SEIKOTECH®

ADMINISTRATOR MANUAL

SKY-7 Vector IQ



Digital Weighing Indicator

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SKY-7 Vector IQ

Administrator Manual

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1. Introduction

1.1 About This Manual

This manual describes how to operate, configure, and maintain the SKY-7 Vector IQ digital weighing indicator from the perspective of a shop-floor Administrator — the highest access level intended for the end customer. It covers everyday weighing operations, product and data management, label design, Administrator-level settings including weighing setup and calibration, and connector/wiring reference.



Figure 1.1 — SKY-7 Vector IQ digital weighing indicator.

1.2 About SKY-7 Vector IQ

SKY-7 Vector IQ is an industrial weighing indicator with a touchscreen interface. It supports three weighing modes (Check Weighing, Part Counting, and Statistic/SQC with optional SPC statistics), product-based weighing with tolerance zones, an optional second weighing platform (Scale 2), printed/exported records, and multi-level user access control.

1.3 Who Should Use This Manual

This manual is written for the Administrator account — typically the QC supervisor, line supervisor, or plant IT staff responsible for configuring products, users, printers, wiring, and calibration on the shop floor. Day-to-day Operators only need Chapters 3–5.

2. Logging In & User Roles

2.1 Default Administrator Account

On first boot, SKY-7 Vector IQ automatically creates a top-level account in its local user database:

Username	Default Password	Role	Notes
administrator	admin123	Administrator	Top-level account for the end customer. Use this to sign in for the first time.

⚠ **CAUTION:** Security recommendation: change the administrator password immediately after the first login (Data → Users → administrator → Edit), and keep this credential confidential.

2.2 Logging In

1. On the login screen, tap the Username field and select "administrator" from the list, or type it in.
2. Tap the Password field and enter the password.
3. Tap the checkmark button to dismiss the on-screen keyboard, then tap LOGIN.
4. On success, the app opens on the last-used weighing mode with the header bar showing the logged-in role.

NOTE: On a new unit the app may first show an Activation screen. Send the Device ID shown on screen to your supplier, enter the activation code you receive, and the login screen follows.

2.3 User Roles Overview

SKY-7 Vector IQ uses three role levels, ranked from lowest to highest privilege. Each higher role inherits everything the roles below it can do. A fourth level, Technician, is reserved for factory service (Service Setting) and is not given to end customers.

Role	Typical User	Can Do
Operator	Machine/line operator	Weigh, zero, tare, print/save, switch unit, view own records
Manager	Line supervisor	Operator rights + manage products, edit limits, export data, import data, edit label designs, manage operator accounts
Administrator	QC supervisor / plant IT	Manager rights + Communication/Printer setup, Weighing Setting, Calibration, Basic Information, Activity Log, Backup/Restore, Factory Reset, System Power

2.4 Logging Out

Open MENU → Logout to end the current session. Always log out before leaving the terminal unattended if the Administrator account is signed in.

3. Interface Overview

3.1 Header Bar

The header bar is visible at the top of every weighing screen. From left to right it shows: the current weighing mode (tap to switch mode), the logged-in user's role, connectivity icons (Bluetooth, Wi-Fi), the scale's configured Max capacity / Min weight / division (d), the connection status (ONLINE/OFFLINE), and the current date and time.

3.2 Main Menu

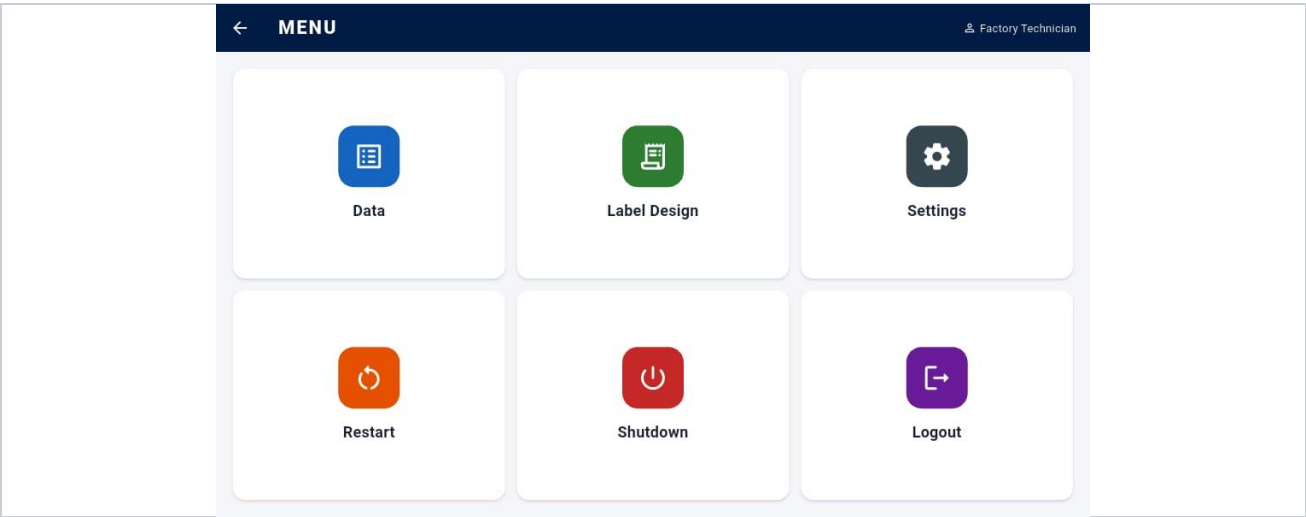


Figure 3.1 — MENU hub, showing Data, Label Design, Settings, Restart, Shutdown, and Logout.

Tap the MENU button on any weighing screen to open the main menu. It gives access to six functions:

Tile	Function
Data	Opens Data Management: Products, Records, Export, Import, Users, Suppliers, Customers (Chapter 6–7)
Label Design	Create/edit receipt and label print templates (Chapter 8) — Manager access or higher
Settings	Administrator configuration: Basic Info, System, Weighing, Calibration, Communication, Activity Log (Chapter 9)
Restart	Restarts the SKY-7 application
Shutdown	Powers off the terminal
Logout	Ends the current session and returns to the login screen

3.3 Switching Weighing Mode

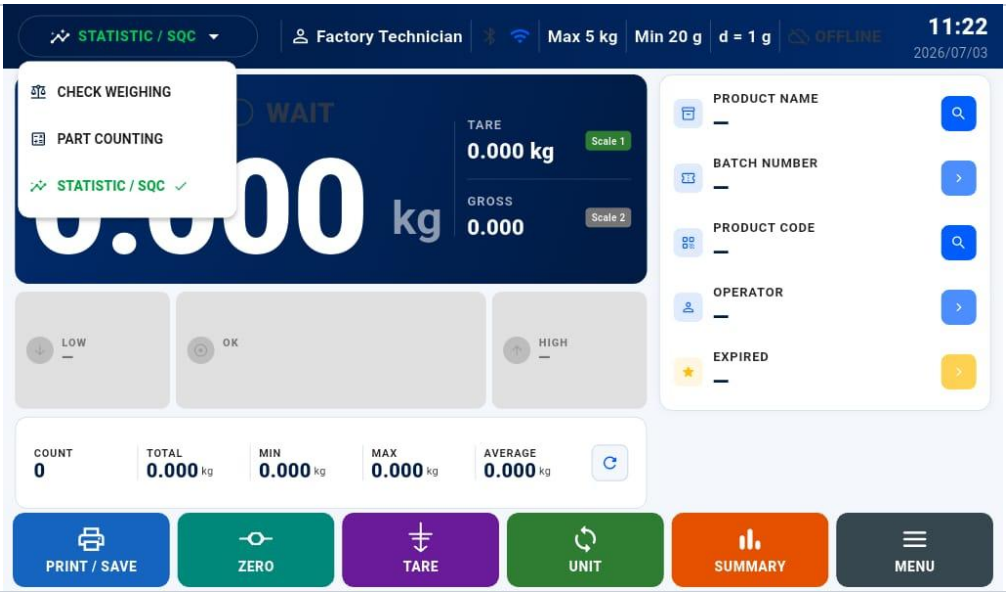


Figure 3.2 — Mode selector dropdown: Check Weighing, Part Counting, Statistic / SQC.

Tap the mode name at the top-left of the header bar (e.g. "STATISTIC / SQC") to open the dropdown shown above, then tap the desired mode. A checkmark marks the mode currently active. The header bar and bottom action buttons will change to match the selected mode.

4. Weighing Modes

SKY-7 Vector IQ provides three weighing modes, selectable from the header-bar dropdown (Section 3.3). Each mode shares the same Product Info panel on the right side of the screen (Chapter 5).

4.1 Check Weighing Mode

Check Weighing compares the net weight of each item against the selected product's Hi Limit / Lo Limit and shows LOW / OK / HIGH zone status — typically used for finished-goods weight checking (e.g. checking a packed product is not under- or over-filled).

