

ULTRA-TOTE™

INSTRUCTION MANUAL



Thank you for purchasing the Hobbico® Ultra-Tote™! You have purchased one of the finest values available in field support equipment. We think you will be impressed with the design and quality of this low cost field box.

TOOLS NEEDED FOR ASSEMBLY:

Med. Thick CA glue
CA Accelerator Spray
Several grades of sandpaper (80-, 120-, 220-grit etc.)
Drill and bits (5/64", 1/8", 3/16")
Pen or Pencil,
Sanding block,
Screwdriver,

Modeling Knife
Masking Tape
Scissors

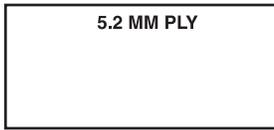
OPTIONAL FINISHING MATERIALS:

400-grit wet/dry sandpaper
Small can wood filler
Small can wood sealer (Polyester resin, etc.)
Paint (epoxy or polyurethane) or stain
Thinner
Brushes and mixing cups if needed



Champaign, Illinois
(217) 398-8970
E-mail: partssupport@hobbico.com

PARTS SUPPLIED WITH YOUR ULTRA-TOTE



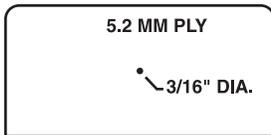
SHELF DIVIDER
HFBIF09



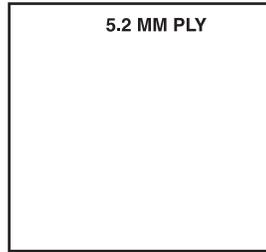
DRAWER SIDES AND
DIVIDER HFBIF11



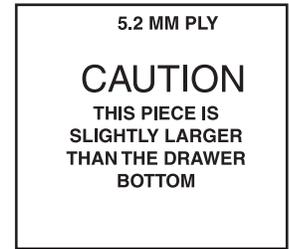
DRAWER BACK
HFBIF13



DRAWER FRONT
HFBIF12



DRAWER BOTTOM
HFBIF10

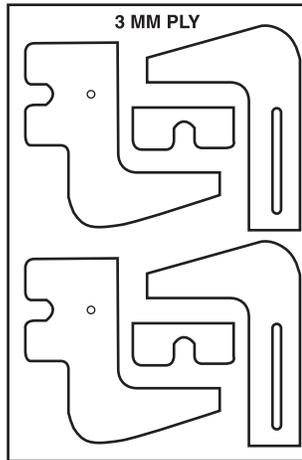


CAUTION
THIS PIECE IS
SLIGHTLY LARGER
THAN THE DRAWER
BOTTOM

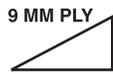
SHELF
HFBIF08



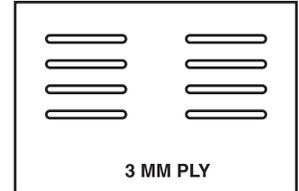
WOODEN
HANDLE
(DOWEL)
DOWEL027



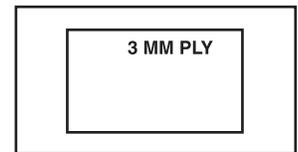
HFBIFI4
2 PIECES



