2000

HIGH SPEED DIGITAL WEIGHT INDICATORS

Fair Measure For All

La mesure juste pour tous

MESURES CANADA
MEASUREMENT CANADA

USER MANUAL

*** FOR SOFTWARE VERSION 1.45 OR HIGHER. * RELEASE DATE: 12-01-03 ***

M2000 DIGITAL WEIGHT INDICATORS
USER MANUAL

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FOR TECHNICAL SUPPORT REGARDING THIS PRODUCT, PLEASE CALL YOUR M2000/SCALE SERVICE REPRESENTATIVE:

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INTRODUCTION

Thank you for choosing the smart weighing solution!

Utilizing over 25 years of research and development in electronic weighing systems, ***M2000*** high performance scale indicators are the industry standard for speed, versatility, and reliability.

From Truck In/Out programs to Cattle weighing, the M2000 can be custom-tailored to meet the needs of all weighing applications. With up to 3 independent scale channels and a totalizing function, an M2000 can easily take the place of three other indicating devices. M2000 indicators are **easy to use** and compatible with all scale systems, making them ideal for new installations as well as upgrades to existing systems.

For a complete synopsis of M2000 Indicator functions or information on other custom weighing services, please contact your M2000 dealer.

* * * NOTE TO M2000 USERS * * *

This ***User Manual*** is intended for operational use by M2000 owners. Information regarding **standard** indicator functionality is contained within.

Due to the important role weighing systems play, certain functions and features of M2000 indicators should only be accessed by qualified Scale Technicians. Specific information regarding Communications, Enabling & Disabling M2000 functions, Scale Set-up, and Scale Calibration can be found by calling your Scale Service Provider.

For the best results, have your system installed to your unique specifications by a qualified Scale Technician.

M2000 INDICATORS

The ***M2000*** Indicator family includes:

M2000 A – 3 Channel Analog Indicator (2 COM Ports). One of the world's best and most affordable high speed, fully featured indicators. For use with Analog loadcells.

M2000 AS – Single Channel Indicator (1 COM Port). M2000 features and quality at a low cost. For use with Analog loadcells.

M2000 D - 3 Channel Digital Indicator (2 COM Ports). Digital Communication with your scale for maximum lightning protection and data integrity. Converts Analog loadcell signals to digital at the scale via the DLC Smart Box.

M2000 Indicators are available in a variety of enclosures, including the **NEMA** rated, wash-down model **NSS-1.** Contact your M2000 dealer for details.

RECEIVING INSPECTION

It is always good practice to verify that the M2000 Indicator Kit is undamaged upon receipt.

Check over packaging for any signs of damage.

Remove the M2000 indicator from its protective packaging and check for damage.

Each M2000 Indicator Kit should include:

M2000 Indicator

12 Volt Power Supply & Power cord (Slimline models only)

M2000 User Manual

Capacity Label Set

Removable Connectors for all M2000 terminals

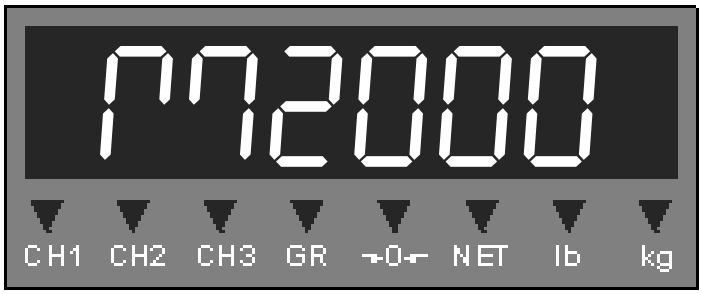
Correct number of cable strain-reliefs (For stainless steel enclosure models)

BE SURE TO CHECK THAT ALL NECESSARY OPTION BOARDS HAVE BEEN INCLUDED.

M2000 USER INTERFACE (DISPLAY & KEYPAD)

M2000 Displays are split into two components: The Alpha-Numeric Weight Display and the LED indicators.

