SM SoftBridge™

SB-V1

SM

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SM SoftBridge™

1. Introduction

SoftBridge™ is highly flexible weighbridge controller which utilize advanced electronic controller module and control software. SoftBridge™ module uses full advantage of modern highly integrated electronics design techniques to achieve accurate weighing results and uses power of standard low cost computer to make user friendly control interface with operator and SoftBridge™ module. Also SoftBridge™ comes with different options where you can choose options as additional cards to standard SoftBridge™.

2. Features

2.1 Simple user interface and minimal user training requirements.

2.2 Highly flexible bridge capacity and division.

2.3 Capable of handling practically unlimited number of linearity points via optional memory module.

2.4 Very simple and user friendly calibration.

2.5 Calibration can be hardware locked for legal requirements.

2.6 Can use any kind of printer via computer to print tickets and reports.

2.7 Keeps records of all weighing records indefinitely.

2.8 Standalone ACCESS and multi user MYSQL databases are supported.

2.9 Single and multi SoftBridge™ module operations are supported.

2.10 All standard reports are included.

2.11 All reports and tickets are generated using standard HTML

2.12 Any kind of formatting and pictures can be printed in tickets and reports

2.13 Optional back up data memory card.

2.14 Remote diagnose and error correction is supported in optional modules

2.15 SoftBridge™ module is independent of computer used to access it.

2.16 Self error logging and correction capability.

2.17 Capable of accepting optional user requirements

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2.1 Simple user interface and minimal user training requirements.

Figure 2.1.a shows standard user interface of SoftBridge™ module which includes high contrast big character weight value and time. All colors are configurable as required. User interface contains only 6 buttons which are self explained and described below. User interface can be interacted with user via standard mouse and computer key board. Operator training can be up to 4 hours to an operator who had never touched a computer before and if operator has basic computer literacy, operator could be trained in 10minitues to effectively use SoftBridge™.

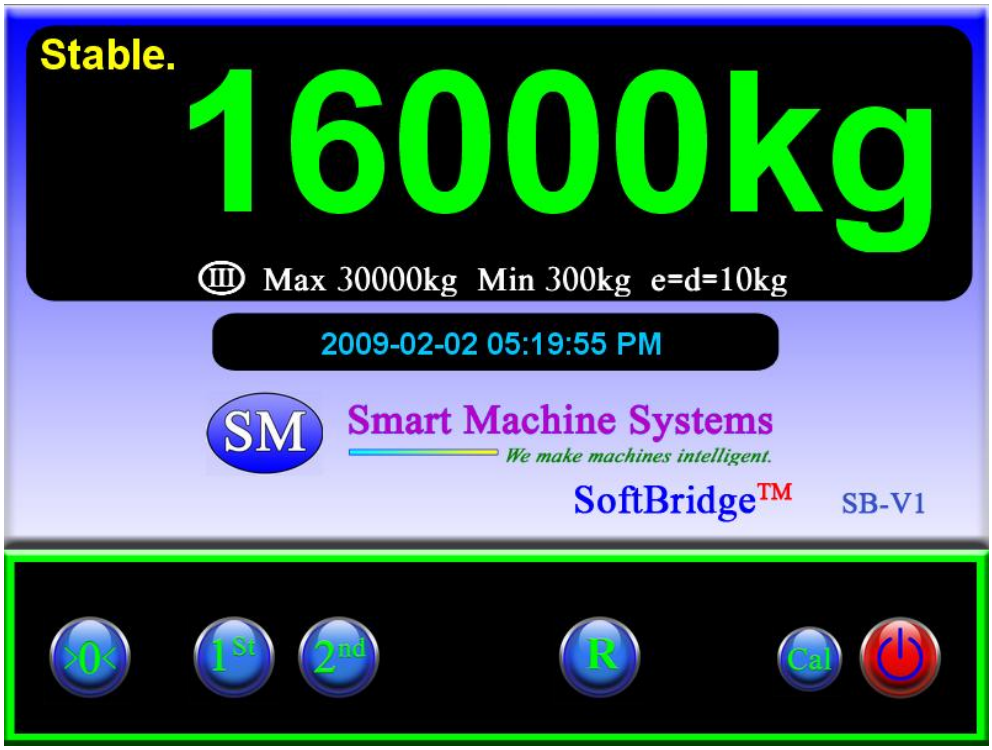

Fig. 2.1.a – Standard user interface

Zero Button – pressing zero button will bring display to zero with in allowable limits.