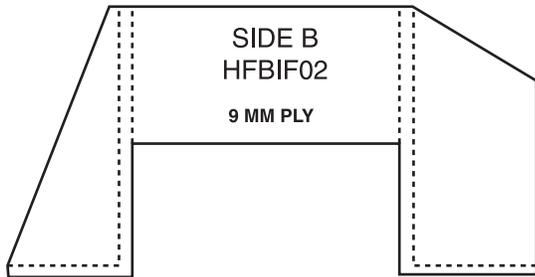
9 MM PLY
GUSSETS
HFBIF15
2 PIECES



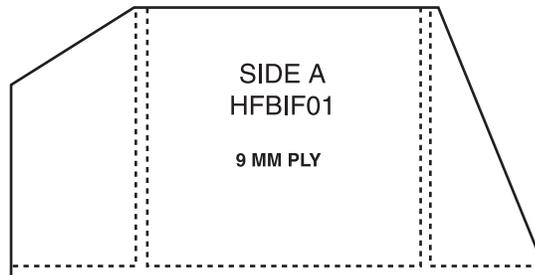
VENTED BATTERY COVER
HFBIF06



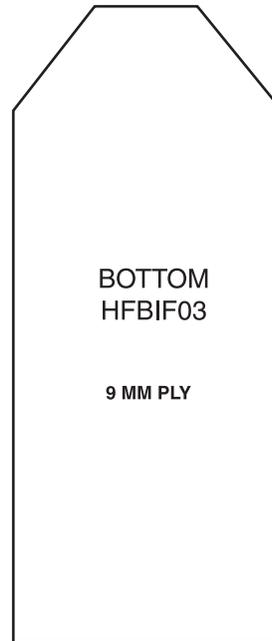
POWER PANEL FRAME
HFBIF07



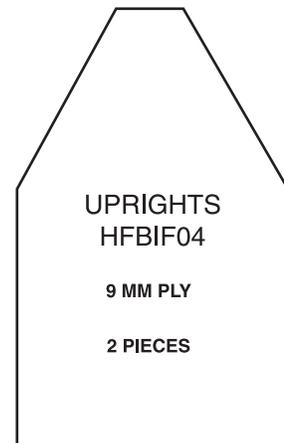
SIDE B
HFBIF02
9 MM PLY



SIDE A
HFBIF01
9 MM PLY



BOTTOM
HFBIF03
9 MM PLY



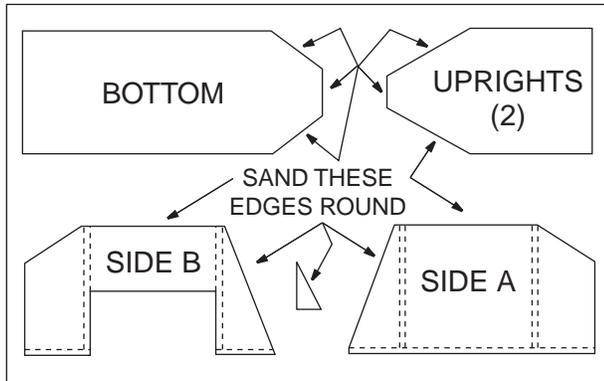
UPRIGHTS
HFBIF04
9 MM PLY
2 PIECES

Stock#	Qty	Description
HFB1P01	1	INSTRUCTION BOOK
FOAM007	1	FOAM CRADLE CUSHION
HFB1A01	1	HARDWARE SUBPAK (Includes the following)
KNOB001	1	WOODEN DRAWER KNOB
NUTS017	3	10-24 WING NUT
NYLON51	1	NYLON STRIP FOR FUEL JUG

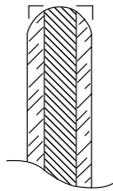
Stock#	Qty	Description
SCRW043	8	#4 X 3/8" SHEET METAL SCREW
SCRW049	2	10-24 X 1-1/4" MACHINE SCREW
SCRW050	1	#10 X 5/8" SHEET METAL SCREW
SCRW051	1	10-24 X 1-3/4" MACHINE SCREW
VELCRH05	1	VELCRO HOOK MATERIAL 3/4" X 1-1/2"
VELCRL05	1	VELCRO LOOP MATERIAL 3/4" X 1-1/2"
WSHR005	4	#4 FLAT WASHERS
WSHR009	4	#10 FLAT WASHERS

CONSTRUCTION

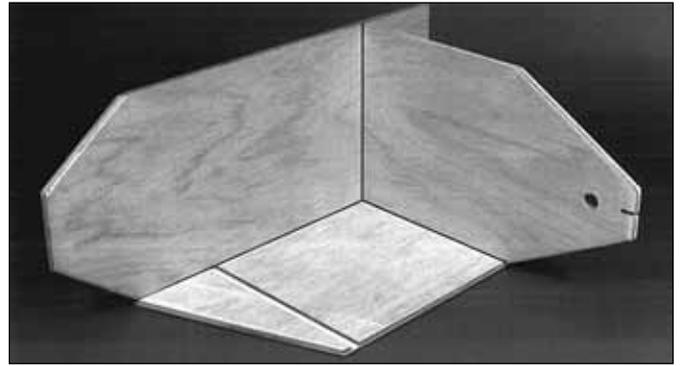
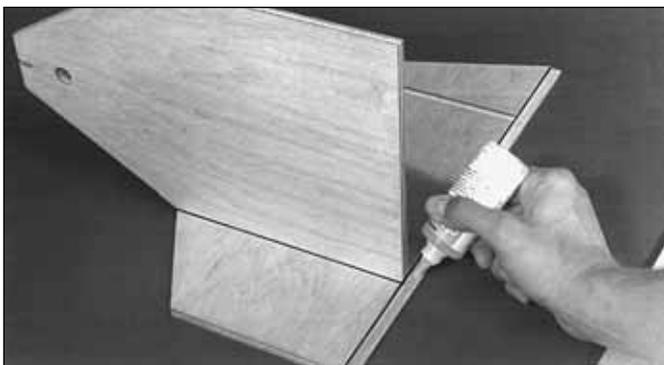
It is a good idea to read through these instructions once before beginning construction to help familiarize yourself with the parts and the construction sequence. We also recommend that you identify the parts against the parts list to make sure all parts are included. Be sure to test fit all pieces to make sure they fit properly before gluing.