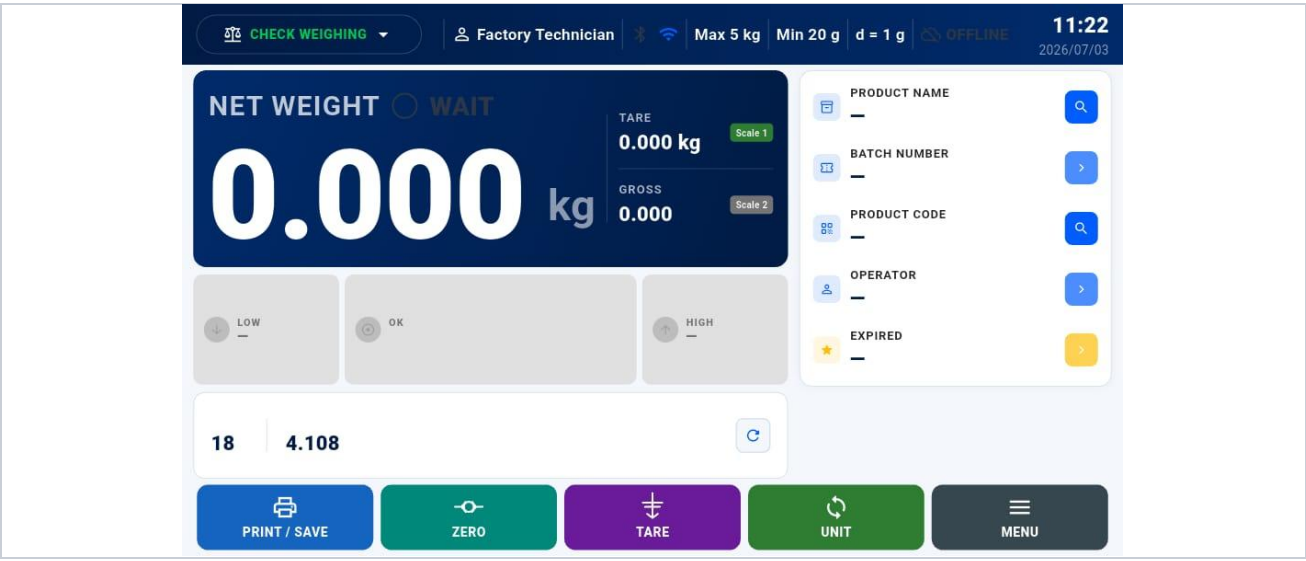


Figure 4.1 — Check Weighing main screen. Net weight 0.000 kg, status WAIT, zone indicators LOW / OK / HIGH below.

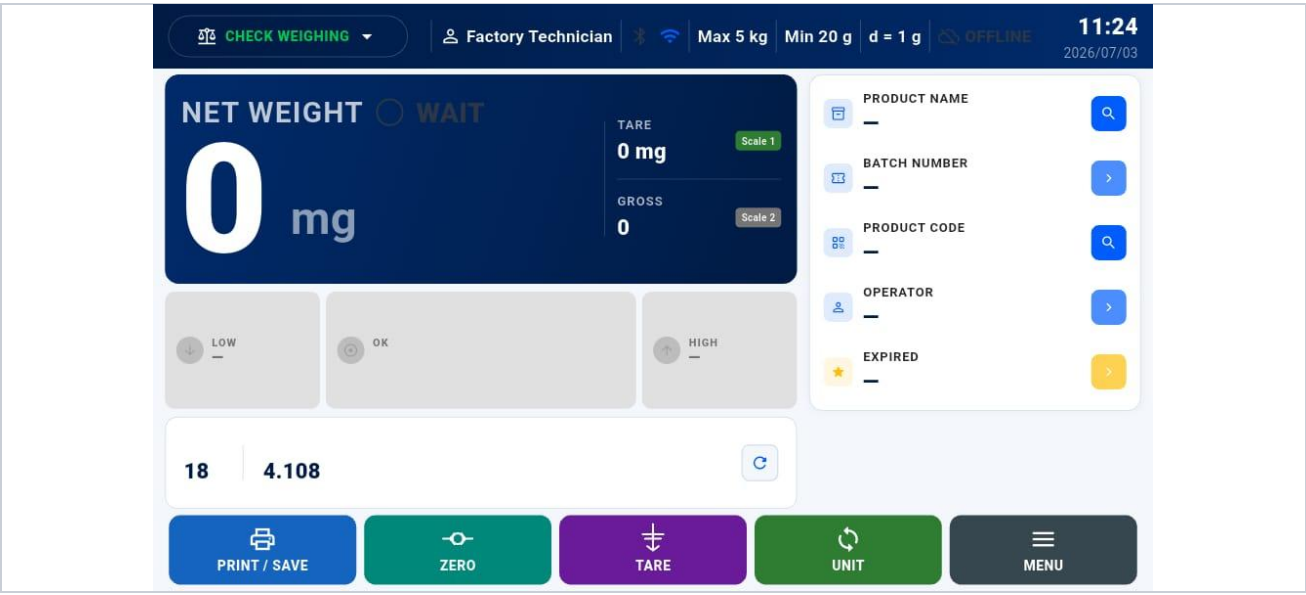


Figure 4.2 — Check Weighing with unit switched to milligram (mg); note TARE and GROSS values shown per scale (Scale 1 / Scale 2).

Key elements on the Check Weighing screen:

Element	Description
NET WEIGHT	Main net weight reading, with status (WAIT / STABLE / MOTION / OVERLOAD) next to it
TARE / GROSS	Tare and gross weight for each connected scale (Scale 1 = primary scale; Scale 2 = second platform, if configured) When Second Platform is enabled (Section 9.5), tap the Scale 1 / Scale 2 selector to choose the active platform.
LOW / OK / HIGH bars	Tolerance zone indicators driven by the selected product's Lo Limit / Hi Limit
PRINT / SAVE	Prints (if a printer is configured) and/or saves the current reading as a weighing record
ZERO	Zeroes the scale — ensure the platform is empty before pressing
TARE	Tares the scale to the current gross weight (subsequent readings show net weight)
UNIT	Cycles the displayed unit (kg / g / mg, depending on configuration)
MENU	Opens the main menu (Chapter 3.2)

4.2 Part Counting Mode

Part Counting derives a piece count (PCS) from the total weight, using either a known Unit Weight or a Sample count. It is used for counting small identical parts (fasteners, components, etc.) by weight.

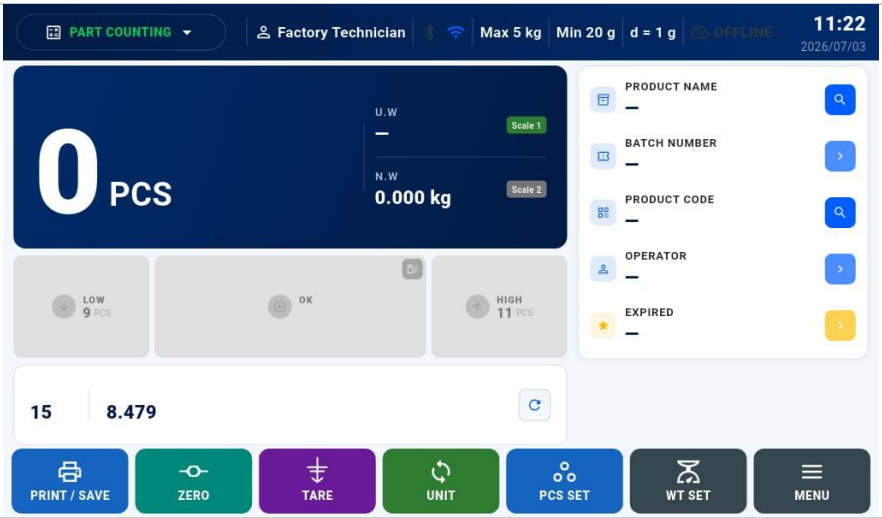


Figure 4.3 — Part Counting main screen. Large "0 PCS" reading, U.W (unit weight) and N.W (net weight) shown at right of the display, LOW/OK/HIGH piece-count zones below.

The bottom bar adds two mode-specific buttons compared to Check Weighing:

Button	Description
PCS SET	Determine unit weight automatically from a known sample quantity (Section 4.2.1)
WT SET	Enter the unit weight of a single piece directly, in grams (Section 4.2.2)

4.2.1 Setting Sample Size — PCS SET

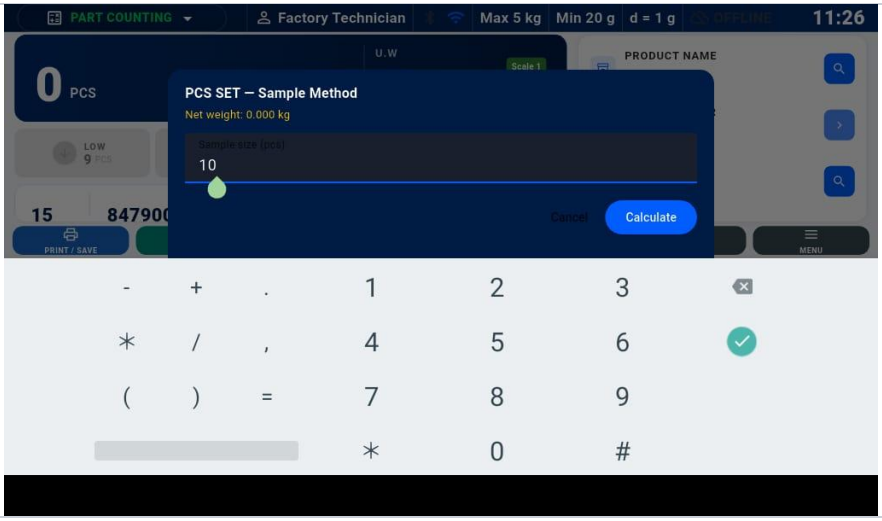


Figure 4.4 — PCS SET dialog: enter the sample size (pcs) placed on the platform; the app calculates unit weight from the current net weight.

1. Place a known quantity of sample parts on the platform (e.g. 10 pcs) and wait for a stable reading.
2. Tap PCS SET.
3. Enter the exact sample size (pcs) using the numeric keypad.
4. Tap Calculate. SKY-7 divides the sampled net weight by the sample size to derive the unit weight.

