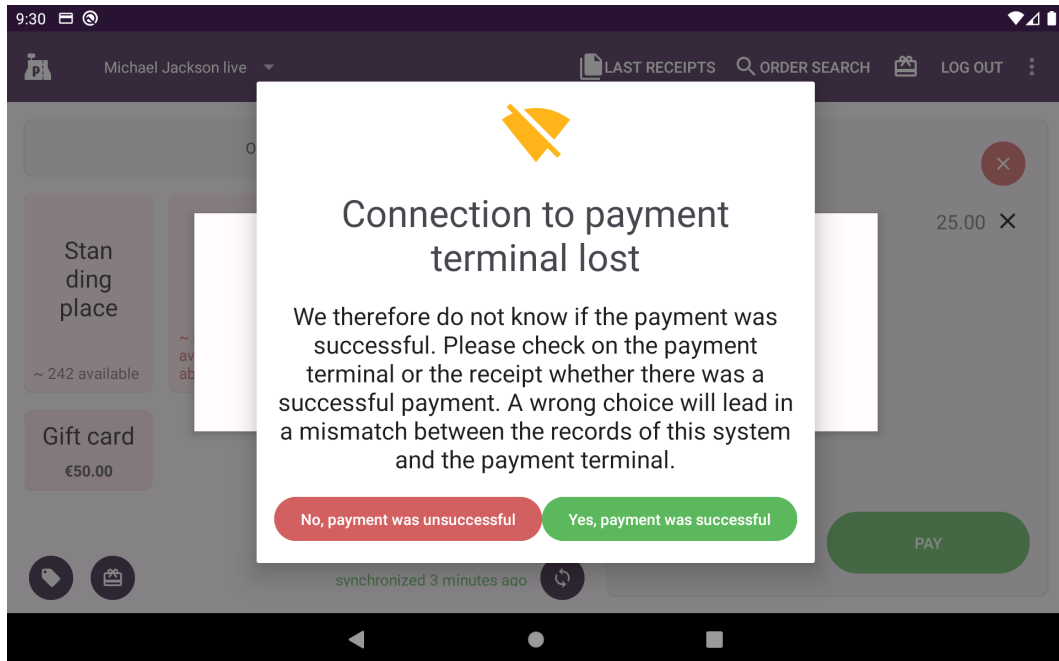


Figure 11.3: Error dialog after a communication issue with the card terminal

For all other card terminal types and error cases, we cannot say for sure if the payment was executed despite the communication error. In this case, the cashier needs to either retry the payment or cancel the receipt. **In case the transaction did complete, a mismatch occurs in both cases.** If the payment is retried, the customer is charged twice and there will be two transactions on the card terminal, but only one in pretixPOS. If the receipt is canceled, there is one transaction on the card terminal, but none in pretixPOS.

Recommendation: The transaction on the card terminal that is not visible in pretixPOS should be canceled or reversed. Depending on the card terminal, this can be done in the menu of the card terminal itself or through the web interface of the terminal provider (e.g. Zettle).

5-10 Errors after payment processing

For all error cases listed below which occur *after* completing the payment process, such as a failure of the signature device, we have the problem that a card was already charged but the receipt cannot be completed.

This will be shown in pretixPOS as a received payment similar to fig. 11.4.

The cashier now has three possibilities:

- Retry to complete the receipt. A new card payment is not necessary, but the existing payment can be re-used to confirm the receipt.

- Reverse the card payment using the X symbol next to the payment line. This is only possible if the card terminal supports reversals.
- Cancel the entire receipt. **In this case, a mismatch occurs since there will be no receipt for a successful payment. This option should only be used in emergencies, if proceeding with both of the above options is impossible and therefore the app is blocked. This should be noted down to manually reverse the transaction later.** If the cashier chooses this possibility, a warning dialog (fig. 11.5) is shown.

