



Australian Government

National Measurement
Institute

Bradfield Road, West Lindfield NSW 2070

Cancellation

General Supplementary Certificate of Approval No S1/0/A

Issued by the Chief Metrologist under Regulation 60
of the
National Measurement Regulations 1999

This is to certify that the approval for use for trade granted in General Supplementary Certificate of Approval No S1/0/A issued 20/03/92 in respect of

Electronic Indicating and Printing Devices for Measuring Instruments

has been cancelled in respect of new instruments as from 1/07/15.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern approved – certificate issued	20/03/92
1	Pattern amended – notification of change issued	24/12/92
2	Pattern amended – notification of change issued	11/03/96
3	Pattern amended – notification of change issued	8/10/01
4	Pattern cancelled – cancellation certificate issued	19/06/15

Signed by a person authorised by the Chief Metrologist to exercise their powers under Regulation 60 of the *National Measurement Regulations 1999*.

A handwritten signature in black ink, appearing to read 'Dr A Rawlinson', with a horizontal line underneath.

Dr A Rawlinson

National Standards Commission



General Supplementary Certificate of Approval

No S1/0/A

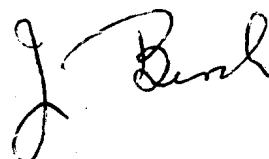
Issued under Regulation 9
of the
National Measurement (Patterns of Measuring Instruments) Regulations

This is to certify that an approval for use for trade has been granted in respect of

Electronic Indicating and Printing Devices for Measuring Instruments.

This Certificate is issued upon completion of reviews of NSC approvals Nos S1/0
and S2/0.

Signed and sealed by a person authorised
under Regulation 9 of the National
Measurement (Patterns of Measuring
Instruments) Regulations to exercise the
powers and functions of the Commission
under this Regulation.



S1/0/A
20/3/92

General Supplementary Certificate of Approval No S1/0/A

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CONDITIONS OF APPROVAL

This approval is subject to continuing review.

Instruments purporting to comply with this approval shall be marked NSC No S1/0/A.

It is the responsibility of the person presenting instruments for verification to ensure that all instruments marked with this approval number are constructed in accordance with the relevant General Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act.

The Commission reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

DESCRIPTIVE ADVICE

Pattern: approved 21/2/92

- . An electronic indicating or printing device which is connected to an approved measuring instrument either as the primary source of measurement data for the parties to the transaction, or to duplicate the price and/or measurement data displayed on the measuring instrument but which is the normal source of information for one or more of the parties to the transaction.

Technical Schedule No S1/0/A describes the pattern.

FILING ADVICE

The documentation for this approval comprises:

General Supplementary Certificate of Approval No S1/0/A dated 20/3/92
Technical Schedule No S1/0/A dated 20/3/92 (incl. Test Procedure)
Appendixes 1 to 4 dated 20/3/92



National Standards Commission

TECHNICAL SCHEDULE No S1/0/A

Pattern: Electronic Indicating and Printing Devices for Measuring Instruments.

1. Description of Pattern

An electronic indicating or printing device which is connected to a Commission-approved measuring instrument, either as the primary source of measurement data for the parties to the transaction or to duplicate the price and/or measurement data displayed on the measuring instrument but which is the normal source of information for one or more of the parties to the transaction.

The indicating or printing device shall be designed to augment the indication/printing capability of the instrument or provide such printing capability if none exists on the instrument. It may take the form of a digital price-computing indicator, local secondary indicator, remote indicator, summing indicator, label or ticket printer, electronic cash register, computer printout, docket printer or similar.

Scope of Approval

- (a) This Certificate relates to those devices which are connected to a Commission-approved measuring instrument, either:
 - (i) as the primary source of measurement data for the parties to the transaction; or
 - (ii) to duplicate the price and/or measurement data displayed on the measuring instrument but which are the normal source of information for the parties to the transaction and are therefore in use for trade.
- (b) All measuring instruments shall have an indicator which displays the results of the measurement and which may or may not also display related data e.g. price, or management information. These indicators, if not an integral part of the approval of the measuring instrument shall be separately approved under the Commission's Supplementary Certificate system.
- (c) Additionally, measuring instruments may be fitted with further indicators or printers as in (ii) above. These devices may be used for trade if they comply with the requirements of this Approval or are separately approved under the Supplementary Certificate system.

- (d) Where devices are used to duplicate measurement data or provide additional data, these devices may obtain data directly from the measuring instrument, or indirectly through data processing equipment connected to the measuring instrument or the primary indicating or printing device.

More than one such device may be attached to a measuring instrument in accordance with paragraphs (e), (f) and (g) below.