4.2.2 Setting Unit Weight — WT SET

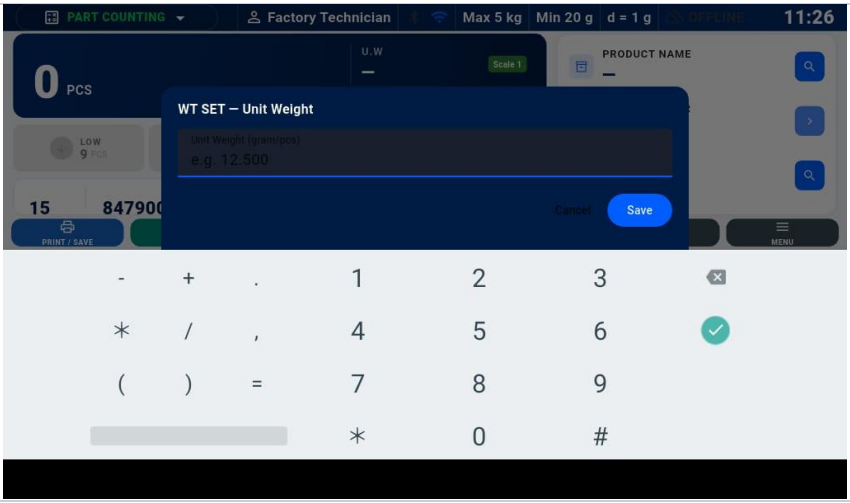


Figure 4.5 — WT SET dialog: enter the known unit weight of a single piece, in grams (e.g. 12.500).

1. Tap WT SET.
2. Enter the known weight of one piece in grams (e.g. 12.500).
3. Tap Save. The count display now converts any weight placed on the platform directly into PCS using this unit weight.

NOTE: The LOW / OK / HIGH zone in Part Counting mode is evaluated in pieces (pcs), based on the selected product's Low Limit Pcs / Hi Limit Pcs — for example the sample screens show LOW = 9 pcs and HIGH = 11 pcs, meaning the OK zone is 10 pcs.

4.3 Statistic / SQC Mode

Statistic/SQC (Statistical Quality Control) records a running series of weighings for the same product/batch and computes live statistics — useful for sampling-based QC checks required by many food and pharmaceutical standards.

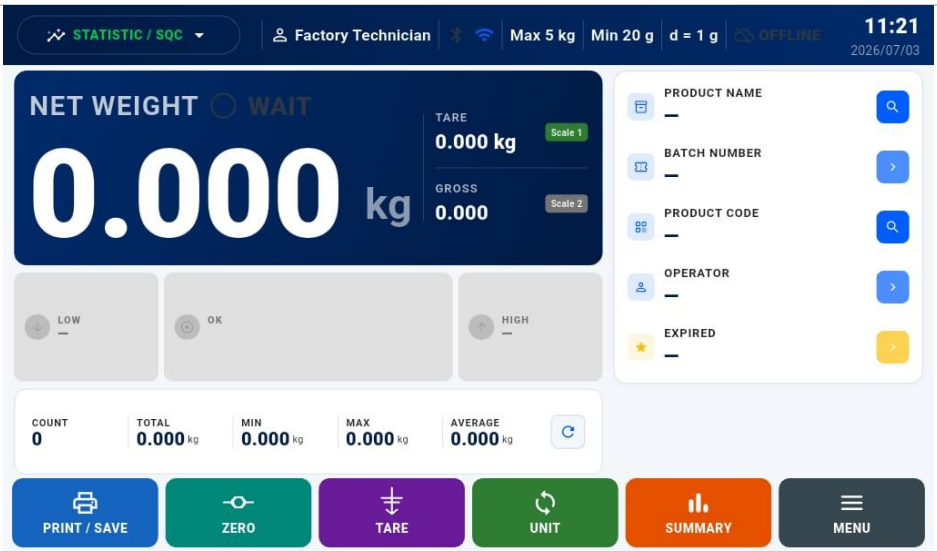


Figure 4.6 — Statistic / SQC main screen showing live Count, Total, Min, Max and Average.

Each time a reading is saved (PRINT/SAVE), it is added to the running series shown at the bottom: Count (number of samples), Total, Min, Max, and Average. The SUMMARY button closes the series; what it does depends on the Enable SPC setting (Section 9.5).

SPC OFF (classic SQC): tap SUMMARY and confirm “Print Summary?”. The summary (Count, Sum, Average, Max, Min, Diff, Std Dev) is printed and the samples are reset to 0. This confirmation can be switched off under Action Confirmation (Section 9.5).

SPC ON: tap SUMMARY to open a menu with three choices:

Choice	Description
Print Summary	Prints the statistics of this session and starts a new session.
Stat.1 / Stat.2	Shows the cumulative statistics (Stat.1 per batch, Stat.2 per product across batches) with Average and Std Dev; each can be cleared with Clear Stat.1 / Clear Stat.2.
Abort session	Discards the current session without adding it to the statistics.

Target sample (n): with SPC ON, tap the COUNT box to set how many samples make up one session — Manual, 3, 5, 10, 20, 25, 30, 50, or Custom. The summary prints automatically when n samples have been weighed; with Manual, close the session with SUMMARY. Changing n requires Manager access or higher.

Sessions: when the same Batch Number is weighed in more than one session, each session is numbered (#1, #2, …) and gets its own session code. Past sessions can be viewed and reprinted from MENU → Data → Export → Session Reports (Section 7.2).

Second platform: when Scale 2 is enabled, SQC can weigh on Scale 1 or Scale 2 using the Scale 1 / Scale 2 selector. Auto print for Scale 2 follows the Scale 2 settings in Section 9.5.

5. Product Info Panel

The panel on the right side of every weighing screen identifies what is currently being weighed. It is shared by all three modes. By default it shows Product Name, Batch Number, Product Code, Operator, ID and SKU; fields can be added, removed, or renamed (Section 5.3). The EXPIRED field in the screenshots below is a custom field.

5.1 Selecting a Product

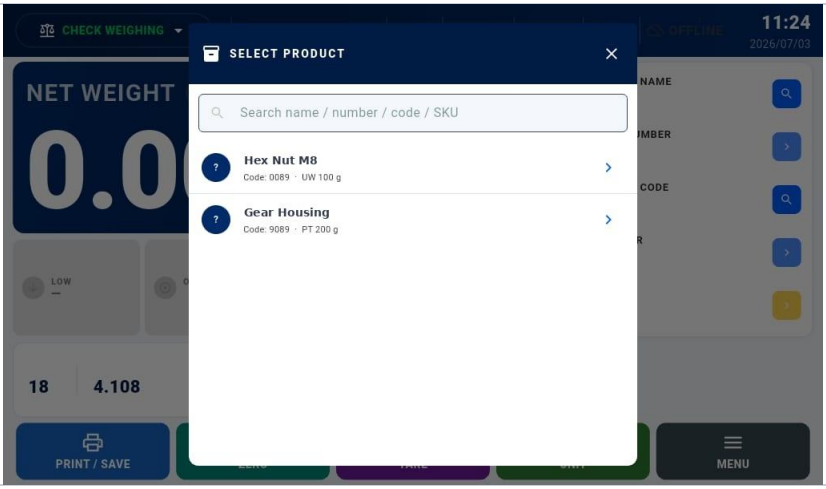


Figure 5.1 — SELECT PRODUCT dialog, opened from the search icon next to Product Name or Product Code.

1. Tap the search icon next to PRODUCT NAME or PRODUCT CODE.
2. Type part of the product's name, number, code, or SKU to filter the list, or scroll to find it.
3. Tap the product to select it. All its configured limits (Hi/Lo Limit, Unit Weight, Pre-Tare, Target, etc. — see Chapter 6) are loaded into the current weighing session automatically.

5.2 Batch Number, Operator & Custom Fields

BATCH NUMBER, OPERATOR, and custom fields such as EXPIRED are free-text fields, edited with the same simple dialog: tap the arrow icon next to the field, type the value, then tap Save. These values are stamped onto every weighing record and printed receipt/label until changed.

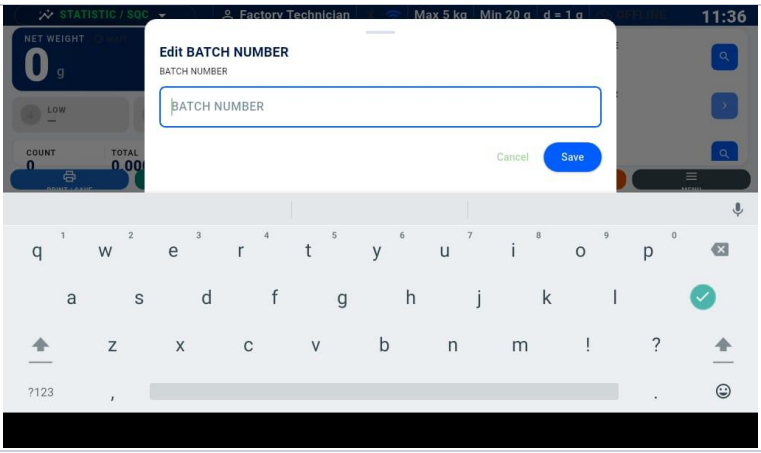


Figure 5.2 — Edit BATCH NUMBER dialog.

