



CHELTON

**VCS-40A VHF COMMUNICATION SYSTEM
MAINTENANCE MANUAL**

SECTION 8 – CD-402B CONTROL DISPLAY UNIT ILLUSTRATED PARTS LISTS

1. General

This section contains parts lists for the CD-402B assembly and for each of its modules. The parts list for each module is accompanied by an assembly drawing that shows the location of each component in the list.

**CHELTON****VCS-40A VHF COMMUNICATION SYSTEM
MAINTENANCE MANUAL****2. CD-402B Final Assembly Parts Lists****A. 5V Gray (8.33 kHz)**

Item	Qty	UM	Part	Title	Reference
0	RF	RF	300-04746-0000	FINAL ASSEMBLY DISPLAY MODULE (COM/NAV)	
1	1	EA	200-08821-0000	PARTS LIST, LIGHT BD	
2	1	AR	012-01304-0000	TAPE POLY FILM 3/4	
3	1	EA	300-040535-01	ASSEMBLY, LCD DRIVER BOARD (CD-402B)	
4	1	EA	155-02542-0000	DLCD MODULE CABLE	
5	1	EA	012-05091-0000	FILTER COK41NAV	
6	AR	EA	012-05143-0000	ALIGNMENT SHIM	
7	AR	AR	016-01412-0000	LOCTITE 425	
8	AR	AR	016-01082-0000	DC RTV 3145	
9	AR	AR	016-01122-0000	EPOXY DEVCON 14250	
10	AR	AR	016-01139-0000	SUPERBONDER 414	
11	AR	AR	016-01144-0000	TAK PAK ADV 122-92	
12	AR	AR	016-01144-0001	ACCELERATOR 11525	
13	6	IN	16026-0	WIRE 26 AWG 7STR BLK	
14	6	IN	16026-2	WIRE 26 AWG 7STR RED	
15	2	EA	030-03010-0006	ZEBRA STRIP	
16	2	EA	030-03010-0007	ZEBRA STRIP	
17	1	EA	136-040470-01	DICHROIC LCD DISPLAY	
18	4	EA	047-09042-0000	SPRING CONTACT	
19	1	EA	073-00846-0002	BEZEL COM/NAV PLT	
20	1	EA	073-00847-0001	TOP PLT W/FIN	
21	1	EA	088-02407-0000	ZEBRA SUPPORT COM	
22	4	EA	089-05103-0003	SCREW FHP 0-80 X 3/16	

B. 28V Black (8.33 kHz)

Item	Qty	UM	Part	Title	Reference
0	RF	RF	300-04746-0000	FINAL ASSEMBLY DISPLAY MODULE (COM/NAV)	
1	1	EA	200-08821-0000	PARTS LIST, LIGHT BD	
2	1	AR	012-01304-0000	TAPE POLY FILM 3/4	
3	1	EA	300-040535-01	ASSEMBLY, LCD DRIVER BOARD (CD-402B)	
4	1	EA	155-02542-0000	DLCD MODULE CABLE	
5	1	EA	012-05091-0000	FILTER COWNAV	
6	AR	EA	012-05143-0000	ALIGNMENT SHIM	
7	AR	AR	016-01412-0000	LOCTITE 425	

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Item	Qty	UM	Part	Title	Reference
8	AR	AR	016-01082-0000	DC RTV 3145	
9	AR	AR	016-01122-0000	EPOXY DEVCON 14250	
10	AR	AR	016-01139-0000	SUPERBONDER 414	
11	AR	AR	016-01144-0000	TAK PAK ADV 122-92	
12	AR	AR	016-01144-0001	ACCELERATOR11525	
13	6	IN	16026-0	WIRE 26 AWG 7STR BLK	
14	6	IN	16026-2	WIRE 26 AWG 7STR RED	
15	2	EA	030-03010-0006	ZEBRA STRIP	
16	2	EA	030-03010-0007	ZEBRA STRIP	
17	1	EA	136-040470-01	DICHROIC LCD DISPLAY	
18	4	EA	047-09042-0000	SPRING CONTACT	
19	1	EA	073-00846-0002	BEZEL COWNAV PLT	
20	1	EA	073-00847-0001	TOP PLT W/FIN	
21	1	EA	088-02407-0000	ZEBRA SUPPORT COM	
22	4	EA	089-05103-0003	SCREW FHP 0-80 X 3/16	