ALPHA-NUMERIC DISPLAY



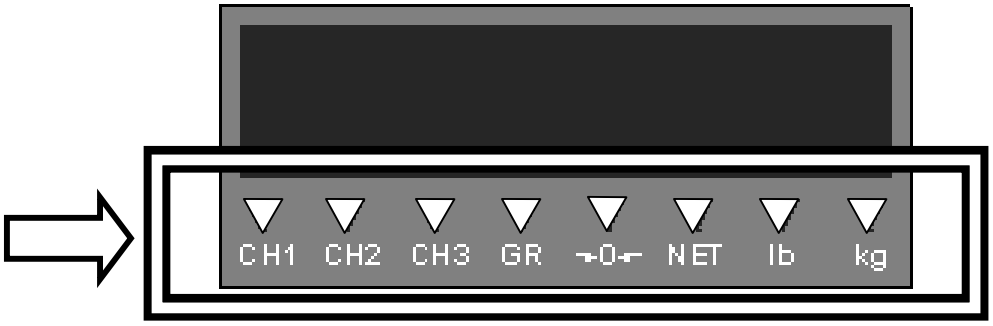
The Alpha-Numeric Weight Display has **6** multi-character LED's. Scale weights, Error messages, and Calibration information (See M2000 Technical Manual) are shown here.

A negative weight is shown by a **(-)** minus sign on the far left LED character.

The number of decimal points on the display is determined in Calibration Mode.

On power-up, a scrolling "M2000" will be displayed, followed by the software version number. The scale weight will then be displayed.

LED INDICATOR LAMPS



These triangular **LED**s will illuminate to indicate certain scale conditions.

SCALE CHANNEL 1 INDICATOR

Illuminated LED indicates the weight from **Scale Channel 1** is displayed. A blinking LED indicates motion on the scale.

SCALE CHANNEL 2 INDICATOR

Illuminated LED indicates the weight from **Scale Channel 2** is displayed. A blinking LED indicates motion on the scale.

SCALE CHANNEL 3 INDICATOR

Illuminated LED indicates the weight from **Scale Channel 3** is displayed. A blinking LED indicates motion on the scale.

GROSS WEIGHING MODE INDICATOR

Indicates the scale is in **GROSS** weighing mode (No tare is stored).

CENTRE ZERO INDICATOR

Indicates scale is within **0.2** graduations of true **ZERO**. May illuminate with a displayed weight in **NET** mode or if **Tare Offset** is being utilized.

NET WEIGHING MODE INDICATOR

Indicates the scale is in **NET** weighing mode (Scale has a tare weight stored).

LB INDICATOR

The scale is weighing in **IMPERIAL** units (Pounds or a fraction thereof).

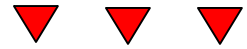
KG INDICATOR

The scale is weighing in **METRIC** units (Kilograms or a fraction thereof).

SCALE MOTION INDICATOR

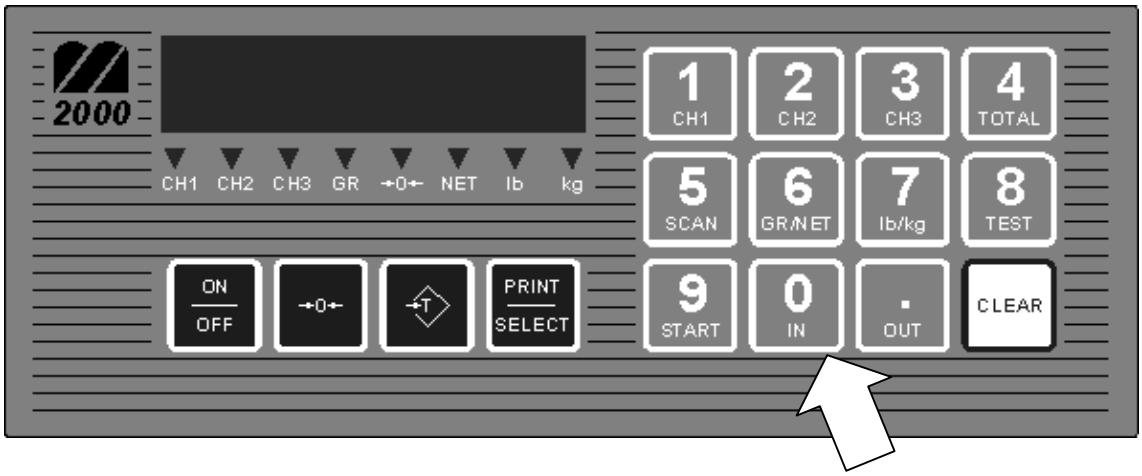
A blinking Scale Channel LED indicates **MOTION** on that scale.

TOTAL MODE INDICATOR



Multiple illuminated Scale Channel LEDs indicate **TOTAL MODE.** Only those channels illuminated are included.