1St Weight – Pressing 1St weight button will bring up 1St weight dialog as in figure 2.1.b to accept data from user where user can fill given spaces with relevant data.

2nd Weight – Pressing 2nd weight button will bring up 2nd weight dialog as in figure 2.1.c to accept data from user. It also display and data entered in first weight too.

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Report Button – Pressing report button will bring up reports dialog as in figure 2.1.d, where user can generate different reports.

Calibration – Pressing calibration button will bring up calibration dialog as in figure 2.1.e, where all the bridge settings and calibration can be performed. Hover calibration is not displayed during normal operation and has to be enabled via hardware jumper located with in SoftBridge™ module. This is to prevent unauthorized modifications of bridge.

Power – Pressing power button will shout down SoftBridge™ Software interface and can be configured to shout down computer if necessary.

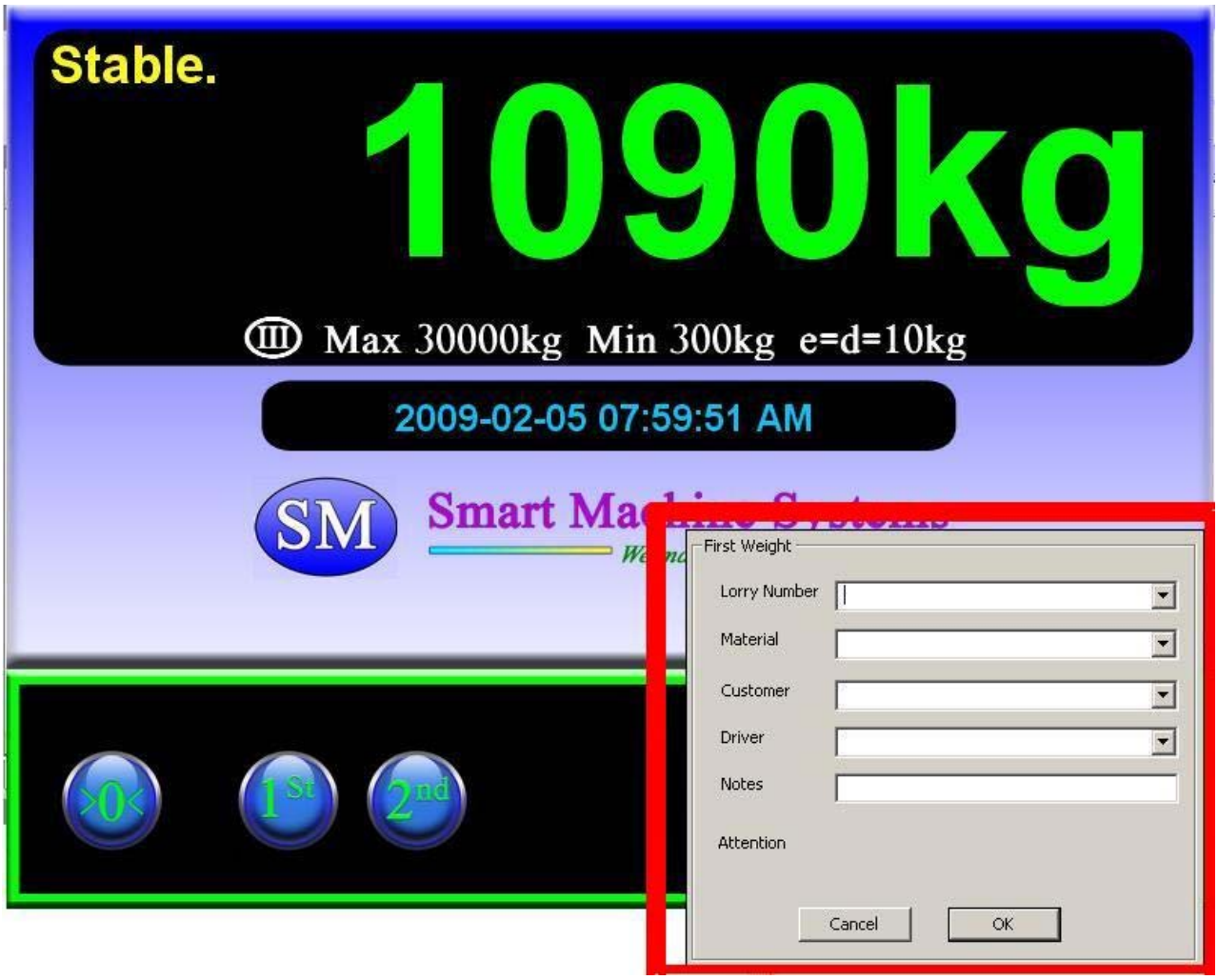

Fig. 2.1.b – 1St weight dialog

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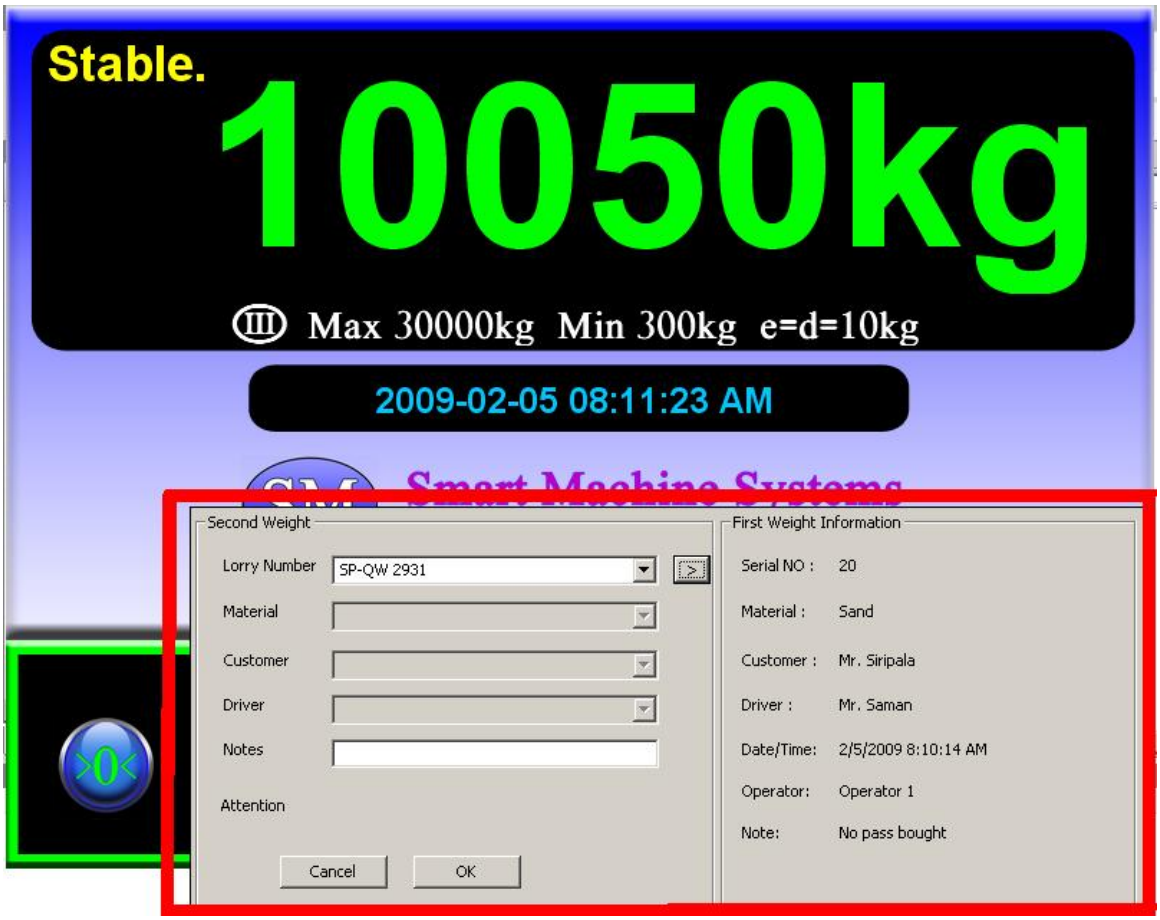

