INTEGRATED VISUAL DATA TECHNOLOGY INC.
Solutions that lift your business

Installation Manual

* Unidentified Downtimes
* Operator Access control
* Audio / Visual Alerts
* RF module

myKPI-RF (Keypad Operator Access Control Series)

Lift Truck Onboard Automatic Recording of All Operational Unidentified Downtime Events

myKPI-RF V1

INTEGRATED VISUAL DATA TECHNOLOGY INC.
Solutions that lift your business

General Installation Guide

This **myKPI-RF V1.27 s**eries installation guide describes how to install, test and use your onboard automatic unidentified downtime recording system. The **myKPI** system *does not require any calibration*.

Following the instructions in the **ADMINISTRATION MENU** guide will enable you to get the system set up quickly. In the event that you require additional assistance, please contact customer support via e-mail at support@skidweigh.com , visit www.skidweigh.com or contact us at the address or contact number below:

Integrated Visual Data Technology Inc.

3439 Whilabout Terrace, Oakville, ON, Canada, L6L 0A7 Phone: 905-469-0985

Safety

Always disconnect the vehicle battery while installing myKPI system or any other electronic product.
Make sure that unit, pressure transducer and any other associated cables are securely mounted and do not impede any of the vehicle's controls. Use care when routing the components cables. Route the cables where they will be protected.
Use commonly accepted install practices for after market industrial vehicle electronic devices.
The installation of the myKP-RF systems should only be performed by an acknowledged lift truck dealer technician or end user electro and hydraulic technical installer.
Here are two acceptable methods of making a wire connections:
* Soldering your connections (recommended)
* Crimp connectors (with the use of the proper crimping tool)
Regardless of the method you choose, ensure that the connection is mechanically sound and properly insulated. Use high quality electrical tape and shrink tubing where necessary. This product is connected directly to the vehicle's ignition switch, 12 to 55 VDC. There is no on-off switch on the unit.

Electro-Magnetic Compatibility

CE conformity to EC directive 89/336 (EMC) by application of harmonized standards: Interference stability EN 61000-6-2 and EN 61326-1 interference emit EN 61000-6-3, EN 61326-1 for the pressure transducer.

myKPI-RF Keypad Series

Our policy is one of continuous improvement and the information in this document is subject to change without notice.
The software version is displayed on the LCD display once the power is turned on to the system.

Overview of components

The standard myKPI-RF system consist of two main components:
* Digital indicator,RF module, strobe light, announcer module, wiring harness, and mounting bracket
* Hydraulic pressure transducer with 3 wires cable
* Installation manual and operator usage instruction

INTEGRATED VISUAL DATA TECHNOLOGY INC.
Solutions that lift your business

Pressure transducer installation

The pressure transducer must be installed in the lifting hydraulic line ***between the lift control valve and lift cylinder(s).*** Mount a T-piece in hydraulic line. In some cases you can install the pressure transducer in the flow divider, drilling and tapping for 1/4"-18 NPT male in spare plug (if only single or double mast configuration) or in the body of the flow divider. Also, you can drill and tap on any "larger elbow" that might be available in the hydraulic lifting circuit.

Pressure transducer installation precautions

Before installation of the pressure transducer the hydraulic lift circuit must be pressure free.

There are two ways to do that:

1. Place the forks on the ground in their lowest position and make the hydraulic system pressure free by tilting the mast forward. The chain(s) should be slack.
2. Lift the forks and position them on the top of a supporting fixture. Start lowering the lifting cylinder into its lowest position. Be sure that chain(s) is slack.

Make sure that that installed pressure transducer will not touch any moving Parts or assembly of the vehicle while in normal operation. Pressure transducer has 1/4"-18 NPT male thread.

Use thread seal to ensure tight fit.

Selecting the mounting location for digital indicator

Use the mounting bracket with the anti vibration mount and fasten digital indicator on the vehicle dashboard, side railing on the right hand side or preferably on the overhead guard. There are many examples of mounting locations that will depend on the vehicle model. However, additional mounting items such as a flat brackets may be needed to help secure the unit to upper right corner of the guard or side railing.

