

CALSTAN

PRECISION TEST EQUIPMENT

MANUFACTURED BY _____

SLADE'S RADIO PTY. LTD.

LANG STREET :: CROYDON, N.S.W.

UJ 5381

UJ 5382

The largest TEST EQUIPMENT manufacturers in the COMMONWEALTH

CALSTAN DISTRIBUTORS

THROUGHOUT AUSTRALIA :—

N.S.W.: Radio House Pty. Ltd., Sydney; Martin de Launay Ltd., Sydney;
Bloch and Gerber Ltd., Sydney; Fox and MacGillycuddy Ltd.,
Sydney; John Martin Ltd., Sydney; Electric Service Co., Newcastle.

VICTORIA : Australian General Electric Ltd., Melbourne; Arthur J. Veall
Pty. Ltd.

QUEENSLAND : J. B. Chandler & Co., Brisbane.

SOUTH AUSTRALIA : Radio Wholesalers Ltd.

WEST AUSTRALIA : Carlyle & Co., Perth.

TASMANIA : Noyes Bros. (Melbourne) Ltd., Launceston.

NEW ZEALAND : New Zealand Electrical Equipment Co.

Stocks available from Turnbull and Jones, all branches.

CALSTAN SET ANALYSERS

The SERVICEMAN'S greatest ASSISTANT

● Here again three different models are available.

- (1) Model 485 Engineer's Model, suitable for the advanced Student and Engineer.
- (2) Model 445 A.C./D.C. Model, equally suitable for the Country or Suburban Dealer.
- (3) Model 435 D.C. Model, suitable for the Country Dealer whose service does not include Electric Radios.

Features of the 485 Analyser are as follows:

Completely tests all types of RADIO SETS, including those equipped with metal or Philips P. and V. Valves.

Point-to-point analysis of receivers without removing chassis from cabinet.

FEATURES—Direct reading on meter scale of:—

VOLTS A.C./D.C. 1250, 250, 125, 25, 5.

M/As. 500, 125, 25, 5, 1.

DECIBELS—12 to +9; +2 to +23; +16 to +37.

D.C. OHMS—0.5 Megohms, 0-500,000 ohms, 0-50,000 ohms, 0-5000 ohms, 0-500 ohms.

A.C. OHMS—0.5 Megohms, 0-500,000 ohms, 0-50,000 ohms, 0-5000 ohms.

HENRIES—0-20,000, 0-2,000, 0-200, 0-20.

MICROFARADS—0-50, 0-5, 0-.5, 0-.05.

Tests electrolytic Condensers with variable voltage and current tappings.

The 445 has the same appearance as the 485, but has no built-in Power Unit. The ranges are: Milliamps, 1, 5, 25, 50, 100; Volts, 5, 10, 50, 250, 1250; A.C. and D.C. Ohms, 0-50, 0-5,000, 0-50,000, 0-500,000.

The 435 has also the same general appearance, but is smaller in size, and is not suitable as an output meter. Has the same ranges as the 445, but WILL NOT measure A.C. Volts.

PRICES:

Model 485 : £17'17'0

Model 445 : £12'12'0

Model 435 : £10'10'0

ALL PLUS TAX



AC and DC TUBE CHECKERS

COUNTER - PORTABLE - and EMPORIUM MODELS

THREE DIFFERENT MODELS ARE AVAILABLE TO SUIT ALL REQUIREMENTS . . . THE COUNTER, THE PORTABLE, AND THE EMPORIUM MODEL.

- The Trade asked for a Portable Type Tube Checker, and in Model 222 we have produced what is unquestionably the finest Tube Checker ever placed on the Australian Market. Years ahead in design, performance and simplicity. The Model 222 Tube Checker incorporates the most advanced circuit features for tube analysing. High Resistance, Leakage and Shorts between Elements indicated by the Neon Lamp even as high as 1,000,000 ohms. Completely tests American, Philips, Osram and Mullard Valves, including metal Philips, P. & V. A turn of the switch picks out and tests every element. Additional Features are percentage Readings in conjunction with Good-Bad sections on scale of large Fan Shaped Meter. Time Voltage Regulation with meter check. All of the above types can be made for D.C. operation.

Country Dealers will find the CALSTAN D.C. TUBE CHECKER a Sound Investment. These times are busy times for Radio Dealers . . . many new sets are installed . . . these sets require new valves . . . and in turn these valves must be tested for efficiency before being placed in the set. At the same time dealers must be prepared for the checking of valves which have been in use for some period . . . as nine times out of ten . . . radio set faults are traced to inefficient tubes. Build up your business with a Modern Valve Checking Department. The Calstan D.C. Tube Checker is a boon to Country Dealers as it is BATTERY OPERATED . . . will work from a 6-VOLT BATTERY . . . the High Tension being supplied by means of a VIBRATOR UNIT . . . thus enabling it to be used in any place or time independently of Power Lines. Don't be misled. The Calstan DC222 is positively the only Tube Checker which will test all tubes, both A.C. and Battery Types.