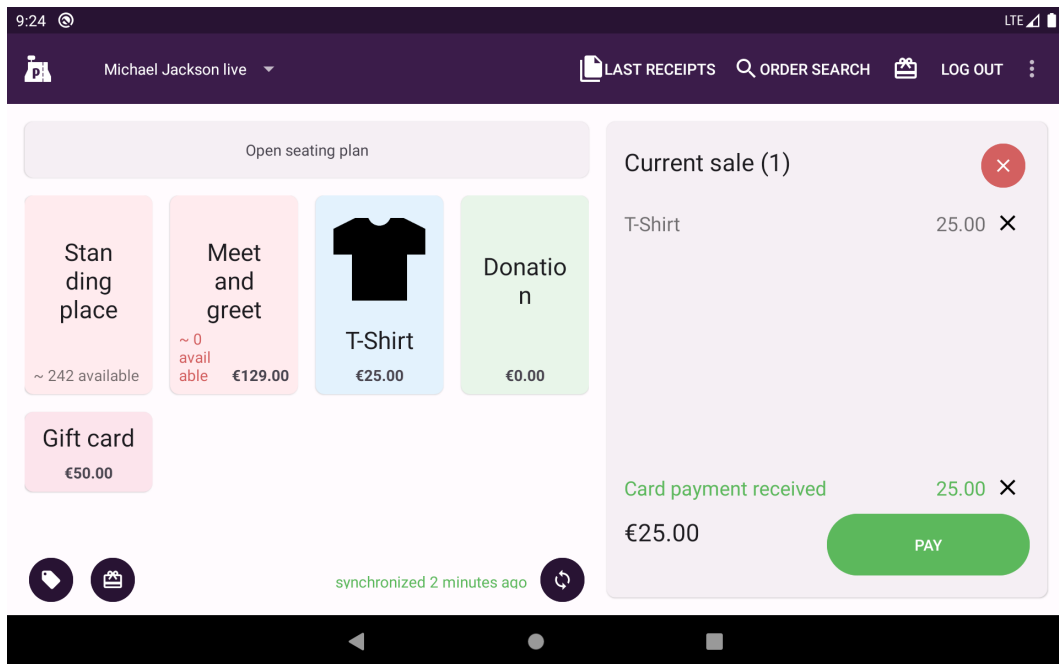


Figure 11.4: Receipt with a received payment

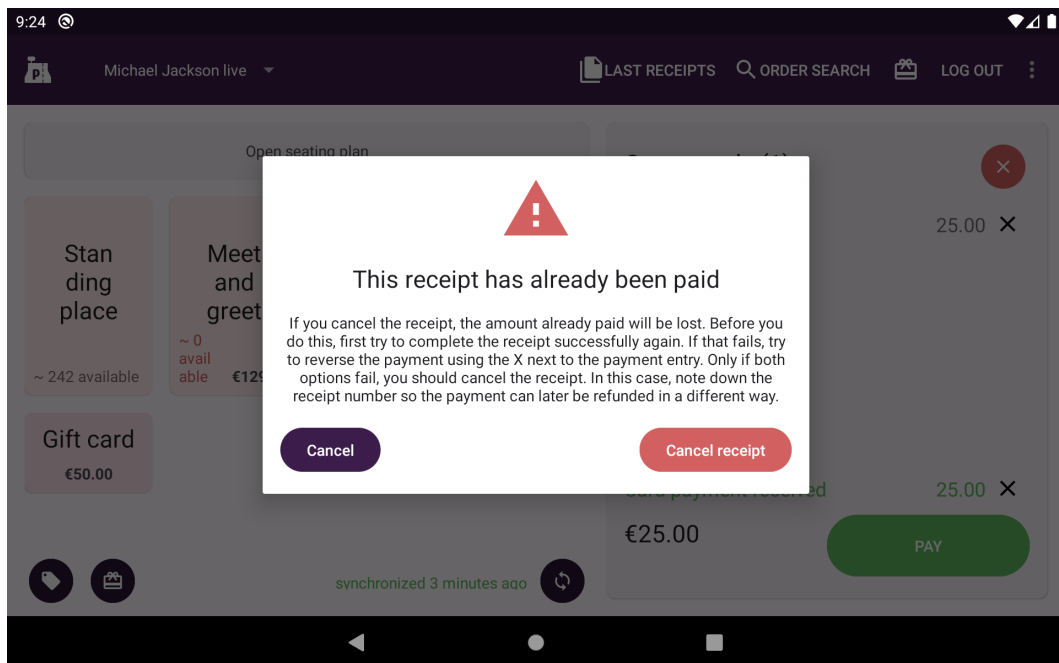


Figure 11.5: Warning dialog when discarding a successful payment

5 Error transmitting order data to pretix

If an error occurs while contacting pretix, such that the order data never reaches pretix, there are no additional negative consequences. An error message will be shown in pretixPOS and the cashier can retry or cancel the receipt.

