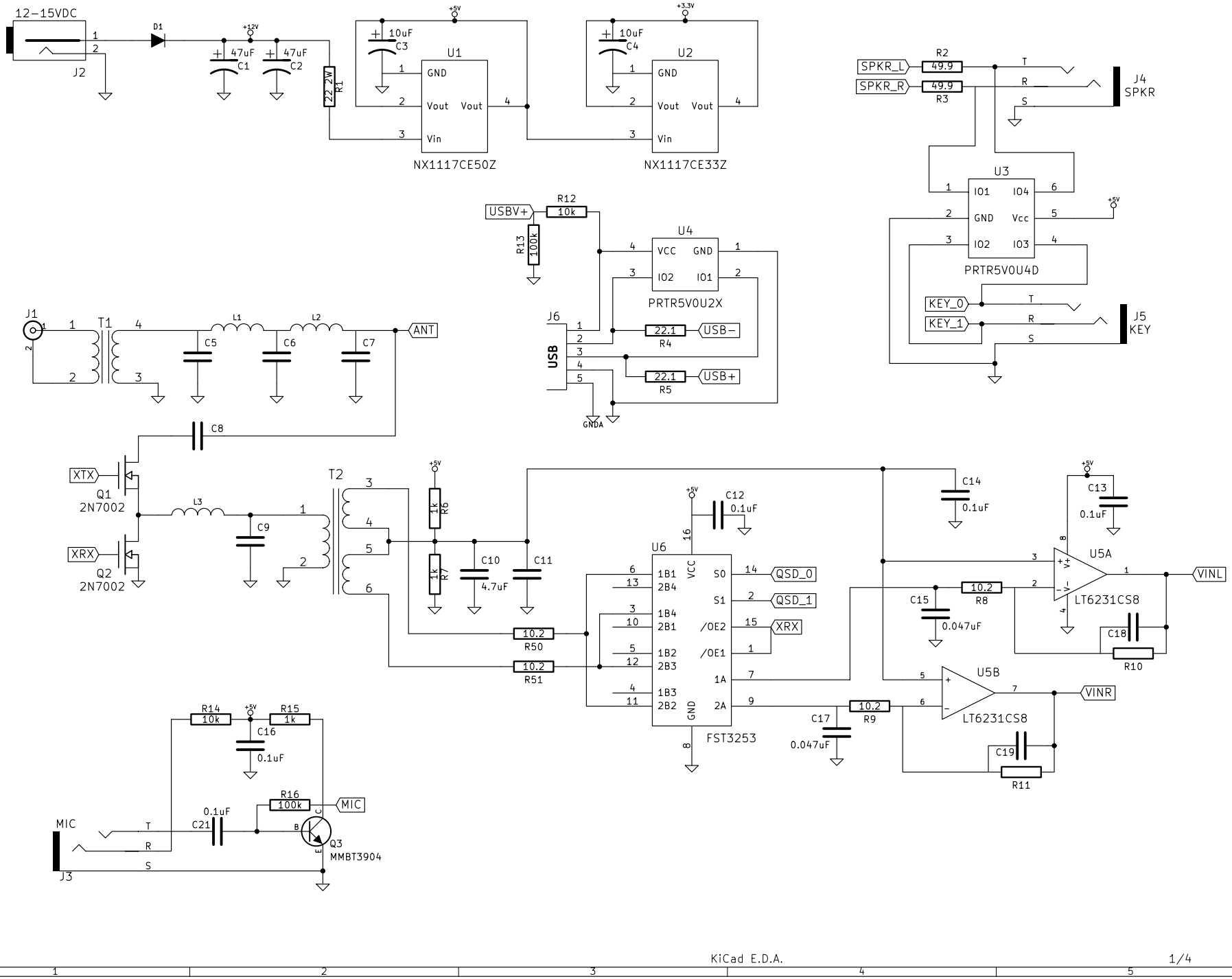
12-15VDC
J2
D1
+12V
47uF
C1
47uF
C2
22 2W
R1
+5V
10uF
C3
U1
GND
Vout
Vout
Vin
NX1117CE50Z
+3.3V
10uF
C4
U2
GND
Vout
Vout
Vin
NX1117CE33Z
SPKR_L
SPKR_R
R2
49.9
R3
49.9
J4
SPKR
T
R
S
U3
IO1
IO4
GND
Vcc
IO2
IO3
PRTR5V0U4D
+5V
KEY_0
KEY_1
J5
KEY
USBV+
R12
10k
R13
100k
U4
VCC
GND
IO2
IO1
PRTR5V0U2X
J6
USB
22.1
R4
USB-
22.1
R5
USB+
GNDA
J1
T1
L1
L2
C5
C6
C7
ANT
C8
XTX
Q1
2N7002
XRX
Q2
2N7002
L3
C9
T2
+5V
1k
R6
1k
R7
C10
4.7uF
C11
C12
0.1uF
U6
1B1
2B4
1B4
2B1
1B2
2B3
1B3
2B2
VCC
GND
S0
S1
/OE2
/OE1
1A
2A
QSD_0
QSD_1
XRX
FST3253
10.2
R50
10.2
R51
C14
0.1uF
C13
0.1uF
U5A
LT6231CS8
C15
0.047uF
10.2
R8
C18
R10
VINL
U5B
LT6231CS8
C17
0.047uF
10.2
R9
C19
R11
VINR
R14
10k
R15
1k
C16
0.1uF
R16
100k
MIC
C21
0.1uF
Q3
MMBT3904
MIC
J3
T
R
S

