![IVDT logo - INTEGRATED VISUAL DATA TECHNOLOGY INC. Solutions that lift your business]

Installation & Operational Manual

AC5-OS
Lift Truck RFID Card Reader Operator Access Control with Programmable OSHA Safety Check

AC5-OS V1.25

General Installation Guide

This **AC5-OS V1.25** Series installation & calibration guide describes how to install, set up, test and use your vehicle on-board RFID card reader operator access control with automated OSHA safety check. Following the instructions in the **ADMINISTRATION MENU** guide will enable you to get the system set up and operating 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 SkidWeigh system or any other electronic product.
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 **AC5-OS** 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.

AC5-OS SkidWeigh Plus 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 **AC5-OS** system consist of two main components:

* Digital indicator with integrated RFID operator access reader with wiring harness, mounting bracket
  * Installation & calibration manual and operator usage instruction
  * One Master RFID card and one operator card is included with every system

* **Note:**

Valid operator ID# card is required during system installation to enable vehicle operation (Verification of electrical connection of the BLUE and GREEN wires connected in series to one of the vehicle seat switch wire) and to be able to access the "Administration Menu".

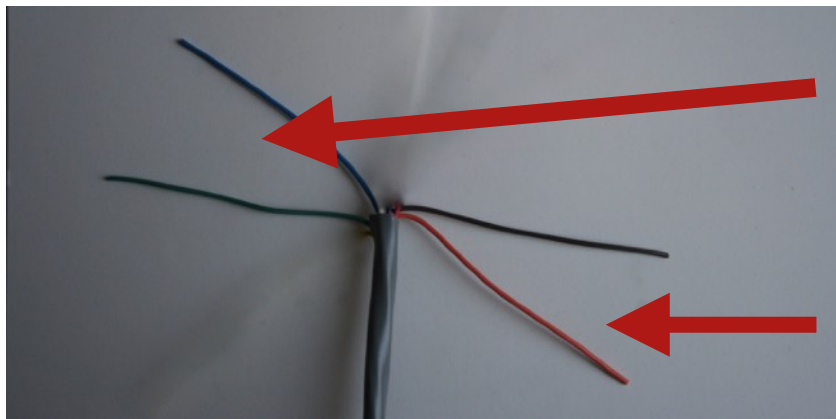## Selecting the mounting location for digital indicator

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

Electrical connections

All SkidWeigh RFID equipped systems operate from 12 to 55 VDC.

Use two wires **BLUE** and **GREEN** and connect them is series with vehicle seat switch wire **Normally Open Contacts**

(+) **ORANGE Wire**, Connect to ignition switch
(-) **BROWN Wire,** Connect to battery negative

Orange Wire (+) Ignition switch

Brown Wire (-) Battery negative

Internal relay connections to be used to enable vehicle usage (Dry contacts)

BLUE Wire, common

GREEN Wire, N. O. contact

IMPORTANT

For all SkidWeigh Plus Systems equipped with RFID card reader you MUST HAVE AT LEAST ONE VALID OPERATOR CARD in order to enable vehicle operation, program additional RFID cards and access the administration menu to set up and calibrate the system!

RFID Reader

Keypad

Toggle Arrows Keys in set up menu
Select function in F 0
and F 9 menu

"Enter key" ↵

Optional Functions
Print Key or /and
SEND key to wireless base station
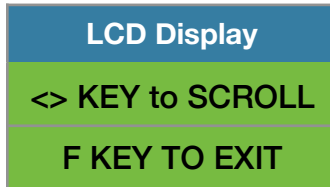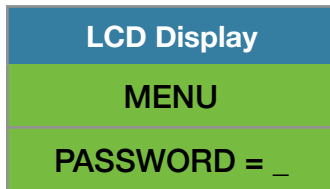
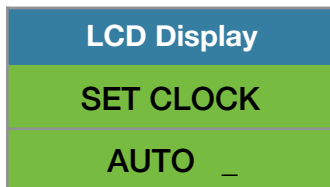**FUNCTION MODE KEY**
F9
F0

How to disable RFID reader

Vehicle access enable function in case of lost RFID master card, valid card(s) or reader malefaction

- With LCD Display showing " IVDT SCAN CARD" press and hold **F** key for 5 seconds
- LCD display will show PASSWORD =_
- Input **521** and RFID reader will be disabled. Vehicle will be operational

Administration Menu Instructions

To enter into the **Administration Menu** scan valid RFID card, press **F key and than 9 key** and input password **521.** Use left and right arrow keys to scroll and follow the LCD instructions.
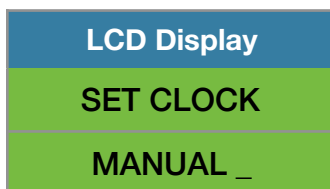
LCD Display
MENU
PASSWORD = _

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 communication and programming hub.

