

**WAY FORWARD  
TECHNOLOGIES**  
LIMITED



# **Touch-Weigh 3000**

**Unattended Weighbridge Control System**

*Product Outline  
TW-3000*

## Please Note

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## Overview

Over the past 20 years Way Forward Technologies Limited has been developing Microsoft Windows based Weighbridge Control systems using advanced development tools and the ACCESS database. Way Forward was the first company in New Zealand to use ELO Graphics Touch-Screen technology to assist unattended weighbridge users. Indications are, we were the first in the world with this system and have one of the most advanced Weighbridge Control Systems available.



# System Design

TOUCH-WEIGH is written in Microsoft Visual BASIC 6.0 and Microsoft ACCESS

The system is consists of multiple modules:

- ⌚ The Weighbridge Application is the driver interface and the program that communicates with the scale Indicator(s), vehicle identification systems and other devices such as traffic lights, barrier arms, etc. This module is sometimes referred to as the 'Remote'.
- ⌚ The Back-end Database is an Access database containing all the data tables. This can cope with huge transactions volumes. E.g. 1 site has a 67 MB database with 5 years of weighs and 240,000 transactions. Most programming languages and database systems can 'link' to MS Access. This can be useful for production/financial systems interfacing, web site reporting, web page maintenance forms and data replication.
- ⌚ The Administration module is an Access database with a forms interface for maintaining the data. This module is sometimes referred to as the 'Host'.
- ⌚ The Reporter module is an Access database that provides a large variety of customisable transaction reports.
- ⌚ The Transaction Entry module is an Access database for manual data-entry from non-automated sites or from back-up after system outages.
- ⌚ There are several specialised modules used when one or more weighbridges are separated from a central database. Modules used, would depend on the type of connection available (LAN/WAN/dial-up, etc) and required frequency of updates.

The system is designed foremost for unattended use. Drivers who have never seen the system, with no prior training, need to easily use and understand the system. This is achieved by:

- ⌚ Always giving the driver only valid options so mistakes are minimised
- ⌚ Showing the driver only one thing at a time
- ⌚ Big, simple instructions
- ⌚ Big buttons for big fingers

The system is also designed to be highly configurable and flexible.

- ⌚ Software configuration settings allow features to be 'turned off', so the system appears as simple or as complex as is required.
- ⌚ Weighbridge configurations can vary: short bridges, full size bridges, dual (end-to-end) bridges and multiple (In / Out) bridges
- ⌚ While the touchscreen is usually inside a kiosk it can be placed on a pole beside the weighbridge
- ⌚ The flexibility means the weighbridge owner has complete control over what the drivers see, the data they get asked to enter and how they enter it.

This all means Touch-Weigh is suitable for ANY industry, from specialised in-house weighbridge operations to general weighbridge service providers.



## Minimum System Requirements for Software

Pentium Dual Core Processor  
4GB RAM  
200GB Hard Disk  
Serial Port for connection to the scale indicator  
Windows XP or later  
Thermal Printer

### A Clean Power Supply

17" Touchscreen @ 1024x768 resolution



## Way Forward Technologies Limited

will supply

Microsoft Access Run-time Licence  
- Full version of Microsoft Access is recommended  
Microsoft Visual Basic Run-time Environment  
WFT Access Database Management System  
Visual Basic Operator environment

## Recommended

Uninterrupted Power Supply  
LAN connection  
Separate PC for Administration and Report with  
Access 2000 or above  
Teamviewer connection for WFT Support



In addition, specific hardware may be required depending on your site configuration:

- ⌚ Tag Reader(s) & tags
- ⌚ Card Reader(s)
- ⌚ Remote displays
- ⌚ Traffic Lights
- ⌚ Barrier arms
- ⌚ Security Door
- ⌚ Barcode scanner



Way Forward Technologies Limited

High Product Outline March 2013



# Weighbridge Application

## Touch Screen

Touch-Weigh will work with any touch screen, but we recommend that you seek advice as they are in harsh environments.