EMPORIUM MODEL

£12'5'0

A.C. COUNTER MODEL

£11'5'0

A.C. PORTABLE MODEL

£11'15'0

D.C. COUNTER MODEL

£16'16'0

D.C. PORTABLE MODEL

£17'6'0

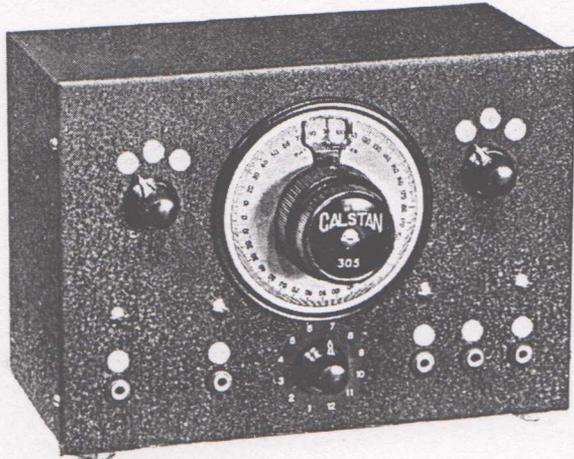
ALL PLUS TAX



EMPORIUM MODEL.

CALSTAN OSCILLATORS

● The new "Calstan" fundamental All-Wave Oscillator is so designed that it meets perfectly the many demands of the serviceman. Battery operated, permitting it to be used at any time or in any place independently of power lines. It covers frequencies from 15 M.C. to 150 K.C. All frequencies are fundamental and fully stabilised. It has perfect attenuation of R.F., modulated R.F., and A.F. signals. Precision Accuracy, Modern design, and low cost are the salient points of this new Calstan All-Wave Oscillator. Built to a very high standard and sold at prices within the reach of all. In the design of a modern service oscillator there are certain features that are necessary in order that it will suit the varying conditions encountered in modern servicing.



£9'15'0

PLUS TAX

and be substantially flat over any given frequency band. (3) It must be modulated with an audio frequency preferably with a separate modulator valve. (4) The carrier frequency of the R.F. Oscillator must not drift on any part of the band or be effected by changes in applied potential or frequency of A.F. Modulator. (5) The oscillator must be accurately calibrated on all the most common frequencies used and maintain its calibration over reasonably long periods. The above requirements as well as many others not mentioned are all incorporated in the new "Calstan" fundamental oscillator.

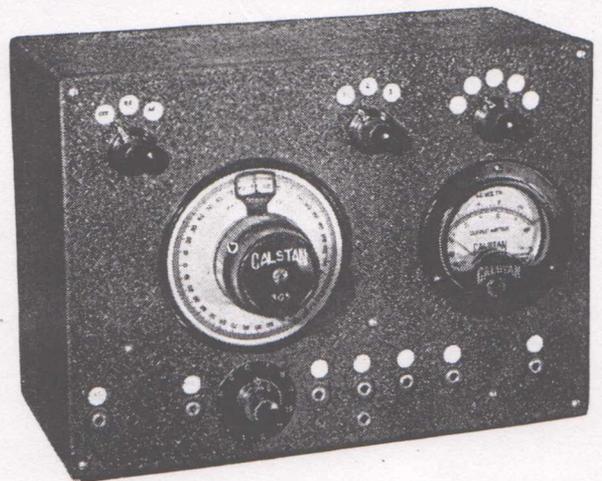
Two type 30 valves are used, one is an R.F. Oscillator and the other an audio modulator. The frequency ranges are suitable for all modern servicing, and are all fundamentals.

CALSTAN ALL-WAVE
OSCILLATOR and
OUTPUT METER
COMBINATION:

The ideal instrument for line production or large Servicing Organisations.

£14'14'0

PLUS TAX

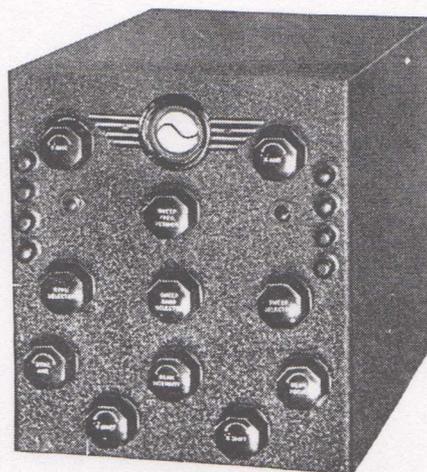


Cathode Ray Oscillograph

- Complete Kit of Parts for the Home Assembly of a modern Oscillograph.

Price complete less Valves, £10/17/6.

A large number of these units have been built by Dealers, all of whom report that they have wonderful flexibility.