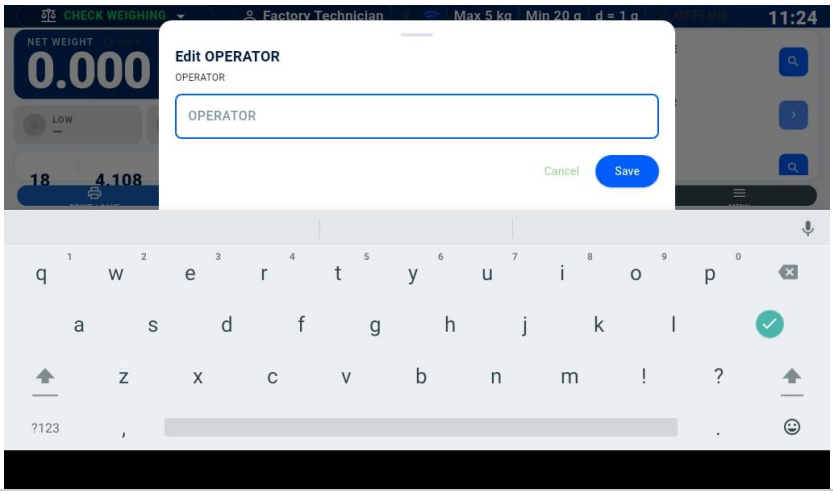


Figure 5.3 — Edit OPERATOR dialog.

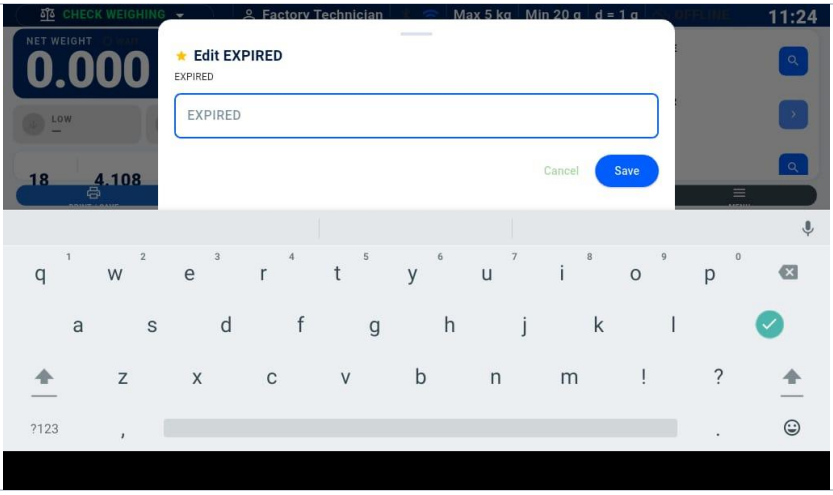


Figure 5.4 — Edit EXPIRED dialog.

NOTE: Tip: set OPERATOR at the start of each shift so weighing records can be traced back to the person who produced them.

5.3 Customizing the Panel Fields

Tap the edit icon of a field to open the Edit Field menu. It offers Edit Value, Clear Value, Rename This Field (custom fields only), Add New Field, and Delete Custom Field / Remove Field. At least one field must always remain on the panel.

Add New Field lets you choose from the standard fields (Product Name, Number, Product Code, Unit, Batch Number, SKU, ID, Operator, Location, Notes, Supplier, Supplier Code, Customer, Customer Code) or any custom field name used before, or create a new custom field by typing its name. Up to 4 custom fields can be defined. The Supplier field opens a picker from the Suppliers list (Section 7.4).

When Barcode Mode is enabled (Section 9.5), a connected scanner can fill the panel fields directly; the scanner mode and fields are set in Communication → Hardware Add-ons → Configure Scanner.

6. Product Management

Products are the master records that store each item's weighing parameters (limits, unit weight, tare, etc.). They are managed from MENU → Data → Products.

6.1 Product List

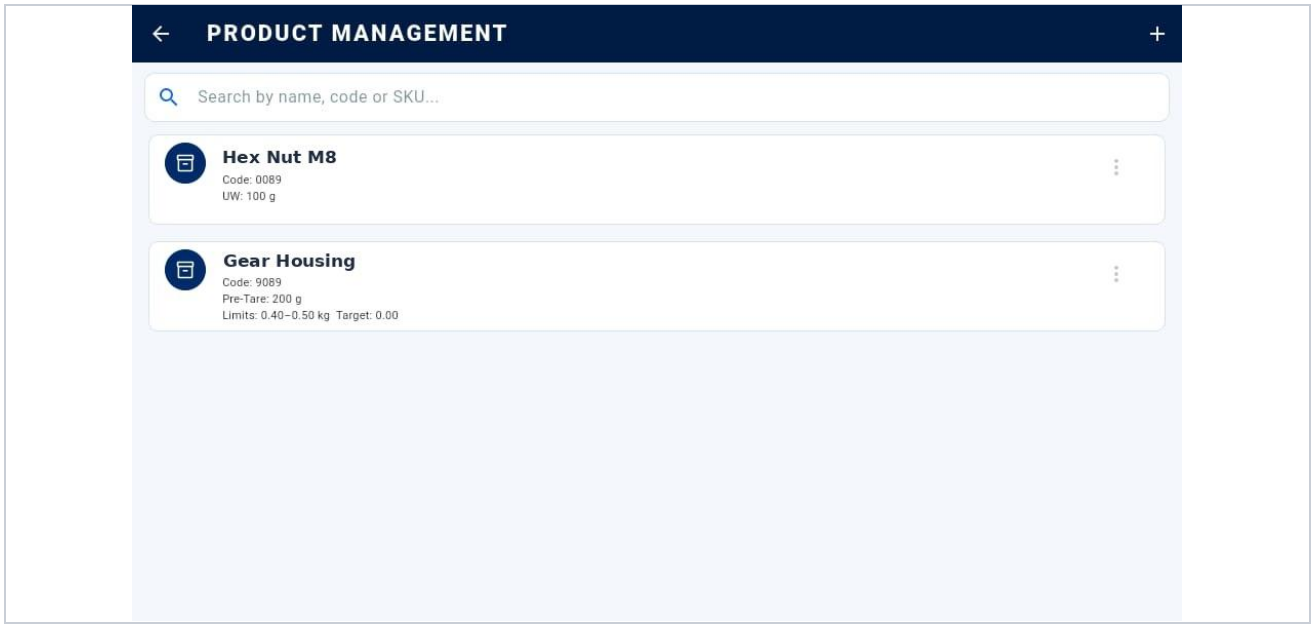


Figure 6.1 — Product Management list. Each card summarizes the product code, unit weight (UW), pre-tare, limits, and target where configured. ("Hex Nut M8" and "Gear Housing" are example products.)

Use the search box to find a product by name, code, or SKU. Tap the ":" icon on a card to edit or delete that product; tap "+" at the top-right to add a new one.

> **NOTE:** Adding, editing, and deleting products requires Manager access or higher; deleting a product requires Administrator access.

6.2 Adding or Editing a Product

The product edit form contains the following fields. Fields marked * are required; all weight fields accept the unit selected via the UNIT dropdown at the top of the form (default kg).

Field	Used In	Description
Product Code *	All modes	Unique identifier used for search/select and printed on receipts
Product Name *	All modes	Descriptive name shown in the product panel
SKU	All modes	Optional stock-keeping unit code, searchable
Unit Weight	Part Counting	Weight of a single piece, in grams — pre-fills WT SET
Pre-Tare	Check Weighing	Fixed tare weight (e.g. empty container), in grams
Target Value	Check Weighing / SQC	Nominal target net weight
Hi Limit / Low Limit	Check Weighing / SQC	Upper/lower weight tolerance that defines the HIGH/OK/LOW zones
Min Limit	Check Weighing	Minimum acceptable weight (used for reject/underweight alarms)
Hi Limit Pcs / Low Limit Pcs	Part Counting	Upper/lower piece-count tolerance that defines the HIGH/OK/LOW zones
Customer Name / Customer Code	All modes	Optional customer reference printed on labels
Custom 1–4	All modes	Free-text fields available for label templates (Chapter 8)

1. From the Product Management list, tap "+" to add a new product, or tap ":" → Edit on an existing one.
2. Fill in Product Code and Product Name (required), then any of the weight/limit/pcs fields relevant to how this product will be weighed.
3. Tap Save.

7. Data Management

Data Management is opened from MENU → Data. It centralizes every master-data and record-keeping function of SKY-7.

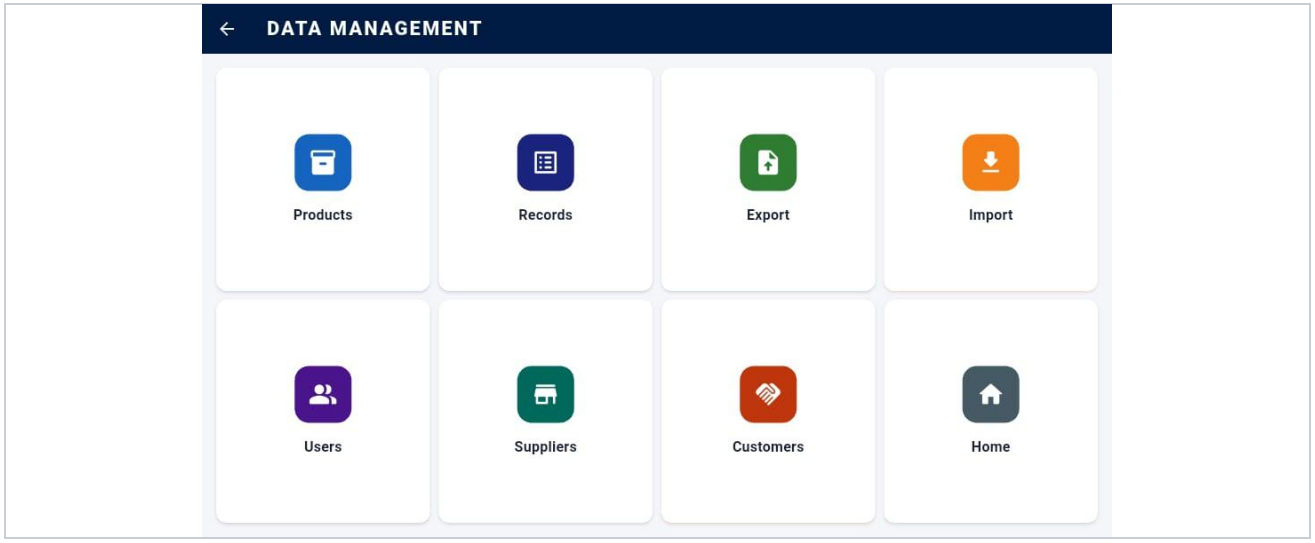


Figure 7.1 — Data Management hub: Products, Records, Export, Import, Users, Suppliers, Customers, Home.

