



Project: iCARC FOX HUNT  
 Assembly: 102-00000

# MATERIAL BUILD RECORD

Department of  
 Physics & Astronomy

ICARC DTOA DIRECTION FINDER

Board: 102-73170.A  
 Schematic: 102-73170.A

| Idx # | Pg # | Comp S/N as needed | Component MIT | Part Type                      | Ref Des    | Part Value        | Flight Part Number | Kit by | Value Ver | Insp by | Lead Form | Insp by | Tinned by | Insp by | Appl by | Insp by |
|-------|------|--------------------|---------------|--------------------------------|------------|-------------------|--------------------|--------|-----------|---------|-----------|---------|-----------|---------|---------|---------|
| 6     | 1    | 2.2C Top           | 1.475 0.680   | CER CAP X7R AXX150             | C4         | 0.01UF            | RDE5C1H103J1P1H03B |        |           |         |           |         |           |         |         |         |
| 6     | 1    | 2.2C Top           | 0.975 1.340   | CER CAP X7R AXX150             | C5         | 0.01UF            | RDE5C1H103J1P1H03B |        |           |         |           |         |           |         |         |         |
| 6     | 1    | 2.4E Top           | 0.675 1.545   | CER CAP X7R AXX150             | C72        | 0.01UF            | RDE5C1H103J1P1H03B |        |           |         |           |         |           |         |         |         |
| 7     | 1    | 2.3B Top           | 0.975 0.647   | CER CAP X7R AXX150             | C13        | 0.1UF             | 320C104K5R5TA      |        |           |         |           |         |           |         |         |         |
| 8     | 1    | 2.4C Top           | 1.695 1.139   | CAP CERAMIC SM1210             | C2         | 10UF/CERAMIC      | CL32B106KPINNNE    |        |           |         |           |         |           |         |         |         |
| 8     | 1    | 2.4C Top           | 1.695 0.949   | CAP CERAMIC SM1210             | C2A        | 10UF/CERAMIC      | CL32B106KPINNNE    |        |           |         |           |         |           |         |         |         |
| 9     | 1    | 2.4E Top           | 0.665 1.325   | CAP TANTALUM SMP1210           | C73        | 10UF              | 10UF               |        |           |         |           |         |           |         |         |         |
| 10    | 1    | 3.9B Top           | 6.000 2.900   | COAX CABLE SMA HARDWARE, CABLE | CBL3_ANT   | 115101-19-18.00   | 115101-19-18.00    |        |           |         |           |         |           |         |         |         |
| 11    | 1    | 3.8B Top           | 3.325 5.310   | COAX CABLE SMA HARDWARE, CABLE | CBL2_ALT   | 415-0029-MM500    | 415-0029-MM500     |        |           |         |           |         |           |         |         |         |
| 11    | 1    | 3.9B Top           | 3.320 4.860   | COAX CABLE SMA HARDWARE, CABLE | CBL3_ALT   | 415-0029-MM500    | 415-0029-MM500     |        |           |         |           |         |           |         |         |         |
| 12    | 1    | 3.8B Top           | 6.000 3.375   | COAX CABLE SMA HARDWARE, CABLE | CBL2_ANT   | 415-0033-018      | 415-0033-018       |        |           |         |           |         |           |         |         |         |
| 13    | 1    | 2.7C Top           | 2.795 1.044   | CAP NPO/BP SM0805              | C1         | 470PF             | C0805C471J5GACTU   |        |           |         |           |         |           |         |         |         |
| 13    | 1    | 2.6C Top           | 1.900 1.214   | CAP NPO/BP SM0805              | C3         | 470PF             | C0805C471J5GACTU   |        |           |         |           |         |           |         |         |         |
| 14    | 1    | 3.9C Top           | 6.000 2.400   | COAX CABLE SMA HARDWARE, CABLE | CBL1_RADIO | CCBNS-MM-RG174-18 | CCBNS-MM-RG174-18  |        |           |         |           |         |           |         |         |         |
| 15    | 1    | 2.7B Top           | 2.575 1.044   | DIODE VARACTOR SOT23-3         | D1         | BAR63-04          | BAR6304E6327HTSA1  |        |           |         |           |         |           |         |         |         |
| 16    | 1    | 2.3E Top           | 0.602 0.755   | N/A Not Applicable DO-201-AD   | D10        | N/A 1N4001        | Do NOT Install     |        |           |         |           |         |           |         |         |         |
| 17    | 1    | 2.8E Top           | 6.200 5.400   | ENCLOSURE ENCLOSURE            | ENCL1      | 1599BBAT          | 1599BBKBAT         |        |           |         |           |         |           |         |         |         |
| 19    | 1    | 3.9D Top           | 4.975 4.375   | CONTACT HARDWARE, CONTACT      | HW51       | 0016020103        | 0016020103         |        |           |         |           |         |           |         |         |         |



