

OPERATIONS MANUAL



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When this icon is present the screen or software has not been finalised and is still under construction.

1. Features

MultiWeigher 3000 is designed to run on a Microsoft Windows operating system. The MultiWeigher 3000 software is designed to meet the growing requirements for real-time weight capture, data collation and analysis. MultiWeigher 3000 provides framework and structure for a factory-wide Weight Information Management System (WIMS).

The MultiWeigher software is capable of monitoring, checking and grading the weight data of various products that are passed over the connected scales or checkweighers.

☑ Operating Systems

The MultiWeigher 3000 software can run on most Microsoft Operating Systems - Windows 2000, NT, XP Professional, XP Home Edition and Vista.

☑ Visually Appealing

The software utilises soft Pascal colors in bold text for the identity of the target, under, over and erroneous weights. OK weights in olive, Under in orange, Over in red and Errors are inverse solid red blocks.

☑ Various Products

The MultiWeigher 3000 can be used to collect weight data from: Platform Scales, Scientific Balances, Weight Indicators, Checkweighers, Counting Scales and other weighing devices.

☑ Various Protocols

The data string input to the computer from the weight scale can be modified to suit any piece of weighing equipment, from any scale manufacturer as long as the scale is fitted with a serial interface. The serial interface can be any one of the following:

- A) RS232 Serial Output and Serial I/O.
- B) RS485 Serial Output and Serial I/O.
- C) RS422 Serial Output and Serial I/O.
- D) Ethernet TCP/IP, Modbus and Port Address.

☑ Data Bases

The MultiWeigher software package stores its data in a comma delimited text format which can be easily read by products like MS Excel. The data recorded is: Weight, Time, Date, Product, Operator, Station and Errors. These records can either be printed or viewed on the monitor screen.

☑ Reports

Reports can be viewed, printed and sorted by Date, Month, Operator, Product, Table, Station, Transaction, Transaction summary or Custom Extra data fields.

☑ Checkweighers

The MultiWeigher 3000 software as standard can be interfaces to four checkweighers available in today's market place; however MultiWeigher 3000 can be up-graded to included data capture from any checkweigher with a serial output.

2. Hardware Requirements

2.1.1. Hardware Requirements

Minimum Computer Hardware Requirements

- Intel Pentium® 2.2GHz or AMD equivalent Processor
- 17" TFT Colour Monitor
- 50 MB Free (minimum install) Hard Drive Space
- 256 MB Scratch "Temp" space
- 512 MB RAM
- 512 MB Virtual Memory Space
- 32+ MB Graphics Card
- 10/100 MB Ethernet
- Multiple USB ports (One port for Security Dongle)
- CD/DVD ROM Drive

Recommended Computer Hardware Requirements

- Pentium IV 3.0G+Hz or AMD equivalent Processor
- 19" TFT Colour Monitor
- 250GB (100 MB Free Hard Drive Space)
- 1GB Scratch "Temp" space
- 1GB RAM
- 1.5 GB Virtual Memory Space
- 64+ MB Graphics Card
- 10/100/1000 Ethernet
- Multiple USB ports (One port for Security Dongle)
- CD/DVD ROM Drive

Other Hardware Requirements

- Weight Scale/s with Serial RS232/RS485/RS422 Option Fitted
- Checkweigher/s with Serial RS232/RS485/RS422 Option Fitted
- Multi-port Serial to Ethernet Device Server (i.e. Sena, Moxa, Lantronix)
- Serial to Ethernet data cables for each Weight Scale/s.
- Personal Computer with a running Windows Operating System

2.1.2. Hardware – Typical Overview

The typical hardware in a system that the MultiWeigher software will interface to, consist of a personal computer, multi-port serial to Ethernet device server and several scales, indicators, checkweighers or other weighing equipment.

There is a practical maximum limit of 255 scales that can be connected at any one time in a single weight data capture system. The scales <u>MUST</u> be capable of either transmitting weight data by manual print button, transmit continuously or the MultiWeigher software can command-request the weight data from the scale if this function is available in the scale.

The personal computers will be set at a particular IP address and Subnet mask on the network so it is important to set the Ethernet device server in the same IP and Sub mask range.

The Ethernet device server allows for the scales to be set as different serial port data formats i.e. 7, e, 1 or 8, n, 1 on the same network, these settings in the Ethernet device server can either be configured using the Network Enabler Administrator software or by using Windows Internet Explorer or Mozilla Firefox.



3. MultiWeigher Software

3.1.1. Microsoft Windows Environment

As with most MS Windows software programs the insertion of data is predominantly carried out by clicking the data field with use of a mouse or mouse pad, and to a lesser extent by using the keyboard. When the data bases are entered such as operators, products, etc... minor entry of information is carried out via the keyboard.

Accessing the relevant areas of the program is undertaken by clicking on the relative folder or tabs. Other software applications such as MS WORD or MS EXCEL can also be operating whilst the MultiWeigher system is in use.

The flexibility of MS WINDOWS allows the operator to enter a particular field by simply clicking on that field or folder. These fields and folders will be discussed throughout the manual.

In any PC based system it is strongly recommended that periodic backing-up of the data bases is carried out, this avoids losing significant amounts of information in the event of power surge, hardware damage etc...

3.1.2. Keyboard and Mouse Environment

When running the program the folders and fields can be accessed by either clicking on the mouse whilst the pointer is over the particular title or by holding the Alt key and typing the underlined first letter (E.g. Alt + F) of the menu group. This opens up the relevant menu and enables the user to further select the relevant area by either using the mouse, the arrow keys on the keyboard or the Alt + letter.

The operator will gain experience using a combination of both functions to skillfully move around the screen, enter information and select functions.

The 'TAB' key moves the focus from one data entry box to the next. The 'ENTER' key (like the tab key) moves the focus from one data entry box to the next. The 'arrow' keys are used to move around within a data entry box or table. The 'backspace' key is used to back over and change the text.



3.1.3. Launching MultiWeigher



Double Clicking the MultiWeigher icon on the desktop will launch the MultiWeigher software package. The screen below will be displayed for several seconds while the MultiWeigher software loads all the connected devices configuration parameter, this progress will be displayed by the sliding bar.



Figure 1 - MultiWeigher Launching

The next screen to be displayed automatically is the Login screen.



MultiWeigher 3000 uses three types of inputs for people using the system.

User > is one who uses a computer system. In order to identify oneself, a user or username is also called a screen name, handle, and nickname.

Password > is a word or string of characters that is entered, often along with a username, into a computer system to log in or to gain access to some resource. Passwords are a common form of authentication.

Operator > is a person who performs a function, in this case it is a person who weighs product in a factory commonly called a packer.

MultiWeigher 3000 data capture software identifies three user levels and their passwords for authentication and protection.

Level 1	Operator user name only gains access to the top layer folders; products, checkweighers, scales and reports, the lower layer folders will not be visible
	will not be visible.

Level 2

Level 3 Technician user name gains full access to both top and lower folders.

Administrator user name has access to the same folders as the operator plus the lower layer folders passwords and backup/restore.

MultiWeigher 3000			
Configuration Reports Log Files			
Login Settings Backup/Restore			
		Operato	or - Level 1
		Adminis	strator - Level 2
		Technic	ian level 3
	Usernar	ne	
	Technic	cian 🖌	
	Passwo	rd	
	######	# Passwo	ord Required
		Login	
	Please	Login!	
	EXI	T Multi-Weigher	
			Sancer
	MINDMIND 0003 13 13333		Server

Figure 2 - Login Screen

The MultiWeigher 3000 software is <u>NOT</u> active until one of the above user levels and its associated password has been entered correctly.

When a user level and password are entered correctly the MultiWeigher 3000 software will automatically search for a PC connected USB Hasp security device.



The USB Hasp will identify the version of software purchased and will also

either allow the software to run in Demonstration Mode "USB Hasp security device NOT INSTALLED" or Registered Mode "USB Hasp security device INSTALLED".

When the login button has been pressed the MultiWeigher 3000 software will identify which version has been installed and acknowledges the user and their level of access.

The Commence Data Capture button when pressed initiates the MultiWeigher 3000 software to start capturing data from all connected devices that are enabled. It also lets the software to allocate the maximum permissible amount of time available to handling the communication ports.



Figure 3 - Log on Validation



If the MultiWeigher 3000 software is running in demonstration mode only one weighing device can be controlled by the MultiWeigher 3000 software package however, all other software functions will be available.

When exiting the MultiWeigher 3000 software the operator should either

use the button at the top of the screen or the "Exit MultiWeigher" button at the bottom of the lower layer of Login screen.

3.1.5. MultiWeigher Device Setup

To setup MultiWeigher 3000 the Technician level and password will need to be activated as this level will gains full access to all the MultiWeigher 3000 folders. The first task is to install and configure all connected devices; this is done by using the **Devices** folder on the lower layer. The devices folder stores all the details for each piece of weighing equipment connected in the field; such as weight scales or checkweighers.

[Configuration > Devices]			
MultiWeigher 3000			
Configuration Products Checkweighers Che	ckweigher Dashboard Scales Reports Log Files		
New Delete U Name Checkweigher 1	Mo Accept Save Duplicate		
Description AD4404 Checkweig	gher Line 1		
Line Number 1		Color Code S00FFEC00	
Device Type Checkweigher	Table 1	ID Number 2	
Driver A&D AD4404	•		
Comms Mode RS232 -		Rescan Mode Automatic	
Com Port 2		DB Poll ENABLED	
Baud Rate 9600 -		Error Interval 500 (mSec)	
Parity NONE -			
Stop Bits 1 💌			
Data Bits 8 💌		RESTART DATA CAPTURE	
Technician logged in at level 3	ANDAND08091919999	Server	

Figure 4 - Device Screen



New > clicking on the New button will open the device window. In the device window a user can display All Devices, Used Devices or Unused Devices.



Delete > clicking on the Delete button will allow the user to delete the details of the selected device; the name, description, line number, device type, driver will be deleted and this device will be disabled.



Undo > when first opening the device folder this button will be grayed out. Clicking on the Undo button will erase all the changes that have just been made for this particular device back to the original details when previously opened.



Accept > when first opening the device folder this button will be grayed out. When a change is been made to the device folder the Accept button will become active this will allow the user the Accept the changes made to this particular device.



