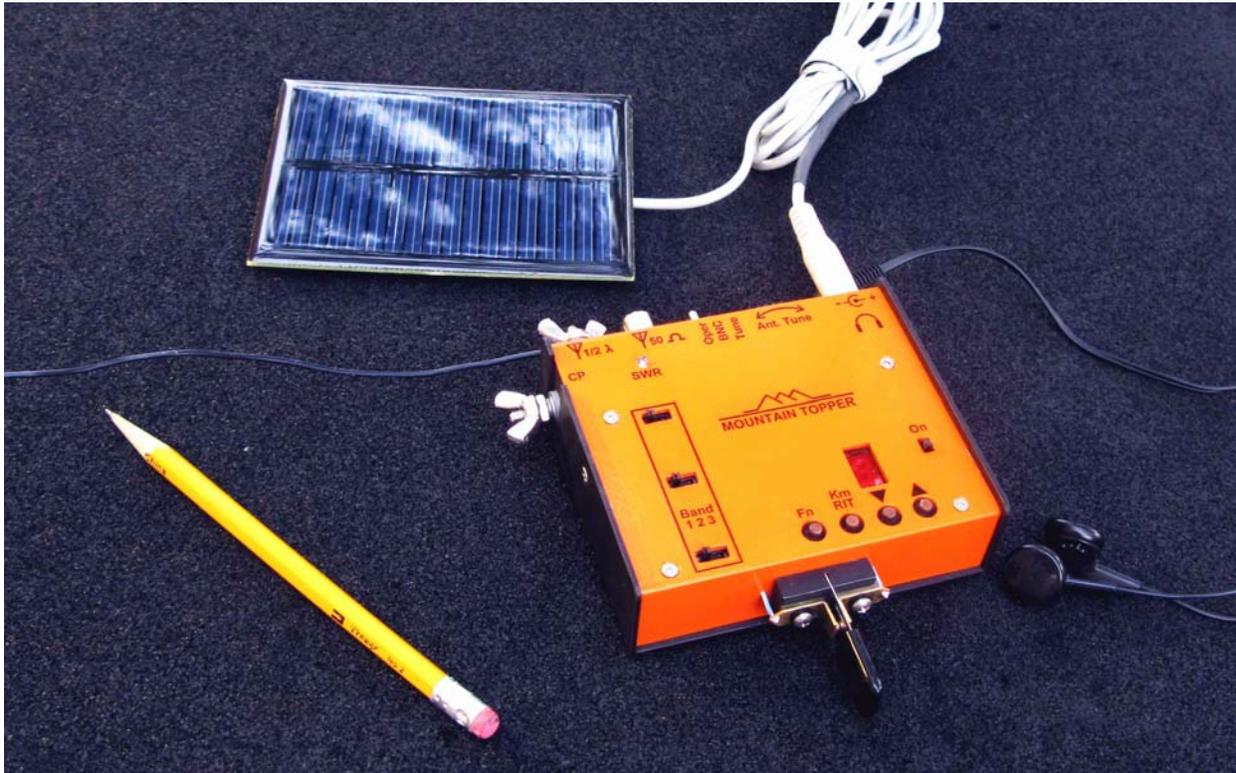
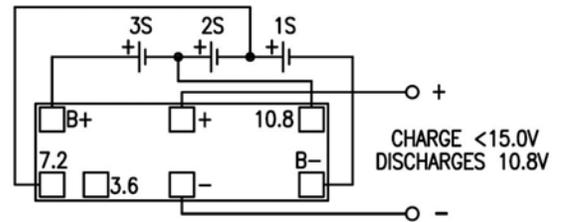
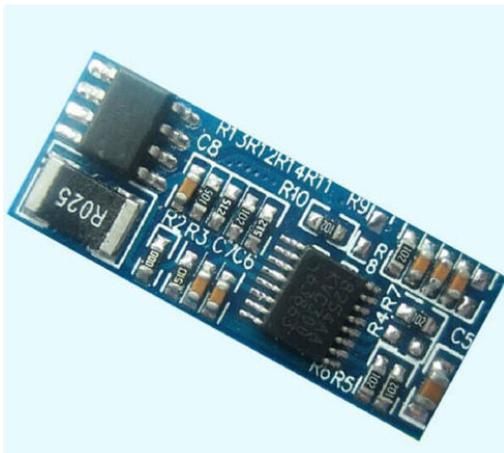
