

1000 Series

The new generation

Oscilloscopes



It had to happen...

a new generation of easy-to-use, economy line scopes offering the flexibility that you the customer demanded and from who else but Telequipment, world leaders in low cost scopes.

Before introducing the 1000 series we conducted an intensive market survey throughout Europe, the results of which were analysed by our engineering and marketing teams; from this a definite set of parameters emerged. These have all been embodied in our new 1000 series.

A choice of bandwidth: 10 or 15MHz, 5mV sensitivity at full bandwidth and 1mV sensitivity at 4MHz and a choice of modes; Algebraic Add, true X-Y, and x5 gain switching; remember we told you it was flexible.

Easy-to-use: this it certainly is; note the minimum number of controls on the front panel, probably less than any other competitive scope available and, of course, all colour coded for easy reference.

Easy-to-read: note the 5" CRT.

Easy-to-service: primary circuits are constructed on only three boards in a "u" configuration. The amplifier and time base boards pivot around the regulated power supply making for excellent accessibility. Wherever possible standard commercial components have been utilised throughout, simplifying acquisition.

Lightweight: only 8kg (approx. 17.5lb).

Reliable: here we have called on our many years' experience in the manufacture of low cost scopes. Components are rated in excess of their required values. Automatic insertion and testing reduces human errors. Flow soldering ensures maximum reliability of soldered joints.

Low cost: just check our price list and remember there is a lot more to cost than just the price.

Optional extras:

Front protection cover.
Light hood.
Camera adaptor to facilitate the C5A camera.

Rackmount version will be available. Please check availability prior to ordering.

Model	Bandwidth MHz	Sensitivity mV	MODES			
			ADD	X-Y	x5 Vertical Gain Switchable	Secs/Div Variable
D1010	10	5	NO	NO	NO	NO
D1011	10	*1	YES	YES	YES	YES
D1015	15	5	NO	NO	NO	NO
D1016	15	*1	YES	YES	YES	YES

*5mV at full bandwidth and 1 mV at 4 MHz bandwidth.



D1010/D1011

General Description

The D1010 is a dual-trace 10MHz oscilloscope with a single time base, for use on A.C. mains.

The D1011 has the same basic specification, with the addition of Channel 2 Invert, Algebraic Add, X-Y mode and X5 vertical gain (at 4MHz bandwidth) in the vertical system, and an uncalibrated variable sweep speed control on the time base.

Shown in red. The additional specification for the 1011.

Vertical System

Two input channels

Bandwidth:

DC coupled DC to 10MHz (-3dB).
AC coupled 8Hz to 10MHz (-3dB).
Rise time: 35ns.

Deflection Factors:

5mV/div to 20V/div in 12 calibrated steps.
(1-2-5 sequence).

A x5 gain switch extends each amplifier sensitivity to 1mV/div at a bandwidth of DC to 4MHz (-3dB).

Maximum Scan:

Amplitude 8 divs (6 divs at 10MHz).

Voltage measurement accuracy:
±5%

Input impedance:

1MΩ+45pF (approx.).

Input conditions:

Switched choice of DC, AC or ground. The third position grounds the input of the attenuator but not the signal input.

Maximum input voltage:

500V DC or AC peak.

Operating modes:

Channel 2 only.
Channels 1 and 2 chopped or alternated. The Alternate/Chop mode is selected by the Secs/div switch. (Chop mode from 0.2s/div to 2ms/div and alternate from 1ms/div to 0.2μs/div).

ADD CH1 and CH2 are algebraically added and an invert switch is available for CH2.

X-Y CH2 is the vertical input and CH1 becomes the horizontal input.

*Bandwidth is DC to 2MHz (-3dB).
Phase error less than 3° at 100kHz.*

Horizontal System

Sweep speeds:

0.2s/div to 0.2μs/div in 19 calibrated steps.
(1-2-5 sequence).

A x5 magnifier provides maximum sweep speeds of 40ns/div.

A variable uncalibrated control provides continuous coverage between stepped ranges extending the slowest sweep range to 0.5s/div.

Time Measurement accuracy:

Normal ±5%.
x5 ±7% (approx.).

Triggering

Bandwidth:

10MHz on both Auto and Normal positions. TV Triggers at field rate from 0.2s/div to 100μs/div and line rate from 50μs/div to 0.2μs/div.

Sources:

Internal channel 2.
External.
Line.

Sensitivity:

Internal 0.5 div.
External 0.5V (approx.).

Polarity:

Positive or negative.

Trigger level:

Variable control selects virtually any point of the positive or negative slope of the input signal. This control is inoperative in the TV position.

External X

Bandwidth:

DC coupled DC to 2MHz (-3dB).
AC coupled 10Hz to 2MHz (-3dB).

Sensitivity:

1V/div (approx.).

Input impedance:

280kΩ+30pF (approx.).

CRT

Display area:

8 divs x 10 divs (1 div=1cm).

Phosphor:

P31.

Accelerating potential:

1.8kV.

Z Modulation:

15V amplitude, DC coupled.