Save > when first opening the device folder this button will be grayed out. The Save button will only become active after the Accept button has been pressed, this confirms that the changes made to this device need to be stored and saved.



Zoom > the zoom button allows the user to view and filter All, Used and Unused devices stored in the system



First Record > the First record button when pressed will display all the details for the first device installed; this is also referred to as ID Number 1.



Previous > the Previous record button when pressed will display the record details for the device with preceding ID Number from the device the user is now displaying.



Next > the Next record button when pressed will display the record details for the following ID Number saved in the device database.

Last Record > the Last record button when pressed will display all the details of the last device available, this is also referred to as ID Number 255.

- Name
 This field is to store a unique device name; this will be used in various other folders in MultiWeigher 3000
 Characters = 30 Alpha and Numeric
- Description
 This field is to store a complete alpha numeric device description
 e.g.; A&D EK Scale on Line 1 in Position 1
 Characters = 40 Alpha and Numeric
- Line Number This field identifies the scales position in a line or on a table. It can also be used as a descriptor for the checkweighers. Characters = 20 Numeric
- **Table** The table field is a drop down selection box MultiWeigher stores a maximum of 240 scales; this allows 12 lines or tables with a maximum of 20 scales on each tables.
- **Device Type** The device type is a drop down selection box. Selectable: Checkweigher, Scale, Multihead Weigher and Key Fob Generator
- **Driver** The driver field is a drop down selection box; drivers available are:
 - A&D 4404 Checkweigher Controller
 - A&D 4323 Digital Weight Indicators and Scales
 - A&D Scales
 - A&D Indicators
 - Ishida DACSV Checkweighers with RS232 or RS485
 - Ishida DACSW Checkweighers with RS232 or RS485
 - Ishida DACSV/W Checkweighers with Stream
 - Yamato CE2100 Checkweigher with RS232
 - Adilam (RFID) Radio Frequency Identification Device

- MT 8434 Mettler Toledo mini tiger retail scales
- SIMSCALES Scales Simulator
- SIMCHECKWEIGHER Checkweighers Simulator

Comms Mode The comms mode is a drop down selection box

Available communication methods are RS232, RS485 and TCP/IP. e.g. If RS232 is selected extra fields will be displayed to obtain the full RS232 protocol requirements

RS232
26
9600 💌
NONE 💌
1 💌
8 💌

- **Disable** The connected device can either be Enabled or Disabled Disabled = no device connection made and no data capture Enabled = a device connection is made and data capture recorded
- Color Code Mouse left-click on the field will open the pallet box.

The color field stores the selected device color

Default primary colors will be identified e.g. Red = clRed

Shaded colors are identified as e.g. Light Orange = \$000080FF



- ID Number The ID number is generated automatically by the MultiWeigher 3000 software. 255 devices are permissible the device breakdown is 240 scales and 15 checkweighers
- Rescan Mode Rescan Mode allows the update of all the information of the product captured in the MultiWeigher to be the same as the Checkweigher Manual Only means the rescan is done manually Automatic means the rescan is done automatically
- **DB Poll** The DB Poll is the switch to Enabled or Disabled MultiWeigher 3000 from storing captured checkweigher weights to the graph database.

Error Interval The Error Interval field is the fastest weighment speed practical by an Operator. This value is stored in milliseconds and if weights are received in a shorter time period the weighment is recorded as an error.

e.g. the operator puts a product on the scale and pressing print several times.



Restart Data Capture enables the MultiWeigher to start capturing data from the Enabled devices This icon will be shown at the bottom right of the screen when the MultiWeigher Data Capture is running

\ Server

ANDAND08091919999

3.1.6. MultiWeigher Settings

The MultiWeigher 3000 settings folder stores all the system hardware and software configuration settings and should only be modified by authorized and experienced personnel.

[Configuration > Settings > General]	
Login Passwords Settings Devices Debug Backup/Restore	
General Scales Checkweighers AQS / UTML	
Use Virtual Thread Commo Curde (maan) 100 Virtual Commo Flanced Time	Restart Data Capture
Comms Device Interval (msec) 100	Stop Data Capture
Day Shift Starts at 7:00:00 AM 😴 Day Shift Name Day Shift	
Afternoon Shift Starts at 3:00:00 PM 🔆 Afternoon Shift Name Afternoon Shift	
Night Shift Starts at 11:00:00 PM 🗧 Night Shift Name Night Shift	

Figure 5 - General Settings Screen

- **Use Virtual Thread** allows the user to either select the standard communications thread or a virtual communication thread; tick selects, blank unselects.
- **Comms Cycle** is the maximum time period that MultiWeigher should complete a hardware communications cycle. Time is editable from 100 to 3,000 milliseconds.
- **Comms Device Interval** sets the time period for MultiWeigher to read the checkweigher data stored in the checkweigher controller, the data received is then displayed in the checkweigher folder. Time is editable from100 to 100,00 milliseconds
- Day / Afternoon / Night Shift Starts sets the start times of the Day, Afternoon and Night shifts of the production runs
- Day / Afternoon / Night Shift Name gives the names for the Day, Afternoon and Night shifts of the production runs

Restart Data Capture	Restart Data Capture enables the MultiWeigher to start capturing data
Stop Data Capture	Stop Data Capture enables the MultiWeigher to stop capturing data

[Configuration > Settings > Scales]
Login Passwords Settings Devices Debug Backup/Restore
General Scales Checkweighers AQS / UTIML
Update Time for Data Capture (sec) 60
Scale Auto Log off Time (sec) 120
Scale Simulator Standard Deviation 4.5
C Location Display Enable

Figure 6 - Scale Settings Screen

- **Update time to Data Capture** is the time period for MultiWeigher to update the weighing scales data capture folder. Time is editable from 5 to 3,600 seconds
- Scale Auto Log Off Time is the minimum time period for a scale to perform a complete weighment cycle. Start from zero, apply weight, stabilize and return to zero. Time is editable from 240 to 43,200 seconds
- Scale Simulator Standard Deviation is the default Standard Deviation used to run the Scale Simulator
- Location Display Enable

[Configuration > Settings > Checkweighers]

Login Passwords Settings Devices Debug Backup/Restore
General Scales Checkweighers AQS / UTML
Checkweigher Log Database Poll Time (sec) 10
Auto Rescan for Product Change Time (sec) 10
Use Shift information to record Checkweigher runs
☑ Reset Batch Field at end of Shift or On Data Reset
Average Over Time or Sample
C Average Calculated over Time
Average Calculated over Sample
Default Checkweigher Standard Deviation for Simulator Mode 4.0

Figure 7 - Checkweighers Settings Screen

- **Checkweigher Database Poll Time** sets the time interval to which the MultiWeigher software updates its graph database with the Target, Average and Standard Deviation values that are present in the Checkweigher folder at that point in time. This creates important plant production trending. Time is editable from 10 to 3,600 seconds
- Auto Rescan Time is the time allowed for MultiWeigher to update information of product captured as the checkweigher. Time is editable from 10 to 3,600 seconds
- Use Shift information to record Checkweigher runs allows the user to use the shift information that is set in the General settings to record the checkweigher runs
- **Reset Batch Field at end of Shift or On Data Reset** enables the reset of data of a specific product batch at the end of a shift
- Average Over Time or Sample gives the option of showing Average over a period of time or a number of samples on the Checkweigher folder. The period of time and the number of samples is editable by the user
- **Default Checkweigher Standard Deviation for Simulator Mode** is the default Standard Deviation used in the checkweigher simulator

[Configuration > Settings > AQS / UTML]

n Passwords Devices Debug Backup/Restore	
General Scales Checkweighers AQS/UTML	
V Enable Assistance Tool for Regulations Compliance	
	1

Figure 8 - AQS / UTML Settings Screen

• Enable Assistance Tool for Regulations Compliance enables the use of the AQS tools during the scale and checkweigher simulations when the Enable box is checked

The MultiWeigher 3000 **Password** folder is only accessible by the Level 2 Administration and Level 3 Technician user names; the Level 1 Operator user name does not have access to this folder, so it will not be displayed.

The password folder allows the user to Create, Modify and Delete operators and their associated passwords plus the ability to set the level for the user's password. The password folder also gives the user the ability to assign an RFID tag or key to any of the operators stored in the MultiWeigher 3000 database.

The RFID number is obtained automatically from a connected and device allocate reader, the number if known can also be entered manually. A correct RFID number will typically look like "07348C6C8D; this is a unique registered 10 digit 256 bit encrypted number.

iguration > Passwords]		
Passwords Settings Devices Debug Bac	kup/Restore	
Constanting 1	Create User and Password	Kev Fob Generator
Create User		
	Enter New User Name	Key RFID Number
Modify User Password	Robert Wong	*****
		Salart Lizar
Delete User	Enter New Password	
	###	
Add RFID Code to User	Enter New Password Again	1
[]	###	Enter Key for User
View / Edit User List	Enter Payroll Number	Clear Liser Key
	RVV-01	
	Enter User Code	In Devices set up the
	###	Generator" to be
		able to generate key
	Create User	codes for the users.
	Close	1
		Close

Figure 9 - Password Screen

- **Create User** button allows the administrator to enter user names, user passwords and the user's payroll numbers. These data fields are required for each and every user whom will be utilizing the data capture system
- Modify User Password button allows the administrator to modify existing user passwords if they need to be changed for operational or security reasons. The correct users name and original password will need to be verified first before a change can occur.
- Delete User button allows the administrator to remove users and their details from the MultiWeigher database. This is normally performed when a user leaves the place of employment.

- Add RFID Code to User allows the administrator to allocate RFID key fobs or RFID wristbands to a user that will be using the weighing equipment in the factory. The RFID code is 128Bit encrypted for security purposes and cannot be reproduced to another key fob or wristband.
- View/Edit User List allows the administrator to easily view the registered system user and their specific user details. It also gives the administrator the ability to edit the registered user's details. Also from within this screen the administrator can insert new users into the system database.

Select Operator Select Operator Enter Key for Operator Clear Operator Key Clear Operator Key In Devices set up the Device "Key Fob Generator" to be able to generate key codes for the operators.

-

Key Fob Generator

Key RFID Number

This screen simplifies the addition on users by combining both the Create User and Add RFID screens into the one-hand edit screen.