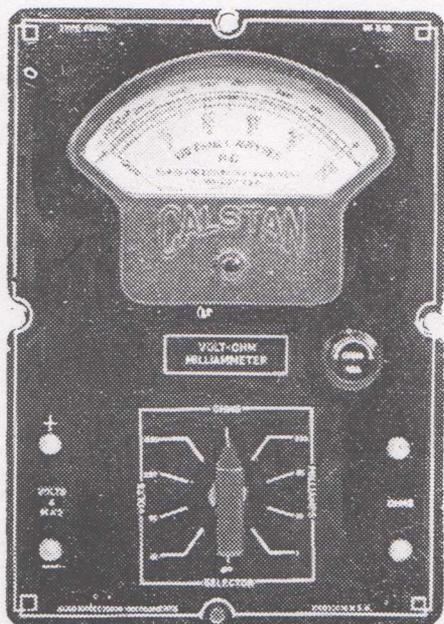
PRICE COMPLETE LESS VALVES

£10'17'6

PLUS TAX

THERMO-COUPLE METERS

- These Thermo-couple meters, like all Calstan products, are equal to the world's best. They are made in ranges from 250 Milliamps to 20 Amps. Special Ranges can be made to order. Prices range from £2/10/- plus Tax.



CALSTAN AND WIRELESS WEEKLY MULTIMETER

Obtainable in Kit Form.

- For Dealers who are desirous of building their own Multimeter this Kit is particularly easy to assemble. All the necessary shunts and series resistors are clearly marked on a pictorial diagram of the necessary connections supplied with each kit.

The ranges are as follows :

Milliamps, 1, 10, 100, 250; Volts, 10, 50, 250, 1000 D.C.; Ohms, 0-100,000, 0-1,000,000.

Price £4/1/6, complete with box, plus tax.

CALSTAN MULTIMETERS

- It's RANGE which counts in Test Equipment — range in Volts, A.C. and D.C., in Milliamps, and in Ohms, all important factors to the Serviceman and Manufacturer. Wise Servicemen choose the CALSTAN A.C./D.C. CIRCUIT TESTER, for they appreciate the importance of Precision, Accuracy, and Low Cost, which, combined with the wide range of this excellent instrument, make it a sound investment for increased new servicing business.

The Calstan Multimeter range consists of two types.

- (1) A.C./D.C. with output range of D.C. volts, 5, 10, 50, 250, 1000. Milliamps, 1, 5, 25, 100, 500; D.C. A.C. and OUTPUT VOLTS, 5, 10, 50, 250, 1000; Ohms, 0-2,000, 0-20,000, 0-200,000.
- (2) D.C. This model has a similar range to the A.C./D.C. model but cannot be used for checking A.C. or Output Volts. These Multimeters afford quick and accurate testing of all components used in modern radio sets, and due to their simple operation are particularly suitable to the Dealer who is just breaking into the Radio Business.

The Portable Box Type with lid and carrying handle as illustrated is designed especially for Dealers' use.

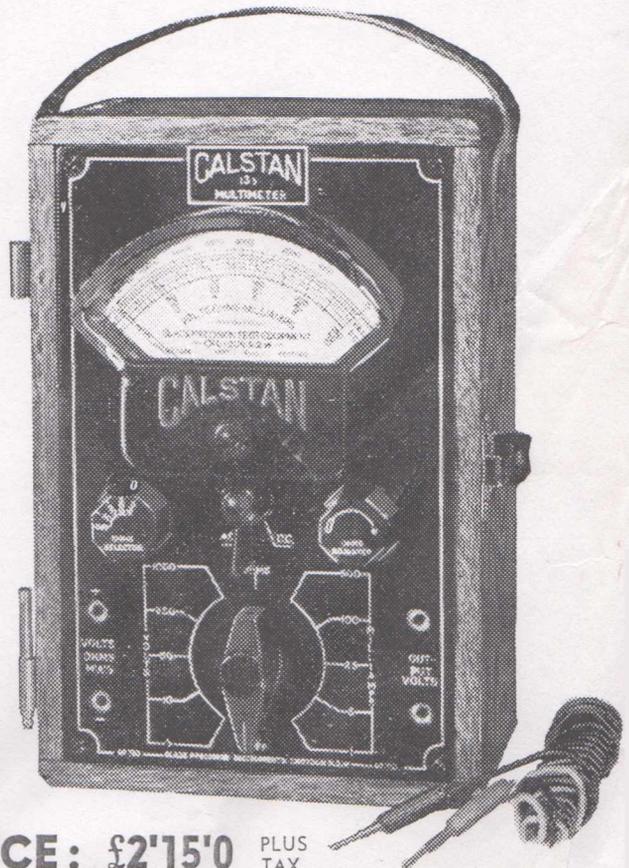
A Metal Type case is available for production lines in factories.

The respective prices are—

ADI35. A.C./D.C.	£7	17	6
Plus tax			
D135. D.C.	£5	15	0
Plus tax			

High Sensitivity 20,000 Ohms per volt meters can be fitted to either of the above type Multimeters for £2/10/-extra.