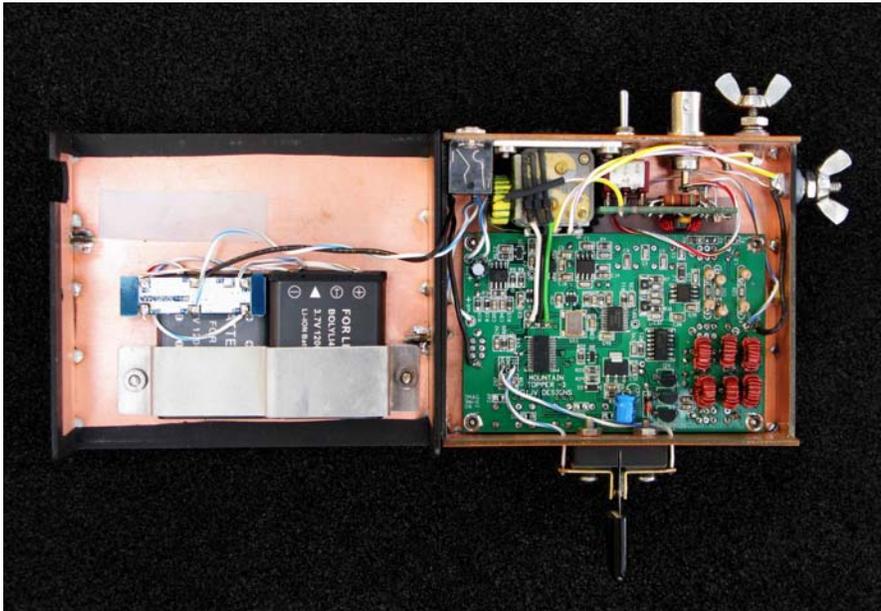
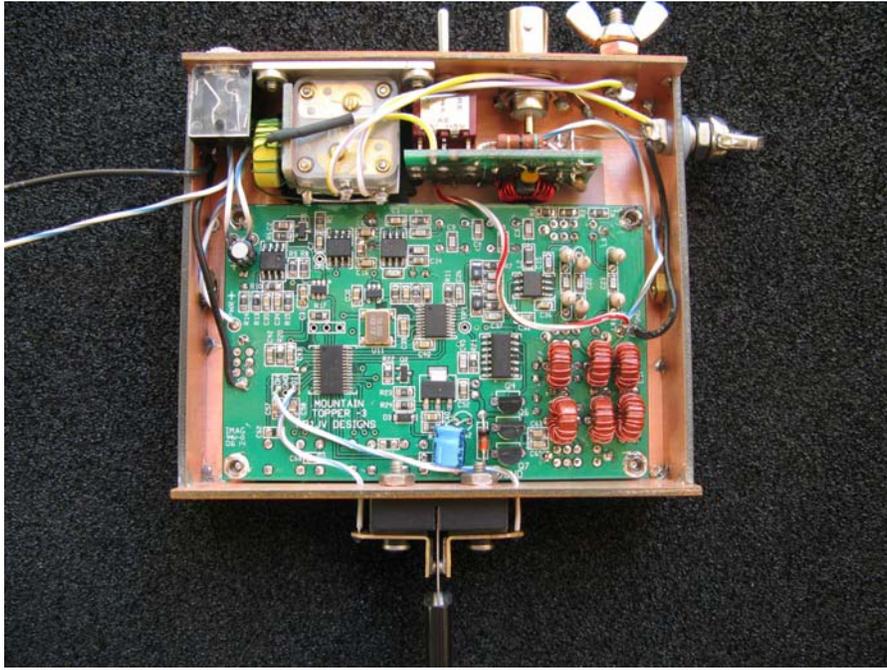