Fig. 2.1.c – 2nd weight dialog

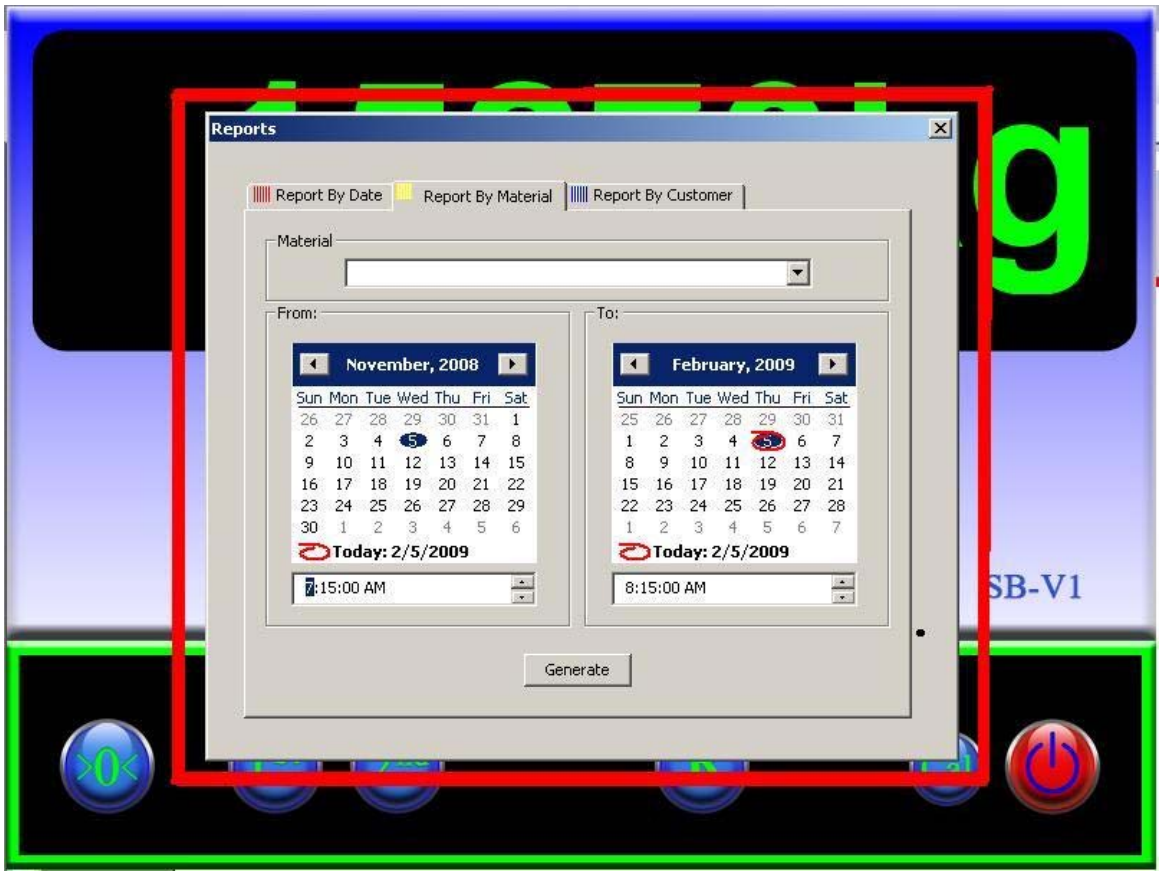

Fig. 2.1.d –Reports dialog

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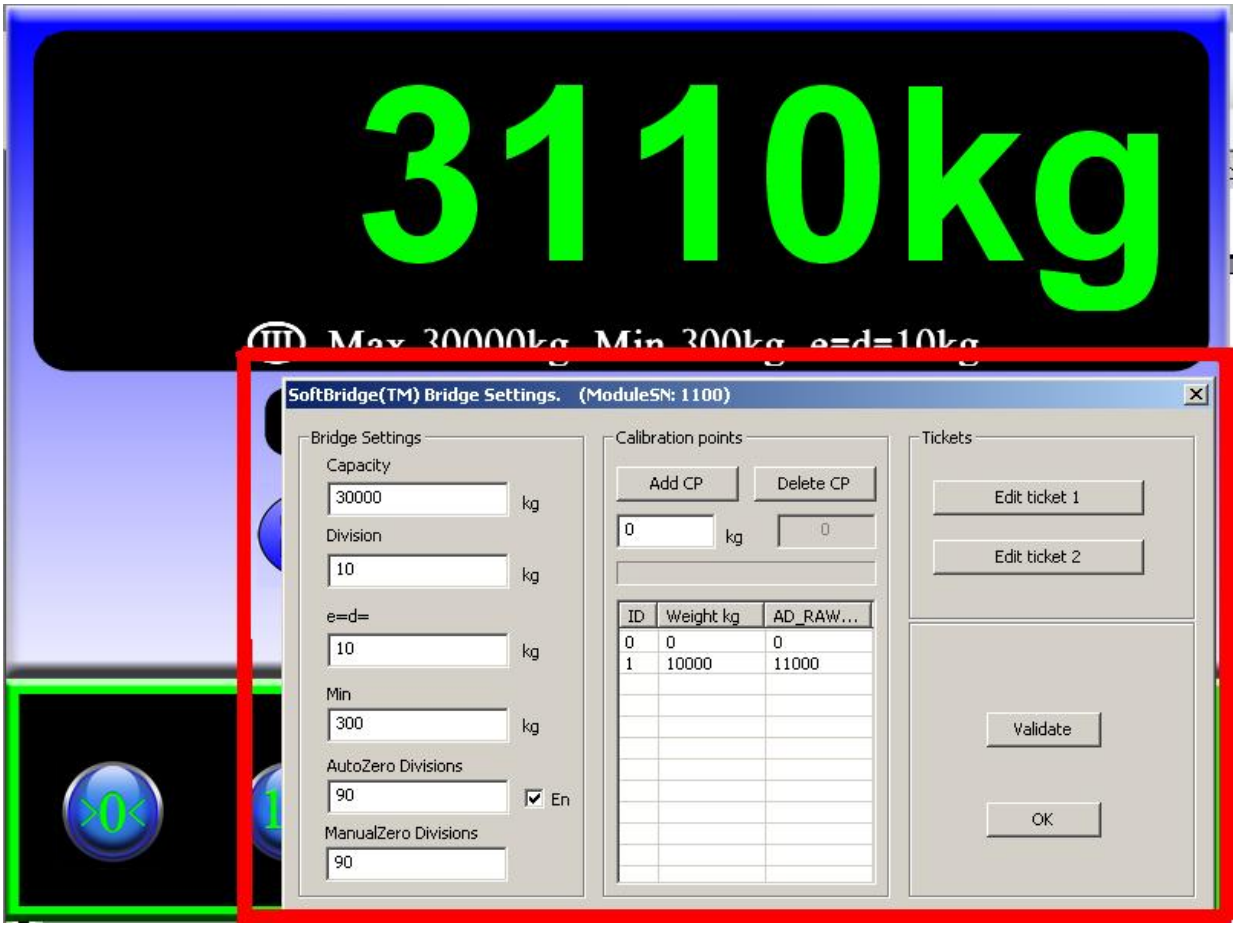

Fig. 2.1.e – Calibration dialog

2.2 Highly flexible bridge capacity and division

As Shown in figure 2.1.e – calibration dialog, bridge capacity and division can be entered with any practical value. Bridge has internal resolution of mover one million noise free AD conversions (20bits Noise free) and stable display resolution up to 30,000 divisions. The standard legal display resolution for weigh bridges are limited to maximum of 4000 divisions. 30,000 divisions can be used for internal company weighing requirements and also weighbridge should be installed in a place where wind forces and not affected.

2.3 Capable of handling practically unlimited number of linearity points via optional memory module.

SoftBridge™ module can accept up to 25 linearity points during calibration in standard version and extended module with higher memory capacity can accept up to 4000 linearity points. Linearity points are extremely useful to achieve accurate weighing results with low cost and de-graded less linear load cell combinations.

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2.4 Very simple and user friendly calibration.

As shown in figure 2.1.e – calibration dialog, calibration is done by entering weight value and adding that point as CP (Calibration Point). Individual points can be deleted and re entered as necessary in case of mistakes and validate button used to store new calibration in SoftBidge™ non volatile memory. Also Auto Zero feature of Weigh Bridge can be disabled during calibration to make calibration more convenient and fast.

2.5 Calibration can be hardware locked for legal requirements

Calibration button is displayed in main display, only if both calibration jumpers are placed to enable calibration in SoftBridge™ module. One of two calibration jumpers inside SoftBridge™ module physically make internal EEPROM read only, which effectively lock unauthorized calibration of module. Also module automatically records last calibration date and can be cross referenced with date of physical stamp placed on module by legal officer to identify any tempering of calibration.