- (e) No function which would cause a variation in the display of the measured or computed quantities, other than as specified in cl. 1.1, paragraphs (a) to (e) below, shall be possible without an alarm being provided. This clause covers the duplication or addition on the device of a function which exists on the measuring instrument which has the effect of changing the measured or computed quantities.
- (f) These devices are connected to data port(s) on the measuring instrument expressly provided for that purpose and nominated in the Certificate of Approval of the individual instrument. The port(s) may be for input, output or both directions of transfer of data.
- (g) For instruments which provide a label or ticket and which are designed to be covered by this Approval, the label shall comply with the examples in Appendix 2 of this Approval and no other; the ticket shall comply with the general examples given in Appendix 3 or Appendix 4 as appropriate.
- (h) Additional information may be provided on the printed record of the transaction or on the display, some or all of which may not be subject to pattern approval.
- (i) The device may provide additional functions which are not subject to pattern approval or may be used to connect measuring instruments together to share common data (networking) if this has been approved in the Certificate of Approval for the individual instrument.

Definitions pertinent to this Approval

alarm, a visual or audible indication of an error condition existing;

approved measuring instrument, an instrument approved by the National Standards Commission for which a Certificate of Approval is current;

data port(s), facilities on the measuring instrument or the device which permit the transfer of electronic data;

decimal marker, a point (.) or comma (,) which delimits decimal numbers (NOTE: a decimal point is preferred);

denomination, the words or symbols which indicate the units of measurement;

descriptors, the alphanumeric characters which describe the article being measured;

designations, descriptions of indications e.g. mass, unit price, price/kg;

ECR, electronic cash register;

EFT, electronic funds transfer;

indicator, device for electrically displaying the result of a measurement;

integral with, *not externally electrically connected by cables or other means, or is in the same housing as the measuring instrument or supplementary instrument;*

interaction, the effect of two or more devices operating simultaneously such that the output of one device changes the output of or input to the other;

interface, a device which is used to transfer information from one instrument or device to another or which allows two or more instruments or devices to be connected together;

label printer, a device which produces a printed output in a form intended to be attached to a package and is normally self-adhesive;

modifies the indication, changes the value of the measured or displayed quantity on the primary indicator;

price-look-up, (PLU), a table from which price, and tare, may be obtained upon entry of a code number or word or by scanning of a bar code;

primary indicating or printing device, the device which provides those indications or printing which are integral with or are the only source of information from the measuring instrument;

remote, at a distance from and/or not visible from the measuring instrument;

secondary device, a device which is not a primary device (there may be more than one secondary device connected to a measuring instrument);

stored tare, a value stored in the memory of the instrument or device which corresponds to the measured value of tare of the thing being measured;

summing indicators, indicators which are used to sum the measurement values of two or more primary indicators;

ticket printer, a device which is used to produce a permanent record of the transaction and which is designed to be a hand-held or self-adhesive record of the **transaction**;

VDU, (visual display unit) a computer display in which the individual dots making up the display are not individually controlled.

1.1 Devices Included

Devices included for control under this Certificate are those which provide information or perform functions which are additional to or complement those of the measuring instrument. For consistency of use and interpretation, the Certificate also controls the operation and facilities of the primary device.

- (a) All primary, secondary and remote digital indicators connected to measuring instruments, which provide the measurement data or repeat the data displayed on the primary indicator and additionally may display price data, other management functions and the totals of measurements performed by the instrument.
- (b) All remote and secondary digital indicators connected to measuring equipment, which repeat the measurement data displayed on the primary indicator and which total the measurement data from two or more primary indicators (i.e. summing indicators).
- (c) All printers or digital indicators not integral with the measuring instrument, i.e. which are externally connected by electrical cable or other means to the measuring instrument, and are used for trade, whether or not they:
 - provide price computation;
 - provide price-look-up or other price related functions;
 - perform calculations based on measurement data obtained from the measuring instrument; or
 - provide management functions not subject to pattern approval.
- (d) Electronic cash registers which are connected (by electrical cable or other means) to the measuring instrument and which do anything other than repeat the total price; see also cl. 1.3 (c).

- (e) Any device which allows automatic control of a single measuring instrument other than by affecting the measured value e.g. a totalling hopper weigher controller (starts and stops filling, sums gross and tare to produce net, prints result).

NOTE: A single measuring instrument is considered to be one where the measurement data from ALL the instruments controlled by the device is summed and displayed on a single primary or secondary indicator as a single measurement value whether or not the indicator is also capable of displaying the individual values.

1.2 Devices Excluded

Devices described in paragraphs (a) to (e) below are required to be submitted for pattern approval.

- (a) Any device which has a function which modifies the indication of the measured quantity on the primary digital indicator of the instrument.
- (b) Any device which has the capability of controlling a function of a measuring instrument which may affect the measurement value e.g. a driveway flowmeter console which controls unit price setting, a flowmeter controller which controls a correction factor, or an unattended weighbridge authorisation device which controls tare setting (either stored or otherwise).
- (c) Any device which is integral with the measuring instrument.
- (d) Any device which modifies measurement data supplied from the measuring instrument, such as linearity correction devices or conversion devices.
- (e) Any device which has, as its **primary** purpose, the supply of data (such as stored tare, calibration factors, conversion tables) to the measuring instrument but which does not itself perform measurement or calculating functions.