This type of instrument when used with this meter obviates the necessity of a Vacuum Tube Volt Meter for average work, and can be used much more extensively. Analyser Selector Units are available for use with the ADI35 or D135. This extra unit enables quick and accurate current and voltage readings of all the elements of English and Continental Type Valves, including Philips P and Octal bases.



PRICE: £2'15'0 PLUS TAX

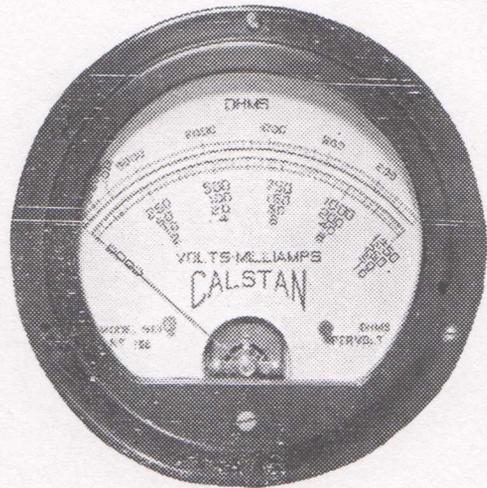
CALSTAN METERS

- The Calstan Meter is built for Service. The robustness and ability to stand up under the most severe overloads and heavy usage is found in no other meter.

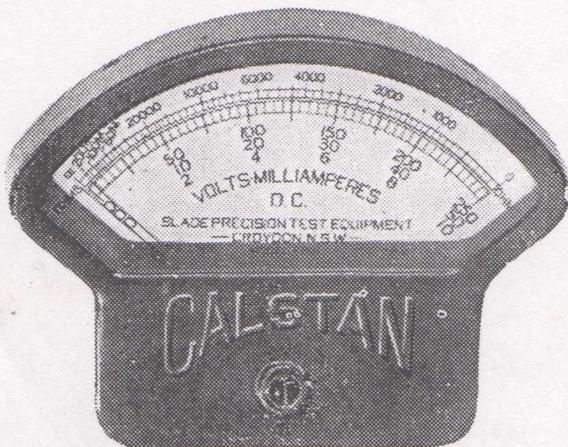
One of the most outstanding features is the aluminium dial which ensures freedom from buckling and cracking in any climate.

CALSTAN METER type 331 is available for flush mounting, projection mounting, or portable mounting. These meters are supplied as a standard 0-1 MA meter. Shunts to increase range of milliamps, 3/- each. Carborundum Resistors (bridged checked 2 per cent. accuracy) to increase voltage range up to 1000 volts, 3/- each plus tax. Wire wound non-inductive type Resistors, 1 per cent. accuracy. 7/6 per 100,000 ohms.

CALSTAN METER Type F501 features D.C. Volts and Milliamps and measures up to 200,000 ohms resistance. Price £1/18/6 plus Tax. Additional features include steadfast calibration, unexcelled accuracy, and clear jet black markings on long scale. Length of calibration on scale $3\frac{3}{4}$ inches. Each of the 72 parts forming a CALSTAN METER is finished in a workmanlike manner, and all of those subject to oxidation are cadmium plated. This meter can also be supplied as a 20,000 ohms per volt. Price £2/15/- plus Tax.



0-1M/A, 1,000 ohms per volt
PRICE : £1'12'6 PLUS TAX



0-1 M/A, 1,000 ohms per volt
PRICE : £1'18'6 PLUS TAX

Calstan meter scales are procurable in 48 different combinations, the biggest variety ever made available in Australia.

Special types of Galvanometers (Centre Zero), Micro-ammeters, etc., made to order.

Prices on request.

CALSTAN RANGE OF SPECIAL METERS

D.C. AMMETERS (Model 331):

Ranges—0-1, 0-2.5, 0-5	Price £2 0 0 plus tax
0-10, 0-25	Price £2 5 0 plus tax

D.C. MICRO-AMMETERS (Model 331):

Range — 0-50	Price £2 15 0 plus tax
0-100	Price £2 15 0 plus tax
0-250	Price £2 12 6 plus tax
0-500	Price £2 5 0 plus tax

Finish.—Each of the 72 parts forming a CALSTAN METER is finished in a workmanlike manner, and all of these subject to oxidation are cadmium-plated.

LABORATORY AND ADVISORY SERVICE

Slade's are prepared to advise experimenters without fee regarding technical problems connected with electrical testing equipment and, at a small and moderate fee, to test and report upon any developments, experiments or proposals regarding the application of electricity to domestic, industrial, or scientific developments. In addition to a well-equipped laboratory, Slade's employ qualified technicians capable of undertaking this service.

Calstan Precision Test Equipment has been chosen by Australia's Leading Research Laboratories, Airways, Commercial Broadcasting Companies, A.W.A., Philips Lamps, S.T.C., Government Departments, Ships and "Hams." All have put their stamp of approval on CALSTAN Meters and Test Equipment —— by purchasing them, and coming back for more —— "Hundreds of them."