❑ 1. Sand the edges shown in the drawing above to the rounded shape illustrated in the drawing to the right. These edges are: the top three edges of both uprights, the three short edges on the bottom and the top and **long** slanted edge of **both** sides (only one side is shown in the photo.) These will be exposed edges after the box is finished but it is easier to sand them now.



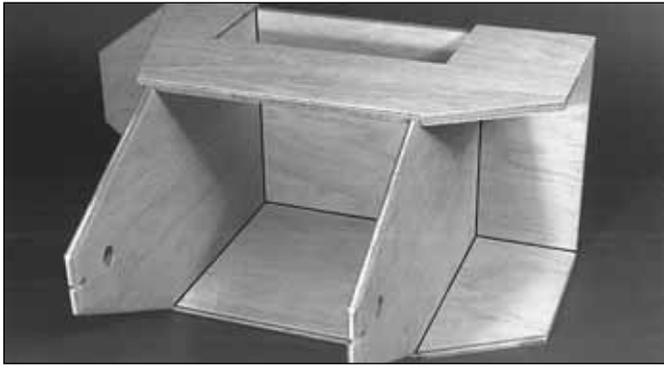
❑ 2. **Very** lightly sand the remaining edges of the uprights, the sides and the bottom to remove any splinters or fuzz. Do not round these edges.



❑ 3. Test fit one upright into the dado groove on the side without the drawer cutout. **Do not** glue it in yet; it is just used to help align the bottom. Position it so that its bottom edge is flush with the dado groove for the bottom piece. Apply a rather heavy bead of glue into the dado slot for the bottom and then put the bottom in place. Line up the bottom so that its ends are aligned with the ends of the side. **Note:** the cut off end of the bottom goes nearest the **long** slanted end of the side as shown in the photo.

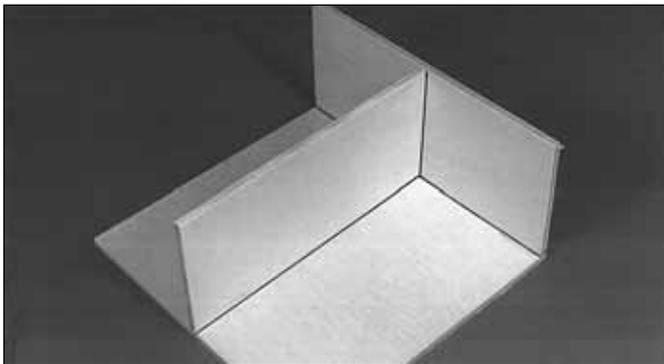


❑ 4. Temporarily install the other upright and the other side. Carefully line up the edges like it will be assembled, then use a pen or pencil to mark a line along the bottom of the uprights. Install the dowel handle in both uprights and apply a generous bead of glue between the lines you made and in the dado groove of the side that is glued to the bottom. Install the uprights using the other side to help line them up. Make sure the uprights get pressed all the way into the groove. Glue the handle in place.



□ 5. Apply a generous bead of glue in the dado grooves on the remaining side and glue the side in place. Again, make sure that the uprights get pressed completely into the grooves and tightly against the bottom.

□ 6. Locate the drawer back, sides, divider and bottom. The drawer back is 3-1/4" x 7-7/8". The sides and the drawer divider are the same size (3-1/4" x 7-5/16".) The drawer bottom is approximately 7-1/2" x 7-7/8". Do not confuse the drawer bottom with the shelf which is slightly larger. It is a good idea to write names on these pieces so you do not get them confused.



