

# Lanx HD

## only for heavy duty work

### User Guide



Convenient on-board weighing during loading

Productivity control

Automatic weighing

Protection against early wear of the vehicle

Reusable system





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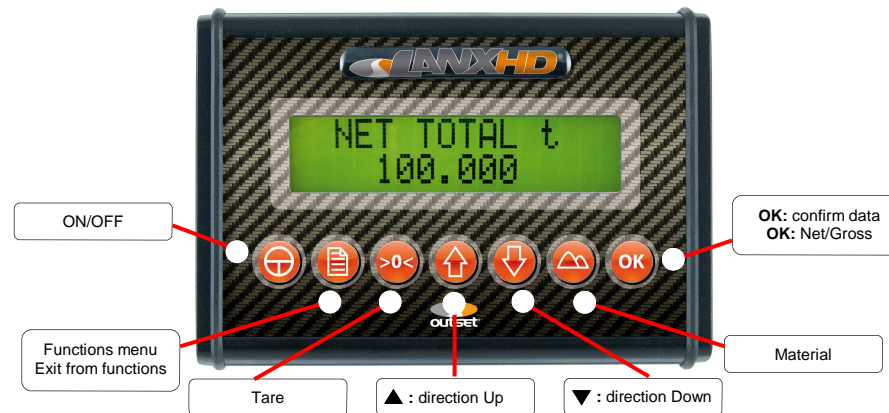
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Load Weighing System for internal use: any commercial transaction is forbidden. Outset® considers itself free of every responsibility in case of eventual errors of the display weight, also caused by manufacturing defects.

## 1 Features

- ◆ Real-time weight display for net and gross loads with automatic memorization.
- ◆ Management of the weight measurements through the instrument's database.
- ◆ Printing of the daily, weekly or monthly load data.
- ◆ 24 Vdc direct power supply with a maximum consumption of 0.5A.
- ◆ Relay control output for connecting an optical warning device for programmable load limits.
- ◆ The system is entirely waterproof, with a solid construction suited to withstand extreme working conditions.
- ◆ Complete safety of the system, since it does not affect any vital part of the vehicle.

## 2 Display Buttons



**ON/OFF BUTTON:** Button for switching the LANX HD<sup>®</sup> display on or off.

**F BUTTON:** Button for selecting the main functions: operator sel., print loads, delete load (PIN CODE unlock), loads Database, diagnostic, edit materials, edit operators and setup (PIN CODE unlock). Furthermore, this button is also used to exit the various functions and return to the weighing mode.

**TARE BUTTON:** Button used to setup the tare.

**BUTTON ▲:** Button for scrolling (up) through the functions.

**BUTTON ▼:** Same function as above (scrolling down).

**MATERIAL BUTTON:** button used to select materials.

**OK BUTTON:** Button used to confirm the selected function. Also used for viewing the net or gross weight of the vehicle.

### 3 PIN CODE

LANX HD® is protected with a pin code that unlock other different features and setup menu available only for the person in charge of the vehicles. To unlock the setup menu with the PIN CODE see the “Calibration manual”.

The standard features available for the user are: *operator selection, print load, loads Database (save loads Database), diagnostic, edit materials, edit operators, tare button and materials selection button.*

### 4 Functions

LANX HD®, in addition to indicating the net and gross weight loaded on the vehicle and memorizing it automatically, also performs other secondary functions which can be set using the **Functions** and **OK** buttons.

#### 4.1 Operator selection

This function allows the user to select until 32 operators or loading destinations.

- Press **Functions** to display:
- Press **OK** to enter the function
- Scroll ▲ and ▼ through the functions to select the operator or the loading destinations
- Press the **OK** button to confirm the operation.

General  
OPERATOR SEL.

#### 4.2 Print loads

This function allows the user to print the weights measured during the day. The date, time, operator/destination and material loaded during the entire workday is printed on the ticket.

- Press **Functions** and ▲ button to display:
- Press **OK** button to print
- Example of a printed ticket:
- Press the **Functions** button to cancel the operation

General  
PRINT LOADS

```
*****
                LANX
                ....
                OUTSET srl
                ....
                31/01/2011      19.30
*****ID TRUCK*****
*****
***      MATERIAL 01      ***
***      OPERATOR/DESTINATION      ***
31/01/11  08.30  kg  75100
31/01/11  09.15  kg  77200
31/01/11  10.47  kg  75150
-----
TOTAL                        227450
-----
***      MATERIAL 02      ***
31/01/11  11.15  kg  75100
31/01/11  12.05  kg  77200
-----
TOTAL                        152300
*****
```

To display or print the daily, weekly or monthly weights, see the “Loads Database” section and it is necessary to enter the protective PIN CODE to unlock the functions.