NAME	LEVEL	KEYFOB	PAYROLL	CODE	1
Administrator	2	0414DC6E10	AD-01	Admin	
Paul Rice	1	0414DC6EE9	PR-01	Paul	
Colin Seddon	1	0414DC6EE8	CS-001	Colin	
Tony Fischetto	2	0414DC6EE7	TF-001	Tony	
Robert Wong	1	0414DC6EE6	RVV-01	Rob	
Operator	1	0414DC6EE5	OP-01	Operator	
					2
)()					>
Insert	Undo	Accept Save	Fi	rst Previous Next	≥ ↓ Last

Figure 10 - Operators Screen

MultiWeigher 3000 software can store a total of 250 products in its database. To add a new product to the MultiWeigher database, select the **Products** folder on the top layer of the screen, then press the Insert button and fill in the required data fields.

MultiWeigher 3000		
Configuration Products Checkweigh	hers Checkweigher Dashboard Scales Reports Log Files	
Insert Delete	Undo Accept Save	↓ @
Product Name	Product Code	
300g Cheese	0001	Update CW Codes
Checkweigher Product Name	e Checkweigher Product Code	
300g Cheese	0001	
Product Description		Import Products
300g Cheese		
Product Enabled	ENABLED Pouch Size (mm)	
Target	300 Line Number	
SG	1.0	
Units	grams 🔻	
Underweight (Low Low)	10	
Underweight (Low)	5	
Overweight (High)	5	
Overweight (High High)	10	
Technician logged in at level 3	ANDAND08091919999 11/08/2010 12:38:52 PM :: Device No. 2 (Checkweigher 1) Communications Failure!	Afternoon Shift - Server
	Figure 11 - Product Screen	



Insert > clicking on the Insert button will clear the product folder and allows the user to enter a new product information and its characteristic details.



Delete > clicking on the Delete button will allow the user to delete the active product from the database; the name, code, and product details will be deleted and this product will be disabled.



Undo > when first opening the device folder this button will be grayed out. Clicking on the Undo button will erase all the changes that have just been made for this particular product back to the original details when previously opened.



Accept > when first opening the device folder this button will be grayed out. When a change is been made to the product folder the Accept button will become active this will allow the user the Accept the changes made to this particular product.



Save > when first opening the device folder this button will be grayed out. The Save button will only become active after the Accept button has been pressed, this confirms that the changes made to this product need to be stored and saved.



Search > the search button allows the user to view all products stored in the database, and the ability to then select a product for modification or deletion.



First Record > the First record button when pressed will display all the details for the first device installed, this is also referred to as Line Number 1.



Previous > the Previous record button when pressed will display the record details for the device on the line preceding the device the user is now displaying.



Next > the Next record button when pressed will display the record details for the next device saved in the device database.



Last Record > the Last record button when pressed will display all the details of the last device available, this is also referred to as Line Number 255.

- **Product Name** This field is to store the Scale products short name and it will be used in various reports throughout MultiWeigher Characters = 12 Alpha and Numeric
- **Product Code** This field is to store a unique short Scale product locator or number Characters = 4 Numeric
- Checkweigher Product Name This field is to store the Checkweigher products short name and it will be used in various reports throughout MultiWeigher Characters = 12 Alpha and Numeric
- Checkweigher Product Code
 This field is to store a unique short Checkweigher
 product locator or number
 Characters = 4 Numeric
- **Prod Description** This field is to store a fully detailed products description Characters = 40 Alpha and Numeric
- **Prod Enabled** This field is to activate or deactivate a product. Enable or Disable
- **Product Target** This field is to store the product target weight Characters = 6 Numeric
- **Product SG** This field is to store the specific gravity of a product. SG = 1 if there is no special required specific gravity
- **Product Units** This field is to store the unit of a product. Selections are grams, kg, tonnes, ml and litres

- **Product Pouch Size (mm)** This field is to store the pouch size of a product
- Product Line Number This field is to store the line number of a product
- Tolerances There are four fields to enter target weight tolerances; they are LoLo, Lo, Hi, and HiHi These values are checked as weight value is not equal to set weight target Characters = 4 Numeric



Update CW Codes updates the Company Product Name and Description into the Checkweigher data and vice versa



Import Products enables user to import product information from a text file





Figure 12 - Import Product Screen

Right-click on the Product window enables users to transfer the Product information into a selected Checkweigher

This function can also be used to recall the product code to be run by the Checkweigher

÷	Se	end P	Preset Data to Checkweigh	er Selected			- 🗆 🛛		
	Select Checkweigher to send to								
		ID	NAME	DESCRIPTION	~				
		1	Checkweigher Simulator	1 9	SIMCHECKWEIGHER	Checkweigher Simulation Test			
	►	2	Checkweigher 1	1 /	A&D AD4404	AD4404 Checkweigher Line 1			
		3	Checkweigher 2	2 4	A&D AD4404	AD4404 Checkweigher Line 2			
							~		
	<						>		
	Th	ese	Presets will be sent to Pr	oduct Code 000	04				
				Send P	roduct Code informa	ation and additional setpoints t	o the		
			Send 🚽	selected	l Checkweigher. recall Product Code to	be run by the selected Checkwei	aher		
	Ch	neck	Weigher Selected	(In this e	example, Product Cod	e = 0004)	9.101		
			<u>A&D 4404</u>	addtional	setpoints				
			Description Val	ue	Units and Range				
			Pre Tare 0.0						
	Full Filling 0								
			Zero Band 0						
			Target Count 0		(0 - 99999)				

Figure 13 - Send Data Screen

Additional setpoints: Pre Tare, Full Filling, Zero Band, and Target Count can also be added into a selected AD4404 Checkweigher



Products can also be added to the MultiWeigher database automatically from the checkweigher screen by right mouse clicking on the name field as below.

Product Code	002	Name	Strav	vberry	Total Weight	0.0	kg
Line Number 1	200	Batch No.		Add Product Code to Database			
Description				Transfer Checkweigher Setpoints to Transfer Product Code Setpoints to	Database Checkweigher		

3.1.9. MultiWeigher Backup and Restore

At the end of a Week, Month or Year the active databases can be archived and stored for future analysis; these created user files are known as Archived Database. The archived database can be saved in any directory under any permissible windows file name on the MultiWeigher hard drive, backup drive or connected network server drive.

The databases that can be backed up are Checkweigher Active Database, Checkweigher Log Database, Scale Data Capture Database and the MultiWeigher Main Database. There is only one database that can be restored in case of hardware failure and that is the MultiWeigher main database.

MultiWeigher 3000		
Configuration Products Checkweighers Cher	ckweigher Dashboard Scales Reports Log Files	
Login Passwords Settings Devices	Debug Backup/Restore	
Select a Function Backup Cher Restore Main Backup Cher Backup Cher Backup Cher Backup Cher Backup Stat Backup Stat Writ gbak: Writ gbak:	ckweigher Log Database ckweigher Database ckweigher Log Database ckweigher Log Database icb Database n Database n Database icb Data	
gbak: writin gbak: writin gbak: writin gbak: closin	ig referential constraints ig check constraints ig SQL roles ig file, committing, and finishing. 833536 bytes written	
Technician logged in at level 3	ANDAND08091919999 Afternoon Shift / Server	

Figure 14 - Backup and Restore Screen

Backup database procedure

First select the function you require to be performed, then if required tick the archive box and select a date to archive up to, this function allows the user to archive last weeks data and not effect the present weeks data being captured in the active database.



Press the start button, MultiWeigher will then open the standard Microsoft Window "Save As". From this window the user can select a previous file name and location or type in a new archived file name and file location.

e.g. 19-08-2008 CW Database.gbk

Restore database procedure

Only restore the database if the MultiWeigher software is updated to a newer version and the previously backed up database need to be restored in the newer version software.

You can also restore database if the current database is corrupted as shown in the warning message below. Read the warning instruction properly and do everything it asks before continue the database restore.

Login Passwords Settings Devices Debug Backup/Restore
Salant a Evention Destore Main Database
This will restore the main database from a previous version into a new version
=>
Confirm X
WARNING!! This will Restore the active Database with an earlier Backup! Data may be Lost! Ensure that you only need to do this if the current Database is corrupted! or that you are importing to a new version of Database! Also be sure there is no Batch Running and all your work is completed! Do you wish to Continue?

Figure 16 - Restore Screen

	Open		
Click Yes to continue and a standard	Look in:	🔁 Backups 💌 🗢 f	⊇ d*
Microsoft Window "Open" will open.	My Recent	Main.gbk	
Choose the database file to be restored	Documents		
	Desktop		
	My Documents		
	My Computer		

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-

Main.gbk Database (*.gbk)

Files of type

4. MultiWeigher Checkweighers

4.1.1. MultiWeigher Checkweigher Screen

To view the live real-time data being captured from the connected checkweighers click on the top layer **Checkweigher** folder; this will then open the low layer checkweigher folders as can be seen in the example image below.

If the data capture has been activated in the [Configuration > Login] screen or the Device folder, the Comms Status field will display either [Comms Good!] or [Comms Failure!].

