Shipping Connector

for Microsoft Dynamics 365 Business Central

Small Package Shipper Quick-Start Guide

Sales Order shipping with the Small Package Shipper Application

I. Purpose of this document

This guide will assist you with installation and initial configuration of Shipping Connector.

Once complete you will be able to create shipping labels using the Shipping Connector Small Package Shipper application, with the shipment details and charges recorded to the Sales Order in Microsoft Dynamics 365 Business Central.

This guide will demonstrate the minimal configuration required to enable the above scenario.
This guide is purposely succinct – it's goal is to quickly get you hands-on experience with the application.

For an in-depth description of the Shipping Connector Small Package Shipper application please refer to the Small Package Shipper User Manual.

For an in-depth description of the Shipping Connector Workstation application please refer to the
Shipping Connector User Manual.

II. Overview

The Shipping Connector Small Package Shipper is a (free) shipping application that creates shipping labels for various shipping providers**. Think of it as a lightweight blend of FedEx Ship Manager with UPS WorldShip and USPS shipping.

The Small Package Shipper application is fast, easy to use, and well-integrated with the Shipping Connector Workstation and your Business Central shipping workflow.

In the sections that follow we will give a brief overview of Business Central shipping, describe how the Small Package Shipper fits into the warehouse end of the shipping chain, and we'll ship an order to connect those dots.

III.   The Business Central Shipping Workflow

Business Central has an inherent shipping workflow into which Shipping Connector taps – it flows like this:

- **Create an order for a customer**
  The ship-to address on the order defines the delivery address for the shipment.
- **Add product to the order**
  The amount and type of product defines the packaging required for the shipment.
- **Set the Shipping Agent and Shipping Agent Service**
  The agent and service indicate to the shipping department the preferred method of shipping.
- **Set the shipping bill-to and any associated account parameters**
  The shipping bill-to defines how to handle charges (whether to charge them to the customer).
- **Release the order to ship**
  Releasing the order makes it available for shipping.
  Shipping Connector queue the order details for export to the (perhaps multiple) shipping workstations.

When the order is released, Shipping Connector queues the order details for export to each shipping workstation. The Shipping Connector Workstation application (running on the shipping workstation) periodically downloads the order details to its local cache where it is made available to the shipping software (the Small Package Shipper application).

- **Load the order details into the Small Package Shipper**
  We're purposely lite on details here since we will expand on use of the software below.
- **Ship the order, creating a shipping label**
  When the Small Package Shipper generates a shipping label it also exports the shipment details to the Shipping Connector Workstation data cache.

The Shipping Connector Workstation watches for new shipment information and automatically relays the information back to the Dynamics 365 Business Central server.

- **Apply the shipment to the Sales Order in Business Central**
  This will result in a shipping tracking information and shipping charges added to the Sales Order header and lines.

The graphic below depicts that data exchange flow.
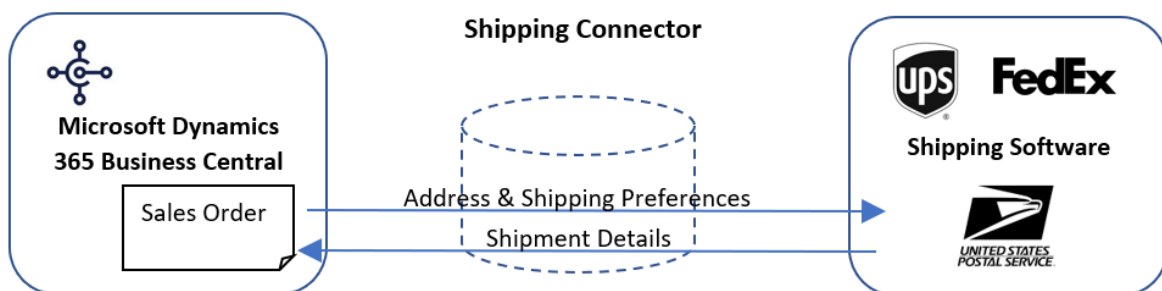
IV.   Installation & Registration

First, you will need to publish and install the Shipping Connector extension app into your Business Central system. You can find Shipping Connector in the Microsoft AppStore or (for on-prem environments) you can download it from our website at https://shippingconnector365.com/download.

