

INTER-OFFICE COMMUNICATION

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TO : Those Listed

FROM: A. C. Morris

SUBJ: Interchangeability of Vacuum Tubes

"The tables below showing interchangeability of vacuum tubes are revisions to the ones which appeared in the January 1955 Digest. They may save both time and temper, for they will enable personnel to determine the prototype of a ruggedized tube if its number is known and to find the ruggedized tube number from its prototype.

"The list of Military Standard types in the last column of Table II is taken from MIL-STD-200B, and is included for ease in ordering tubes. Activities are cautioned to requisition only reliable tubes to replace the lower quality counterpart, in accordance with the OPNAV Instruction 10550.8 dated 13 July 1954.

"When using Table II to find the ruggedized versions of a tube, be sure to consult also the "Remarks" column of Table I for significant information."

TABLE I

Ruggedized Tube Equivalents of Vacuum Tube Types

<u>Ruggedized</u>	<u>Prototype</u>	<u>Remarks</u>	<u>Ruggedized</u>	<u>Prototype</u>	<u>Remarks</u>
E83F	6AH6		5948	1754	
5517	GK-10L3/1B48		5949	1907	
5557	TT-17	Mercury vapor rectifier.	5957	E37	I thyatron.
5591	6AK5		5959	E41	H thyatron.
5632	C3J		5977	6K4	
5642	SN956		5992	6V6	
5651	QA3/VR-75		5993	6X4	
5654	6AK5		6002	QK221	
5664	3631/CLB		6005	6AQ5	
5670	2C51	Filament current is 1/6 greater than prototype.	6021	6BF7	
5679	7A6		6038	1B35A	ATR tube.
			6057	12AX7	
			6058	6AL5	
			6059	6J7	Ruggedized tube is a miniature.

5964 - 6J6

<u>Rugged-ized</u>	<u>Prototype</u>	<u>Remarks</u>	<u>Rugged-ized</u>	<u>Prototype</u>	<u>Remarks</u>
5684	C3J/A	Grid control rectifier.			
5685	C6J	Grid control rectifier.	6060	12AT7	
5691	6SL7GT	Filament current is 1/5 greater than prototype.	6061	6V6GT	Ruggedized tube is a miniature.
5692	6SN7GT		6062	5763	
5693	6SJ7		6063	6X4	
5725	6AS6		6064	6AM6	
5726	6AL5		6065	6BH6	Filament current is 1/3 greater than prototype.
5727	2D2L	Grid control rectifier.			On approximately 1/2 of prototype.
5749	6BA6				
5750	6BE6				
5751	12AX7	Gm equals 70% of prototype; filament current is 1/6 greater than prototype.	6066	6AT6	
			6067	12AU7	Amplification factor is 85% of prototype.
5755	6SU7GT/155L/120A		6073	0A2	
5814	12AU7	Filament current is 1/6 greater than prototype.	6074	0B2	
			6080	6AS7	
			6084	6SJ7	9-pin miniature.
			6085	6SN7GT	9-pin miniature.
5839	25Z6		6087	5Y3GT	Voltage drop is 5/6 that of prototype.
5844	6J6				
5852	6X5/1274		6094	6AQ5	
5871	6V6GT		6095	6AQ5	
5881	6L6G/1614	Plate and screen dissipation is 20% greater than prototype.	6096	6AK5	
			6097	6AL5	
			6098	6AR6	
			6099	6J6	Balanced plate currents.
5910	104				
5930	2A3		6100	6C4	
5931	504G		6101	6J6	
5932	6L6G		6106	5Y3GT	
5933	807		6117	1B58	TR Tube.
6130	3045		6277	3B28A	
6132	6CH6		6278	C5F14	
6134	6AC7		6288	816	

<u>Ruggedized</u>	<u>Prototype</u>	<u>Remarks</u>	<u>Ruggedized</u>	<u>Prototype</u>	<u>Remarks</u>
6135	6C4	Filament current is 1/6 greater than prototype.	6322	HL25	
6136	6AU6		6333	892	
6137	6SK7		6336	6AS7	Plate dissipation is 230% of prototype; Gm is 160% of prototype.
6185	2C5L		6385	2C5L	
6186	6AG5		6386	2C5L	Remote cutoff.
6187	6AS6		6402	QK303/QK437	
6188	6SU7GT/1554/420A		6444	ESM-48	CW Magnetron.
6201	12AT7		6485	6AH6	
6202	6X4	Maximum peak current is 5% lower than prototype	6527	2J42	
6265	6EH6	Filament current is 10% greater than prototype.	7000	6J7	
			7700	6C6/1603	
			8016	1B3	Rectifier.

TABLE II

Designations of Vacuum Tubes Equivalent to Ruggedized Tube Types

<u>Prototype</u>	<u>Ruggedized</u>	<u>Military Standard Type</u>	<u>Prototype</u>	<u>Ruggedized</u>	<u>Military Standard Type</u>
0A2	6073	0A2	06J	5685	5685
0A3	5651	5651	6J6	5844, 6099, 6101	-----
0B2	6074	0B2	6J7	6054, 7000	-----
1B3GT	8016	1B3GT	6K4	5977	-----
1B35A	6038	1B35A	6L6G	5881, 5932	SL6WGB
1B58	6117	1B58	6SJ7	5693, 6084	-----
1U4	5910	-----	6SK7	6137	-----
2A3	5930	-----	6SL7GT	5691	-----
2C5L	5670, 6185, 6385, and 6386	5670	6SN7GT	5692, 6085	-----
2D21	5727	5727	6SU5GT	5755, 6188	-----
2J42	6527	2J42	6V6	5871, 5992, 6061	-----
3B28A	6277	-----	6X4	5993, 6063, 6202	6X4W
3C45	6130	3C45	6X5	5852	-----
03J/A	5684	5684	7A6	5679	-----
05P14	6278	-----	12AT7	6060, 6201	12AT7WA
5U4G	5931	-----	12AU7	5814, 6067	5814A
5X3GT	6087, 6106	5X3WGT/A	12AX7	5751, 6057	5751
6AC7	6134	-----	12AY7	6072	-----
6AG5	6186	-----	TT-17	5557	-----
6AH6	6485, E83F	6AH6	25Z6	5839	-----
6AK5	5591, 5654, 6096	5654	E37	5957	-----
6AL5	5726, 6058, 6097	5726	E41	5959	-----

<u>Prototype</u>	<u>Ruggedized</u>	<u>Military Standard Type</u>	<u>Prototype</u>	<u>Ruggedized</u>	<u>Military Standard Type</u>
6AM6	6064	-----	ESM-48	6144	-----
6AQ5	6005, 6094, 6095	6005	VR-75	5651	5651
6AR6	6098	-----	420A	5755, 6188	-----
6AS6	5725, 6187	5725	807	5933	5933
6AS7	6080, 6336	6080WA	816	6288	-----
6AT6	6066	-----	892	6333	-----
6AU6	6136	6AU6WA	CK-1013	5517	5917
6BA6	5749	5749	1554	5755, 6188	-----
6BE6	5750	5750	1603	7700	-----
6BF7	6021	6021	1614	5881	-----
6BH6	6065, 6265	-----	1754	5948	5948
6C4	6100, 6135	6C4W	1907	5949	5949
6C6	7700	-----	5763	6062	-----
6CH6	6132	-----			

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