MultiWeigher 3000								
Configuration Products Checkweigher Dashboard Scales Reports Log Files AQS Tool Update CW Codes Checkweigher Simulator Checkweigher 1 Checkweigher 2								
Product Code 0001	Nam	e	300g Cheese			Total Weight	2.7 Kg	Units grams
Line Number 1	E	Batch No.				Comms Status	Comms Good!	
Description 300g (Cheese							
Targets		Limits			Stats			
Tare 0.0		Lo Lo	10.0	_	Min	284.2	STD	9.2
Target 300.0	0	Lo	5.0		Мах	313.6	STDP	8.7
Zero Band 2.0		Hi	5.0		Average	299.6		
Full Filling 0.0		Hi Hi	10.0		Average	0.0	Over last 12	Samples
Counts								
Low Low Count	2	22.2 %	OK Count	3		Metal Count	0	
Low Count	1	11.1 %	Reject Count	6		Duplication Count	0	
High Count	2	22.2 %	Target Count	0		Percentage Accepte	ed 33.3	
High High Count	1	11.1 %	Total Counts	9		Crush Count	0	
START STOP	START STOP CLEAR TOTALS Rescan Code Number Write Export Mile ESTOP							
Technician logged in at level 3	ANDANDO	8091919999					Afternoon S	Shift Server

- Figure 16 Checkweigher Screen
- <u>AQS Tool</u> Clicking on the **AQS Tool** button will open up the AQS / UTML Compliancy test during the Checkweigher Simulation
- <u>Update CW Codes</u> Clicking on the **Update CW Codes** button updates the Product Code information in the Multiweigher to be the same as the checkweigher

- **Product Code and Name** These fields store the checkweigher Product Code and Name being captured by the MultiWeigher These fields are writable by the user
- Total Weight and Units These fields store the total weight and its unit of the checkweigher product being captured These fields are NOT writable by the user
- Line Number This field stores the production Line Number of the checkweigher being captured This field is NOT writable by the user
- Batch No. This field stores the Batch Number of the checkweigher product being captured This field is writable by the user
- **Comms Status** This field notifies the user if the Communication between the Device and the MultiWeigher is established This field is NOT writable by the user
- **Description** This field stores the Description of the checkweigher product being captured This field is NOT writable by the user

Targets

- **Tare** This field stores the Tare value of the captured product needs to achieve its targeted net weight This field is writable by the user
- Target This field stores the Target value that needs to be achieved by the captured product This field is writable by the user
- Zero Band This field stores the Zero Band that captured product needs to initialized its weighing This field is writable by the user
- Full Filling This field stores the Full Filling value of the captured product indicating that the product is fully filled This field is writable by the user
- Limits The fields under Limits store the LoLo, Lo, Hi, and HiHi limits for the judgment of the product being weighed These fields are writable by the user

• Stats

 Min and Max These field store the Minimum and Maximum weights of the captured checkweigher product These fields are NOT writable by the user Average This field store the overall Average weight of the captured checkweigher product This field is NOT writable by the use

> Average Over Last ____ Minute / Samples stores the Average weight over a period of time or over a number of samples. The numerical number of minute and sample is writable by the user This Average field is NOT writable by the user

- STD This field stores the Standard Deviation of the captured checkweigher product This field is NOT writable by the user
- STDP This field stores the Population Standard Deviation of the captured checkweigher product This field is NOT writable by the user
- <u>Start</u> Clicking on the **Start** button will initiate MultiWeigher to transmit the serial start command via the connected communication method to a particular checkweigher controller.

The checkweigher receiving this command will switch from stop mode to run mode; all the connected conveyors and associated equipment will run

• <u>Stop</u> Clicking on the **Stop** button will initiate MultiWeigher to transmit the serial stop command via the connected communication method to a particular checkweigher controller.

The checkweigher receiving this command will switch from run mode to stop mode; all the connected conveyors and associated equipment will stop

• <u>Clear Totals</u> Clicking on the Clear Totals button will initiate MultiWeigher to transmit serial clear totals command via the connected communications method to a connected checkweigher controller.

There will be a short lapse in time while the checkweigher controller writes all stored values back to zero; the MultiWeigher software should now display all zeros in the counts and stats fields.

• <u>Rescan Code Number</u> The **Rescan Code Numbers** button allows the user to force the software to rescan the checkweigher controller in the field. This would normally be done to verify what is the actual product code has been set in the controller to be check.

If the rescan does verify that the checkweigher has been changed to another product, the software will from now on monitor this updated product code.

- <u>Write Mode Enabled</u> Changing or writing new data to the checkweigher controller is done simply by placing a tick ($\sqrt{}$) in the Write **Mode Enable** box (\Box); this will then switch the software from Data Capture mode in to Data Edit mode.
- <u>Write</u> When the user has adjusted/changed the required data fields, the user will need to click on the **Write** button; this instructs the software to re-send all the information on the screen to the A&D Dolphin checkweigher controller.
- <u>Export</u> The Export Data button in the software allows the user to save the recorded/displayed data in a Microsoft Excel txt file in Tab Delimited Format.

The file can be named in any format that suits the user; this is for easy retrieval at a later date for data manipulation and reporting.

• <u>EStop</u> Clicking on the EStop button will initiate MultiWeigher to transmit the serial Emergency Stop command via the connected communications method to a particular controller Checkweigher

This will force the checkweigher controller to turn off all of its outputs immediately, all connected equipment will stop.

• **Graph** Clicking on the **Graph** button will open the Graphical Trend page.



Checkweigher Trend Graph

The trend graph displays the instant real-time weighment data captured from the selected checkweigher. This enables the user to see at a glance if the plant is producing products at the correct weight or to analyze where possible faults may have arisen (please refer to Page 32).



Histogram

Pressing the **Histogram** button will open the Trend Histogram page.

4.1.2. MultiWeigher Checkweigher Simulator

To create a Checkweigher Simulator, select the SIMCHECKWEIGHER driver in the Devices setting. When the simulator device is enabled, a checkweigher simulator is created as shown in the screen below.

MultiWeigher 3000								
AQS Tool Update CW Codes								
								Units
Product Code 0100	Nar	ne	SIM PROD 1			Total Weight	7.3 Kg	grams
Line Number 1		Batch No.				Comms Status	Comms Good!	
Description Simul	lation Product 1							
Targets		_l imite			State			
Tare 0.0		Lo Lo	20.0	_	Min	123.3	STD	25.0
Target 200.0	0	Lo	10.0	-	Мах	245.3	STOP	0.0
Zero Band 1.0		Hi	10.0	-	Average	197.5	3104	0.0
Full Filling 0.0		Hi Hi	20.0		Average	198.4	Over last 12	Samples
Counts								
Low Low Count	11	29.7 %	OK Count	9		Metal Count	0	
Low Count	3	8.1 %	Reject Count	28		Duplication Count	0	
High Count	5	13.5 %	Target Count	120		Percentage Accepte	d 24.3	
High High Count	9	24.3 %	Total Counts	37		Crush Count	0	
START STOP	CLEAR TOTALS	Rescar	n Code Number	Write Me	ode Enabled rite	Export	<u>/</u>	ESTOP
Technician logged in at level 3	ANDANE	08091919999					Afternoon S	Shift / Server

Figure 18 - Checkweigher Simulator Screen

Before starting to run the Checkweigher Simulator, it needs to be set up. The main fields that need to be set are the **Target**, **LoLo**, **Lo**, **Hi**, **HiHi**, **STD**, **Total Counts**

When filling in the main fields, the Write Mode needs to be enabled

After the setup, press the **START** button to start the simulator. The simulator will self-run until the Total Counts is achieved

Click on the **CLEAR TOTALS** button to clear all the totals before starting the simulator again

Click on the AQS Tool button to view the AQS compliancy test simulation

4.1.3. MultiWeigher Checkweigher Dashboard

To view certain data being captured from the multiple enabled checkweighers click on the **Checkweigher Dashboard** folder at the top layer of MultiWeigher window. This will then open the low layer Checkweigher Dashboard screen as shown in the example image below.

ą.	MultiV	/eigher 3000										- • ×
Co	Configuration Products Checkweighers Checkweigher Dashboard Scales Reports Log Files											
						To Pi	rint the S	ummary	of CW	Dashb	oard —	
	Checkw	eighers										1
	Line	Checkweigher Name	Prod Co	de Prod Description	# Counts	# Rejects	Total Weight	% Accepted	Average	Target	Comm. Status	Comment
	0	Checkweigher Simulator	0100	Simulation Product 1	201	133	40.1 Kg	33.8	199.3	200.0	Comms Good!	?
	1	Checkweigher 1	0001	300g Cheese	13	4	3.9 Kg	69.2	300.1	300.0	Comms Good!	?
	2	Checkweigher 2	0001		0	0	0.0 Kg	0	0.0	800.0	Comms Failure!	?
	_	_										
		_										
	_											
	_											
	_											
Те	chnician logged in at level 3 ANDAND080919199999 Afternoon Shift / Server											

Figure 19 - Checkweigher Dashboard Screen

Area Properties								
Area Names	djust	ments						
Area Number 1 💌 📥 2 💌		Left Coordi	nate	Title				
Table Name Checkweighers	Line Number	10		Line				
Header Properties	Checkweigher Name	50		Checkweigher Name				
Header Size 8	Product Code	200		Prod Code				
Header Text Color	Description	280		Prod Description				
Header Text Background Color	Total Counts	400		# Counts				
Data Properties	Total Rejects	465		# Rejects				
Data Text Size 8 💌	Total Weight	530		Total Weight				
Data Text Color	Accepted (%)	610		% Accepted				
Data Text Background Color	Average	690		Average				
Bar Color	Target	750		Target				
Bar Color on Comms Error	Comm Status	810		Comm. Status				
Bar Color when % Accepted	Comment	900		Comment				
	Comment Width	80						
	(A value of 0 means th	nat item	is dis	abled from the display)				

Right-click on the Checkweigher Dashboard screen opens up the Area Properties window as shown.

In Area Properties, data that need to be displayed in Checkweigher Dashboard can be selected and the width size of each row can also be set.

The color settings can also done in Area Properties

The dashboard can be named under the Table Name field

4.1.4. MultiWeigher Checkweigher Reports

The MultiWeigher 3000 software package offers user friendly configurable, viewable and printable reports. Reports can be obtained for both Checkweighers and Weight Scales; the data is retrievable from the real-time weight capture database and the time polled logging databases.

To obtain detailed and meaningful reports the user must first set-up the reports field table; this will decide the type of information the reports are to display or print.

The report has been designed in the A4 landscape format. There are seventy (70) data types to select from and the selected data types can be positioned in fifteen (15) report field locations starting from the far left side of the page across the top of an A4 landscape report.