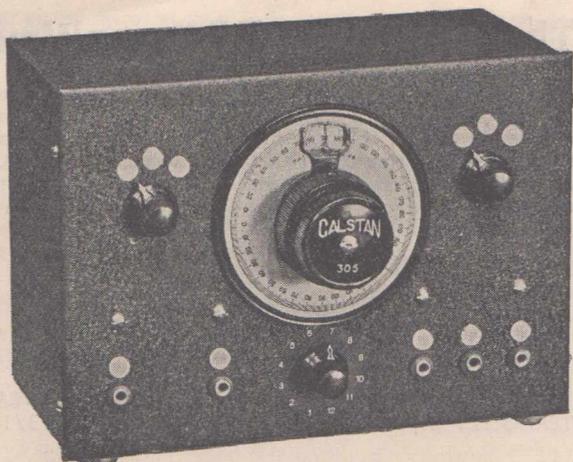
ENGRAVING

Our modern engraving plant is available for Panel Engraving to order of clients. Work carried out by skilled engraver, and satisfaction guaranteed.

PRICE PER LETTER 1d.

Special quotations given for large orders.

CALSTAN OSCILLATORS



Model 305 Oscillator

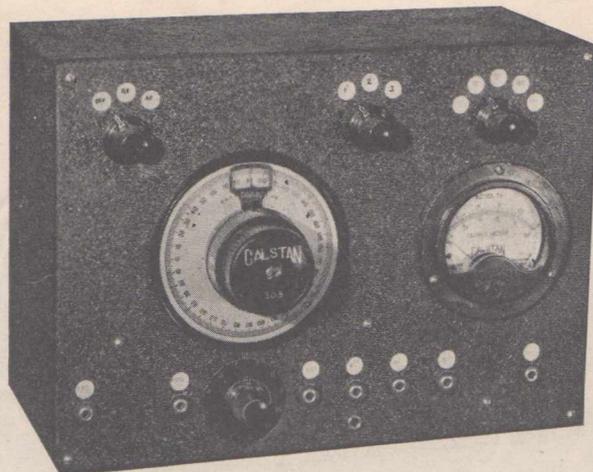
The new "Calstan" fundamental All-Wave Oscillator is so designed that it meets perfectly the many demands of the serviceman. Battery operated, permitting it to be used at any time or in any place independently of power lines. It covers frequencies from 15 M.C. to 150 K.C. All frequencies are fundamental and fully stabilised. It has perfect attenuation of R.F., modulated R.F., and A.F. signals. Precision Accuracy, Modern design, and low cost are the salient points of this new Calstan All-Wave Oscillator. Built to a very high standard and sold at prices within the reach of all. In the design of a modern service oscillator there are certain features that are necessary in order that it will suit the varying conditions encountered in modern servicing.

CASH TRADE PRICE, MODEL 305 **£9 15 0**
(Plus Sales Tax)

TERMS: £2/10/- deposit and 9 monthly payments of 18/6 each.

CASH TRADE PRICE, 305 with output meter .. **£14 14 0**
(Plus Sales Tax)

TERMS: £3/10/- deposit and 12 monthly payments of £1/1/11 each.



Model 305 and Output Meter.

They are as follows:—(1) The oscillator must cover all frequencies used in modern broadcasting, including those frequencies used for I.F. Amplifiers. (2) The output must be variable over wide limits and be substantially flat over any given frequency band. (3) It must be modulated with an audio frequency preferably with a separate modulator valve. (4) The carrier frequency of the R.F. Oscillator must not drift on any part of the band or be affected by changes in applied potential or frequency of A.F. Modulator. (5) The oscillator must be accurately calibrated on all the most common frequencies used and maintain its calibration over reasonably long periods. The above requirements as well as many others not mentioned are all incorporated in the new "Calstan" fundamental oscillator.

Two type 30 valves are used, one is an R.F. Oscillator and the other an audio modulator. The frequency ranges are suitable for all modern servicing, and are all fundamentals.

CASH TRADE PRICE, 305 Kit of Parts **£7 7 0**
(Plus Sales Tax)

TERMS: £2 deposit and 6 monthly payments of £1 each.

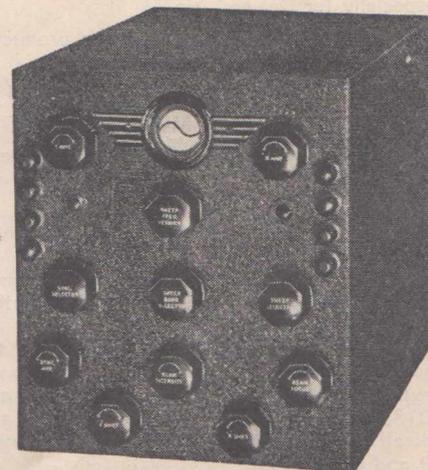
CATHODE RAY OSCILLOGRAPH

A large number of these highly modern instruments have been built by Servicemen engineers with excellent all round results. You can build it yourself, it is supplied in kit form.

