EPSON

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TrueOrder™ KDS

KDS Parsers

About this Guide

This guide contains instructions for supporting POS (Point of Sale) systems in the TrueOrder KDS. The TrueOrder KDS is very versatile – able to be customized in many ways to meet the specific needs of the individual display stations and the entire kitchen. This guide describes requirements and steps to support a parser for a new POS system – including data requirement, archived data downloading and parser delivery.

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1. Introduction

The TrueOrder KDS (Kitchen Display System) can accept data from the POS (Point of Sale) and display it in two different ways:

1. Using a Parser Module.
2. Using the Epson KDS API (Application Programming Interface).

This guide focuses on the first method - Using a Parser module. For API access to the KDS which includes feedback/events from the KDS please consult the most recent supplementary specification for the API. Development work is required on the POS or host side to implement the API protocol.

2. Epson KDS Parsers

A TrueOrder KDS device can replace a standard Epson printer for the purpose of displaying the print job instead of or in addition to printing it. The TrueOrder KDS device will respond the same as an Epson printer to the POS. So, there is no modification or development work required on the POS or host side as the KDS is simply parsing the original receipt or chit print job.

There are 3 basic requirements for the print job for the KDS to be able to understand and display it:

1. The POS must be capable of printing to a supported Epson printer. TrueOrder KDS devices advertise themselves as TM-T88 printers in case the POS is particular about what printer it is communicating to.

2. The data content of the print job needs to be ASCII text based. Rasterized or graphical print jobs cannot be interpreted. The print jobs may contain logos that are rasterized and that is OK – as long as the data required to display is text.

3. The print job needs to end in an ESC/POS paper cut command. This tells the KDS that the print job is finished and it can then process and display the data. There are a few different paper cut commands and it does not matter which:

	Command	Hex
1	ESC i	0x1b 0x69
2	ESC m	0x1b 0x6d
3	GS V 0xXX	0x1d 0x56 0x00 -> 0x1d 0x56 0x68

2.1. Currently Supported POS Systems

As each POS system sends their print jobs in different formats, the TrueOrder KDS needs to know which format/POS it is working with. Epson has written many parsing modules for various POS systems that we currently support. Epson currently has parsers for and supports the following POS systems:

- 2TouchPOS
- Aldelo
- Aloha (NCR)
- Arryved
- Bitekiosk
- Breadcrumb
- BrewPOS
- Brink
- Cake
- Casio 6000, 6600
- Catapult
- CBS
- ClusterPOS
- Comtrex 2100, 5000
- DBS4POS
- Digital Dining
- DinerDaddy
- Dinerware
- Dooli'z
- Duet
- Encore (Jonas Club Software)
- Exatouch
- Focus POS
- Fujitsu
- Future POS
- Galaxy
- HealthTouch
- JCM POS
- LavuPOS
- LineSkip
- Linga
- LOC ePOS
- LOC SMS
- MediaMix
- Micros 3700
- Micros E7
- Micros Symphony R1/R2
- Microsale
- Milagro
- National Soft
- NCC Reflection
- NCR Counterpoint
- Nirvana
- OnePOS
- Pecan
- Positouch (StealthTouch M5)
- Restaurant Manager
- Rezku
- Shift4
- Shopkeep
- Silverware
- SoftTouch
- Speedline
- Skywire
- Squirrel
- Talech
- Tavlo
- Tend POS
- TouchBistro
- Uniwell
- Volante
- VisionMax

Please note that print job formats can change even from the same POS. So, while your POS may be listed here, the parser may require an update or customization. Please contact your vendor or Epson representative for guidance.

2.2. Unsupported POS Systems or Parser Customization

For Epson to support a new POS or customize an existing POS parser we require the raw data for the various print jobs that the POS can send. These are the byte-for-byte identical print jobs that the POS sends so it includes all printer command/control codes with the print job data.

TrueOrder KDS devices out of the box will store the raw incoming receipt data while it is powered on. This is the preferred method with instructions following in the next sections.

2.3. The Default Parser

Out of the box the TrueOrder KDS device will function in a single station, parser-less mode of operation. In this unconfigured mode, the KDS accepts ASCII text-based data from the POS and displays it as-is on screen. This is a very basic mode of operation where the KDS allows full order bumps only, and consequently only full tile print-on-bump labels are supported. A special “Default Parser” is used here, which can also be selected from the web-based Configuration Utility for either multi-station setup or to restore this default mode.