Report Fields			
Fields	Offset	Format	Title (Header)
SUMMARY_CWPRODUCT_CODE	0	#.0	Prod Code
SUMMARY_CWPRODUCT_NAME	80	#.0	Prod Name
SUMMARY_TARGET	180	#.0	Target
SUMMARY_LOWLOW	250	#.0	LoLo
SUMMARY_LOW	300	#.0	Lo
SUMMARY_HIGH	350	#.0	Hi
SUMMARY_HIGHHIGH	400	#.0	ніні
SUMMARY_COUNTS_TOTAL	450	#.0	# Total
SUMMARY_COUNTS_OK	500	#.0	# 0K
SUMMARY_COUNTS_REJECT	550	#.0	# Reject
SUMMARY_COUNTS_DUPLICATIC	600	#.0	# Dup
SUMMARY_TOTAL_WEIGHT	650	#.0	Total Weight
SUMMARY_AVERAGE	750	#.0	Average
Total Reject Weight	830	#.0	Reject Weight
SUMMARY_PC_ACCEPTED	930	#.0	% Accepted
		Close	

Figure 20 - Report Fields Screen

✓ Date Range From 12/08/2010 To 12/08/2010 ✓ 12/08/2010 ✓ 12/08/2010 ✓ 12/08/2010 ✓ Collate on Batch Codes ✓ Collate on Product Codes	Checkweigher Product Code Company Product Code 0001 Batch Code Line Number Checkweigher Name	Order by D Include Average Calc Total Counts > 0 Day Shift Afternoon Shift Night Shift
Perform Filter		Cancel

Figure 21 - Report Filter Screen

The example Report Field table has selected the Checkweigher Product Code as the first field to be printed, starting from offset "0" from the far left of the printed A4 Landscape checkweigher report as per example on the next page.

Checkweigher Report Filters enables the user to drill down even further and create custom detailed reports by means of a Start Date to an End Date, create reports based on a specific Product Codes, Batch Codes, Line Number and Name.

The filters also allow the user to display or print the report in a specific order.

The sample report below has been generated from a single checkweigher. The data in the report was printed after two separate short product production runs.

All Date:	:					CH	IECKW	EIGHE	RSUM	MARY			17/08/2 11:13 /	2010 AM
Prod Code	Prod Name	Target	LoLo	Lo	Hi	HiHi	# Total	# OK	# Reject	# Dup	Total Weight	Average	Reject Weight	% Accepted
0003	500g Margari	500.0	15.0	7.0	7.0	15.0	11.0	9.0	2.0	.0	5.5	496.1	.5	.0
0001	300g Cheese	300.0	10.0	5.0	5.0	10.0	13.0	9.0	4.0	.0	3.9	300.1	.9	.0
			25.0	12.0	12.0	25.0	24.0	18.0	6.0	.0	9.4		1.4	.(

Figure 22 - Checkweigher Report

The checkweigher report summary can also be displayed as a color line graph. In the example below the red Target weight was 500g, the green Average weight was 496.1g and the brown Standard deviation was 15.5.



The color histogram graph of a selected checkweigher can also be generated from the report folder

4.1.5. A&D 4404 Dolphin

The MultiWeigher 3000 software can be set to automatically or manually poll the A&D 4404 checkweigher controller, the frequency at which the polling operates is stored in the settings folder. The following are the data fields that are received from the A&D 4404 Dolphin checkweigher controller, and their equivalences in MultiWeigher



Data from A&D 4404 [Dolphin		
A&D 4404 Data	MultiWeigher Data	A&D 4404 Data	MultiWeigher Data
Code Number	Product Code	Code Name	Name
Target	Target	Hi	Hi
Lo	Lo	HiHi	HiHi
LoLo	LoLo	Zero Band	Zero Band
Full	Full Filling	Preset Tare	Tare
Target Count	Target Count	Total Count	Total Counts
OK Count	OK Count	NG Count	Reject Count
Hi Count	High Count	Lo Count	Low Count
HiHi Count	High High Count	LoLo Count	Low Low Count
Metal Detection	Metal Count	Duplication Count	Duplication Count
Crush Count	Crush Count	Maximum	Max
Minimum	Min	Average	Average
Standard Deviation	STD	Population Std. Dev	STDP
Total Weight	Total Weight		

4.1.6. Ishida DACSV and DACSW

The MultiWeigher 3000 software can be set to automatically or manually poll the Ishida DACSV and DACSW controllers, the frequency at which the polling operates is stored in the settings folder. The following are the data fields that are received from the Ishida DACSV and DACSW

checkweigher controllers, and their equivalences in MultiWeigher



Data from Ishida DAC	SV / DACSW		
Ishida DACS Data	MultiWeigher Data	Ishida DACS Data	MultiWeigher Data
Product Code	Product Code	Product Name	Name
Reference Weight	Target	Upper Weight	Hi
Lower Weight	Lo	Tare Weight	Tare
Minimum Weight	Min	Maximum Weight	Max
Total Weight	Total Weight	Accept Count	OK Count
Over Count	High Count	Under Count	Low Count
Metal Count	Metal Count	Total Count	Total Count

4.1.7. Yamato CE2100



The MultiWeigher 3000 software can be set to automatically or manually poll the Yamato CE2100 controllers, the frequency at which the polling operates is

stored in the settings folder. The following are the data fields that are received from the Yamato CE2100, and their equivalences in MultiWeigher



Data from Yamato CE2	100		
Yamato CE2100 Data	MultiWeigher Data	Yamato CE2100 Data	MultiWeigher Data
Program Number	Product Code	Product Name	Name
Target Weight	Target	High Limit	Hi
Low Weight	Lo	High-high Limit	HiHi
Low-low Weight	LoLo	Tare Weight	Tare
Maximum Weight	Max	Minimum Weight	Min
Average Weight	Average Weight	Accept Packs	OK Count
Under Packs	Low Count	Over Packs	High Count
LL Packs	Low Low Count	HH Packs	High High Count
Metal	Metal Count	Total Weight	Total Weight

4.1.8. Anritsu SF and SV series

The MultiWeigher 3000 software can be set to automatically or manually poll the Anritsu SF and SV controllers, the frequency at which the polling operates is stored in the settings folder. The following are the data fields that are received from the Anritsu SF and SV controllers, and their equivalences in MultiWeigher



Data from Anritsu SF / S	SV		
Anritsu SF/SV Data	MultiWeigher Data	Anritsu SF/SV Data	MultiWeigher Data
Product Number	Product Code	Product Name	Name
Reference Weight	Target	+NG Limit	Hi
-NG Limit	Lo	Tare Weight	Tare
Standard Deviation (s)	STD	Pass Count	OK Count
-NG Count	Low Count	+NG Count	High Count
MDNG Count	Metal Count	Double Prod Count	Duplication Count
Total Count	Total Counts	Total Weight	Total Weight

5. MultiWeigher Scales

5.1.1. MultiWeigher Scale Screen

The MultiWeigher 3000 software can be set to automatically or manually poll the connected weight scales, the frequency at which the polling operates is stored in the settings folder. The following are the data fields and their character lengths that are received from the A&D EW scales.

Operator	Status	Dev	Batch Code	Product Code	Time	Weight	Target	Total Weight	Average	Total	OW	UW
Colin Seddon		2	12345	Berry	9:45:57 AM	146.0	593.0	146.0	146.0	1	0	1
Dean Chambers		3	12345	Berry	Table Propertie	es	1.0	148.0	148.0	1	1	0
Paul		4	777777	??????	Select Table Number		0.0	0.0	0.0	0	0	0
??????	Г ОЛТ	5	??????	??????	Table 1 -		0.0	0.0	0.0	0	0	0
					Table Name Table 1							
					Header Size 10 💌							
					Header Text Color							
					Header Text Background Co	ilor						
					Data Text Size 8 💌							
					Data Text Color							
					Data Text Background Color							
					Bar Color							
					Bar Color on Error							
					Weight OK Color							
					Weight OverWeight Color							
					- Weight UnderWeight Color		-					
					Weight Error Color		-					

Figure 23 - MultiWeigher Scale Screen

- **Operator** The operator name is retrieved from the database by either automatically by the RFID key or by the user manually
- **Status** The status of **Out** to **OUT** or In to IN is generated automatically by the presentation of the RFID key fob or by the user clicking the empty box
- **Dev** The Dev or Device number is the position or entry that this device has been allocated in the device folder, the value is from 1 to 255.
- **Batch Code** The batch code number is a 12 character alpha-numeric user entry data field, this helps MultiWeigher identify and track the products being packed.

- **Prod Code** The Product Code is the code number stored in the checkweigher controller, this number is a unique number typically from 01 to 99 designed to verify what product is being check weighed.
- **Time** The Time field is the exact time the last weighment had been received for this particular scale device, the weights are transmitted from the scale by the operator pressing the print button.
- Weight The weight field is the last weighment received for this particular scale, the weights are transmitted from the scale by the operator pressing the print button.
- **Target** The target field is the correct or perfect product weight that has been stored in the checkweigher controller, this value will typically be the gross weight which includes the container tare weight and product net weight
- **Total Weight** The total weight field stores the running total value of the received transmitted consecutive weighments made by the operator using this particular scale.
- Average The average weight field stores the value obtained from dividing the total weight by the total number of weighments made.
- **Total** The total field stores the quantity or amount of weighments that have been made by the operator.
- **OW** The Over Weight field stores the quantity of weighments made by the operator that exceed the correct weight, these include the Hi and HiHi weighments. (i.e. Target 150g +2g = Hi and +5g = HiHi).
- UW



The Under Weight field stores the quantity of weighments made by the operator that are less than the correct weight, these include the Lo and LoLo weighments. (i.e. Target 150g -2g = Lo and -5g = LoLo).

The **Table Properties** window is accessed by right mouse clicking on any position from with in the scale table screen. It is not necessary to be on a specific table that you wish to change as there is a drop down box for table selection from 1 to 12.

The Table Properties function is to allow the user to customize fonts and colors to suit their specific needs and clarity. An example of this could be Hi weights displayed in red or OK weights displayed in green.

5.1.2. MultiWeigher Scale Global Settings



Changing user data fields during the scale data capture operation is possible in MultiWeigher 3000, the software allows for the fields of Operator, Batch Code and Product to be changed, this function is activated by right mouse clicking on the specific data filed requiring the change.

A drop down box will appear and allow the user to select for example another Operator, this can also be used if the RFID system is not incorporated or the operator looses his keyfob or this scale has a faulty RFID receiver.