FUNCTION KEYS

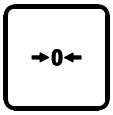


ON / OFF KEY

Pressing this key powers-up the M2000. The key must be pressed and held for 1 second to turn the M2000 off.

The **[ON/OFF]** key is not hard wired to the M2000 power supply. A Power Bypass function is available for Process Control and other applications. (* See Page **2**, Note to M2000 Users)

ZERO SCALE KEY



Removes small, residual weight values to return the displayed weight to zero. The **Centre Zero** LED will be illuminated.

If the **[ZERO SCALE]** button is pressed in **NET** weighing mode, the stored tare weight will appear as a negative weight on the display.

The scale **cannot** be zeroed if:

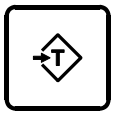
The **[ZERO]** key has been disabled.
The scale is in **MOTION.**
The residual weight on the scale is too great (More than **2%** of Scale Capacity)

Three rapid beeps will sound to indicate any of these conditions!

CLEAR KEY

Press the **[CLEAR]** key to erase previously entered tare values. The **[CLEAR]** key will also function to cancel any keypad entry.

TARE KEY



There are 2 methods used to tare the scale:

Method 1: Tare a random weight on the scale.

Place an item of unknown weight on the scale. (Container, Box, etc.)

Press the **[TARE]** key and the displayed weight will be tared. Note that the **NET** LED will illuminate to indicate that the scale is now in **NET** mode.

Method 2: Manually enter a tare.

With a stable weight on the scale, enter the desired tare weight using the numeric keypad, followed by the **[TARE]** key. The **NET** LED will illuminate to indicate the scale is in **NET** mode.

If the scale was at **zero**, the tare will be displayed as a negative weight.

The scale **cannot** be tared if:

There is a negative weight on the scale.
The scale is in motion.
The **[TARE]** key is disabled. (* See Page **2**, Note to M2000 Users)

PRINT / SELECT KEY

The **[PRINT/SELECT]** key has two functions:

Function 1: PRINT a Weigh Ticket to a printer.

Press the **[PRINT/SELECT]** key. A ticket will be sent to the printer connected to an M2000 COM Port. (Please consult your M2000/Scale Service representative regarding printing information, ticket formatting, etc.)

Function 2: SELECT a function.

Enter the function number on the numeric keypad, followed by the **[PRINT/SELECT]** key.

See Standard M2000 Functions – Next Section.

STANDARD M2000 FUNCTIONS

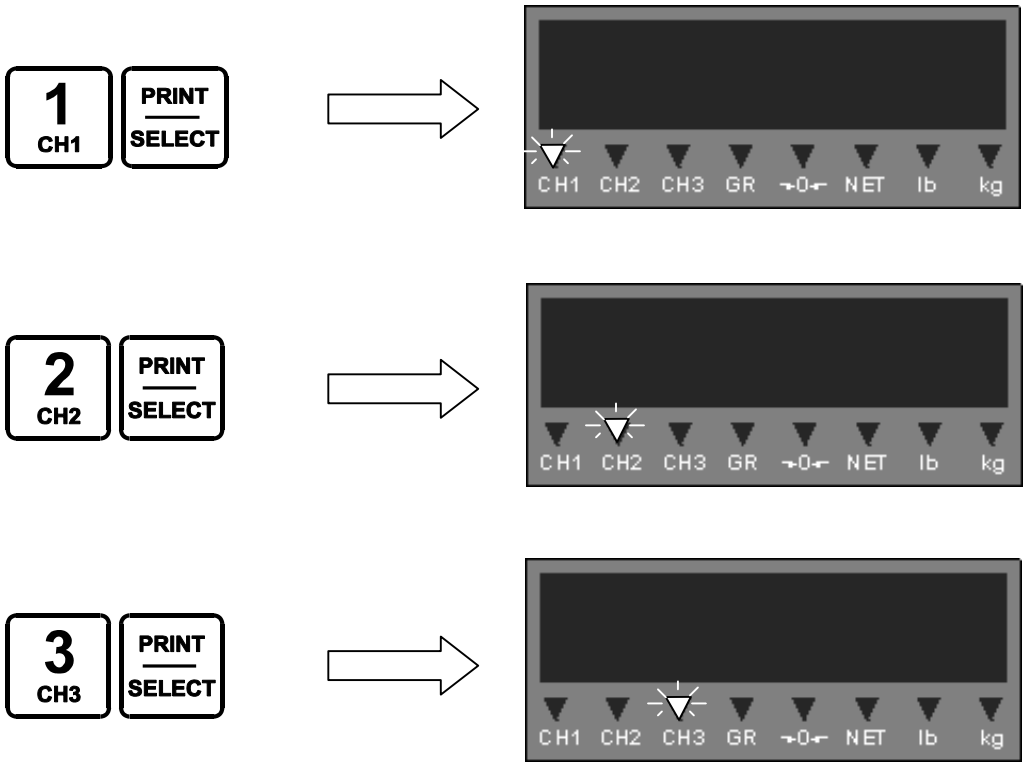
M2000 Standard functions are accessible via the keypad. To prevent accidental misuse, some standard functions may need to be enabled upon installation. Additional fine-tuning may also be recommended to maximize your weighing systems performance. To get the most out of your M2000, discuss your system requirements with your **M2000/Scale Service** representative.