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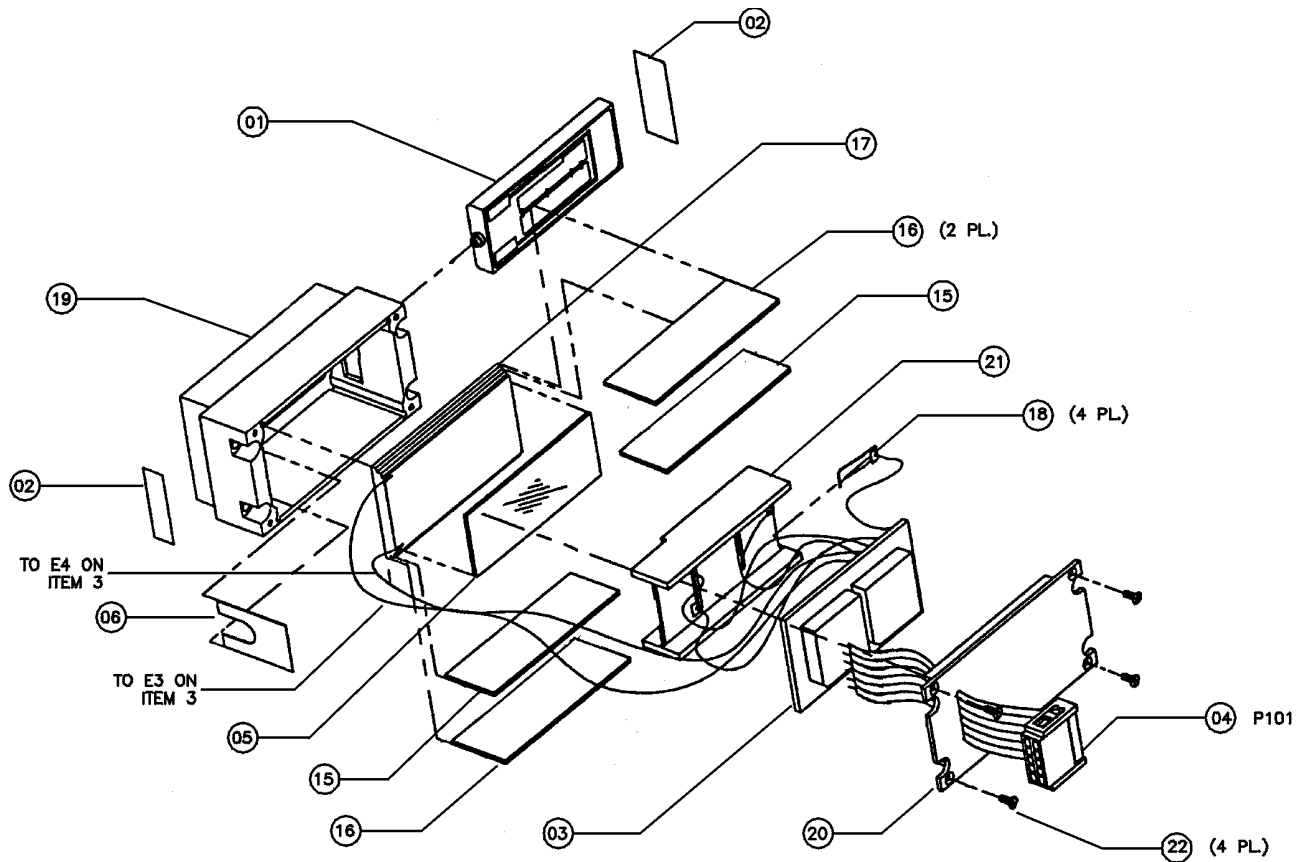