KD1JV MTR v2 Repackaging Project



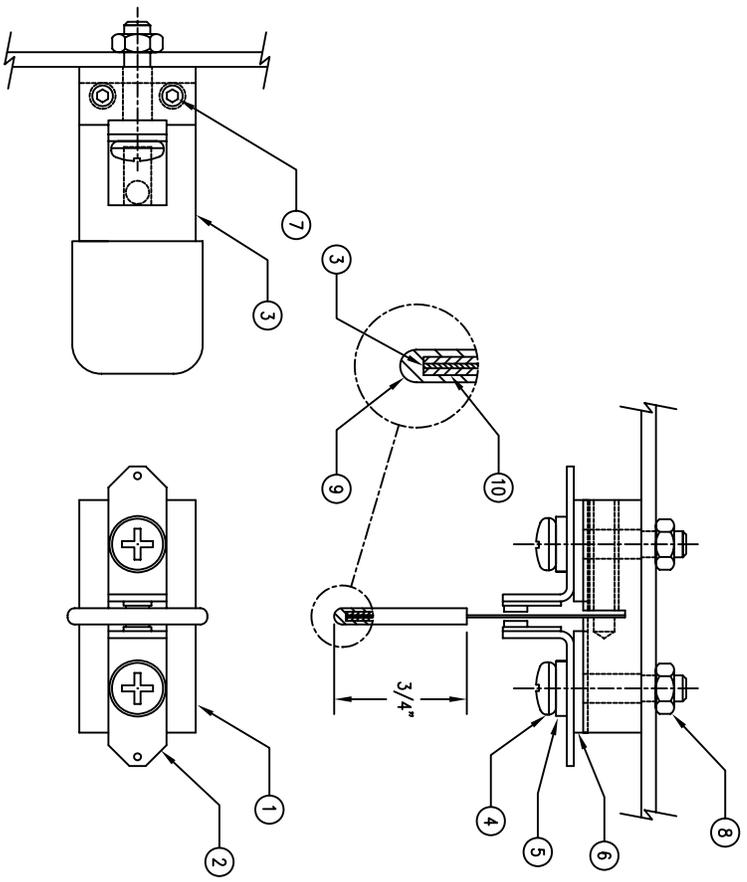
I decided to try and repackage my MTR v2, by Steve Weber. I was spoiled by the PFR-3 in that it was self contained when going out into the field. I have always wanted to do this with one of my many small transceivers. I have, like most, many small rigs that require multiple interconnecting cables and peripherals. Steve's small MTR transceiver seemed a perfect candidate to try. I decided to design and incorporate a simple dedicated small paddle, SOTA tuner with the Tayloe SWR indicator circuit, and internal Li-ion rechargeable batteries with charging, balancing, and protection circuit. The resulting fabricated case is a custom size, printed circuit board material, using the technique detailed in one of my other articles. It is a bit larger than Steve's original. The new case is 1/8" longer, 7/8" wider and the overall thickness is now 1" instead of the original 7/8". The paddle and chassis are all constructed with common hand tools. The only powered tool used was a simple drill press. At the end of this document are drawings of my efforts. This is by no means the best way to accomplish the result, but I wanted to show what can be done with the simplest of tools. I opted to start with the paddle, because if I was unsuccessful with that, I would go no further. I decided to use three small inexpensive camera Li-ion batteries and a charge/balancing/protection circuit board readily available on eBay. The three cell Li-ion batteries (totaling a nominal 10.8v) are rated at 1200mA. Not an extended life, but manageable, and I intended to carry my 3.2 watt solar panel to charge and augment power usage. So technically I only carry the rig, solar panel, earbuds, logbook, and enough wire for the $1/2 \lambda$ antenna. All this incorporation could easily be done with any small transceiver.





