

Partlist exported from OBXVoice/OBXVox_hostboard_rev2.sch at 09/10/2013 8:52 PM BoM rev 2.1

Device/refdes in *italics* are omitted for host board builds that use carrier board for 1 to 4 voices.

Connectors

Qty	Value	Device/Refdes	Part desc./number/vendor
3	KK-156-3	Headers AA, CC, GG	Molex #26-48-1031, Mouser# 538-26-48-1031
1	KK-156-4	Header FF	Molex #26-48-1041, Mouser# 538-26-48-1041
1	KK-156-8	Header BB	Molex #26-48-1081, Mouser# 538-26-48-1081
2	KK-156-10	Header DD, EE	Molex #26-48-1101, Mouser# 538-26-48-1101
1	MTA04-156	J1	Molex #26-60-4040, Digikey# WM4622-ND

4 of the following header Digikey# A19423-ND

1	GATE 1x2	<i>JP10</i>
1	OUTPUT 1x2	<i>JP1</i>
1	EXT VOL 1x2	JP13
1	LFO 1x2	JP15

13 of the following header Digikey# A19470-ND

1	1V/OCT 1x3	<i>JP11</i>
1	FTA 1x3	<i>JP7</i>
1	FTB 1x3	<i>JP6</i>
1	EXT BEND 1x3	JP9
1	EXT FMLVL1x3	JP8
1	EXT IN 1x3	<i>JP2</i>
1	EXT LFOCV1x3	JP14
1	EXT PW1 1x3	JP3
1	EXT PW2 1x3	JP4
1	EXT VCFCV1x3	JP5
1	EXTVBDEP 1x3	JP12
1	FM OSC1 1x3	JP16
1	FM OSC 2 1x3	JP17

Capacitors, Beads

2	FB 60@100MHz L1, L2		Mouser# 81-BL01RN1A1F1J, Digikey# P9820BK-ND
23	1nF	C5, C6, C7, C8, C9, C10, C11, C12, C13, C14, C15, C23, C24, C25, C26, C27, C28, C29, C30, C31, C40, C45, C46	Digikey# 399-1147-1-ND
1	6u8 tant	C32	Digikey# 478-1921-ND
1	10n	C41 X7R	Digikey# P4513-ND
4	10uF	C4, C20, C36, C49	Digikey# P5161-ND (C49 was 6u8)
1	22n	C44 poly	Digikey# P4717-ND
1	47n	C37 X7R	Digikey# 445-5256-ND
2	100n X7R	C22, C43	Digikey# 399-4329-ND
19	100n 0805 SMT	C1, C2, C16, C18, C19, C21, C34, C35, C47, C48, C50, C51, C52, C53, C54, C55, C56, C57, C58	Digikey# 1276-1003-1-ND
2	100n poly	C38, C42	Digikey# P4525-ND

1	100p	C39	Digikey# 445-4726-ND
3	100uF	C3, C17, C33	Digikey# P5182-ND

Resistors, 1/4W 5% unless otherwise indicated

7	1K	R3, R11, R7, R15, R55, R137, R145, R156, R161 R167, R168	Digikey# 1.0KQBK-ND
1	1K 1%	R68	Digikey# 1.00KXBK-ND
1	1K15 1%	R141	Digikey# 1.15KXBK-ND
1	1M5	R69	Digikey# 1.5MGACT-ND
3	2K2	R149, R151, R152	Digikey# 2.2KQBK-ND
1	2M2	R78	Digikey# 2.2MQBK-ND
2	3K3	R88, R91	Digikey# 3.3KQBK-ND
2	4K7	R23, R155	Digikey# 4.7KQBK-ND
6	4K87 1%	R5, R6, R8, R13, R14 R16	Digikey# 4.87KXBK-ND
1	5K9 1%	R131	Digikey# 5.90KXBK-ND
1	6K8 1%	R142	Digikey# 6.81KXBK-ND
10	10K	R18, R79, R81, R102 R103, R109, R154, R160	Digikey# 10KQBK-ND
1	10M	R130	Digikey# 10MQBK-ND
11	10R	R121, R122, R148 R169, R170, R171, R172 R173, R174, R175, R176	Digikey# 10QBK-ND
1	15K*	R158 (optional)	Digikey# 15KQBK-ND (not installed by default)
3	20K	R56	Digikey# 20KQBK-ND
7	22K	R38, R51, R89, R90, R92, R123, R144	Digikey# 22KQBK-ND
4	23K7 1%	R48, R49, R50, R140	Digikey# 23.7KXBK-ND
1	27K	R34	Digikey# 27KQBK-ND
19	33K	R17, R19, R20, R21 R22, R32, R40, R41, R58 R59, R60, R61, R62, R63 R64, R85, R101, R104, R150	Digikey# 33KQBK-ND
1	34K8 1%	R67	Digikey# 34.8KXBK-ND
8	47K	R33, R36, R45, R46, R57, R80, R82, R110, R146	Digikey# 47KQBK-ND
2	64K9 1%	R134, R135	Digikey# 64.9KXBK-ND
1	68K	R66	Digikey# 68KQBK-ND
1	75K	R77	Digikey# 75KQBK-ND
21	100K	Alpha 9mm VR1~VR21	Mouser# 317-2090F-100K, Digikey# PTV09A4020U-B104-ND
10	100K	R35, R37, R53, R74 R75, R86, R87, R136, R147	Digikey# 100KQBK-ND
41	100K 1%	R1, R2, R4, R9, R10 R11, R12 R26, R27, R28, R29, R30, R70, R71, R72, R73, R95, R96, R97, R99, R107, R108, R111, R112, R113, R114, R115, R116, R117, R118, R119, R120, R124, R125, R126, R127, R128, R129, R159 R162, R163	Digikey# 100KXBK-ND