After installation you need to start a free, 30-day trial to obtain a registration:

- Open the Shipping Connector Setup page (type 'Shipping Connector Setup' in the Search box).
- Click on the Administration option, then the Registration option
- On the Registration page select the "Start 30-day Free Trial" action
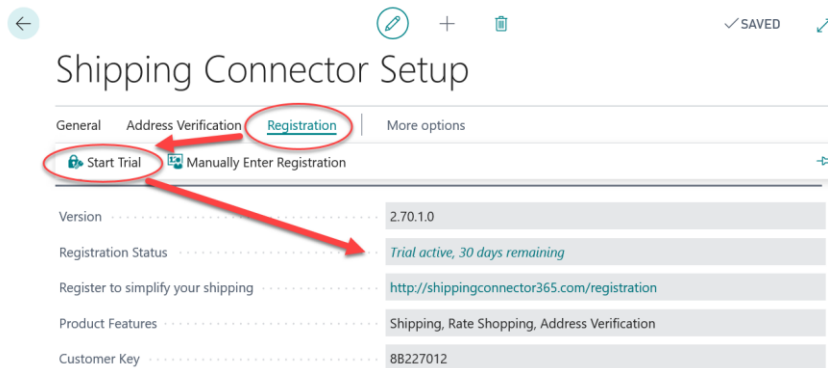
V.   Configure Web Service Account Permissions and Authentication

Permissions

The Shipping Connector Workstation application (installed on the shipping workstation - we'll get to that below) communicates with Shipping Connector in Business Central via the Shipping Connector Web Service.

To enable web service communication a user account with sufficient permissions is required.

To configure account permissions, you must select a Business Central user account and add the "SHIPPING CONNECTOR" permission set to that account. (Since the Shipping Connector Web Service will interact with other Business Central objects, we recommend that you use an account with sufficient permissions to perform common sales and general ledger tasks).

In Dynamics 365 Business Central:

Choose the Search icon, enter **Users**, choose the related link, and then select the User account that you wish to use for web service data exchange.

- Add the **Shipping Connector Permission Set** to the permission sets for that account.
- Add other permission sets as needed (a SUPER account is recommended).

Authentication

To configure web service authentication, Microsoft SaaS now requires OAuth2 authentication. This involves approving the "Shipping Connector" application in your Azure Active Directory (step by step details here). Note: On-prem can continue to use Web Service Access Keys (details here).

For succinctness, we'll give the condensed version – follow these steps:

In Dynamics 365 Business Central:

- If SaaS
  - o Grant consent for the Shipping Connector Workstation app in your Azure AD (see step-by-step here) Note: Your Azure AD Administrator will need to make this change.
- If On-prem
  - o On the User page, select the Assist Edit button for the **Web Service Access Key** field.
  - o In the **Set the Web Service Access Key** window, select the **Key Never Expires** check box.
  - o The access key is automatically generated and appears in the **Web Service Access Key** field. Copy the key, we will need it below
    NOTE: In order to configure a **Web Service Access Key** you must be logged into Business Central under the account for which you wish to configure the key – Business Central will not allow you to configure a **Web Service Access Key** for other user accounts.

VI.   Shipping Connector Setup (in Dynamics 365 Business Central)

Next, you will need to configure a few options such that Shipping Connector knows how to place shipping charges onto the Sales Order.