SELECTING SCALE CHANNELS

M2000 Indicators utilize **3** independent scale channels. **Channel 1** is the default scale channel.

To view the weight display for the desired channel, press the channel number on the **numeric keypad** followed by the **[PRINT/SELECT]** key.

Note the appropriate **Scale Channel LED indicator** will illuminate.



Scale Channels 2 & 3 *must be enabled in Calibration/Set-up Mode.*
(* See Page 2, Note to M2000 Users)

TOTAL MODE (SUMMING CHANNELS)

Up to 3 channels may be summed together to display a total weight.

Only channels that are enabled and calibrated with the same grad size, decimal places, and units of weight will be displayed in **TOTAL MODE**.

Channel 1 is always included in **TOTAL MODE**.

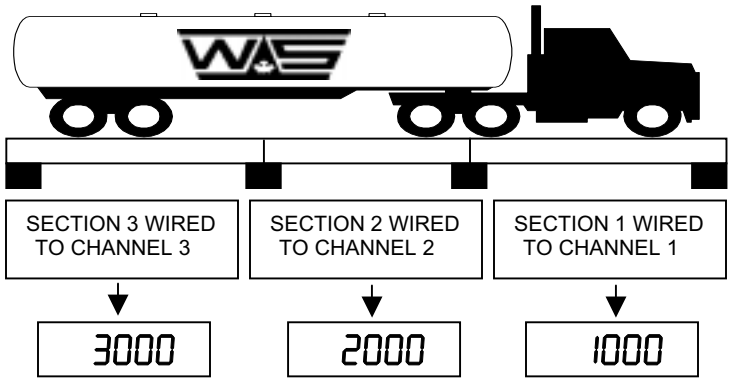
TOTAL MODE is indicated when more than one of the Scale Channel LEDs are illuminated.

To return the M2000 to Single Channel Mode, select a channel followed by the **[PRINT/SELECT]** key.

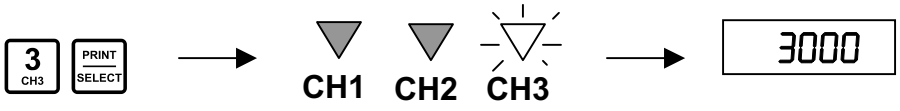
TOTAL MODE EXAMPLE 1:

A Truck scale with 3 sections.

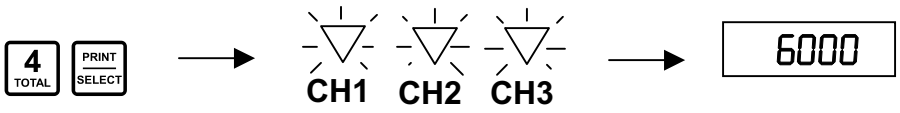
Each section is wired to a separate channel on the M2000, allowing the operator to record the total weight of the vehicle along with the individual axle weights.



1. To view the rear axle weight (Section 3), select **Scale Channel 3**. (**CH3** LED will illuminate)



2. To view the total weight (Sum of all sections), enter **TOTAL MODE**. Press **[4]**, followed by the **[PRINT/SELECT]** key. (**CH1**, **CH2**, & **CH3** LEDs will illuminate)



TOTAL MODE EXAMPLE 2:

3 Floor scales, each using a channel on a single M2000.

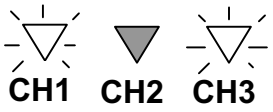
CH1 and **CH3** are calibrated as 2000 x 2 lbs.

CH2 is calibrated to 500 x 0.2 lb.

As a result, **only Channels 1 and 3 will be included in Total Mode**.