1.3 Special Exclusions

The following types of equipment are excluded from complying with the **general** provisions of this Approval when they are connected to measuring instruments or when they are used to interface instruments to devices, provided they do not directly perform any of the functions specified in cl. 1.1 paragraphs (a) to (e).

Further they shall operate such that the instrument and device to which they are interfaced comply with the performance as specified in the Certificate of Approval for the instrument and with the requirements of this Certificate for the device without variation. In both these cases, a test facility shall be provided to demonstrate compliance with this requirement e.g. by a simple transfer of information from the measuring instrument indicator through this device to the printer, the output and input of metrological data should be consistent.

- (a) Electronic data management systems, the correct operation of which are controlled by programs.
- (b) Electronic Funds Transfer (EFT) devices.
- (c) Electronic cash registers (ECR's) which are connected to a measuring instrument which displays, quantity measured, unit price and price, i.e. simple, total price only ECR's; see also cl. 1.1 paragraph (d).

1.4 Functions of the Device

- 1.4.1 The device shall repeat exactly those indications of quantity, price and unit price (as applicable) displayed on the measuring instrument, including any additional indications e.g. tare.
- 1.4.2 Where the device is used to provide price computation, either by the introduction of a unit price or by reference to a PLU table, then the device shall compute the price correctly and/or the total of those computed prices correctly.
- 1.4.3 Where the device is used to provide net value of the measured quantity or the total of a number of measurements, the net value or values and the totals shall be computed correctly.
- 1.4.4 Where the price information is derived from a measurement of quantity, the device shall not be capable of displaying price information without displaying the corresponding value of the quantity measured.
- 1.4.5 For the purposes of rounding of price calculations and totals, rounding shall either be to the nearest 5 cents or be down to the next lowest '5' or '0'. (refer to Appendix 3)

1.5 Clarity of Indications

Indications shall be clear and unambiguous and have stable indication to allow easy reading of the values displayed. Printed information shall be clear, indelible and unambiguous.

1.6 Arrangement of Digits

Indications and printings shall permit readings by simple juxtaposition of digits. The digits shall be horizontally aligned and oriented in the normal viewing position. The decimal marker on numbers less than unity shall be preceded by at least one zero digit; one only is preferred.

1.7 Height of Digits on Digital Displays, Labels and Tickets

1.7.1 The height of digits, capital letters, symbols, etc. on **digital displays** related to quantity, unit price or price per item and price shall be not less than 3 x L millimetres (where L is the minimum reading distance in metres) without being less than 9.5 mm for instruments used for trading direct with the public, or without being less than 4 mm for other instruments. Where, for management purposes, other information appears on the display, the height of digits, words or symbols shall be not greater than those for quantity, unit price or price.

1.7.2 The height of digits, capital letters, symbols, etc. on **labels** comprising statements of quantity, unit price or price per item and price shall be not less than 3 mm. Printing shall also satisfy the *Uniform Model Trade Measurement (Prepackaged Articles) Regulations*. (see cl. 1.10.3)

1.7.3 The height of digits, capital letters, symbols, etc. on **tickets** which indicate quantity, unit price or price per item and price, or capital letters or symbols designating the units of measurement of those values, shall not be less than 2 mm.

1.8 Denomination of Indicators

Indications of quantity, unit price and/or price shall include the unit of measurement or its symbol in accordance with Appendix 1 and the Commission's Document 110.

1.9 Price-computing Requirements

For a device which provides the unit price and/or computes the price, the price scale interval shall equal that on the instrument, and shall not be greater than:

- (a) For weighing instruments - 1 cent
- (b) For flowmeters - 1 cent for unit price to \$1.00/L;
- 2 cents for unit price from \$1.00/L to \$2.00/L;
- 5 cents for unit price from \$2.00/L to \$5.00/L; and
- 10 cents for unit price from \$5.00/L to \$10.00/L.

1.10 Format of Labels and Tickets

1.10.1 General

The decimal marker shall be printed by the printer and not preprinted on the label or ticket.

Any designations of the quantity (mass, volume, number, etc.), unit price or price per item and price shall be printed using the descriptors of Appendix 1.

1.10.2 Price-computing Devices

NOTE: It is no longer mandatory for the word 'net' to appear on prepackaged items; it is accepted that mass, kg, etc. implies 'net mass', 'net kg', etc. However, 'net' may be included if desired.

For measured quantities, where the measured quantity and price are printed, the unit price shall also be printed.

Where the quantity is a number, only a statement of quantity and price is required.

The numerical values of unit price and price per item shall always be associated with the relevant denomination.

The symbol '\$' shall always be associated with the total price. The '\$' symbol may also appear at the head of the price column (preferred option in some states and territories) but this is not mandatory.

1.10.3 Labels

Labels shall be marked with the statements of measured quantity, unit price and price (as applicable). If the price and unit price are not printed, the space where these values are normally printed shall both be either blank or marked with zero's (Appendix 2).