## Vehicle/Driver Identification

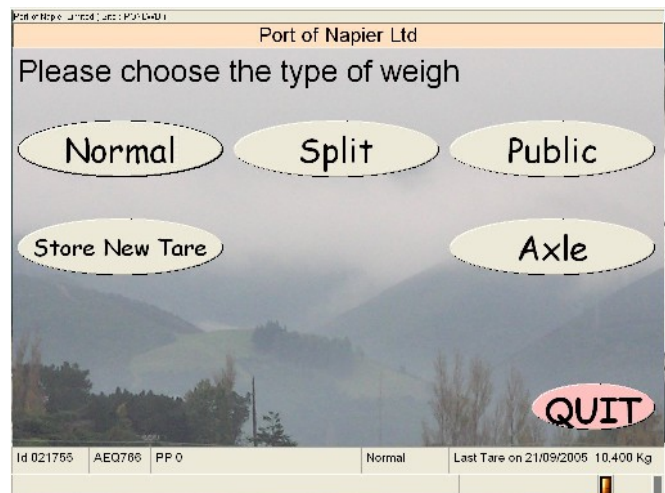
To use the system a driver must identify their vehicle, typically this is a iButton. The iButton is a small disk like device which has a unique id. iButtons are used because they are very robust and will withstand harsh treatment. Vehicle identification can also be done manually, using proximity cards, barcodes or RF ids.



## Weigh Type Selection

The Weigh Menu screen is tailored for each weigh and only the required types are available to a driver. This is based on the system configuration, pre-defined customer/vehicle parameters and the current status of the vehicle.


- ⌚ Normal Weigh: single product, captures Tare and Gross weights using 2 weighs if necessary.
- ⌚ Split Weigh: same as a normal weigh but for 2 products
- ⌚ Public Weigh: used for casual customers who require just the gross weight of their vehicle.
- ⌚ Part Weigh: same as a Normal weigh but will ignore the stored tare.
- ⌚ Part Split Weigh: same as a Split weigh but will ignore any stored tares
- ⌚ Axle Weigh: An axle by axle weigh of a vehicle.
- ⌚ Tare Weigh: stores new tare weights for a truck and/or trailer.



## Vehicle Products and Trailers

The vehicle configuration screen displays the previous Product and trailer. If the current product and trailer are the same pressing **OK** will continue with the weighing.

If there are no choices (either Product or Trailer), this screen will not be shown.



Split Weigh

Confirm Products  
(touch button to change)

**Products** Special Waste Special Waste

FREW01 EXPIRED Tare TFCL1 EXPIRED Tare

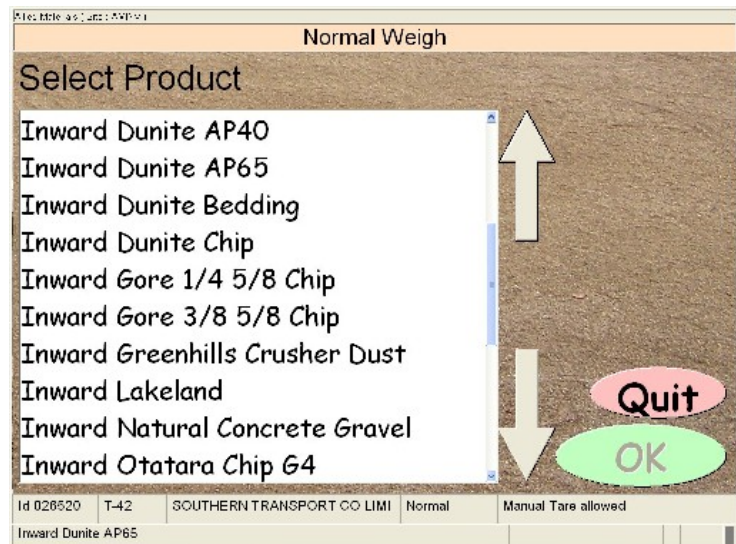
Quit OK

Id 915987 FREW01 Frews Contracting Ltd Normal Last Tare on 9/09/2005 15,220 Kg

Special Waste and Special Waste

## Product Selection

If the Product needs to be changed, the driver will see the Product selection screen.