In contrast, using a POS Parser module or the KDS API method allows for improved synchronization among KDS stations, including individual item bumping, optimized screen space usage, printing labels for each item/order bump, limiting what parts of the order show up on screen, differentiating between item and modifier font colors etc.

Using default mode in multi-station setup
The Default Parser can be selected when configuring a multi-station KDS. In this mode, each kitchen station shall act as an independent single station. Orders sent to all kitchen stations will also show on the Expeditor and Customer Facing displays, using order received time as the order number in the tile headers.

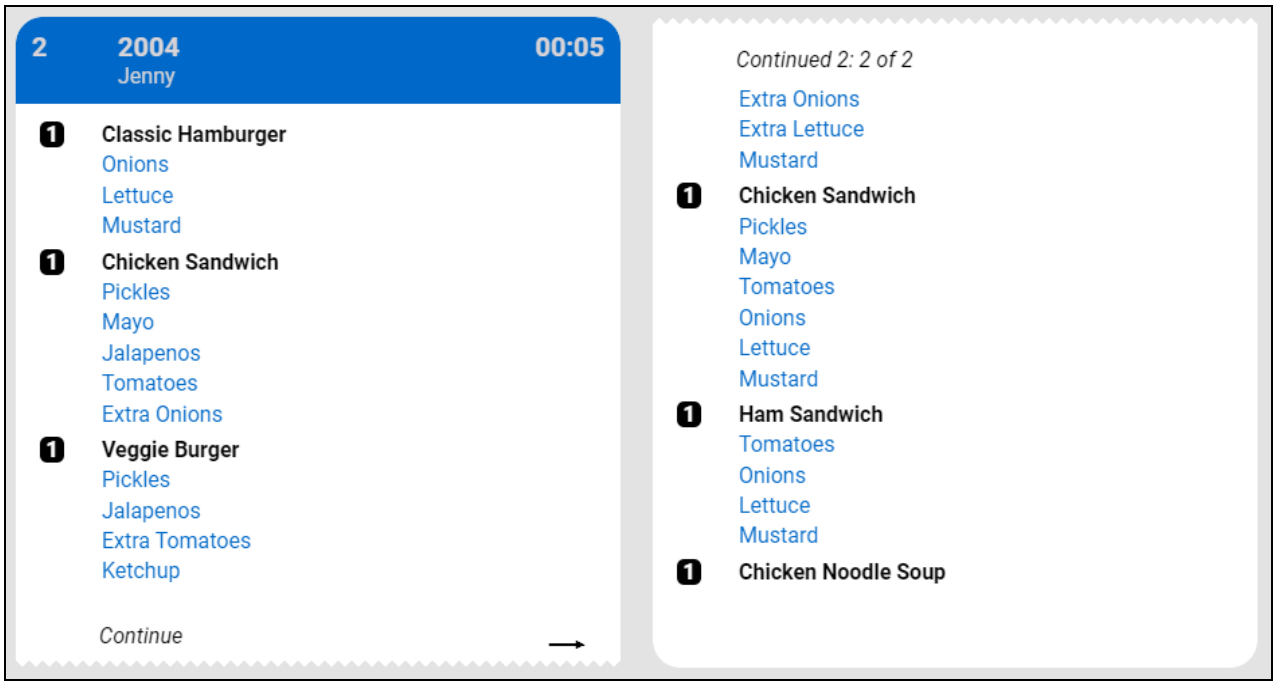
3. Data Requirements

For proper data display and handling Epson requires samples for all the different formats of data that can be sent from the POS. All the print jobs need to be sent to the KDS device and then subsequently downloaded and sent to Epson.

***** Any receipt data sent to the KDS device is stored in RAM until the TrueOrder device is power cycled. All sample chit/receipt data for Epson should be sent to the device and downloaded prior to power cycling the device. How to do this is described later in Section 4.**

3.1. Typical Order Display

A typical order display contains basic elements:



Picture 3.1: Typical order tile

3.1.1. KDS Header

The KDS Display header typically contains the Server Name and Check # for the order. It is not a requirement that these items exist in the print data, and it may be possible to replace these fields with other fields such as Customer Name or Order Type.

3.1.2. KDS Order Contents

Typically contains Item Quantity, Item Name, Modifiers, and any special instructions.

