



**NOTICE OF APPROVAL
AVIS D'APPROBATION**

S.WA-805

Revision 2

This circular supersedes Circular S.WA-805,
dated May 29, 1974.

Ottawa, January 17, 1979

TOLEDO SCALE - ELECTRONIC READOUT FOR SCALES

MANUFACTURER: Toledo Scale
Division of Reliance Electric Ltd.
Mississauga, Ontario

DEVICES APPROVED: Electronic readout systems consisting of one or more
load cells in conjunction with any of the following approved models of
Toledo electronic indicators and accessories:

<u>Model No.</u>	<u>Device</u>
42, 8110	Analog Dial Indicators
8100, 8120, 8130, 8134	Digital Indicators
131	Digital Tare Module
132	Switching Module
133	Switching & Summing Module
134	Batching Module
135	Coupler (for adding machine)
139	Cut-off Module
141	Remote Display Driver/Data Splitter
145	Coupler (for source record punch)

APPLICATION: These devices may be incorporated in approved Toledo
Lectrolever weighing systems or full load cell weighing systems to
which they are adaptable.

DESCRIPTION: The Toledo Lectrolever system utilizes one or more strain
gauge load cells installed at the steelyard connection in a conventional
lever scale. Full load cell scales have the load fully borne by strain
gauge load cells. Systems may be equipped for tare setting, range-
stepping, batch control, and a number of other control functions.

Models 42 and 8110 dial indicators and model 8100 digital indicator
are actuated by a null balance servo system. Model 8100 utilizes
a row of number wheels for readout.

Indicator models 8120, 8130 and 8134 are solid state units with seven-
segment indicating tubes, 8120 and 8130 having 6 digits (including a
fixed zero) utilizing incandescent tubes, while 8134 has 7 digits
(including a minus sign) utilizing gas discharge tubes.

DESCRIPTION: (cont'd)

Models 8130 and 8134 incorporate an X5 and an X10 multiplier feature respectively, which is intended to assist scale service personnel in calibration and is normally not accessible to the scale operator. In some instruments of early manufacture, however, the multiplier can be activated by an external push button and is effective over a small range around zero reading in order to facilitate zero setting. Models 8130 and 8134 provide for load cell excitation and have a BCD output.

Model 8134 has built-in tare capability with provision for automatic or manual taring with tare entry by means of push buttons. By operation of a selector key, model 8134 is also enabled to provide readout in either avoirdupois or metric units.

Unless otherwise stated, all accessories described below are designed for use with model 8130 indicators only.

The model 131 digital tare module provides for automatic or manual taring with tare entry by means of five rotary switches.

The model 132 switching module enables from two to six scales to be served by one readout unit. In addition to providing the scale selector function, this module also has a zero adjustor for each scale being served.

The model 133 module provides switching and zero adjustment functions as on model 132, except that model 133 has provision for connecting a maximum of four scales and has the capability of summing the outputs of all scales.

The model 134 batching module controls feeders and valves in a controlled sequence to automatically direct batch weighing or discharging operations. Set point data may be acquired from panel-mounted thumbwheel switches or from external BCD data.

The model 135 coupler module has add, subtract and non-add capabilities and serves as the interface between the indicator and an Addo-X key serial adding machine.

The model 139 cut-off module provides up to four cut-off set points for use in filling, batching, signalling and alarm applications. Cut-off points are manually set by means of thumbwheel switches.

The model 141 unit acts as a driver for the 141 series of remote displays, providing a duplicate output of digital scale data at distances up to 500 feet. The "data splitter" output of the 141 unit provides weight data to a number of sources, e.g., printers, remote displays, scoreboards, etc.

The model 145 coupler module serves as the interface between the indicator and the Standard Register Company source register punch (Series 1600 and 1700).

SPECIAL CONDITIONS: On indicators equipped with indication multipliers, which can be activated by the scale operator, the multiplier shall be effective for not more than the first ten increments of indication. Where the installation includes a weight printer, the printer shall be automatically inhibited from printing when an indication multiplier is activated.

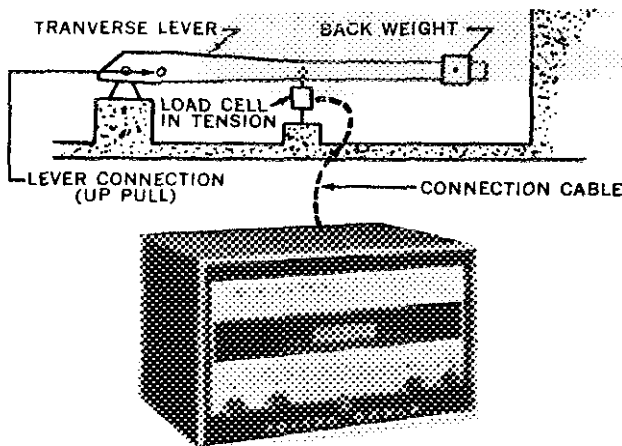
TESTING: The standard tests for the applicable scale type shall apply.