Calibrator

Output voltage:

250mV peak to peak.

Wave shape:

A vertical step at the screen centre.

Frequency:

At sweep repetition rate.

Accuracy:

±2%.

Power Requirements:

Mains voltages:

100-125 volts or 200-250 volts.

Frequency:

48-440Hz.

Consumption:

50VA (approx.).

Dimensions and Weight

Height	160mm	(6.3in)
Width	300mm	(11.82in)
Depth	420mm	(16.56in)
Weight	8.0kg	(17.63lb)

D1015/D1016

General Description

The D1015 is a dual-trace 15MHz oscilloscope with a single time base, for use on A.C. mains.

The D1016 has the same basic specification, with the addition of Channel 2 Invert, Algebraic Add, X-Y mode and X5 vertical gain (at 4MHz bandwidth) in the vertical system, and an uncalibrated variable sweep speed control on the time base.

Shown in red. The additional specification for the 1016.

Vertical System

Two input channels

Bandwidth:

DC coupled DC to 15MHz (-3dB).
AC coupled 8Hz to 15MHz (-3dB).
Rise time: 24ns.

Deflection Factors:

5mV/div to 20V/div in 12 calibrated steps.
(1-2-5 sequence).

A x5 gain switch extends each amplifier sensitivity to 1mV/div at a bandwidth of DC to 4MHz (-3dB).

Maximum Scan:

Amplitude 8 divs (6 divs at 15MHz).

Voltage measurement accuracy:
±5%.

Input impedance:

1MΩ+45pF (approx.).

Input conditions:

Switched choice of DC, AC or ground. The third position grounds the input of the attenuator but not the signal input.

Maximum input voltage:

500V DC or AC peak.

Operating modes:

Channel 2 only.
Channels 1 and 2 chopped or alternated. The Alternate/Chop mode is selected by the Secs/div switch. (Chop mode from 0.2s/div to 2ms/div and alternate from 1ms/div to 0.2μs/div).

ADD CH1 and CH2 are algebraically added and an invert switch is available for CH2.

X-Y CH2 is the vertical input and CH1 becomes the horizontal input.

*Bandwidth is DC to 2MHz (-3dB).
Phase error less than 3° at 100kHz.*

Horizontal System

Sweep speeds:

0.2s/div to 0.2μs/div in 19 calibrated steps.
(1-2-5 sequence).

A x5 magnifier provides maximum sweep speeds of 40ns/div.

A variable uncalibrated control provides continuous coverage between stepped ranges extending the slowest sweep range to 0.5s/div.

Time Measurement accuracy:

Normal ±5%.
x5 ±7% (approx.).

Triggering

Bandwidth:

15MHz on both Auto and Normal positions. TV Triggers at field rate from 0.2s/div to 100μs/div and line rate from 50μs/div to 0.2μs/div.

Sources:

Internal channel 2.
External.
Line.

Sensitivity:

Internal 0.5 div.
External 0.5V (approx.).

Polarity:

Positive or negative.

Trigger level:

Variable control selects virtually any point of the positive or negative slope of the input signal. This control is inoperative in the TV position.

External X

Bandwidth:

DC coupled DC to 2MHz (-3dB).
AC coupled 10Hz to 2MHz (-3dB).

Sensitivity:

1V/div (approx.).

Input impedance:

280kΩ+30pF (approx.).

CRT

Display area:

8 divs x 10 divs (1 div=1cm).

Phosphor:

P31.

Accelerating potential:

1.8kV.

Z Modulation:

15V amplitude, DC coupled.

Calibrator

Output voltage:

250mV peak to peak.

Wave shape:

A vertical step at the screen centre.

Frequency:

At sweep repetition rate.

Accuracy:

±2%.

Power Requirements

Mains voltages:

100-125 volts or 200-250 volts.

Frequency:

48-440Hz.

Consumption:

50VA (approx.).

Dimensions and Weight

Height	160mm	(6.3in)
Width	300mm	(11.82in)
Depth	420mm	(16.56in)
Weight	8.0kg	(17.63lb)

TELEQUIPMENT

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Greetings!

We would like to introduce the newest addition to our TELEQUIPMENT product line - the new 1000 Series!

This new generation of oscilloscopes represents a four model range of high quality, low cost testing instruments that can easily be used in a wide variety of applications.

With the 1000 Series, you are able to choose from either a 10MHz or 15MHz Bandwidth, as well as from a 1mV/div or 5mV/div Sensitivity Level. These dual-trace scopes feature a large screen and simple controls along with truly automatic triggering - a feature seldom offered with low cost oscilloscopes! The enclosed brochure will further explain the specifications for you.

Our TELEQUIPMENT instruments may conveniently be ordered from any one of our TEKTRONIX field offices across the country. Whether you are interested in updating your present testing facilities, or would simply like to learn more about our new product selection, give us a call or complete the enclosed Business Reply Card. Your TEKTRONIX Field Representative will be more than happy to assist you in choosing the scope that's right for your application.

We look forward to hearing from you!

Sincerely,

Ken Monk
Marketing Communications Manager