

10-07-2021, Chuck Olson, Jackson Harbor Press

Bug Descratcher III enclosure kit manual

Assembly:

- 1) first, build the Bug Descratcher III kit per the manual.
- 2) the 9V snap and jacks from the enclosure kit can then be wired to the board per the hookup diagram. If the SSR option was purchased, the user will probably want to use their own output connector since the 3.5 mm jack isn't meant for high voltage use.
- 3) use a 9V battery to attach the included cable tie as shown here:



Don't cinch the cable tie tightly to the battery, make it snug enough to hold the battery but loose enough to allow the battery to be changed easily. A second cable tie is included in case a slightly larger 9V battery is used in the future.

Then clip the cable tie end flush as shown here:



4) Attach the cable tie, circuit board and jacks as shown here:



Use the 6-32 x 1/2" screw and nut to attach the cable tie.

Use the 4-40 x 1/2" screw and nuts to attach the circuit board (first attach the screw and nut to the front panel and then use the second nut to attach the circuit board).

Fasten the the two jacks to the front panel as shown.

Finally put the 9V battery into the cable tie holder and then snap on the connector.

5) Now place the front panel on the case and use the four 4-40 x 5/16" black screws to secure the top as shown:



6) modification ideas:

a) as previously mentioned, substitute a higher voltage connector for the SSR option. The hole will probably have to be drilled out. I would only have one output, the SSR can drive both high and low voltage transmitters. Also, the ground connection to the jack is required since the SSR output pins are floating. Either SSR output pin can be grounded, just like a mechanical relay.

b) although the standby current drawn from the battery is low at 7 uA or so, there is plenty of empty panel space to add a power switch.

Bug Descratcher III enclosure kit stocklist:

Quantity	description
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1	4 x 3 x 1.5" phenolic box
1	top plate, silk screened, pre-drilled
4	black 4-40 x 5/16" Philips screws
1	9 Volt battery snap
2	black cable tie with mounting hole (used for holding the battery)
1	6-32 x 1/2" machine screw for mounting the cable tie/battery holder
1	6-32 nut
1	4-40 x 1/2" machine screw for mounting the circuit board
2	4-40 nuts for mounting the circuit board
2	3.5 mm mono input/output jacks

items NOT included with enclosure kit: wire, solder, 9V battery