

Date: Monday, August 25, 2008
To: Simpson260.com
From: Fred Scoles
Subject: Information about the enclosed Simpson 1000 data charts

The data chart that is already on your website is the "Supplemental & Obsolete" list from the last half of the Operations Manual. It was also later reprinted in 3-62 as a separate document titled "Model 1000 Seldom Used and Obsolete Tube Supplement". Therefore, I am not including this data list.

The main roller data chart I have included is labeled "Model No. 1000, January, 1962". These photocopied pages were from an original paper roll housed inside a tester; which explains why there are some duplication of a few listings at the bottom and top of each page. This 1962 roll contains the main tube chart data that is not found on any of the "supplement" listings. It is one of the newer (latest) rolls Simpson had published. According to the enclosed 1965 Supplement pages, Simpson had published a May 1964 roller chart, but we have not yet found any copy of this 1964 roller (and may never will). The earliest known Simpson 1000 roller chart was 1954. I have enclosed only the 1962 roller chart because it contains all of the tube data listings that were ever contained in all the earlier roller charts, and the newer listings to that date. We also have file copies of the 1956, 1958, and 1960 roller charts.

The single handwritten data page contains the "missing data" from two places on this roller chart that were repaired years ago with the clear (aka "scotch tape") tape that darkened the paper to the point of obscuring the data under the repair tape; these places photocopied as solid black. I transcribed this missing data to a page in my handwriting. Every Simpson 1000 roller chart that I've seen are all on very thick paper which became very brittle with age. This 1962 chart was in better physical condition than some others I've seen. Nowadays, we know to use an acid-free high quality library-quality repair tape on documents that need to last a long time. I'm not sure how you will be including or splicing in this "missing data", so I have written the ID title lightly in pencil so it may get erased.

Simpson Model 1000 testers are one of the more respected emission-style tube testers, and are still commonly used today, even though the last units were sold new in 1962. It was well designed, durable, dependable, and easy to use. It was the model tube tester that the Eico (kit) company apparently copied (in about 1956) for their Eico Model 666 (and later the Model 667) testers, which became immensely popular. These Simpson and Eico testers are still used by many vintage Radio, HiFi and Electronics enthusiasts. They are bought and sold every day on the internet auction sites such as Ebay. The list price of a new Simpson 1000 was \$133, but only approx \$40 for an unassembled Eico kit.

This Simpson Model 1000 test data is useable with both the Simpson 1000 and the Eico 666 & 667 testers. These printed data listings can be easily set up on either brand tester by applying a simple data/nomenclature translation of the testers' panel switches and knobs. I have included two photos (black & white, because I don't have a color printer),

one photo of each of my Simpson 1000 and Eico 667 testers; that shows the panel switches translation (tape labels) from Simpson to Eico, or vice-versa. I will also email to you the color digital photos of these two panels, along with the MSWord file of this memo, so you may edit or use any portion of it. One could also write this panel translation information into a table or small chart, but everyone who has received these photos says they are easy to use with their Simpson or Eico testers.

The Simpson Model 1000 Nuvistor 5-pin adaptor, described on page 9 of the March '63 Supplement has a different pinout scheme from other brands of testers and the various adapter boxes. The Nuvistor data chart in this 1963 supplement matches only this Simpson adaptor's wiring scheme. The commonly found adaptor boxes such as the Eico Models 610 or 610A and the Coletronics B-16, have Nuvistor socket wirings which do not match this Simpson Nuvistor data chart!! This should not create a problem for anyone, because one should always carefully check the pinout diagram of a Nuvistor tube before testing it on a tube tester.

Simpson

INSTRUMENTS THAT STAY ACCURATE

**FOREIGN
TUBE TEST DATA
MODEL 1000**

JANUARY 1965

SIMPSON ELECTRIC COMPANY

5200 W. Kinzie St., Chicago, Illinois 60644
Area Code 312, Telephone 379-1121
In Canada, Bach-Simpson, Ltd., London, Ontario



MODEL 1000 FOREIGN TUBE SUPPLEMENT

TUBE	FIL.	BIAS.	RANGE	TOGGLES	PUSH BUTTONS	
					SHORTS	VALUE
AZ 31 Plate.1	5.0	0	55	010-003-000-000	F	F
AZ 31 Plate.2	5.0	0	55	010-300-000-000	D	D
BPM04	6.3	70	5	401-032-500-001	ABEF	E
B 36 Tri.1	12.6	47	0	000-430-100-022	DEF	E
B 36 Tri.2	12.6	47	0	430-000-100-022	ABC	B
B 65 Tri.1	6.3	45	0	000-430-100-022	DEF	E
B 65 Tri.2	6.3	45	0	430-000-100-022	ABC	B
B 152 Tri.2	12.6	65	30	340-103-405-022	ABC	A
B 152 Tri.1	12.6	65	30	340-103-405-022	FGH	F
B 309 Tri.2	12.6	65	30	340-103-405-022	ABC	A
B 309 Tri.1	12.6	65	30	340-103-405-022	FGH	F
B 319 Tri.2	7.5	80	0	043-010-050-032	ABC	C
B 319 Tri.1	7.5	80	0	000-014-053-032	FGI	I
B 329 Tri.1	12.6	60	0	340-103-405-022	FGH	F
B 329 Tri.2	12.6	60	0	340-103-405-022	ABC	A
B 339 Tri.1	12.6	0	0	340-103-405-014	FGH	F
B 339 Tri.2	12.6	0	0	340-103-405-014	ABC	A
B 719 Tri.2	6.3	40	25	340-100-000-022	ABC	A
B 719 Tri.1	6.3	40	25	000-103-400-022	FGH	F
DA 90	1.4	7	21	150-055-000-005	CB	B
DAC 32 Tri.	1.4	12	98	012-050-000-424	CEJ	C
DAC 32 Dio.	1.4	7	20	012-050-000-405	E	E
DAF 91 Pen.	1.4	20	65	005-224-100-023	CDEF	E
DAF 91 Dio.	1.4	7	29	005-224-100-005	C	C
DAF 92 Pen.	1.4	24	57	022-504-100-023	BCDF	B
DAF 92 Dio.	1.4	7	30	022-504-100-005	D	D
DAF 96 Pen.	1.25	50	95	150-234-000-024	CDEF	E
DAF 96 Dio.	1.25	0	75	152-234-000-033	C	C
DCC 90 Tri.1	1.4	15	84	000-142-000-022	BCEF	F
DCC 90 Tri.2	1.4	15	84	024-100-000-022	B	B
DD6 Plate.1	6.3	0	0	001-000-200-032	AG	G
DD6 Plate.2	6.3	0	0	021-000-000-032	BE	B
D63 Plate.1	6.3	0	65	010-020-000-032	EH	H
D63 Plate.2	6.3	0	65	012-000-000-032	CD	C
D77 Plate.1	6.3	0	0	001-000-000-032	AG	G
D77 Plate.2	6.3	0	0	021-000-000-032	BE	B
D 152 Plate.1	6.3	0	0	001-000-000-032	AG	G
D 152 Plate.2	6.3	0	0	021-000-000-032	BE	B
DF 33	1.4	7	79	021-200-000-403	CDJ	C
DF 62	1.25	65	75	330-410-000-032	ABD	A
DF 91	1.4	7	85	022-004-100-002	BCF	B
DF 92	1.4	7	92	022-004-100-002	BCF	B
DF 96	1.4	17	85	032-554-100-023	BCF	B
DF 97	1.25	0	85	032-450-100-023	BCDF	B
DF 904	1.4	7	60	022-004-100-003	BCF	B

