flysoft.

Procedural documentation for flysoftPOS System

Procedural documentation

Document version

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Date	Section	Change	Modified by
23.06.2022	Release history	Added release history	A.V
23.06.2022	Operation of flysoftPOS with activated TSE module	Added new section malfunctions in the operation of TSE and DSFinV-K export	A.V
23.06.2022	Export in DSFinV-K format	Added new section managing cash summary	A.V
23.06.2022	Export in DSFinV-K format	Added new section managing discounts	A.V
23.06.2022	Export in DSFinV-K format	Added new section covid-special VAT	A.V
10.05.2022	Structure of GoBD export	Added new column "tax-name" to GoBD export invoice-items.csv	A.V
05.05.2022	All	Document created	A.V

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Functionalities of the POS system

This document provides information concerning the audit of the cash register data for the tax office. The information applies to the regular operation of the cash register. In some rare cases, it is possible that errors caused by components from other manufacturers or in our own software may lead to exceptional situations that may deviate from the answers given here. This document is updated for the flysoft POS version 1.2.4.

Architecture of flysoftPOS

flysoftPOS works offline without needing an active internet connection. A single on-premise server/desktop is installed locally inside the business location that stores and processes all data. Mobile clients act an extension of the User interface that must work alongside the server/desktop. In other words, the server act as the sole master and the mobile clients acts as the slaves, which forms the master-slave architecture. A single TSE module is connected to and managed by the server/desktop.
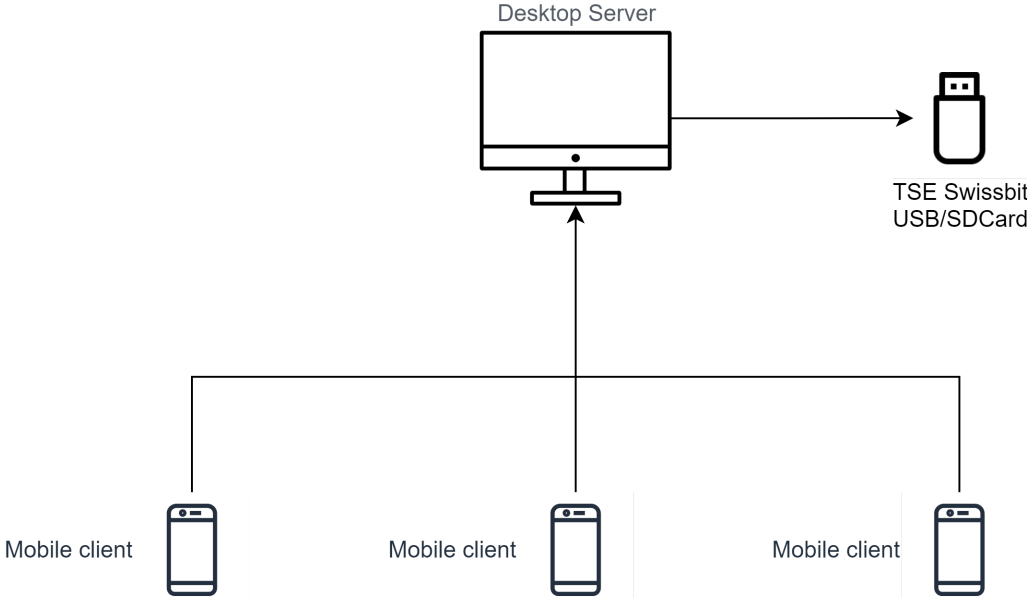

Fig. 1: Schematic representation of flysoftPOS architecture with TSE module

Master data

Master data are records first imported and later created or generated by the user of the POS system. Data are grouped as follows:

- Users (user profiles, roles and rights)
- Menu (items, item-subcategories, item-categories and memos)
- Runtime (order, payment, cancellations, all business transaction data)
- System (license, backup, printer)

The item menu and the store/shop data are imported from a CSV file during first time set up for new customers. Customers usually send in their menu and the flysoft support team prepare the CSV file in specific format.

Assignment of Invoice Number and Invoice ID

The generation of invoice number is automatic, and thus it cannot be influenced or manipulated in any way by any third parties. The invoice numbers are numeric only and are generated sequentially. Whenever a new invoice is created, it automatically gets the number as last_invoice_number + 1.

Invoice numbers created from mobile clients also follow the same sequence. For example, if the last invoice was created from the desktop server and the number was 1001, then the next invoice created from one of the mobile clients will be numbered 1002.

Invoice IDs are alphanumeric unique IDs. For normal invoices, this ID is randomly generated. When an invoice is reopened or cancelled, the ID is generated in such a way that it has a link to the parent invoice number.

Link between Order and Invoice

To check POS data, you can make use of the export data. In the GoBD export, you can find the whole invoice and ordering data by checking the "orders.csv" and "invoices.csv" files. Connection between the two files can be resolved through the property "order-id" which is available in both the CSV files.

Order
id
created-date
created-time
shift-id
user-id
user-name
table-id
customer-name
order-type
device-id
settled

