

# ATTENTION

## READ ME FIRST

This manual is formatted for printing on A4 paper, the european standard. To print on letter paper, choose "Shrink to Fit" while printing from Adobe Acrobat software.

You can download the last version of the free Adobe Acrobat Reader from <http://www.adobe.com>

**Save the forest. Print both sides.**



# ATENCIÓN

LIST  
OF VALVES AND CRYSTALS  
used  
in  
MARCONI MARINE EQUIPMENT

Este documento es copia por escaner del manual arriba citado. Deseo que sea de la mayor utilidad para el público en general, y considero que la mejor forma de conseguirlo es liberalizando su distribución aunque manteniendo el Copyright. Por tanto, este documento es gratuito o "freeware" pero no comercializable o "public domain". Así pues, cualquiera que haga o distribuya copia del mismo deberá copiar el documento completo incluida esta página, y ya sea impresa o en formato electrónico, sea gratuita o cobrando como máximo y únicamente el valor del soporte, tendrá que dar al receptor de la misma el mismo derecho de libre copia y distribución que él tiene.

Este documento se distribuye con el deseo de que sea útil pero **SIN NINGUNA GARANTÍA**, ya sea implícita o explícita. En otro caso véase el manual original.

©Miguel Bravo

Cartagena – España - CE

Diciembre de 2002

[mbravoc@wanadoo.es](mailto:mbravoc@wanadoo.es)

# **NOTICE**

**LIST  
OF VALVES AND CRYSTALS  
used  
in  
MARCONI MARINE EQUIPMENT**

This is a scanned copy of the above manual. I want this document to be of the greatest possible use to the public, and believe that the best way to achieve this is to make it free from proprietary claims, keeping it as freeware but not as public domain. If you create or distribute copies of this document, whether in printed or electronic form, whether gratis or for a fee (only to cover media), you must copy the full document **including this page** and must give the recipients all the rights that you have, including the right to freely copy and distribute it.

This document is distributed for informational purpose only and in the hope that it will be useful, but WITHOUT ANY WARRANTY, either express or even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE (you must look at the original instead).

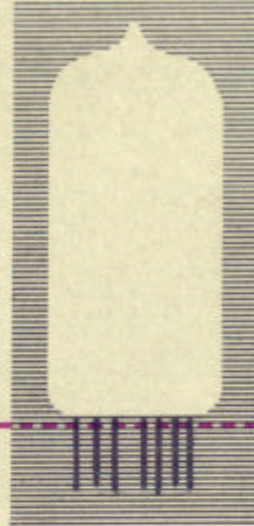
©Miguel Bravo

Cartagena – España - CE

Diciembre de 2002

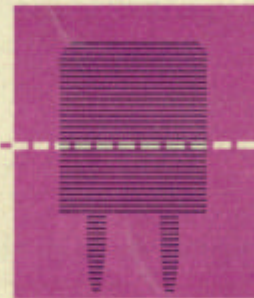
[mbravoc@wanadoo.es](mailto:mbravoc@wanadoo.es)

LIST  
OF  
VALVES



AND

CRYSTALS



USED IN



**EQUIPMENT**

*(Third Edition)*

*Issued by  
Technical Information Branch, Technical Division  
The Marconi International Marine Communication Co. Ltd  
Marconi House, Chelmsford, Essex*



**THE MARCONI INTERNATIONAL MARINE  
COMMUNICATION COMPANY LIMITED**

# **VALVES & CRYSTALS**

**USED IN**



**EQUIPMENT**

*(Third Edition)*

Marconi Marine named equipment is listed in alphabetical order followed by type numbers of "MIMCO" equipment listed in numerical order.

Valves listed under the heading "Proved Alternatives" have been tested in the equipment concerned and found to be satisfactory. Valves listed under "Possible Alternatives" are those stated by valve manufacturers as being equivalent but these have not been tested in the equipment. These latter valves, when available, should be relaced by the original valves incorporated in the type approved equipment.

Transmitting/receiving equipment is listed under "Transmitters" transmitter valves being denoted by (T).

Space has been provided in this booklet to allow for the insertion of additional information as it becomes available.

*Published by*

**Technical Information Branch, Technical Division,  
THE MARCONI INTERNATIONAL MARINE COMMUNICATION CO., LTD.  
Marconi House, Chelmsford,  
Essex.**





C O N T E N T S

VALVES

Type of Equipment	Page
Transmitters ... ..	1
Receivers ... ..	5
Echometers ... ..	8
Radar ... ..	12
V.H.F. ... ..	19
Miscellaneous ... ..	23
“MIMCO” Equipment	
Receivers ... ..	26
Amplifiers ... ..	29
Tape Recorders and Players ... ..	33

CRYSTALS

Type of Equipment	Page
Transmitters ... ..	35
Receivers ... ..	39
V.H.F. ... ..	41
Miscellaneous ... ..	44



**VALVES  
TRANSMITTERS**

<i>Name of Equipment</i>	<i>Type No.</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>				
"Albatross"		4	ECC91		6BJ5 9D6 EF92 6AL5 EB91 6AM6 EF91 QVO5-25				
		1	QS150/15						
		6	N78						
		5	W77						
		3	D77						
		4	Z77						
		4	807						
		1	STV280/80						
		"Fulmar"	2436A			5	6146	QVO6-20	
1	5763								
1	5749								
2	6CH6								
1	EF91								
3	12AU7								
"Gannet" and "Gannet II"	1158A } 1158B }	4	5B/254M		QVO3-12 EF82 6AM6 EF91 9D6 EF92				
		1	5763						
		1	6CH6						
		2	Z77						
		1	W77						
"Globespan" (A.C. & D.C.)	1232A	1	W77	B309 12AT7	9D6 EF92				
		3	ECC81						
		3	5B/254M						
		4	TT16DG			QY3/125			
		4	Z77			53KU	6AM6 EF91		
		2	U54				3B28		
		6	GXU1						
		A.C. only {	1167A } 1167B }				1	KT8	KT807
						3	KT66		
						"Kestrel" (Transmitter and receiver)		2	
4	QVO6-20 (T)	6146							
1	EB91 (T)	6AL6							
2	90C1 (T)								
3	6870 (T)								
3	EF93	6BA6							
1	ECH81	6AJ8							
1	EF91	6AM6							
1	EBC90	6AT6							
1	EB91	6AL5							
1	PCL83								
1	EZ90	6X4							
"Lifeline" type 600		1	6C4 (T)	CV4058					
		1	6BW6 (T)	CV4053					