□ 7. Apply glue to one long edge of the drawer back and using one of the sides as a brace, glue the back in place on **top** of the drawer bottom. Be sure to glue it to the edge of the bottom that is the same length as the back.



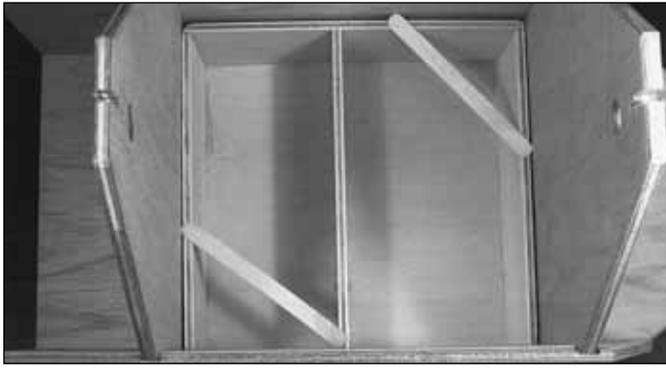
□ 8. Glue one side in place, lining it up with the edge of the bottom and the side of the back. Lay another side in the drawer as shown in the photo and mark along the edge. Remove the side and apply glue to two adjacent edges. Glue the side in place along the line you just drew.

Note: This side just became the divider which can actually be placed anywhere you want in the drawer or even omitted, but this is just an easy way of getting it straight. Glue the remaining side in place. Sand the front edges of the drawer so the drawer front will fit up against all four pieces.

□ 9. Test fit the drawer into position to make sure it fits nicely. If the wood is warped (twisted) so that the drawer sides make things fit tightly, use some leftover wood or paper to wedge the sides out while the front is glued in place. Sand the drawer if necessary to help it fit.



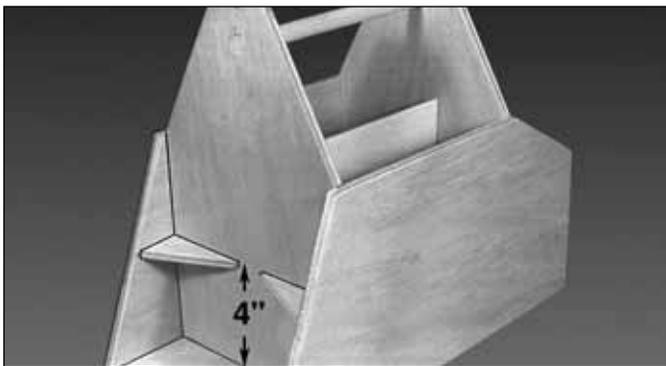
□ 10. Test fit the drawer front in place. You want a little clearance around it so that when you paint or finish it the drawer will still fit. Pull out the drawer slightly and apply a small amount of glue to the front edges. Put the front in position and push the drawer in far enough so you can see that the front is lined up with the cutout in the side. Make sure the drawer sides are still lined up and hold the drawer front in place while the glue cures. A little CA accelerator will help speed up this process. After the glue has cured, remove the drawer from the box and securely glue the front in place by adding some glue to the joints and curing it with some accelerator. Add the wooden knob to the drawer by securing it in place with the #10 sheet metal screw provided. A touch of glue between the knob and drawer will help keep it there permanently.



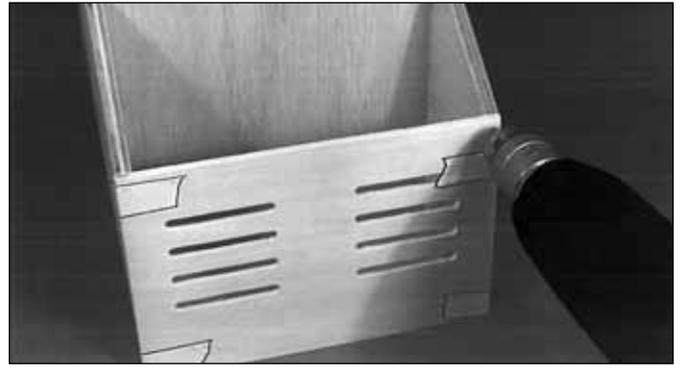
□ 11. Use some leftover wood or paper approximately 1/16" thick on top of the drawer as shown in the photo to shim up the shelf when it is laid in place. Lay the shelf in position (you may have to sand it slightly for a good fit) and then **tack** glue it in place. Just use small drops of glue in several places to hold the shelf in place. **Be very careful not to use too much glue or you may glue the drawer to the box.** Remove the drawer from the box and securely glue the shelf in place.