Invoice
id
created-date
created-time
shift-id
order-id
invoice-number
order-type
user-id
user-name
device-id
table-id
discount-id
....
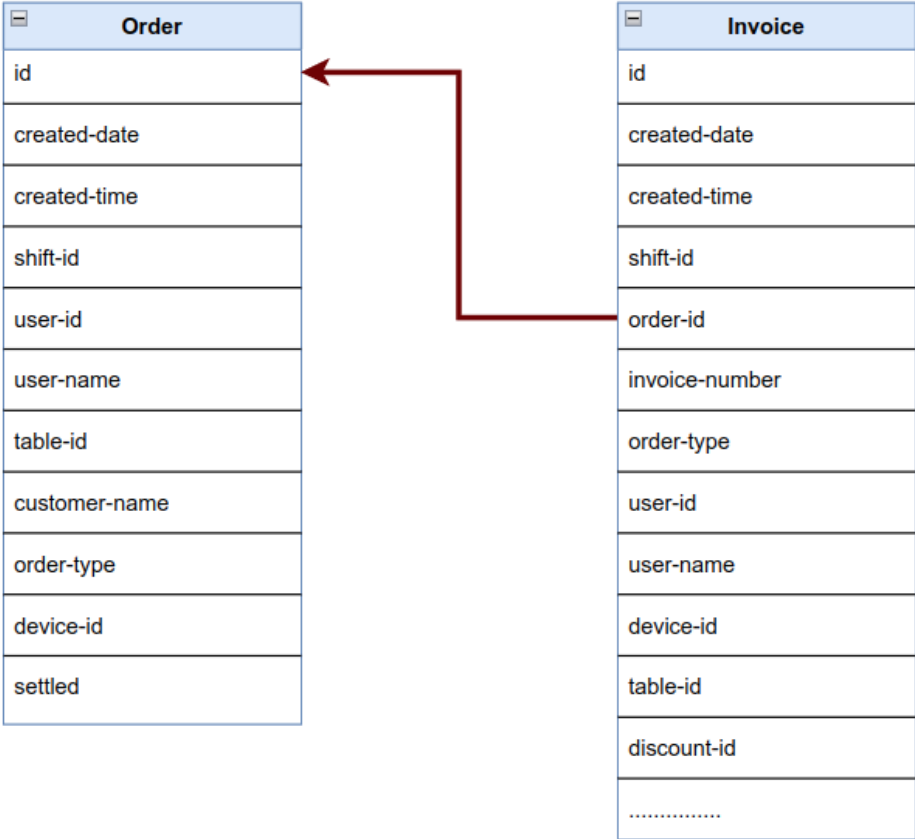
Fig. 2: Link between invoices.csv and order.csv

Link between Invoice and Line-items

Line items are available in the file named "invoice-items.csv". Line-items that belong to an invoice are referenced by the same "invoice-id".

Fig. 3: Link between invoices.csv and invoice-items.csv

Edit Invoice

The user can edit invoices which haven't been edited previously while the current shift still is in progress. Once the shift is closed, either manually through closing the shift-report or by automatic closing, all edits are prohibited. A shift starts in the morning at 7.00 and ends at the morning next day at 7.00 (24 hours). If an invoice was created during

yesterday's shift, it cannot be edited in today's shift. flysoftPOS enforces this so that the edit option will not be misused in any manner.

Reopen Invoice

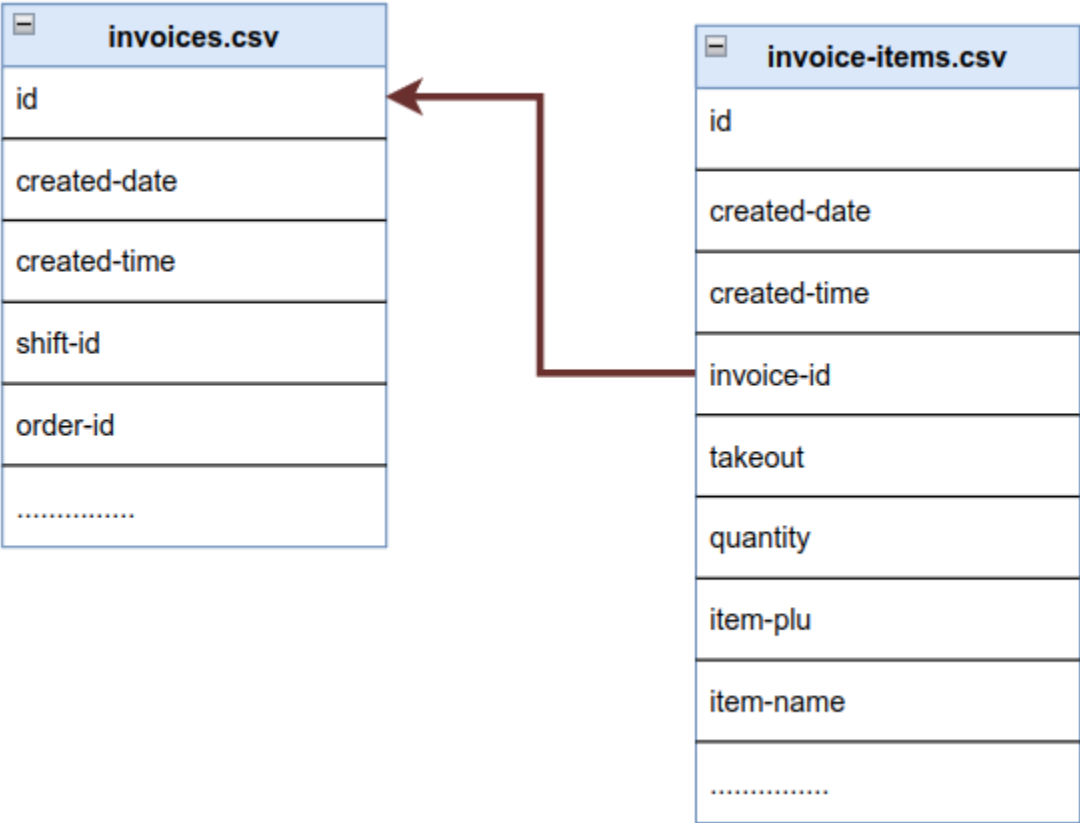The reopening of invoices results in cancellation of the original invoice by creating a new invoice with all fields negated, along with the creation of another invoice that contains the edits. This way, the original invoice stays untouched with its negative invoice to nullify its revenue, whiles a 3rd invoice documents the change.

For example, the Invoice #1010 with a total of 50.00 EUR was paid with cash. During its reopening, a new Invoice#1011 will be created with a total of -50.00 EUR along with a negated cash payment. Both invoice totals summed up lead to zero revenue. The negative invoice has all of its monetary values negated ("total", "subtotal"). One finds all invoices in the "invoices.csv" file.

In addition, the system writes a new event into the Eventlog with the event-type "INVOICE_REOPENED". This can be found in the eventlogs.csv file in the GoBD export.

Once all the necessary changes have been made, the user can close the invoice again, and it generates a new invoice #1012.