With parser customization other fields can be displayed: Customer name/information, Course information, Seat Designation, Order Type.

Any unique requirements for the KDS Header or Contents Display need to be discussed with Epson. Please contact your vendor or Epson representative for guidance.

3.2. Data required for Parser Generation

We require samples for all different formats of data that may be sent to the KDS. We do not need all the items or menu itself as we only care about overall formatting. For example:

Single Item Order (No modifiers or Special Instructions)
Single Item Order with a modifier
Single Item Order with Special Instructions
Single Item Order with a modifier and special instructions.
Multiple Item Order (No modifiers or special instructions)
Multiple Item Order - Items have a modifier
Multiple Item Order - Items have special instructions.
Multiple Item Order - Items have a modifier and special instructions.
Orders that are to be voided.
Orders with items to be voided.
Orders with items and modifiers to be voided.
Orders that can have course information.
Orders that can have customer information that may or may not need to be displayed.
Orders that have Order Type designations.
Orders that have very long item names, modifier names, special instructions, or any other data that may reach the tile boundary.
Any Chit or Receipt that should be ignored and not displayed.

3.2.1. Void Items/Orders

TrueOrder KDS can handle voiding individual items within an order or multiple items within an order. To correctly process a VOID order the print job must contain:

1. VOID or similar identifier (i.e. DELETE) must be located on the chit.
2. The check # must match an existing order.

3. The item(s) quantity, name, and modifier(s) must be character by character identical to the incoming order. For example, if “2 Hotdog” is sent as an item and one of them is to be VOIDED you must send a VOID chit with “2 Hotdog” and then a new chit with "1 Hotdog”.

3.2.2. Appending to Orders

If an order needs additional items added to it the POS, it simply needs to send those additional items to the KDS in a regular chit/receipt. However, the check # must match the original order so the KDS knows which order to append the items to. If the check # does not match a previous order the order will be treated as a new order.

3.2.3. Receipts and/or Chits

TrueOrder KDS can parse Receipts and/or chits. When parsing receipts, we will typically strip out the price information as it is not needed in the kitchen.

3.2.4. Optional Printing

From the KDS Configurator it is possible to enable incoming chit printing. This will ensure that all incoming print jobs are printed as well as displayed. However, some customers wish to only print certain orders -> TO GO orders for example. In this case incoming chit printing in the Configurator should be disabled and Epson can implement this ability in the parser.

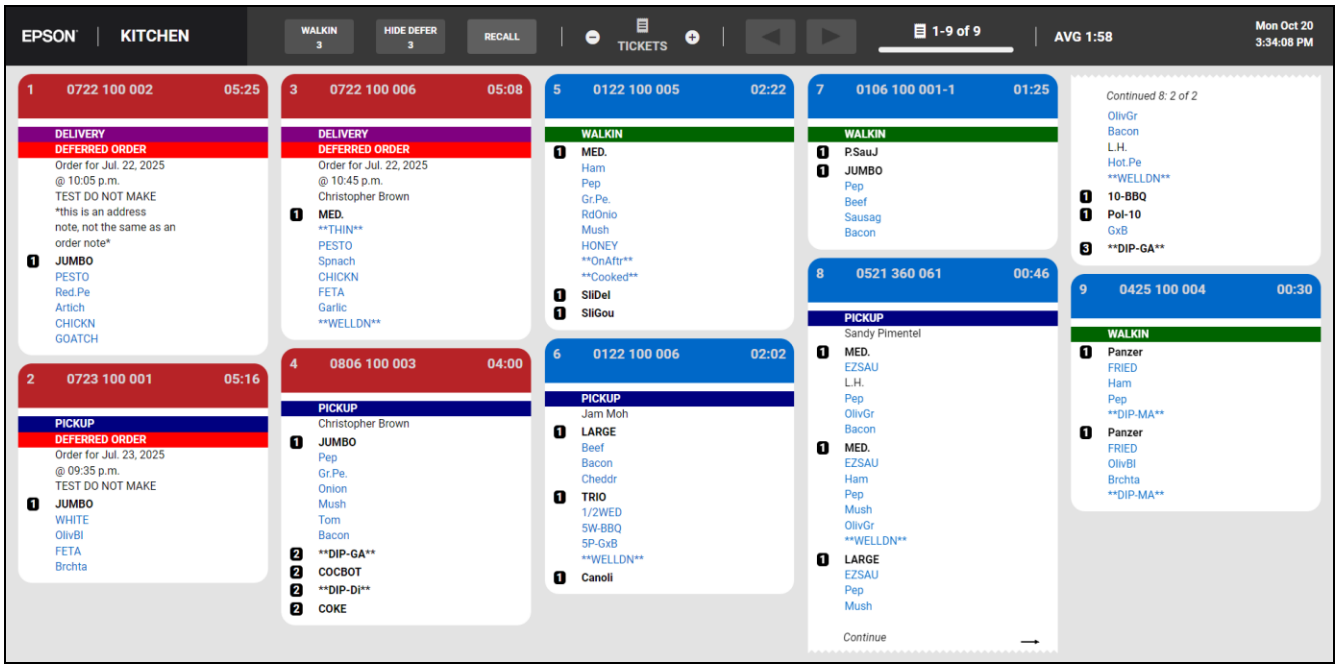
Epson can customize the parser to only print certain orders or order types. We only need to know the specific requirements for what to print.