Figure 8-1. CD-402B Control Display Unit (8.33 kHz) Final Assembly Parts Locator

**CHELTON****VCS-40A VHF COMMUNICATION SYSTEM
MAINTENANCE MANUAL****3. CD-402B Top Assembly Parts Lists****A. 5V Gray (8.33 kHz)**

Item	Qty	UM	Part	Title	Reference
1	1	EA	073-00803-0002	BEZEL MOD GRY CD-402B	
2	1	EA	047-07901-0001	CHAS MAIN DFS-43	
3	RF	RIF	300-04174-0000	COM DSPLY CD-402B	
4	1	EA	047-07902-0000	COVER DUST CD-402B	
5	1	EA	047-07751-0000	DUST COVER	
6	4	EA	088-00084-0001	FILTER LAMP LT BLU	
7	1	EA	009-07589-0000	FLEX CIRCUIT CD-402	W4
8	1	EA	030-02759-0000	HEADER F/M	P1
9	1	EA	076-01767-0007	KNOB SKIRT	
10	1	EA	076-01761-0000	KNOB W/PLATING	
11	1	EA	076-01762-0000	KNOB W/PLATING	
12	4	EA	037-00220-0000	LAMP MIN T-1 5V	DS3 DS4 DS5 DS6
13	2	EA	047-07748-0000	LOCKING PAWL	
14	AR	AR	016-01007-0005	LOCTITE 222	
15	1	EA	057-03231-0001	MOD DECAL	
16	2	EA	089-02664-0006	NUT FLAT 3/8-32	
17	2	EA	089-02140-0000	NUT LOCK 4-40	
18	2	EA	089-02679-0000	NUT SQUARE 4-40	
19	1	EA	088-02116-0042	PANEL COM GRAY CD-402B	
20	1	EA	200-04746-0002	PARTS LIST, 5V DISPLAY MODULE (COM/NAV)	
21	1	EA	200-07582-0005	PARTS LIST, COM DSPLY CD-402B	
22	1	EA	030-01308-0000	POLARIZING KEY	
23	1	EA	088-02586-0001	PUSHBUTTON SNAP-ON	
24	RF	RF	002-00718-0000	SCHEMATIC, COM CONTROL DISPLAY	
25	3	EA	089-05923-0007	SCREW BHP 2-56 X 7/16	
26	4	EA	089-05927-0004	SCREW BHP 4-40 X 1/4	
27	4	EA	089-05927-0003	SCREW BHP 4-40 X 3/16	
28	4	EA	089-06008-0003	SCREW FHP 4-40 X 3/16	
29	4	EA	089-07125-0008	SCREW FLHS 2-56 X .500	
30	1	EA	089-05850-0003	SCREW SET 1-72 X 3116	
31	4	EA	089-06204-0003	SCREW SET 4-40 X 3/32	
32	2	EA	089-06204-0005	SCREW SET 4-40 X 5/32	
33	2	EA	089-07144-0000	SCREW SHH 4-40 X .562	
34	4	EA	033-00168-0000	SOCKET LAMP	XDS2 XDS3 XDS4 XDS5

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Item	Qty	UM	Part	Title	Reference
35	2	EA	078-00252-0013	SPRING COMPRESSION	
36	1	EA	031-00555-0000	SWITCH DUAL CONCENTRIC	S2
37	1	EA	031-00758-0000	SWITCH PUSHMMNTRY SPEC	S3
38	1	EA	031-00566-0000	SWITCH ROTARY	
39	1	EA	031-00412-0001	SWITCH, PUSHBUTTON	
40	1	IN	012-01005-0005	TAPE MYLAR 1 W	
41	3	EA	089-08510-0003	WASHER FLAT SS .093	
42	4	EA	089-08024-0030	WASHER FLT STD #3	
43	3	EA	089-08107-0034	WASHER SPLT LK #2	
44	4	EA	089-08109-0034	WASHER SPLT LK #4	
45	3	IN	16091-0	WIRE 24 AWG 19STR BILK	
46	3	IN	16091-2	WIRE 24AWG 19STR RED	
47	4	IN	16031-1	WIRE 28AWG WIRE WRAP	