7.1 Weighing Records

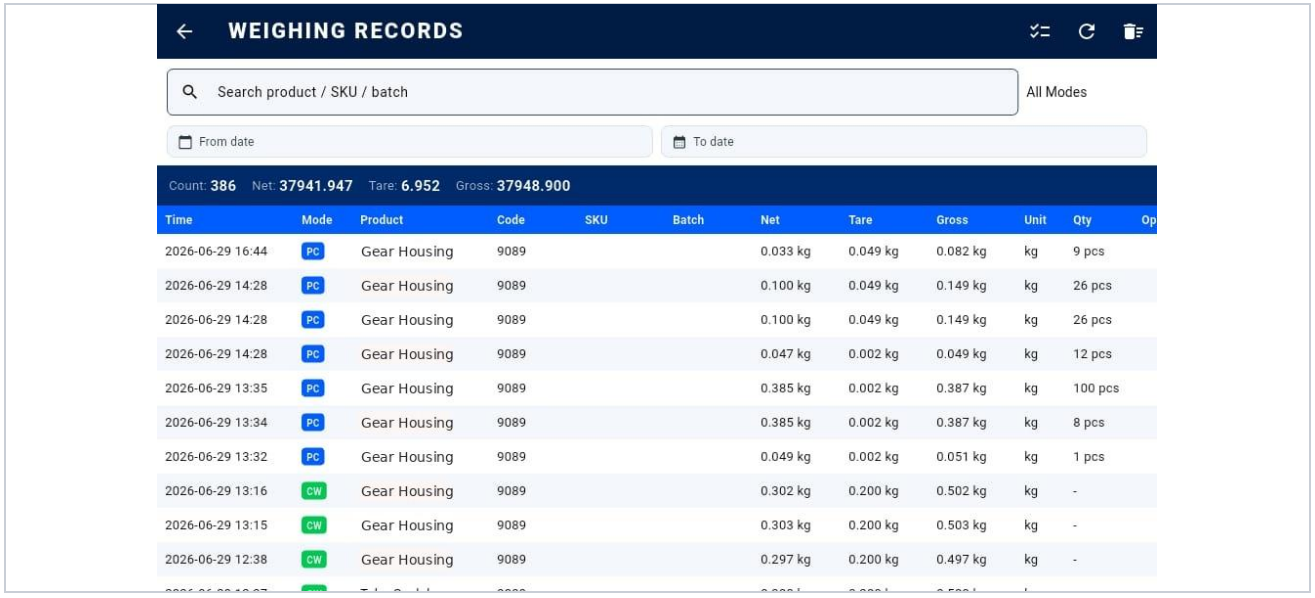


Figure 7.2 — Weighing Records list, with running totals (Count, Net, Tare, Gross) and per-row Time, Mode, Product, Code, Batch, Net, Tare, Gross, Unit and Qty. ("Gear Housing" is an example product.)

Every PRINT/SAVE action from any weighing mode creates one row here. Use the search box and the From date / To date filters to narrow the list, and the "All Modes" filter to show only Check Weighing (CW), Part Counting (PC), or SQC records. The icons at the top-right allow bulk-select, refresh, and delete. SQC samples carry a Session Code so every sample can be traced to its session.

NOTE: Deleting weighing records requires Manager access or higher.

7.2 Export Data



Figure 7.3 — Export Data screen: select which datasets to export (Weighing Records, Product Database, Supplier List, Customer List, Label Designs) and an optional date range.

Export writes the selected data to a file on a USB flash drive (or shares it via PC Manager over the network — see the note on the Import screen). Label Designs are exported as plain, editable .txt files (one per design) so they can be opened and adjusted in Notepad. Below the dataset list, the Session Reports card opens the list of saved SQC sessions (product, session code, sample count). Select a session to export a full statistics report as a PDF — every sample plus Count/Sum/Average/Max/Min/Diff/Std Dev, with the same numbers as the printed Summary ticket — or tap Reprint and choose Receipt printer (the same ticket as printed) or Standard printer (full A4 report through the system print dialog).

7.3 Import Data

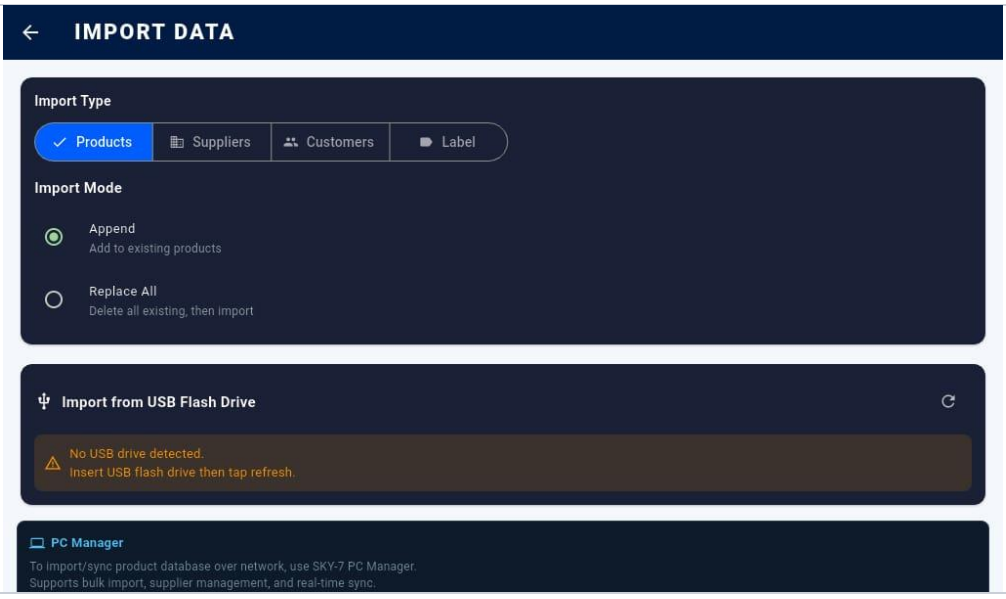


Figure 7.4 — Import Data screen: Import Type (Products / Suppliers / Customers / Label), Import Mode (Append / Replace All), and Import from USB Flash Drive.

1. Choose the Import Type: Products, Suppliers, Customers, or Label.
2. Choose the Import Mode: Append (add to existing records) or Replace All (delete all existing records of that type, then import).
3. Insert a USB flash drive containing the export file and tap the refresh icon under "Import from USB Flash Drive", or use SKY-7 PC Manager over the network for bulk import, supplier management, and real-time sync from a desktop computer.

⚠ **CAUTION:** Replace All permanently deletes existing records of the selected type before importing. Export a backup first (Section 7.2) if in doubt.

7.4 Customer & Supplier Contacts

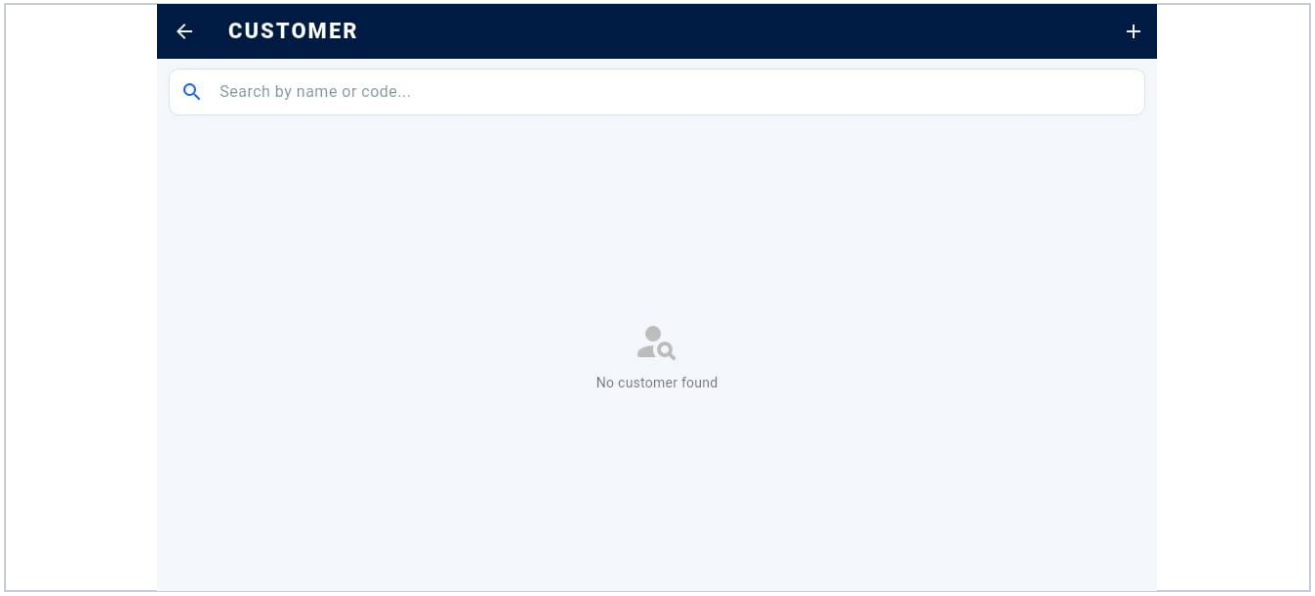


Figure 7.5 — Customer list (empty state: "No customer found").