□ 12. Make a mark on both insides of the uprights, 2-3/4" from the side opposite the drawer. This is where the shelf divider will be installed. Test fit the divider in place and use your transmitter to make sure it is spaced correctly. When satisfied with the positioning, glue it in place.



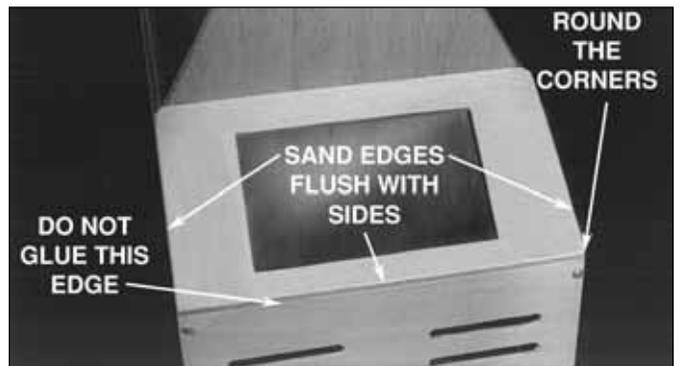
□ 13. If you are planning to use a plastic fuel jug with this Ultra-Tote, sand smooth the long edge of the 9mm plywood gussets and glue these in place approximately 4" above the bottom. These help hold the jug in place. They are not required if you are using a metal fuel can.



□ 14. Line up the vented end panel (battery cover) with the bottom and sides of the **Ultra-Tote** and use some masking tape to hold it in place. Drill a 5/64" hole in each corner of the panel about 1/2" from the top or bottom edge and in the middle of the **Ultra-Tote** sides. Remove the panel and enlarge the holes in the panel to 1/8" so the screws will pass through the holes. Using the #4 x 1/2" sheet metal screws provided, secure the panel in place.



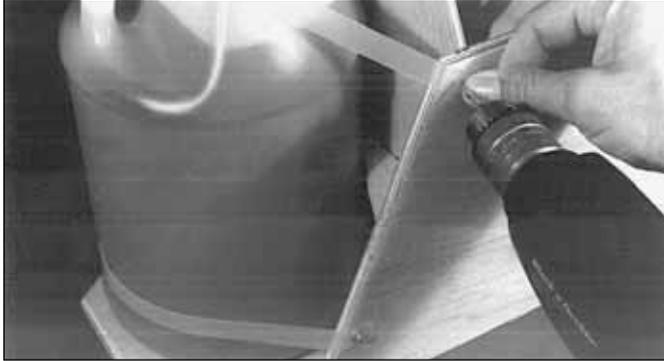
□ 15. Use a **flat** sanding block or the Great Planes® Easy-Touch™ bar sander to sand the sides and top edge of the panel flush with the sides of the box.



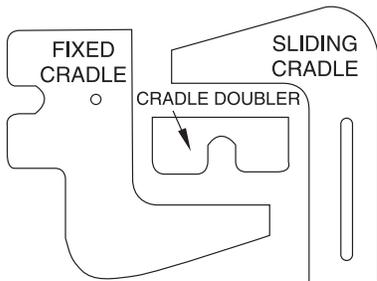
□ 16. Test fit your power panel in place in the power panel frame. The cutout is designed for the **Hobbico Deluxe Power Panel II (HCAP0302)** so you may have to modify the cutout to fit your panel. Glue the power panel frame in place.

Note: Do not glue the bottom edge of the power panel frame to the vented end panel. Sand the edges of the frame flush with the rest of the box and round off any sharp

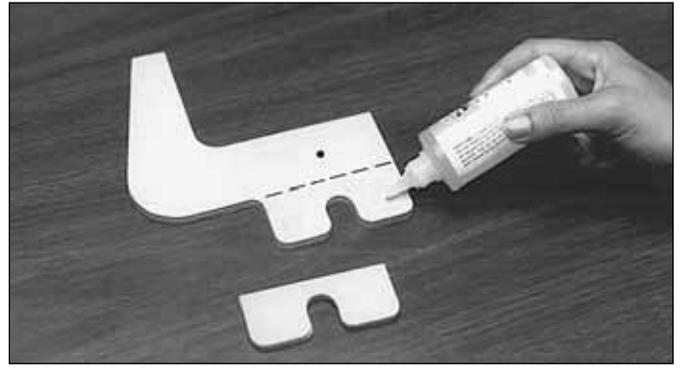
corners. Drill the mounting holes for your power panel and test fit it at this time. When satisfied with the fit, remove the power panel until after the **Ultra-Tote** is finished.