B. 28V Black (8.33 kHz)

Item	Qty	UM	Part	Title	Reference
1	1	EA	073-00803-0001	BEZEL MOD BLK CD-402B	
2	1	EA	047-07901-0001	CHAS MAIN DFS-43	
3	RF	RF	300-04174-0000	COM DSPLY CD-402B	
4	1	EA	047-07902-0000	COVER DUST CD-402B	
5	1	EA	047-07751-0000	DUST COVER	
6	4	EA	088-00084-0001	FILTER LAMP LT BLU	
7	1	EA	009-07589-0000	FLEX CIRCUIT CD-402	W4
8	1	EA	030-02759-0000	HEADER F/M	P1
9	1	EA	076-01767-0003	KNOB KNURLED	
10	1	EA	076-01760-0000	KNOB KNURLED .128	
11	1	EA	076-01761-0000	KNOB W/PLATING	
12	1	EA	076-01762-0000	KNOB W/PLATING	
13	4	EA	037-00012-0006	LAMP MIN T-1 28V	DS3 DS4 DS5 DS6
14	2	EA	047-07748-0000	LOCKING PAWL	
15	AR	AR	016-01007-0005	LOCTITE 222	
16	1	EA	057-03231-0001	MOD DECAL	
17	2	EA	089-02664-0006	NUT FLAT 3/8-32	
18	2	EA	089-02140-0000	NUT LOCK 4-40	
19	2	EA	089-02679-0000	NUT SQUARE 4-40	

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Item	Qty	UM	Part	Title	Reference
20	1	EA	088-02116-0041	PANEL COM BK CD-402B	
21	1	EA	200-04746-0003	PARTS LIST, 28V DISPLAY MODULE (COM/NAV)	
22	1	EA	200-07582-0001	PARTS LIST, COM DSPLY CD-402B	
23	1	EA	200-04149-0000	PARTS LIST, SW RTRY CD-402A	
24	1	EA	030-01308-0000	POLARIZING KEY	
25	1	EA	088-02586-0001	PUSHBUTTON SNAP-ON	
26	RF	RF	002-00718-0000	SCHEMATIC, COM CONTROL DISPLAY	
27	3	EA	089-05923-0007	SCREW BHP 2-56 X 7/16	
28	4	EA	089-05927-0004	SCREW BHP 4-40 X 1/4	
29	4	EA	089-05927-0003	SCREW BHP 4-40 X 3/16	
30	4	EA	089-06008-0003	SCREW FHP 4-40 X 3/16	
31	4	EA	089-07125-0008	SCREW FLHS 2-56 X .500	
32	1	EA	089-05850-0003	SCREW SET 1-72 X 3/16	
33	4	EA	089-06204-0003	SCREW SET 4-40 X 3/32	
34	6	EA	089-07185-0000	SCREW SET 4-40 X 3/32	
35	2	EA	089-06204-0005	SCREW SET 4-40 X 5/32	
36	2	EA	089-07144-0000	SCREW SHH 4-40 X .562	
37	4	EA	033-00168-0000	SOCKET LAMP	XDS2 XDS3 XDS4 XDS5
38	2	EA	078-00252-0013	SPRING COMPRESSION	
39	1	EA	031-00555-0000	SWITCH DUAL CONCENTRIC	S2
40	1	EA	031-00758-0000	SWITCH PUSHMMNTRY SPEC	S3
41	1	EA	031-00412-0001	SWITCH, PUSHBUTTON	
42	1	IN	012-01005-0005	TAPE MYLAR 1 W	
43	3	EA	089-08510-0003	WASHER FLAT SS .093	
44	4	EA	089-08024-0030	WASHER FLT STD #3	
45	3	EA	089-08107-0034	WASHER SPLT LK #2	
46	4	EA	089-08109-0034	WASHER SPLT LK #4	
47	3	IN	16091-0	WIRE 24 AWG 19STR BLK	
48	3	IN	16091-2	WIRE 24AWG 19STR RED	
49	4	IN	16031-1	WIRE 28AWG WIRE WRAP	