Any unique requirements for printing certain receipts/chits need to be discussed with Epson.

4. Focus and Hide Buttons

The parser can be customized to allow for focusing on or hiding specific order types. Focusing, enabled via an onscreen button, allows for only a specific type of order to be shown on screen. Hiding, also enabled via an on screen button allows for certain types of orders to be hidden from the main view. This functionality is only available using a touchscreen.

Consider the following screen shot that shows different order types - DEFERRED ORDER, WALKIN, and PICKUP:

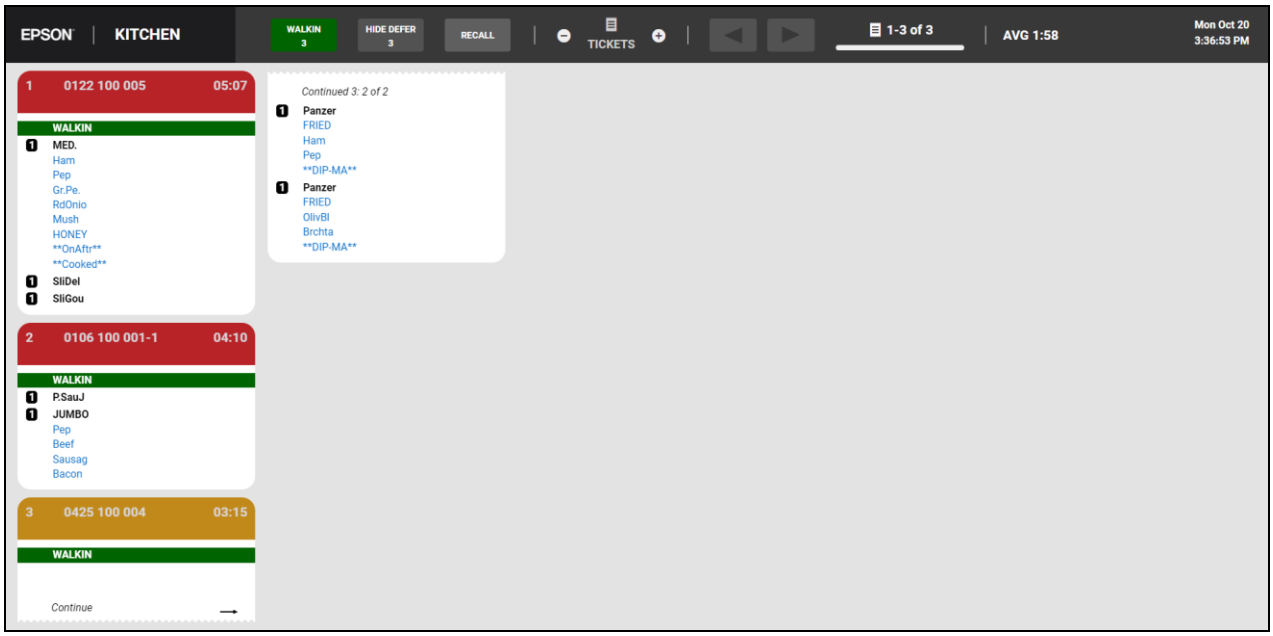


Picture 4.1: KDS tile with Focus and Hide button enabled but not clicked.