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|-------|------|--------------------|---------------|---|---------|------------|--------------------|--------|-----------|---------|-----------|---------|-----------|---------|---------|---------|
| 19    | 2    | 3.9D Top           | 4.975 4.875   | CONTACT<br>HARDWARE_CONTACT                   | HW52    | 0016020103 | 0016020103         |        |           |         |           |         |           |         |         |         |
| 19    | 2    | 3.9D Top           | 4.975 5.375   | CONTACT<br>HARDWARE_CONTACT                   | HW53    | 0016020103 | 0016020103         |        |           |         |           |         |           |         |         |         |
| 20    | 2    | 3.8D Top           | 4.475 4.625   | CONN HOUSING LATCH<br>HARDWARE_HOUSING        | HW50    | 0050579403 | 0050579403         |        |           |         |           |         |           |         |         |         |
| 21    | 2    | 3.8C Top           | 3.175 4.420   | BRASS STANDOFF d.250 4-40<br>HARDWARE_SPACER  | HW6     | 1547C      | 1547C              |        |           |         |           |         |           |         |         |         |
| 21    | 2    | 3.9C Top           | 3.450 4.425   | BRASS STANDOFF d.250 4-40<br>HARDWARE_SPACER  | HW7     | 1547C      | 1547C              |        |           |         |           |         |           |         |         |         |
| 22    | 2    | 2.7E Top           | 5.775 4.100   | SCREW-INDIVIDIAL<br>HARDWARE_SCREW            | HW1     | 1593ATS    | 1593ATS50          |        |           |         |           |         |           |         |         |         |
| 22    | 2    | 2.7E Top           | 6.075 4.100   | SCREW-INDIVIDIAL<br>HARDWARE_SCREW            | HW2     | 1593ATS    | 1593ATS50          |        |           |         |           |         |           |         |         |         |
| 22    | 2    | 2.7E Top           | 6.375 4.100   | SCREW-INDIVIDIAL<br>HARDWARE_SCREW            | HW3     | 1593ATS    | 1593ATS50          |        |           |         |           |         |           |         |         |         |
| 22    | 2    | 2.8E Top           | 6.675 4.100   | SCREW-INDIVIDIAL<br>HARDWARE_SCREW            | HW4     | 1593ATS    | 1593ATS50          |        |           |         |           |         |           |         |         |         |
| 23    | 2    | 3.8E Top           | 4.475 5.125   | BATTERY CONTACT & PIGTAIL<br>HARDWARE_BATTERY | HW5     | 232        | 232                |        |           |         |           |         |           |         |         |         |
| 24    | 2    | 3.9D Top           | 2.800 4.400   | NYLON SPACER D.250 d.125<br>HARDWARE_WASHER   | HW10    | 9908-250   | 9908-250           |        |           |         |           |         |           |         |         |         |
| 24    | 2    | 3.9D Top           | 2.800 4.100   | NYLON SPACER D.250 d.125<br>HARDWARE_WASHER   | HW11    | 9908-250   | 9908-250           |        |           |         |           |         |           |         |         |         |
| 24    | 2    | 3.8D Top           | 2.800 5.050   | NYLON SPACER D.250 d.125<br>HARDWARE_WASHER   | HW8     | 9908-250   | 9908-250           |        |           |         |           |         |           |         |         |         |
| 24    | 2    | 3.8D Top           | 2.800 4.700   | NYLON SPACER D.250 d.125<br>HARDWARE_WASHER   | HW9     | 9908-250   | 9908-250           |        |           |         |           |         |           |         |         |         |
| 25    | 2    | 2.1E Top           | 0.230 1.657   | CONN-LTCH-MOLEX-R/A<br>HDR-50-57-9403         | J4      | 0705530002 | 0705530002         |        |           |         |           |         |           |         |         |         |
| 26    | 2    | 2.6B Top           | 2.525 1.687   | CONN BNC R/A<br>COAX_SMA_BNC                  | J2      | 5414373-1  | 5414373-1          |        |           |         |           |         |           |         |         |         |
| 26    | 2    | 3.8A Top           | 6.650 -0.425  | CONN BNC R/A<br>COAX_SMA_BNC                  | J2_ALT  | 5414373-1  | 5414373-1          |        |           |         |           |         |           |         |         |         |
| 26    | 2    | 2.8B Top           | 2.525 0.400   | CONN BNC R/A<br>COAX_SMA_BNC                  | J3      | 5414373-1  | 5414373-1          |        |           |         |           |         |           |         |         |         |