<i>Name of Equipment</i>	<i>Type No.</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>
"Lifeline" type RN.500		1	6C4 (T)		
		1	6AQ5 (T)		
		1	DF91		
		1	DAF91		
"Oceanspan IV" (A.C.)		6	807	Z90	QVO5-25
		3	EF50		
		1	STV280/80		
		4	U18/20		FW4-500
"Oceanspan IV and VI"		6	807	Z90	QVO5-25
		3	EF50		
		1	STV280/80		
"Oceanspan V and VII"		6	807	Z90	QVO5-25
		4	EF50		
		2	EF55		
		1	STV280/80		
"Oceanspan V and VII" with H.F. oscillator type 2399A Add:—		3		Z77	
A.C. Power Unit (For "Oceanspan VI & VII")	1201B	4	U18/20		FW4-500
"Reliance"	1050A	7	807		QVO5-25
"Salvare"	1102A	4	807 (T)	B329	QVO5-25 ECC82 6BJ5 6AM6 EF91
		1	12AU7(T)		
		1	N78(T)		
		8	Z77		
"Salvita III"	1110B	2	DF91	W17 ZD17 N17 QS92/10	
		1	DAF91		
		1	DL92		
		1	7475		
		1	EL42(T)		
		2	5B/255M(T)		
"Salvor"	2222A	4	DET28		
		1	Philips 329 Barretter		
"Solas"		2	6BA6		
		1	6BW6		
		1	DM70		

<i>Name of Equipment</i>	<i>Type No.</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>
"Seagull"	TV5X	1	KT8 (T)	KT807	
		3	KT66 (T)		6L6G
		1	D63	6H6G	6H6GT 6H6
		1	DH63		6Q7
		1	KT63		6F6
		4	KTW61		
		1	X66	X65	ECH35
		1	6X5G		U147
"Seamew II"	972	2	EF50 (T)	Z90	
		2	807 (T)		QVO5-25
		1	X61M		ECH35 X65
		1	KTW61		
		1	DH63		6Q7
		1	6V6G (T)		
		1	6V6		
"Seaspan"	1213	4	Z77	CV138	6AM6
		1	ECC81	CV455	EF91
		4	5B/254M	CV428	B309
		1	D77	CV140	12AT7
"Seaswallow"	TW12	1	ACT6		6AL5
		1	PT15		EB91
		1	DET5		
"Transarctic I"		5	807 (T)		QVO5-25
		1	STV280/80 (T)		
		4	EF50 (T)	Z90	
		3	KTW61		
		2	X61M		ECH35 X65
		1	DH63		6Q7
		1	6H6GT	D63 6H6	
		1	6V6G		
		1	6X5G		U147
		1			QVO5-25
"Transarctic II"		6	807 (T)		
		1	STV280/80 (T)		
		2	EF50(T)	Z90	
		2	EF55(T)		
		3	KTW61		
		2	X61M		ECH35 X65
		1	DH63		6Q7
		1	6H6GT	D63 6H6	
		1	6V6G		
		1	6X5G		U147
"Worldspan"		3	TT10	813	
		2	DET16		
		2	PX4		
		1	D63	6H6G	LP4 PP3/250
		1			6H6 6H6GT

<i>Name of Equipment</i>	<i>Type No.</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>



## RECEIVERS

<i>Name of Equipment</i>	<i>Type No.</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>
"Alert"	1119A	5 1	9D6 N77	CV131 W77 EL91	EF92
"Atalanta"	2207A, C or E	3 1 1 2 1 1 1 1 3	ECH81 6060 D77 Z77 N37 W77 QS75/20 EF85	X719      W719	B309 6 AL5 EB91 6AM6 EF91  9D6 EF92
"Atalanta"	2207B or D	1	ECH81 (V.14)		X719
"Electra"	1018	5 2 2 1 2 1	KTW61 X61M D63 DH63 L63B VR150/30	6H6G	ECH35 X65 6H6 6H6GT 6Q7 6J5 QS150/40 OD3
"Gannet"	1159A	4 3 1 1 1	Z77 W77 D77 6F33 N78		6AM6 EF91 6D6 EF92 6AL5 EB91  6BJ5
"Guardian"	1193A	1 1 5 1 1 1 1	6X5G D77 W77 X727 DH77 N37	6BE6	U147 6AL5 EB91 6D6 EF92  6AT6
"Guardian II" and "Guardian III" and "Guardian IV" and "Guardian V"	2354A 2354B 2354C 2354D	4 1 1 1 1 1	W77 ECH81 N77 DH77 N37 EB91 6X5		6D6 EF92 X719 EL91 6AT6  D77 U147
"Kestrel" (Receiver only)		3 1 1 1 1 1 1	EF93 ECH81 EF91 EBC90 EB91 PCL83 EZ90	6BA6 6AJ8 6AM6 6AT6 6AL5  6X4	

<i>Name of Equipment</i>	<i>Type No.</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>
"Mercury"	1017	4	KTW61	6H6G QS150/40	ECH35 X65 6H6 6H6GT 6Q7 6J5 OD3
		3	X61M		
		2	D63		
		1	DH63		
		1	L63B		
		1	VR150/30		
"Redifon"	R50M	5	EF39	6H6 EF36	OM6 X61M 6J5 6H6GT 6H6G 52KU GZ30
		1	ECH35		
		1	L63B		
		2	EB34		
		2	EF37A		
		1	6V6G		
		1	SZ4G		
		1	S130		
"Renown"	950D	4	KTW61	X66 KT33C	X61M 6Q7 25L6GT
		1	X65		
		1	DH63		
		1	KT32		
"Valiant"	1060A	4	KTW62	6H6G	X61M ECH35 6Q7 6H6GT 6H6 6F6 U147
		1	X65		
		1	DH63		
		1	D63		
		1	KT63		
		1	6X5G		
"Yeoman" with Power Unit type 889	CR.300	4	KTW61		X61M ECH35 6Q7 U147
		1	X66		
		1	DH63		
		1	6V6G		
		1	6X5G(P.U.)		