6 Error creating an order inside pretix

Creating a ticket order in pretix can fail for many valid reasons, such as when a ticket has been sold out in the meantime. In these cases, no record is created on the pretix server, such that no mismatch occurs (except for the case of a successful card payment, see above).

A mismatch can only occur in this step due to a software bug on the pretix server, if a record is created but not reported back to pretixPOS. In this case, please contact pretix support for a detailed analysis of the individual case.

7 Error transmitting the order status to pretixPOS

If the order was created successfully on the pretix server, but never reported back to pretixPOS due to a connection error, an error message will be shown in pretixPOS. If the cashier retries to complete the receipt, a mismatch can occur if multiple orders on the server are created for the same pretixPOS receipt. If the cashier instead cancels the receipt, a mismatch can also occur because an order was created without a matching pretixPOS receipt.

Since pretixPOS 3.2.0, a mechanism exists that automatically detects this situation and cancels the "surplus" orders on the server, assuming pretixPOS is able to do a full synchronisation within 24 hours after the incident. Therefore, this situation should usually only lead to some surprising canceled orders on the server, but not to a mismatch of reporting.

8-10 Errors after the pretix order was created

For all error scenarios listed further below which occur *after* creating the order on the pretix server, pretix will have created in order which is not actually needed. A mechanism in pretixPOS will attempt to automatically cancel them again before an additional attempt is performed. Therefore, unexpected canceled orders can occur on the server, but there should be no mismatch of reports unless the cancellation fails as well.

8 Error transmitting data to the signature device

If the data transmission to the signature device fails, no mismatch between signature device and pretixPOS occurs, since the transaction was confirmed neither in the signature device nor in pretixPOS. Only the problems of a failed transaction as listed above (abandoned payments, canceled pretix orders) can occur.

9 Errors within the signature device

We can make no assertion to the results of errors within the signature device, since we do not have sufficient insight into the internal workings of the signature devices. Experience suggests that it is not a likely source of errors.

10 Error transmitting the signature to pretixPOS

If the transmission from the signature device to pretixPOS fails, depending on the type of the signature device there can be a mismatch between the data in the signature device and pretixPOS, if pretixPOS retries the transmission and creates an additional transaction in the signature device. In most cases, however, this will either resolve without a mismatch or show an error message preventing further activity.

12 Version history

Version 4.0.0

- Implementation of RKSV requirements (Austria).

Version 3.14.1

- The cash drawer is no longer opened when tickets are printed on the receipt printer.
- Stability of ZVT payment terminals has been improved.
- The *About* screen has been restructured and extended with additional help options.
- The SumUp integration has been updated.

Version 3.14.0

- Support for Mifare Ultralight AES as a mechanism for reusable media with NFC.
- Support for ACS ACR 1252U as an external NFC reader.
- New setting that allows making all required questions optional during data collection.
- The button *Copy answers from previous ticket* now skips add-on products with no information to copy.
- The user interface directly after starting the software has been improved.

Version 3.13.4

- Compatibility with the Cryptovision TSEv2.
- The operating system version is now reported to the server to make it easier to analyze errors.
- Handling of products with a maximum quantity per order of 0 is now implemented the same way as in the online shop (the requirement is now ignored).
- A crash in the ticket refund dialog has been fixed.

Version 3.13.3

- A crash in the add-on selection dialog has been fixed.

Version 3.13.2

- Keyboard input is now supported in all barcode scan dialogs.
- Support for a new backend feature that allows including all add-on and bundled products for free when a specific voucher is used.
- Fixed an issue in the handling of network issues which could lead to wrong transaction data in the backend.
- Fixed an issue in add-on selection that prevented choosing the correct add-ons from being chosen from a long list.

Version 3.13.1

- Fixed crash using gift cards with a short gift card code.
- Fixed incorrect price computation for prices that depend on both date and product variation.
- Improved handling of gift cards issued by other organizers.
- Reusable media that have been deactivated are now no longer accepted.

Version 3.13.0

- New section on closing report that summarizes all payments by payment method.
- When re-using a reusable medium, photos are now copied correctly.
- Improvements to ZVT connection stability.
- For gift cards that are stored on a reusable medium, you can now connect an "owner" and you can "take over" balance of a different gift card.
- When redeeming or topping up gift cards, additional information is now transmitted to the server.