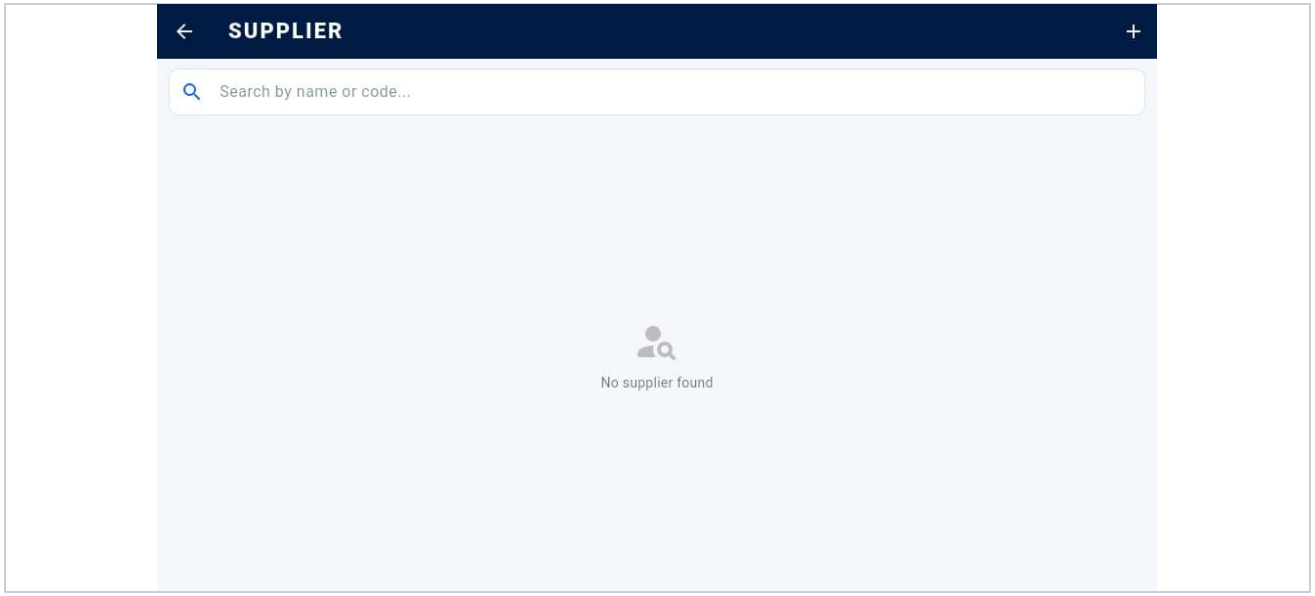


Figure 7.6 — Supplier list (empty state: "No supplier found").

Customer and Supplier lists work the same way as Product Management: search by name/code, tap "+" to add a new contact, or ":" to edit/delete an existing one. These records populate the Customer Name/Code fields on products (Section 6.2) and can be referenced on printed labels.

7.5 User Management

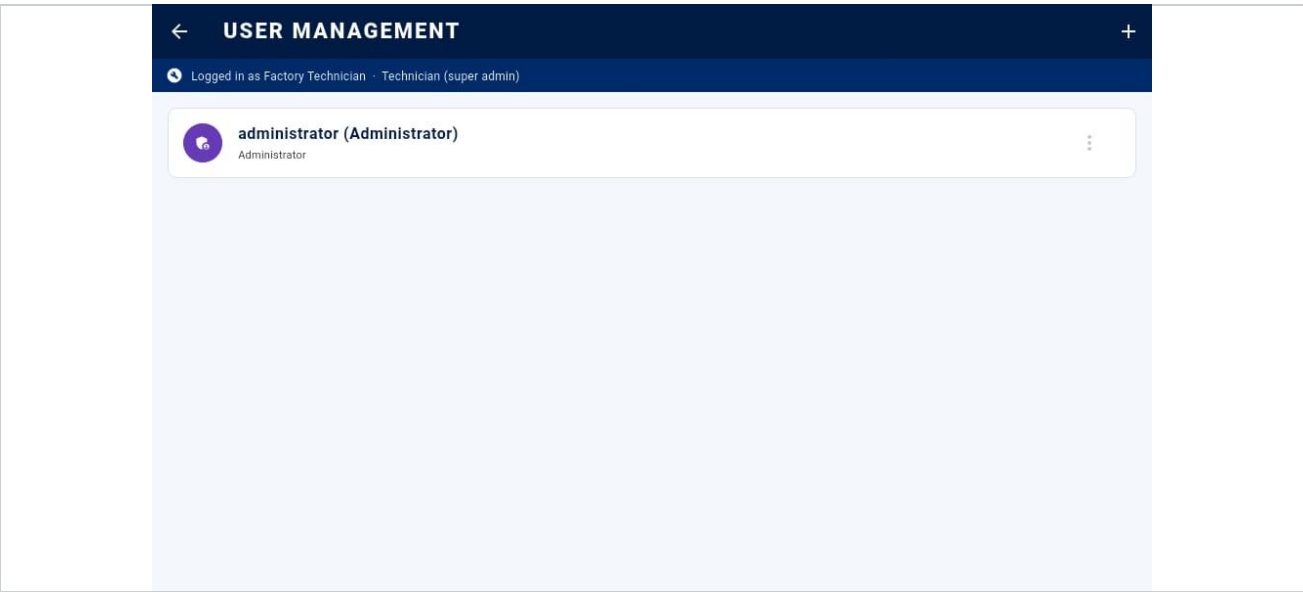


Figure 7.7 — User Management screen, showing the "administrator (Administrator)" account. The banner confirms who is currently logged in and their role.

Administrators can add new user accounts (Operator or Manager level) for shift staff, and edit or deactivate existing accounts. Tap "+" to add a user, or ":" on an existing account to edit, change its password, deactivate it, or delete it.

Field	Description
Username	Login identifier, must be unique
Display Name	Name shown in the header bar and printed on receipts
Password	Login password (stored hashed, never shown in plain text)
Role	Operator or Manager (an Administrator cannot create another Administrator account from this screen)
Active	Toggle to enable/disable login without deleting the account

8. Label Design

Label Design (MENU → Label Design) lets an Administrator or Manager create and edit the receipt/label templates used when printing a weighing result. SKY-7 ships with several default templates covering common printer types.

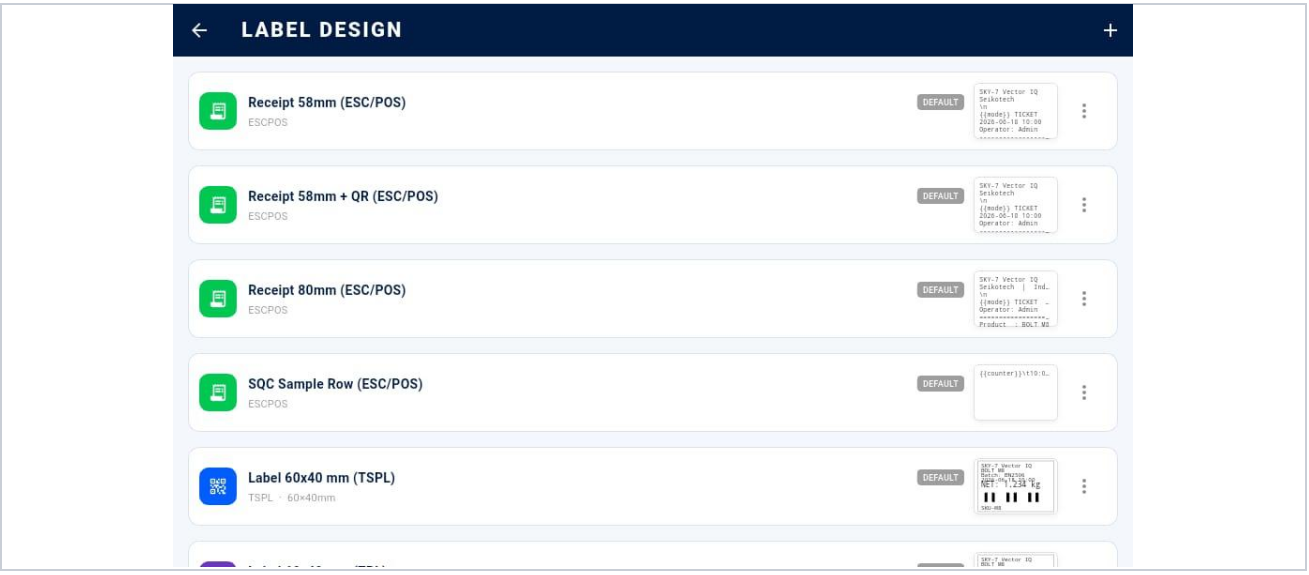


Figure 8.1 — Label Design list: Receipt 58mm (ESC/POS), Receipt 58mm + QR (ESC/POS), Receipt 80mm (ESC/POS), SQC Sample Row (ESC/POS), Label 60×40mm (TSPL), and more.