Other printed information, such as dates, should be such as to satisfy the *Uniform Model Trade Measurement (Prepackaged Articles) Regulations* which are reflected in weights and measures packaging legislation of the states and territories.

1.10.4 Tickets

Tickets may be produced by a wide range of printing devices for widely differing purposes. It is neither possible nor desirable to reproduce in this document, more than the guidelines for most of the formats and examples of the most common ones; formats outside these guidelines and where doubt exists as to suitability, should be referred to the Commission. The following clauses also cover 'simple' printers attached to measuring instruments.

1.10.5 Ticket Printers

Tickets produced by the instruments listed below shall conform with the guidelines of Appendix 3 and Appendix 4 of this Technical Schedule:

Electronic cash registers (ECR's) connected to a weighing instrument, driveway flowmeter console or controller;

Receipt printers connected to card acceptors, driveway flowmeters or weighing instruments; and

Computer printouts from devices connected to weighing instruments or flowmeter controllers.

1.10.6 ECR's and Receipt Printer Ticket Format

All items appearing on the ticket, whether measured quantity or unweighed item, shall have a field for the descriptor of not less than eight characters. Examples of acceptable formats are shown in Appendix 3.

Against each item shall appear:

Price (where price is calculated);
Measured quantity or quantity (as applicable); and
Unit price or price per item (as applicable).

Additionally, the ticket shall show vendor identification (in the form of a company name or logo), a discrete transaction number and the date.

Alignment of the left hand edge of printing is preferred but not essential; however right hand alignment of the price column is mandatory.

There shall be a space of at least one digit between any digits relating to data other than price and the price column; no character shall appear in the price column. For practical purposes, the price column is taken to be five digits in width, excluding the decimal mark (Appendix 3).

Descriptors and/or statements of measured quantity, unit price and price may appear on the one line, however the columns in which they appear shall then be separated by at least one space.

Columns for measured quantity, unit price and price may be headed by the denomination and the total price shall be preceded by the symbol '\$'. It is preferred that the total price be highlighted, for example by increased print size, bolding, or underlining, but this is not mandatory.

1.10.7 Computer Printout Format

There is no set format for the output of computer printers as the variety of applications makes such fixed requirements unreasonable. However, all measurement related data must be clearly indicated by separation from other information, bolding, enlarged size or similar and be clearly associated with its appropriate descriptor. Manually entered data (keyboard entry e.g. tare mass) shall be identified, for example by 'MAN' (or other suitably identified symbols) after the value of the entry (Appendix 4).

1.11 Requirements for Summing Indicators

Summing indicators may be used for summing the outputs of weighing or flowmetering indicators.

Devices which do not comply with ALL of the requirements listed below shall be submitted for pattern approval.

- 1.11.1 The value displayed on the summing indicator shall equal the mathematical sum of the measurement values displayed on the primary indicators being summed.
- 1.11.2 The scale interval of the summing indicator shall be of a value to suit the sum of the scale intervals of the primary indicators being summed or of the sum. That is, if the primary indicator scale intervals are 50 and 20, the sum is 70, and therefore the scale interval of the summing indicator is 10.
- 1.11.3 The summing indicator shall be blank or show non-numerical characters if any of the indicators being summed is blank or is displaying a negative number, with the exception that, if the summing indicator incorporates a VDU, it may display the mass on the other primary indicator(s) but shall show an error message for the primary indicator(s) which displays a negative number.
- 1.11.4 In addition to the sum of the measured quantities, summing indicators may have the facility to select and display the indication of any one or a combination of the primary indicators it is being used to sum or may simultaneously display all such indications. The selection device shall be so designed that it is obvious which indicator(s) have been selected, or each value shall be identified on the screen if the indicator is a VDU. In all cases, the ticket produced shall show the sum of the measured quantities in addition to any individual measured quantity which may be required to be printed.
- 1.11.5 The summing indicator shall indicate the denomination of the value being displayed.

1.11.6 There shall be a discrete display segment check on the summing indicator, unless it is a VDU.

1.12 Markings

Any device purporting to comply with the requirements of this Approval shall be marked in a clear and permanent manner, with the following information:

Manufacturer's name or mark

Serial number

NSC approval number

NSC No S1/0/A

1.13 Verification/Certification Mark

Provision shall be made on the device for the placing of a verification/certification mark.

If a stamping plug is used, it shall consist of a lead plug securely set below the surface of an undercut hole and so secured that it cannot be removed from the device without defacing the verification/certification mark. The lead plug shall have a circular face of not less than 12 mm diameter or with a rectangular face of dimensions not less than 8 mm by 12 mm and shall be accessible by means of a 50 mm long stamping tool.

If a destructible adhesive label is used, a space of not less than 25 mm diameter shall be provided for affixing the label. This space shall be flat, flush with the surface or raised but not recessed into the surface.

TEST PROCEDURE

Instruments shall be tested in conjunction with any tests specified in the approval documentation for the measuring instrument to which the device covered by this Approval is connected, as appropriate, and in accordance with any relevant tests specified in the Inspector's Handbook.