Version 3.12.1

- Introduction of a new analysis option for ZVT connection issues.
- Layout correction in the gift card dialog.
- When setting up a Swissbit TSE, it is no longer possible to change the seed value which is currently always the same.

Version 3.12.0

- Gift cards can now be paid out.
- The order search now respects the settings around ticket creation for unpaid orders.
- The order search now shows a ticket's validity including the year.

Version 3.11.3

- A bug introduced in 3.11.0 has been fixed that caused the wrong tickets to be printed when printing individual tickets using the order search feature.

Version 3.11.2

- The add-on product dialog is no longer shown if no add-on product is actually available.
- The connection to the Epson TSE is now more stable.

Version 3.11.1

- Support for reusable media has been extended to add-on products.

Version 3.11.0

- Support for the experimental feature "reusable media" has been added.
- SumUp integration was updated to version 4.0, adding support for new SumUp Air readers.
- The order of system questions and individual questions is now respected correctly.
- A visible indicator has been added to mark required questions as such.
- A bug was fixed that prevented removing the Cryptovision TSE gracefully.

Version 3.10.0

- Update of Zettle integration.
- Prevention of double transactions with ZVT terminals and Stripe Terminal.
- Support for customer display on iMin devices (with separate bridge app).
- Support for new cashier permission "can check-in tickets".
- Badge printing will now be disabled automatically if the badge plugin is disabled for the selected event.
- Performance improvement of synchronization on devices with lots of data.

Version 3.9.3

- Absturz bei Verwendung der Epson-TSE behoben.

Version 3.9.2

- Absturz im Frage-Dialog behoben.

Version 3.9.1

- Unterstützung für Abhängigkeit zwischen Frage-Feldern wurde hinzugefügt.
- Absturz unter alten Android-Versionen wurde behoben.

Version 3.9.0

- Support for a new pretix backend feature to define validity of tickets based on the product.

Version 3.8.0

- You can now refund orders with an open balance through pretixPOS.
- We significantly improved usability of using pretixPOS with a keyboard.
- Validation of the minimum and maximum amount of a product is now performed before payment processing.
- When creating exports, e.g. of a fiscal device, you can now choose the folder in which we will store the file.
- Manual price input is now supported for add-on products.
- The SDK for the Bundesdruckerei TSE was updated to version 3.0.0 and stability of the Bundesdruckerei TSE as improved.
- A bug was fixed that caused add-on products to be shown even if they are not actually available.
- A bug was fixed that caused refunding tickets in some cases even if they were already refunded.
- Inactive dates of event series are no longer shown in the event selection list.

Version 3.7.4

- Bugs in the USB integration of the Swissbit TSE have been fixed, especially on Android 13.

Version 3.7.3

- Support for the new pretix backend feature to turn off personalization of admission products.

Version 3.7.2

- It is now possible to add more products to a receipt after redeeming a voucher.
- Handling of failed Zettle card payments has been improved.

Version 3.7.1

- An incorrect calculation of prices of bundled products in certain tax setups has been fixed.
- You can now search by event title when selecting events.
- Products with manual price input now will assume their default price if the dialog is confirmed without input.
- The event selection is now shown larger on large screens.
- Various crashes and display issues have been fixed.
- Performance optimization of the order search.
- When cancelling and refunding orders, additional information will be transmitted to the backend.

Version 3.7.0

- Support for add-on products and bundle products has been added.
- When cancelling and refunding orders, information about the payment method is now sent to the backend.

Version 3.6.2

- The app is now built for newer Android versions.
- Stripe Terminal: The terminal is now instructed to always skip the tipping screen.

Version 3.6.1

- Fix crash of the order search.

Version 3.6.0

- Redesign of printer settings options and addition of more fine-grained options.
- Support for Stripe Terminal with network-based or USB terminals.
- Support for EPSON TSEs (over network connection).
- Tickets are no longer printed when an order is returned.
- More stable display of synchronisation progress.
- Small performance improvements.
- Incorrect line cancellation option removed.

Version 3.5.5

- Fixed a bug that prevented deprovisioning in some cases.
- Variations which require a voucher can now be used without a voucher if the corresponding settings option is set.
- Missing line breaks on printed closing receipts have been fixed.
- After a closing, a "initial change" receipt will no longer be created if the value is zero.
- Fixed a bug that prevented use of Stripe Terminal on Android 13.
- Fixed a bug that prevented the installation on devices without camera.