- Open the Shipping Connector Setup page (type 'Shipping Connector Setup' in the Search box)
- Expand the "General" fast-tab
  - o Enable the "Auto-apply Shipping" option
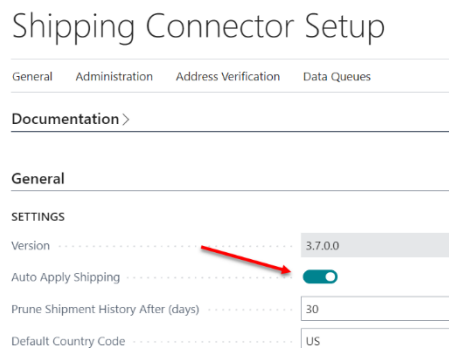
- Scroll down to the "Numbering" fast-tab
  - o Set "Shipping Charges Type" to "G/L Account"
  - o Set "Shipping Charges No." to an appropriate G/L income account

o   Set "Tax Group Code" to "NONTAXABLE" (or select an appropriate tax group code)

Numbering

SALES ORDERS

Shipping Charges Type · · · · · · · · · · · · · · · · · · ·	G/L Account
Shipping Charges No. · · · · · · · · · · · · · · · · · · ·	40100
Shipping Tax Group Code · · · · · · · · · · · · · · · ·	NONTAXABLE

While we're on this page let's also copy & save the Shipping Connector Web Services URL – we'll need it in a later step.

- Scroll down to the "Web Service" fast-tab
- Copy the Web Service URL (double click to select all, then right-click and select Copy)

Web Service

Web Service URL ·	https://api.businesscentral.dynamics.com/v1.0/c8c98d94-2e36-4dd4-b336
Published ·	⬤◯

- Save that value

VII.   Shipping Connector Workstation Setup

Now we'll install the Shipping Connector Workstation application on the shipping workstation. The Shipping Connector Workstation application manages information exchange between the shipping software and Business Central.

- Download the Shipping Connector Workstation installer from
  https://shippingconnector365.com/download.
- Run the Shipping Connector Workstation installer
- Choose the option to run the configuration utility when setup completes

When the Shipping Connector Workstation Configuration wizard appears, we'll use it to setup a connection to the Business Central server.
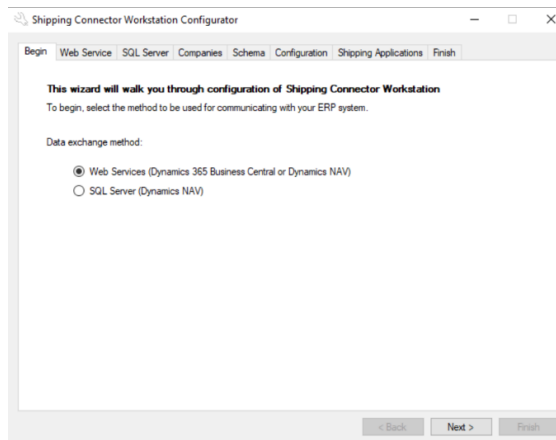
- In the Configurator select **Web Services** for the data exchange method
- Select **Next** to move to the **Web Services** tab
- Paste the URL you saved in the previous step into the **Web Services URL** field
- Select **OData** for the communication protocol
- If using Web Service Access Key, select **Credentials**
    - o Enter the **Web Services Account Username** (do not include a domain name)
    - o Enter the **Web Services Access Key** configured previously
- If using OAuth2 authentication, select OAuth2
    - o If SaaS, select Hosting = Business Central SaaS
    - o If On-prem, select Host = OnPrem / Other, enter the Aad App ID
- Press the **Verify Web Service** button

If using OAuth2 an authorization dialog will appear. Enter the credentials for the user account that you configured in Section V above. Validate the authorization to continue.