REFERENCE: G6953-T170-33

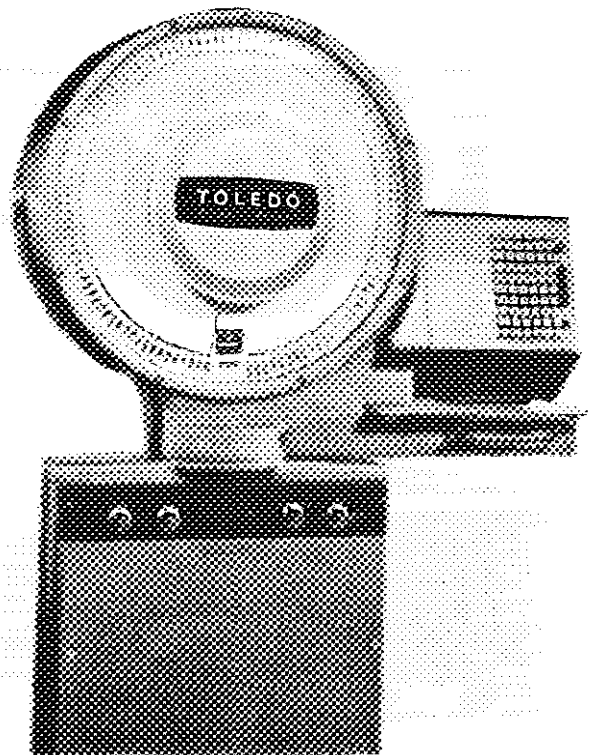
CONDITIONS OF APPROVAL: Approval is granted under the Weights and Measures Act, S.C. 1970-71-72, Chapter 36, and the Weights and Measures Regulations, P.C. 1974-1461 of June 27, 1974 for use in Canada under the general conditions of the said Regulations, and under any special conditions listed above.

John Armstrong

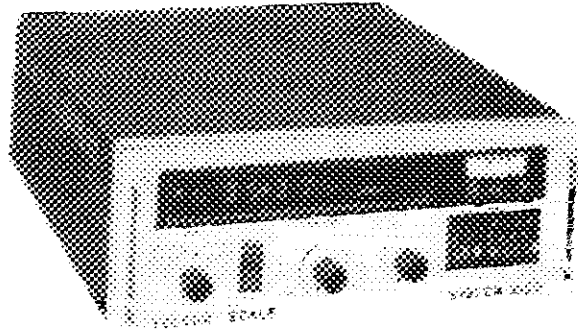
John Armstrong
Chief, Weights and Measures
Legal Metrology Branch



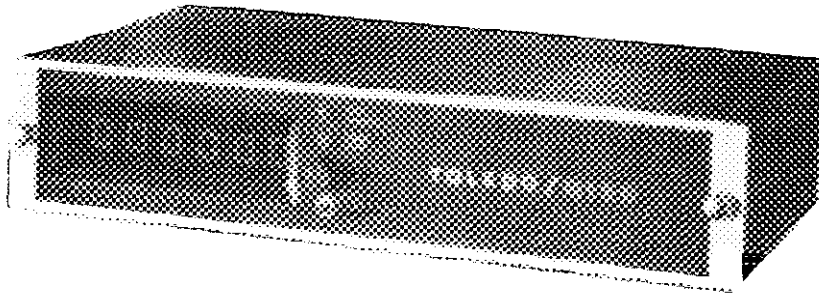
Lectrolever-Typical
Model 8100 Indicator



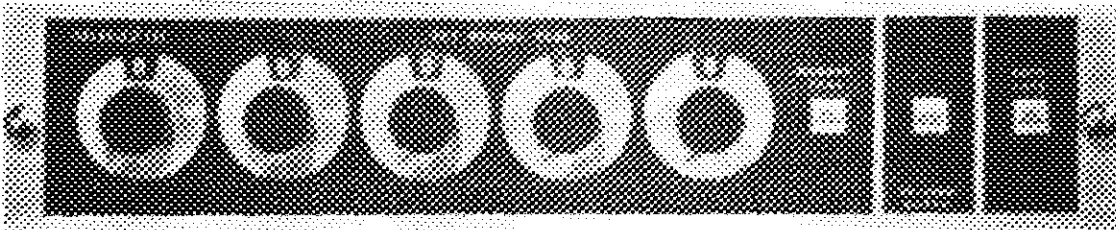
Model 8110



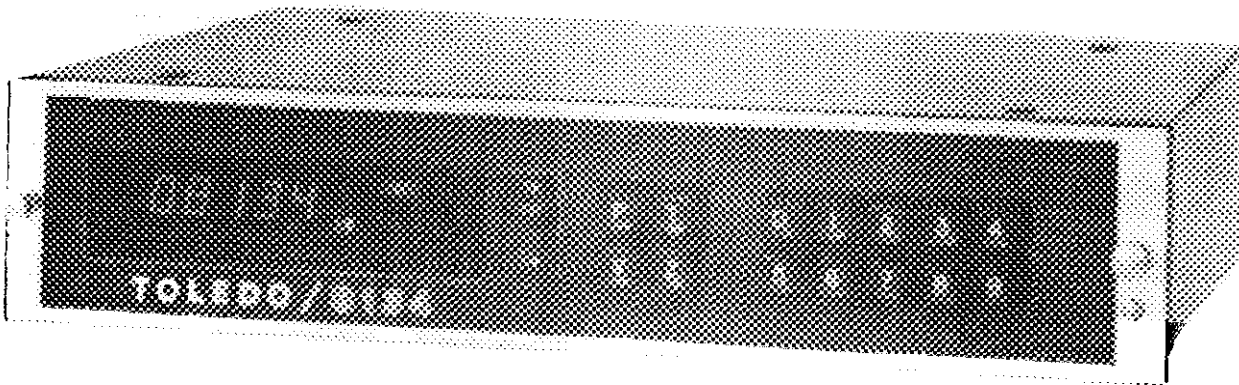
Model 8120



Model 8130



Model 131



Model 8134