The maximum permissible errors applicable are those applicable to the instrument to which the device approved herein is fitted, as stated in the approval documentation for the instrument.

APPENDIX 1 TABLE OF ACCEPTABLE DESCRIPTORS OF MEASURED QUANTITY - Includes Designations and Denominations

Mass net; net wt; wt; net weight; mass; net mass; net kg; kg; kilogram; tonne; t; gram; g.

NOTE: 'net' is no longer a mandatory marking on labels or tickets but may be retained if desired.

Volume litre; kilolitre; megalitre; cubic metre; L; kL; ML; m³.

Quantity quantity; number; piece(s); item(s); count; qty; no.; pc; pcs; cnt.

Unit price price/mv; dollars/mv; \$/mv; cents/mv; c/mv, (#)

where 'mv' is any of the designations or denominations of mass or volume above except 'net'.

NOTE: pricing in cents, other than c/L, is prohibited for point of sale applications.

Price per item price/piece(s); price/item(s); price/count; price each; (*) price ea; price/pc; price/quantity; price/number; \$/piece; \$/pc; \$/item; \$ each; \$ ea.

Price total price \$; price \$; dollars \$; total \$.

NOTE: In these four cases the \$ is mandatory.

(#) The unit price may be designated as '\$/1kg', however this is a deprecated option. It is NOT acceptable to have unit price designated 'kg/\$'. The unit price may alternatively be designated "\$1.23/mv".

(*) For price per item, the format "\$1.23/03" is not acceptable; either "\$1.23 per 3" or "\$1.23/03 items" may be used.

In the cases above, the word 'per' is an acceptable alternative to '/'.

In all cases, the use of lower case denominations (other than for litres L) is preferred, however upper case may be used on an instrument with a limited character set.

APPENDIX 2 PERMISSIBLE LABEL FORMATS

1

kg	\$/kg	price
1.460	1.00	\$ 1.46

or

1.460	1.00	1.46
kg	\$/kg	price \$

2

1.460 kg	1.00 \$/kg	\$ 1.46 total price
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or

kg 1.460	\$/kg 1.00	total price \$ 1.46
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3

kg	\$/kg
1.460	\$ 1.00
price	
\$ 1.46	

or

1.460	1.00
kg	\$/kg
1.46	
price \$	

or

kg	
1.460	
\$/kg	price
\$ 1.00	\$ 1.46

or

1.460	
kg	
1.00	1.46
\$/kg	price \$

or

kg	\$/kg
1.460	1.00
1.46	
price \$	

or

1.460	\$ 1.00
kg	\$/kg
price	
\$ 1.46	

or

kg	
1.460	
\$ 1.00	\$ 1.46
\$/kg	price

or

1.460	
kg	
\$/kg	price \$
1.00	1.46

4

1.460 kg	\$1.00/kg
\$ 1.46 total price	

or

kg 1.460	
\$1.00/kg	total price \$ 1.46

or

1.460 kg	
\$1.00/kg	1.46 total price \$

or

kg 1.460	\$1.00/kg
total price \$ 1.46	

5

\$ 4.00	4 @ \$ 1.00/pc
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or

\$ 4.00	
4 items	\$ 1.00/item

6

1.46	kg
\$ 1.00	\$/kg
\$ 1.46	total price

or

kg	1.46
\$/kg	1.00
total price	\$ 1.46

7

kg	\$/kg
1.460	\$ 1.00
price \$ 1.46	

or

1.460	1.00
kg	\$/kg
\$ 1.46 price	

or

1.460 kg	
\$/kg	price
\$ 1.00	\$ 1.46

or

kg	1.46
1.00	1.46
\$/kg	price \$

or similar variations as per format 3.

Any of the descriptors for measured quantity, unit price, price per item and price of Appendix 1 may be used.

Any of the formats in 1 to 7 above may be used.

No additional descriptors e.g. 'kg', '\$/kg', may appear on the label.

Whatever format is used, the order of information shall be measured quantity, unit price or price per item, and price.

Note:

The value of measured quantity, unit price or price per item must be directly associated with its correct denomination e.g. a mass value of '1.460' must be directly associated with 'kg' as shown above. The descriptor for measured quantity, in this example 'mass' or 'weight', is NOT mandatory and the field for this descriptor may be blank or carry a non-contradictory description; in this case 'quantity' would be acceptable for 'mass', 'volume' or 'piece' but 'mass' would not be acceptable for 'piece'.

The symbol '\$' and descriptor 'total price' or 'price' remain mandatory.

APPENDIX 3 POSSIBLE FORMATS FOR TICKET PRINTERS FOR POINT OF SALE USE

The formats shown are some examples of acceptable solutions; formats outside these guidelines, and where doubt exists as to suitability, should be referred to the Commission.