CASH TRADE PRICE, Kit of Parts **£10 17 6**
(Plus Sales Tax)

TERMS: £3 deposit and 12 monthly payments of 15/6 each.

(Above prices quoted less valves)



RADIO EQUIPMENT PTY. LTD.
BROADWAY :: SYDNEY

CALSTAN A.C. and D.C. TUBE CHECKERS

CALSTAN TUBE TESTER-MULTITESTER

—The Radiotrician's Portable Servicing Laboratory.

● A.C. Model 223 will test every valve used in Australia, including American and European P. and V., and in addition to the emission test a Neon leakage indicator is fitted for individual electrode selection. Eleven steps for filament voltage from 1.5 to 30 volts is provided. The multitester range is:—

A.C. and D.C. VOLTS: 5, 10, 50, 250, 1,250.

MILLIAMPERES: 5 Ranges, 1, 5, 25, 100, 250.

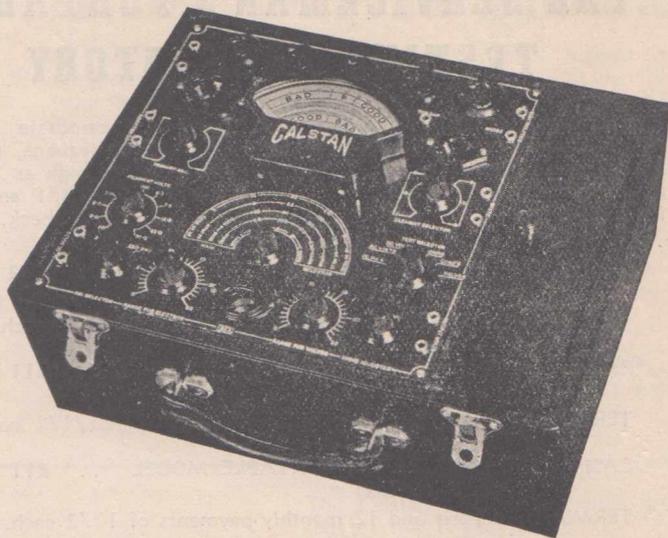
OHMS: 5 Ranges, from 1 ohm to 5 megohms.

This is also an excellent instrument for lining up sets and as a "Multimeter" operating in conjunction with the Power Supply an electrolytic condenser leakage test is available and condensers may be checked at 10, 25, 100, 150 and 250 volts, and a "GOOD"—?"—"BAD" meter scale provides the necessary indications.

A Vibrator Unit is now available to convert the AC223 to 6-volt Battery Operation, thus making the AC223 the ideal all round Multitester. (This Unit is given free for a limited period only to purchasers of AC223 Multitester. Order yours early.)

CASH TRADE PRICE, MODEL AC223 .. £17 17 0 plus Sales Tax

TERMS: £4 deposit and 12 monthly payments of £1/7/- each.



The Calstan A.C. 223 Valve and Circuit Tester

CALSTAN SET ANALYSERS

Calstan Model 485 Analyser will completely test all makes of sets, including those equipped with metal, P and V base valves. Point to point analysis of receivers without removing chassis from cabinet.

FEATURES:—Direct reading on meter scale of:—

Volts A.C./D.C.: 1,250, 250, 125, 25, 5.

M/A's: 500, 125, 25, 5, 1.

Decibels: —12 to +9; +2 to +23; +16 to 37.

D.C. ohms: 0-5 megohms, 0-500,000 ohms, 0-50,000 ohms, 0-5,000 ohms.

Henries: 0-20,000, 0-2,000, 0-20.

Microfarads: 0-50, 0-5,000, 0-50,000, 0-500,000.

Model 445 A.C./D.C. is ideally suitable for the country or suburban serviceman.

Model 435 has also the same general appearance, but is smaller in size and is not suitable as an output meter. Has the same ranges as the 445, but will **NOT** measure A.C. volts.

CASH TRADE PRICE, MODEL 485 £17 17 0
(Plus Sales Tax)

TERMS: £4 deposit and 12 monthly payments of £1/7/- each.

CASH TRADE PRICE, MODEL 445 £12 12 0
(Plus Sales Tax)

TERMS: £3 deposit and 12 payments of 18/9 each.



CASH TRADE PRICE, MODEL 435 £10 10 0
(Plus Sales Tax)

TERMS: £2/10/- deposit and 9 monthly payments of £1/0/5 each.

RADIO EQUIPMENT PTY. LTD.
BROADWAY :: SYDNEY

CALSTAN TEST EQUIPMENT

THE SERVICEMAN'S PORTABLE TESTING LABORATORY

The Calstan Model 222 Series tube checkers incorporate the most advanced features for valve analysis. High resistance, leakage, and shorts between elements indicated by the Neon lamp even as high as 1,000,000 ohms. Completely tests all types of valves including metal, P and V base. Percentage readings. Time voltage regulation with meter check.