1. Press **[4]**, followed by the **[PRINT/SELECT]** key.

2. The **CH1** and **CH3** LED indicators will illuminate.



3. The weight on the display is the sum of these two channels.

SCALE OPERATIONS IN TOTAL MODE

Pressing the **[ZERO SCALE]** button will zero all the channels that are part of the total.

The **TARE** function will tare all channels simultaneously, displaying the total NET weight.

The **MOTION** and **SCALE ZERO** LEDs will indicate the status of all the scales that are part of the total.

TOTAL MODE must be enabled in Calibration before it can be used. (* See Page 2, Note to M2000 Users)

TOTAL MODE *cannot be used in legal for trade applications in Canada*!

SCAN MODE

SCAN MODE allows the indicator to cycle between the scale channels that are enabled.

The M2000 will automatically switch the display to the next available channel and pause for **3** seconds before switching to the next channel.

To enter **SCAN MODE**, press **[5]** followed by the **[PRINT/SELECT]** key.

Select a specific channel to stop scanning.

GROSS / NET WEIGHING MODES

To change the weighing mode, press **[6]** followed by the **[PRINT/SELECT]** key.

If the M2000 has a tare value stored, it will toggle between **GROSS** and **NET** weighing modes.

If no tare value is stored, the M2000 will remain in **GROSS** weighing mode.

SELECTING POUNDS / KILOGRAMS

To change the weighing units on the display, press **[7]** followed by the **[PRINT/SELECT]** key.

The indicator will toggle units from **lbs** to **kgs** or **kgs** to **lbs**.

Either unit of measurement can be set up as the default. (* See Page 2, Note to M2000 Users)

TEST DISPLAY

To test the display segments, press **[8]** followed by the **[PRINT/SELECT]** key.

All the segments in the display will light up for a short period of time.

TIME & DATE ON THE M2000

M2000 Indicators have a built-in Time & Date Clock that is Y2K compliant and automatically adjusts for leap years. The real time clock runs from a battery on the main board and will continue to operate when power is cut. The M2000 does ***not*** have to be in Calibration Mode to change the time and date settings. Access these Parameters as you do functions (Number, followed by **[PRINT/SELECT]**).

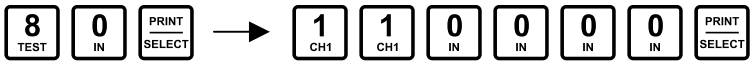
SET TIME - PARAMETER 80

Using the numeric keypad, enter the new 6-digit time in the format shown below. Press **[PRINT/SELECT]** to save the new time or cancel at any time by pressing the **[CLEAR]** key. For 12-Hour clock mode, **Parameter 83** must be used to select **AM** or **PM**.

HH:MM:SS

- 2 Digit Seconds (**00 – 59**)
- 2 Digit Minute (**00 – 59**)
- 2 Digit Hour (**01 – 12** *or* **00 – 23**)

EXAMPLE: 11:00 AM



SET DATE - PARAMETER 81

Using the numeric keypad, enter the new 6-digit date in the format shown below. Press **[PRINT/SELECT]** to save the new date or cancel at any time by pressing the **[CLEAR]** key.

YY:MM:DD

- 2 Digit Day (**01 – 31**)
- 2 Digit Month (**01 – 12**)
- 2 Digit Year (**00 – 99**)

EXAMPLE: OCTOBER 31, 2003

PARAMETER 83 - TIME FORMAT MODE

Description: Controls Time Format settings. 12 Hour or 24 Hour (military time) clock settings are available.

PARAMETER VALUE	TIME FORMAT
0 (default)	24 Hour Mode
1	12 Hour Mode AM
2	12 Hour Mode PM

BATTERY REPLACEMENT ON THE M2000

The M2000 uses a 3V Lithium Battery to run the real-time clock and backup the indicator's memory. Power is drawn from the battery only when the indicator is disconnected from the 12V supply. With regular use, then the battery should have a long lifespan.

REPLACING THE BATTERY

1. Remove the M2000's back cover.
2. A coin-sized battery is located in a battery holder. (Upper left corner of the M2000 PCB).
3. Use your fingers to grab each edge of the battery.
4. Gently pull on an angle removing the battery from the holder.

Replace the battery with a type **RENATA CR2450N 3V 540mAh lithium battery** or equivalent. This battery should be available at most electronics stores.

NEVER USE METAL OBJECTS SUCH AS SCREWDRIVERS TO REMOVE THE BATTERY. THIS CAN RESULT IN PERSONAL INJURY AND/OR A SHORT-CIRCUITING OF THE BATTERY CAUSING DAMAGE TO THE INDICATOR.