<i>Name of Equipment</i>	<i>Type No.</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>

### ECHOMETERS

<i>Name of Equipment</i>	<i>Type No.</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>
Echo cut-off unit ("Fishgraph")	1981AZ	2	B309		
Echo cut-off unit ("Graphette")	1982AZ	2	B309		
"Fishgong"	1963A	1 2 2 1	B329 B309 6F33 N77		ECC82 12AU7 ECC81 12AT7 CV329 EL91
"Fishgraph"	1913/ 1914 series	2 1 1 2 1 2 1	B309 B329 N309 EF85 N78 11E3 BA9S		ECC81 12AT7 ECC82 12AU7  CV3711 CV73
	1913EA only	1 2	QS150/15 B309		CV287 ECC81 12AT7
"Fishscope"	1953A	5 1 3 2 1 2	B309 B329 6F33 Z77 DG-13-2 BA9S		ECC81 12AT7 ECC82 12AU7 CV329 EF91 6AM6
"Fishviewer"	1923A 1923C	2 1 1 1 1 1	B309 B329 Z77 U52 STV280-40 VCR517		ECC81 12AT7 ECC82 12AU7 EF91 6AM6
"Fishviewer"	1923B	1 1 1 1 1	B329 Z77 6F33 U52 VCR517		ECC82 12AU7 EF91 6AM6 CV329
"Fishviewer"	1923D	2 2 1 1 1 1	B329 Z77 6F33 U52 STV280-40 VCR517		ECC82 12AU7 EF91 6AM6 CV329

Name of Equipment	Type No.	Qty. per Set	Valve Type	Proved Alternatives	Possible Alternatives
"Graphette"	848 series	2	Z77	QZ77 (Improved sens.)	EF91 6AM6 ECC81 12AT7 CV3711
		1	B309		
		1	N78		
		1	QS95/10		
		2	NSP2		
Inshore echosounder		1	EN91		
		2	EF91		
		1	ECC82		
		1	EZ90		
"Metron"		1	6F33		CV329 EF91 6AM6 EB91 6AL5 ECC81 12AT7 ECC82 12AU7 12AX7 CV449
		2	Z77		
		1	D77		
		3	B309		
		8	B329		
		10	B339		
		2	QS83/3		
Offshore echosounder		2	EF91		
		2	PCL83		
		1	EN91		
		1	EZ90		
"Seagraph"	{ 839 840	4	KTW63	(Strap pins 5 and 8)	
		1	QS95/10		
		1	MPS1A		
"Seagraph II"	1910A/B	4	Z77		EF91 6AM6 ECC81 12AT7 CV3711 EB91 6AL5 CV287 CV395 829B
		1	B309		
		1	N78		
		1	D77		
		1	QS150/15		
		1	QS150/45		
		1910A only	1		
1910B only	2	11E3			
"Seagraph III"	1913/1914 series	2	B309		ECC81 12AT7 ECC82 12AU7
		1	B329		
		1	N309		
		2	EF85		
		1	N78		
		2	11E3		
		1	BA9S		
"Seavisa"	841	1	L63B		6J5 6C5
		1	XL600		
Shallow sounder	1973 A/B	1	Z77		
		2	B329		
		1	B309		
		1	EN91		
		1	U52		
		1	E/4504/B/16 (VCR517)		

<i>Name of Equipment</i>	<i>Type No.</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>
Shallow sounder	1983AZ	4 2 1 1	B309 6F33 Z77 DG-13-2		
"Visagraph"	{ 840 841 839	4 1 1 1	KTW63 QS95/10 L63B XL600		CJ5 6C5
"Visette"	847A	3 1 1 1	W17 N17 NSP2 QS95/10		DF91 IF3 IT4 3S4 IP10 DL92

<i>Name of Equipment</i>	<i>Type No.</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>

### RADAR

Name of Equipment	Type No.	Qty. per Set	Valve Type	Proved Alternatives	Possible Alternatives
"Consort"		1	QF41		
		1	3D21A		
		1	JP9-2-5		
		1	K340		
		7	E180F		
		6	E88CC		
		2	EL81		
		1	2D21		
		1	QS150/15		
		1	CS3A		
		2	2N174	OC29	
		5	2N353	OC29	
		2	OC72		
	"Quo Vadis" and "Quo Vadis II" with transmitter type 1486A or C		1	M513A	CV3528
		1	K300		
		1	TTR31	QF40 CV221	QF42
		1	C1111	CV427	
				5D21 4PR60A	
		1	6LO1A		
		6	B309	M8162 12AT7	
				CV455 ECC81	
				6060	
		9	Z77	CV138 EF91	6F12 6AM6
				6064 M8083	
		1	CS3B		
		1	STV280/40	CV1068	
		2	D77	CV140 EB91	6AL5 6D2
			6058 M8079	DD6	
"Quo Vadis" only "Quo Vadis II" only "Quo Vadis II" only		1	6CH6	6132 7D10	
				CV2127	
		1	EL81	CV2721	
		1	12E1	CV345	
		5	B329	6067 ECC82	
				CV491 12AU7	
				M8136	
		1	QS150/15	CV287	
		2	QS95/10	CV286	
		2	85A2		
"Quo Vadis II" with transmitter type 1486D			(Mullard) CV448	CG4E OA71	
			(Crystal)	GEX54 GEX55	
		1	M513A	CV3528	2J42A JP9/15
		1	K302		
		1	QF41	TTR31MR	
	1	C1111	CV427		
			5D21 4PR60A		

<i>Name of Equipment</i>	<i>Type No.</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>	
"Quo Vadis II" with transmitter type 1486D (contd.)		1	6LO1A			
		6	Z77	CV138 EF91 M8083 6064	6F12 6AM6	
		3	E180F			
		1	6CH6	7D10 6132 CV2127		
		1	CS3B			
		1	BS48			
		1	STV280/40	CV1068		
		2	D77	CV140 EB91 6058 M8079	6AL5 6D2 DD6	
		1	EL81	CV2721		
		1	12E1	CV345		
		5	B329	12AU7 6067 ECC82 CV491 M8136		
		6	B309	CV455 ECC81 6060 12AT7 M8162 CV286		
		2	QS95/10			
		2	85A2 (Mullard) CV448 (Crystal)	CG4E OA71 GEX54 GEX55		
	"Quo Vadis XII" with transmitter type 1486C		1	M513A	CV3528	2J42A JP9/15
			1	K300		
			1	TTR31	QF40 CV221	QF42
		1	C1111	CV427 4PR60A 5D21 CV2752		
		1	12LO3A	12LO1A		
		2	EL81	CV2721		
		10	B309	12AT7 ECC81 CV455 6060 M8162		
		4	B329	12AU7 ECC82 CV491 6067 M8136		
		10	Z77	6064 M8083 EF91 CV138	6F12 6AM6	
		2	D77	EB91 CV140 6058 M8079	6AL5 6D2 DD6	
		2	QS95/10	CV286		
		1	STV280/40	CV1068		
		1	6F33	CV2209		
		1	13E1			
		1	Z759			
		1	6CH6	6132 7D10 CV2127		
		1	CS3B			
	1	U78	6X4 CV449 6063			