POSSIBLE FORMATS			EXAMPLES	
1	ITEM DESCRIPTOR	PRICE	CONFECTIONERY	2.15
2	MEASURED DESCRIPTOR	PRICE	SUPER PETROL	11.61
(a)	QTY @ UNIT PRICE		21.00L @ 0.553\$/L	
or				
(b)	QTY		21.00L	
	UNIT PRICE		0.553\$/L	
or				
(c)	UNIT PRICE		0.553\$/L	
	QTY		21.00L	
or				
(d)	UNIT PRICE QTY		0.553\$/L 21.00L	
3	MEASURED DESCRIPTOR	PRICE	POTATOES	2.50
	UNIT PRICE QTY		0.50\$/kg 5kg	
4	MEASURED DESCRIPTOR		CARROTS	
	UNIT PRICE QTY	PRICE	\$0.45/kg 2.565kg	1.15
5	ITEM DESCRIPTOR	PRICE	BAKED BEANS 375g	2.16
(a)	QTY @ EACH		3 @ \$0.72 EA.	
or				
(b)	QTY @ \$		3 @ \$0.72	
6	ITEM DESCRIPTOR	PRICE	SPAGHETTI 585g	1.18
7	QTY @ UNIT PRICE		15 @ \$0.25	
(a)	MEASURED DESCRIPTOR	PRICE	ORANGES	3.75
or				
(b)	QTY		15	
	UNIT PRICE		\$0.25	
	MEASURED DESCRIPTOR	PRICE	ORANGES	3.75
or				
(c)	UNIT PRICE QTY		\$0.25 15	
	MEASURED DESCRIPTOR	PRICE	ORANGES	3.75
or				
(d)	UNIT PRICE QTY		\$0.25 15	
	MEASURED DESCRIPTOR	PRICE	ORANGES	3.75
8	QTY @ EACH		4 @ \$2.78 EA.	
(a)	ITEM DESCRIPTOR	PRICE	SOAP POWDER 1 kg	11.12
or				
(b)	QTY @ \$		4 @ \$2.78	
	ITEM DESCRIPTOR	PRICE	SOAP POWDER 1 kg	11.12
	TOTAL PRICE	\$	TOTAL PRICE	\$****.**

The blank line may be omitted between successive items (as between 4 and 5) and any of the formats 2(a), (b), (c) or (d) may be used with the formats in 3 and 4.

Any of the descriptors for measured quantity, unit price, price per item and price of Appendix 1 may be used.

Alignment of the left hand edge of printing is preferred but not essential, however right hand alignment of the price column is mandatory; with either the descriptor or the data indented.

The total price shall be preceded by the symbol '\$'. Columns for measured quantity, unit price and price may be headed by the denomination.

It is preferred that the total price be highlighted, for example by increased print size, bolding, or underlining, but this is not mandatory.

Particular items on a ticket may be voided provided the correct total price is shown. For example, an item may be deleted by striking-out the line containing the price of the item, as shown below.

WITHOUT ITEM CORRECTION

COOKING OIL	\$2.50
3.59 \$/kg	
0.510 kg	
BANANAS	\$1.03
SOAP	\$2.20
TOTAL PRICE	\$5.73

WITH ITEM CORRECTION

COOKING OIL	\$2.50
3.59 \$/kg	
0.510 kg	
BANANAS	\$1.03
SOAP	\$2.20
TOTAL PRICE	\$4.70

Examples of acceptable and non-acceptable tickets:

ACCEPTABLE

Descriptor information	\$ Price
SUPER PETROL	028.43
42.75 L @ \$/L 0.665	
SQUASH	047.90
10.505 kg @ 4.56 \$/kg	
TOTAL PRICE	\$ 76.33

NOT ACCEPTABLE

Descriptor information	\$ Price
SUPER PETROL	028.43
42.75 L @ \$/L 0.665	
SQUASH	047.90
10.505 kg @ 4.56 \$/kg	
TOTAL PRICE	76.33

There shall be a space of at least one digit between any digits relating to data other than price and the price column, nor shall any character appear in the price column. For practical purposes, the price column is taken to be five digits in width, excluding the decimal point. Note that the last digit of the unit price has a space between it and the price column in the ticket on the left but infringes on the price column in the ticket on the right. Similarly for the 'kg'.

The total price shall be preceded by the symbol '\$', as in the ticket on the left.

Descriptors and/or statements of measured quantity, unit price and price may appear on the one line, however the columns in which they appear shall then be separated by at least one space.

Rounding of Price Totals

Where payment is made by any of the following methods:

- Cash tendered to the *exact* amount;
- Debit card or credit card; or
- Cheque;

the amount to pay is the **TOTAL PRICE** which remains unrounded in any way.