DH 63 Tri.	6.3	7	85	013-550-000-423	CDEHI	C
DH 63 Dio.1	6.3	7	25	013-550-000-405	E	E
DH 63 Dio.2	6.3	7	25	013-550-000-405	D	D
DH 77 Tri.	6.3	24	0	401-055-200-013	ABEFG	G
DH 77 Dio.1	6.3	0	40	401-022-000-033	F	F
DH 77 Dio.2	6.3	0	40	401-022-000-033	E	E
DH 149 Tri.	6.3	15	78	134-555-000-013	BCD	B
DH 149 Dio.1	6.3	7	22	134-555-000-005	F	F
DH 149 Dio.2	6.3	7	22	134-555-000-005	E	E
DH 719 Tri.	6.3	17	27	550-105-042-013	GHI	I
DH 719 Dio.1	6.3	7	0	220-102-000-033	FG	F
DH 719 Dio.2	6.3	0	40	220-100-000-032	BC	B
DH 719 Dio.3	6.3	0	40	220-100-000-032	AG	A
DK 32 Mixer	1.4	70	20	012-402-000-004	CDEF	C
DK 32 Osc.	1.4	80	95	012-402-000-003	F	F
DK 91 Mixer	1.4	45	25	032-450-100-023	BCDF	B
DK 91 Osc.	1.4	0	35	002-450-100-023	CDF	C
DK 92	1.4	7	92	022-004-100-002	BCF	B
DK 96 Mixer.	1.25	15	85	032-024-100-023	BCDEF	B
DK 96 Osc.	1.25	25	82	032-420-100-023	BCD	B
DL 33	2.8	45	27	012-240-050-022	CDE	C
DL 35	1.4	29	41	012-240-000-022	CDE	C
DL 36	1.4	30	21	012-240-000-522	CDE	C
DL 91	1.4	7	44	024-205-100-022	BCD	B
DL 92	2.8	7	40	024-255-100-022	BCD	B
DL 93	2.8	70	90	022-455-100-021	BCD	B
DL 94	2.8	30	34	032-054-100-022	BCF	B
DL 95	2.8	35	29	024-255-100-022	BCD	B
DL 96	1.25	15	25	132-504-100-023	BCD	B
DL 98	1.25	80	83	214-005-200-021	ACG	G
DM 70 Target Open	1.4	75	90	455-105-530-014	AH	H
DM 70 Target close	1.4	0	90	455-105-530-035		H
DM 71 Target open	1.4	75	90	455-105-530-014	AH	H
DM 71 Target close	1.4	0	90	455-105-530-035		H
DP 61	6.3	23	36	401-032-500-022	ABEF	E
DY 86	1.4	0	70	515-550-555-322	J	J
DY 87	1.4	0	70	515-550-555-322	J	J
DY 80	1.25	0	95	010-050-050-223	J	J
EAA 91 Plate.1	6.3	0	0	001-000-200-032	AG	G
EAA 91 Plate.2	6.3	0	0	021-000-000-032	BE	B
EABC 80 Tri.	6.3	17	27	550-105-042-013	GHI	I
EABC 80 Dio.1	6.3	7	0	220-102-000-033	FG	F
EABC 80 Dio.2	6.3	0	40	220-100-000-032	BC	B
EABC 80 Dio.3	6.3	0	40	220-100-000-032	AG	A
EB 34 Plate.1	6.3	0	65	010-020-000-032	EH	E
EB 34 Plate.2	6.3	0	65	012-000-000-032	CD	C
EB 91 Plate.1	6.3	0	0	001-000-200-032	AG	G
EB 91 Plate.2	6.3	0	0	021-000-000-032	BE	B
EBC33 Tri.	6.3	15	78	134-555-000-013	BCD	B
EBC 33 Dio.1	6.3	7	22	134-555-000-005	F	F
EBC 33 Dio.2	6.3	7	22	134-555-000-005	E	E
EBC 90 Tri.	6.3	7	78	401-055-200-003	ABEFG	G
EBC 90 Dio.1	6.3	7	25	401-055-200-005	F	F
EBC 90 Dio.2	6.3	7	25	401-055-200-005	E	E