Name of Equipment	Type No.	Qty. per Set	Valve Type	Proved Alternatives	Possible Alternatives
"Quo Vadis XII" with transmitter type 1486C (contd.)		3	85A2 (Mullard) CV448 (Crystal)	CG4E OA71 GEX54 GEX55	
"Quo Vadis XII" with transmitter type 1486D		1	M513A	CV3528	2J42A JP9/15
		1	K302		
		1	QF41	TTR31MR	
		1	C1111	CV427 4PR60A 5D21 CV2752	
		1	12LO3A	12LO1A	
		2	EL81	CV2721	
		10	B309	12AT7 ECC81 CV455 6060 M8162	
		4	B329	12AU7 ECC82 CV491 6067 M8136	
		7	Z77	6064 M8083 EF91 CV138	6F12 6AM6
		3	E180F		
		1	BS48		
		2	D77	EB91 CV140 6058 M8079	6AL5 6D2 DD6
		2	QS95/10	CV286	
		1	STV280/40	CV1068	
		1	6F33		
	1	13E1			
	1	Z759			
	1	6CH6	6132 7D10 CV2127		
	1	CS3B			
	1	U78	6X4 CV449 6063		
	3	85A2 (Mullard) CV448 (Crystal)	CG4E OA71 GEX54 GEX55		
"Quo Vadis XII and XIII" for R.T.I. Add:— Delete:— (from R.T.I.)		1	12AT7	B309	
		1	ECC91		
"Quo Vadis XIII" As "Quo Vadis XII" Delete:—		1	U78	6X4 CV449 6063	
Add:—		1	EL81	CV2721	
		1	U709		
		1	6080		
		1	D77		



<i>Name of Equipment</i>	<i>Type No.</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>
"Radiolocator II and III"		1	M505		MAG2
		1	K300		
		1	TTR31	QF40 CV221	QF42
		1	24B1	CV6008	
		1	9LO1A	9LD1 T921	CV254
		8	KT66		
		1	G400		
		6	U27	CV1111 V1907	VU111
		2	QS150/15	CV287	
		2	EC91		
		7	Z77	EF91 CV138 6064 M8083 CV286	6F12 6AM6
		4	QS95/10		
		1	CV189		
		2	6X5G		EZ35
		4	U52	5U4G	
		27	EA50		SD61 6D1 63SPT
		23	EF50		
		1	KT45		
		7	ECC32		B65 6SN7
		7	EF55		
"Radiolocator IV"		1	M505		MAG2
		1	K300		
		1	TTR31	QF40 CV221	QF42
		1	24B1	CV6008	
		1	9LO1A	9LD1 T921	CV254
		1	11E3	CV73	
		1	U27	CV1111	V1907 VU111
		28	Z77	EF91 CV138 6064 M8083 QZ77	6F12 6AM6
		2	12E1	CV345	
		3	QS150/15	CV287	
		9	D77	EB91 6058 M8079 CV140	6D2 DD6 6AL5
		2	ECC91	6J6	
		6	B329	ECC82 CV491 12AU7 6067 M8136	
		3	6CH6	7D10 6132 CV2127	
		2	CS3B		
	1	CV425 (Crystal)	CG1C GEX44		
"Radiolocator IV" with 15 inch display unit type 1417A/B		1	M505		MAG2
		1	K300		
		1	TTR31	QF40 CV221	QF42
		1	24B1	CV6008	
		1	15LO3A	15LO1A	
		26	Z77	EF91 CV138 6064 M8083 QZ77	6F12 6AM6

Name of Equipment	Type No.	Qty. per Set	Valve Type	Proved Alternatives	Possible Alternatives	
"Radiolocator IV" with 15 inch display unit type 1417A/B (contd.)		10	D77	EB91 6058 M8079 CV140	6D2 DD6 6AL5	
		2	ECC91	6J6		
		6	B329	ECC82 CV491 12AU7 6067 M8136		
		7	6CH6	7D10 6132 CV2127		
		1	11E3	CV73		
		1	U27	CV1111	V1907 VU111	
		4	12E1	CV345		
		3	QS150/15	CV287		
		2	CS3B			
		1	N78			
		1	CV2231			
		2	CV425 (Crystal)	CG1C GEX44		
	"Radiolocator IVA" As "Radiolocator IV" Delete:—		1	6CH6	7D10 6132 CV2127	
	Add:—		1	CV2231		EL81
	"Radiolocator IV" for R.T.I. Add:—		1	12AT7	B309	
		1	6F33			
		1	D77	EB91 CV140 6AL5 6058 M8079		
		1	E88CC			
		1	N78			
		2	12E1			
"Radiolocator IVA" for R.T.I. Add:—		1	12AT7	B309		
		1	D77	EB91 CV140 6AL5 6058 M8079		
		1	E88CC			
		1	N78			
		2	12E1			
"Radiolocator IVB" for R.T.I. Add:—		1	12AT7	B309		
Radar Track Indicator		34	E88CC			
		11	D77	EB91 CV140 6AL5 6058 M8079		
		1	E91H			
		3	Z759			
		1	ECC91	6J6		

<i>Name of Equipment</i>	<i>Type No.</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>
Radar Track Indicator ( <i>contd.</i> )		4	KD61		
		2	ME1400		
		4	QS75/20	CV284	
		3	6080		
		2	Z77	EF91	
				CV138 6064	
				M8083 QZ77	
				QS1209/5651	
		1	85A2		
		1	EF86		
	1	OB2	CV1833 QS1208		

<i>Name of Equipment</i>	<i>Type No.</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>



V.H.F.