The link between the original invoice, the negative invoice and the new invoice are found in the invoice-id. For example, if the original invoice ID is "e7016673a6", and its invoice number is RE-1010, then the negative invoice ID will be "e7016673a6-*NR(RE-1010)*" and the final invoice ID will be "e7016673a6-*R(RE-1010)*".

Edit Payment

Edit payment is similar to reopening, but it only allows the change in payment total, tip and payment-type. During its process, a negative invoice is created to nullify the original invoice, while a new invoice is created with the updated payment data.

In addition, the system writes a new event into the Eventlog with the event-type "INVOICE_PAYMENT_UPDATED". This can be found in the eventlogs.csv file in the GoBD export.

The link between original invoice, negative invoice and the payment updated invoice can be found from the invoice-id. For example, if the original invoice ID is "6891a935", and its invoice number is 1010, then the negative invoice ID will be "6891a935-*NP(RE-1010)*" and the payment updated invoice ID will be "e7016673a6-*P(RE-1010)*".

Void/Cancel Invoice

Unlike the reopening of an invoice, the voiding of an invoice generates only a negative invoice. When an invoice is voided, a negated invoice is created with negative values for all the fields of the original invoice. For example, Invoice#1010 with a total of 50.00 EUR was paid in cash. When the Invoice#1010 is voided, a new invoice, Invoice#1011 will be created with a total of -50.00 EUR and a negated cash payment.

In addition, the system writes a new event into the Eventlog with the event-type "INVOICE_CANCELLED". This can be found in the eventlogs.csv file in the GoBD export.

The link between original invoice and negative invoice can be found from the invoice-id. For example, if the original invoice ID is "c2abf94", and its invoice number is 1010, then the negative invoice ID will be "c2abf94-*NC(RE-1010)*".

End-of-Day Report (Z-Report)

The system uses a fixed 07.00 - 07.00 shift that spans 24 hours. An active shift can be closed either manually (within the 24 hours) or automatically (after 24 hours) to prepare the Z-report. The reports can be accessed from the application's manager dashboard. Authorized managers can log in to the manager dashboard through the desktop server or mobile client.
All business transactions are linked to a particular shift. Edit operations on invoices are allowed only within an active shift. For example, if an invoice was created on yesterday's shift, it cannot be edited (reopen, payment update, void, etc.) in today's shift or in any future shift. Once a shift is closed and settled, it is fixed forever, and it cannot be altered in any manner. This ensures that the old data is kept with integrity and cannot be tampered with.

Export financial data in GoBD format

flysoftPOS provides an easy-to-use interface to generate and export the POS system data in a tax office-compliant format. Existing database fields are converted into a human-readable format. During this transfer, all the available data fields are transferred directly without modification into the required CSV format.

The resulting CSV file can be opened using any spreadsheet program like LibreOffice Writer, MS Excel etc. Each GoBD export contains an index file, which provides metadata about the files included in the export.

During export, a date-range can be chosen so that only data within the chosen time period are exported.

The exported data is ordered chronologically in the ascending order. This ensures easier readability for analyzing the business transactions in the order they actually happened.

How to access GoBD export

The GoBD export is available to users with elevated rights (Managers) in the manager dashboard, "F10 Data" tab. Once the button is pressed, a dialog will request you to choose the date range for data filtering. The export will only contain data within the given date range.
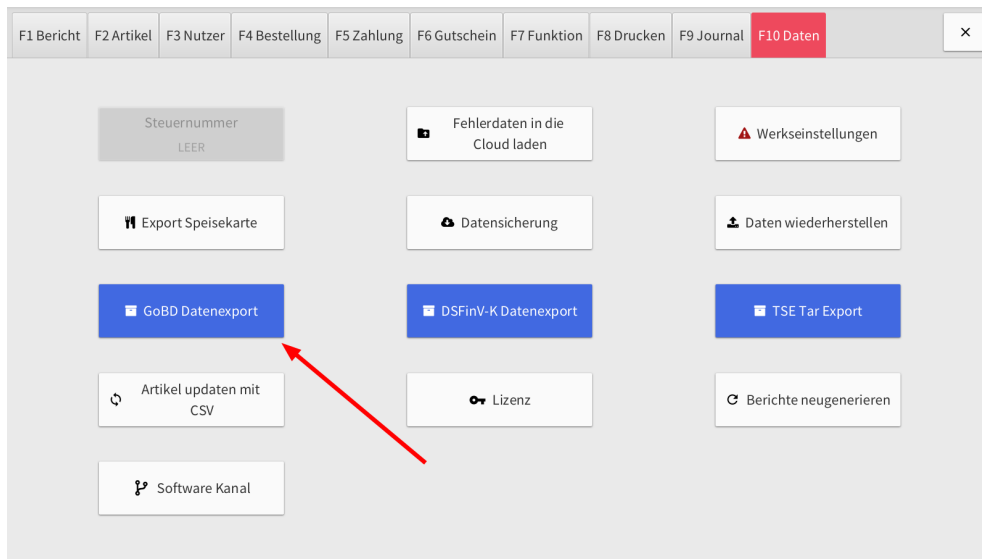