EBE 91 Tri.	6.3	7	87	401-055-200-003	ABEFG	G
EBE 91 Dio.1	6.3	7	25	401-022-200-005	F	F
EBE 91 Dio.2	6.3	7	25	401-022-200-005	E	E
EBF 80 Pen.	6.3	50	38	240-103-550-033	ABCF	F
EBF 80 Dio.1	6.3	0	30	240-105-220-033	CG	G
EBF 80 Dio.2	6.3	0	30	240-105-220-033	CH	H
EBF 89 Pen.	6.3	52	27	240-103-000-022	ABCF	F
EBF 89 Dio.2	6.3	0	25	000-100-220-033	CG	G
EBF 89 Dio.1	6.3	0	25	000-100-220-033	CH	H
EC 80	6.3	60	88	450-105-553-021	ACI	I
EC 81	6.3	60	73	400-100-030-021	ACH	H
EC 90	6.3	0	15	351-054-000-023	AFG	A
EC 91	6.3	25	15	401-055-200-012	ABG	G
EC 92	6.3	50	65	201-004-000-033	AFG	A
EC 94	6.3	50	80	241-005-500-032	ABE	A
EC 95	6.3	25	30	041-020-500-022	ABEF	E
ECC 32 Tri.1	6.3	50	25	430-430-100-022	DEF	E
ECC 32 Tri.2	6.3	50	25	430-430-100-022	ABC	B
ECC 33 Tri.1	6.3	60	20	430-430-100-022	DEF	E
ECC 33 Tri.2	6.3	60	20	430-430-100-022	ABC	B
ECC 35 Tri.1	6.3	57	65	000-430-100-033	DEF	E
ECC 35 Tri.2	6.3	57	65	430-000-100-033	ABC	B
ECC 81 Tri.1	12.6	0	77	000-103-405-023	FGH	F
ECC 81 Tri.2	12.6	0	77	340-100-005-023	ABC	A
ECC 82 Tri.1	12.6	60	0	340-103-405-022	FGH	F
ECC 82 Tri.2	12.6	60	0	340-103-405-022	ABC	A
ECC 83 Tri.1	12.6	0	47	000-103-405-024	FGH	F
ECC 83 Tri.2	12.6	0	47	340-100-005-024	ABC	A
ECC 84 Tri.2	6.3	0	70	042-010-050-023	ABC	C
ECC 84 Tri.1	6.3	0	70	000-014-052-023	FGI	I
ECC 85 Tri.2	6.3	40	10	340-100-000-022	ABC	A
ECC 85 Tri.1	6.3	40	10	000-103-400-022	FGH	F
ECC 86 Tri.2	6.3	0	18	240-100-000-034	ABC	A
ECC 86 Tri.1	6.3	0	18	000-102-400-034	FGH	F
ECC 88 Tri.2	6.3	0	55	340-100-000-012	ABC	A
ECC 88 Tri.1	6.3	0	55	000-103-400-012	FGH	F
ECC 91 Tri.2	6.3	0	35	301-004-000-023	AFG	A
ECC 91 Tri.1	6.3	0	35	031-040-000-023	BEG	B
ECC 180 Tri.1	6.3	65	25	240-102-400-022	FGH	F
ECC 180 Tri.2	6.3	65	25	240-102-400-022	ABC	A
ECC 189 Tri.2	6.3	0	47	340-105-400-012	ABC	A
ECC 189 Tri.1	6.3	0	47	540-103-400-012	FGH	F
ECC 801 Tri.1	12.6	0	77	000-103-405-023	FGH	F
ECC 801 Tri.2	12.6	0	77	340-100-005-023	ABC	A
ECF 80 Pen.	6.3	30	35	542-103-004-012	BCFG	F
ECF 80 Tri.	6.3	0	55	300-100-004-033	AHI	A
ECF 82 Pen.	6.3	50	10	042-103-000-012	BCFG	F
ECF 82 Tri.	6.3	0	90	200-100-004-023	AHI	A
ECF 86 Pen.	6.3	40	43	045-100-032-022	ABHI	H
ECF 86 Tri.	6.3	0	30	005-104-300-002	AFG	G

ECH 801 Tri.	6.3	0	40	005-100-024-034	AHI	H
ECH 801 Pen.	6.3	0	70	045-103-200-034	ABFG	F
ECH 81 Mix.	6.3	52	27	400-103-200-003	ACFG	F
ECH 81 Osc.	6.3	38	47	040-103-200-013	BCFG	F
ECH 81 Tri.	6.3	50	80	000-100-034-032	CHI	H
ECH 84						
ECH 84						
ECH 84						
ECL 80 Pen	6.3	38	22	000-013-024-022	CFGHI	F
ECL 80 Tri.	6.3	62	10	340-010-000-022	ABC	A
ECL 82 Pen.	6.3	65	47	004-103-200-021	BCFG	F
ECL 82 Tri.	6.3	0	60	400-100-003-013	AHI	I
ECL 84 Pen.	6.3	30	77	000-103-042-011	FGHI	F
ECL 84 Tri.	6.3	0	58	430-100-000-013	ABC	B
ECL 85 Pen.	6.3	0	80	000-103-304-001	FGHI	F
ECL 85 Tri.	6.3	0	65	340-100-000-023	ABC	A
ECL 86 Pen.	6.3	80	65	002-103-040-032	CFGH	F
ECL 86 Tri.	6.3	0	50	400-100-003-024	ABI	I
ED2 Dio.1	6.3	0	0	001-002-000-032	AG	G
ED2 Dio.2	6.3	0	0	021-000-000-032	BE	B
E180F	6.3	30	85	045-105-302-021	ABGHI	G
E880C Tri.1	6.3	65	85	340-100-000-031	ABC	A
E880C Tri.2	6.3	65	85	000-103-400-031	FGH	F
E1820C Tri.1	12.6	30	45	340-100-453-021	ABC	A
E1820C Tri.2	12.6	30	45	340-100-453-021	FGI	I
EF22	6.3	7	45	132-054-000-002	BCDFG	B
EF 80	6.3	15	20	045-100-320-012	ABFGH	G
EF 85	6.3	10	10	045-100-320-012	ABFGH	G
EF 86	6.3	25	75	200-103-004-012	ACFHI	F
EF 89	6.3	55	15	540-105-320-022	BCGHI	G
EF 91	6.3	48	68	401-030-200-022	ABEFG	E
EF 92	6.3	40	0	401-030-200-012	ABEFG	E
EF 93	6.3	13	0	401-032-000-002	ABEFG	E
EF 94	6.3	55	0	401-032-000-012	ABEFG	E
EF 95	6.3	23	66	401-032-500-022	ABEF	E
EF 96	6.3	30	30	401-0320500-012	ABEF	E
EF 183	6.3	0	12	045-100-320-003	ABGHI	G
EF 184	6.3	0	25	045-100-330-003	ABGHI	G
EH 90 Sec.1	6.3	18	0	401-032-000-023	ABEFG	E
EH 90 Sec.2	6.3	27	25	001-032-400-023	FG	F
EK 90 Mix.	6.3	17	58	401-032-000-002	ABEFG	E
EK 90 Osc.	6.3	0	58	401-003-200-033	FG	F
EL 34	6.3	80	85	013-245-005-010	ACDEH	C
EL 37	6.3	50	10	013-240-000-011	CDEH	C
EL 38	6.3	90	80	015-245-000-310	ADEHJ	J
*EL 41	6.3	80	65	135-524-000-032	BEFG	B
EL 81	6.3	7	85	540-105-530-220	BCHIJ	J