 Successful web service communication will be indicated, and you can move to the next tab.
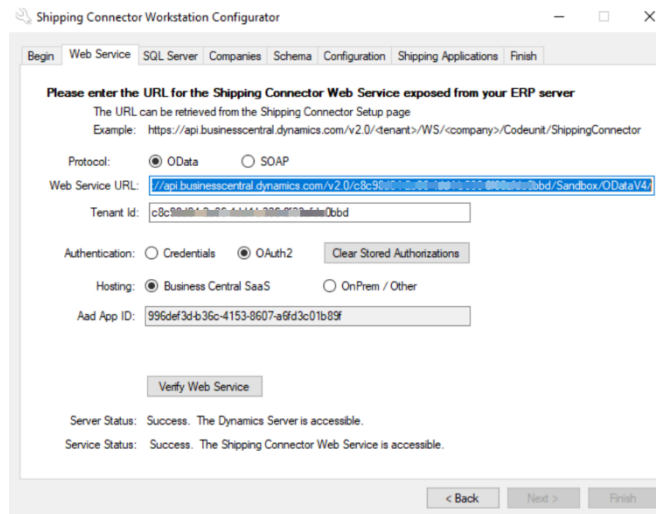
(Ignore the SQL Server tab – it doesn't apply here).

- Press the **Next** button to move to the **Companies** tab
- Select the companies with which you would like to exchange data
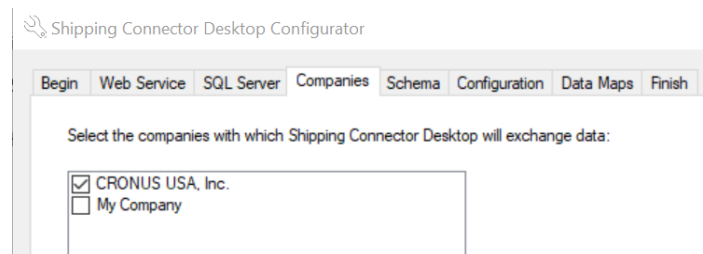
- Press the **Next** button to move to the **Schema** tab
  The **Schema** tab is for informational purpose only – no changes can be made

- Press the **Next** button to move to the **Configuration** tab
  The Shipping Connector Workstation configuration will be saved, confirmation will be displayed

- Press the **Next** button to move to the **Shipping Applications** tab
- Install the **Small Package Shipper application**
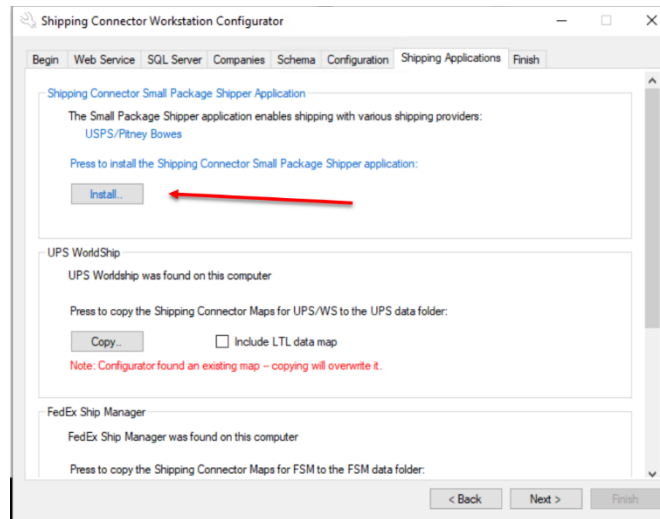
- Press the **Next** button to move to the **Finish** tab
- Select the startup options
- Press the **Finish** button - Shipping Connector Workstation will display in the System Tray

Next, we'll move on to do some real shipping…

VIII. Configure Small Package Shipper for use with Shipping Connector

The Small Package Shipper (we'll use the short name "Shipper" going forward) is well integrated with Shipping Connector Workstation (short name "Workstation") and allows you to ship in Sandbox mode right out of the box.