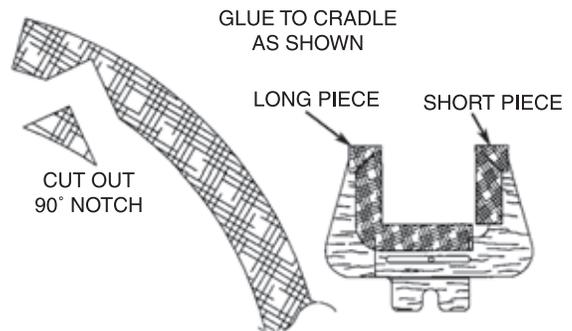
□ 17. Use a modeling knife or scissors to split the nylon strip down the middle and into two pieces. Drill a 1/8" hole through each nylon strap about 1/2" from one end. Then drill two 5/64" holes in one side of the flight box and install the straps with the #4 x 3/8" sheet metal screws and the #4 washers as shown in the photo. Pull the straps as tightly as possible around your fuel container and drill the holes. Install the screws and washers on the other side of the **Ultra-Tote**. You can position the straps to fit your particular fuel container but you want the straps as far apart as possible to hold the container firmly.



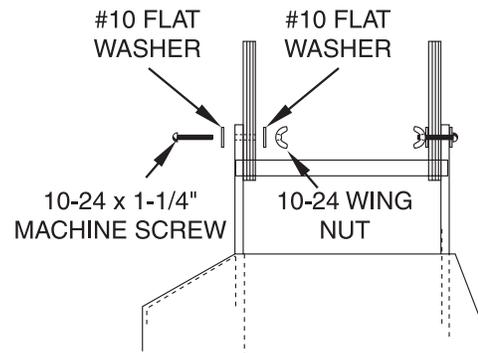
□ 18. Punch out the two, six (6) piece sets of cradles and very lightly sand the edges if necessary to remove any splinters. Glue each fixed cradle, cradle doubler and sliding cradle to another piece exactly like it. Make sure they are lined up correctly and that the punched indentation is showing on the largest pieces. You should now have two sets of three different pieces. Glue the smallest assembly using medium CA (as shown in the photo), again making sure they are lined up correctly. Drill a 3/16" hole in this assembly where the punch mark is located. Repeat this procedure for the other set.



□ 19. Glue the cradle doublers to the fixed cradles as shown in the photo again making sure they are lined up correctly. Drill a 3/16" hole in this assembly where the punch mark is located. Repeat this procedure for the other set.



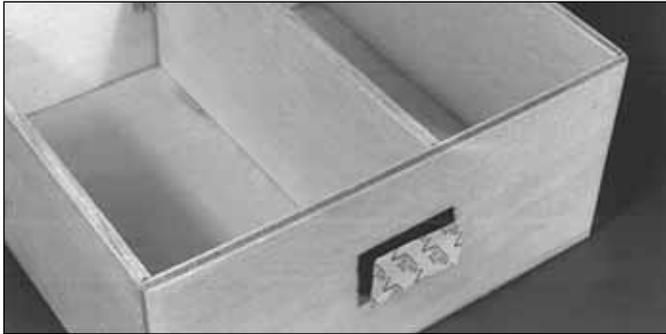
□ 20. Cut the foam cradle cushion into four pieces – two pieces 6-1/2" long and two pieces – 3-1/2" long. With a pair of scissors, carefully slit the tubing in a straight line from one end to the other. Cut a 90° notch about 3/4 of the way through the diameter of the tube on one end of each of the four pieces. Glue the pieces of cushion so that the notch is at the corner. Do not glue the cushion to the bottom of the cradle since the two parts have to slide in relation to each other.



□ 21. Each cradle is attached to your field box with a 10-24 x 1-1/4" machine screw, two #10 flat washers and a 10-24 wing nut.