### 4.3 Delete Load (PIN CODE unlock)

This function allows the user to delete the last weight measured. It will be available after the PIN CODE input. Press the **Functions** button and the ▲ and ▼ buttons until the following appears on the display:

General  
DELETE LOAD

- Press **OK** and the following will appear:
- Press **OK** again to confirm the deletion of the weight
- Press the **Functions** button to exit the function.

DELETE LOAD  
Confirm ?

### 4.4 Loads Database

This function allows to save the weights made through a USB Flash Drive device. It also allows to print the single and the totals weight measurement during and interval of days, to view on the display the weight measurement and to reset all loads in the Database.

Connect the USB reader to the printer's connector placed on the back of the display. (Obviously it will not be possible to print during the saving data operation).

Once the USB reader is connected, insert the USB Flash Drive device, then the led in the reader becomes green and it is ready to save data.

E.g.:



- a) **SAVE LOADS DB** allows to save the weights made through a USB Flash Drive device.

- Press the **Functions** button and the ▲ and ▼ buttons until the following appears on the display:

General  
LOADS DATABASE

- Press the **OK** button to enter the function

Loads Database  
SAVE LOADS DB

- Before saving data, make sure that the USB reader is correctly connected with the printer's connector, then press **OK** button to confirm the saving.
- The Database saving opens an "open file" (Notepad) in the USB Flash Drive device named with the ID of the truck that will be updated synchronizing the data after each saving. The file shows date, time, material, operator/destination and total of the loaded material. Transmitting the data to Excel is possible to develop them obtaining daily, weekly or monthly totals.

*NB: if the USB reader is not connected to the display and you try to save the data, the system goes blocked and needs to be reset, cutting off the power.*

It is necessary to enter a protective PIN CODE to unlock the following functions. These functions allow the user to print, display or delete the weights measured during the previous days, weeks or months. Press the **Functions** button and the ▲ and ▼ buttons until the following appears on the display:

b) **DAILY PRT (SNG)** allows the user to print specifically (date and time) every single weight measurement made in a single day or within an interval of days

- Press **OK** to display:

**Loads Database  
DAILY PRT (SNG)**

- Use the ▲ and ▼ buttons to change the number of the day (dd) flashing on the display and press **OK** to confirm it

- Use the same procedure for the month (mm). After having set the number of the year (yy), press **OK** and the following screen will appear:

**FROM DAY  
dd/mm/yy**

- Use the same date modification procedure described above. When the number of the year (yy) is set by pressing **OK**, the printer will issue the ticket with the relevant data of the weight measurements (with the date and time) made within the set interval of days.

**TO DAY  
dd/mm/yy**

c) **DAILY PRT (TOT)** allows the user to print the totals of all the weight measurements made in a single day or within an interval of days.

- Press **OK** to display:

**Loads Database  
DAILY PRT (TOT)**

- Use the ▲ and ▼ buttons to change the number of the day (dd) flashing on the display and press **OK** to confirm it

- Use the same procedure for the month (mm). After having set the number of the year (yy), press **OK** and the following screen will appear:

**FROM DAY  
dd/mm/yy**

- Use the same date modification procedure described above. When the number of the year (yy) is set by pressing **OK**, the printer will issue the ticket with the relevant data of the weight measurements (with the date and time) made within the set interval of days.

**TO DAY  
dd/mm/yy**

d) **SHOW LOADS** allows the user to specifically view on the display (with date and time) the weight measurements made in a single day or within an interval of days.

- Press the ▲ and ▼ buttons to display:
- Press the **OK** button to confirm

Loads Database  
SHOW LOADS

- Use the same date modification procedure described in point a). When the number of the year (yy) is set on the “to day” screen, press **OK** and the following screen will appear:

TO DAY  
dd/mm/yy

- Press the ▲ and ▼ buttons to view the desired date and time
- Press **Functions** to exit.

e) **RESET LOADS DB** allows the user to zero all the individual weights and the totals.