For the applications without Base Station, select MANUAL _ set clock and follow the LCD instructions.
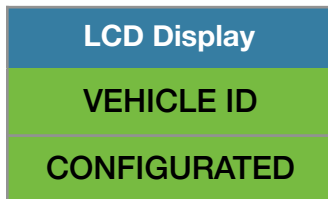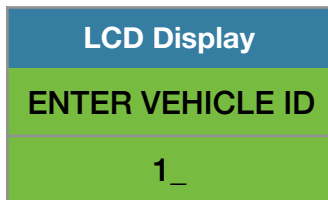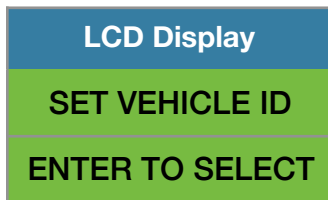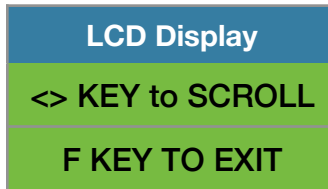
LCD Display
SET CLOCK
MANUAL _

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.

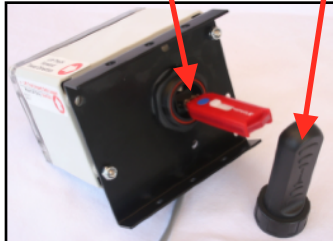## Set vehicle ID   -

Maximum input number for vehicle ID is 4 digits.
Note: For system used with RFID card reader maximum input number for vehicle ID is 5 digits.

LCD Display
<> KEY to SCROLL
F KEY TO EXIT

LCD Display
SET VEHICLE ID
ENTER TO SELECT

LCD Display
ENTER VEHICLE ID
1_

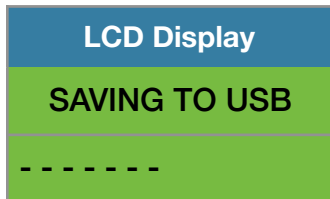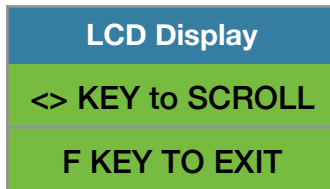| LCD Display |
|:---:|
| VEHICLE ID |
| CONFIGURATED |

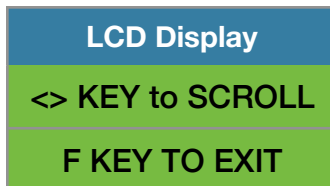**USB port**   **USB Port Protective Cover**

Save data to USB

The SkidWeigh Plus system will allow you to download all recorded data onto a USB drive. **Follow instructions shown on the LCD display**
This function is located in **Supervisor Menu** to protect the integrity of the information.

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 erase the SDRAM , all files contained on the SKidWeigh Plus ED3-IM . Once you have made your selection **Y** or **N** the system will automatically bring you back to the main screen in the supervisor menu.

LCD Display
<> KEY to SCROLL
F KEY TO EXIT

Operator Usage Guide

Turn on ignition switch   **(Vehicle operation is disabled until valid RFID card is used)**

Scan valid operator RFID card

LCD Display
IVDT
SCAN CARD

LCD display will show date and time

or

LCD message prompts the operator to complete OSHA safety check procedure before vehicle operation is enabled.

LCD Display
SAFETY / CHECK
LEAKS/DAMAGE?F

Default values for all OSHA "safety check's messages" shown on the LCD Display are **F** meaning **Fail**.

Press **"Enter key"** ↵ to confirm if the **F** (Fail) if true.

To change **F** (Fail) to **P** (Pass) press left or right arrow key. The LCD will change to **P** and press **"Enter key"** ↵ to confirm selection.

System will automatically advance to next OSHA "safety check message".

Follow above procedure for all next OSHA "safety check messages" by inputing the **F** or **P**.

After the last "safety check message" input (**F** or **P**) is done the LCD display will go back and show date / time and **vehicle operation will be enabled**.

LCD Display
Aug 11, 2011
11:22:38

General

Each **AC5-OS** system supplied to the end user includes one **RFID MASTER CARD** and one valid operator **RFID** card.

The master card and one operator card is used to enable vehicle operation, access Administration menu for system set up, program additional operators RFID cards as required.