The WALKIN button in the header bar is the button to select to focus on those orders. The HIDE DEFER button in the header bar is the button that allows the DEFERRED ORDER types to be hidden from the main view. In the above screenshot neither of these buttons have been activated (pressed) yet. There is a count with each button indicating the quantity of those particular order types there are.

4.1. Focus Button

When WALKIN is pressed the KDS will display only those orders that match the “WALKIN” string:



Picture 4.1.1: Focus button clicked/engaged

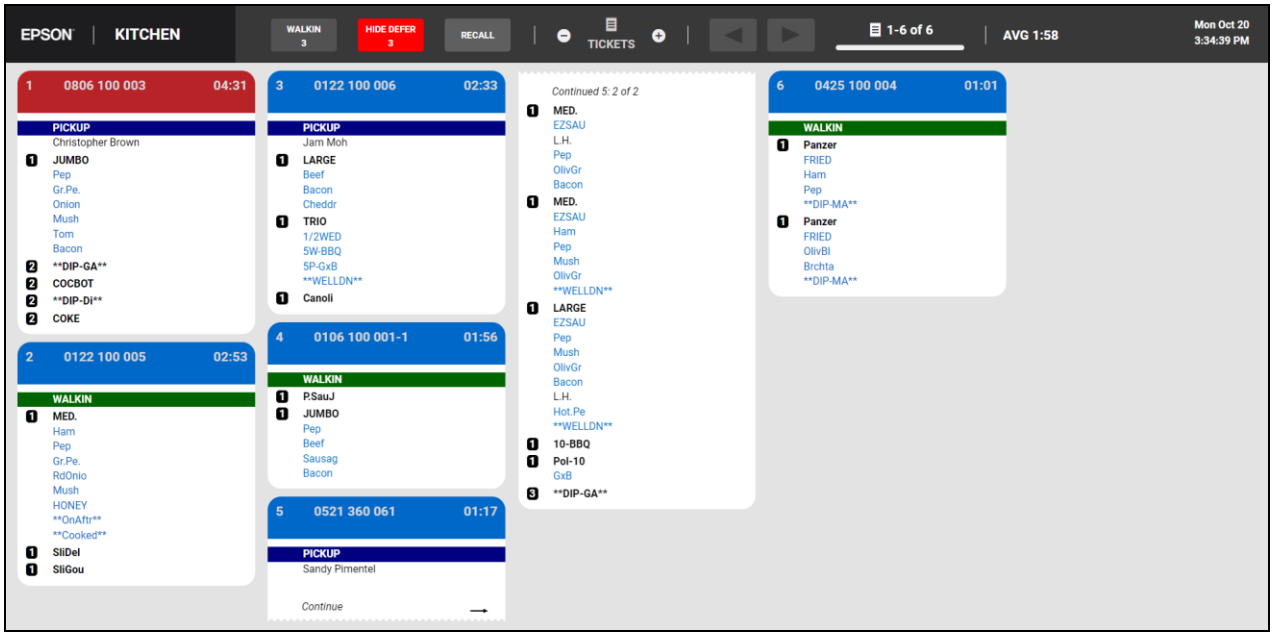
The WALKIN button is now enabled and there is a count indicator for how many such orders of that type there are.

The parser can be configured to search for any order type and the button can be named accordingly. The foreground and background color for the button are configurable and as well the button can also blink once activated.

Please consult with Epson if such functionality is desirable for your parser.

4.2. Hide Button

When HIDE DEFER is pressed the KDS will hide all orders that are of the type DEFERRED ORDER:



Picture 4.2.1: Hide button clicked/engaged

The HIDE DEFER button is now enabled and there is a count indicator for how many such orders of that type there are.

The parser can be configured to search for any order type and the button can be named accordingly. The foreground and background color for the button are configurable and as well the button can also blink once activated.

Please consult with Epson if such functionality is desirable for your parser.