Fig. 4: The GoBD export tool
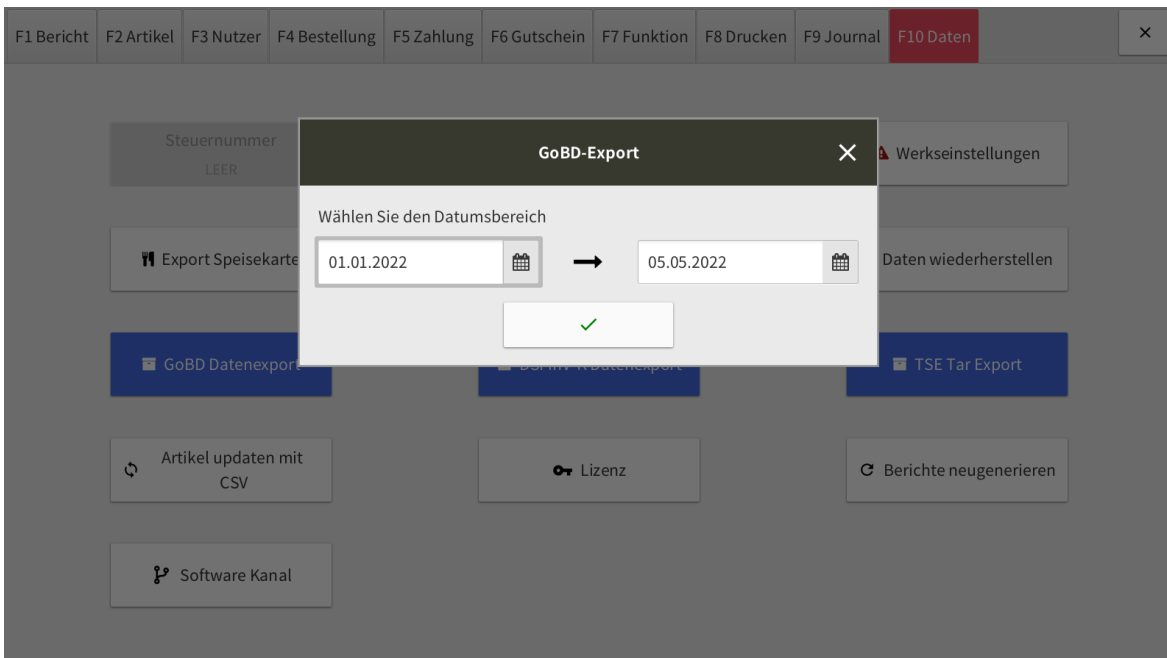
Fig. 5: GoBD date-range selection dialog

Structure of exported GoBD data

Files in the GoBD export	Description
event-logs.csv	Journal of all events happened in the system chronologically organized
event-logs-masterdata.csv	Journal of all master data create, update, and delete events happened in the system
orders	Details of orders
order-items.csv	Details of individual items from order
invoices.csv	Details of invoices
invoice-items.csv	Details of individual items from invoice
payments.csv	Details of payments for invoice and voucher
taxes.csv	Tax details for each invoice
vouchers.csv	Details of all voucher sales and cancellations
voucher-redemptions.csv	Details of voucher redemptions
shift-reports.csv	Z-reports summary. Report contains summary of all sales happened on a shift
cash-operations.csv	Cash operations (withdrawal and deposits)
version-history.csv	History of application OTA updates
gdpdu-dd-mm-yyy.dtd	XML definition for index.xml
index.xml	Details of all the files in the export

The data contained in each file is explained in-detail in the following tables.

event-logs.csv

Field	Description
id	Unique ID of the event
created-date	Event date in YYYY-MM-DD format
created-time	Event time in HH:MM:SS format
user-id	ID of user who caused the event
user-name	Name of user who caused the event
device-id	ID of the device at which the event happened
event-type	Type of the event
event-title	Title of the event
event	Detailed description of the event

event-logs-masterdata.csv

Field	Description
id	Unique ID of the event
created-date	Event date in YYYY-MM-DD format
created-time	Event time in HH:MM:SS format
user-id	ID of user who caused the event

user-name	Name of user who caused the event
device-id	ID of the device at which the event happened
event-type	Type of the event
event-title	Title of the event
event	Detailed description of the event

orders.csv

Field	Description
id	Unique ID of the order. This is also called "order-id"
created-date	Created date in YYYY-MM-DD format
created-time	Created time in HH:MM:SS format
shift-id	ID of the active shift
user-id	ID of user who created the order
user-name	Name of user who created the order
table-id	ID of the table to which the order is assigned to
customer-name	Name of the customer
order-type	Type of the order. 3 possible values 1. Im Haus 2. Mitnahme

	3. Lieferung
device-id	ID of the device from which the order was created
settled	Whether order is settled or not (true/false)

order-items.csv

Field	Description
id	Unique ID of the order item
created-date	Created date in YYYY-MM-DD format
created-time	Created time in HH:MM:SS format
order-id	ID of the parent order. This field is used for associating the order-item to the parent order.
quantity	Quantity of the product ordered. When an item is cancelled, quantity will be negative.
item-plu	PLU of the item
item-name	Name of the item
item-price	Price of the item
expense-item	Whether the item is an expense item
subcategory-id	ID of the SubCategory to which the item belongs to
subcategory-name	Name of the SubCategory to which the item

	belongs to
user-id	ID of user who created the order
user-name	Name of user who created the order
memos	Comma separated list of memos requested by the customer
device-id	ID of the device from which the order was created
sent	Whether item is printed
creation-reason-description	Remarks on item creation. This field describes the specialty of the item. For example, if the item was created by transferring it from another order, it will be specified.
cancelled	Whether the item is cancelled

invoices.csv

Field	Description
id	Unique ID of the invoice
created-date	Created date in YYYY-MM-DD format
created-time	Created time in HH:MM:SS format
shift-id	ID of the active shift
order-id	ID of the linked order
invoice-number	Numeric auto-incremented invoice number
order-type	Type of the order. 3 possible values 1. Im Haus 2. Mitnahme 3. Lieferung
user-id	ID of user who created the invoice
user-name	Name of user who created the invoice
device-id	ID of the device from which the invoice was created
table-id	ID of the table to which the invoice is assigned to
discount-id	ID of the discount applied to the invoice. ● When custom discount is applied, the value will be "CUSTOM". ● When a predefined discount is applied, the value will be a UUID that uniquely identify the discount

discount-selection	Type of the applied discount. 2 possible values
	1. TOTAL_DISCOUNT
	2. ITEM_DISCOUNT
subtotal	Subtotal amount
expenses	Expense amount
discounts	Discount amount
total	Invoice total amount
taxes	Comma separated list of tax-ids. For each applicable tax rate for the invoice, a tax entry will be created. These values can be used to link the tax entries from "taxes.csv" file.
net-total	Net total amount
number-guests	No.of guests
order-agent	Name of order agent
customer-name	Name of the customer
state	State of the invoice. 7 states are possible.
	1. NORMAL
	2. CANCELLED,
	3. REOPENED,
	4. PAYMENT_UPDATED,
	5. NEGATED_BY_CANCEL,
	6. NEGATED_BY_REOPEN,
	7. NEGATED_BY_PAYMENT_UPDATE