Sandbox mode behaves like a production shipping environment and does everything identically except it prints voided shipping labels.
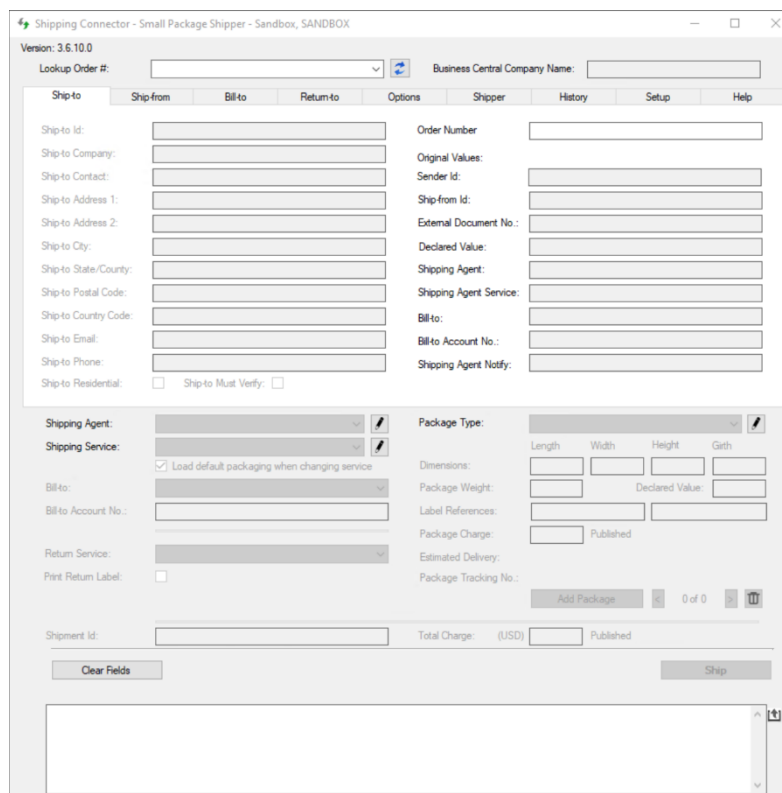
To get realistic pricing in Sandbox mode we will need to set your Ship-from address.

IX. Start the Shipper application

- Right click the Workstation icon, select the Tools submenu, and then the Small Package Shipper menu item
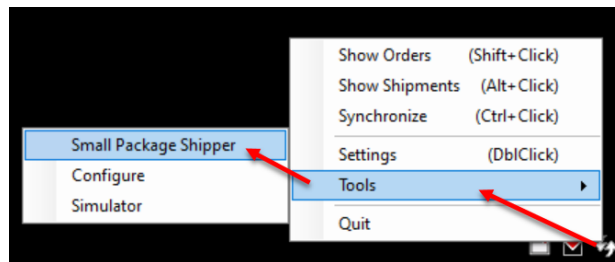
- The Shipper app will open

- Select the Shipper tab, and open the Ship-from/SANDBOX entry for editing
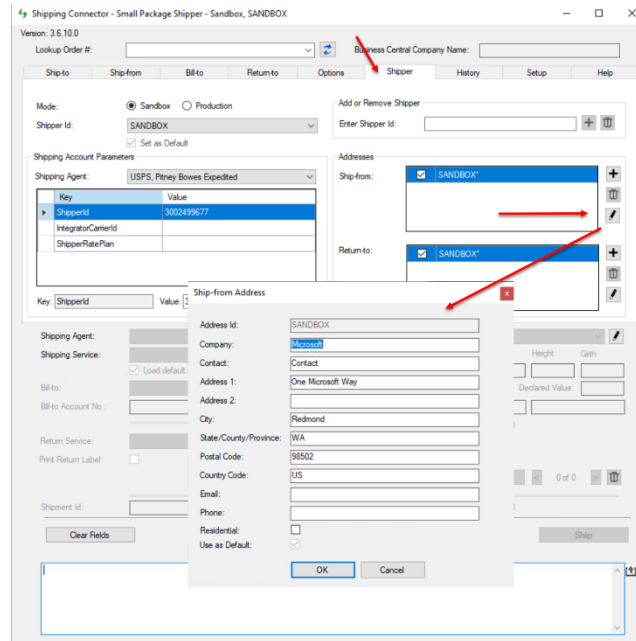
- Change the address to your warehouse address (or the address from which you want your shipping to originate) then Save the changes

X.   Process a Shipment

We're now ready to begin shipping – let's process a shipment.