CASH TRADE PRICE, EMPORIUM MODEL £12 5 0
(Plus Sales Tax)

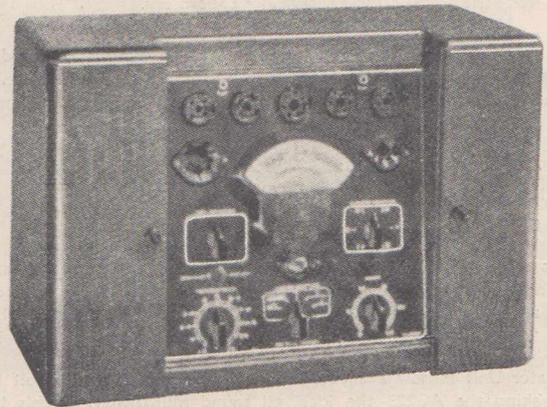
TERMS: £3 deposit and 12 monthly payments of 18/1 each.

CASH TRADE PRICE, A.C. COUNTER MODEL .. £11 5 0
(Plus Sales Tax)

TERMS: £3 deposit and 9 monthly payments of £1/1/1 each.

CASH TRADE PRICE, A.C. PORTABLE MODEL .. £11 15 0
(Plus Sales Tax)

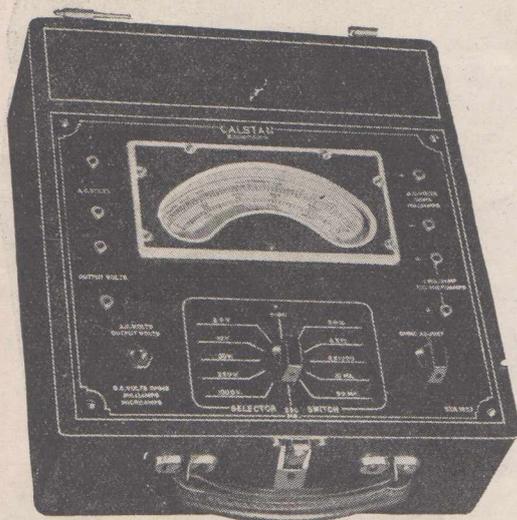
TERMS: £3 deposit and 12 monthly payments of 17/2 each.



The Calstan A.C. 222 Valve Tester

CALSTAN <CALibrated to STANDARD> TEST EQUIPMENT

NEW CALSTAN MULTITESTER



CASH TRADE PRICE, MODEL A.C./D.C.,
(Plus Sales Tax) £12 12 0

TERMS: £3 deposit and 12 monthly payments of 18/9 each.

CASH TRADE PRICE, MODEL 136 D.C., (Plus Sales Tax) £10 10 0

TERMS: £2 deposit and 9 monthly payments of £1/0/5 each.

THE CALSTAN 136 MULTITESTER

with NEW HIGH SENSITIVITY 20,000 OHMS. PER VOLT METER and will measure current AS LOW AS 2 MICRO-AMPS.

Model 136 Multimeter is an outstanding achievement in the Test Equipment field with AN ENTIRELY NEW AND DISTINGUISHED METER SCALE OF 7 INCHES LONG . . . the whole instrument itself a handy portable size and built in the usual Calstan compactness.

The Ranges are as follow:

MEASURES CURRENT AS LOW AS 2 MICRO-AMPS.

A.C./D.C. VOLTS: 2½, 10, 50, 250, 1,000.

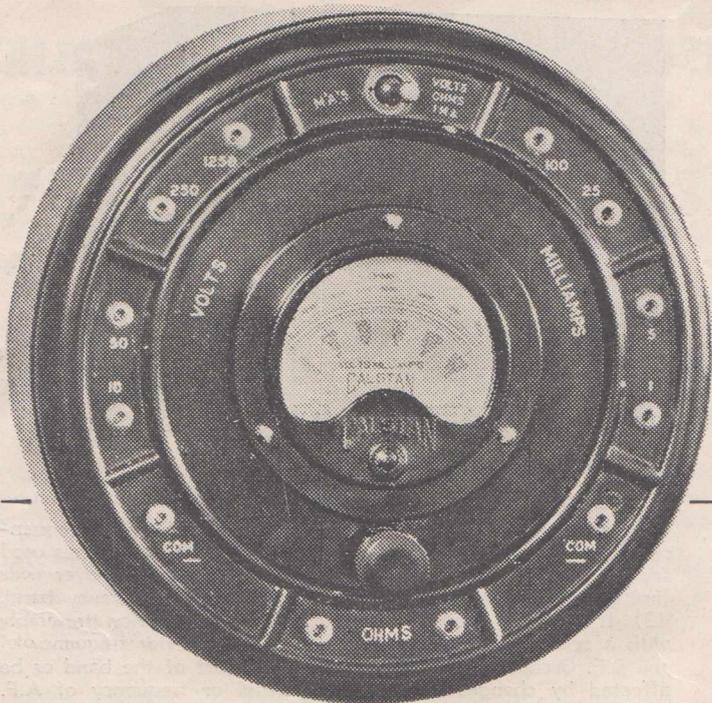
OHMS: Zero to 50 Megohms in 4 Ranges.