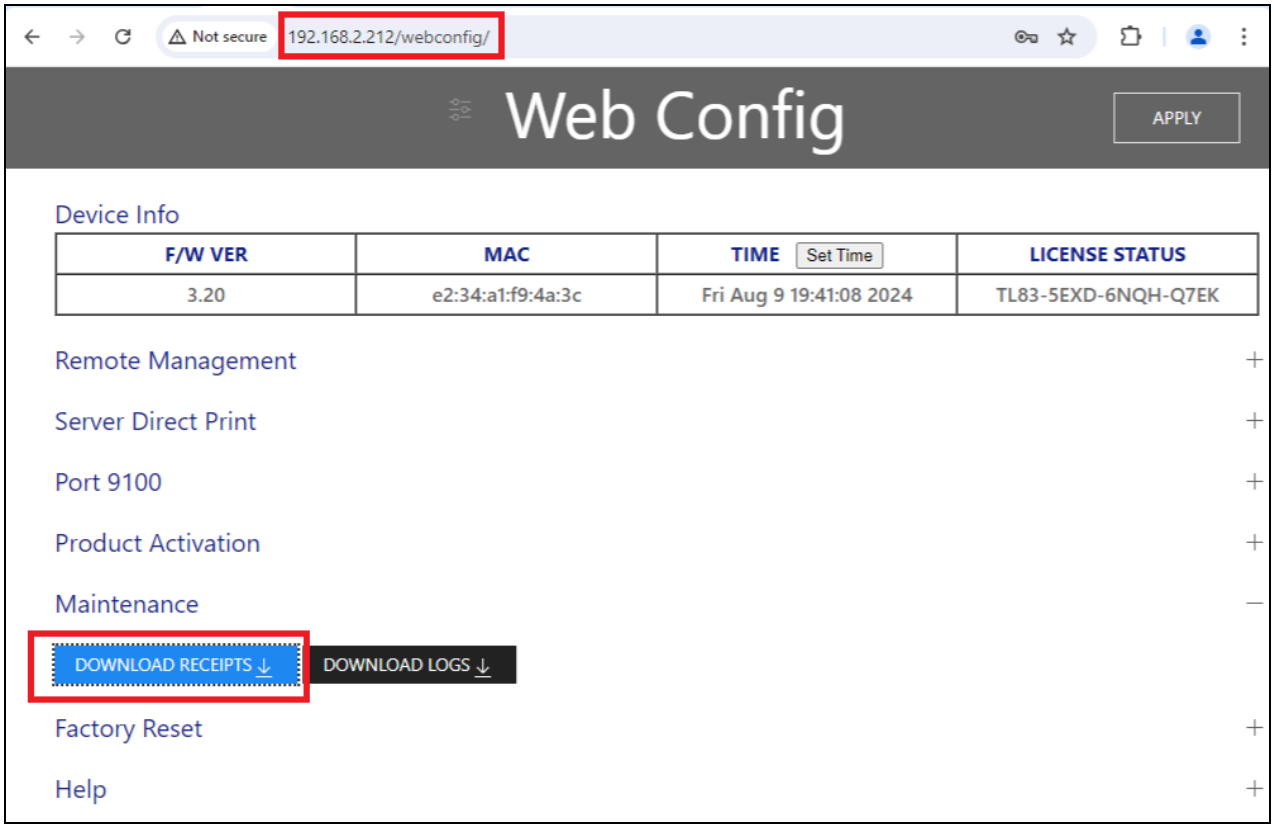
5. Downloading Archived Chit/Receipt Data

The raw print jobs can be downloaded from the printer's web server accessible from any web browser by entering the IP of the TrueOrder KDS device in the browser URL:

http://<IP Address>/webconfig/

Default username: epson
Default password: epson

Then accessing the Maintenance section and clicking on the Download Receipts button:



Picture 5.1: Download Archived Receipts button

Archived receipts file archived_receipts.zip will be downloaded. This file needs to be sent to Epson for review.