Version 3.5.4

- Fixed a crash caused by certain tax calculations.

Version 3.5.3

- Fixed a crash caused by incomplete covid certificate check settings.

Version 3.5.2

- Fixed a crash caused by certain cancellations.
- Fixed a bug that prevented the use of Square POS card payments on Android 11+.

Version 3.5.1

- Fixed a bug that prevented setting up Stripe Terminal.
- The country selection in input dialogs no longer allows selecting entities that are not really countries, like the EU.
- The validation of email addresses has been improved.
- Copying personal information from one a previous ticket has been fixed for the salutation field.

Version 3.5.0

- New variation selection for quicker usage.
- Fixed a bug during deprovisioning.

Version 3.4.2

- Fixed a bug that caused the app to crash.

Version 3.4.1

- Fixed incorrect handling of voucher discounts for variations.
- Performance improvement for generation of DSFinV-K files.

Version 3.4.0

- If your event settings specify that attendee names should be split into first names, last names, or other parts, pretixPOS will now respect this setting as well.
- When closing the session, the cash drawer will now be opened before you need to enter the amount of money in the drawer.
- Within an event series, date-level product availabilities are now respected correctly.

Version 3.3.4

- Significant performance improvements for installations with many sold tickets

Version 3.3.3

- Fixed crash that was caused due to a rounding error for specific carts

Version 3.3.2

- Fixed issue with Adyen Legacy card terminals.
- pretixPOS now reports its version number with every server communication to make error debugging easier.

Version 3.3.1

- Fixed issue with Adyen Legacy card terminals.

Version 3.3.0

- Seat descriptions as well as some error messages which were previously always shown in English are now shown in the correct language.
- Support for card payment using Adyen Legacy/VX series was added.
- A new cashier permission allows to disable the top-up feature for gift cards.
- The SDK for SumUp was updated to the newest version.
- A few rare app crashes have been fixed.
- The product list in the main sales view now correctly respects the setting to ignore voucher restrictions.

Version 3.2.1

- Fixed a bug that caused a session closing to be recommended every 1 hour instead of 24 hours.

Version 3.2.0

- It is now possible to redeem vouchers.
- A new error correction mechanism prevents mismatches between pretixPOS session reports and pretix reports after internet connection issues.
- Support for Fiskal Cloud was added.
- It is now possible to cancel an unpaid online order.
- The SDK for Stripe Terminal and Zettle by PayPal was updated to the newest version.
- The ZVT card terminal connection now tries to keep the connection to the terminal alive every minute.

12 Version history

- The ZVT card terminal connection now supports closing the card terminal's session together with the pretixPOS session.
- The ZVT card terminal connection now supports manually marking a transaction as paid if the connection between pretixPOS and the card terminal failed.
- It is now possible to change the default settings of the parameters available in the session closing dialog.
- The Covid certificate check now respects the set of vaccination products configured in the pretix backend.
- The settings dialog of the app was split into multiple screens to improve usability.
- The graphical appearance of many parts of the user interface was adjusted to match more recent Android design guides.
- Canceled receipts are now easier to spot in the receipt list.
- A bug was fixed that caused wrong availability information being shown on some products with variations.
- When switching between events, the seating plan is now closed and reloaded properly in the background.
- Long product variation names are now visible through animated text scrolling.
- A bug was fixed that prevented use of Stripe Terminal if the event's short name did not contain any letters.
- A bug was fixed that caused PayPal QRC payments to be enabled by default on new installations.
- A bug was fixed that prevented a top-up of gift cards.
- A bug was fixed that caused the word *null* to be printed on receipts.
- A few small bugs in the event selection dialog have been fixed, most importantly events not sold on pretixPOS are now no longer shown.
- A few bugs were fixed that caused the app to crash.
- A few layout issues on very small screens were fixed.
- This manual was extended by the *Technical annex* chapter.
- The upload of DSFinV-K files introduced in 3.1.0 is now limited to installations operated in Germany.

Version 3.1.0

- DSFinV-K export files for every session closing will now be uploaded to the server.
- The integration of Zettle card payments now supports refunding previous payments.
- You can now accept payments through PayPal QRC.
- A new process for deprovisioning the app has been implemented.
- The app now reports additional information to the server such as information on the installed fiscalization device.
- A bug was fixed that caused timestamps internal log files of the app only to show minute precision, not second precision.
- If used in Germany, the app now shows a warning message if the session was not closed for 24 hours.
- The version number of the DSFinV-K taxonomy was raised to 2.3.
- If no second display is detected during the first start, the customer display will now automatically be disabled in the app's settings to prevent issues with remote support applications.
- A bug during initialization of the seating plan component has been fixed.
- The app can now be installed on devices without GPS location support.