ADVANCED M2000 FUNCTIONS

The M2000's advanced functions are accessible in **Calibration Mode**. It is important that only qualified Scale Service Technicians access this mode. This not only ensures the optimal performance of your weighing system, but may be required under law in "**Legal For Trade**" applications. Your M2000-trained **Scale Service Provider** will be happy to help you access all the features and functions required to maximize your system's effectiveness.

ELECTRONIC SEAL

M2000 Set-Up and Calibration settings are electronically sealed with a password. This safeguard helps prevent accidental or unauthorized alteration of important scale settings.

Passwords are 4 digit numbers. The factory default for the password is **1111**, which can be changed in Calibration Mode. To change or view the password in Calibration Mode, consult a **M2000-trained** Service Technician.

IMPORTANT: If you forget your password, Calibration Mode will be inaccessible. Contact your **Scale Service Provider** for assistance.

AUDIT TRAIL

The M2000 is equipped with a Category 1 Audit Trail system. The Audit Trail has two counters:

Calibration Counter: Changing parameters that affect the calibration of weight will increment the Calibration counter by 1.

Parameter Counter: Changes to all other parameters will increment the Parameter counter by 1.

Important Note: *Because the Audit Trail becomes active at the factory, the counters may not initially show* ***0****, even when the M2000 is new out of the box.*

IT IS **EXTREMELY IMPORTANT** THAT THE CORRECT TIME AND DATE BE SET FOR THE AUDIT TRAIL TO BE ACCURATE. THE AUDIT TRAIL IS PERMANENT AND CANNOT BE DISABLED OR ERASED BY REMOVING THE INTERNAL BATTERY.

ACCESSING THE AUDIT TRAIL

The Audit Trail can only be accessed from normal Weighing Mode.

1. Enter **1000** followed by the **[PRINT/SELECT]**. The message "Aud it" will briefly be displayed.

2. Shortly after, the M2000 will display (in order) the date of the last change made to the M2000's calibration parameters, the calibration (CAL) counter, and the configuration (CFG) counter.

PRINTING

From simple weight printouts to customer-designed tickets, the M2000 prints to virtually any printer. Utilize pre-designed, pre-programmed, industry-specific tickets & programs or the M2000 Ticket Formatter, which allows for the easy creation of custom weigh tickets and reports.

> Contact your **M2000 dealer** representative regarding the printing freedom the M2000 delivers.

SERIAL COMMUNICATIONS

M2000 Serial Communications offer variable output strings and support a wide range of protocols to easily integrate with any weighing system. Transmit scale information directly to your Printer and/or Remote Display. Capture scale data for processing by a PC, Data Controller, or PLC.

The M2000 has two fully independent, fully configurable serial ports (COM1 and COM2) on the back of the indicator. The factory default settings allocate COM1 for printing tickets at 9600 baud. COM2 is allocated for outputting a weight string (DF1500) in continuous mode at 9600 baud. The COM Ports are programmable for RS232 & RS422 capabilities.

Please note that Single Channel Models only have one serial port (COM1)

BARCODE SCANNERS AND OTHER PERIPHERAL DEVICES

Combine your scanner and your scale to print out accurate product/weight tickets. The SMARTWIRE peripheral interface also provides easy connection and communication.

INDUSTRY-SPECIFIC PROGRAMS & FEATURES

The Multi-Purpose M2000 software package supports many industry-specific features that simply require activation upon installation. A variety of unique program configurations are available. Examples include:

Truck-In/Out	Onboard Weighing
In-Motion Weighing	Cattle Weighing

For further information regarding these programs, contact your local **M2000 dealer.**

M2000 OPTION BOARDS

4-20 mA OUTPUTS: The M2000 utilizes an optional 4-20 mA board to generate an output current reflecting weight. This typical industrial sensor protocol is useful in a broad range of applications.

SETPOINTS & RELAYS: The M2000 supports a total of 6 Setpoints that can be allocated to any Scale Channel. The optional Setpoint board uses solid-state relay modules to switch AC and DC loads.

REMOTE INPUTS: The Isolated Input board allows the M2000 to accept remote input switch control. Zero, Tare, Clear, Gross, & Print functions are supported:

For further information regarding M2000 option boards, contact your local **M2000 dealer.**

FILTERING AND ADJUSTMENTS

M2000 Indicators have a high degree of compensation abilities and adjustability, making them the industry's most versatile weighing element.