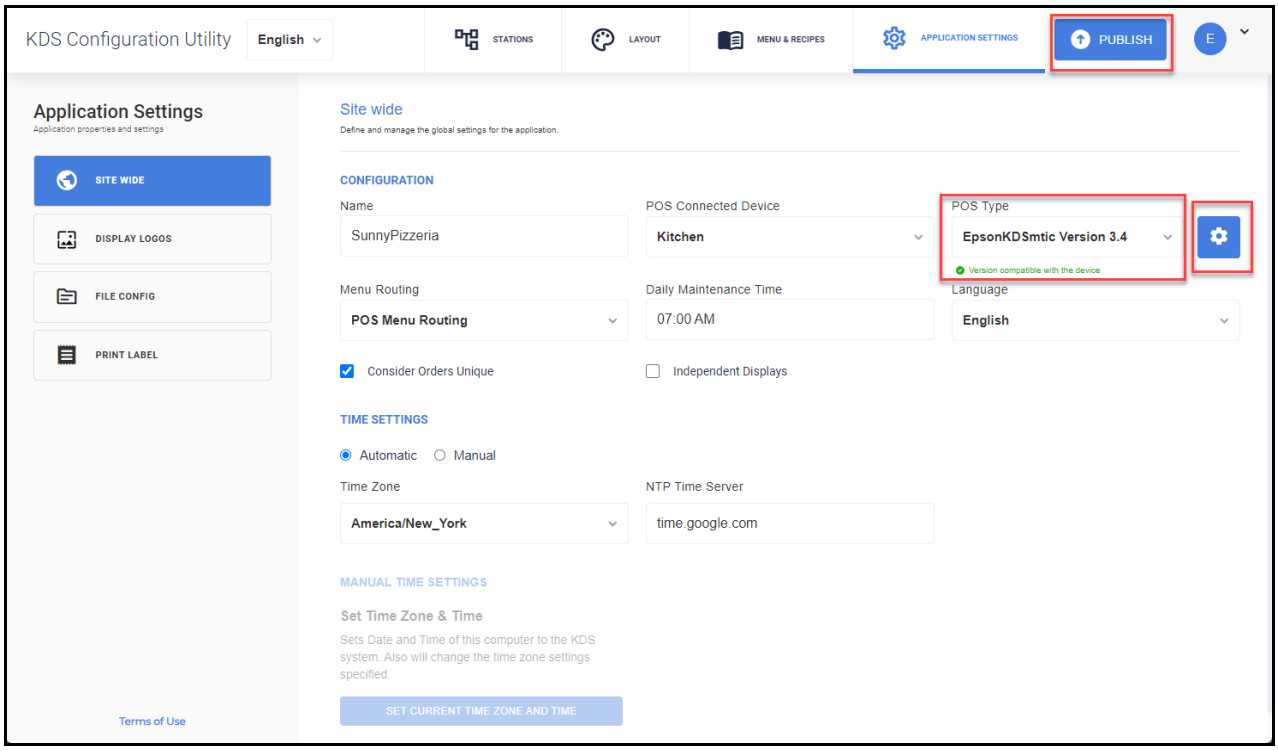
6. Parser Delivery

Once Epson has all the raw data, a specification will be created for how the data will be displayed on screen. When the specification is agreed to, it is typically a 1–2-week turnaround to provide the new parser to a customer.

Moving forward, it is important that the POS maintains the formatting for the various print jobs as they were supplied to Epson. Any changes in the formatting may result in information not being displayed as expected.
Menus can and will change and that is perfectly fine as it is unlikely to affect formatting.

7. Parser Installation

To upload the new or updated parser use the KDS Web Configurator App (IP address of the KDS device in the web browser) and navigate to the Application Settings tab.
Then, add the downloaded ipk to the True Order Parsers drop down list using the  option , select the newly added parser, and publish it all to the TrueOrder KDS.



Picture 7.1: Add/Delete Parser configuration wheel button

Note: Be sure to use the correct parser for the POS Connected device. The POS parser gets installed on the selected POS Connected device and is different for each hardware model. By default, every device ships with a full list of parsers built for itself. The parser name and corresponding IPK filename have the hardware variant in them. For example, in the above picture the POS Type "EpsonKDSmtmc Version 3.4" contains "mtmc" which means MicroTouch Mach platform. Below is the list of supported hardware platforms for each hardware variant.

Supported hardware platforms for POS parsers with name mtic:

- MicroTouch AIO 21.5" Touchscreen Part#: IC-215P-AA2-A016
- MicroTouch Media Player Part#: MP-000-AA2-A017

Supported hardware platforms for POS parsers with name ls89:

- Logic Controls Controller Part#: LS8900-Epson

Supported hardware platforms for POS parsers with name eloi:

- ELO AIO 21.5" Touchscreen Part#: E166526
- ELO Backpack Part#: E166712

Supported hardware platforms for POS parsers with name mtmc:

- MicroTouch All-In-One Touchscreens Part#:
  - M1-215IC-AA2-A037 M1-215IC-AA3-A038 (PoE)
  - M1-156IC-AA2-A040 M1-156IC-AA3-A041 (PoE)
- MicroTouch Mach Media Player Part#:
  - M1-MP-AA2-A039

Supported hardware platforms for POS parsers with name ka06:

- Kitchen Armor All-In-One Touchscreen Part#:
  - TBD base on KA-22PCAPAIO6