Template	Format	Typical Use
Receipt 58mm	ESC/POS	Narrow thermal receipt printer, text-only
Receipt 58mm + QR	ESC/POS	Same, with a QR code (e.g. for traceability)
Receipt 80mm	ESC/POS	Wide thermal receipt printer
SQC Sample Row	ESC/POS	One compact line per SQC sample, for continuous logging
Label 60×40 mm	TSPL	Self-adhesive label with barcode, for a label printer
Label 60×40 mm (ZPL)	ZPL	Same label for a ZPL label printer
Label 60×40 mm + QR (TSPL)	TSPL	Label with barcode and a QR code (e.g. for traceability)
Label 60×40 mm + QR (ZPL)	ZPL	Same QR label for a ZPL label printer

Tap a template to preview and edit its layout in the built-in Code Editor, which supports inserting placeholders (e.g. {{product_name}}, {{net_weight}}), QR/barcode commands, and a logo image. Tap "+" to create a new design from scratch. The template marked DEFAULT for each printer mode is used automatically when printing from that mode unless a different one is selected in Communication Setting (Section 9.6).

9. Administrator Settings

Open MENU → Settings to reach the configuration sidebar. As an Administrator you can see the following sections: Basic Information, System Setting, Weighing Setting, Calibration, Communication, and Activity Log. A seventh section, Service Setting, is visible only to Technician accounts.

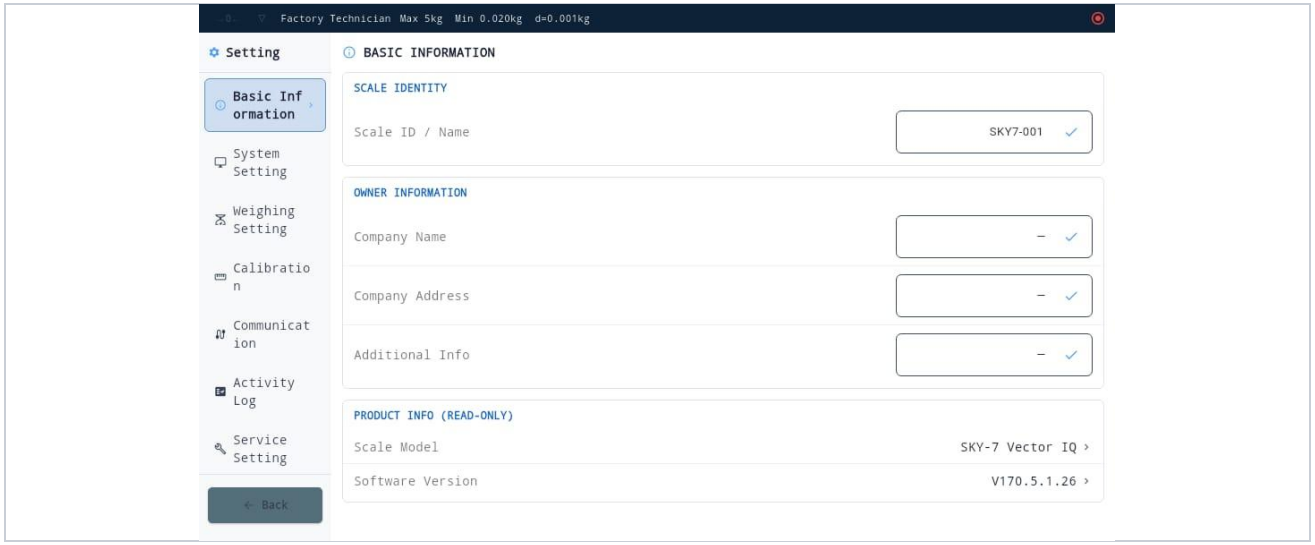


Figure 9.1 — Settings sidebar and the Basic Information screen. The sidebar lists Basic Information, System Setting, Weighing Setting, Calibration, Communication, and Activity Log.

9.1 Basic Information

Basic Information stores identity data that is printed on receipts/labels and shown for reference — it does not affect weighing behavior.

Section	Field	Description
Scale Identity	Scale ID / Name	Internal identifier for this terminal (e.g. "SKY7-001"), useful when several units are deployed
Owner Information	Company Name / Company Address / Additional Info	Printed on receipts/labels as the issuing company
Product Info (read-only)	Scale Model / Software Version	Fixed device information, e.g. "SKY-7 Vector IQ" / "V238.5.1.26" — useful when reporting issues or requesting support

9.2 System Setting

System Setting groups general terminal behavior into three areas (Time & Locale, Display & Input, and Beep & IO Trigger):

Section	Field	Description
Time & Locale	Date & Time	Sync with network time or set manually

Section	Field	Description
Time & Locale	Language	Interface language: English, Indonesian, Chinese, or Japanese
Display & Input	Backlight / Brightness	Screen brightness percentage
Display & Input	Touch Screen Calibration	Recalibrates touch-point accuracy if tapping feels misaligned
Display & Input	Key Beep / Touch Sound	Enable/disable audible feedback on tap
Display & Input	Soft Keyboard	Enable/disable the on-screen keyboard
Display & Input	Keep Screen On	Always On / 1 / 2 / 5 / 15 / 30 minutes
Display & Input	Toast Notifications	Enable/disable small pop-up confirmation messages
Beep & IO Trigger	Beep on LOW / OK / HIGH	Enables the buzzer, and its matching physical IO pin (IO1/IO2/IO3), when a reading falls in that zone — useful for signal towers or reject gates
Beep & IO Trigger	LOW / OK / HIGH Sound, Beep on Save/Print Success	Choose the sound played for each zone, and optionally play a sound when a record is saved or printed successfully (manual or auto). The play button previews a sound.

Administrators additionally see an Application Data section here with Export Database / Import Database, Backup & Restore, and Reset Database (Chapter 11), plus a Software Update option.

9.3 Weighing Setting

Weighing Setting configures the scale's fundamental measurement parameters — this is the "capacity, division, decimal places" configuration referred to in commissioning. Administrator access is required.

NOTE: The table below lists every configurable field and what it controls. Recommended values for each specific SKY-7 Vector IQ model/capacity will be provided separately in the product specification sheet.

Section	Field	Description
Approval & Range	Approval	Legal-for-trade approval class, if applicable
Approval & Range	Range Mode	Single or multi-range capacity mode
Approval & Range	Min Calibration Weight	Minimum reference weight (%) accepted during calibration (Section 9.4)
Scale Capacity	Calibration Unit	Base unit used internally for calibration (typically kg)
Scale Capacity	Decimal Places (DCPT)	Number of digits after the decimal point on the display

Section	Field	Description
Scale Capacity	Capacity (kg)	Maximum weighable load — shown as "Max" in the header bar
Scale Capacity	Division (d)	Smallest reading increment — shown as "d" in the header bar
Speed & Filtering	Weighing Speed / Poll Interval / Filter Value (FLTR)	How fast the indicator samples and updates the display
Filter & Stability	AZT (Auto Zero Track) / Anti-Vibration Filter / Digital Filter (EMA) / Adaptive Filter	Signal-conditioning filters that trade responsiveness for a steadier reading in a noisy environment
Filter & Stability	Stability Range / Stability Time	Tolerance window and time used to decide when a reading is STABLE
Filter & Stability	Zero Dead Band / Motion Detect / Creep Compensation	Additional stability aids (drift and small-motion handling)
Minimum Weight	Min Weight = N × d	Smallest weight the indicator will treat as valid, expressed as a multiple of the division
Power-On Auto-Zero	Auto-Zero Range on Startup	Percentage of capacity within which the scale self-zeros on power-up
Smart Best Value	Best Value / Snap Threshold	Auto round detection: when enabled, a reading that is very close to a round value is snapped to it; Snap Threshold sets how close (0.5 % to 5 %).
Tare & Accumulation	Tare Function / Auto Multi-Tare / ACC Min Weight	Tare behavior and minimum weight to count toward accumulation totals

⚠ **CAUTION:** Changing Capacity, Division, or Decimal Places affects every product's stored limits and should always be followed by a full re-calibration (Section 9.4).

9.4 Calibration

Calibration teaches the indicator the relationship between the load-cell signal and a known physical weight. It requires Administrator access and a certified reference weight appropriate for the scale's capacity. For load-cell wiring, see Chapter 10.

The calibration screen shows the current live weight and raw sensor count at all times, plus the Scale Setup read-only summary (Capacity, DCPT, Division) so you can confirm you are calibrating with the intended parameters from Section 9.3 before starting.

1. STEP 1 — Zero: make sure the platform is completely empty, then tap STEP 1. Wait for confirmation "Step 1 ✓ Zero OK".
2. STEP 2 — Set Reference Load: place the certified reference weight on the platform. Enter its exact weight in grams in the Reference Weight field (or tap a Quick Select preset), wait for the reading to show STABLE, then tap STEP 2. Wait for confirmation "Step 2 ✓ [weight]g stored".

3. STEP 3 — Complete Calibration: with Step 1 and Step 2 both completed, tap STEP 3 to write the new calibration to the device's permanent memory. This action cannot be undone — double-check Steps 1 and 2 before confirming.
4. Remove the reference weight and verify with a few independent check weighings that the displayed reading matches expectation.