With **ADVANCED SET-UP FEATURES**, **STATE-OF-THE-ART FILTERING SYSTEMS**, and a **GLOBAL COMPATIBILITY STRATEGY**, the M2000 can be fine tuned by Qualified Scale Technicians to perform at an elite level in all applications.

ENTERING SETPOINT VALUES

Setpoints should be installed and structured by a qualified Scale Technician. However, simple adjustment of the *Setpoint weights* can be done by the User. ***Parameters 51-56*** (in Weighing Mode) are used to enter Setpoint values. The values entered into these registers will control the Setpoint relays.

NOTE THE UNITS OF MEASUREMENT! TO ENTER A SETPOINT VALUE IN KILOGRAMS, MAKE SURE THE M2000 IS CURRENTLY WEIGHING IN KILOGRAMS.

PARAMETER 51: Setpoint Value (weight) for **Setpoint 1**.

PARAMETER 52: Setpoint Value (weight) for **Setpoint 2**.

PARAMETER 53: Setpoint Value (weight) for **Setpoint 3**.

PARAMETER 54: Setpoint Value (weight) for **Setpoint 4**.

PARAMETER 55: Setpoint Value (weight) for **Setpoint 5**.

PARAMETER 56: Setpoint Value (weight) for **Setpoint 6**.

EXAMPLE: **ADJUST SETPOINT 6 TO 1000 lbs (FROM 500 lbs).**

1. In Weighing Mode, verify the M2000 is weighing in lbs. If not, switch weighing units.

2. Select the Setpoint to adjust. **Parameter 56** for **Setpoint 6**. The display will show the current Setpoint Value.

3. Enter **1000**, followed by **[PRINT/SELECT].**

USER TROUBLESHOOTING FOR THE M2000

SYMPTOM	POSSIBLE PROBLEM	PROBABLE SOLUTION
M2000 will not power up	External power source failure.	Check Circuit Breaker, Power Outlet
	12V Power Supply failure.	Replace Power Supply
M2000 will not turn off	**[ON/OFF]** key disabled.	The **[ON/OFF]** key may be disabled for Process Control Applications. Consult an M2000-trained Service Technician.
Display shows: uuuuuu	The loadcell cable to the M2000 has been disconnected or possibly severed. No Signal Input.	Check terminal for disconnection. If loadcell cable is damaged, call for Service.
	Sense lines from loadcell have not been terminated.	Connect Sense wires or jumper **+EXC** to **+SNS** and **–EXC** to **–SNS**.
Display shows: AAAAAA	Loadcell voltage range problem.	Call for Service
Display shows: EEEEEE OR 888888	The scale has been overloaded.	Remove weight from the scale immediately. Check scale for damage. Call for Service if necessary.
Display shows: ------	Scale Sections have not been allocated. (Digital System only)	Call for Service.
Will not Print.	The Scale Channel you are trying to print on is in **MOTION** or **OVERLOADED**.	Wait for scale to settle or remove excess load.
Cannot Zero Scale	**[ZERO]** key disabled	Must be enabled in Calibration.
	Scale in Motion	Wait for scale to settle.
	Weight on Scale > 2% of Scale Capacity	To zero more than 2%, Zero Range must be increased in Calibration. Consult an M2000 trained Scale Technician.

SYMPTOM	POSSIBLE PROBLEM	PROBABLE SOLUTION
Cannot Tare Scale	Tare function disabled	Must be enabled in Calibration.
	Scale in Motion	Wait for scale to settle.
	Cannot Tare a negative weight	Remove weight, clear scale and re-enter Tare.
Cannot Select a Scale Channel	Scale Channel is Disabled.	Scale Channels (other than CH1) must be enabled in Calibration Mode. Consult an M2000 trained Scale Technician.
Display segments missing	LED may need replacement	Use the TEST DISPLAY function to confirm. Call for Service.
No response to Key presses	Keypad may need replacement	Remember that some keypad functions may be disabled. Call for Service.

POWER PROBLEMS?

Proper steps must be taken during installation to prevent noise, static, or other power problems. Consult your local M2000 dealer to ensure all power requirements are met. **For the best results, have your system installed by a qualified scale technician.**

It is important to note that in very noisy industrial environments, power-conditioning filters would be a requirement to ensure a fail-safe operation under all conditions. Indicators should not share AC power with electrical motors and switchgear. Consult with the site engineer for clean AC power.