Normal Weigh

Select Product

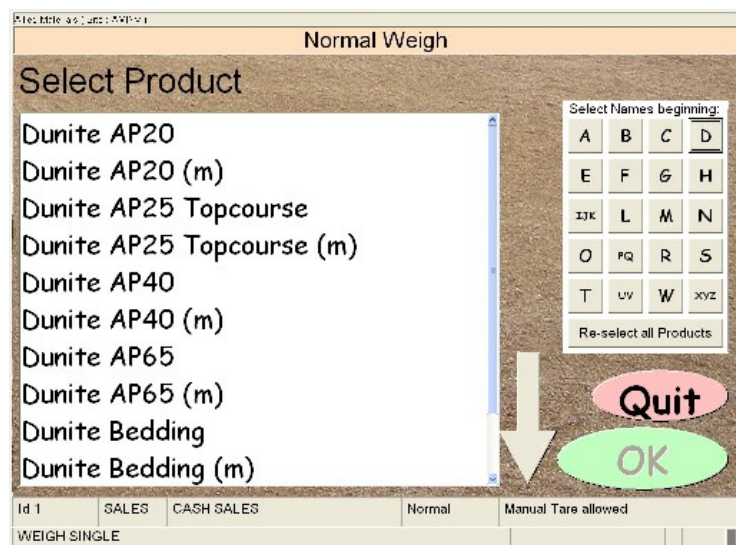
Inward Dunite AP40  
Inward Dunite AP65  
Inward Dunite Bedding  
Inward Dunite Chip  
Inward Gore 1/4 5/8 Chip  
Inward Gore 3/8 5/8 Chip  
Inward Greenhills Crusher Dust  
Inward Lakeland  
Inward Natural Concrete Gravel  
Inward Otatara Chip G4

Quit OK

Id 026520 T-42 SOUTHERN TRANSPORT CO LIM Normal Manual Tare allowed

Inward Dunite AP65

There are many screens that can show lists for selection, when the lists get very long, extra selection keys are shown to get to required item faster.



Normal Weigh

Select Product

Dunite AP20  
Dunite AP20 (m)  
Dunite AP25 Topcourse  
Dunite AP25 Topcourse (m)  
Dunite AP40  
Dunite AP40 (m)  
Dunite AP65  
Dunite AP65 (m)  
Dunite Bedding  
Dunite Bedding (m)

Select Names beginning:  
A B C D  
E F G H  
IJK L M N  
O PQ R S  
T UV W XYZ  
Re-select all Products

Quit OK

Id 1 SALES CASH SALES Normal Manual Tare allowed

WEIGH SINGLE

## Extra Data for Products

Commonly called 'Product References', each Product can be customised (whenever the site requires it), to gather further information about the products being weighed.

Examples are:

Bush Dockets, Forest and Grade for Logs; or  
Vessel, Type and Destination for Fertilizer.

There are screens to capture ANYTHING:  
container numbers, order numbers, felling date,  
job number, load out site, barcode, customer,  
vehicle id, species, product type, notes.  
And any number of references can be prompted for.

There are a variety of ways to capture the data,  
not just a manual entry on a keypad by the driver.  
The driver can be given a list, use a barcode, or a  
calendar form.

Data for lists can be derived from external data  
sources like text files, Excel Spreadsheets or  
other systems. (eg PSLogs)

The system can also derive a value automatically from a database query, or pick up a  
value automatically from a RF id reader.

TRAILER - Special Waste

Please Enter Manifest Number

85412

Back 0 Quit OK

Id 915987 FREWD1 Frews Contracting Ltd Normal 2 Weights required

Special Waste and Special Waste

Normal Weigh

Please Enter Order No

345-67T

Back Quit OK

Id 1 SALES CASH SALES Normal 2 Weights required

Normal Weigh

Select Customer

Montana Wines  
Regal Haulage  
Coopers Creek  
Esk Valley  
Misson Estate

Quit OK

Id 388237 TA795 A A Knight Normal 2 Weights required

Grapes

Normal Weigh

Please select the Felling Date

October 2005

Mon Tue Wed Thu Fri Sat Sun

1 2

Show Sep 3 4 5 6 7 8 9 Show Nov

10 11 12 13 14 15 16

17 18 19 20 21 22 23

24 25 26 27 28 29 30

31

Quit n/a

Id 388237 TA795 A A Knight Normal 2 Weights required

Logs - Other





## Weigh Confirmation

This allows the driver to check the load details before completing the weigh.