charge-category	Charge category. 3 categories possible. 1. <null> (No categories specified) 2. Restaurant 3. Hotel

invoice-items.csv

Field	Description
id	Unique ID of the invoice item
created-date	Created date in YYYY-MM-DD format
created-time	Created time in HH:MM:SS format
invoice-id	ID of the linked invoice. This ID can be used to link the invoice items to its parent invoice.
takeout	Whether the item is for takeout
quantity	Quantity of the product ordered. When an item is cancelled, quantity will be negative.
item-plu	PLU of the item
item-name	Name of the item
item-price	Price of the item
expense-item	Whether the item is an expense item
tax-type	ID of the applied tax-type
tax-name	Name of the applied tax-type. The name is usually

	tax-percentage. For example, "19%", "7%", etc.
subtotal	Subtotal amount
discount-id	ID of the discount applied to the invoice. ● When custom discount is applied, the value will be "CUSTOM". ● When a predefined discount is applied, the value will be a UUID that uniquely identify the discount
discount-percentage	Percentage of discount applied to the item
discount-amount	Discount amount
total	Total amount

payments.csv

Field	Description
id	Unique ID of the payment
created-date	Created date in YYYY-MM-DD format
created-time	Created time in HH:MM:SS format
shift-id	ID of the active shift
user-id	ID of user who created the payment
user-name	Name of user who created the payment
parent-id	ID of the parent Invoice/Voucher that used this

	payment. This field can be used to resolve an invoice or voucher that uses this payment.
device-id	ID of the device from which the invoice was created
total	Total amount
given	Given amount
change	Change amount (change = given - total)
tip	Tip amount
payment-type	ID of the payment type
state	State of the payment. 3 states are possible. 1. NORMAL 2. CANCELLED 3. NEGATED

taxes.csv

Field	Description
id	Unique ID of the tax entry. This ID is included in the "invoices.csv" and can be connected to associate with an invoice.
tax-name	Name of tax (tax percentage)
gross	Gross amount

net	Net amount
tax	Tax amount

vouchers.csv

Field	Description
id	Unique ID of the voucher
created-date	Created date in YYYY-MM-DD format
created-time	Created time in HH:MM:SS format
ref-number	Unique automatically incremented reference number
shift-id	ID of the active shift
user-id	ID of user who created the payment
user-name	Name of user who created the payment
payment	Type of payment used
initial-amount	Amount credited to the voucher when it was created
remaining-amount	Remaining amount in the voucher
expiration-date	Expiration date of the voucher in YYYY-MM-DD format
customer-name	Name of customer voucher sold to

charge-category	Charge category
state	Current state of the voucher. 3 states are possible. 1. NORMAL 2. CANCELLED 3. NEGATED

voucher-redemptions.csv

Field	Description
id	Unique ID of the redemption process
created-date	Created date in YYYY-MM-DD format
created-time	Created time in HH:MM:SS format
voucher-number	Unique voucher number that used for the redemption. This field can be used to link the redemption to the voucher.
shift-id	ID of the active shift
user-id	ID of user who redeemed the voucher
user-name	Name of user who redeemed the voucher
redeemed-amount	Redeemed amount

shift-reports.csv

Field	Description
ref-number	Auto-incremented unique numeric reference number
reference-date	Reference date of the report in YYYY-MM-DD format
created-date	Created date in YYYY-MM-DD format
created-time	Created time in HH:MM:SS format
cash-withdrawals	Comma separated list of cash-withdrawal operation ref-numbers. This number can be used to resolve entries from "cash-operations.csv".
cash-deposits	Comma separated list of cash-deposit operation ref-numbers. This number can be used to resolve entries from "cash-operations.csv".
number-guests	Total number of guests served in the shift
invoice-total	Aggregated sum of all invoice totals
tip-total	Aggregated sum of all tips received
user-revenue-total	Total user revenue amount
taxes	Total tax amount
payments	Total payment amount

cancellations	Total cancellation amount
discounts	Total discount amount
orderagent-total	Total order agent revenue amount
expense-total	Total expense
cancelled-item-total	Total cancelled item amount
cash-opening	Total cash available at starting of the shift
cash-withdrawal-total	Total amount withdrawn
cash-deposit-total	Total amount deposited
cash-operation-total	Total cash operations
cash-payments	Total cash payments received
cash-closing	Cash balance at end of the shift
voucher-opening	Total voucher amount available at starting of the shift
voucher-sold-total	Total voucher sold amount
voucher-cancelled-total	Total voucher cancelled amount
voucher-redeemed-total	Total voucher redeemed amount
voucher-closing	Voucher balance at ending of the shift

cash-operations.csv

Field	Description
ref-number	Auto-incremented unique numeric reference number
created-date	Created date in YYYY-MM-DD format
created-time	Created time in HH:MM:SS format
purpose	Purpose added by user for the operation
amount	Operation amount
type	Type of operation. 2 values are possible 1. WITHDRAWAL 2. DEPOSIT