*Rimlock socket

EL 83	6.3	25	30	240-100-300-011	ABCFG	G
EL 84	6.3	35	30	540-105-352-011	BCGI	G
EL 86	6.3	47	33	540-105-352-021	BCGI	G
EL 90	6.3	25	35	401-022-500-033	ABEF	E
EL 91	6.3	65	0	401-030-200-022	ABEG	E
EL 95	6.3	60	83	401-032-500-021	ABEF	E
EL181	12.6	50	93	040-105-325-032	ABCGH	G
EL 500	6.3	0	50	450-103-555-301	ACFJ	J
EL 803	6.3	25	25	540-105-220-022	BCFGH	G
EL 821	6.3	25	25	540-105-220-022	BCFGH	G
EL 822	6.3	12	43	540-105-230-011	BCFGH	G
EM 34 Target Open	6.3	0	25	514-434-000-014	CDEH	E
EM 34 Target Close	6.3	0	85	513-433-000-013		E
EM 80 Target Open	6.3	0	90	405-105-253-013	ABGI	G
EM 80 Target Close	6.3	0	25	504-105-353-013		G
EM 81 Target Open	6.3	0	20	405-105-253-014	ABGI	G
EM 81 Target Close	6.3	0	20	405-105-353-013		G
EM 84 Target Open	6.3	10	80	450-103-253-013	ACFGI	I
EM 84 Target Close	6.3	10	78	450-103-353-013		I
EM 84A Target Open	6.3	0	70	450-103-253-013	ACFGI	I
EM 84A Target close	6.3	0	70	450-103-353-013	GI	I
EM 840 Target Open	6.3	0	72	450-103-253-013	ACFGI	I
EM 840 Target Close	6.3	0	77	450-103-353-013	IG	I
EQ 80 Mixer	6.3	0	78	220-103-450-024	ABCGF	F
EQ 80 Osc.	6.3	25	67	230-102-454-023	ABCFI	B
EZ 35 Plate.1	6.3	0	85	010-020-000-000	EH	E
EZ 35 Plate.2	6.3	0	85	012-000-000-000	CH	C
EZ 80 Plate.1	6.3	0	79	000-100-200-000	CG	G
EZ 80 Plate.2	6.3	0	79	200-100-000-000	AC	A
EZ 81 Plate.1	6.3	0	74	350-105-355-000	AC	A
EZ 81 Plate.2	6.3	0	74	350-105-355-000	CG	G
EZ 90 Plate.1	6.3	0	86	001-002-000-000	FG	F
EZ 90 Plate.2	6.3	0	86	201-000-000-000	AG	A

GZ 30 Plate.1	5.0	0	35	103-000-000-000	C	C
GZ 30 Plate.2	5.0	0	35	130-000-000-000	B	B
GZ 31 Plate.1	5.0	0	41	010-003-000-000	F	F
GZ 31 Plate.2	5.0	0	41	010-300-000-000	D	D
GZ 32 Plate.1	5.0	0	76	010-002-000-000	F	F
GZ 32 Plate.2	5.0	0	76	010-200-000-000	D	D
GZ 34 Plate.1	5.0	0	40	010-003-000-000	F	F
GZ 34 Plate.2	5.0	0	40	010-300-000-000	D	D
H52 Plate.1	5.0	0	41	010-003-000-000	F	F
H52 Plate.2	5.0	0	41	010-300-000-000	D	D
HAA 91 Dio.1	12.6	0	0	001-000-200-032	AG	G
HAA 91 Dio.2	12.6	0	0	021-000-000-032	BE	B
HABC 80 Tri.	19	0	72	550-105-043-003	GHI	I
HABC 80 Dio.1	19	0	0	220-102-042-033	FG	F
HABC 80 Dio.2	19	0	0	220-102-042-033	BC	B
HABC 80 Dio.3	19	0	0	220-102-042-033	AG	A
HBC 90 Tri.	12.6	0	75	401-055-200-024	ABG	G
HBC 90 Dio.1	12.6	0	55	001-022-000-033	BF	F
HBC 90 Dio.2	12.6	0	55	001-022-000-033	BE	E
HBC 91 Tri.	12.6	24	25	401-055-200-013	ABG	G
HBC 91 Dio.1	12.6	0	40	001-022-000-033	BF	F
HBC 91 Dio.2	12.6	0	40	001-022-000-033	BE	E
HCH 81 Mixer.	12.6	63	50	240-103-000-022	ABCFG	F
HCH 81 Osc.	12.6	0	55	200-103-400-023		F
HCH 81 Tri.	12.6	20	25	000-100-034-022	CHI	H
HCC 85 Tri.2	14	45	0	340-100-000-022	ABC	A
HCC 85 Tri.1	14	45	0	000-103-400-022	FGH	F
HD 14 Tri.	1.4	12	98	012-050-000-424	CEJ	C
HD 14 Dio.	1.4	7	20	012-050-000-405		E
HD 30	1.25	80	83	214-005-200-021	ACG	G
HD 59	6.3	31	4	401-022-500-001	ABE	E
HD 93	1.25	0	95	010-050-050-223	J	J
HD 94	6.3	45	0	010-240-000-321	DEHJ	J
HD 96	25	45	0	010-240-000-321	DEHJ	J
HF 93	12.6	13	0	401-032-000-002	ABEFG	E
HF 94	12.6	40	0	401-032-000-012	ABEFG	E
HK 90 Mixer.	12.6	7	90	401-032-000-002	ABEFG	E
HK 90 Osc.	12.6	25	50	401-002-000-022	FG	F
HL 90	19.	70	5	401-032-500-001	ABEF	E
HL 92	50	7	97	041-052-300-000	ABFG	G
HL 94	25	10	25	041-052-200-001	ABFG	G
HMO4 Mixer.	6.3	7	90	401-032-000-002	ABEFG	E
HMO4 Osc.	6.3	25	50	401-002-000-022	FG	F
HY 90	35	0	70	001-025-000-000	EG	E
H 63	6.3	7	94	010-200-000-403	DHJ	D
KT 32	25	45	44	013-240-000-021	CDEH	C
KT 63	6.3	7	58	013-340-000-001	CDEH	C
KTW 63	6.3	28	44	013-200-000-412	CDEHJ	C
KT 66	6.3	90	65	013-240-000-000	CDEH	C
KT 71	50.	10	0	012-240-000-011	CDEH	C
KT 81	6.3	30	92	133-004-000-000	BCFG	C
KT 88	6.3	20	53	013-340-000-000	CDEH	E
KTW 74	12.6	28	44	013-200-000-412	CDEHJ	C
KTZ 63	6.3	16	40	013-200-000-423	CDEHJ	C
L63	6.3	36	15	012-040-000-012	CEH	C
L77	6.3	40	65	351-054-000-011	AFG	A