Choose the correct location and make sure that:

- Indicator is visible and within reach of the operator
- Location so that operator has a clear unobstructed view of the working environment

Compact size

All of the myKPI systems are compact size, housing dimension of only 120 x 80 x 85 mm.

INTEGRATED VISUAL DATA TECHNOLOGY INC.
Solutions that lift your business

Electrical connections

All of the **myKPI-RF** systems operate from 12 to 55 VDC.

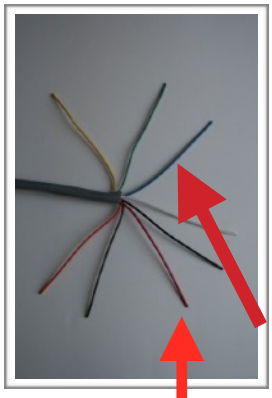
Digital indicator with eight wires single cable

- **Orange Wire (+) Ignition switch On position**
- **Brown Wire (-) Battery negative**
- **Red Wire, connect to RED wire of the pressure transducer cable**
- **Black Wire, connect to BLACK wire of the pressure transducer cable**
- **White Wire, connect to WHITE wire of the pressure transducer cable**

NOTE:

The myKPI-RF design is using "Audio / Visual Alert Warning" to prompt the operator to input valid ID# before operating the vehicle.

When valid operator ID# is entered into the system Audio / Visual alert will be disabled.



Vehicle Disable Function (Optional)

-**Internal relay SPST Normally Open dry contacts, rating 1A.**

This relay will be activated and stay on once the valid operator ID# is inputed into the system.

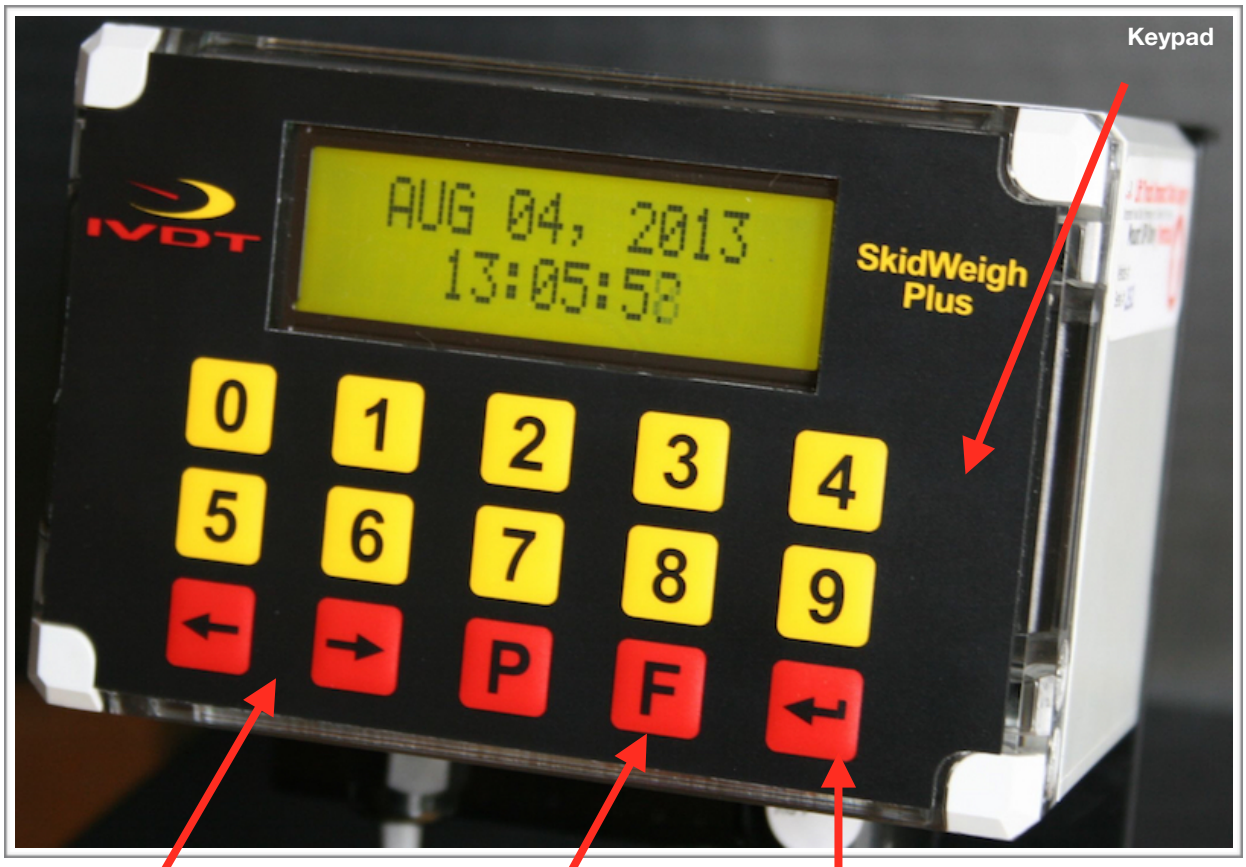
To disable vehicle operation connect two wires, green and blue in series with seat switch