Name of Equipment	Type No.	Qty. per Set	Valve Type	Proved Alternatives	Possible Alternatives
"Argonaut"	3747A	1	PCC84	PCF82	
		1	EC91		
		11	12AT7		
		7	9U8		
		4	Z77		
		2	6AU6		
		1	N37		
		1	EF85		
		1	EF86		
		1	12AU7		
		1	12AX7		
		2	12BH7	CV5121	
		1	6870		
		1	QQV02/6		
		1	QQV03/20B		
		1	QS150/45		
		5	CV448		
		2	1S404		
		2	CV425		
		2	M1		
2	2E4				
1	M3				
1	EZ81				
"Harbafone"	H18	1	ECC91 (T)		6J6
		1	DCC90 (T)		3S4 1P10
		1	N17 (T)		
		1	3D6 (T)		
		4	DL93		
		1	DCC90		
		1	12AT7		B309 ECC81
		1	W17		DF91 1T4
1	X17	DK91 1R4			
"Nautilus"	2476A	1	PCF80(T)	LZ319	
		1	6BH6(T)		
		2	6AU6(T)		
		1	6AQ5(T)	N727	
		1	5763(T)		
		1	QQVO3-20A (T)		
		2	12AX7(T)	B339	
		4	EC91		
		5	6U8		
		1	12AT7	B309	
		7	6BH6		
		1	6T8	EABC80	
		1	6AQ5	N727	
		1	90C1	D77	
		1	EB91		
		1	EF91		
1	U52				
				QS1215	

<i>Name of Equipment</i>	<i>Type No.</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>
"Nautilus" (contd.)	2476A	2	12AU7	B329	
		2	R17	R18	
"Portafone"	H19	3	N17 (T)		3S4 1P10
		1	DCC90 (T)		
		1	3D6 (T)		
		2	DCC90		
		3	W17		DF91 1T4
		1	X17		DK91 1R4
Redifon (1AF)	GR174	1	QQVO3-10		
		2	QVO3-12	5763	M8096 6062
		12	6BH6		
		4	M8100		EF95 6AK5
		3	6AL5	EB91	D77 CV140
		1	6AT6	EBC90	DH77
		3	6BW6		6061
1	5V4G				
Redifon (2AF)	GR174	2	QQVO3-10		
		4	QVO3-12	5763	M8096 6062
		22	6BH6		
		8	M8100		EF95 6AK5
		6	6AL5	EB91	D77 CV140
		2	6AT6	EBC90	DH77
		4	6BW6		6061
		1	5V4G		
"Seaphone"	H16	1	CV136 (T)	EL91	
		2	6V6G (T)		
		2	CV138 (T)	Z77 EF91	
		1	C144 (T)	QQV-07-40. 829B	
		1	QVO4-7 (T)		
		1	ECC91 (T)	6J6	
		1	U52 (T)		5U4G
		3	CV140	D77 EB91	
		6	CV138	Z77 EF91	
		4	CV131	W77 EF92	
		1	CV136	EL91	N77
1	U50				
V.H.F. Radio Telephone	HP.52	1	6L34	EC91	M8099
		2	B309	12AT7	ECC81
	HP.56	3	6BH6		
		3	6BJ6		
		1	EL85		
		2	B329	12AU7	ECC82
		1	6F17		
		2	6BW6		6061
1	QQVO3-10				

<i>Name of Equipment</i>	<i>Type No.</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>
V.H.F. Radio Telephone	HP.82	3	6AK5		EF95 M8100
		3	6X8		
		1	6BJ6		
		4	6BH6		
		3	6BN6		
		3	D77	6AL5	EB91
		2	N727	6AQ5	EL90
		2	B309	12AT7	ECC81
		1	12AU7	B329	ECC82
		1	6AU6		
		1	6AK6		
		1	5763	QV03-12	M809 6062
		1	QQVO3-20		C1134
		1	Z77		

<i>Name of Equipment</i>	<i>Type No.</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>





MISCELLANEOUS

<i>Name of Equipment</i>	<i>Type No.</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>
Direction finder	579	3 2 2	W21M LP220 HL2K	210HF	
"Lodestone I and II"	758	3 2	KTW61 X61M	X65	ECH35
"Lodestone III and IV"	758	1 2 2	B309 X61M KTW61	12AT7 X65	ECC81
"Lodestar"		1 3 3 2 1 1 1 1 2 8 1 1	PL82 EF85 ECH81 9U8 Z77 QB309 D77 EA76 LN309 PL81 CV448 18003 (Texas Inst.) M1 (S.T.C.)	N329 W719 X719 PCF82 EF91 6060 EB91  PCL83	
"Martinet"		1 1 1 1	EBL21 ECC91 6X4 BRIMAR 4687 MULLARD		U78 EZ90
"Martinet II"		1 2	6X4G 12BH7		
"Martinet III"		4	12BH7		
Measuring Set	1935B	3 2 4	6BH6 6BR7 CV448		
"Protector"	1925A/B	1 2	TT16D 13D3	TT16 12AU7	QY3-125 12AT7 ECC81
Redifon auto alarm	AL26	2 1 2 3 1 1	6BA6 6AT6 6AM6 ECC91 Type 304 BARRETT G.E.C. 85A1 MULLARD	W727 DH77 Z77	EF91

<i>Name of Equipment</i>	<i>Type No.</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>
Radio-Telephone terminal equipment		1	W77	CV131	
		2	N77	CV136	
		16	Z77	CV138	
		4	D77	CV140	
		1	QS75/20	CV284	
		1	QS92/10	CV188	
		2	OB2	CV1833	
		3	X719	CV2128	
		3	W719		
		1	QB309		
		1	N37		
	"Seaguard" and "Seaguard II" auto alarms	1185A } 2348A }	5	B309	ECC81 12AT7 PL81
7			N359 or N339		
		3	Z77		6AM6 EF91
		2	D77		6AL5 EB91
		2	W77		6D6 EF92
"Vigilant" auto alarm		4	KTW63		6U7
		1	LP2		
Alarm generator	2402A	1	B309		
Speech inversion equipment	2446A/B	7	EF91		
		2	ECC91		
		1	6X5GT		
		2	EF86		

<i>Name of Equipment</i>	<i>Type No.</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>