2.6 Can use any kind of printer via computer to print tickets and reports

Since SoftBridge™ use computer as user interface, it is possible to use any kind of printer without any problem, for printing reports and tickets. Namely SoftBridge™ can utilize any laser printer (color or black and white), any inkjet printer or any dot matrix printer if that printer supports printing from computer. This feature ensures availability of low cost and reliable printing solutions according to individual user requirements.

2.7 Keeps records of all weighing records indefinitely.

SoftBridge™ can keep all weighing records indefinitely for any practical purpose. These can be used to generate reports and cross references. Records are kept in computer database and SoftBridge™'s internal memory card if memory module is installed.

2.8 Standalone ACCESS and multi user MYSQL databases are supported

SoftBridge™ supports ACCESS databases and MYSQL databases. If your company uses multi user MYSQL data server, SoftBridge™ can directly upload weighing data to that server and use same database for SoftBridge™ operations.

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2.9 Single and multi SoftBridge™ module operations are supported.

If you use only one Weigh Bridge for your requirements, then you can use stand alone operation mode of SoftBridge™ and also utilize optional backup memory card to securely store your weighing records independently from computer. If your company uses several weigh bridges, then you can setup central server with MYSQL database (or use existing database) and all the SoftBridge™ modules can access same database to store and retrieve relevant data for operation.

All the current weighbridges need to weigh first and second weight of lorry in same weigh bridge. But when using multi SoftBridge™ module operation, it is possible to enter lorry from one gate with weigh bridge and exit from another gate with different weigh bridge. This makes operation handling of Lorries much fast and convenient.

2.10 All standard reports are included

SoftBridge™ comes with capability to generate all the standard reports used during weigh bridge operations.

2.11 All reports and tickets are generated using standard HTML

All the reports and tickets generated by SoftBridge™ use standard HTML language so that any user with HTML knowledge can generate report formats as required.

2.12 Any kind of formatting and pictures can be printed in tickets and reports

Because SoftBridge™ uses HTML report and ticket formats, it is possible to include any kind of formatting and graphics in tickets and reports. As an example ticket can be printed with full color company logo and different size and color fonts and all underlining, bold, italic formatting are supported.

2.13 Optional back up data memory card

In single SoftBridge™ module operation mode, optional memory card can be installed inside SoftBridge™ module with capacity up to 32GB, where this memory can keep all weighing records indefinitely for any practical purpose. Capacity of 32GB can keep more than 50 million weighing records, which exceeds and practical requirement. If optional memory card used in single SoftBridge™ module operation mode, all the data preserved in memory module and in case of computer malfunction, no weighing data will be lost and module can be plugged to another computer with in few minutes to continue normal operation.

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2.14 Remote diagnose and error correction is supported in optional modules

80% of weigh bridge malfunctions are can be rectified by software means and SoftBridge™ supports remote diagnose and error correction. This feature requires internet connection to SoftBridge™ installed computer and optional software modules. This feature dramatically reduces down times of weigh bridge because real time technical assistance can be provided from any ware from the world, because physical site visits can be reduced, hence no traffic and transport delays.

2.15 SotBridge™ module is independent of computer used to access it.

If SoftBridge™ used in single module operation mode, or used with central data server with MYSQL data base, Operation of SoftBridge™ is completely independent of computer and can me freely un-plugged and plugged in to new computer. This reduces down time due to computer malfunctions.

2.16 Self error logging and correction capability

SoftBridge™ equipped with self error logging and correction facilities, which records any error occur during operation and tries to recover it self. If self recovery fails, it also logs reasons and detailed error reports. When technician comes to recover errors, technician can use log files to isolate errors much faster with out questioning operator what happened. This also reduces down time of weigh bridge. Also this error log can be accessed remotely when remote diagnose and error correction modules are enabled.

2.17 Capable of accepting optional user requirements

SoftBridge™ software and hardware can be modified to accommodate user requirements via optional plug-in modules.

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3. Warranty

SoftBridge™ module covered with one year limited warranty for manufacturing defects.

4. Requirements

Computer: With Pentium IV or better processor, 256MB of RAM, 2USB ports, 40GB Hard disk and Windows XP operating system installed.

Printer: Any suitable printer supported by computer.

Internet connection: If remote diagnose and error correction modules installed, internet connection should be provided on computer. A board band connection is recommended.

Power: 230V AC Single phase. A UPS is recommended for both SoftBridge™ module and computer for reliable operation.

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