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|-------|------|--------------------|---------------|-------------------------------|------------|------------|-------------------------|--------|-----------|---------|-----------|---------|-----------|---------|---------|---------|
| 26    | 3    | 3.9A Top           | 6.650 0.100   | CONN BNC R/A<br>COAX_SMA_BNC  | J3_ALT     | 5414373-1  | 5414373-1               |        |           |         |           |         |           |         |         |         |
| 27    | 3    | 2.1D Top           | 1.300 1.560   | JUMPER HEADER<br>HDRB_2       | JP1        | PBC02SAAN  | PBC02SAAN               |        |           |         |           |         |           |         |         |         |
| 27    | 3    | 2.2B Top           | 1.800 1.560   | JUMPER HEADER<br>HDRB_2       | JP2        | PBC02SAAN  | PBC02SAAN               |        |           |         |           |         |           |         |         |         |
| 28    | 3    | 2.8D Top           | 3.120 1.044   | CONN SMA R/A<br>COAX_SMA_BNC  | J1         | RF2-49B    | RF2-49B-T-00-50-G-HDW   |        |           |         |           |         |           |         |         |         |
| 28    | 3    | 3.8A Top           | 1.575 4.750   | CONN SMA R/A<br>COAX_SMA_BNC  | J2_ANTENNA | RF2-49B    | RF2-49B-T-00-50-G-HDW   |        |           |         |           |         |           |         |         |         |
| 28    | 3    | 3.9A Top           | 1.575 4.250   | CONN SMA R/A<br>COAX_SMA_BNC  | J3_ANTENNA | RF2-49B    | RF2-49B-T-00-50-G-HDW   |        |           |         |           |         |           |         |         |         |
| 29    | 3    | 2.7C Top           | 2.255 1.044   | INDUCTOR<br>AIAC-1812         | L1A        | 100nH      | AIAC-1812-R10           |        |           |         |           |         |           |         |         |         |
| 29    | 3    | 2.7B Top           | 3.100 1.359   | INDUCTOR<br>AIAC-1812         | L2A        | 100nH      | AIAC-1812-R10           |        |           |         |           |         |           |         |         |         |
| 29    | 3    | 2.8B Top           | 3.100 0.734   | INDUCTOR<br>AIAC-1812         | L3A        | 100nH      | AIAC-1812-R10           |        |           |         |           |         |           |         |         |         |
| 31    | 3    | 2.7C Top           | 2.255 1.044   | N/A Not Applicable<br>IND_0.3 | L1         | N/A        | Do NOT Install          |        |           |         |           |         |           |         |         |         |
| 31    | 3    | 2.6B Top           | 3.100 1.359   | N/A Not Applicable<br>IND_0.3 | L2         | N/A        | Do NOT Install          |        |           |         |           |         |           |         |         |         |
| 31    | 3    | 2.8B Top           | 3.100 0.734   | N/A Not Applicable<br>IND_0.3 | L3         | N/A        | Do NOT Install          |        |           |         |           |         |           |         |         |         |
| 35    | 3    | 2.1F Top           | 0.325 0.625   | Pad<br>PAD0062                | PAD1       | N/A        | VP: Not a Physical Part |        |           |         |           |         |           |         |         |         |
| 35    | 3    | 2.1F Top           | 0.125 0.625   | Pad<br>PAD0062                | PAD2       | N/A        | VP: Not a Physical Part |        |           |         |           |         |           |         |         |         |
| 36    | 3    | 2.6C Top           | 1.935 1.044   | RES THK-FLM<br>SM0805         | R5         | 100        | M55342K06B100DTW        |        |           |         |           |         |           |         |         |         |
| 37    | 3    | 2.1C Top           | 1.400 0.994   | CARBON FILM<br>CF0.400        | R8         | 27K        | CF18JA27K0              |        |           |         |           |         |           |         |         |         |
| 38    | 3    | 2.6B Top           | 2.770 1.359   | RES THK-FLM<br>SM0805         | R6         | 330        | M55342K06B332DTW        |        |           |         |           |         |           |         |         |         |
| 38    | 3    | 2.8B Top           | 2.770 0.734   | RES THK-FLM<br>SM0805         | R7         | 330        | M55342K06B332DTW        |        |           |         |           |         |           |         |         |         |