**“MIMCO EQUIPMENT”  
RECEIVERS**

<i>Type No.</i>	<i>Type of Equipment</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>
1154A	Broadcast receiver	3	W77	EF92	6CQ6 9D6
		1	X79		6AF8
		2	D77		EB91 6AL5
		1	6BR7	EF91	6AM6
		3	Z77		6F12 8D3
		1	6U5G	761	763
		2	6V6G		63MG 6M1
		1	KT66		EL37
		1	5Z4G		GZ30 GZ232
		1187A	Four station receiver	1	X79
1	W77			EF92	6CQ6 9D6
1	D77			EB91	6AL5
1	L77				6C4
2232A	Broadcast receiver	3	UAF42		
		1	UCH42		
		1	UL41		
		1	DM70		IM3
2235A	Broadcast receiver up to serial No. 715	4	Z77	EF91	6AM6 6F12
		3	W77	EF92	8D3
		1	X79		6CQ6 9D6
		1	L77		6AE8
		1	DH77	6AT6	6C4
		2	761	6U5G	EBC90
		2	6V6G		
		1	KT66		EL37
		1	5V4G		GZ32 54KU
		1	Z729	EF86	
2235A	Broadcast receiver serial No. 716 onwards	4	Z77	EF91	6AM6
		3	W77	EF92	6F12 8D3
		1	X79		6CQ6 9D6
		1	L77		6AE8
		1	DH77	6AT6	6C4
		2	EM34		6CD7 64ME
		2	6V6G		
		1	KT66		EL37
		1	5V4G		GZ32 54KU
		1	Z729	EF86	
2244A/B	Radio tuner unit	3	EAF42		
		1	ECH42		
		1	EL42		

<i>Type No.</i>	<i>Type of Equipment</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>
2245A	Broadcast receiver	4 1 2 1	UAF42 UCH42 UL41 DM70	WD142	IM3
2273A	Broadcast receiver	3 1 1 1	UAF42 UCH42 UL41 DM70		IM3
2294A	F.M./A.M. radio tuner	3 1 1 1 1 1	6AM6 12AT7 ECH42 6AL5 EM80 EZ41	EF91 Z77 B309  D77	SP6 8D3 6F12 ECC81 B152  EB91 6D2

<i>Type No.</i>	<i>Type of Equipment</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>



### AMPLIFIERS

<i>Type No.</i>	<i>Type of Equipment</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>
1165A/B	Power amplifiers	1 4	ECC33 EL37		ECC32 B65 KT66 6L6
1172A/B	Pre-amplifiers	1 1	EF40 ECC33		ECC32 B65
1172C	Pre-amplifier	1 1	EF86 ECC81	Z729 B309	B152 12AT7
1175A	Power amplifier	2 2	KT66 DA41		EL37 6L6
1176A	Four channel electronic mixer	4 2 1	EF40 12AT7 EB91		B309 ECC81 D77
1181/A/B/C	Pre-amplifier	1	6BR7		
1182A	Boat order amplifier	1 1 1 1	EF37A ECC33 KT66 GZ32		OM5B ECC32 B65 EL37 54KU
2220A/B	Power amplifier	1 1 2 1 1	EF36 ECC33 KT66 GZ32 KT61	EF37A  EL33	OM5B ECC32 B65 EL37 54KU 6AG6
2228A/B	Power amplifier	3 4	L63 KT33C		6J5G
2233A	"Pantenna" A.C. model	8	CV417		
2234A	"Pantenna" D.C. model	4	PCC84		
2247A/B	Power amplifier	2 2 1	ECC83 EL84 GZ30	5Z4GT	12AX7 6BQ5 N709 R52
2270A	Pre-amplifier	1	EF86	Z729	
2275A	Power amplifier	2 4	EL37 DA42		KT66
2279A	Pre-amplifier	2	EF86	Z729	

<i>Type No.</i>	<i>Type of Equipment</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>
2280A	Power amplifier	1 1 2 1	EF36 ECC33 KT66 GZ32	EF37A	OM5B B65 6L6 EL37 54KU
2296A	Pre-amplifier (varislope)	1	ECC81	B309	12AT7
2297A	Power amplifier	1 1 1 1 1	EF36 ECC33 KT66 KT61 GZ32	EF37A  EL33	OM5B ECC32 B65 6L6 EL37 6AG6 54KV
2319A/B	10 watt loudhailer amplifier	1 2	ECC83 EL84		12AX7 N709
2319C	10 watt loudhailer amplifier	1 1 2 1	UBF80 UCC85 UL84 UY85		
2300A	Talk-back panel	1 1	EF86 EF91	Z729	
2317A	Power amplifier	2 1 2 1	EF86 ECC8 EL84 EZ81	Z729	
2320A/B	Talk-back panel	2 2	ECC83 EL84		
2320C	Talk-back panel	1 1 2 1	UBF80 UCC85 UL84 UY85		
2320C/E	Talk-back panel	1 1 2 1	UCC85 UF86 UL84 UY85		
2327A	Talk-back amplifier	1 1 2 1	UBF80 UCC85 UL84 UY85		
3602A	Power amplifier	1 1 2	EF86 ECC83 KT55		



<i>Type No.</i>	<i>Type of Equipment</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>
3602B	Power amplifier (A.C./D.C. model)	1 1 4	UCC85 UF86 UL84		
3660A	Power amplifier (TL12+)	1 1 2 1	EF86 ECC81 EL84 GZ34	Z729 B309	
3690 series	Power amplifier	1 1 1 2	ECC81 EF86 GZ34 KT88	B309 Z729 5AR4 6550	12AT7 6267
3699A	"Pantenna" A.C./D.C. model	3	PCC84		

<i>Type No.</i>	<i>Type of Equipment</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>



### TAPE RECORDERS AND PLAYERS

<i>Type No.</i>	<i>Type of Equipment</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>
2261A 2262A	Tape Recorder	3 2 1 1	EF86 EL84 ECC81 EZ80	Z729 B309	6267 N709 12AT7 6B4
2265A/B	Tape player	2 1 1 1	EF86 12AU7 6C4 6X4	Z729 ECC82 L77 EZ90	6267 B329 EC90 U78
2281A	Tape player	2	EF86	Z729	
2284A	Tape player	3 1 1 2 1	EF86 ECL83 ECC83 EL84 G230	Z729	12AX7 B339 N709
3620A	Tape reproducer	3 1 2 1 1 1 1	EF86 ECC81 EL84 GZ34 12AU7 6C4 6X4	Z729 B309 ECC82 L77 EZ90	