Loads Database  
RESET LOADS DB

- Press the ▲ and ▼ buttons to display:

RESET LOADS DB  
Confirm ?

- Press the **OK** button to confirm the total reset or press the **Functions** button to exit this function.

#### 4.5 Diagnostic

This function allows the user to analyze the elements making up the Lanx HD system. It also allows the user to display the pressure values of the sensors installed in the system and the coefficients of calibration. The user is able to control the operating pressures of the vehicle after calibration.

- Press the **Functions** button and the ▲ and ▼ buttons until the following appears on the display:

General  
DIAGNOSTIC

- Press the **OK** button to display:

Diagnostic  
SENSORS

- Press the **OK** button to check out the status of the sensors

S1	9235	S2	9250
S3	8514	S4	8538

- Press **Functions** to exit

- Press the ▲ and ▼ buttons until the following appears on the display:

Diagnostic  
K SENSORS



- Press the **OK** button to check the coefficient of the calibration for each sensor
- Press the ▲ and ▼ buttons to scroll the sensors
- Press **Functions** to exit.

SENSOR 1  
K = 3.550

#### 4.6 Edit materials

This function allows the user to edit until 64 different type of materials.

- Press the **Functions** button and the ▲ and ▼ buttons until the following appears on the display:
- Press the **OK** button to select the type of material
- Press the ▲ and ▼ buttons to scroll the characters and then press the **Functions** button to skip to the next digit
- Press the **OK** button to confirm and the **Functions** button to exit.

General  
EDIT MATERIALS

EDIT MATERIALS  
----- 1

EDIT MATERIALS  
█----- 1

#### 4.7 Edit operators

This function allows the user to edit until 32 different operators or loading destinations.

- Press the **Functions** button and the ▲ and ▼ buttons until the following appears on the display:
- Press the **OK** button to select the operator/destination
- Press the ▲ and ▼ buttons to scroll the characters and then press the **Functions** button to skip to the next digit
- Press the **OK** button to confirm and the **Functions** button to exit.

General  
EDIT OPERATORS

EDIT OPERATORS  
----- 1

EDIT OPERATORS  
█----- 1

## 4.8 Tare

This function allows the user to acquire the tare of the vehicle. This operation must be carried out with the vehicle completely empty and on a flat surface (with the handbrake released). It's recommended that the tare be acquired with half a tank of fuel in the vehicle. Perform this operation only when the values displayed in *Net total kg* exceed +/- 300kg.

- Press the **Tare** button to display:
- Press **OK** to confirm and to effectively memorize the tare
- Press the **Functions** button to cancel the operation.

TARE  
Confirm ?

## 4.9 Materials

This function allows the user to select the different type of materials.

- Press the **Materials** button to display:
- Press the ▲ and ▼ buttons to scroll the different materials
- Press **OK** to confirm the material and to display the weighing screen.

MATERIALS SEL.  
SAND

# 5 Setup Functions (PIN CODE unlock)

The *Setup* functions represent the main menu of the system and it is necessary to enter a protective PIN CODE to unlock the functions. (See the "Calibration manual") They can be used to perform the calibration, set the load limits for external alarms, enter the weighing delay, modify the sensor filters, etc. Press the **Functions** button and scroll with the ▲ and ▼ buttons until the following appears on the display:

- Press the **OK** button to enter the various menus

General  
SETUP

## 5.1 Weighing delay

This function allows to manage the time necessary to stabilize the lifting pressure. The parameter has to be setup at minimum 1 second. Enter the *Setup* menu as described above and press ▲ and ▼ until the following appears on the display:

Setup  
WEIGHING DELAY

- Press the **OK** button and use the ▲ and ▼ buttons to select the time (seconds), then press **OK** to confirm.

## 5.2 Sensitivity

This function allows the weight to be displayed in increments of 1-10-20-50-100-150-200kg.

Enter the *Setup* menu as described at the beginning of section 5 and press ▲ and ▼ until the following appears on the display:

Setup  
SENSITIVITY

- Press the **OK** button and use the ▲ and ▼ buttons to select the desired subdivision, then press **OK** to confirm
- Press the **Functions** button several times to exit this function.

Sensitivity  
100

## 5.3 Language

This function allows the user to set the desired operating language.

Enter the *Setup* menu as described at the beginning of section 5 and press ▲ and ▼ until the following appears on the display:

Setup  
LANGUAGE

- Press the **OK** button and use the ▲ and ▼ buttons to select the desired language from those available (Italian, English, French, German, Spanish), then press **OK** to confirm
- Press the **Functions** button several times to exit this function.