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|-------|------|--------------------|---------------|------------------------------------|---------|-----------------|--------------------|--------|-----------|---------|-----------|---------|-----------|---------|---------|---------|
| 39    | 4    | 2.2C Top           | 1.500 0.994   | CARBON FILM CF0.400                | R2      | 59K             | RNF18FTD59K0       |        |           |         |           |         |           |         |         |         |
| 40    | 4    | 2.6C Top           | 1.900 0.874   | N/A Not Applicable SM0805          | R4      | N/A 100K        | Do NOT Install     |        |           |         |           |         |           |         |         |         |
| 41    | 4    | 2.1D Top           | 1.400 1.875   | N/A Not Applicable 3296Z           | R1B     | N/A 50K         | Do NOT Install     |        |           |         |           |         |           |         |         |         |
| 41    | 4    | 2.1B Top           | 1.900 1.875   | N/A Not Applicable 3296Z           | R3B     | N/A 50K         | Do NOT Install     |        |           |         |           |         |           |         |         |         |
| 42    | 4    | 2.1D Top           | 1.350 1.675   | N/A Not Applicable BOURNS_3310-001 | R1      | N/A 50K         | Do NOT Install     |        |           |         |           |         |           |         |         |         |
| 42    | 4    | 2.2B Top           | 1.850 1.675   | N/A Not Applicable BOURNS_3310-001 | R3      | N/A 50K         | Do NOT Install     |        |           |         |           |         |           |         |         |         |
| 43    | 4    | 2.2E Top           | 0.600 1.695   | PCB SWITCH SPDT R/A ON-ON SW_ET_A  | SW2     | 200USP1T1A1M6RE | 200USP1T1A1M6RE    |        |           |         |           |         |           |         |         |         |
| 45    | 4    | 2.3C Top           | 1.125 0.994   | IC OSC SGL TIMER DIL08             | U3      | TLC555          | TLC555CP           |        |           |         |           |         |           |         |         |         |

**NON-POPULATED and NON-PARTS (do not fill in this sheet)**

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|-------|------|--------------------|---------------------------|------------------------|---------|---------------|-------------------------------------|--------|-----------|---------|-----------|---------|-----------|---------|---------|---------|
| 1     | 63   | 5                  | 1.6E Top<br>-3.950 -1.950 | Documentation Artifact | BRD4    | DRAWING FRAME | VP: Documentation Artifact          |        |           |         |           |         |           |         |         |         |
| 2     | 64   | 5                  | 1.6F Top<br>7.000 -1.950  | Documentation Artifact | BRD3    | DRAWING FRAME | VP: Documentation Artifact          |        |           |         |           |         |           |         |         |         |
| 3     | 65   | 5                  | 1.6E Bot<br>1.280 0.475   | Documentation Artifact | BRD7    | DRAWING FRAME | VP: Documentation Artifact          |        |           |         |           |         |           |         |         |         |
| 4     | 66   | 5                  | 1.6F Bot<br>1.590 0.280   | Documentation Artifact | BRD6    | DRAWING FRAME | VP: Documentation Artifact          |        |           |         |           |         |           |         |         |         |
| 5     | 67   | 5                  | 1.7E Top<br>0.000 0.000   | Documentation Artifact | BRD5    | DRAWING FRAME | VP: Documentation Artifact          |        |           |         |           |         |           |         |         |         |
| 18    | 68   | 5                  | 2.7F Top<br>0.237 0.365   | Documentation Artifact | ESD1    | DRAWING FRAME | VP: Documentation Artifact          |        |           |         |           |         |           |         |         |         |
| 30    | 69   | 5                  | 2.7F Top<br>0.600 0.070   | Documentation Artifact | LOGO1   | DRAWING FRAME | VP: Documentation Artifact          |        |           |         |           |         |           |         |         |         |
| 32    | 70   | 5                  | 2.9E Top<br>0.000 0.000   | Invalid Flight Part(1) | PCB1    | 102-73170     | Invalid Flight Part (see schematic) |        |           |         |           |         |           |         |         |         |
| 33    | 71   | 5                  | 1.10F Top<br>-3.765 5.460 | Documentation Artifact | PWA1    | DRAWING FRAME | VP: Documentation Artifact          |        |           |         |           |         |           |         |         |         |
| 34    | 72   | 5                  | 1.10E Top<br>-3.745 5.440 | Documentation Artifact | PWB1    | DRAWING FRAME | VP: Documentation Artifact          |        |           |         |           |         |           |         |         |         |
| 44    | 73   | 5                  | Top<br>-3.325 2.000       | Documentation Artifact | U\$1    | DRAWING FRAME | VP: Documentation Artifact          |        |           |         |           |         |           |         |         |         |
| 46    | 74   | 5                  | Top<br>-0.175 0.000       | Documentation Artifact | U\$2    |               | VP: Artwork Documentation Artifact  |        |           |         |           |         |           |         |         |         |
| 47    | 75   | 5                  | Top<br>0.000 -0.425       | Documentation Artifact | U\$3    |               | VP: Artwork Documentation Artifact  |        |           |         |           |         |           |         |         |         |