version-history.csv

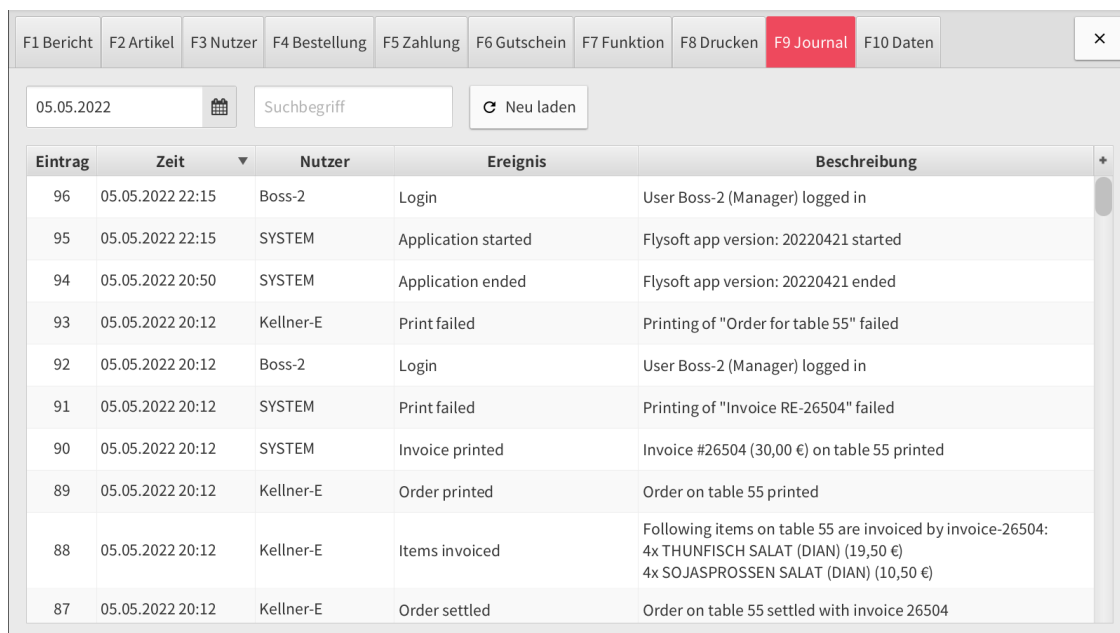| Field	Description
id	Unique alphanumeric ID
created-date	Created date in YYYY-MM-DD format
created-time	Created time in HH:MM:SS format
version	Version number after update

Event-log System

flysoftPOS provides a comprehensive journal system. It tracks all the major events, including but not limited to the following:

- Business transactions
- Creation and modification of master data (e.g. items, discounts, buffets, etc.)
- Interactions (e.g. user login, data exports, TSE hardware events, mobile client events, etc.)

The journal is kept separate from the master data. Journal entries once created cannot be altered. This ensures that all the events happened in the system are written into the write-only journal and kept safe.

Each journal entry includes the timestamp, title and description of the event along with the user who caused the event. The system is capable of keeping millions of journal entries effortlessly. It is also possible to see the journal entries filtered by date within the manager dashboard.

Fig. 6: GUI for reading journal entries in the manager dashboard

Download Event-logs

You can download the journal in CSV format through GoBD export. During the export, you can specify the date range you are interested and the exported file will contain all journal entries in that time period.

There are 2 files that contains the journal entries within the exported zip archive. Extract the GoBD exported zip file, and you will find the journal entries in the following files:
1. eventlogs.csv: Contains all journal entries
2. eventlogs-masterdata.csv: Contains only journal entries that document changes made to master data

Versioning System

flysoftPOS internally keeps track of every change related to any business transactions through database versioning. The use of state-of-the-art systems ensures all relevant business data are properly versioned and kept safe.

The versioning system can be used for microscopic level analysis of the records. Along with the journal entries and TSE logs, the versioning system helps to retrace and explain what exactly happened at any event.

The versioning system is kept inside a secure MongoDB database in a non-human-readable format and hence cannot be tampered with. It is not directly downloadable. If the tax authorities require versioning data of any particular event or set of events, flysoft support team can extract the versioning data in JSON format from the POS system and provide it to the authorities.

Compliance with KassenSichV

flysoftPOS supports the integration with TSE USB and TSE SDCard modules manufactured by Swissbit. The user needs to buy a TSE hardware module and connect it to their Desktop Server. Once it is connected, the POS system automatically displays the first time activation wizard. The activation process has been simplified with an easy-to-use GUI and the user need to confirm the TSE activation themselves. Once the activation is complete, the system adheres fully to the requirements of KassenSichV.

Contact information of the TSE hardware provider

The TSE hardware (USB, SDCard) is provided by Swissbit

> Swissbit Germany AG
> Bitterfelder Straße 22
> 12681 Berlin
> Germany
>
> Tel. +49 30 936 954 0
> sales@swissbit.com
> https://www.swissbit.com/en/solutions/fiscal/

Certification IDs of TSE

The Swissbit TSE has been certified by the BSI since 20.12.2019 and the certificate number is BSI-K-TR-0362-2019. The certificate is valid until 19.12.2027 at the time of writing of this documentation.

As of 06.05.2022, all certificates can be downloaded directly from the Swissbit website from here: https://www.swissbit.com/en/solutions/fiscal/

Export in DSFinV-K format

The elevated user (Manager) can initiate the export through the manager dashboard after logging in with manager credentials.

Before exporting the DSFinV-K date, the elevated user (Manager) must settle all the active shifts. Once all Z-reports are settled, the export can be created with just a few steps.
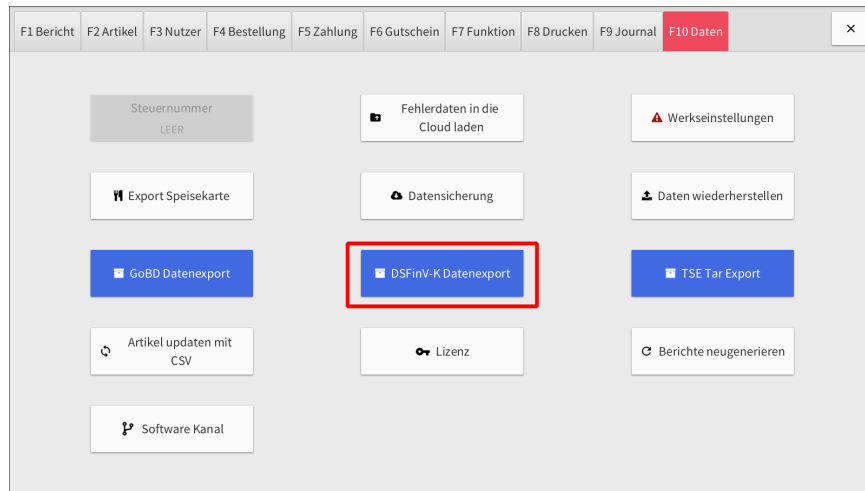

