

Electro-Magnetic Distance Measuring Instruments

BY T. P. JONES, O.L.S.

On the opposite page will be found statistical data on some E.D.M. units in tabular form. This is an up-date of a similar form that appeared in the summer 1977 issue of the Quarterly.

Once again, we caution that all of the figures should be used as a rough guide only.

For further information on any instrument, please write or phone the companies listed below. Their assistance in compiling the table is gratefully acknowledged.

AGA Geotronics.

AGA Geodimeter of Canada, Ltd.
41 Horner Avenue, Unit 5
Toronto, Ont.
416-252-4691 M8Z 4X4

Benchmark.

See Tellurometer.

Carl Zeiss.

Carl Zeiss Canada, Ltd.

45 Valleybrook Drive
Don Mills, Ont.
416-449-4660 M3B 2S6

Hewlett-Packard.

Hewlett-Packard Canada, Ltd.
6877 Goreway Drive
Mississauga, Ont.
416-678-9430 L4V 1M8

Kern and Co.

Kern Instruments of Canada, Ltd.
40 Colonnade Road
Ottawa, Ont.
613-226-1105 K2E 7J6

Keuffel and Esser.

Keuffel and Esser of Canada, Ltd.
124 Milner Avenue
Scarborough, Ont.
416-298-1750 M1S 3R2

Krupp Atlas.

Marinav Corporation
1140 Morrison Drive
Ottawa, Ont.
613-820-6600 K2H 8S9

Precision International Inc.

See Wild Heerbrugg.

Siemens-Albis.

See Wild Heerbrugg.

Sokkisha.

Faber-Castell
1325 The Queensway
Toronto, Ont.
416-259-5051 M8Z 1S9

Tellurometer.

Telefix Canada
50 Doncaster Ave, Unit 8
Thornhill, Ont.
416-881-8551 L3T 1L4

Topcon Instrument Corp.

Norman Wade Co. Ltd.
75 Milner Avenue
Scarborough, Ont.
416-291-4211 M1L 4C8

Wild Heerbrugg.

Wild Leitz Canada, Ltd.
513 McNicoll Avenue
Willowdale, Ont.
416-497-2460 M2H 2C9

Norman Wade Co. Ltd.

75 Milner Avenue
Scarborough, Ont.
416-291-4211 M1L 4C8

STATISTICAL DATA FOR SOME ELECTRO-MAGNETIC DISTANCE
MEASURING INSTRUMENTS

MANUFACTURER	INSTRUMENT	WEIGHT kg	RANGE km	ACCURACY mm +ppm	APPROX COST	NOTES
<u>MICRO-WAVE</u>						
Siemens-Albis	SIAL MD-60	15.0	150	10 + 3	50,000	
Tellurometer	MRA 5	11.0	100	10 + 3	36,000	
" "	CA 1000	1.8	80	15 + 5	8,000	
" "	MRD 1	26.0	100	1000		1,2
<u>ELECTRO-OPTICAL:- infra-red.</u>						
AGA Geotronics	Geod. 14A	2.5	15	5 + 3	15,400	
" "	Geod. 110	2.6	5	5 + 5	7,900	
" "	Geod. 112	2.6	6	5 + 3	9,900	
" "	Geod. 116	2.6	2.5	5 + 5	12,900	3
" "	Geod. 120	2.6	6	5 + 3	18,700	3
Benchmark	Surveyor 1	2.1	1.5	5 + 2	7,800	
Carl Zeiss	ELDI 1	8.0	10	5 + 2	15,500	
" "	ELDI 2	4.2	5	5 + 2	14,200	
" "	ELDI 2	3.8	1.5	10 + 2	8,500	
" "	ELDI 3	3.8	1.5	10 + 2	8,200	
" "	ELDI 2	10.5	4	5 + 2	23,000	4
" "	SM-4	6.5	3	5 + 2	18,200	
" "	ELTA 2	12.0	4	5 + 2	35,000	5
" "	ELTA 4	6.5	3	5 + 2	25,400	5
Hewlett-Packard	3805A	7.7	1.6	7 + 7	8,000	
" "	3810A	12.1	1.6	5 + 5	19,100	
Kern and Co.	DM 502	1.5	3	5 + 5	13,000	
Keuffel & Esser	AutoRanger A	2.4	0.5	2 + 6	10,000	
" "	AutoRanger	2.4	2	5 + 6	7,300	
" "	AutoRanger II	2.4	3.2	5 + 6	9,000	
Precision	Super Beetle 1400	2.5	1.4	4 + 5	5,400	
International Inc	Super Beetle 1400s	2.5	1.4	4 + 5	6,000	
" "	Super Beetle 2000	2.5	2	4 + 5	6,000	
" "	Super beetle 2000s	2.5	2	4 + 5	6,400	
Sokkisha	Red 1A	3.4	3	5 + 5	8,000	
" "	SDM 3A	8.5	1.4	5 + 5	14,900	5,7
Tellurometer	MA 100	15	2	2 + 5	7,000	
" "	CD 6	2.5	2	3 + 5	8,000	
Topcon Instrument	DM-C2	2.1	2	5 + 5	7,000	
" Corp.	GTS-1	5.0	1	5 + 10	10,900	6
Wild Heerbrugg	DI-4	1.2	2	5 + 5	14,000	
" "	TC1 Tachymat	9.8	2	5	47,000	5
<u>ELECTRO-OPTICAL:- laser.</u>						
Hewlett-Packard	3810B	12.0	8	5 + 1	23,350	
" "	3808A	9.0	10	5 + 1	16,900	
" "	3820A	9.6	5	5 + 5	54,700	5
Krupp Atlas	Lara 10	7.0	0.5	100	11,000	2
<u>ELECTRO-OPTICAL:- xenon flash.</u>						
Kern and Co.	Mekometer ME3000	15	3	0.2 + 1	64,000	

NOTES

- 1 denotes airborne survey capability.
- 2 " marine (water borne) survey capability.
- 3 " vertical angle measurement, horizontal measurement, difference in height.
- 4 " underground (mining) survey capability.
- 5 " total station, electronic angle measurement, computer controlled.
- 6 " E.D.M. incorporated in a 10" reading theodolite.
- 7 " not available until Oct/Nov, 1980.