Charge/Controller Wiring

REVISIONS		
REV	DESCRIPTION	DATE
A	INITIAL RELEASE	11/17/14

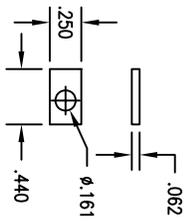


ITEM	REQ'D	DESCRIPTION
10	2	SSLP-05, ALUMINIUM SHIM
9	1	VINYL CAP, CAPPLUG # VRF-062X500-16, TRIMMED TO 3/4" L.
8	2	S.S. 4-40 NUT, MCM# 91841A005
7	2	S.S. 4-40 X 3/8" L SET SCREW, MCM# 92311A108
6	2	SSLP-02, CONTACT INSULATOR
5	2	#4, NYLON SCREW INSULATOR, MOUSER # 561-04004B (BLACK)
4	2	S.S. 4-40 x 5/8", PAN HEAD SCREW, MCM# 91772A112
3	1	SSLP-04, PADDLE FINGER
2	2	SSLP-03, CONTACT HOLDER
1	1	SSLP-01, PADDLE BASE

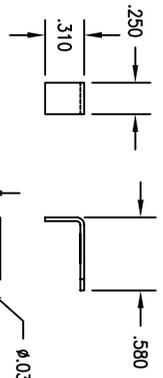
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS .XX ± .015 ANGLES ± 1°
DECIMALS .XXX ± .005
SURFACE FINISH √
BREAK EDGES .005- .020
RADIUS OR CHAMFER

WWW.CORPBUILDER.COM			
TITLE SIMPLE SINGLE LEVER PADDLE			
DRAWN	WA4MNT	SCALE	DATE 11/17/14
SHEET 1	OF 2	REF.	DWG.# SSLP

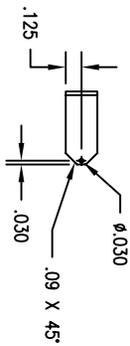
REVISIONS		
REV	DESCRIPTION	DATE
A	INITIAL RELEASE	11/17/14



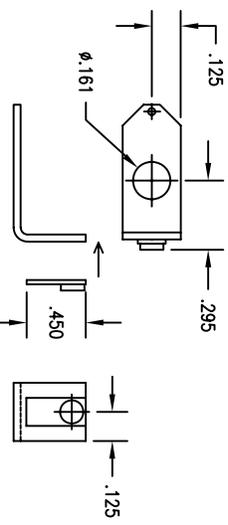
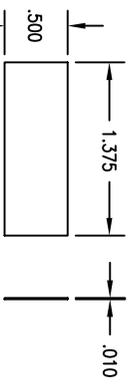
MATERIAL - 1/16" THK. G10 COPPER CLAD PCB MATERIAL
CONTACT SPACER
2 REQUIRED



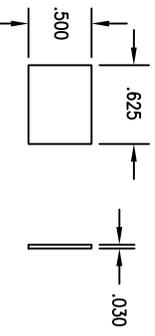
MATERIAL - .030 BRASS
CONTACT HOLDER
2 REQUIRED