Language  
ENGLISH

## 5.4 Unit of measure

This function determines the chosen unit of measure for the display weight, which can be either kilograms, tonnes or lbs.

On the printed ticket, the unit of measure for the weight is Kg.

- Enter the *Setup* menu as described at the beginning of section 5 and press ▲ and ▼ until the following appears on the display:
- Press the **OK** button and use the ▲ and ▼ buttons to select the desired unit of measure
- Press the **OK** button to confirm the selection
- Press the **Functions** button several times to exit this function.

Setup  
UNIT OF MEASUR.

Unit of Measur.  
t

## 5.5 Sec TX System Ext

This function is used for transmitting the loads Data with a GPRS connection. It is necessary to connect the optional Transmission Data cable RS232. The functioning of these options are necessary to have a portable Palm Pilot or the ability to use GPRS:

**Setup**  
**SEC TX SYS EXT**

There are two function modes available:

Interrogation: Lanx responds only to requests from the part of the external source connected;

Time interval sending: Lanx sends the data string at time intervals set by the user.

- Press the **OK** button and use the ▲ and ▼ buttons to select the time (seconds), then press **OK** to confirm.

0 = Replies to interrogation

1 = Activation of the automatic sending each storage pulse from ESOPTO sensor

## 5.6 K Adjustment

This function is used to set a percentage correction for an error in the Net weight displayed, without requiring any intervention by an Outset authorized centre. The maximum correction allowed is +/- 10%.

Enter the *Setup* menu as described at the beginning of section 5 and press ▲ and ▼ until the following appears on the display :

- Press the **OK** button and use the ▲ and ▼ buttons to select the desired percentage

**Setup**  
**K ADJ. TRUCK. %**

- Press the **Functions** button several times to exit this function.

**K ADJ. TRUCK. %**  
**100.00**

## 5.7 Date Settings

This function is used for setting the date which is printed on the ticket and display in the show loads menu.

Enter the *Setup* menu as described at the beginning of section 5 and press ▲ and ▼ until the following appears on the display:

**Setup**  
**DATE**

- Press the **OK** button and use ▲ and ▼ to set the day, press **OK** and set the month, press **OK** and set the year, then press **OK** again to confirm

**DATE**  
**dd/mm/yy**

- Press the **Functions** button several times to exit this function.

## 5.8 Time Settings

This function is used for setting the time which is printed on the ticket. Enter the *Setup* menu as described at the beginning of section 5 and press ▲ and ▼ until the following appears on the display:

Setup  
TIME

- Press the **OK** button and use ▲ and ▼ to set the hours, press **OK** and set the minutes, then press **OK** again to confirm

TIME  
hh:mm

- Press the **Functions** button several times to exit this function.

## 5.9 Alarms

This function allows the user to set the programmable load limits of the optical warning device. Enter the *Setup* menu as described at the beginning of section 5 and press ▲ and ▼ until the following appears on the display:

Setup  
ALARMS

- Press the **OK** button

Alarms  
FIX

- To set the **Fixed** Alarm, press the **OK** button and use the ▲ and ▼ buttons to scroll through the submenus until the following appears on the display :

Press **OK** to enable the fixed alarm

Fix alarm  
ON

Press **OK** to disable the fixed alarm

Fix alarm  
OFF

To set a value, press **OK** and hold down ▲ or ▼ until the desired value is displayed, then press **OK** to exit

Fix alarm  
LIMIT

- To set the **Flashing** alarm, scroll with ▲ and ▼ until the following appears on the display:

Alarm  
FLASHING

- Press the **OK** button and use the ▲ and ▼ buttons to scroll through the submenus until the following appears on the display:

Press **OK** to enable the flashing alarm

Flashing alarm  
ON

Press **OK** to disable the flashing alarm

Flashing alarm  
OFF

To set a value, press **OK** and hold down ▲ or ▼ until the desired value is displayed, then press **OK** to exit

Flashing alarm  
LIMIT

- Press the **Functions** button several times to exit this function.