LC 900	2.8	0	68	401-030-555-023	ABE	E
LCF 801 Tri.	5.0	0	40	005-100-024-034	AHI	H
LCF 801 Pen.	5.0	0	70	045-103-200-034	ABFG	F
LCL 84 Tri.	10	0	58	430-100-000-013	ABC	B
LCL 84 Pen.	10	30	77	000-103-042-011	FGHI	F
LG11 Pen.	6.3	38	22	000-013-024-022	CFGHI	F
LG11 Tri.	6.3	62	10	340-010-000-022	ABC	A
LN152 Pen.	6.3	38	22	000-013-024-022	CFGHI	F
LN152 Tri.	6.3	62	10	340-010-000-022	ABC	A
LN309 Pen.	12.6	65	47	004-103-200-021	BCFG	F
LN309 Tri.	12.6	34	80	400-100-003-022	AHI	I
LZ319 Pen.	10.	7	35	042-103-000-012	BCFG	F
LZ319 Tri.	10.	24	75	200-100-004-001	AHI	A
N14	1.4	29	41	012-240-000-022	CDE	C
N17	2.8	7	40	024-255-100-022	BCD	B
N18	2.8	35	29	024-255-100-022	BCD	B
N19	2.8	30	34	034-054-100-022	BCF	B
N77	6.3	48	68	401-030-200-022	ABEFG	E
N144	6.3	48	68	401-030-200-022	ABEFG	E
N148	6.3	30	92	133-004-000-000	BCG	B
* N150	6.3	80	65	135-524-000-032	BEFG	G
N709	6.3	35	30	540-105-352-011	BCGI	G
N727	6.3	70	5	540-032-500-001	ABEF	E
OM 3 Dio.1	6.3	0	65	010-020-000-032	EH	E
OM 3 Dio.2	6.3	0	65	012-000-000-032	CD	C
O149 Plate.1	6.3	0	84	100-002-000-000	FG	F
O149 Plate.2	6.3	0	84	102-000-000-000	CG	C
PABC 80 Tri.	7.5	21	37	550-105-042-013	GHI	I
PABC 80 Dio.1	7.5	7	10	220-102-000-033	FG	F
PABC 80 Dio.2	7.5	0	55	220-100-000-032	BC	B
PABC 80 Dio.3	7.5	0	55	220-100-000-032	AG	A
PC 900	3.6	0	73	401-030-555-023	ABE	E
PC 86	3.6	15	84	340-105-555-021	ABC	A
PCC 84 Tri.2	7.5	0	65	042-010-050-023	ABC	C
PCC 84 Tri.1	7.5	0	65	000-014-052-023	FGI	I
PCC 85 Tri.2	10	28	0	340-100-000-022	ABC	A
PCC 85 Tri.1	10	28	0	000-103-400-022	FGH	F
PCC 88 Tri.2	7.5	0	55	340-100-000-012	ABC	A
PCC 88 Tri.1	7.5	0	55	000-103-400-012	FGH	F
PCF 80 Tri.	7.5	0	52	350-105-004-002	AHI	A
PCF 80 Pen.	7.5	30	50	542-103-004-012	BCFG	F
PCF 82 Pen.	10	17	25	042-103-000-012	BCFG	F
PCF 82 Tri.	10	0	90	200-100-004-023	AHI	A
PCF 86 Tri.	7.5	0	30	005-104-300-002	AFG	G
PCF 86 Pen.	7.5	40	43	045-100-032-022	ABHI	H
PCF 801 Tri.	7.5	0	40	005-100-024-034	AHI	H
PCF 801-Pen.	7.5	0	70	045-103-200-034	ABFG	F
PCL 82 Tri.	14	0	70	400-100-003-013	AHI	I
PCL 82 Pen.	14	68	50	004-103-200-021	BCFG	F
PCL 85 Tri.	19	0	65	340-100-000-023	ABC	A
PCL 85 Pen.	19	0	80	000-103-304-001	FGHI	F
PCL 86 Tri.	14	0	50	400-100-003-024	ABI	I
PCL 86 Pen.	14	80	75	002-103-040-032	CFGH	F