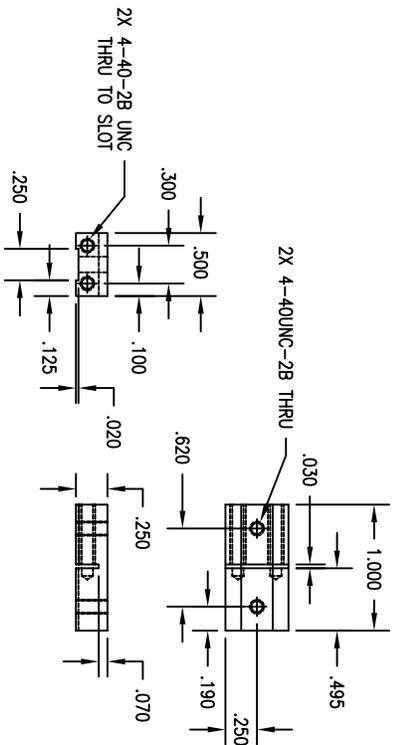
MATERIAL - .010 S.S. SHIMSTOCK
PADDLE FINGER
1 REQUIRED



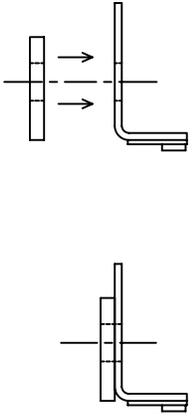
RELAY CONTACT ASSEMBLY
SOLDER SALVAGED ICECUBE RELAY CONTACT AS SHOWN. DRILL THE .161" HOLE FROM THE FACE OF THE CONTACT



MATERIAL - .030 ALUMINUM
VINYL CAP SPACER
2 REQUIRED



MATERIAL - ALUMINUM OR BRASS
PADDLE BASE
1 REQUIRED



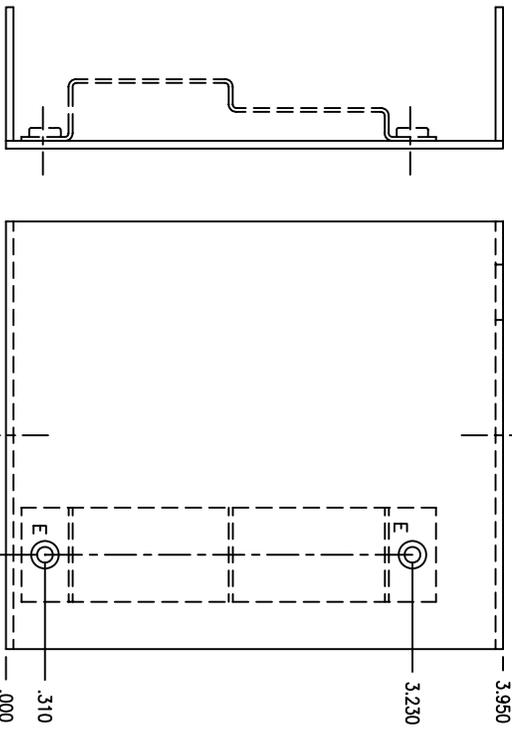
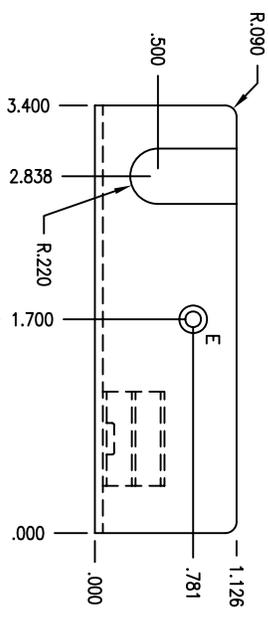
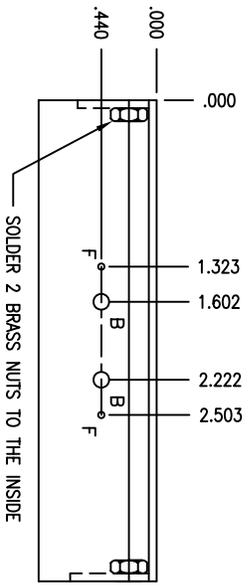
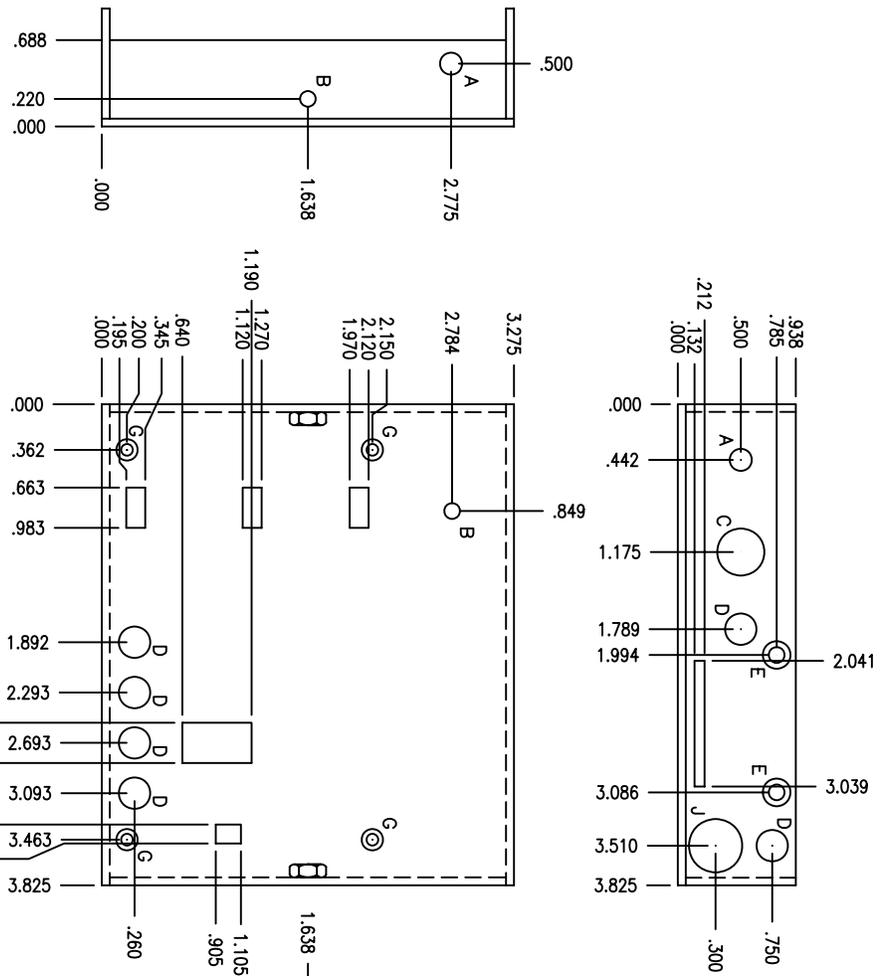
FINAL CONTACT ASSEMBLY
SOLDER THE CONTACT SPACER TO THE BOTTOM OF EACH CONTACT USING A DRILL SHANK TO ALIGN THE HOLES
THIS ASSEMBLY WILL FIT IN THE .250" WIDE SLOT OF THE PADDLE BASE AND ALLOW ADJUSTMENT OF THE CONTACT SPACING