Fig. 7: DSFinV-K export inside manager dashboard "F10 Data" tab

The user can also specify a date range for the export data. The export will include transactions only within the selected time period.
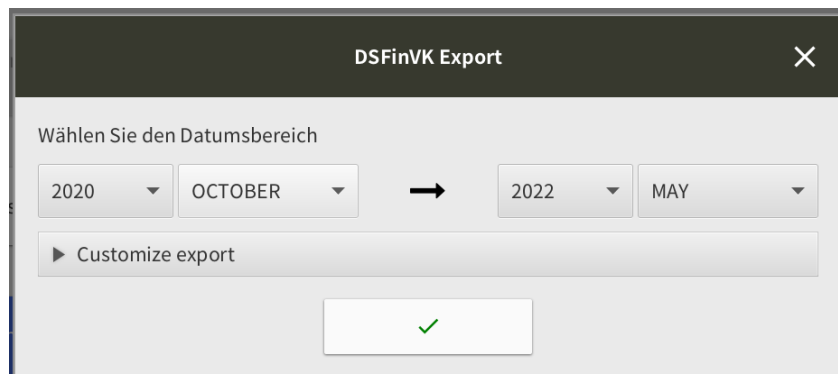

Fig. 8: DSFinV-K export by time period

Covid-special VAT rates

The special VAT rates 16% and 5% were introduced due to coronavirus pandemic. They are given with special UST_SCHLUESSEL 1001 and 1002 respectively and are used in multiple files in the export.

UST_SATZ	UST_SCHLUESSEL	UST_BESCHR
16%	1001	Allgemeiner Steuersatz (Coronakrise)
5%	1002	Ermäßigter Steuersatz (Coronakrise)

The special VAT data are used on multiple files in the DSFinV-K export. The files that contain these special UST_SCHLUESSEL are listed below.

- Stamm_USt (vat.csv)
- Bonkopf_USt (transactions_vat.csv)
- Bonpos_Preisfindung (itemamounts.csv)
- Bonpos_Ust (lines_vat.csv)
- Z_GV_Typ (businesscases.csv)

Managing discounts

flysoftPOS supports Invoice-level and item-level discounts. Invoice-level discounts are the discounts applied to the whole invoice and is applicable for every item. Item-level discounts are only applicable for only some individual items in the invoice.

When an invoice has invoice-level discount applied to it, the discount will be added as a negative row into the Bonpos (lines.csv) table. The value of the "STK_BR" will be negative and the column GV_TYP will be set as "Rabatt" to denote the discounting.

When an invoice has item-level discount applied to it, the discounted price will be shown in the Bonpos (lines.csv) table for the item. Then a detailed price breakdown will be added to the Bonpos_Preisfindung (itemamounts.csv). For each discounted item, two rows will be created in Bonpos_Preisfindung. The first row will denote the item with normal-price with TYP column denoting "base_amount", and the second row will denote the discount applied to it with the TYP column denoting "discount".

Managing cash summary

Z_Waehrungen (cash_per_currency.csv) lists the cash availability at the closing time of a shift. The column ZAHLART_BETRAG_WAEH will have the accumulated cash available at the end of every shift. The cash balance at the beginning of a shift is the same as the cash balance at the end of the last shift. So, it should be noted that the value doesn't represent cash balance from just a single shift, but an accumulation of cash balances from all previous shifts.

Serial number of TSE module

The 64-digit serial number of the TSE, which consists of numbers and letters, is printed on every invoice. It is also encoded into the QR Code and printed onto the invoice.

Reporting obligation for cash registers

The reporting obligation for cash registers has been postponed by the legislator until further notice. Currently, there is no possibility to report the operation of the flysoftPOS electronically (As of 06.05.2022).

Signing of the Invoices via QR code

By default, every invoice includes both a text-based signature summary of the TSE transaction and the QR-Code. Both of them contain all relevant information about the invoice. The QR-Code can be read and validated by a QR-Code reader.

According to the [Ergänzung von § 6 Satz 2 KassenSichV am 25.06.2021 durch den Bundesrat (S. 8)](), it is sufficient to include only the QR-Code in the receipt. However, flysoft includes both in the receipt. The QR-Code however can be removed from the receipt in case the user wishes so.

Failure of TSE module

A temporary failure of the TSE, for example due to a network connection problem or a technical error in the execution of the TSE itself, will be reported on the invoice printout as follows:

!!! TSE FEHLER !!!

All transactions that happened while the TSE was not working will not be added to the TSE once it is working again from version 2470 onwards (released on 21 Apr 2021). Up to version 2470, while TSE was not working, all business transactions were saved to a

file-based queue and as soon as the TSE works again, all transactions from the queue were written back to the TSE. In versions greater than 2470, this queue was removed, with the program waiting a maximum of 15 minutes before dropping any transaction. For example, if the TSE module gets accidentally disconnected and some orders were created; within 10 minutes, the cashier reconnected the invoice. In this case, the transactions happened within the 10 minutes are written to the TSE automatically. However, if the failure went unnoticed for more than 15 minutes, then these transactions will not be written to the TSE. The invoices created while the TSE is out-of-order contains the error message describing the TSE to be not working.

The DSFinV-K export will still contain orders and invoices without the TSE working if at least one business transaction was created with TSE enabled in that shift. Orders and invoices without a TSE entry can be found inside the file transactions_tse.csv by looking at the BON_ID sequence. For example, if after RE-10100, RE-10102 is listed, then the RE-10101 was missed and not written to the TSE module due to an error condition. The same is applicable for order (Bestellung), voucher, etc. transactions as well. RE- prefix is used for invoices. More prefixes used for sequential transaction numbering can be found in the Appendix A.

If the TSE was not working during the whole shift duration, then the DSFinV-K export will not contain orders and invoices created in that shift. These excluded shifts can be identified from "cashpointclosing.csv" as the shift numbers will be missing in the exported file.

If any defect is found in the TSE, it will be reported directly in the flysoftPOS dashboard so that the user will not miss the case. Additionally, the user will be reminded of the failed TSE at every startup of the application.