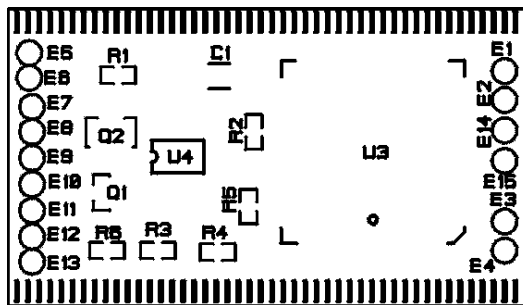
**CHELTON****VCS-40A VHF COMMUNICATION SYSTEM
MAINTENANCE MANUAL****4. CD-402B LCD Driver Module Parts List**

Item	Qty	UM	Part	Title	Reference
1	1	EA	210-040020-102	CAP 1000pF 5% 50V COG 0805	C1
2	1	EA	007-00383-0004	XSTR 2N2222A	Q1
3	1	EA	007-00692-0000	XSTRNPN BCX56S0T89	Q2
4	1	EA	234-040024-1823	RES 182K OHM 1 % 100PPM 1/1 6W TKF 0603	R1
5	2	EA	234-040024-2742	RES 27.4K OHM 1 % 100PPM 1/1 6W TKF 0603	R2 R3
6	1	EA	234-040024-3923	RES 392K OHM 1 % 100PPM 1/1 6W TKF 0603	R4
7	1	EA	234-040024-7501	RES 7500 OHM 1% 100PPM 1/16W TKF 0603	R6
8	1	EA	234-040024-9091	RES 9.09K OHM 1 % 100PPM 1/1 6W TKF 0603	R5
9	3	EA	120-02367-0000	I.C., DICHROIC LCD DRIVER (INTERNAL LOCK)	U1 U2 U3
10	1	EA	120-03053-0011	IC LM258 SO-8 OP AMP	U4

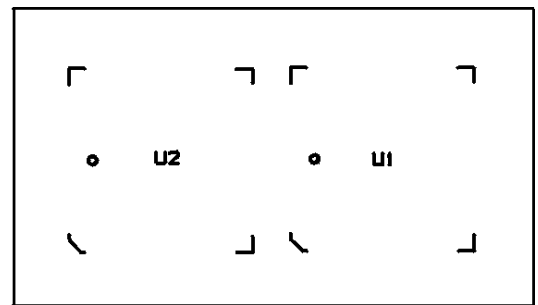


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NEAR SIDE



FAR SIDE

Figure 8-2. CD-402B Control Display Unit (8.33 kHz) LCD Driver Module Parts Locator