□ 22. This completes the basic assembly of the **Ultra-Tote** and it is ready to be painted or stained. Be sure to remove all screws and disassemble the cradles before finishing. A good sanding job always pays off in helping to obtain a nice finish so be sure to spend some time smoothing out any rough spots. If you are going to paint the

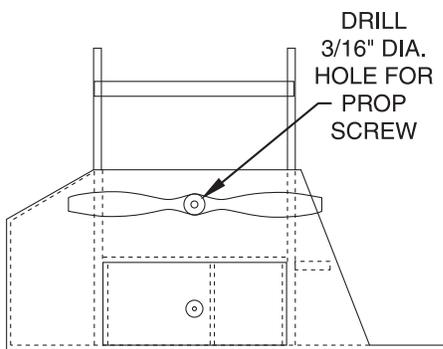
field box we recommend that you first fill the grain of the wood with a good wood filler. Paint seems to bring out any defects in the wood or the construction so take your time and do a good job in preparation for painting.



□ 23. After the **Ultra-Tote** is finished or painted, reinstall all of the hardware and separate the velcro hook material from the velcro loop material. Peel the backing off of one piece and stick it firmly on the back of the drawer. Gently touch the other piece of velcro to the piece on the drawer and peel off its backing. Slide the drawer into the box and push the velcro against the box. Gently pull the drawer out and the velcro hopefully stuck to the box. If it did, reach in and push it firmly in place. If it did not, put it in place manually by estimating where it should be and pushing it in place. The adhesive on the velcro will hold more strongly with time.



□ 24. Test fit your 12 volt battery in place and glue some leftover pieces of wood around it to keep it from sliding around and to help keep the battery upright. A couple of extra pieces of foam cradle cushion can be glued to the inside of the vented battery cover to help keep the battery upright.



□ 25. A 10-24 x 3/4" machine screw and wing nut is provided in the kit to enable you to carry props on the outside of the

Ultra-Tote. Drill a 3/16" hole in the side about 1-1/2" below the top as shown in the sketch. Insert the screw into the hole from the inside of the **Ultra-Tote** and props can be threaded onto the screw and secured with the wing nut.

This completes the assembly of your **Hobbico Ultra-Tote**, we hope you enjoyed building it and wish you **good luck and many happy landings**.

SAFETY WARNINGS

1. When mounting your power panel into your **Ultra-Tote**, make sure that the leads can not short out, which could cause sparks or excessive heat. The same caution applies when mounting an electric fuel pump on your **Ultra-Tote**.
2. Model airplane fuel is **highly flammable and explosive!** Extreme care should be taken at all times. Do not allow anyone to smoke or bring any flame near or allow anything that could set off a spark near the **Ultra-Tote**. Do not allow your glow plug driver, battery or any other electrical device to be stored in your **Ultra-Tote** without the proper insulation in place to prevent short circuits.
3. **Never** use the cradle to hold the model while the engine is running. The cradles were designed for holding the model while assembling and working on the plane, **not while the engine is running!**
4. Do not allow fuel to leak out of its container and onto the **Ultra-Tote**. If it does, clean everything thoroughly being very careful not to ignite the fuel. Model airplane fuel burns very quickly and cleanly, with a flame that is almost invisible.

GREAT PRODUCTS FOR YOUR FIELD BOX



**HOBBICO DELUXE POWER PANEL II
HCAP0302**

Recharge a glow starter NiCd or NiMH battery from your power panel? The Deluxe Power Panel II can do just that! Charge rate is 300-400mA – just plug in, and you're set. An LED confirms that charging has started. It's MOSFET-equipped for more power and efficiency...and of course, it also provides 12V power for electric starters and fuel pumps, and 1.5V pulsed power for glow plugs. A handy meter and control knob let you adjust glow plug current, detect engine problems and check for burned out plugs. Includes 1 set of alligator clips and three sets of banana plugs. Dimensions: 6 x 3.8 x 2 in [150 x 95 x 51mm].



**HOBBICO TORQMASTER™ 90
DELUXE 12V STARTER
HCAP3205**

Solidly built and affordably priced, the TorqMaster 90 Deluxe 12V Starter starts engines up to .90 cu. in. It includes a turned aluminum starter cone with grooved silicone insert; double-wound motor; soldered copper contacts; pretrued, extra-thick carbon brushes; easy-press switch; and a self-recoiling 5' DC input cord. Preinstalled, heavy-duty banana plugs are provided for use with your 12V power panel. 2-year warranty.