If the TSE module fails to work properly, then it needs to be replaced. The flysoft support team can assist with the purchase and activation of a new TSE module. The user can

also buy a new Swissbit TSE module and connect it to the system and use the "activation wizard" to easily activate the new module.

Operation of flysoftPOS with activated TSE module

Once the TSE hardware is connected and activated, all business transactions are stored securely on the TSE hardware as well as in the POS System database. All transactions are signed by the TSE, and its return signature ensures data protection and data integrity. These signatures are printed on each invoice.

Changes to Store Data

The store master data is linked to the user's license and is managed by flysoft. The store master data cannot be changed by the user themselves. The master data includes:
- Name and address of the establishment
- Name, telephone number and e-mail address of the contact person provided by the user
- Tax number

If a user need to update their master data, then it has to be updated on the flysoft license server by the support team.

Implementation of the invoice receipt obligation

it is possible for flysoftPOS users to finish the payment process and settle an order without printing an invoice (by choosing "no print" option during payment). Users are advised that they must be able to show an exemption from the invoice requirement for this. It is the sole responsibility of the user whether they disable invoice printing or not.

Malfunctions in the operation of TSE and DSFinV-K export

This section lists the bugs found in the implementation of TSE integration and DSFinV-K export. As soon as the bugs were identified, they were fixed and a new version was

released with the fix. The following table can be used to track the malfunctions and when the issue was resolved on what version.

Issue	Affected version	Fixed version	Issue behavior
Bon_Referenzen (references.csv) file's REF_DATUM column stores invoice timestamp (DEV-4557).	All versions up to v1.2.9	v1.3.0	Instead of using cash register closing timestamp, invoice timestamp was used in the REF_DATUM column.
Bonkopf_AbrKreis (allocation_groups.csv) does not track transfer of order from one table to another (DEV-4556).	All versions up to v1.2.9	v1.3.0	Table transfers were not being tracked, and only one table-ID per invoice was added in the allocation_groups.csv file.

Setting up the cash register

The basic configurations

When the flysoftPOS is first installed, default settings are provided for the user's easy of use. Following are some default settings:

- Nine pre-configured users
  - Root | PIN: 888 | Language: English
  - Boss-1 | PIN: 888 | Language: Chinese
  - Boss-2 | PIN: 888 | Language: German
  - Kellner-A | No Pin | Language: Chinese
  - Kellner-B | No Pin | Language: Chinese
  - Kellner-C | No Pin | Language: German
  - Kellner-D | No Pin | Language: German
  - Kellner-E | No Pin | Language: English
  - Kellner-F | No Pin | Language: English
- Three user roles
  - Waiter: Can create and settle orders and do basic ordering functionalities.
  - Manager: Can access manager dashboard and update master data like menu, payment types, etc.
  - Root: Can do special actions like factory reset, restore from backup, etc.
- Five standard cancellation reasons
  - Falscheingabe
  - Falsch verstanden
  - Kundenänderung
  - Beschwerde
  - Training
- Three Payment methods
  - Bargeld

- ○ Karte
- ○ Gutschein
- Five order agents
  - ○ Lieferheld
  - ○ foodora
  - ○ pizza.de
  - ○ Lieferando
  - ○ deliveroo
- The sample menu and memo preset in the app will be provided on request as CSV files and can be imported

Setup of the cash register

The user can set up the flysoftPOS completely on his own after the flysoft support team has issued a demo or valid license. Once the app is installed and the license key is entered, the sample menu and whole sample data as requested by the user will be automatically downloaded and installed. Flysoft support team is also eager to help in case the user needs assistance with the setup.

Once the app is installed and the setup is complete, the user can check the installation made for correctness and completeness and has the option to correct them if necessary. For example, if he needs to add more menu items or needs to change the theme of the software, it is all self doable. Once the user is satisfied with the setup, he can start actual ordering. The user is solely responsible for the correctness and completeness of the settings made in the cash registers.

Each change to the settings is recorded and logged in the event-log/journal. Thus, the journal serves as an event log and is thus part of the organizational documents of the operation. More details of the journaling system can be found in the section "Journalling system". The journal can also be exported through GoBD export, and its structure is described in the section eventlogs.csv.

Appendix A

List of prefixes used for various transactions for sequential ID allocation.

Transaction type	Prefix
Invoice	RE-
Voucher	GU-
Shift report	Z-
Order	BE-
Cash operation	CO-
Item discard	AB-

Release history of flysoftPOS

The following section lists the release history of flysoftPOS Desktop. The updates are provided through the app's built-in auto updater tool.

Until March 2022, build-number based versioning was followed. From March 2022 onwards, we have switched to customer friendly version naming scheme in the x.y.z format. The x is the major version, y is the minor version and z is the patch version.

- Only releases made from 2021 are included in the following table.
- Version 1.3.0 is compatible with DSFinV-K 2.3 specifications.

Version	Release Date
1983	Jan 8, 2021
2150	Jan 20, 2021
2167	Feb 12, 2021
2198	Mar 5, 2021
2215	Mar 12, 2021
2325	Mar 23, 2021
2335	Mar 30, 2021
2385	Apr 1, 2021
2430	Apr 8, 2021
2438	Apr 19, 2021
2470	Apr 21, 2021
2474	Apr 24, 2021
2537	May 18, 2021
2555	May 20, 2021

2570	May 26, 2021
2572	May 27, 2021
2582	Jun 14, 2021
2635	Jun 16, 2021
2641	Jun 21, 2021
2667	Jun 23, 2021
2695	Jun 24, 2021
2720	Jul 7, 2021
2730	Jul 12, 2021
2732	Jul 15, 2021
2740	Aug 30, 2021
2741	Sep 1, 2021
2758	Dec 27, 2021
2766	Feb 28, 2022
1.2.0	Mar 8, 2022
1.2.1	Mar 14, 2022
1.2.2	Mar 18, 2022
1.2.3	Mar 29, 2022
1.2.4	May 10, 2022
1.2.5	Jun 2, 2022
1.2.6	Jun 8, 2022
1.2.8	Jun 10, 2022
1.2.9	Jun 15, 2022
1.3.0	Jun 28, 2022