- In Business Central open a Sales Order
  (For this exercise, choose an order with a valid destination address)
- If the Sales Order is currently released, reopen it
  In the Shipping and Billing fast-tab area set the Shipping Agent to USPS and the Shipping Agent Service to First Class Mail
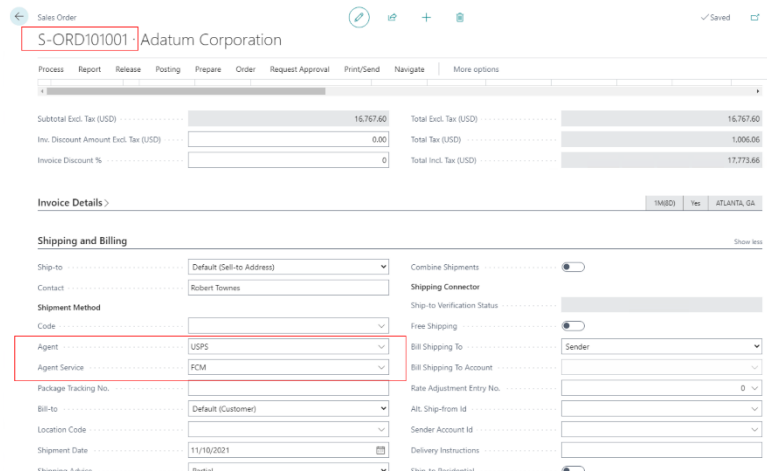
- Release the Sales Order
  The release action that enables data exchange with Shipping Connector Workstation.
  Note the Sales Order number (in this example it is S-ORD101001)

- In the Shipper app, enter the Sales Order number -- S-ORD101001 – into the Lookup
  Order# field and press enter
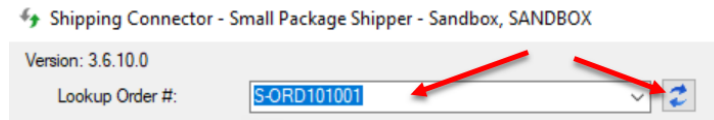
If the Shipper app doesn't immediately populate with the order details, it is because
Workstation has not yet synchronized with Business Central.
  - Press the 'Sync' button on the Shipper app (the left/right blue arrows above)
    That will signal Workstation to sync immediately. When it finishes it signals
    Shipper to try again – this time the order will populate the Shipper fields.

The recipient ship-to information and shipping options will auto populate

- Now select Package Type = Package

- Enter Length, Width and Height dimensions for the package (10, 10, 10)
  (If you enter values not supported by the service the app will warn you)

- Enter a shipping weight (we'll configure a scale later, for now, enter it manually)
  USPS First Class Mail packages must be 13 ounces or less)

- The Shipper app will retrieve a rate for the package when you move off the dimensions
  and weight fields.

- Press the Ship button (lower right corner)

Shipper will now print a shipping label and export the shipping details to Shipping
Connector Workstation. The Workstation tray icon will flash green, indicating that
shipment information is being relayed back to Dynamics 365 Business Central.

- Back to Business Central, on the Sales Order (#S-ORD10100) press the F5 key to refresh
  the page, or press the Shipping Connector 'Apply Shipping' action: Actions → Shipping
  Connector → Apply Shipping

The shipment details will populate onto the Sales Order

It also populates the Package Tracking Number, Shipping Agent and Shipping Agent Service fields in the Shipping and Billing area.

- The Sales Order is now ready to Post

Congratulations, you have just shipped your first order.

XI.   Other Basic Setup

Here are some recommendations to configure your Shipper app for testing.

Add Ship-from, Return-to addresses

You will probably wish to add Ship-from and (optionally) Return-to addresses corresponding to your shipping requirements.

Click the Add button ('+') next to the Ship-from address list.
Enter the address from which shipments will originate.
Repeat as necessary.

Do the same for the Return-to address list.

Setup Printers

To print physical labels, you will need to configure a label printer.
The Shipper app allows you to define up to two label printers (you only need to configure one).
By convention, the first label printer should be your most frequently used printer, likely a 4x6".