If the driver presses **X** the system will return to the Weigh Menu so the correct details can be re-entered.

File: Weigh.as? Lang: ENGLISH

Normal Weigh

Confirm Weigh Details

Dunite AP40

Gross 33,300 Kg  
Tare 21,280 Kg  
Net 12,020 Kg

Id 11 Sales CASH SALES Normal Manual Tare allowed

2 Docket copies will be printed

This screenshot shows the 'Normal Weigh' confirmation screen. It displays the product name 'Dunite AP40' and its weight details: Gross 33,300 Kg, Tare 21,280 Kg, and Net 12,020 Kg. At the bottom, there are two large buttons: a green one with a checkmark and a red one with an 'X'. The footer shows 'Id 11', 'Sales CASH SALES', 'Normal', 'Manual Tare allowed', and '2 Docket copies will be printed'.

If the driver presses **✓** the system will save the transaction, print the docket(s) if required, display any Tare warning/expiry messages,

All relevant information is shown on the confirmation screen and also printed on the docket.

File: Weigh.as? Lang: ENGLISH

Split Weigh

Trailer T204 expires in 6 days  
Please Tare your Trailer soon.

OK

Id 698558 CNS817 Canterbury Waste Services Ltd Normal 1st Tare:16,220 Kg 2nd Tare:7,800 Kg

Docket will not be printed Trailer: T204

This screenshot shows the 'Split Weigh' confirmation screen. It features a large warning message: 'Trailer T204 expires in 6 days Please Tare your Trailer soon.' with an 'OK' button. The footer displays 'Id 698558', 'CNS817', 'Canterbury Waste Services Ltd', 'Normal', '1st Tare:16,220 Kg', '2nd Tare:7,800 Kg', 'Docket will not be printed', and 'Trailer: T204'.

Split weighs are stored in the database as 2 separate transactions and print as 2 separate dockets.

Weigh data can be exported in a variety of formats to provide a real time data import into other systems

File: Weigh.as? Lang: ENGLISH

2nd Product - Special Waste

Confirm Weigh Details

Special Waste  
Permit Number : B1010  
Billing Customer : WMNZ (for Laminex)  
Manifest Number : 52478

Gross 20,840 Kg  
Tare 15,280 Kg  
Net 5,560 Kg

Special Waste  
Permit Number : B1010  
Billing Customer : WMNZ (for Laminex)  
Manifest Number : 85412

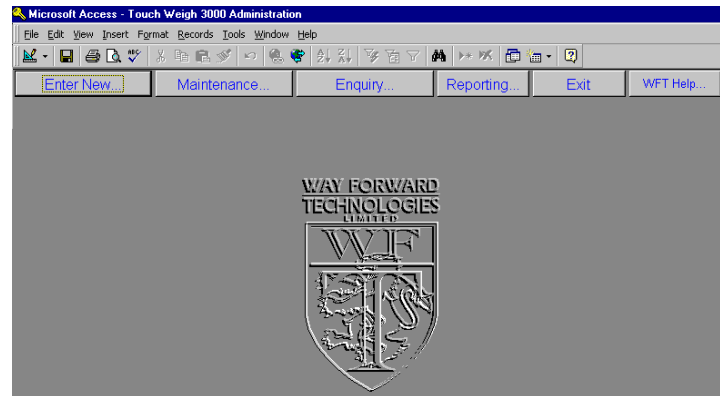
Gross 16,200 Kg  
Tare 13,400 Kg  
Net 2,800 Kg

Id 915987 FREW01 Frews Contracting Ltd Normal Last Tare on 9/09/2005 15,220 Kg

Docket will be printed Trailers: TFCL1

This screenshot shows the '2nd Product - Special Waste' confirmation screen. It displays two product details side-by-side. The first product has a Gross weight of 20,840 Kg, Tare of 15,280 Kg, and Net of 5,560 Kg. The second product has a Gross weight of 16,200 Kg, Tare of 13,400 Kg, and Net of 2,800 Kg. The footer shows 'Id 915987', 'FREW01', 'Frews Contracting Ltd', 'Normal', 'Last Tare on 9/09/2005 15,220 Kg', 'Docket will be printed', and 'Trailers: TFCL1'.