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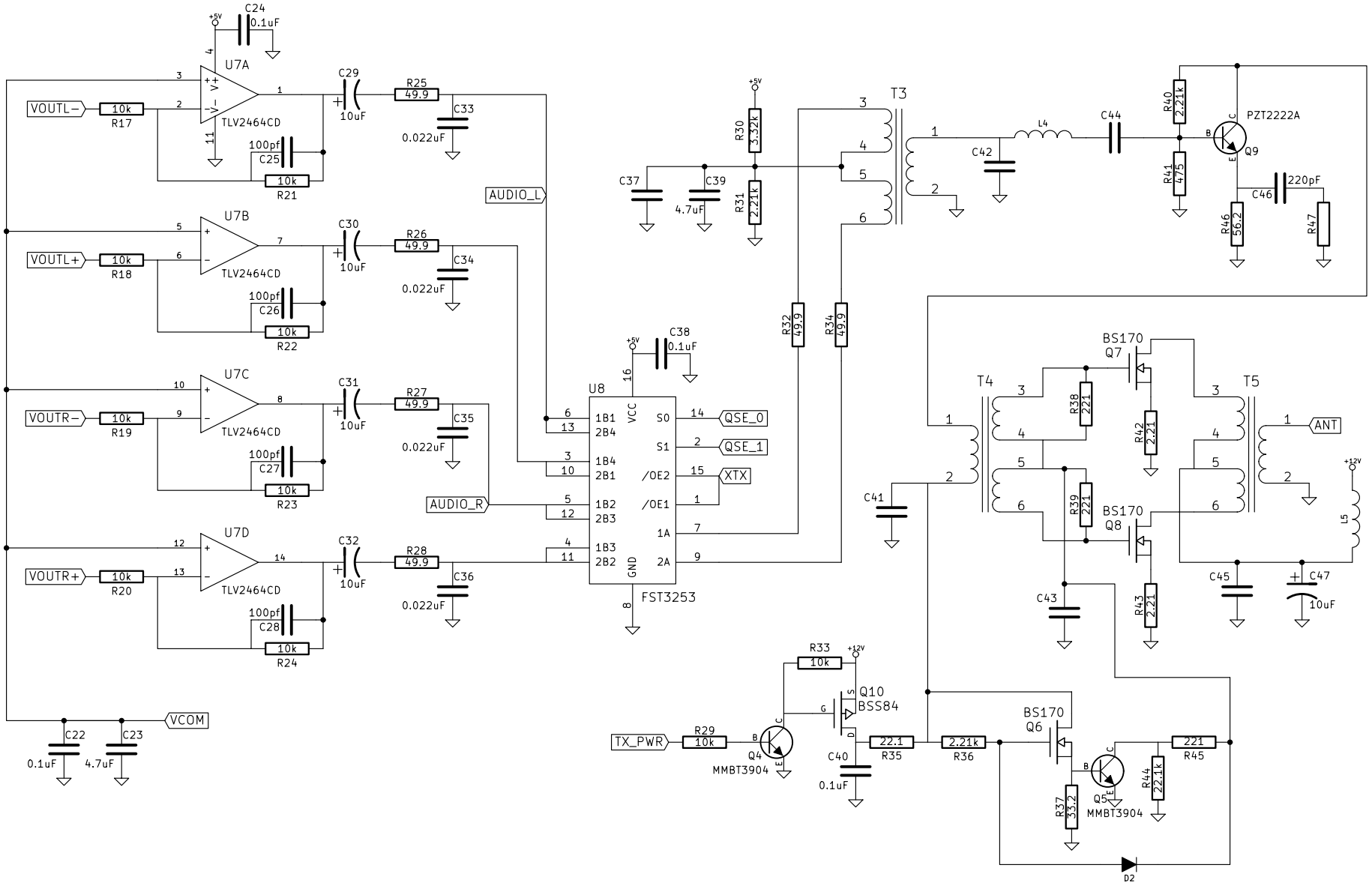