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS DECIMALS ANGLES
± 1/32 .XX ± .015 ± 1°
.XXX ± .005
SURFACE FINISH
BREAK EDGES .005-.020
RADIUS OR CHAMFER

WWW.0RPBUILDER.COM			
TITLE SIMPLE SINGLE LEVER PADDLE			
DRAWN	W44MNT	SCALE	DATE 11/17/14
SHEET	2 OF 2	REF.	DWG.# SSLP

REVISIONS		
REV	DESCRIPTION	DATE
A	INITIAL RELEASE	11/18/14

- HOLE LEGEND
- A - ϕ .175
 - B - ϕ .125
 - C - ϕ .375
 - D - ϕ .250
 - E - CSK ϕ .220 X 82°
 - F - ϕ .050
 - G - CSK ϕ .170 X 82°
 - H - ϕ .163
 - J - ϕ .425



UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS DECIMALS ANGLES
 $\pm 1/32$.XX \pm .015 $\pm 1^\circ$
SURFACE FINISH .XXX \pm .005
BREAK EDGES .005-.020
RADIUS OR CHAMFER

WWW.QRPBUILDER.COM			
TITLE MTR V2 REPACKAGE CHASSIS			
DRAWN	WA4MNT	SCALE	DATE
SHEET	1 OF 1	REF.	11/18/14
			DWG.# MTR2_PKG