PL 84	14	47	35	540-105-352-021	BCGI	G
PL 500	28	0	40	450-103-555-301	ACFJ	J
PM 04	6.3	13	0	401-032-000-002	ABEFG	E
PM 05	6.3	23	66	401-032-500-022	ABEF	E
PY 81	14	0	70	555-105-552-000	IJ	I
PY 83	19	0	70	555-105-552-000	IJ	I
PY 88	28	0	80	555-105-552-000	IJ	I
QV06/50	6.3	15	77	134-000-000-300	BCDJ	J
QV06-20	6.3	85	35	012-545-005-300	ACEHJ	J
QV05/25	6.3	25	41	153-400-000-311	CFJ	J
RE 1. P-1	5.0	0	55	010-003-000-000	F	F
RE 1. P-2	5.0	0	55	010-300-000-000	D	D
R52 Plate.1	5.0	0	76	010-002-000-000	F	F
R52 Plate.2	5.0	0	76	010-200-000-000	D	D
RG3-250A	2.5	0	70	100-000-000-200	J	J
SP6	6.3	48	68	401-030-200-022	ABEFG	E
T2M05 Tri.2	6.3	0	35	301-004-000-023	AFG	A
T2M05 Tri.1	6.3	0	35	031-040-000-023	BEG	B
TM12	6.3	15	85	401-055-200-011	ABG	G
U41	1.25	0	82	515-050-051-212	J	J
U50 Plate.1	5.0	0	55	010-003-000-000	F	F
U50 Plate.2	5.0	0	55	010-300-000-000	D	D
U52 Plate.1	5.0	0	41	010-003-000-000	F	F
U52 Plate.2	5.0	0	41	010-300-000-000	D	D
U70 Plate.1	6.3	0	85	010-020-000-000	EH	E
U70 Plate.2	6.3	0	85	012-000-000-000	CE	C
U78 Plate.1	6.3	0	86	001-002-000-000	FG	F
U78 Plate.2	6.3	0	86	201-000-000-000	AG	A
U82 Plate.1	6.3	0	84	100-002-000-000	FG	F
U82 Plate.2	6.3	0	84	102-000-000-000	CG	C
*U 142	28	0	65	135-555-000-020	BG	B
U 147 Plate.1	6.3	0	85	010-020-000-000	EH	E
U 147 Plate.2	6.3	0	85	012-000-000-000	CE	C
U 709 Plate.1	6.3	0	80	350-105-355-000	AC	A
U 709 Plate.2	6.3	0	80	350-105-355-000	CG	G
UABC 80 Tri.	25	17	27	550-105-042-013	GHI	I
UABC 80 Dio.1	25	7	0	220-102-000-033	FG	F
UABC 80 Dio.2	25	0	40	220-100-000-032	BC	B
UABC 80 Dio.3	25	0	40	220-100-000-032	AG	A
UBF 80 Pen.	17	50	38	240-103-550-033	ABCF	F
UBF 80 Dio.1	17	0	30	240-105-220-033	CG	G
UBF 80 Dio.2	17	0	30	240-105-220-033	CH	H
UC 92	7.5	7	21	301-004-000-002	ACFG	A
UCC 85 Tri.2	25	40	25	340-100-000-022	ABC	A
UCC 85 Tri.1	25	40	25	000-103-400-022	FGH	F
UBF 89 Pen.	19	52	27	240-103-000-022	ABCF	F
UBF 89 Dio.2	19	0	25	000-100-220-033	CG	G
UBF 89 Dio.1	19	0	25	000-100-220-022	CH	H
UCF 80 Pen.	25	30	35	542-103-004-012	BCFG	F
UCF 80 Tri.	25	20	85	342-105-004-021	AHI	A
UCH 81 Mixer	19	63	50	240-103-000-022	ABCFG	F
UCH 81 Csc	19	0	55	200-103-400-023	F	F
UCH 81 Tri.	19	20	25	000-100-034-022	CHI	H
* Rimlock				Page. 8		

UCL 82 Tri.	50	0	60	400-100-003-013	AHI	I
UCL 82 Pen	50	65	47	004-103-200-021	BCFG	F
UF 85	19	55	15	540-105-320-022	BCGHI	G
UF 89	12.6	55	15	540-105-320-022	BCGHI	G
UL 84	45	67	0	540-105-350-021	BCGI	G
*UY 41	28	0	65	135-555-000-020	BG	B
*UY 42	50	0	65	135-555-000-020	BG	B
V2M70 Plate.1	6.3	0	86	001-002-000-000	FG	F
V2M70 Plate.2	6.3	0	86	201-000-000-000	AG	A
W 17	1.4	7	85	022-004-100-002	BCF	B
W 63	6.3	28	44	013-200-000-412	CDH	C
W 76	12.6	28	44	013-200-000-412	CDH	C
W 81	6.3	30	14	132-054-000-012	BCG	B
W 149	6.3	35	23	132-454-000-012	BCG	B
WT 294	70	0	73	010-020-000-001	E	E
WD 709 Pen.	6.3	50	38	240-103-550-033	ABCF	F
WD 709 Dio.1	6.3	0	30	240-105-220-033	CG	G
WD 709 Dio.2	6.3	0	30	240-105-220-033	CH	H
W 719	6.3	10	10	045-100-320-012	ABFGH	G
W 727	6.3	13	0	401-032-000-002	ABEFG	E
X 14 Mixer	1.4	70	20	012-402-000-004	CDEFJ	C
X 14 Osc.	1.4	80	95	012-402-000-003		F
X 17 Mixer	1.4	45	25	032-450-100-023	BCDF	B
X 17 Osc.	1.4	0	35	002-450-100-023	CDF	C
X 18 Mixer	1.25	15	85	032-024-100-023	BCDEF	B
X 18 Osc.	1.25	25	82	032-420-100-023		B
X 61M Mixer	6.3	7	81	013-202-000-402	CDEFJ	C
X 61M Osc.	6.3	7	64	013-242-000-002		F
X 63 Mixer	6.3	60	0	013-243-000-023	CDEFHJ	C
X 63 Osc.	6.3	60	85	013-243-000-022		F
X 64	6.3	7	73	013-240-000-002	CDEHJ	C
X 65 Mixer	6.3	7	81	013-202-000-002	CDEFHJ	C
X 65 Osc.	6.3	7	64	013-202-000-002		F
X 71 Mixer	12.6	7	81	013-202-000-002	CDEFHJ	C
X 71 Osc.	12.6	7	64	013-202-000-002		F
X 76 Mixer	12.6	7	81	013-202-000-002	CDEFHJ	C
X 76 Osc.	12.6	7	64	013-202-000-002		F
X 77 Mixer	6.3	7	90	401-032-000-002	ABEFG	E
X 77 Osc.	6.3	25	50	401-002-000-022	FG	F
X 81 Mixer	6.3	60	30	132-420-000-023	BCDEFG	B
X 81 Osc.	6.3	60	76	132-420-000-022		C
X 148 Mixer	6.3	60	30	132-420-000-023	BCDEFG	B
X 148 Osc.	6.3	60	76	132-420-000-022		C
X 719 Mixer	6.3	63	50	240-103-000-022	ABCFG	F
X 719 Osc.	6.3	0	55	200-103-400-023		F
X 719 Tri.	6.3	20	25	000-100-034-022	CHI	H
X 727 Mixer	6.3	7	60	401-032-000-002	ABEFG	E
X 727 Osc.	6.3	25	50	401-002-000-022	FG	F
XF 183	3.6	0	10	045-100-320-003	ABGHI	G
XF 184	3.6	15	25	045-100-320-003	ABGHI	G
XY 88	14	0	28	555-105-553-000	IJ	I