Alternatively, the following is an example of a typical cash register ticket and shows the methods of rounding which can be used to obtain an acceptable total:

OPTION 1		OPTION 2	
	\$		\$
CONFECTIONERY	2.15	CONFECTIONERY	2.15
POTATOES	2.55	POTATOES	2.55
0.51\$/kg 5 kg		0.51\$/kg 5 kg	
TINNED PEACHES	1.49	TINNED PEACHES	1.49
BAKED BEANS	1.32	BAKED BEANS	1.32
TOMATOES PACKED 1 kg	1.47	TOMATOES PACKED 1 kg	1.47
TOTAL PRICE	\$ 8.98	TOTAL PRICE	\$ 8.98
<u>PRICE TO PAY</u>	<u>\$ 9.00</u>	<u>PRICE TO PAY</u>	<u>\$ 8.95</u>
<u>AMOUNT TENDERED</u>	<u>\$ 10.00</u>	<u>AMOUNT TENDERED</u>	<u>\$ 10.00</u>
<u>CHANGE</u>	<u>\$ 1.00</u>	<u>CHANGE</u>	<u>\$ 1.05</u>

Option 1 is the Commonwealth Government recommended approach and can be summarised as:

- 1, 2, 8 or 9 cents in **TOTAL PRICE** are rounded to the nearest 10 cents;
- 3, 4, 6 or 7 cents in **TOTAL PRICE** are rounded to the nearest 5 cents.

Option 2 is an expressed alternative of industry and can be summarised as:

- 1, 2, 3 or 4 cents in **TOTAL PRICE** are rounded down to the next lowest 10 cents;
- 6, 7, 8 or 9 cents in **TOTAL PRICE** are rounded down to the next lowest 5 cents.

The words shown underlined on the sample ticket are examples; similar, alternative wording is acceptable.

The following are other examples of acceptable ticket formats and include the amount rounded up or down. This requires that the Total Price appears after the rounding calculation to provide the correct mathematical summation.

OPTION 3		OPTION 4	
	\$		\$
CONFECTIONERY	2.15	CONFECTIONERY	2.15
POTATOES	2.55	POTATOES	2.55
0.51\$/kg 5 kg		0.51\$/kg 5 kg	
TINNED PEACHES	1.49	TINNED PEACHES	1.49
BAKED BEANS	1.32	BAKED BEANS	1.32
TOMATOES PACKED 1 kg	1.47	TOMATOES PACKED 1 kg	1.47
<u>SUBTOTAL</u>	8.98	<u>SUBTOTAL</u>	8.98
<u>ROUND UP</u>	0.02	<u>ROUND DOWN</u>	0.03
TOTAL PRICE	\$ 9.00	TOTAL PRICE	\$ 8.95
<u>AMOUNT TENDERED</u>	<u>\$ 10.00</u>	<u>AMOUNT TENDERED</u>	<u>\$ 10.00</u>
<u>CHANGE</u>	<u>\$ 1.00</u>	<u>CHANGE</u>	<u>\$ 1.05</u>

Option 3 is the Commonwealth Government recommended approach; Option 4 is an expressed alternative of industry.

OPTION 5		OPTION 6	
	\$	kg	\$/kg
CONFECTIONERY	2.15	CONFECTIONERY	2.15
POTATOES 0.51\$/kg 5 kg	2.55	POTATOES	
TINNED PEACHES	1.49	5 0.51	2.55
BAKED BEANS	1.32	TOMATOES PACKED 1 kg	1.47
TOMATOES PACKED 1 kg	1.47	MANGOES	
<u>SUBTOTAL</u>	8.98	# 1 PC @ 1.00/PC	1.00
TOTAL PRICE	\$ 8.98	APPLES	
<u>AMOUNT TENDERED</u>	<u>\$ 8.98</u>	# 6 PC X 0.22/PC	1.32
		TOTAL PRICE	\$ 8.49

Option 5 covers the case where the transaction is completed by tendering the exact amount in cash, or by cheque, or by debit or credit card, or by EFT (electronic funds transfer); Option 6 shows how items sold per piece may be listed on a ticket having columns for quantity and unit price.

Suggested alternatives for items priced by count.

APPENDIX 4 POSSIBLE FORMATS FOR PRINTERS ATTACHED TO COMPUTERS

The printout, docket, etc., may use one of the following methods of showing items where a price is computed on the printout/docket:

POSSIBLE FORMATS			EXAMPLES	
1	ITEM DESCRIPTOR	PRICE	SORGHUM	215.00
2	MEASURED DESCRIPTOR PRICE		SUPER PETROL	100.00
	(a) QTY @ UNIT PRICE		200.00L @ 0.500\$/L	
	or			
	(b) QTY		200.00L	
	UNIT PRICE		0.500\$/L	
	or			
	(c) UNIT PRICE		0.500\$/L	
	QTY		200.00L	
	or			
	(d) UNIT PRICE QTY		0.500\$/L 200.00L	
3	MEASURED DESCRIPTOR PRICE		CATTLE CLASS 14	750.00
	UNIT PRICE QTY		150c/kg 500kg	
4	MEASURED DESCRIPTOR		NITRATE	
	UNIT PRICE QTY	PRICE	\$0.45/kg 226.0kg	101.70
	TOTAL PRICE	\$	TOTAL PRICE	\$****.**

The blank line separator may be omitted between successive items (as between 3 and 4) and any of the formats 2(a), (b), (c) or (d) may be used with the format in 3 and 4.