<i>Type No.</i>	<i>Type of Equipment</i>	<i>Qty. per Set</i>	<i>Valve Type</i>	<i>Proved Alternatives</i>	<i>Possible Alternatives</i>



**CRYSTALS  
TRANSMITTERS**

<i>Equipment</i>	<i>Fundamental Crystal Frequency Band</i>	<i>Drawing Identity</i>	<i>Type of Crystal</i>
"Albatross"	1.6-3.8 Mc/s or 1.6-3.8 Mc/s	WZ.12919/C, Sht. 2 WZ.12919/C, Sht. 5	10XJ 10X
"Cormorant"	1.6-3.8 Mc/s or 1.6-3.8 Mc/s (except 2.381 and 2.182 Mc/s)	WZ.12919/C, Sht. 3 WZ.12919/C, Sht. 5	10XJ 10X
"Gannet I & II"	1.6-3.8 Mc/s	WZ.12919/C, Sht. 3	10XJ
"Globespan"	200-270 kc/s 1.6-3.2 Mc/s, I.F., R/T (for radiated frequency 1.6-3.2 Mc/s) 1.6-1.9 Mc/s (for radiated frequency 3.2-3.8 Mc/s) 2.067-2.118 Mc/s H.F. W/T 3.679-3.7325 Mc/s H.F. W/T 2.0333-2.065966 Mc/s H.F. R/T	WZ.12919/C, Sht. 1 WZ.12919/C, Sht. 3    WZ.12919/C, Sht. 3  WZ.12919/C, Sht. 3  WZ.12919/C, Sht. 4	10XJ 10XJ    10XJ  10XJ  10XJ
"Guillemot"	1.6-3.8 Mc/s or 1.6-3.8 Mc/s	WZ.12919C/, Sht. 5 WZ.12919C/, Sht. 2	10X 10XJ
"Lifeline" type 600	2182 kc/s		
"Lifeline" type RN 500	500 kc/s 8364 kc/s		
"Solas"	500 kc/s $\pm$ 0.01% 8364 kc/s $\pm$ 0.01%		
"Oceanspan I & II"	3 Mc/s H.F. W/T 4 Mc/s 5 Mc/s	WZ.12919/C, Sht. 5 WZ.12919/C, Sht. 5 WZ.12919/C, Sht. 2	10X 10X 10XJ
"Oceanspan III"	1.6-3.8 Mc/s I.F. R/T 3 Mc/s H.F. W/T 4 Mc/s 5 Mc/s	WZ.12919/C, Sht. 5 WZ.12919/C, Sht. 5 WZ.12919/C, Sht. 5 WZ.12919/C, Sht. 2	10X 10X 10X 10XJ
"Oceanspan V & VII"	200-270 kc/s 1.6-3.8 Mc/s I.F. R/T 3 Mc/s H.F. W/T 4 Mc/s 5 Mc/s	WZ.12919/C, Sht. 1 WZ.12919/C, Sht. 5 WZ.12919/C, Sht. 5 WZ.12919/C, Sht. 5 WZ.12919/C, Sht. 2	10XJ 10X 10X 10X 10XJ

<i>Equipment</i>	<i>Fundamental Crystal Frequency Band</i>	<i>Drawing Identity</i>	<i>Type of Crystal</i>
"Oceanspan V and VII" with high stability H.F. oscillator type 2399A	200-270 kc/s	WZ.12919/C, Sht. 1	10XJ
	1.6-3.8 Mc/s I.F. R/T	WZ.12919/C, Sht. 3	10XJ
	2 Mc/s H.F. W/T	WZ.12919/C, Sht. 3	10XJ
	3 Mc/s H.F. W/T	WZ.12919/C, Sht. 3	10XJ
	2.7 Mc/s	WZ.12919/C, Sht. 3	10XJ
	2 Mc/s H.F. R/T	WZ.12919/C, Sht. 4	10XJ
	3 Mc/s H.F. R/T	WZ.12919/C, Sht. 4	10XJ
	2.7 Mc/s H.F. R/T	WZ.12919/C, Sht. 4	10XJ
"Oceanspan IV & VI"	200-270 kc/s	WZ.12919/C, Sht. 1	10XJ
	3 Mc/s H.F. W/T	WZ.12919/C, Sht. 5	10X
	4 Mc/s	WZ.12919/C, Sht. 5	10X
	5 Mc/s	WZ.12919/C, Sht. 2	10XJ
"Salvare"	2.091 Mc/s	WZ.12919/C, Sht. 3	10XJ
"Salvita" Serial Nos. prior to 1251	500 kc/s	Brookes	'S'
	8.364 Mc/s	Brookes	'SSS'
"Salvita" Serial Nos. after 1251	500 kc/s	WZ.12919/C, Sht. 6	10X
	8.364 Mc/s	WZ.12919/C, Sht. 7	10XJ
"Seagull" (Modified to T.N.2/53)	1.6-3.8 Mc/s or	WZ.12919/C, Sht. 5	10X
	1.6-3.8 Mc/s	WZ.12919/C, Sht. 2 (Note: Type 1196A Adaptor required)	10XJ
"Seamew I & II"	1.5-3.5 Mc/s or	WZ.12919/C, Sht. 5	10X
	1.5-3.5 Mc/s	WZ.12919/C, Sht. 2	10XJ
"Seaswallow"	1.5-2.5 Mc/s or	WZ.12919/C, Sht. 5	10X
	1.5-2.5 Mc/s	WZ.12919/C, Sht. 2	10XJ
TGY.1	1.5-8.3 Mc/s	WZ.12919/C, Sht. 5	10X
TGY.2 Serial Nos. 102-2022 (Modified to T.N.8/53)	1.2-8.3 Mc/s or	WZ.12919/C, Sht. 5	10X
	1.2-8.3 Mc/s	WZ.12919/C, Sht. 2 (Note: Type 1196A Adaptor required)	10XJ
"Transarctic I & II" (Modified to T.N.2/53)	1.6-3.8 Mc/s or	WZ.12919/C, Sht. 5	10X
	1.6-3.8 Mc/s	WZ.12919/C, Sht. 2	10XJ
	4 Mc/s	WZ.12919/C, Sht. 5	10X
	5 Mc/s	WZ.12919/C, Sht. 2	10XJ
	6 Mc/s	WZ.12919/C, Sht. 2	10XJ
Type 727 (Modified to T.N.2/53)	1.6-3.0 Mc/s or	WZ.12919/C, Sht. 5	10X
	1.6-3.0 Mc/s	WZ.12919/C, Sht. 2 (Note: Type 1196A Adaptor required)	10XJ
"Fulmar"	1.6-3.8 Mc/s	WZ.12919/C, Sht. 3	10XJ