Version 3.0.1

- A crash during setup of a Bundesdruckerei TSE has been fixed.
- An incorrect table name in the index file of our DSFinV-K export has been fixed.

Version 3.0.2

- Printing existing tickets with missing question answers is no longer prohibited.

Version 3.0.1

- Correction of crashes and error messages newly introduced in 3.0.1

Version 3.0.0

- The input process has been changed for transactions which are not created through the regular sale process, this includes gift card topup, payment for online shop orders, and reversals. In these cases, you will now always be shown the newly created receipt before the payment process starts.
- You can now pay out refunds through card terminals connected using ZVT, as well as through manually operated card terminals (external card terminals).
- If you enabled ticket emails for attendees in the pretix backend for pretixPOS tickets, this will now be respected correctly.
- If you add multiple products to the receipt at once, all products will be reserved on the server at the same time. This way, you do not need to hurry during attendee data input and can take your time to enter all information.
- You can now cancel an existing order as a whole instead of every position individually.
- If a product allows free price input and has a negative base price (e.g. deposit returns) you can (and must) now also input a negative price.
- An additional logging mechanism has been added to track usage of the software and aid analysis or correction efforts in case of future bugs.
- A visual aerror was fixed that occurred if you rotated your screen while a dialog (e.g. choice of variation) was shown.
- The software's core was improved to avoid bugs caused by concurrent actions if you operate the software very quickly.

Version 2.10.0

- Show price of products in product list
- Fixed a bug that caused the software to hang after a closed TSE connection
- If the connection to the TSE was closed, a new connection will be attempted automatically (max. once per hour)
- Fixed a bug in a diagnosis feature

Version 2.9.5

- Fixed a bug when using Bundesdruckerei TSE that caused the software to hang

Version 2.9.4

- Fixed a bug that caused the software to crash

Version 2.9.3

- Fixed a bug that caused the software to crash

Version 2.9.2

- Support for Bundesdruckerei TSE was improved.
- Various layout problems, crashes, and freezes have been fixed.
- Seat numbers are now shown if tickets are printed on the receipt printer.
- The receipt layout no longer contains a tax table if the event does not contain a single tax rule (not even with tax rate zero).

Version 2.9.1

- Fixes for Android-11-specific bugs such as printing not being possible.

Version 2.9.0

- Support for Bundesdruckerei TSE was added.
- Bugs in the structure of the DSFinV-K export data have been fixed.
- Questions which are configured to only be asked during check-in will no longer prevent printing of a ticket in the order search view.
- The COVID-19 certificate verification feature was updated to recent regulations to support e.g. booster vaccinations and new settings in the pretix control interface.

Version 2.8.0

- Manual control for cash drawers was added.
- A new settings option to control the cash drawer was added.
- Questions which are configured to only be asked during check-in will no longer be shown during sale. The old behaviour can be brought back using a new configuration option.
- A performance problem was fixed that caused the app to become unusable if a very large order was viewed.
- A bug was fixed which caused unnecessary empty transactions on the TSE.

Version 2.7.0

- Support for new pretix backend features to restrict certain product variations to specific time frames or sales channels.
- Support for selling tickets for multiple dates from the same event series.

Version 2.6.3

- Resolved crash when using Zettle.

Version 2.6.2

- Resolved incorrect display of minimum price if a product has both variation as well as adjustable pricing.
- Resolved crash of order search if a search result references an event series date not known by the local system.
- Resolved crash when setting up Stripe Terminal for the first time.

Version 2.6.1

- Introduction of option "Filter products by text".
- Resolved crash of order search if a network error occurs.

Version 2.6.0

- Collection of attendee data now supports checking COVID-19 vaccination, test, and recovery records.
- If you send digital receipts via email and we know the customers email address (e.g. from their online order), the email address will now automatically be pre-filled.
- The session closing report printed on the receipt printer now includes name and ID of the POS terminal.
- The dialogue to enter email addresses for digital receipts now makes better use of available screen space.
- Improved performance and reliability of the option to add products to the current receipt multiple times.
- In previous versions, it was possible to trigger a double-save through quick double-clicks in certain dialogues (e.g. cash withdrawal, counting, ...). This will now be prevented.