- **Green Wire**
- **Blue Wire**

Male port 1/4"-18 NPT

Pressure transducer cable

- **White Wire, pressure transducer output signal**
- **Black Wire, signal negative**
- **Red Wire, power supply + 11 V DC**



All **iVisibility-RF** systems are **internally short circuit protected with a resettable fuse.** There is no need to install external inline fuse in orange wire that is connected to the ignition switch.

Note:

The **iVisibility-RF** system utilizes a keypad as the input for the operator access control. The system provides capacity for up to 250 valid operators ID numbers, 3 digits maximum, ranging from 1 to 999. All factory delivered systems are supplied with **default operator ID# 111**.

INTEGRATED VISUAL DATA TECHNOLOGY INC.
Solutions that lift your business

Administration Menu Instructions

(Time/Date, Vehicle ID#, Utilization Factor, USB Data Upload)

To enter into the **Administration Menu** with LCD display showing **Date / Time** press **"F"** key and than input number **9**. Input password **521** and press **"Enter key"** ↵. If LCD display shows **"ENTER ID NUMBER"** input any operator valid ID# or factory default ID# **111** and press **"Enter key"** ↵. With the LCD showing Date / Time press **F** key and than number **9** and input password **521** and press **"Enter key"** ↵. Use scroll left and right arrow keys and follow the LCD menu instructions and press **"Enter key"** ↵ to confirm the input values.

LCD Display
MENU
PASSWORD = _

LCD Display
<> KEY TO SCROLL
F KEY TO EXIT

Date / Time Set Up

LCD Display
SET CLOCK
ENTER TO SELECT

LCD Display
SET CLOCK
AUTO _

Use left ◀ and right ▶ arrow key *(bottom left side of the keypad)* to change from AUTO to MANUAL date/time set up.

Note: *AUTO set up refers to system utilizing a wireless RF platform with automatic date /time*

update from IVDT Base Station.

For the applications without Base Station, select MANUAL input to set date and time.

LCD Display
SET CLOCK
MANUAL _

LCD Display
Aug 28, 2010
12:20:23

Press **"Enter key"** ↵ to confirm the setting. The cursor will automatically move to the next item to be changed (Month, Day, Year, Hours, Minutes, Seconds). On the last correction, seconds item press **"Enter key"** ↵ to confirm new Date / Time set up.

How to set vehicle ID#s

- Maximum input number for vehicle ID# is 3 digits. Scroll to "**Set Vehicle ID"** menu.

LCD Display
<> KEY TO SCROLL
F KEY TO EXIT

LCD Display
SET VEHICLE ID
ENTER TO SELECT

LCD Display
ENTER VEHICLE ID
1_

INTEGRATED VISUAL DATA TECHNOLOGY INC.
Solutions that lift your business

Press **Enter** key to confirm Vehicle ID# selection.

Saving data to USB memory stick

- Insert memory stick into USB port
- With LCD display showing date /time press **F** key and than number **9** and input password **521.** Scroll to **" Save to USB"** menu.

Follow instructions shown on the LCD display.

Press **"Enter key"** ↵ to confirm selection.