**CHELTON****VCS-40A VHF COMMUNICATION SYSTEM
MAINTENANCE MANUAL****5. CD-402B Control Display Module Parts List**

Item	Qty	UM	Part	Title	Reference
1	1	EA	111-00009-0011	CAP CCR .1UF 10%	C1
2	1	EA	096-01155-0002	CAP TA 4.7UF 20V	C2
3	1	EA	111-00009-0011	CAP CCR .1UF 10%	C3
4	1	EA	111-00009-0024	CAP CR 33PF 10%	C4
5	1	EA	111-00009-0024	CAP CR 33PF 10%	C5
6	1	EA	11 1-00009-0024	CAP CR 33PF 10%	C6
7	1	EA	.111-00009-0024	CAP CR 33PF 10%	C7
8	1	EA	111-00009-0024	CAP CR 33PF 10%	C8
9	1	EA	111-00009-0024	CAP CR 33PF 10%	C9
10	1	EA	097-00135-0001	CAP AL 10UF 50V	C10
11	1	EA	097-00135-0001	CAP AL 10UF 50V	C11
12	1	EA	097-00135-0001	CAP AL 10UF 50V	C 12
13	1	EA	097-00135-0001	CAP AL 10UF 50V	C 13
14	1	EA	111-00009-0024	CAP CR 33PF 10%	C 14
15	1	EA	007-06046-0008	DIO	CR 1
16	1	EA	007-06046-0008	DIO	CR 2
17		EA	007-06046-0008	DIO	CR3
18		EA	007-06111-0000	DIO S IN4157	CR 3
19	1	EA	030-02830-0013	TERMINAL PC HDR	J2001
20	1	EA	030-02348-0017	CONN SUB-D 25P, WIRE WRAP, STRT	J2002
21	1	EA	030-02830-0005	TERMINAL PC HEADER	J2005
22	1	EA	030-02348-0017	CONN SUB-D 25P, WIRE WRAP, STRT	J2006
23	1	EA	030-02832-0002	TERMINAL PC HEADER	J2010
24	1	EA	030-02348-0017,	CONN SUB-D 25P, WIRE WRAP, STRT	J2015
25	1	EA	030-02348-0017	CONN SUB-D 25P, WIRE WRAP, STRT	J2021
26	1	EA	030-01286-0000	SHUNT 100 INCH	P2010
27	1	EA	131-00200-0053	RES CF 20 .25W	R1
28	1	EA	015-00113-0004	RES 4308R-1 02-103	R2
29	1	EA	131-00103-0053	RES CF 10K .25W	R3
30	1	EA	131-00103-0053	RES CF 10K .25W	R4
31	1	EA	015-00160-0001	RES MOD 100K 150 V2%	R5
32	1	EA	131-00104-0053	RES CF 100K .25W	R6
33	1	EA	008-00096-0001	TERMINAL TEST PNT	TP2
34	1	EA	00840066-0001	TERMINAL TEST PNT	TP3
35	1	EA	008-00096-0001	TERMINAL TEST PNT	TP4
36	1	EA	120-03278-0000	7660 VLTG CONVERTR	U1
37	1	EA	120-06007-0009	CMOS 4011	U2

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Item	Qty	UM	Part	Title	Reference
38	1	EA	120-03278-0000	7660 VLTG CONVERTR	U3
39	1	EA	120-06080-0001	IC MC14584BALD	U4
40		EA	002-07582-0000	SCH COM DSP CD402B	
41		EA	002-07582-0001	SCH NAV DSP CD412B	
42		EA	002-07582-0002	SCH TPR DSP CD422B	
43	1	EA	009-07582-0000	PC BID DSPLY CD402B	
44	1	AR	016-01040-0000	COATING TYPE AR	
45	1	EA	030-01333-0001	LOCK TAB MD90000V3	
46	2	EA	089-05927-0004	SCR BHP 4-40X1/4	
47	2	EA	089-08109-0034	WSHR SPLT LK #4	
48	2	EA	090-00710-0011	SPCR ROLLOVER THD	

**CHELTON****VCS-40A VHF COMMUNICATION SYSTEM
MAINTENANCE MANUAL****6. CD-402B Rotary Switch Parts List**

Item	Qty	UM	Part	Title	Reference
1	0	AR	016-01007-0005	LOCTITE 222	
2	1	EA	031-00554-0000	SW ROTARY	
3	1	EA	047-07744-0000	MTG PLATE	
4	2	EA	076-01734-0063	SPACER. TUBULAR.	
5	4	EA	089-08517-0000	WASHER FLAT .125	
6	1	EA	133-00391-0000	RES V 500 OHM	