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Date: 18 jul 2012

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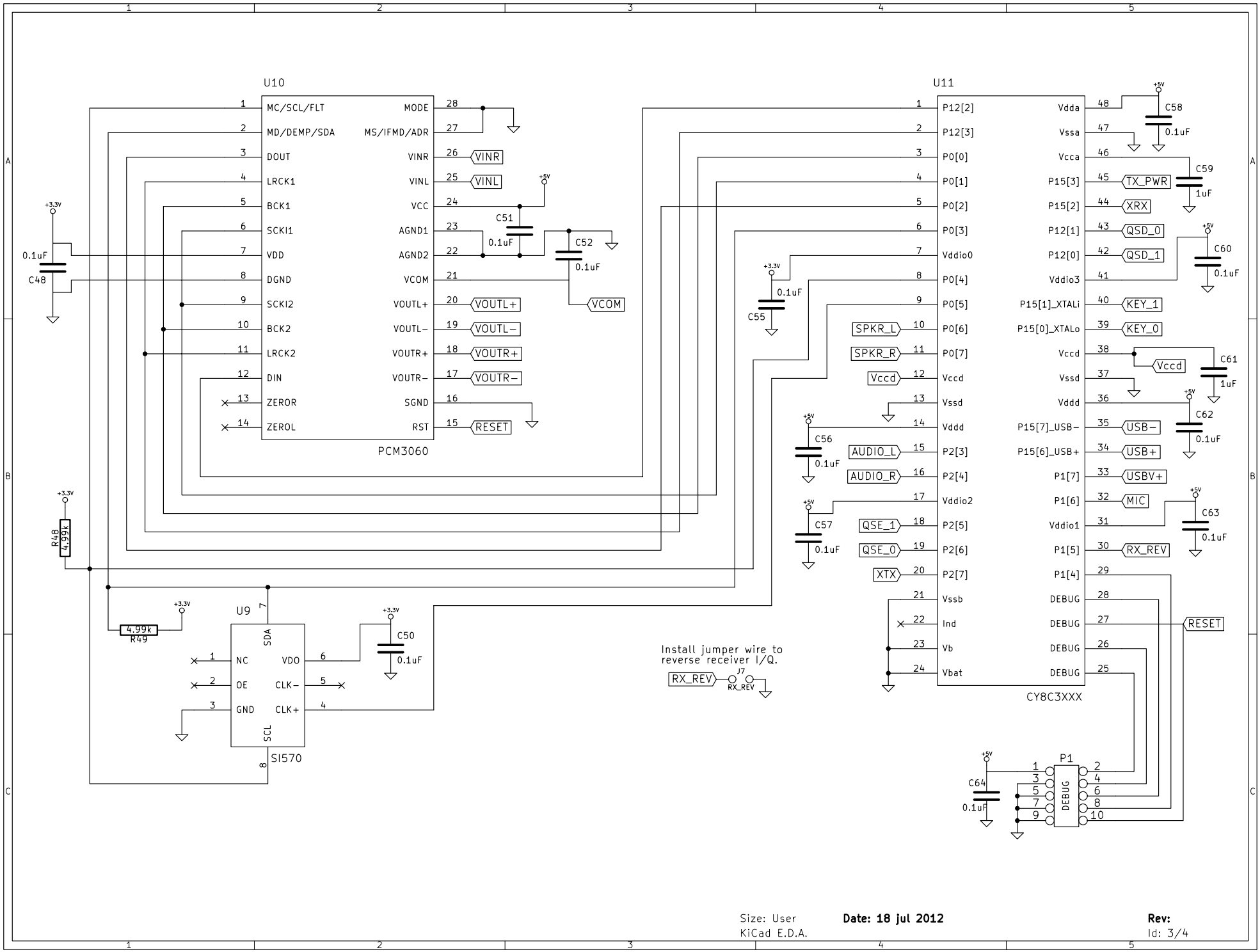