LCD Display
<> KEY TO SCROLL
F KEY TO EXIT

LCD Display
SAVE TO USB
ENTER TO SELECT

LCD Display
SAVING TO USB
- - - - - - -

LCD Display
ERASE SDRAM ? N

When the system has finished uploading the data to the USB memory stick the LCD display will prompt you to save or erase the SDRAM. If selected ERASE all files contained on the myKPI-RF system will be erased. Once you have made your selection **Y** or **N** the system will automatically bring you back to the main screen in the supervisor menu.

INTEGRATED VISUAL DATA TECHNOLOGY INC.
Solutions that lift your business

How to program keypad valid operator ID#'s

- With power turned on to the system the LCD display will indicate to **"ENTER ID NUMBER"**

LCD Display
ENTER ID NUMBER
ID =

- Input passcode **742F** and LCD display will automatically prompt you to input the first valid operator ID#. *(Any number in range from 1 to 999)* and press **"Enter key" ↵.**

LCD Display
ENTER VALID IDS
ID 1 = 111

- LCD display will advance and prompt you to input second valid operator ID# and press **"Enter key" ↵.**

LCD Display
ENTER VALID IDS
ID 2 = 222

- LCD display will advance and prompt you to input third valid operator ID# and so on.

LCD Display
ENTER VALID IDS
ID 3 = 333

** Above example showing operators ID# 111, 222 and 333.*

On the last valid operator ID number that you have inputed into the system you must press **"Enter key" ↵** and than press **F** key to exit the menu.

At any time if you want to look at the current operators ID numbers already in the

INTEGRATED VISUAL DATA TECHNOLOGY INC.
Solutions that lift your business

system, change or delate them you must input password **742F** while LCD display is showing **"Enter ID Number"**.

How to change default Utilization Factor

Default Factory Utilization Factor is set to 30.
Use this default value to start to evaluate your material handling efficiency by measurement of all unidentify operational downtime events, automatically. If the number of unidentified downtime events is "low"; it will indicate good productivity. In the case that number of unidentify downtime events is "high"; it will indicating lower productivity. To improve productivity **decrease default utilization factor in small increments.**
(Example: Value changed from 30 to 28 and compare data)
Keep doing this adjustment until you get to the most favourable utilization factor for your operation.

LCD Display
MENU
PASSWORD = _

With LCD display showing Date /Time press **F** key and than number **9** and input password **521.**
Scroll to **"Utilization Factor"** menu.

LCD Display
UTILIZAT.FACTOR

LCD Display
ENTER TO SELECT

LCD Display
UTILIZAT.FACTOR
Time(1-300)? 30

Use scroll keys to decrease utilization factor to 28 and press **“Enter key”** ↵ and than press **F** key to exit the menu.

LCD Display
UTILIZAT.FACTOR
Time(1-300)? 28

LCD Display
UTILIZAT.FACTOR
CONFIGURATED

By pressing **F** key new utilization factor will be in effect for all future measurements. The LCD display will show Date / Time, representing normal operational mode.

LCD Display
<> KEY TO SCROLL
F KEY TO EXIT

LCD Display
Aug 28, 2010
12:20:23

INTEGRATED VISUAL DATA TECHNOLOGY INC.
Solutions that lift your business

AUDIO / VISUAL ALERT
- **Strobe Light (Flashing)**
- **Announcer Voice Module**

Operator Guide

1. Turn ignition to on position. AUDIO / VISUAL alert will be activated and stay on until a valid operator ID number is inputed into the system. *(Voice announcer audio module)*

LCD Display
ENTER ID NUMBER
ID =

2. When a valid operator ID is entered into the system, AUDIO / VISUAL alert will be turned off. The LCD display will show Date / Time.

LCD Display
Aug 28, 2010
12:20:23

3. The myKPI-RF measurement system is activated. **(No operator input required)**

Every time when the UTILIZATION FACTOR is exceeded LCD display will automatically indicate visual / audio **“IDLING”** event to the operator. All unidentified time and duration will be recorded for retrieval on USB port. All unidentified operational downtime events will be shown to the operator on LCD display as **“OTHER”** in real time.

Any current unidentified event will be cancelled automatically as soon vehicle is put into productive operational mode. The LCD display will show Date / Time.