### 5.10 Sensor Filter Settings

This function makes the weight reading operation faster. A high filter setting (e.g.: 20) should be used during the calibration phase, but once the calibration has been completed, it's recommended that the filter values be set at 10 in order to speed up the weight display response. Enter the *Setup* menu as described at the beginning of section 5 and press ▲ and ▼ until the following appears on the display:

Setup  
SENSOR FILTER

- Press the **OK** button to display the 1<sup>st</sup> sensor

Filter  
SENSOR 1

- Press the **OK** button and hold down ▲ or ▼ to set the desired value

Filter S1  
10

- Press the **OK** button and ▲ to display the 2<sup>nd</sup> sensor

Filter  
SENSOR 2

- Press the **OK** button and hold down ▲ or ▼ to set the desired value

Filter S2  
10

Repeat the procedure for each sensor installed in the system.

- Press the **Functions** button several times to exit this function.

## 6 Safety Rules

- ◆ **Power Supply**  
The power supply must conform to the specifications of the apparatus.
- ◆ **Lanx HD® System Maintenance**  
Any System breakdown caused by neglect or during maintenance by an unauthorized source is excluded from the warranty; any damage caused by neglect will be charged to the user.
- ◆ **Cable protection**  
All wires and cables must be installed without being stretched or crushed whilst also avoiding the possibility of splitting from constant vibration during the movement of the vehicle.
- ◆ **Truck maintenance**  
Before performing maintenance on the truck make sure that the System is completely disconnected.  
In particular, when performing maintenance, changing air spring levelling valves or leaf spring suspensions, calibrating the Lanx HD® system is required.  
Welding, battery replacement, battery charging or external motors could seriously damage the system.
- ◆ **Cleaning of the vehicle**  
During cleaning using a jet wash or other, avoid spraying directly onto the system components.
- ◆ **Non-utilization period**  
Check that the Lanx HD® System is switched off.

## 7 Warranty

The LANX HD<sup>®</sup> System is guaranteed for **12 months** from the date of the purchase against defects in material or workmanship because of manufacturing defects or malfunctions.

Outset<sup>®</sup> agrees to repair or replace any defective product under the warranty conditions in force at the moment of the claim.

The warranty covers the good quality of the raw material, the good construction and the good functioning.

Not covered are damages resulting from accident, misuse or abuse, lack of reasonable care, the affixing of any attachment not provided with the product to any but maximum specified voltage. Moreover the warranty does not cover: transport expenses, labour, travelling allowances including technician journey time during the warranty period.

The instruments to repair, replace or change must be returned to the vendor head office and, in case of technical intervention in the utilization place, the relative expense will be charged to the buyer .

The warranty is void in case of:

- ◆ Breach of the contract agreement
- ◆ Breakdown due to repair maintenance by a non- authorized repair service
- ◆ Feeding the instrument a different voltage from what is declared on the apparatus
- ◆ The connection of other external equipment not authorized from Outset<sup>®</sup> .

LANX HD<sup>®</sup> Display mod.....Serial N. ....

Printer mod..... Serial N. ....

**Limited Warranty: Expiration Date** .....

(return to Outset<sup>®</sup> company for the warranty validity)



Company.....  
Address.....Post Code.....Town/City.....  
Country..... Phone.....Fax.....  
Email.....  
LANX HD<sup>®</sup> Display mod ..... Serial No.....  
Printer mod..... matr.....  
**LIMITED WARRANTY: EXPIRATION DATE**.....  
Type of vehicle.....  
Activity field.....  
System application (if different).....  
Authorised centre.....



## 8 Declaration of Conformity

**Outset® S.r.l.**  
Via Chizzalunga, 14/2  
36066 Sandrigo (VI) Italy

Declares on his own responsibility that

OUTSET®'s products with the "CE" mark

Are manufactured according with the Community Directives (including the last modification) and the related National Legislation on conception

89/336/CE

E

The following (parts/ articles of) harmonized standards and regulation have been applied

EN55022 (class A), EN 55024  
EN 55022 (Enclosure – radiated emission)  
EN 55022 (DC mains – conducted emissions)  
EN 61000-4-3 (Enclosure – RF AM electromagnetic field)  
EN 61000-4-6 (DC mains - RF common mode)  
EN 61000-4-6 (Control line - RF common mode)  
EN 61000-4-4 (DC mains - Bursts)  
EN 61000-4-4 (Control line - Bursts)  
EN 61000-4-2 (Enclosure – Electrostatic discharge)

**Test report**                      **EMC N°030315**

**Date**                                      **12/03/03**