XL 500	12.6	0	45	450-103-555-301	ACFJ	J
YC 95	3.6	0	35	041-032-500-022	ABEF	E
YC 97	3.6	0	45	401-030-500-022	ABEF	E
YCC 189 Tri.2	5.0	40	57	340-105-400-021	ABC	A
YCC 189 Tri.1	5.0	40	57	540-103-400-021	FGH	F
YF 183	5.0	0	0	045-100-320-003	ABGHI	G
YF 184	5.0	0	25	045-100-320-003	ABCHI	G
Z 14	1.4	7	79	012-200-000-403	CDJ	C
Z 63	6.3	16	40	013-200-000-423	CDEJH	C
Z 77	6.3	45	65	401-030-200-022	ABEG	E
Z 152	6.3	15	20	045-100-320-012	ABFGH	G
Z 719	6.3	15	20	045-100-320-012	ABFGH	G
Z 729	6.3	35	75	200-103-004-012	ACFHI	F
ZD 15 Pen.	1.4	20	65	005-224-100-023	CDEF	E
ZD 15 Dio.	1.4	7	29	005-224-100-005		C
ZD 17 Pen.	1.4	20	65	005-224-100-023	CDEF	E
ZD 17 Dio.	1.4	7	29	005-224-100-005		C
ZD 152 Pen.	6.3	50	38	240-103-550-033	ABCF	F
ZD 152 Dio.1	6.3	0	30	240-105-220-033	CG	G
ZD 152 Dio.2	6.3	0	30	240-105-220-033	CH	H
1C1 Mixer	1.4	45	25	032-450-100-023	BCDF	B
1C1 Osc.	1.4	0	35	002-450-100-023	CDF	C
1D13	1.4	7	21	150-055-000-005	CB	B
1F1	1.25	15	65	032-554-100-023	BCF	B
1F2	1.4	7	92	022-004-100-002	BCF	B
1F3	1.4	7	85	002-004-100-002	BCF	B
1FD1 Pen.	1.25	50	75	150-234-000-023	CDEF	E
1FD1 Dio.	1.25	0	50	152-234-000-023	C	C
1FD9 Pen.	1.4	20	65	005-224-100-023	CDEF	E
1FD9 Dio.	1.4	7	29	005-224-100-005		C
1M3 Target Full	1.4	75	90	455-105-530-025	AH	H
1M3 Target Close	1.4	0	90	455-105-530-035		H
1P1	1.25	15	75	132-504-000-022	BCF	B
1P10	2.8	7	40	024-255-100-022	BCD	B
1P11	2.8	30	34	032-054-100-022	BCF	B
5B/250A	6.3	15	77	134-000-000-300	BCDJ	J
STV150/30	50	0	20	215-555-500-002	A	A
STV108/30		0	60	215-555-500-002	A	A
STV85/10		0	87	305-555-500-021	A	A

ADDITIONAL NEW TYPES

EN32 Non-Cond.	6.3	0	70	012-010-000-000	CFH	C
EN32 Conduct	6.3	0	70	012-000-000-000		C
EN91 Non-Cond.	6.3	0	40	401-042-500-030	ABEF	F
EN91 Conduct.	6.3	80	40	401-042-500-030		F
XC 95	2.5	0	30	041-032-500-022	ABEF	E
XC 97	2.5	0	45	401-030-500-022	ABEF	E
XC 900	2.5	0	60	401-030-555-023	ABE	E

XCC 189 Tri.2	3.6	40	57	340-105-400-021	ABC	A
XCC 189 Tri.1	3.6	40	57	340-103-400-021	FGH	F
XCF 80 Tri.	3.6	0	60	300-100-040-033	AHI	A
XCF 80 Pen.	3.6	35	70	042-102-000-022	BCFG	F
XCF 801 Tri.	3.6	0	40	005-100-024-034	AHI	H
XCF 801 Pen.	3.6	0	75	045-103-200-034	ABFG	F
XFY 34	1.25	95	45	000-412-300-033	DEG	G
XFY 35	1.25	30	60	000-412-300-034	DFG	G
EB 41 Plate.1	6.3	0	0	150-002-000-032	FG	F
EB 41 Plate.2	6.3	0	0	150-200-000-032	GD	D
EBC 81 Tri.	6.3	15	35	340-100-000-023	ABC	A
EBC 81 Dio.1	6.3	0	0	540-102-020-033	FC	C
EBC 81 Dio.2	6.3	0	0	540-102-020-033	HC	H
EC 86	6.3	60	15	340-105-555-032	ABC	A
EC 92	6.3	50	65	201-004-000-033	AFG	A
EC 95	6.3	0	58	041-032-500-022	ABEF	E
EC 97	6.3	0	45	401-030-500-022	ABEF	E
ECC 189 Tri.2	6.3	40	57	340-105-400-021	ABC	A
ECC 189 Tri.1	6.3	40	57	540-103-400-021	FGH	F
ECF 200 Pen.	6.3	25	25	004-010-325-022	BCDGH	G
ECF 200 Tri.	6.3	0	75	055-510-452-013	AGI	I
USE ADAPTER. 10 Pin Tube. Plug dual banana plug lead into pin #7 of 7 pin socket.						
ECF 201 Pen.	6.3	15	25	004-010-325-022	BCDGH	G
ECF 201 Tri.	6.3	0	40	055-510-452-023	AGI	I
USE ADAPTER. 10 Pin Tube. Plug dual banana plug lead into pin #7 of 7 pin socket.						
ECH 200 Hept.	6.3	25	85	004-210-200-033	ABCDG	G
ECH 200 Tri.	6.3	0	85	255-510-540-023	AHI	A
USE ADAPTER. 10 Pin Tube. Plug dual banana plug lead in pin #1 of 7 pin socket.						
EFL 200 Pen.2	6.3	25	80	402-210-555-011	ABCD	D
EFL 200 Pen.1	6.3	0	45	555-310-043-033	DGHI	D
USE ADAPTER. 10 Pin Tube. Plug dual banana plug lead into pin #4 of 4 pin socket.						
ELL 80 Pen.2	6.3	0	55	343-100-000-012	ABCG	C
ELL 80 Pen.1	6.3	0	55	000-104-033-012	FGHI	H
EY 81	6.3	0	37	555-105-553-000	IJ	I
EY 86	6.3	0	55	555-015-555-333	J	J
EY 87	6.3	0	55	555-015-555-333	J	J
EY 88	6.3	0	28	555-105-553-000	IJ	I
EC 900	6.3	0	65	401-030-555-023	ABE	E
EM 87						
Target Open	6.3	25	40	450-103-253-012	ACFGI	I
EM 87						
Target closed	6.3	25	40	450-103-353-012	I	I
GL-U52 Plate.1	5.0	0	41	010-003-000-000	F	F
GL-U52 Plate.2	5.0	0	41	010-300-000-000	D	D
GLKT66	6.3	50	10	013-240-000-011	CDEH	C
GLKT77	6.3	80	85	013-245-005-010	ACDEH	C
GLU77 Plate.1	5.0	0	40	010-300-000-000	D	D
GLU77 Plate.2	5.0	0	40	010-003-000-000	F	F