Operator	Status	Dev Batch C	ode Product Code	Time	Weight	Target	Total Weight	Average	Total	OW	UW
Colin Seddon		2 12345	Berry	1:25:29 PM	137.0	593.0	412.0	137.3	3	0	3
Dean Chambers		Salact Onor	tar	1:25:35 PM	140.0	1.0	420.0	140.0	3	3	0
Paul	C 0	Technician		12:00:00 AM	0.0	1.0	0.0	0.0	0	0	0
Technician	C •	Change	Cancel	12:00:00 AM	0.0	1.0	0.0	0.0	0	0	0

The Batch Code field also offers the functions of setting a batch code for all scale in this particular table or all scales in all tables

Table 1														
Operator	Status	Dev	Batch Code	Product Code		Time		Weight	Target	Total Weight	Average	Total	OW	UW
Colin Seddon	₩ IN	3	AB55E	• For this Scale (For all Scales in For all Scales in For all Scales in	de Only In this Table In all Tables		32 PM	106.0	100.0	106.0	106.0	1	1	0

The Product Code field also offers the functions of setting a product code for all scale in this particular table or all scales in all tables

Operator	Status	Dev	Batch Code	Product Code	Time	Weight	Target	Total Weight	Average	Total	OW	UW
Colin Seddon	IN 🔽	3	AB555	Blueberrie	Select Product	•	100.0	106.0	106.0	1	1	0
					 For this Scale Only For all Scales in this Table For all Scales in all Tables 	8						
					Change	ancel						



To create a Scale Simulator, select the SIMSCALE driver in the Devices setting.

When the simulator device is enabled, a scale simulator is created in table as shown in the screen below. The example below shows three scale simulators that run simultaneously.

MultiWeigher 3000											E	
Configuration Products Che	ckweighers	Che	ckweigher Dash	board Scales Reports Log	Files							
AQS Tool												
Scale Simulator												
Operator	Status	Dev	Batch Code	Product Code	Time	Weight	Target	Total Weight	Average	Total	OW	UW
SIM OP 1	V IN	4	222	SIM PROD 2	10:55:20 AM	200.1	200.0	12794.4	199.9	64	0	2
SIM OP 2	▼ IN	5	222	SIM PROD 2	10:55:20 AM	198.4	200.0	12825.5	200.4	64	0	2
SIM OP 3	▼ IN	6	222	SIM PROD 2	10:55:20 AM	205.7	200.0	12797.5	200.0	64	1	1
Technician logged in at level 3			ANDAND0809	1919999					Day Shift	1	Serve	er

Figure 24 - Scale Simulator Screen

Check in the Operator by checking on the Status OUT box; the status changes to IN and the scale simulation for the checked in operator will start automatically.

Click on the AQS Tool button to view the AQS compliancy test simulation

5.1.4. MultiWeigher Scale Reports

Selecting the top layer Reports tab and the lower layer tab Scales the user can produce custom reports for all the packing scales in the factory. The weighing data that has been captured from these scales is stored in the Active database as seen below (Figure 11)

Configu	ltiWeigher 3000)												
	uration Products	Checkweighers Checkweigher Dashl	ooard Scales [Reports Log	Files									
Chec	kweighers Scales	Checkweigher Batches												
Se	elect Database Sourc	re .								- 1				
A	ctive Scale Databas	ie 🔽							Report Filters		(rint R	eport
	H 4								Packing Rep	ort		R	Exp	ort
	Product Code	Product Name	Batch Number	VVeight	Units	Date	Time	Operator	Target	Low	Lo Lo	High	Hi Hi	
	0011	130g Butter	111	128.0	grams	14/09/2010	12:23:08 PM	Matt Warne	130.0	0	0	0	0	
-	0011	130g Butter	111	128.0	grams	14/09/2010	12:23:08 PM	Matt Warne	130.0	0	0	0	0	_
-	0011	130g Butter	111	128.0	grams	14/09/2010	12:23:08 PM	Matt Warne	130.0	0	0	0	0	_
	0011	130g Butter	111	128.0	grams	14/09/2010	12:23:08 PM	Matt Warne	130.0	0	0	0	0	
	0011	130g Butter	111	128.0	grams	14/09/2010	12:23:09 PM	Matt Warne	130.0	0	0	0	0	
	0011	130g Butter	111	128.0	grams	14/09/2010	12:23:09 PM	Matt Warne	130.0	0	0	0	0	
	0011	130g Butter	111	128.0	grams	14/09/2010	12:23:09 PM	Matt Warne	130.0	0	0	0	0	
-	0011	130g Butter	111	128.0	grams	14/09/2010	12:23:09 PM	Matt Warne	130.0	0	0	0	0	
-	0011	130g Butter	111	128.0	grams	14/09/2010	12:23:09 PM	Matt Warne	130.0	0	0	0	U	-
-	0011	130g Butter	111	130.0	grams	14/09/2010	12:23:03 PM	Matt Warne	130.0	0	0	0	0	_
	0011	130g Butter	111	132.0	grams	14/09/2010	12:23:09 PM	Matt Warne	130.0	0	0	0	0	
	0011	130g Butter	111	133.0	grams	14/09/2010	12:23:09 PM	Matt Warne	130.0	0	0	0	0	
	0011	130g Butter	111	123.0	grams	14/09/2010	12:23:09 PM	Matt Warne	130.0	0	0	0	0	
	0011	130g Butter	111	97.0	grams	14/09/2010	12:23:10 PM	Matt Warne	130.0	0	0	0	0	
	0011	130g Butter	111	58.0	grams	14/09/2010	12:23:10 PM	Matt Warne	130.0	0	0	0	0	
-	0011	130g Butter	111	25.0	grams	14/09/2010	12:23:10 PM	Matt Warne	130.0	0	0	0	0	_
	0011	130g Butter	111	1.0	grams	14/09/2010	12:23:10 PM	Matt Marne	130.0	0	0	0	0	
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Γ	Date Range	14090010	14/00/2010											8
		14/03/2010	14/09/2010	<u> </u>	H					Aff	ernoor	n Shift	1	Server
	Product Cod	de September	2010 •		ŀ				Figure 25 –	Sca	ernoor le Re	eport	/ Scr	Server een
Г	Product Coo	de Mon Tue Wed Thu ne 30 31 1 2	2010 Fri Sat Sun 3 4 5		ľ				Figure 25 –	Sca	ernoor le Re	eport	/ Scr	Server Seen
r r	Product Coo Product Nar Batch Code	de Mon Tue Wed Thu me 30 31 1 2 6 7 8 9 13 4 15 16 20 20 20 20	2010 Fri Sat Sun 3 4 5 10 11 12 17 18 19 24 25 20		ľ	• Fil	ter B	uttor	Figure 25 –	Sca	ernoor le Ro	eport	Scr	een
. Г Г Г	Product Coo Product Nar Batch Code	de <u>Mon Tue Wed Thu</u> 30 31 1 2 6 7 8 9 13 (4) 15 16 20 21 22 23 27 28 29 30	2010 ► Fri Sat Sun 3 4 5 10 11 12 17 18 19 24 25 26 1 2 3			• Fil	iter B	uttor the c	Figure 25 – Figure 25 –	Sca	ernoor le Ro to	eport	Scr	een om dr
	Product Cod Product Nar Batch Code Operator	Image: September Mon Tue Wed Thu 30 31 1 2 6 7 8 9 13 15 16 20 21 22 23 27 28 29 30 4 5 6 7	2010 ► Fri Sat Sun 3 4 5 10 11 12 17 18 19 24 25 26 1 2 3 8 9 10 010			• Fil down capt	t er B n in to ured (uttor the c data	Figure 25 – Figure 25 – Sis us lata for si can be f	Sca Sed Dec	to to rec	cu cu re d	scr Isto por	om dr ts. Th
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1 1 1 1 1 1 1 1 1 1 1 1 1	Product Cod Product Nar Batch Code Operator Weight OK Error UnderWeigh OverWeight OverWeight OverWeight	de Mon Tue Wed Thu me So 31 1 2 6 7 8 9 13 15 16 20 21 22 23 27 28 29 30 4 6 6 7 Today: 14/09/2 mts Low ts High ts High ts High	2010 Fri Sat Sun 3 4 5 10 11 12 17 18 19 24 25 26 1 2 3 8 9 10 010			• Fil down capte simp fields E.g.: days one c be se	ter B n in to ured c le sel s that f should work, fo perator lected a	uttor the c data lection the re the us or a spe- for or as sho	Figure 25 – Figure 25 – Figure 25 – I > is us lata for s can be f n of one port need ser require ecific produce the custome wn in the e	An Sca Sca Sca Dec Dec Dec Dec Sca Sca Sca Sca Sca Sca Sca Sca Sca Sc	to to cific rec r r to c epc und	CLU Peport CLU rej d d nor cont f cont f cont cont cont f cont f cont	scr scr por ovv tair or a spher ode the	een om dr ts. Th n by specif n. specif d by on this ca le
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• Export button > will open the standard Microsoft Window "Save As" from here the user can navigate to any directory to save the exported file, the file can be save as a (DAT) Data file, (TXT) text file or an (RTF) Rich Text File. These file types can be opened by various other software packages like Microsoft Excel or Linux Open Office Calc.



Figure 26 - Export Report Data

Opening exported files from MultiWeigher is simple because MultiWeigher saves the exported data as a delimited file this satisfies the standard Text Import Wizards like that used in Microsoft Excel.

