Processing unit EC 110

Application	Processing unit for dynamic wheel load sensor WL 110 and for static wheel load scales WL 103 for measuring axle loads as well as gross weights of vehicles.
Input	2 dynamic wheel load sensors. 2 static wheel load scales. Battery charger.
Zeroing	Zero setting by key stroke.
Measurement	Manual or automatic operation, static or dynamic weighing.
Calculation of overweights	Editable limits for 50 vehicle types or limits for axles and axle groups
Storing and printout	Upon key stroke the weighing results are stored and transmitted to the printer port.
Storing Capability	2000 vehicles.
Display	4 lines 20 characters dot matrix
Key pad	10 alpha numeric keys (cell phone scheme) 6 function keys.
Data in- and output	Parallel port for printer and serial port RS 232 C for data exchange with a personal computer.
Setup and configuration	Setup mode using the key pad and the display. Download of limits, text lines and software up-dates from a PC.
Power Supply	Integrated rechargeable batteries for 24h of operation, feeding also the dynamic sensors WL 110. Static scales WL 103 are operating on their own batteries
Power saving	Auto shut off after 10 minutes of idle operation.
Autonomy	24h. The remaining operating time is indicated on the display.
Charging	DC 12V from car battery or mains adapter.
Housing	Aluminium alloy. Water and dust proof IP 54 (DIN 40050, IEC 144)
Weight	3 kg
Scope of supply	1 processing unit EC 110 1 download software for WINDOWS™ 1 RS 232 cable 1 operating manual

Selection Chart

Ordering example:	**EC 110 / 1 5 9 . 2 1 1 / 00Y /2142**	
Power supply	internal Batteries 1 5 9	
Operating mode	Axle by Axle, max. 24 2	
Language	English 1 1	
Measuring range	Automatic selection of meas. range **00Y**	
Power supply	USA, Canada	**2142**
	UK	**2143**
	Australia	**2145**
	Europe	**2144**

Design and Function

The processing unit EC 110 is designed for processing the results of the dynamic sensors WL 110 as well as of the static scales WL 103. It continuously receives the weight signals from the connected scales. In the manual mode the measurement starts and ends by key stroke. The automatic mode is limited to dynamic sensors only. Two scales are used for weighing both sides of the vehicle in an axle by axle mode. The overweight calculation is either based on free editable axle and axle group limits or on vehicle types. In the automatic mode only the axle limits are used. The EC 110 automatically detects single axles, axle groups and the gross weight of the vehicle. All stored measurements – up to 2000 vehicles – may be transferred to a personal computer via the serial port using the comfortable WINDOWS based download software. The data can be converted to any spread sheet program format. This software is also used to edit the vehicle types and the axle limits as well as the text lines to be printed with the weighing protocol. Even a up-date of the instruments firmware is possible. The four line dot-matrix display shows the axle weights and the gross weight and guides the user through the various setup menus. The results are also sent to the parallel port for being printed out using any type of printer.

Example of the printout

Shortest possible protocol for optional roll feed printer

```
MEASUREMENT NO.:       17

DATE:          2000-02-28
TIME:            14:15:54

MEASURED WEIGHTS:
AXLE  1             3350 kg
AXLE  2             4900 kg
AXLE  3             7600 kg

GROSS              15850 kg
```

Maximum protocol

```
HAENNI INSTRUMENTS INC.
MEASUREMENT NO.:       17

DATE:          2000-02-28
TIME:            14:15:54

AUTOMATIC MODE
    SENS1  SENS2  EC 110
SER: 1837  1509     2001
CAL: 7020  7023  EU01.0a

LOCATION:

DRIVERS SIGNATURE:

OFFICERS SIGNATURE:

USED LIMIT:
T2S3

MEASURED WEIGHTS:
AXLE    WHEEL 1  WHEEL 2
 1      1650 kg  1700 kg
 2      2550 kg  2350 kg
 3      3750 kg  3850 kg

AXLE  1             3350 kg
AXLE  2             4900 kg
AXLE  3             7600 kg

GROSS              15850 kg

OVERWEIGHTS:
TOL. DEDUC. PER SCALE:
RELATIVE               2%
ABSOLUTE             100 kg

AXLE(S): 1
                     200 kg
AXLE(S): 3
                     350 kg
GROSS:
                     250 kg
```

head line 1 (3 are available)

printed out only if WL 110 are used

additional text lines (6 are available) followed by an empty line to be filled in manually or using the key pad

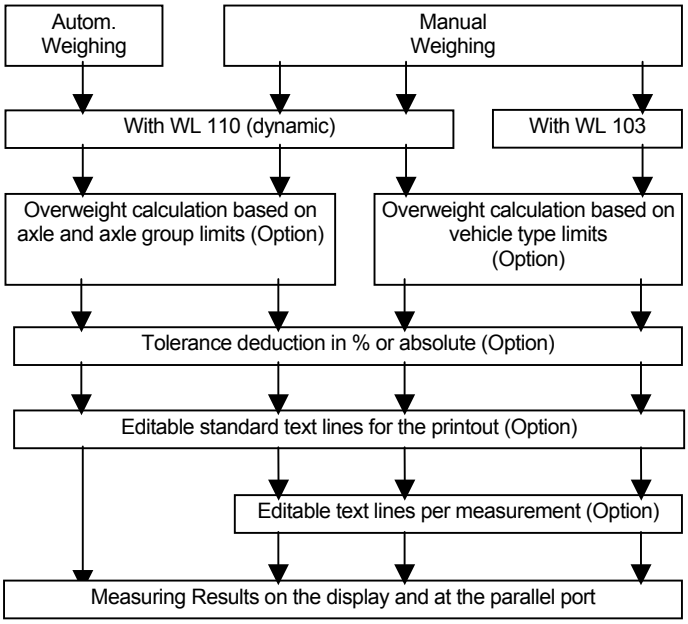
printed out only if 'overweight option' is set

printed out only if 'wheel weight option' is set

only if the 'overweight' option and the 'tolerance deduction' options are set

'none' is printed if no overweight is detected

Options



Setup software for WINDOWS™

Main screen of the download software ECdata