# Administration Module



The Administration database contains forms for managing your data:

- ⌚ Customers: for the vehicle tag owners (could be your clients, Carriers, Suppliers, etc)
- ⌚ Vehicles: holds the data about each vehicle tag
- ⌚ Trailers: registered trailers with stored tares
- ⌚ Products: the products that are weighed including charging information
- ⌚ Product References: for customising the additional data capture
- ⌚ Vehicle Groups: for customising what drivers can do
- ⌚ Customer Warnings: for customising messages to drivers
- ⌚ System Parameters: covers weighbridge settings and database parameters
- ⌚ Transactions: for viewing, correction and cancellation if necessary

All the forms are simple and straight forward.

This is a screen for maintaining a vehicle. Vehicle tags can be captured quickly if a stand-alone reader is attached to the Administration PC.

The Enquiry menu includes a Transaction Search feature to help find specific transactions from your database.

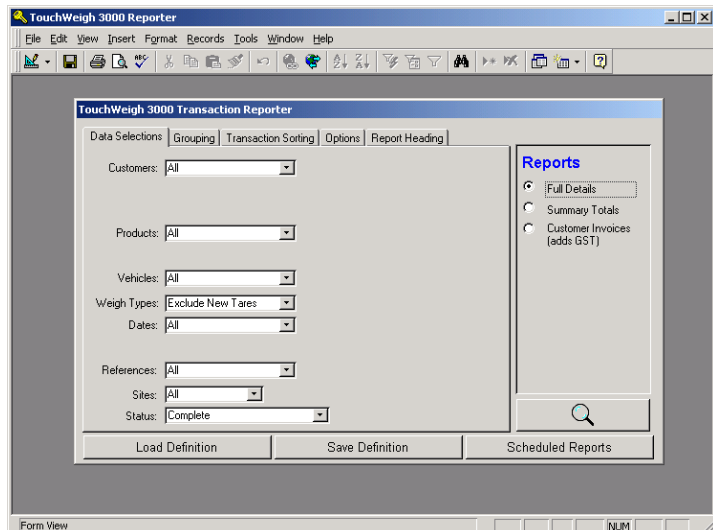
The Reporting menu covers administration reports like vehicle lists. Transaction reports are covered by the Reporter module.



# Reporter Module

The Reporter module provides a large variety of transaction reports.

There are plenty of data selection options and these apply to the summary and detail report styles.

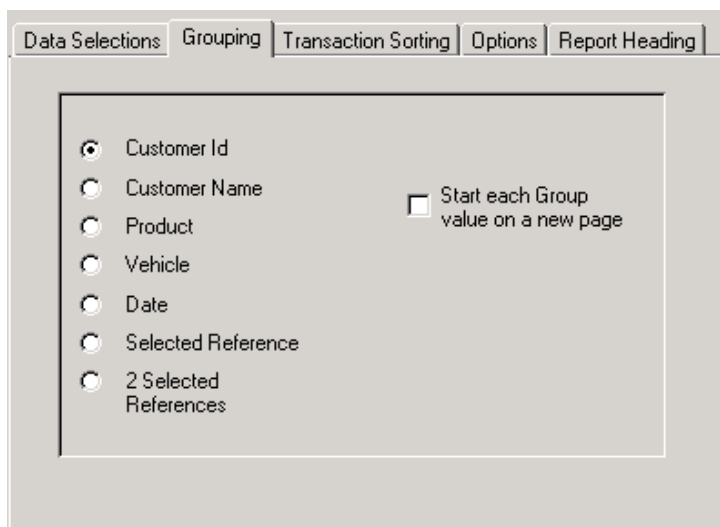


The Grouping tab defines the high level sorting provides subtotals.

The Transaction Sorting tab provides further sorting options.

The Options tab provides for formatting and data customisation.

The Report Heading tab allow you to customise the system generated headings.



Once the report is previewed, it can be emailed and exported in a variety of formats.

The Reporter module allows you to save a complete report definition and then schedule them to be printed, emailed or saved. This means the weekly/monthly reports can be produced easily or even automatically.