<i>Equipment</i>	<i>Fundamental Crystal Frequency Band</i>	<i>Drawing Identity</i>	<i>Type of Crystal</i>
"Seaspan"	2-067-2-119 Mc/s	WZ.12919/C, Sht. 5	10X
		or WZ.12919/C, Sht. 3	10XJ
	3-679-3-732 Mc/s	WZ.12919/C, Sht. 5	10X
		or WZ.12919/C, Sht. 3	10XJ

<i>Equipment</i>	<i>Fundamental Crystal Frequency Band</i>	<i>Drawing Identity</i>	<i>Type of Crystal</i>





### RECEIVERS

<i>Equipment</i>	<i>Fundamental Crystal Frequency Band</i>	<i>Drawing Identity</i>	<i>Type of Crystal</i>
"Atalanta"	700 kc/s	M.W.T. Code 200/8/50	10X
"Albatross"	2.02-3.28 Mc/s or 2.02-3.28 Mc/s	WZ.12919/C, Sht. 2 WZ.12919/C, Sht. 5	10XJ 10X
"Electra"	690 kc/s 690 kc/s 690 kc/s	W.34231/B, Ref. B W.34231/B, Ref. A W.7024/C, Sht. 1, Ref. B	QR22 QR23 1668
"Guardian I, II, III IV & V"	2.170-3.230 Mc/s or 2.170-3.230 Mc/s	WZ.12919/C, Sht. 5 WZ.12919/C, Sht. 2	10X 10XJ

<i>Equipment</i>	<i>Fundamental Crystal Frequency Band</i>	<i>Drawing Identity</i>	<i>Type of Crystal</i>



V.H.F.

<i>Equipment</i>	<i>Fundamental Crystal Frequency Band</i>	<i>Drawing Identity</i>	<i>Type of Crystal</i>
"Argonaut"	8550-000 kc/s 8600-000 kc/s 13150-000 kc/s 13200-000 kc/s 3404-102 kc/s 4820-898 kc/s 3409-657 kc/s 4848-675 kc/s 3415-212 kc/s 4876-453 kc/s 3420-767 kc/s 4904-231 kc/s 3426-322 kc/s 441-667 kc/s 444-445 kc/s 13050 kc/s 13100 kc/s 4932-009 kc/s 4959-786 kc/s	XL/C.65/C XL/C.65/C XL/C.65/C XL/C.65/C XL/C.61/C XL/C.61/C XL/C.61/C XL/C.61/C XL/C.61/C XL/C.61/C XL/C.61/C XL/C.61/C XL/C.60/C XL/C.66/C XL/C.66/C XL/C.65/C XL/C.65/C XL/D.06/C XL/D.06/C	
Optional crystals for channels above 39			
"Nautilus" Transmitter/ Receiver	1700-7999-99 kc/s 22000-44999-99 kc/s	XLC/33/C XLC/42/C	QO.1670A QO.1670F
H16 (FM)	265-499-99 kc/s 279-499-99 kc/s	50/25/10 50/25/11	QO.1655C QO.1655C
(Radiated frequency 78-100 Mc/s)	500-650 kc/s	50/25/11	QO.1655D
(Radiated frequency 36-44 Mc/s)	500-650 kc/s 1600-4299-99 kc/s	50/25/12 50/25/20	QO.1655D QO.1655E
H16 (AM)	22000-33000 kc/s 39000-43500 kc/s 10000-20499-99 kc/s	50/25/24 50/25/23 30/25/2	QO.1655K QO.1655K QO.1656A
H16 (FM or AM) Transmitter Receiver	8000-16999-99 kc/s 8000-16999-99 kc/s	50/25/22 50/25/140	QO.1655H QO.1655H
HP51	17000-21999-99 kc/s 22000-44999-99 kc/s	XLB/53/C XLB/54/C	QO.1670E QO.1670F
HP52	17000-21999-99 kc/s 22000-44999-99 kc/s	XLB/53/C XLB/54/C	QO.1670E QO.1670F
HP55	17000-21999-99 kc/s 22000-44999-99 kc/s	XLB/53/C XLB/54/C	QO.1670E QO.1670F
HP56	17000-21999-99 kc/s 22000-44999-99 kc/s	XLB/53/C XLB/54/C	QO.1670E QO.1670F

<i>Equipment</i>	<i>Fundamental Crystal Frequency Band</i>	<i>Drawing Identity</i>	<i>Type of Crystal</i>
HP82 Transmitter Receiver	1700-7999.99 kc/s 22000-44999.99 kc/s	20/75/30 XLB/56/C	QO.1670A QO.1670F
HR22	1600-4299.99 kc/s 4300-4999.99 kc/s 5000-7999.99 kc/s 17000-21999.99 kc/s 99.925 kc/s	State for HR22 State for HR22 State for HR22 State for HR22 W.39725, Sht. 3, ref. 66	QO.1655E QO.1655F QO.1655G QO.1655J QR.132
S.S.B. Type NT.201	1700-7999.99 kc/s 8000-15000 kc/s	2010 2011	QO.1670A QO.1670B
Redifon Type GR174	·9482.4 kc/s ± ·003 % 4397 kc/s ± ·003 %		M SM

<i>Equipment</i>	<i>Fundamental Crystal Frequency Band</i>	<i>Drawing Identity</i>	<i>Type of Crystal</i>

MISCELLANEOUS

<i>Equipment</i>	<i>Fundamental Crystal Frequency Band</i>	<i>Drawing Identity</i>	<i>Type of Crystal</i>
"Lodestar"	100 kc/s		QO.1654B (200/B/100)
Radio telephone terminal equipment	3.0 kc/s		1651A
Speech inversion equipment	3 kc/s	50/125/83	QO.1651A

<i>Equipment</i>	<i>Fundamental Crystal Frequency Band</i>	<i>Drawing Identity</i>	<i>Type of Crystal</i>