M2000 SPECIFICATIONS

INDICATOR PERFORMANCE	
UNIT CONVERSION	lbs / kg
ZERO TRACKING	1-99% of d or 1,2,3d
RESOLUTION (M2000A)	+/- 520,000 A/D counts per loadcell
RESOLUTION (M2000D)	+/- 256,000 A/D counts per loadcell
SAMPLING RATE	100 times per second per AD channel
SPAN STABILITY	2ppm/ Celsius
ZERO STABILITY	5nV/Celsius
LINEARITY CORRECTION	5 span entries
CALIBRATION METHOD	Calibration through software stored in Flash memory
CALIBRATION SEALING	Class 1 Audit Trail System, password protected
FILTERING	FASTSTEP quick response
MODES	Display from CH1, CH2, CH3 and TOTAL MODE (All Channels)
FIRMWARE UPGRADING	Flash Memory - In field Firmware upgrading without affecting calibration data.
LOAD CELLS	Up to 16 Loadcells using two DLC slaves

LOADCELL INPUTS	
FULL SCALE	4 ranges: **0-9**mV, **0-19**mV, **0-39**mV, and **0-79**mV
EXCITATION (M2000D)	5VDC,16x350, 32x700 ohm in total
EXCITATION (M2000A)	7.5VDC,16x350, 32x700 ohm in total

COMMUNICATIONS	
SERIAL OUTPUTS	2 full duplex RS232/RS422 (1 only with Single Channel model)
IO INTERFACE	SMART WIRE peripheral expansion: RS485 multi-drop
EXTERNAL IO: SETPOINTS	6 channel Setpoint via SMARTWIRE (optional)
EXTERNAL IO: ANALOG OUTPUT	4-20mA board via SMARTWIRE (optional)
EXTERNAL IO: DIGITAL INPUTS	6 optically isolated inputs via SMARTWIRE (optional)
NETWORKING	RS485 Multi-drop Networking of up to 32 indicators as slaves

ELECTRICAL	
POWER REQUIREMENTS	12VDC, 1 Amp. (1.5A maximum)
POWER DRAW	200 mA
TEMPERATURE RANGE	-10C to +40C
RFI PROTECTION	Filtered Signal, Excitation, & Sense lines

ENCLOSURES	
STAINLESS	Wash-down stainless steel enclosures. Panel mount, swivel-bracket, or desktop. Light Stainless or NEMA 4-X.
ALUMINIUM	Slimline. M2000A only. 12 GA. Cast aluminium.

APPROVALS	
MEASUREMENT CANADA	
NTEP	
CSA	CSA Approved Power Supply
OIML	Pending

Warranty

The following terms of warranty apply to all new products sold by Western Scale Co. Limited (hereinafter called "Western") unless otherwise specified in the terms of sale.

All new products are warranted against defects in workmanship and materials for the following period and upon the following terms and conditions:–

1. The warranty period is for twelve (12) months commencing from the date of delivery of the product to the purchaser.
2. Western shall, at its option, repair or replace or refund the purchase price, within a reasonable period of time, after having been notified of the alleged defect and after having been satisfied that a defect pursuant to this warranty in fact exists.
3. Notice of the alleged defect must be given during the warranty period and must state the model number and serial number and the date the product was purchased.
4. If requested by Western, any product or part thereof must be promptly returned to Western with the shipping charges pre-paid. Purchasers who require on site servicing shall be responsible for travel labour and all other extra expenses incurred as a result of such on site servicing. Western does not accept responsibility for loss or damage to any product or part thereof in transit, nor will any claim be honoured unless the product or part thereof is received, by Western, intact, with no evidence of tampering or previous attempts at repair.
5. Western shall not be responsible for:–
   (a) consequential or special losses or damages, such as loss of use, inconvenience, commercial or economic loss;
   (b) defects caused by misuse, negligence, modification or neglect;
   (c) improper operation, maintenance or repair.
6. This warranty shall have no force and effect and shall not apply if there has been:–
   (a) any unauthorized modification, alteration or substitution of any part or parts of the product, or
   (b) the serial number of the product has been altered or defaced in any manner whatsoever.
7. No employee or agent of Western has any authority to add to, subtract from, or change any portion of this warranty and Western's obligation herein is strictly limited to these terms as written.
8. This warranty is the sole warranty of Western and any other warranties, expressed or implied by law, including the provisions of the Sale of Goods Act and in particular Section 20 thereof, are hereby specifically excluded.

WESTERN SCALE CO. LIMITED
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