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E Batch Code V 543AB 543AB 543AB 543AB 543AB	F Neight 593 592 593 592 593 592	G Target 1.000 1.000 1.000 1.000	H Units grams grams grams grams grams	3 19/Au 4 5 Low 0 0 0 0	Low Low 0 0 0 0 0 0	High 00023t	Cancel Cancel High High 1 1 1 1 1	0.009999999 Sector Construction Construct	776492590 ▶ ► ► ► ► ► ► ► ► ► ► ► ► ►		
E Batch Code V 543AB 543AB 543AB 543AB 543AB	F Neight 593 593 593 592 593 592 596	G Target 1.000 1.000 1.000 1.000 1.000	H Units grams grams grams grams grams grams	Low 0 0 0 0	Low Low 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	High 0 0 0 0 0 0	Cancel Cancel High High 1 1 1 1 1 1 1 1 1 1	0.009999999 Carror C	Next > Enish Operator Colin Seddon Dean Chambers		
E Batch Code V 543AB 543AB 543AB 543AB 543AB 543AB 543AB	F Neight 593 593 593 592 593 592 596 593	G Target 1.000 1.000 1.000 1.000 1.000 1.000	H Units grams grams grams grams grams grams grams	▲ 9/Au ▲ 5 ▲ 6 0 0 0 0 0 0 0 0 0 0 0 0 0	Low Low 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	High 0 0 0 0 0 0 0	Cancel High High 1 1 1 1 1 1 1 1 1 1 1 1 1	 a. a conservation of a conservatio	Next > Enish Operator Colin Seddon Dean Chambers		

593 Figure 27 - Microsoft Excel - Open Exported File

Kicrosoft Excel - 19-08-2008 Scales.txt

Time

14/08/2008 3:11:27 PM

14/08/2008 3:11:30 PM

14/08/2008 3:15:16 PM

14/08/2008 3:16:59 PM

14/08/2008 3:18:23 PM

14/08/2008 3:18:38 PM

14/08/2008 3:22:03 PM

9 14/08/2008 3:23:00 PM

fx 0 В

73 73 78 -M6

Date

2

3

4

5

6

8

A

• Printed Report >

Clicking on the **Printed Report allows the user to view the report of the information** captured from the enabled scale

All Dates		DATA	CAPTURE REPOR		8:20 PM 20/08/2008			
D ate	Time	Product Code	Batch Number	Weight	Units	Target	Operator	
20/08/2008	4:26:37 PM	0001	12345	137	grams	150	Dean Chambers	
20/08/2008	4:26:42 PM	0001	12345	140	grams	150	Technician	
20/08/2008	4:26:51 PM	0001	12345	151	grams	150	Technician	
20/08/2008	4:26:58 PM	0001	12345	148	grams	150	Dean Chambers	
20/08/2008	4:27:00 PM	0001	12345	152	grams	150	Dean Chambers	
Total Weig	ght= 728			Total	Counts =	5		
Average =	145.6			Good	ICounts =	0		
Min - 41				Low Low Counts = 3				
MIN = 13	57			Low (Counts =	0		
Max = 15	52			High	Counts =	0		
				High	High Coun	nts = 2		
				Error	s= 0			

Figure 28 - Scale Report

6. AQS / UTML

From 1 July 2010, manufacturers and packers will be able to apply the Average Quantity System (AQS) as their measurement systems.

To know more about the AQS system, please visit:

<u>http://www.measurement.gov.au/TradeMeasurement/Business/Pages/AverageQuantitySy</u> <u>stem.aspx</u>

The AQS Tool of the MultiWeigher 3000 is used with the Scale / Checkweigher Simulators to show the users the difference in product savings using the Average Quantity System (AQS) and the existing Uniform Trade Measurement Legislation (UTML) in their manufacturing / packing environment.

AQS			
Device SIMCHE Product Name SIM PR Product Code 0100 to starts monitoring	CKWEIGHER DD 1 Set Nominal <u>Weight</u>	Change Check	e Device Device to be monitored weigher Simulator
Start Monitor	SET 0		UTML Complice!
AQS C	omplies!		orme compres:
Weighted Av Target Weight 0	erage Complies!		Average Complies! Target Weight 200.0 Nominal Weight 0.0
Nominal Weight 0 Weighted Average 0 (Sample Average 0	0 0 0 Sample SD 7.2)		Average Weight 0.0
Min Weighted Ave 0 Total Counts 0 Passed Counts 0	.0 Max Weight 0.0 Min Weight 0.0		
T1 Error	Complies!		
T1 Value 0.0			
T1 Counts 0 (T1 Counts are the co	T1 Rejects 0 unts between T1 and T2)		
T2 Erroi	Complies!		5% Deficiency Complies
T2 Value 0.0	Reject Weight		Reject Counts 0
T2 Counts 0 (T2 Counts are the co	0.0 gms unts below T2		
Savings			
UTML Method has saved	0.0 kgs		
UTML Method has saved	0.00 kgs in Rejects		
UTML Method has saved Total Yield of 0.000 %	a total 0.00 kgs		

Figure 29 - AQS Simulator Screen

The first half on the left hand side of the AQS screen shows the 3 rules that need to be fulfilled to comply with the AQS.

The other half on the right hand side of the screen shows the 2 rules that need to be fulfilled to comply with the UTML.

> <u>AQS</u>

Weighted Average Compliancy

• Target Weight The Target Weight is the weight that needs to be achieved by the monitored product

This value is editable by the MultiWeigher user

- Nominal Weight The Nominal Weight is the weight marked on the end-user / customer package of the monitored product This value is editable by the MultiWeigher user from the <u>Set Nominal Weight</u> field
- Weighted Average The Weighted Average is the result of the Sample Average added to the multiplication result of the Sample SD with the Sample Correlation Factor
- Min Weighted Ave Min Weighted Ave is minimum weighted average being recorded
- **Total Counts** Total Counts is total number of products being weighed or produced in a certain production run
- **Passed Counts** Passed Counts is the number of products that weigh the same as the Nominal Weight
- Max Weight Max Weight is the maximum weight of the sample products
- Min Weight Min Weight is the minimum weight of the sample products

T1 Error Compliancy

- T1 Value is the Tolerable Deficiency allowed to meet the AQS standard
- **T1 Counts** T1 Counts is the number or shortfall of products allowed to meet the requirement of the T1 Error rule
- **T1 Rejects** T1 Rejects is the number of rejects needed to comply with the T1 Error rule

T2 Error Compliancy

• T2 Value T2 Value is a value double the T1 value

- **T2 Counts** T2 Counts is the total number of products that need to be rejected to meet the T2 Error rule
- **Reject Weights** Reject Weights is the total weights that have been rejected to comply with the T2 Error requirement

> <u>UTML</u>

Average Compliancy

- **Target Weight** The Target Weight is the weight to be achieved by the products in a production run
- Nominal Weight The Nominal Weight is the weight marked on the end-user / customer package of the monitored product. It needs to be achieved by the average weight of the monitored product to meet the UTML rule requirement This value is editable by the MultiWeigher user from the <u>Set Nominal</u> Weight field
- Average Weight The Average Weight is average weight from a batch of production run of the monitored products

5% Deficiency Compliancy

• **Reject Counts** Reject Counts is the number of products that need to be rejected to meet the requirement of the 5% Deficiency rule

<u>Savings</u>

Savings show the manufacturers the amount of products they could save (in percentage) by implementing the AQS standard comparing to the existing UTML standard that they have been implementing in their manufacturing processes

7. MultiWeigher Debugging

MultiWeigher makes available to experienced technicians a live on screen debugging terminal interface, from this debug screen all the serial traffic flow can be viewed and therefore diagnosed for errors and correct interfacing.

The technician will enable the data view and select a specific device that needs to be monitored, the communications ports can be stopped and restarted and the data view window can be cleared at any time.

If a checkweigher device is selected as in Figure 18 below; both the read & reply and the write & reply data commands can be viewed in the debug window.

	,0001000,0000050,0000050,0000100,0000100,0000010,0000000,000000
Disable Data View	0000000,0000000,0000000,0000000,0000000
	Controlword = 1
	elapsed time = 234
evice ID to Monitor	Control Word = 1
	RCODUU2
	shares there and a
	elapsed time = 110
	Control Word = 4
	elapsed time = 54
	Control Word = 4
	elapsed time = 109
	Control Word = 4
	RCODUU2,Strawberry
	,0001000,0000050,0000050,0000100,0000100,0000010,0000000,000000
	00000000,0000000,000000,000000,000000,0000
	Controlword = 1
	elapsed time = 250
	Control Word = 1
	RCOD0002
1	
Restart Comms	elapsed time = 109
	Control Word = 4

Figure 30 - Debug (Checkweigher) Screen

If a scale device is selected as in figure 19 below, the technician can identify the serial communications port being used and the RFID tag that was presented. Scale weight data packets can also be seen and confirmation that MultiWeigher has logged this scale off automatically for lack of activity or weighments.

Enable Data View	Port Opened Port 10
Disable Data View	Dev = 3 Data = -0414DC6EE84A Start Character Received for RFID RFID Tag Scanned!
Device ID to Monitor	0414DC6EE8 Dev3 Logged In! Operator Found - Colin Seddon
3	Dev = 3 Data = ST,+00000101 g Device 3Logged Out due to Inactivity!
	Figure 31 - Debug (Scale) Screen

8. Interface Connections

8.1.1. RS232 Interface – A&D 4404 Dolphin

□ The RS-232C is used to connect to either an Ethernet Hub or Personal Computer.

□ When installing a serial option only one option can be installed at any one time.

Specifications

Transmission system
Data length
Start bit
Parity bit
Stop bits
Baud rate

EIA RS-232C, Asynchronous, bi-directional, half-duplex 7 bits ot 8 bits 1 bit Odd, Even, not used 1 bit, 2 bits 1200 bps, 2400 bps, 4800 bps, 9600 bps, 19200 bps

Connection



Settings of Parameters

Refer to the relevant checkweigher controller Instruction Manual.

8.1.2. Serial Interface RS485/RS422 - A&D 4404

- □ The RS-422/485 interface can use commands to control the indicator. The interface can read weighing data or parameters or store parameters to the indicator.
- □ The interface can connect a maximum of 32 units and a personal computer.
- □ The unit can be specified by an address appended to the command.
- □ RS-485 can use 2-wire or 4-wire.

Specifications

Transmission system

Data length Start bit Parity bit Stop bits Baud rate Line

Connection Character code Terminator EIA RS-422 / 485, Asynchronous, bi-directional, half-duplex 7 bits or 8 bits 1 bit Odd, Even, not used 1 bit, 2 bits 600 bps, 1200 bps, 2400 bps, 4800 bps, 9600 bps, 19200 RS-422: 4 wires RS-485: 2 wires or 4 wires Max. 32 units ASCII code CR, CR LF

Connection



Specifications

Interface
Sychronization method
Transmission speed
Start bit
Stop bits
Data bits
Parity
Communication code
Error detection
Data transmission direction

RS-232C Intermittent synchronous (Non-Synchronous) 2400, 4800, 9600, 19200 bps 1 bit 1 bit, 2 bits 7 bits, 8 bits Odd, Even, None JIS 8 bit Sum check Bi-directional



PIN	PIN NAME	REFERENCE
1	DCD	Not wired
2	RxD	Input
3	TxD	Output
4	DTR	Short-circuited with Pin No. 5
5	GND	
6	DSR	Short-circuited with Pin No. 4
7	RTS	Short-circuited with Pin No. 8
8	CTS	Short-circuited with Pin No. 7
9	RI	Not wired

Specifications

Communication Method	Half duplex
Transmission Method	Bit serial Asynchronous, start/stop
Transmission Standard	RS232C
Transmission Distance	15m (Max.)
Transmission Rate	1200, 2400, 4800, 9500 bps
Transmission Character Code	ASCII
Start Bit	1 bit
Data Bits	7 bits, 8 bits
Parity	None, Even, Odd
Stop Bits	1 bit, 2 bits



Data may not be transmitted from the computer if CTS and RTS of the computer are not connected. Please check your computer manual

Transmission Std.	Code	Pin Number	Signal Name	Output/Input
	FG	1	Frame Ground	
	RxD	2	Receiving Data	Input
RS232C	TxD	3	Transmitting Data	Output
	CTS	8	Transmitting Enable	Input
	RTS	7	Receiving Enable	Output
	GND	5	Ground	



A&D AD4404 Indicator

Stream Mode

The data is output on each display update. If the data cannot be output completely due to a slow baud rate, the data is output at the next update.