Any of the descriptors for measured quantity, unit price, price per item and price of Appendix 1 may be used.

There is no set format for the output of computer printers as the variety of applications makes such fixed requirements unreasonable. However, all measurement related data must be clearly indicated by separation from other information, bolding, enlarged size or similar.

National Standards Commission



NOTIFICATION OF CHANGE

GENERAL SUPPLEMENTARY CERTIFICATE OF APPROVAL No S1/0/A

CHANGE No 1

The following changes are made to the approval documentation for

Electronic Indicating and Printing Devices for Measuring Instruments.

1. In Technical Schedule No S1/0/A dated 20/3/92, the following amendments are made:

(a) On page 3, the definition entitled **secondary device** should be changed to read **secondary indicating or printing device**.

(b) On page 6, clause 1.4.5 should be changed to read, in part;

"For the purposes of rounding of **total prices**, rounding shall ..."

(c) On page 8, the following should be added to the 1st paragraph of clause 1.10.3; (Note that this same wording already appears as the 2nd sentence in clause 1.10.4.)

"It is neither possible nor desirable to reproduce in this document more than the guidelines for most of the formats and examples of the most common ones; formats outside these guidelines, and where doubt exists as to suitability, should be referred to the Commission."

2. In Appendix 2 dated 20/3/92:

- (a) The 4th paragraph on page 3 should be changed to read;

"The preferred order of information is measured quantity, unit price or price per item, and total price; the printed value of total price shall always appear last."

- (b) The following should be added as a new paragraph at the top of page 3;

"The formats shown are some examples of acceptable solutions; formats outside these guidelines, and where doubt exists as to suitability, should be referred to the Commission."

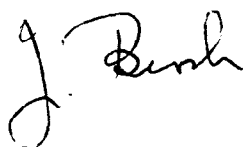
3. In Appendix 3 dated 20/3/92:

- (a) The following should be added as a new paragraph at the top of page 1;

"The formats shown are some examples of acceptable solutions; formats outside these guidelines, and where doubt exists as to suitability, should be referred to the Commission."

- (b) The page attached herein should be added as page 4.

Signed and sealed by a person authorised under Regulation 9 of the National Measurement (Patterns of Measuring Instruments) Regulations to exercise the powers and functions of the Commission under this Regulation.



National Standards Commission



NOTIFICATION OF CHANGE

GENERAL SUPPLEMENTARY CERTIFICATE OF APPROVAL No S1/0/A

CHANGE No 2

The following changes are made to the approval documentation for

Electronic Indicating and Printing Devices for Measuring Instruments.

In Technical Schedule No S1/0/A dated 20 March 1992, the following amendments are made:

1. On page 6, clause 1.4.2 should be amended by adding the following as a second paragraph:

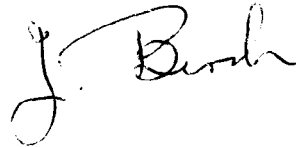
"Where this device is an electronic cash register used for trading direct with the public and the device totalises the prices of items, a ticket in accordance with clause 1.10.6 shall be produced."

2. On page 6, clause 1.4.4 should be amended by adding the following as a second paragraph:

"For an electronic cash register, this requirement is considered to be satisfied provided a receipt in accordance with clause 1.10.6 is issued."

3. In Appendix 3, pages 1 and 2 are replaced by the pages attached herein which include a new first paragraph (previously advised in Notification of Change No 1 dated 24 December 1992) and additional ticket formats (numbered 7 and 8) on page 1.

Signed and sealed by a person authorised under Regulation 9 of the National Measurement (Patterns of Measuring Instruments) Regulations to exercise the powers and functions of the Commission under this Regulation.

A handwritten signature in black ink, appearing to read "J. Birch". The signature is written in a cursive style with a large initial "J" and a long horizontal stroke extending to the right.



National Standards Commission

12 Lyonpark Road, North Ryde NSW

Notification of Change

Certificate of Approval No S1/0/A

Change No 3

The following changes are made to the approval documentation for
Electronic Indicating and Printing Devices for Measuring Instruments.

In Technical Schedule No S1/0/A dated 20 March 1992;

1. In clause **1.1 Devices Included**, paragraph (e) ["Any device which allows automatic control ... individual values."] should be deleted.
2. In clause **1.2 Devices Excluded**;
 - (a) The first sentence should be amended to read, in part:
"... paragraphs (a) to (f) below ..."
 - (b) The following should be added as paragraph (f):
"Any device which results in the instrument operating as a type of instrument covered by requirements different to that covered by the Certificate of Approval. For example, a non-automatic weighing instrument operating with a device such that the instrument is now an automatic catchweighing instrument or a discontinuous totalising automatic weighing instrument."

Note: Instruments verified or certified with such devices prior to 1 October 2001 may continue to be used at the discretion of the applicable trade measurement authority."

Signed by a person authorised under Regulation 60 of the National Measurement Regulations 1999 to exercise the powers and functions of the Commission under this Regulation.

~ End of Document ~