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Band Configuration Worksheet

L1
160m 3.4uH 29T (18 in) #26 T37-2 (red)
80/40m 1.4uH 19T (13 in) #26 T37-2 (red)

L2
40/30/20m 0.8uH 16T (11 in) #26 T37-6 (yellow)
30/20/17m 0.6uH 14T (10 in) #26 T37-6 (yellow)

T1
160m 2x4T (2x6 in) #30 BN-43-2402
80/40m 2x4T (2x6 in) #30 BN-43-2402
40/30/20m 2x4T (2x6 in) #30 BN-61-2402
30/20/17m 2x4T (2x6 in) #30 BN-61-2402

L3
160m 18.7uH 66T (35 in) #30 T30-2 (red)
80/40m 1.6uH 22T (11 in) #30 T25-2 (red)
40/30/20m 0.9uH 18T (10 in) #30 T25-6 (yellow)
30/20/17m 0.78uH 17T (9 in) #30 T25-6 (yellow)

T2
160m 1.4uH 18T (12in) 2x9T (2x7 in) #30 T30-2 (red)
80/40m 1.2uH 18T (11 in) 2x9T (2x6 in) #30 T25-2 (red)
40/30/20m 0.69uH 16T (9in) 2x8T (2x7 in) #30 T25-6 (yellow)
30/20/17m 0.6uH 14T (8 in) 2x7T (2x6 in) #30 T25-6 (yellow)

L4
160m 30uH 83T (44 in) #30 T30-2 (red)
80/40m 4.7uH 33T (19 in) #30 T30-2 (red)
40/30/20m 2.3uH 25T (15 in) #30 T30-6 (yellow)
30/20/17m 1.6uH 21T (14 in) #30 T30-6 (yellow)

T3
160m 2x20T (2x12 in) 7.1uH 40T (22 in) #30 T30-2 (red)
80/40m 2x17T (2x10 in) 5.0uH 34T (19 in) #30 T30-2 (red)
40/30/20m 2x13T (2x9 in) 2.43uH 26T (15 in) #30 T30-6 (yellow)
30/20/17m 2x11T (2x8 in) 1.74uH 22T (14 in) #30 T30-6 (yellow)

L5
Power supply RF choke.
4T (6 in) #26 BN-43-2402

T4
160m 6T (10 in) 2x3T (2x5 in) #30 BN-43-2402
80/40m 6T (10 in) 2x3T (2x5 in) #30 BN-43-2402
40/30/20m 6T (9 in) 2x3T (2x5 in) #30 BN-61-2402
30/20/17m 6T (9 in) 2x3T (2x5 in) #30 BN-61-2402

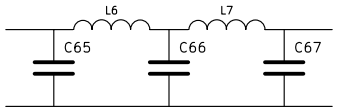
L6
80*/40m 2.5uH 29T (17 in) #26 T37-6 (yellow)
40*/30/20m 1.3uH 18T (12 in) #26 T37-2 (red)

L7
30*/20/17m 0.9uH 15T (10 in) #26 T37-2 (red)
* External LPF required to transmit on these bands.

T5
160m 2x4T (2x6 in) 5T (9 in) #30 BN-43-2402
80/40m 2x4T (2x6 in) 5T (9 in) #30 BN-43-2402
40/30/20m 2x3T (2x5 in) 5T (9 in) #30 BN-61-2402
30/20/17m 2x3T (2x5 in) 5T (9 in) #30 BN-61-2402

	R10, R11	C18, C19	R47	C5, C7	C6	C8	C9	C42	C44	C11, C37, C41 C43, C45	Leaded caps for external LPF C65, C67	C66
160m	1.00k	1500pF	omit	2200pF	4700pF	390pF	5600pF	1000pF	270pF	0.1uF	N/A	N/A
80/40m	1.00k	1500pF	omit	470pF	820pF	560pF	680pF	220pF	220pF	0.1uF	390pF	1000pF
40/30/20m	4.99k	390pF	omit	220pF	470pF	330pF	470pF	100pF	100pF	0.1uF	220pF	470pF
30/20/17m	4.99k	390pF	68.1	150pF	330pF	180pF	220pF	82pF	82pF	0.1uF	100pF	330pF

External LPF



Receiver only mixes with odd harmonics so filters are designed very large. (1/5, 1/3, 3, 5, etc.) Transmitter will mix up on all harmonics (2, 3, 4, etc.) so an external LPF is necessary in some configurations.

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Date: 28 aug 2012

Rev:
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