Select the label printer from the drop-down menu.
Select the page size from the page size drop-down menu.
If you need to configure any printer settings, select the configure button.

Do the same for the second label printer if necessary.

If your shipping workflow produces documents (e.g., manifests) then you'll also need to configure the document printer.

Setup a Scale

The Shipper app supports USB and Serial scales.
Out-of-the-box it knows about commonly used USB shipping scales.
Select your USB scale from the drop-down (make sure it is connected when doing so).
If your scale is not in the list, it can be added – contact us we'll talk you thru it (this step will be automated in a future release).

For serial scales a bit of configuration and testing is necessary - contact us we'll talk you thru it (this step will also be automated in a future release).

Configure labels

You can print up to two customized text fields on the shipping labels.
This feature is Agent/Service and Package dependent – the Shipper app will display the available fields when you configure a package for shipment.

To print a specific field from the order details select Reference = Field, and the field name from the drop-down menu.
To print a custom text string select Reference = Text, and enter the custom text string.

End-of-Day

End-of-Day (EOD) is the process of marking all of the orders shipped during the day as having been picked up by the carrier (when a package is picked up we call that Freight-On-Board, or FOB).

The Shipper App supports automatic and manual End-Of-Day.

Automatic EOD happens at midnight + 1 minute, all (non-FOB) shipments from the previous day are marked FOB. You will see the status change on the History tab.
- You might use automatic EOD if you are taking the packages to the carrier drop off point or you just don't want to both with manifests.

With Manual EOD the Shipper app does not mark shipments FOB until you manually run EOD (the button is on the History tab). When you manually run EOD the Shipper app will print the scan sheet for each of the manifests.
- You might use manual EOD if you don't have a carrier pickup every day.

Manifesting

Manifesting is the process of inventorying the packages to be picked up by the carrier. A scan sheet can be printed so the carrier can quickly confirm the manifest and take the packages without having to scan each.

Units & Currency

The units and currency options on the Setup tab tell the Shipper app how to accept input from the associated fields and how to display their values. The values from the fields are automatically converted to the units required by the carrier.

For instance, USPS only accepts dimensions in IN and weight in OZ.
If you set the units to KG and CM then values you enter into the dimensions and weight fields will be displayed in KG and CM but will be converted to IN and OZ when used with USPS rating and shipping.
Also, most USB scales will identify the units currently configured on the scale – the Shipper app will make the required conversions where appropriate.

There is a fair bit of configuration available to tune the Shipper app to your workflow.

- Use a barcode scanner to enter order numbers
- Define custom packaging
- Define default packaging (per agent/per service) so it loads automatically
- Hide features that you don't use

We'll refer you to the User Manual for the intimate details.

XII.   More Information

In this guide we have touched on the basic features of Shipping Connector and the Shipper application to process a Sales Order shipment.

There is a lot more to Shipping Connector including:
- Address Verification
- Rate Shopping
- Rate Adjustments
- Purchase Return Orders, Transfer Orders, Service Orders

XIII.   Onboarding

If you like the Shipper application and wish to use it for production shipping then please refer to the Onboarding Guide to setup a production configuration.

We invite you to check out the feature descriptions and in-depth guides available on our web site @ https://shippingconnector365.com/guides.

We're also more than happy to provide training, demonstration or other advice – **at no cost**.

Please contact us for any questions – we want to hear from you!
support@shippingconnector365.com
https://shippingconnector365.com/support

XIV. More Soon

At the time this document was last updated the Shipper application supports:

- USPS, with the Pitney Bowes Shipping API

The following providers will be added in future releases (soon):

- FedEx, with the Pitney Bowes Shipping API
- UPS, with the Pitney Bowes Shipping API
- FedEx, with the Federal Express International shipping API
- UPS, with the United Parcel Post shipping API
- DHL, with the DHL International shipping API

If you have a need for other shipping providers, please contact us.

Happy Shipping!