GLKT88	6.3	50	10	013-240-000-011	CDEH	C
GLU707 Plate.1	6.3	0	36	001-002-000-000	FG	F
GLU707 Plate.2	6.3	0	86	201-000-000-000	AG	A
GLN709	6.3	35	30	540-105-352-011	BCGI	G
GLU709	6.3	80	85	013-245-005-010	ACDEH	C
GLD717 Plate.1	6.3	0	0	001-000-200-032	AG	G
GLD717 Plate.2	6.3	0	0	021-000-000-032	BE	B
GLZ729	6.3	25	75	200-103-004-012	ACFHI	F
GLB739 Tri.1	12.6	0	77	000-103-405-023	FGH	F
GLB739 Tri.2	12.6	0	77	340-100-005-023	ABC	A
GLB749 Tri.1	12.6	60	0	340-103-405-022	FGH	F
GLB749 Tri.2	12.6	60	0	340-103-405-022	ABC	A
GLB759 Tri.1	12.6	0	47	000-103-405-024	FGH	F
GLB759 Tri.2	12.6	0	47	340-100-005-024	ABC	A
LCF200 Pen.	5.0	25	25	004-010-325-022	BCDGH	G
LCF200 Tri.	5.0	0	75	055-510-452-013	AGI	I
USE ADAPTER. 10	Pin Tube. Plug dual banana plug lead into pin #7 of 7 pin socket.					
LCF201 Pen.	5.0	15	25	004-010-325-022	BCDGH	G
LCF201 Tri.	5.0	0	40	055-510-452-023	AGI	I
USE ADAPTET. 10	Pin Tube. Plug dual banana plug lead into pin #7 of 7pin socket.					
LCH200 Hept.	5.0	25	85	004-210-200-033	ABCDG	G
LCH200 Tri.	5.0	0	85	255-510-540-023	AHI	A
USE ADAPTER. 10	Pin Tube. Plug dual banana plug lead in pin #1 of 7 pin socket.					
LFL200 Pen.2	10	25	85	402-210-555-011	ABCD	D
LFL200 Pen.1	10	0	55	555-310-043-033	DGHI	D
USE ADAPTER. 10	Pin Tube. Plug dual banana lead into pin # 4 of 4 pin socket.					
LCL 84 Tri.	10	0	58	430-100-000-013	ABC	B
LCL 84 Pen.	10	30	77	000-103-042-011	FGHI	F
LCF 801 Tri.	5.0	0	40	005-100-024-034	AHI	H
LCF 801 Pen.	5.0	0	70	045-103-200-034	ABFG	F
ECF 801 Tri.	6.3	0	40	005-100-024-034	AHI	H
ECF 801 Pen.	6.3	0	70	045-103-200-034	ABFG	F
PCC 189 Tri.2	7.5	0	47	340-105-400-012	ABC	A
PCC 189 Tri.1	7.5	0	47	540-103-400-012	FGH	F
PCL 84 Tri.	14	0	65	430-100-000-013	ABC	B
PCL 84 Pen.	14	30	83	000-103-042-011	FGHI	F
UBC 81 Tri.	14	15	35	340-100-000-023	ABC	A
UBC 81 Dio.1	14	0	0	540-102-020-033	FC	F
UBC 81 Dio.2	14	0	0	540-102-020-033	HC	H
13D2 Tri.2	6.3	45	0	430-000-100-022	ABC	B
13D2 Tri.1	6.3	45	0	000-430-100-022	DEF	E
6D2 Plate.1	6.3	0	0	021-000-000-032	BE	B
6D2 Plate.2	6.3	0	0	001-000-200-032	AG	G
6P9 Tri.	6.3	34	80	400-100-003-022	AHI	I
6P9 Pen.	6.3	65	47	004-103-200-021	BCFG	F
6P13	6.3	35	30	540-105-352-011	BCGI	G

6922 Tri.2	6.3	65	85	340-100-000-031	ABC	A
6922 Tri.1	6.3	85	85	000-103-400-031	FGH	F
8888	6.3	30	85	045-100-302-021	ABGHI	G
6267	6.3	25	75	200-103-004-012	ACPHI	F
7188A	6.3	40	75	540-105-353-021	BCGI	G
XCL 85 Tri.	10	0	65	340-100-000-023	ABC	A
XCL 85 Pen.	10	0	80	000-103-304-001	FGHI	F
15002	25	0	70	315-555-500-022	A	A
10801	10	0	60	215-555-500-022	A	A
XL 84	7.5	35	38	540-105-352-011	BCGI	G
XL 86	7.5	50	38	540-1-5-352-021	BCGI	G