9	100R	R24, R25, R31, R39, R54, R105, R106, R157, <i>R164</i> (install for carrier board only)	Digikey# 100QBK-ND
2	120K	<i>R47, R65</i>	Digikey# 120KQBK-ND
3	150K	<i>R44, R76, R84</i>	Digikey# 150KABK-ND
2	432K 1%	R42, R43	Digikey# 432KXBK-ND
1	470K	R138	Digikey# 470KQBK-ND
1	510R	R153	Digikey# 510QBK-ND
1	511K 1%	R139	Digikey# 511KXBK-ND
4	820K	R93, R94, R98, R100	Digikey# 820KQBK-ND (see rev.2 errata, below)
2	10K 25t trimpot	R132, R133	Digikey# 3296Z-103LF-ND
3	100K 1t trimpot	R52, R83, R143	Digikey# 3362P-104LF-ND

Semiconductors

4	LED3MM	LED1, LED2, LED3, LED4	Digikey# P565-ND (amber)
11	1N4148	<i>D1, D2, D3, D4, D5, D6,</i> D7, D8, D9, D10, D11	Digikey# 1N4148FS-ND
1	J112	Q3	Digikey# J112FS-ND (see note 1)
3	2N3904	T1, T2, T3	Digikey# 2N3904FS-ND
8	2N3906	Q1, Q2, Q4, Q5, Q6, Q7, Q8, Q9	Digikey# 2N3906FS-ND
1	4051N	IC7	Digikey# 296-2057-5-ND, Mouser# 595-CD4051BE
3	4053N	IC14, IC15, IC16	Digikey# 296-2059-5-ND. Mouser# 595-CD4053BE
2	LM13700	IC9, IC12	Digikey# LM13700N/NOPB, Mouser# 926-LM13700N/NOPB
6	TL072P	IC4, <i>IC5, IC8, IC13,</i> IC17, <i>IC19</i>	Digikey# 296-1775-5-ND
5	TL074P	IC11, IC18, IC20, IC21 IC22	Digikey# 296-1777-5-ND
1	PIC12C508JN	IC6	Digikey# PIC12C508A-04/P-ND (will need programmed)
1	7805T	IC10	Digikey# LM7805CT-ND
1	7815T	IC1	Digikey# LM7815CTFS-ND
1	7915T	IC2	Digikey# LM7915CTFS-ND

Switches

4 of the following switch Digikey# 432-1169-ND (on/off/on)

1	SHAPE	SW1
1	OSC 2 (level)	SW12
1	NOISE	SW13
1	OCT	SW16

13 of the following switch Digikey# 432-1168-ND (on/on)

3	OSC 1	SW2, SW5, SW11
2	OSC 2	SW3, SW6
1	BEND	SW17
1	FILTER	SW4
1	KBD	SW14
1	MUTE	SW15
1	SYNC	SW9
1	WAVE1	SW7
1	WAVE2	SW10
1	X-MOD	SW8

Notes:

1) The J112 is pinned (flat facing view) as D S G whereas the board pads use the 2N3819's D G S order. Placing the J112 is simple enough: the flat side should face the 10 o'clock direction as the leads go into their respective pads as noted on the silk screen.

Errata for rev1: **(rev2 builders can skip these)**

Refdes swaps:

R45 and R65, values are correct

R51 and R55 (values correct)

R80 and R160 (values correct)

Value changes:

R154 is 10K, board is marked 1K

R155 is 4K7, board is marked 10K

R33 is 47K, board marked 100K

Swap R34 and R35 values: R34 is now 27K, R35 is 100K

R84 is 150K, board is marked 100K

Additions:

Add 1N4148, anode to IC13 pin 1, cathode to IC15 pin 16 (clamp diode)

Errata for rev 2: (rev 2 builders take note)

When building for 1-4 voices using a carrier board, **omit** the following parts from the host board:

C32, C43, C44, C45

D1 through D6

R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R65

R136, R137, R144, R145, R148

IC5, IC9, IC19

J1, JP1, JP2, JP11

L1, L2

Similarly, install these parts on host board when using a carrier board:

R164, R165, R166

OSC1/OSC2 FM fix: resistors R93 and R94 need to be cross-wired to correct a minor oversight where the switches for OSC1 FM and OSC2 FM were in fact affecting the opposing VCO. (FM1 switch was modulating OSC2, etc). The easiest fix is to install R93 and R94 as shown here (820K resistor from R93 left pad to R94 right pad, another 820K resistor from R94 left pad to R93 right pad using wire insulation on the resistor leads):