- A custom text configured in the online backend can now be printed on receipts.
- If the pretix server blocks a request due to too many requests in a short period of time, pretixPOS will now automatically wait for a few seconds and retry.
- Swissbit TSE: Upgrade of Swissbit SDK to version 5.7.7, including the USB TSE firmware update 1.1.0

Version 2.5.0

- Added option to search an order by scanning a ticket QR code.
- Added display of the number of lines in the current receipt.
- Added feature to add a product to the receipt multiple times by long-pressing the product name.

Version 2.4.7

- The device display now no longer may go into standby in most dialogues.
- Swissbit TSE menu: New option to manually initialise a TSE.

Version 2.4.6

- Swissbit TSE menu: New option to enable and disable CTSS mode on the TSE.

Version 2.4.5

- Resolved a bug with printing cancelled receipts where the cancellation indicator was not clear.

Version 2.4.4

- Resolved a critical bug in the handling of payments for online orders. With certain configurations, it could happen that a payment for an online order accepted in pretixPOS was correctly booked and processed but turned into a cancelled order in the local receipt history five minutes later. This only concerns the acceptance of payment, not new sales initiated in pretixPOS. The bug led to incorrect balancing and thus incorrect DSFinV-K exports whenever it occurred. Both TSE signature and TSE data exports continue to have correct data; the payment data in the pretix online shop is also correct. All pretix Hosted customers for whom we could identify affected transactions (which were not clearly test transactions) in the server data will receive an e-mail from us.
- Several rare software crashes were fixed.

Version 2.4.3

- A bug in the bug fix mechanism which prevented correct cancellation if the acceptance of payment for an online order could not be signed by the fiscal device, was fixed.
- The Android system is now prompted not to include the app in cloud back-ups et al.
- Several rare software crashes were fixed.

Version 2.4.0

- Showing the availability of tickets.
- Order view: Option to record the exit of a ticket
- Order view: Showing individual ticket scans with time stamp
- Order search: showing dates
- Re-printing tickets from the order history is now possible even if they're only printed on the receipt printer.

Version 2.3.2

- New selection dialogue for events with showing of availability and date selection
- Bug fix: Missing button for register balancing on devices with very small screens.
- Bug fix: When printing tickets on the receipt printer, long QR code contents were cut off.

Version 2.3.1

- The cash register balancing dialogue now shows the balance before the balancing is performed.
- Settings: Option to immediately and completely stop the app.
- Training mode can now be disabled when an active receipt exists.
- A bug was fixed in which old data fields for items were queried directly after synchronization.
- Permission to access USB devices should now survive system reboots.
- A bug was fixed which caused system overload in rare cases.

Version 2.3.0

- Introduced the option to edit personal data associated with tickets in the current receipt
- Introduced the option to copy personal data from the previous ticket in the current receipt

Version 2.2.4

- Support for Stripe Terminal in Germany (Terminal 2.0 beta)
- Support for hardware buttons for cashier PIN entry
- Fix of dialogue sizes for different screen sizes
- Swissbit TSE can now be selected even if Germany is not selected as country
- The selected country can now be changed if the current selection is not supported
- Settings now show the connected pretix server
- Swissbit TSE: upgraded the integration to Swissbit version 5.7.6
- SumUp: upgraded the integration to SumUp version 3.2.2

Version 2.2.3

- ZVT: fixed a connection error to Ingenico Move/5000
- ZVT settings: fixed a bug in the option to terminate the connection

Version 2.2.2

- ZVT settings: option to actively terminate the connection
- ZVT settings: fixed missing display of error messages

Version 2.2.1

- Bug fix: item variations in event series were not functioning

Version 2.2.0

- Order search: showing the customer name
- Order view: option to cancel and print individual tickets
- Order view: showing ticket details
- Order view: option to edit ticket details
- Order view: request for confirmation before a cancellation is performed
- Order view: ticket printing is only possible if all data has been filled in
- Order view: re-printing of tickets is recorded online
- Order view: option for manual check-in (entry)

Version 2.1.2

- Clearer visual indication of training mode

Version 2.1.1

- Introduction of training mode

Version 2.0.0

- Configuration option to deactivate customer display
- Introduction of cashier login
- Support for badge printing