M/A'S: 0.1, 1, 10, 50, 250.

The large meter, like all Calstan meters, features steadfast calibration, unexcelled accuracy, and clear jet black markings on the 7 inch scale. Each of the 72 parts forming a Calstan meter is finished in a workmanlike manner and all meters subject to oxidisation are Cadmium Plated.

RADIO EQUIPMENT PTY. LTD.
BROADWAY :: SYDNEY

CALSTAN MULTIMETERS



The new CALSTAN multimeter

This new Calstan Multimeter . . . by reason of its rugged construction, its accuracy and extreme simplicity . . . is the ideal instrument for the beginner in radio or electrical work and for the young serviceman. At 90/- (plus sales tax) the Calstan Multimeter is remarkably good value . . . as attractive in value as it is in serviceability and appearance. Fitted in bakelite case.

Note the range of the Calstan Multimeter:—

M/A's: 1, 5, 25, 100.

VOLTS, D.C.: 10, 50, 250, 1,250.

OHMS: 0—100,000.

CASH TRADE PRICE £4 10 0 PLUS SALES TAX
TERMS: £1 deposit and 6 monthly payments of 13/1 each.

(2) D.C. This model has a similar range to the A.C./D.C. model, but cannot be used for checking A.C. or Output Volts. These Multimeters afford quick and accurate testing of all components used in modern radio sets, and due to their simple operation are particularly suitable to the Dealer who is just breaking into the Radio Business.



The Calstan Multimeter range consists of two types.

(1) A.C./D.C. with output range of D.C. volts, 5, 10, 50, 250, 1,000. Milliamps, 1, 5, 25, 100, 500; D.C., A.C. and OUTPUT VOLTS, 5, 10, 50, 250, 1,000; Ohms, 0-2,000, 0-20,000, 0-200,000.

The Portable Box Type with lid and carrying handle as illustrated is designed especially for Dealers' use.

A Metal Type case is available for production lines in factories.

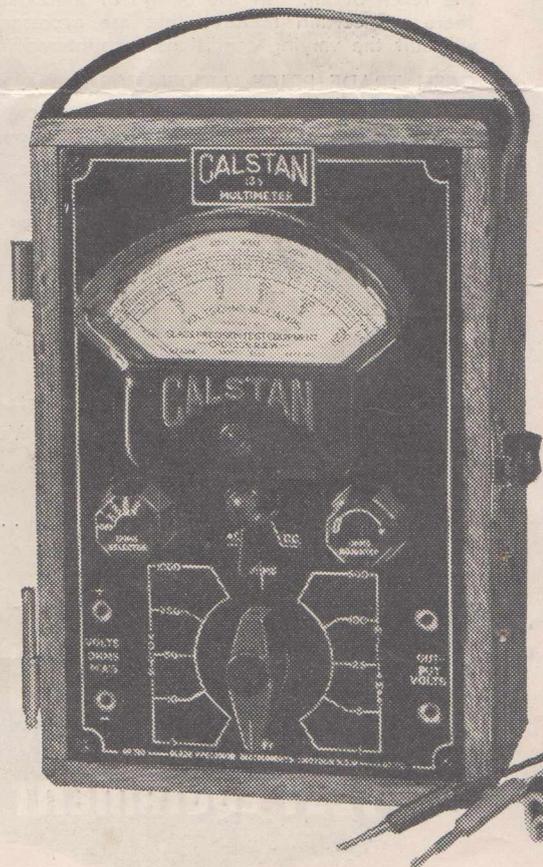
PRICES :

CASH TRADE PRICE, MODEL A.D. 135 . . . **£7 17 6** plus Sales Tax
TERMS: £2 deposit and 9 monthly payments of 15/- each.

CASH TRADE PRICE, MODEL D135 . . . **£5 15 0** plus Sales Tax
TERMS: £2 deposit and 6 monthly payments of 14/2 each.

High Sensitivity 20,000 Ohms per volt meters can be fitted to either of the above type Multimeters for £2/10/- extra.

This type of instrument when used with this meter obviates the necessity of a Vacuum Tube Volt Meter for average work, and can be used much more extensively. Analyser Selector Units are available for use with the AD135 or D135. This extra unit enables quick and accurate current and voltage readings of all the elements of English and Continental Type Valves, including Philips P and Octal bases.



RADIO EQUIPMENT PTY. LTD.
BROADWAY :: SYDNEY