The Calibration screen has seven sub-menus in its left column. The procedure above is Load Calibration:

Sub-menu	Description
Load Calibration	Three-step calibration with a certified reference weight (Steps 1–3 above).
Unload Calibration	Weightless calibration (CAL2): enter the load cell Sensitivity (mV/V) and apply it, then set the zero reference with the platform empty.
Zero Calibration	Sets the zero reference and shows the Zero Settings (Power-On Zero, Semi-Auto Zero, Zero Tracking).
Linearity	Multi-point calibration: choose the number of calibration steps, then confirm each step with its reference load.
Trim	Applies a trim (fine correction) value to the calibrated reading.
Calibration Data	Backup and Restore of the calibration data, and Factory Reset of the calibration.
Internal Count	Shows the live raw (internal) count from the load cell, useful for diagnosing wiring and signal.

Additional calibration-related fields available on this screen:

Field	Description
Sensitivity (mV/V)	Load cell rated sensitivity, used as a starting reference for the analog front-end
Power-On Zero	Zero range accepted automatically at power-up (default 10%)
Semi-Auto Zero	Zero range accepted when the ZERO button is pressed manually (default 2%)
Zero Tracking	Continuously nudges the zero point to compensate for slow drift while the platform is empty

9.5 Communication Setting

Communication Setting configures printers, network, and optional hardware add-ons. It is visible to all roles, but editing requires appropriate access.

Section	Field	Description
COM Ports	Add / Edit / Delete printer	Registers a printer or serial device and assigns it a Printer Mode: Off, Continuous (streams net weight), Printer ESC/POS, Printer TSPL, Printer ZPL, ASCII to PC, or Scale 2 Input (second platform). A

Section	Field	Description
		printer can connect by USB (OTG), Bluetooth, LAN/TCP (WiFi or Ethernet), or an RS232 COM port.
Print Settings	Print Only When Weight OK / Print When Not Stable / Auto Print When Stable / Require Zero Before Save	Guard-rails controlling when a print/save is allowed to happen
Print Settings	After Save	Single choice: Off (scale left as is), Auto Zero (reading becomes 0, nothing is stored) or Auto Tare (the weight is stored as tare, then the reading becomes 0). Works in all three modes.
Print Settings	Enable SPC (mode SQC)	Turns on target sample (n), Abort session and Stat.1 / Stat.2 in SQC mode (Section 4.3).
Print Settings	SQC Statistic Format	SQC = compact summary (Count, Sum, Average, Max, Min, Diff, Std Dev); SPC = full report (samples, T1/T2, Stat.1/2, R & X chart). Ignored while Enable SPC is ON, because the SPC format is then always used.
Print Settings	Clear Stat.2 (SPC)	Deletes the cumulative Stat.2 statistics of all products. Stat.1 (per batch) is not affected.
Print Settings	Serial Monitor	Diagnostic screen for Scale 1 and Scale 2: port status, bytes, frames and errors.
Network	WiFi / WLAN, Ethernet (eth0)	Network interface status
Network	Sky-7 Server (PC Manager)	Enables the network service used by the desktop SKY-7 PC Manager companion app for product sync and bulk import/export. Opens IP, port and discovery settings and the PC Manager Secret Key (Administrator).
Hardware Add-ons	Second Platform / Barcode Mode	Second Platform enables Scale 2 (for example an analytical balance on a COM port set to Scale 2 Input). Once on, the Scale 2 parameters appear: Convert Unit (Scale 2 follows the unit selected on the weighing screen), Stable Time (0.5–5 s), Stable Band (0 to ±5 div), Min Print (5–500 div) and Zero Band (5–200 div). Barcode Mode enables a scanner input; Configure Scanner then appears (connection, scanner mode A/B/C, fields).
Action Confirmation	Ask Before Execute (per action)	One switch per action decides whether a confirmation dialog is shown: Save / Record, Print Label, Tare, Zero, SQC Reset / Summary, Delete Record, Delete Product, Logout, Factory Reset. All ON / All OFF set every switch at once. Default is ON for SQC Reset / Summary, Delete Record, Delete Product and Factory Reset. Available to every role.

Under Label Design per Mode, choose which label template (Chapter 8) is used by default for Check Weighing, Part Counting and SQC. For the physical port each COM connection corresponds to, see Chapter 10.

10. Wiring & Connector Guide

This chapter identifies every connector on the rear panel of the SKY-7 Vector IQ indicator and gives the pin-out needed to wire a load cell, an RS232 serial device, and DC power.

10.1 Rear Panel Layout



Figure 10.1 — Rear panel connectors

Connector	Description
ON/OFF Switch	Main power switch for the indicator
LoadCell Connector	5-pin CB connector for the load cell (Section 10.2)
COM2	CB connector — RS232 serial, 3-pin wiring: 1 GND, 2 TX, 3 RX (Section 10.3)
COM3	CB connector — RS232 serial, 3-pin wiring: 1 GND, 2 TX, 3 RX (Section 10.3)
DC Power Jack	Power input, located directly below the ON/OFF switch (Section 10.4)
USB 1	USB host port (e.g. USB flash drive, barcode scanner)
USB 2	USB host port (e.g. USB flash drive, barcode scanner)
HDMI	External Display
AUDIO	External Audio
RJ45 Port	Ethernet (LAN) network connection
WIFI ANTENA	Wifi Repeater

NOTE: COM2 and COM3 are general-purpose RS232 ports — assign what each one is used for (printer, PC, second scale, barcode scanner) in Settings → Communication (Section 9.5).

10.2 Load Cell Wiring

The load cell port (connector 3) is a 5-pin CB connector. Connect a 4-wire analog load cell (or a summing box for multiple load cells) as follows:

Pin	Signal	Description
1	E− (Excitation −)	Excitation supply, negative
2	E+ (Excitation +)	Excitation supply, positive
3	S+ (Signal +)	Signal output, positive
4	S− (Signal −)	Signal output, negative
5	GND	Ground / cable shield

⚠ **CAUTION:** Always power off the indicator before connecting or disconnecting the load cell. After wiring, perform a full calibration (Section 9.4) before relying on any reading.

10.3 RS232 Wiring (COM2 / COM3)

COM2 and COM3 are CB connectors wired with three pins for standard RS232 serial communication (e.g. to a receipt printer, a PC, or a second scale):

Pin	Signal	Description
1	GND	Signal ground
2	TX	Transmit data (out)
3	RX	Receive data (in)

NOTE: Only pins 1, 2 and 3 are used for RS232 on this connector. Connect the indicator's TX (pin 2) to the RX of the connected device, its RX (pin 3) to the device's TX, and GND (pin 1) to the device's ground (cross/null-modem wiring).

10.4 DC Power

Item	Specification
Input Voltage	12 V DC
Minimum Adapter Current	5 A
Connector	DC barrel jack (connector 2, below the ON/OFF switch)

⚠ **CAUTION:** Use only a regulated 12 V DC power adapter rated at 5 A or higher. An undersized or unregulated adapter can cause unstable readings or damage the indicator.

11. Backup, Restore & Database Reset

These functions live under Settings → System Setting → Application Data, and require Administrator access.

Function	Description
Export Database	Writes a full copy of the application database (products, users, records, settings) to a file
Import Database	Loads a previously exported database file, replacing the current one
Backup	Saves a timestamped snapshot of the current database, kept alongside the app for quick recovery
Restore	Restores the application to a previously saved Backup snapshot
Reset Database	Erases all application data — settings, backup, and last-used mode — and returns the app to a factory-fresh state. This cannot be undone.

⚠ **CAUTION:** Always run Export Database or Backup before a Reset Database, a major settings change, or a firmware/software update.

12. Appendix

12.1 Default Credentials Summary

Username	Default Password	Role
administrator	admin123	Administrator

NOTE: Change this password immediately after commissioning (Section 2.1, Section 7.5).

12.2 Permission Matrix

Feature	Operator	Manager	Administrator
Weigh / Zero / Tare / Print-Save	✓	✓	✓
View own weighing records	✓	✓	✓
Export own weighing records	✓	✓	✓
Add / edit products, limits	—	✓	✓
Delete products	—	—	✓
Export/Import Products, Suppliers, Customers, Labels	—	✓	✓
Edit label designs	—	✓	✓
Manage Operator/Manager accounts	—	✓	✓
Delete weighing records	—	✓	✓
Basic Information / Communication	✓ (view)	✓ (view)	✓ (edit)
Weighing Setting	—	—	✓
Calibration	—	—	✓
Backup / Restore / Factory Reset	—	—	✓
Activity Log (audit trail)	—	—	✓
System Power (restart/shutdown)	—	—	✓

12.3 Glossary

Term	Meaning
Net Weight	Gross weight minus tare weight
Gross Weight	Total weight measured, including any container/packaging

Term	Meaning
Tare	Weight of an empty container, subtracted so only the contents are measured
Pre-Tare	A fixed tare value stored per product, applied automatically when that product is selected
Division (d)	Smallest weight increment the display can show
DCPT	Decimal point position / number of decimal places shown
STABLE / MOTION	Reading status: settled vs. still changing
SQC	Statistical Quality Control — sampling-based statistical checking
PCS	Pieces — the unit used in Part Counting mode
Excitation (E+/E−)	The supply voltage fed into a load cell that its signal output is measured against
SPC	Statistical Process Control — the full SQC print (samples, T1/T2, Stat.1/Stat.2, R & X chart), enabled with Enable SPC
Stat.1 / Stat.2	Cumulative statistics in SQC/SPC: Stat.1 per batch, Stat.2 per product across batches
Session	One run of weighings in SQC mode that closes with a summary; sessions of the same batch are numbered #1, #2, …

12.4 Document Information

Item	Value
Document Title	SKY-7 Vector IQ — Administrator Manual
Applies To	SKY-7 Vector IQ, software version V238.5.1.26
Scope	Administrator-level operation, product/data management, label design, weighing setup, calibration, and connector/wiring reference
Revision	1.2