Note: *Integrated Visual Data Technology Inc. will supply only one valid operator RFID card.*

Technology

The RFID operator access card reader is integrated into **AC5-OS** system proprietary software that allows self programming of RFID cards, deleting and management of authorized operator RFID cards. There is no need for any additional external programming devices or PC.
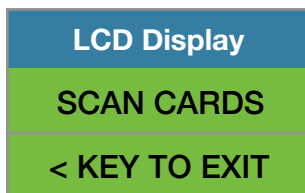
Starting point to program valid operator(s) cards

Turn ignition switch to on position
The LCD display will indicate to **"SCAN CARD"**

Scan RFID MASTER CARD
LCD display will show

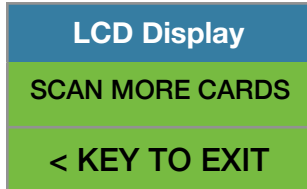| LCD Display |
|:---:|
| SCAN CARDS |
| < KEY TO EXIT |

Scan first valid HID operator card.
The LCD display will show for the moment the value of the inputed card.

The LCD display will indicate that "CARD ADDED OK "and short beep once

LCD Display
SCAN MORE CARDS
< KEY TO EXIT

Scan second valid HID operator card.

Follow instructions shown on LCD display.

Keep adding the valid cards to vehicle. When all cards inputed into the system press **< KEY TO EXIT**
Lift Truck SkidWeigh RFID Authorized Operator Access System has a capability to add up to 150 valid
operator cards.

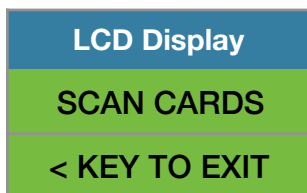**Note: *Proceed with programming valid operator cards for each vehicle in your fleet.***

Starting point to delete operator(s) cards already on the system

Turn ignition switch to on position

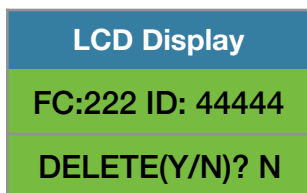The LCD display will indicate to "SCAN CARDS"

Scan RFID MASTER CARD

LCD display will show

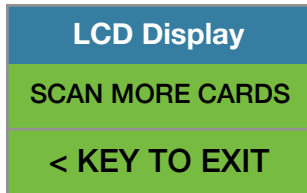| LCD Display |
| :---: |
| SCAN CARDS |
| < KEY TO EXIT |

Scan first valid operator CARD that you want to delete from the system

LCD display will show the card ID# . Use left ◀ and right ▶ arrow key to change to **Y**.

LCD Display
FC:222 ID: 44444
DELETE(Y/N)? N

The current card ID# 44444 will be deleted from the system. LCD display will automatically show

LCD Display
SCAN MORE CARDS
< KEY TO EXIT

Scan next valid operator CARD that you want to delete from the system

Follow instructions shown on LCD display.

Keep adding cards to be deleted. When all cards inputed into the system press **< KEY TO EXIT**

How to disable RFID reader (Vehicle Enable Function)

In the case of lost RFID operator card or master card, or reader malefaction in order to enable vehicle operation do a following:
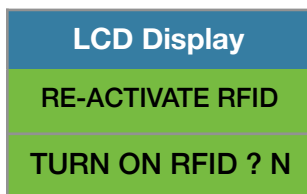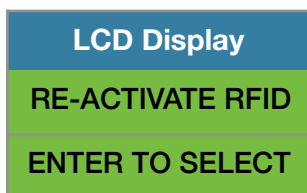
- With LCD Display showing " IVDT SCAN CARD" press and hold **F** key for 5 seconds

- LCD display will show PASSWORD =_

- Input password **521** and RFID reader will be disabled. Vehicle will be operational without RFID operator

card input.

How to enable RFID reader

With LCD display showing Date / Tome press **F key and than press number 9**.

- LCD display will show PASSWORD =_

- Input **521**

 < KEY TO SCROLL and follow instructions

LCD Display
RE-ACTIVATE RFID
ENTER TO SELECT

LCD Display
RE-ACTIVATE RFID
TURN ON RFID ? N

Use left or right arrow key to toggle to **Y** and press **"Enter key"** ↵

ProxPoint Plus RFID Card Reader / SkidWeigh Technology

Read Range   Typical 3"

Operating Voltage 12 to 55 VDC

Operating Temperature (-35 C to 65C)

Operating Humidity 5-95% non-condensing

Transmit Frequency 125 kHz

Card Compatibility All 125 kHz HID Proximity cards, long and short formats, as well as Corporate 1000 cards formats

LED Type Bicolored (green and red)

Transient Surge and Reverse Voltage Protection

Extra Security, Recognizes card formats up to 85 bits with over 137 billion unique codes

Application for all kinds of lift trucks regardless of the vehicle make, type ,model or operating voltage

Self programming, no additional devices required to add or delete cards from the system

Memory capacity to up to 250 operators ID#

FCC Compliance, part 15 of the FCC rules