Auto Print Mode

The data is automatically printed on batch finish.

Manual Print Mode

When the preset print key is pressed or the assigned terminal is connected, the data is output.

Command Mode

This mode is used to control the indicator, to store parameters and to read data or parameters.

8.1.7. Ethernet Device Server – Hardware

Moxa Serial Device Servers

Nport 5110 – 1 RS232 Port Nport 5210 – 2 RS232 Ports Nport 5410 – 4 RS232 Ports Nport 5610 - 8 and 16 RS232 Ports

Lantronix Serial Device Servers

UDS1100 – 1 RS232 Port UDS2100 - 2 RS232 Ports EDS4100 - 4 RS232 Ports EDS008PR - 8 RS232 Ports EDS016PR - 16 RS232 Ports EDS032PR - 32 RS232 Ports

Sena Serial Device Servers

LS100 - 1 RS232 Port STS400 – 4 RS232 Ports STS800 - 8 RS232 Ports STS1600 - 16 RS232 Ports STS3200 - 32 RS232 Ports

N	port 5610	Nport 5630			Sen	a STS1600
PIN	RS-232	PIN	RS-422/485-4w	RS485-2w	PIN	RS-232
1	DSR	1			1	CTS
2	RTS	2			2	DSR
3	GND	3	TxD +		3	RxD
4	TxD	4	TxD -		4	GND
5	RxD	5	RxD -	Data +	5	DCD
6	DCD	6	RxD +	Data -	6	TxD
7	CTS	7	GND	GND	7	DTR
8	DTR	8			8	RTS

RJ-45 Male Plug



ннннн

111



12345678







8.1.8. Ethernet Device Server – Software

The Serial to Ethernet device servers can normally be configured and setup by various software methods, these can include Telnet, Console, Web browser and Manger software.

The manager software can be set to automatically search for an Ethernet connected device server thus making easier to locate if the IP address is not known.

The examples in Figures 18 and 19 show the Sena HelloDevice Manager and Moxa Nport Administrator software have both located a their respective four port device servers.

🐝 NPort Administrator-(СОМ Маррі	ing					
<u>File</u> Eunction COM Mappir	ng ⊻iew <u>H</u> r	elp					
Exit Add Remo		Configure					
Function				COM	Mapping - 4	F COM	
□ → NPort	No /	Model	IP Address	Port	COM Port	Mode	Parameter
🔚 🚺 Configuration	1	NPort 5410	10.2.2.80	1	COM22	Hi-Performance, FIFO Ena	9600, None, 8, 1, None
Monitor	2	NPort 5410	10.2.2.80	2	COM23	Hi-Performance, FIFO Ena	9600, None, 8, 1, None
Port Monitor	3	NPort 5410	10.2.2.80	3	COM24	Hi-Performance, FIFO Ena	9600, None, 8, 1, None
COM Mapping	4	NPort 5410	10.2.2.80	4	COM25	Hi-Performance, FIFO Ena	9600, None, 8, 1, None



🐗 HelloDevice Ma	nager V2																	[
<u>Eile S</u> earch <u>D</u> evi	ce ⊻iew Log	Help																	
📲 🖿 📲 🤮	🔒 초 옾 🕷	🛛 🔽 All classes		• A	Il ports	Ŧ	2 🐹	0 🔯	ŝ										
DeviceList		>	-	Config	guration	Mo	onitor												
Device	IP	MAC	P.	Title	Host	Port	Uart	Baud	Data bit	Stop bit	Parit	Flow	Rx	Tx	RTS	CTS	DTR	DSR	CD
V PS810	10.2.2.70	00:01:95:08:9b:d4	1	Port #1	TCP	7001	RS232	9600	8 bits	1 bits	None	None	357	11	On	Off	On	On	Off
			2	Port #2	TCP	7002	RS232	9600	8 bits	1 bits	None	None	0	0	On	Off	On	Off	Off
			3	Port #3	TCP	7003	R5232	9600	8 bits	1 bits	None	None	0	0	On	Off	On	Off	Off
			4	Port #4	TCP	7004	RS232	9600	8 bits	1 bits	None	None	0	0	On	Off	On	Off	Off
					Figur	e 33 -	MOX	ANPO	ort Adr	ninistr	rator								

The examples in Figures 21 and 22 show the Sena and Moxa WEB browser interface using Microsoft Internet Explorer. When the device server IP address is entered into the WEB browsers address bar you will be prompted to enter and User Name and Password.

For a Sena device the default logins for User Id is "root" and for a Password is "ADM" For a Moxa device the default logins for User Id is "root" and for a Password is also "ADM"

SENA	Pro series PS810 Manageme	nt			
letwork configuration	System status : /system/sysstatus				
IP configuration	System information				
Dynamic DNS configuration	Device name :	ProSeries			
SMTP configuration	Serial No. :	PS810-080600089			
IP filtering configuration SVSLOG configuration	F/W Rev. :	v1.4.2			
Locating server configuration	MAC address :	00-01-95-08-96-d4			
NFS configuration	Current time :	01/01/1970 00:03:57			
TCP configuration	System logging :	Enable			
erial port configuration	Send system log by email :	Disable			
Configuration	IP information				
ystem administration	IP mode :	Static			
System status	IP address :	192.168.161.5			
System logging	Subnetmask :	255.255.0.0			
Device name Date and time	Gateway :	192.168.1.1			
Change password	Receive/Transmit errors :	0/0			
User administration	Primary DNS :	168.126.63.1			
Factory reset Configuration management	Secondary DNS :	168.126.63.2			

System statistics

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Figure 34 - SENA Web Browser

MOXA

www.moxa.com

🖻 М	ain Menu
	Overview
	Basic Settings
	Network Settings
•	Serial Settings
± 🗀	Operating Settings
	Accessible IP Settings
Ð 🧰	Auto Warning Settings
Ð 🧰	Monitor

Welcome to NPort's web console !

Model Name	NPort 5410
MAC Address	00:90:E8:0C:FC:47
Serial No.	476
Firmware Version	2.2
System Uptime	0 days, 00h:41m:20s

Figure 37 - MOXA Web Browser

8.1.9. RFID Hardware

Radio frequency identification (**RFID**) is an automatic identification method, relying on storing and retrieving data using devices called RFID tags or transponders.

An RFID tag is an object that can be applied to or incorporated into a product, animal, or person for the purpose of identification using radio waves, some tags can be read from several meters away and beyond the line of sight of the reader

There are many types of RFID tags and these can be either passive or active devices, we will however concentrate on two tags the Key fob and the Wristband

The MultiWeigher 3000 software can assign an operator a Key fob as their unique identification for automatic logging on and logging off the system. The key fob is a passive device and does not store any personal information, it simply transmits a 256bit encrypted number when it is in proximity to the reader house in side the weighing scale.

The tear shape Key fob features are:



- Dimensions: W31mm x L40mm x T4.8mm
- Material: polycarbonate
- Environmental protection: IP 67
- ✤ Operating temperature: -25°C to 50°C
- Colors: Black, Red, Blue

The Wristband features are:



- Dimensions: L247mm x W16mm x T1.4mm
- Chlore 0.6 mg/1 (Norm SIA 385/1)
- Environmental protection: IP 68
- Operating temperature: -25 to +50°C
- Colors: Black, Dual Colors (Pantone 541C)

(ey	RFID Number
****	****
Sele	ect Operator
	<u>•</u>
E	Enter Key for Operator
	Clear Operator Key
In (Devices set up the
Ge	nerator" to be
abl	e to generate key des for the operators

Specifications

General

So So O	oftware Version oftware Development perating Systems	MultiWeigher Borland C++ Windows 200	3000 Ver 1.0 for Win 0, NT, XP and Vista i	dows n 2009		
D E1 M IP	evice Servers thernet lodes Supported ? Set-Up	1, 2, 4, 8, 16 a Auto Detectin TCP Server, ⁻ Web Browser	and 32 devices comm g 10/100/1000 Mbps TCP Client, UDP and r, Telnet, Console, De	nunication ports Real Comm evice Manager		
M Se Ba	laximum Scales erial Interfaces aud Rates	255 Scales in one complete system RS232C, RS422 and RS485 1200 up to 230K Baud				
Dat	abases					
Pa	asswords	Operator Administrator	25 Alpha and Numer Limited acess Weigh 16 Alpha and Numer Full access Editing 8	ic Characters It data capture ONLY ic Characters Weight data capture		
O Pi	perators roducts	Codes : Names : Payroll : Short Name: Name: Weight :	16 Alpha and Numer 32 Alpha and Numer 16 Alpha and Numer 16 Alpha and Numer 32 Alpha and Numer 16 Alpha and Numer	ic Characters ic Characters ic Characters ic Characters ic Characters ic Characters		
R	eports	Operators, Pr summary, Err	oducts, Transactions, or Reports and Group	, Transaction pings		
Che	eckweigher Data					
Code Hi – LoLo Pres OK (Lo C Meta Maxi Stan	e number – RCOD + 4 7 0 – 7 set Tare – 7 Count – 7 count – 7 al Detection – 7 imum – 7 idard Deviation – 7	Code Name – 1 Lo - 7 Zero Band – 7 Target Count – NG Count – 7 HiHi Count – 7 Duplication Cou Minimum – 7 Population Star	2 + 3 spaces 7 unt – 7 ndard deviations – 7	Target – 7 HiHi – 7 Full – 7 Total Count – 7 Hi Count – 7 LoLo Count - 7 Crush Count – 7 Average – 7 Total Weight - 7		

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