

Weighing Axles Instructions

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Compatibility Note

If LCIC-WIM-TRAIN is installed on your PC, remove it using the 'Add or Remove Programs'. Otherwise, you'll get the message ***'Another version of this product is already installed. Installation of this version cannot continue.'***

1. Introduction

The Weighing Axles System includes:

- a. Standard LCIC-WIM board (WIM-Mode version).
- b. Standard utilities for the LCIC-WIM board:
 - b1. LCIC-WIM-CALIBRATION.
 - b2. LCIC-WIM-SETTINGS.
 - b3. LCIC-WIM-MONITOR.
- c. A specific LCIC-WIM-AXLE utility, built especially for the Weighing Axles System (in motion).

The system supports either a **train** or a **truck**.

In the LCIC-WIM-AXLE utility the user defines the required mode (Train or Truck) in the 'Vehicle Type' box. Unless otherwise specified, this document refers to both modes.

2. **Limitations**

For Train mode only

- a. This version of LCIC-WIM-AXLE utility supports only the case that the number of axles in each wagon is the same. That is, there may not be a mixture of wagons with different number of axles in the same train.
- b. Train structure is:
 - b1. Locomotive(s).
 - b2. General wagons with the same number of axles.
 - b3. End of Train: Locomotive(s) and/or bogie(s).

3. **Minimal Requirements**

- a. The board should be calibrated - see section 3.2 in LCIC-WIM.PDF.
- b. All the parameters should be defined correctly:
 - b1. General parameters - see section 3.3 in LCIC-WIM.PDF.
 - b2. WIM-Mode parameters - see 'The Settings Utility' in LCIC-WIM-WIM-MODE.PDF.

4. **Defining Train/Truck Parameters**

The operator should use the LCIC-WIM-AXLE utility in order to define the parameters below.

For any parameter that is still not known select N/A (Not Available). You may start weighing (=click 'Start') even if some of the parameters are N/A, but in order to get a report all the parameters should be known.

The first parameter ('TrainID' or 'TruckID') and the last one ('Auto Stop after') should be typed manually; the other ones (4 parameters in Train mode and one parameter in Truck mode) should be selected from a list of options. In case a parameter is still unknown, select the first option – N/A (Not Available). The lists of options may be updated by a senior operator – see section 7.

LCIC-WIM-AXLE Parameters

- * TrainID or TruckID
Specify the name or description of the train/truck.
- * OperatorName
Select operator's name from the list.

For Train mode only

- * Number of Axles BEFORE Wagons
Select the TOTAL no. of axles BEFORE the first wagon.
For example, if before the first wagon there are two locomotives, one with 6 axles and one with 7 axles – then specify in this parameter 13.
- * Wagon Type ... axles
No. of axles in each wagon (for example, 2, 4 or 6).
- * Number of Axles AFTER Wagons
Select the TOTAL no. of axles AFTER the last wagon.
For example, if after the last wagon there are two bogies each with 2 axles – then specify in this parameter 4.

- * Auto Stop after ... sec.
The user may tell the program that the train/truck ended by clicking the 'Stop' button. Another option is that the program itself decides that the train/truck ended according to timeout defined by this parameter.
For example, if you specified "Auto Stop after 10 sec.", then if for 10 seconds -
 - * there is no axle, or:
 - * an axle remains on the scale- then the program automatically decides that the train/truck ended – as if the 'Stop' button was clicked.
If you don't want the 'Auto Stop' mechanism to work, specify "Auto Stop after 0 sec.". This will tell the program to never automatically terminate the Wim-mode.

5. **Read Only Parameters**

For your convenience, board parameters (AutoZero, Filtering, Physical and Internal) may be shown. Normally the AutoZero and Train/Truck parameters are displayed. However, before clicking 'Start' you may type Ctrl+F and instead of the AutoZero and the Train/Truck parameters you will see the other three groups: Filtering, Physical & Internal parameters. Type Ctrl+F again in order to switch to the previous display. Note that these board parameters cannot be changed here; in case you do have to change them, exit the LCIC-WIM-AXLE program and use LCIC-WIM-SETTINGS.

These 'Read Only' board parameters are:

AutoZero parameters (by default after program activation):

- * Activate
- * Max. Zero
- * Min. Zero
- * Time limit

Upon typing Ctrl+F the following three groups will appear instead of the AutoZero & the Train/Truck parameters:

Filtering parameters:

- * Filter1
- * Filter2
- * Decimator

Physical parameters:

- * Threshold
- * Scale Width
- * Max Speed

Internal parameters:

- * Time Limit
- * Impact Level
- * Sensitivity
- * Integration Correction
- * Estimated Speed

6. **Operation**

- a. Before a train/truck arrives, specify its direction ('Right to Left' or 'Left to Right') in the 'Motion Direction' box and then click the 'Start' Button.
- b. When the train/truck arrives, the board sends to PC data about each axle. Axle's serial number and weight are displayed on the screen.

For Train mode only

In case all the parameters are known, and the number of axles AFTER the train is not more than the number of axles in a wagon, then the program will show the weight of the wagons in real time.

- c. When the operator clicks 'Stop' (or the 'Auto Stop' mechanism works), the program saves automatically an Axles file with automatic name: "Axles" followed by the date & time, for example :
"Axles_23_Oct_2007_18_02_25.txt".
The user can always copy this file to a file with another name by clicking the 'Save As' button.

d. Getting the report

If the 'Get Report Immediately' option is checked, the report will be displayed automatically upon train/truck end. Otherwise, click the 'Report' button in order to get the report.

For Train mode only

In case there are 'N/A' parameters, you should specify the real value. Additionally, you may redefine any parameter. After all parameters are defined correctly, click the 'Confirm Parameters' button.

You may now print the report and/or save it to a file by the 'Save to File' button. The default file name will be the same as the Axles file name but with the prefix 'Report'.

For example, for the above Axles file ("Axles_23_Oct_2007_18_02_25.txt"), the default report file name is:
"Report_23_Oct_2007_18_02_25.txt".

e. **Folders**

The folder for axles files is:

C:\Program Files\IMS\WIM-DATA\AXLES

and the folder for reports file is:

C:\Program Files\IMS\WIM-DATA\REPORTS

Compatibility note:

In the previous version, when the program was named LCIC-WIM-TRAIN, there were used these two folders instead:

C:\Program Files\IMS\TRAIN-DATA\AXLES

C:\Program Files\IMS\TRAIN-DATA\REPORTS

7. **Parameters Files**

There are some files where a senior operator may define which options will be available for the various parameters.

These files are called "Parameters Files".

The Parameters Files are in usual text format file and may be edited by Notepad. They should be placed in the same directory as the 'LCIC_WIM_AXLE.exe' file.

For example, the file cbxNumberOfAxlesPerWagon.txt (see paragraph 'c' below) now contains N/A, 2, 4, 6 and 8.

('N/A' stands for 'Not Available'.) Therefore, the available options for the parameter 'Wagon Type' are the same:

N/A, 2, 4, 6 or 8. If you want to change it, edit the file cbxNumberOfAxlesPerWagon.txt and update it as required, in the same format – one option per line.

Last line of every file should be:

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The Parameter Files are:

a. cbxOperatorName.txt

List of possible options for the parameter:

OperatorName

For Train mode only

b. cbxLocomotiveNumberOfAxles.txt

List of possible options for the parameter:

Number of Axles BEFORE Wagons

c. cbxNumberOfAxlesPerWagon.txt

List of possible options for the parameter:

Wagon Type

d. cbxLastWagonNumberOfAxles.txt

List of possible options for the parameter:

Number of Axles AFTER Wagons