HINTS & TIPS cont'd

For more information that may be relevant to this model please visit us at www.richmondrc.com/support.htm

JODEL DR400 45-61 ARF

1. During construction use Low Tack Masking Tape only. The green painters masking tape works well.

2. Before beginning Stage 1 on Page 2, remove any lockdown material and/or foam pads from the wing. Be careful when removing tape. Pull tape strips back on themselves... do not pull tape away from the wing. Be very careful when removing tape that crosses a seam or edge in the covering. Remove any Tape Residue with alcohol or other not abrasive solvent. Test small area first.

3. Please review the "Care and Maintenance of POLYCOTE ECS" page within this document. Pay particular attention to the section entitled "Cleaning Initially". We recommend that you clean the surfaces initially in order to maximize the appearance of your new model. Remove the servo cover plates before cleaning and test all cleaners on painted surfaces.

4. On page 8 and 10, various pictures illustrate the removeable forward firewall. This firewall is approximately 1/4" (6mm) thick and has been constructed by laminating two pieces of 1/8" (3mm) ply together using Epoxy. The horizontal thrust line is printed on the forward face. Before joining the wing and earlier phases of the assembly process of the instructions it is a good idea to fill any gaps in the edges of the firewall with medium CA or Epoxy and set the firewall aside to cure under the weight of something heavy. After curing, we suggest sealing the firewall front and back face with Pacer FInishing Resin or thinned epoxy and setting it aside to dry. By doing this early in the assembly process, the firewall will be sealed, cured and ready for you to install your engine later on.

5. Please note that this model has ailerons located outboard on the wings and flaps located inboard on the wings. The ailerons are activated by a servo in the bottom of each wing. The flaps are optional and will require two servos located in the more inboard wing cavities.

6. When fitting wing servos for the ailerons and/or flaps, some servos have a rubber boot strain relief around the wire coming from the servo. Notch the bottom of the servo rails mounted to the servo hatches to clear the rubber boot or wire if required.

7. When fitting wing servos for the ailerons and/or flaps, you can open up clearance slots in the aileron and flap servo cover plates using a narrow drum sander and a dremel tool. Work carefully from the inside of the plate.

8. When fitting wing servos for the ailerons and/or flaps use a long servo arm and mount the servo as close to the servo cover plate as possible to maximize the length of the servo arm protruding from the bottom of the wing.

9. The base color and top patch color of the fibreglass cowl has been pre-painted to match the appearance of the full size version that this model has been based upon. Handle the cowl carefully at all time. The shape of the cowl will be most realistic when fitted over the firewall. After you have fitted your engine and aligned the cowl for your particular installation, you can then align and apply the blue trim stripes to match those of the fuselage.

10. Engine & Prop Size. This model flies well on a .46 Engine such as the VMAX 46PRO or a .52 Engine such as the VMAX 52PRO. We suggest using a larger diameter lower pitch prop than you might have used in other models. Check your engine manual and select a prop that is at the maximum diameter in the recommended range. The idea is to get the thrust out beyond the edge of the fuselage and cowl. A larger diameter prop helps accomplish this.

11. The factory has supplied a number of trim pieces such as the white plastic wing root fairings (fit between the wing root and the fuselage) and the servo covers on the bottom of the wing. These have been painted with epoxy paint. Always test these painted surfaces for compatibility with any cleaning solutions.We recommend Fantastic.

COLOR SPECIFIC PARTS FOR MODEL #VMA-R160F

#VMA-R160FF	FUSELAGE
#VMA-R160FW	WING SET
#VMA-R160FWRF	WING ROOT FAIRINGS (2)
#VMA-R160FTH	TAIL HORIZONTAL
#VMA-R160FTV	TAIL VERTICAL
#VMA-R160FL	FIBREGLASS COWL
#VMA-R160FV	COVERING SET
#VMA-R160FVPS	COVERING PATCH SET
#VMA-R160FN	CANOPY

NON-COLOR SPECIFIC PARTS FOR ALL JODEL 45-61

#VMA-R160XSPR	WING SPARS ALUM (2)
#VMA-R160XRMF	READ ME FIRST SHEET
#VMA-R160XIBP	IMPORTANT INFORMATION SHEET
#VMA-R160XIB	INSTRUCTION BOOK
#VMA-R160XMB	MASTER BAG (HARDWARE)
#VMA-R160XMGB	MAIN GEAR BAG
#VMA-R160XNGB	NOSE GEAR BAG
#VMA-R160XSPB	SPARE PARTS BAG
#VMA-R160XWPB	WING PARTS BAG
#VMA-R160XPMF	FIREWALL (FRONT)

GENERIC PARTS USED IN THIS MODEL

#VMA-CHSET	CONTROL HORN (2 SETS)
#VMA-WH2716	WHEEL 2-7/16" (NEED 3)
#VMA-MOUNTUNI	ENGINE MOUNTS (PAIR)
#VMA-SPIN200R	SPINNER - RED 2"
#VMA-TANK300	FUEL TANK 300mm (8.8 OZ)
#VMA-SXTRAY	SERVO TRAY - UNIVERSAL
#VMA-WC532	WHEEL COLLARS 5/32 (4)
#VMA-CL1M	CLEVISES (2)
#VMA-EZCON	EZ CONNECTORS (2)

PLEASE READ EVERYTHING BEFORE ASSEMBLY!

IMPORTANT INFORMATION ABOUT VMAR JODEL DR400

#VMA-R160F 45-61 ARF

This model may be produced in a number of Military and Civilian Graphic Schemes. The last character of the part number will vary according to the model. This information sheet is pertinent for all graphics schemes of the JODEL DR400 45-61 ARF ECS.

#VMA-R160F (as shown)

PLEASE READ THIS BEFORE ASSEMBLY!

Model airplanes, model engines, model engine fuel, propellers and related accessories, tools and equipment can be hazardous if improperly used. Be cautious and follow all safety recommendations when using your VMAR model airplane. Keep hands, tools, clothing and all foreign objects well clear of engines when they are operating. Take particular care to safeguard and protect your eyes and fingers and the eyes and fingers of other persons who may be nearby. Use only a good quality propeller that has no cracks or flaws. Stay clear of the propeller and stay clear of the plane of rotation defined by the propeller.

The Manufacturer, Distributor, Retailer and/or other suppliers of this product expressly disclaim any warranties or representations, either expressed or implied, including but not limited to implied warranties of fitness for the purposes of achieving and sustaining remotely controlled flight.

In no event will the Manufacturer, Distributor, Retailer and/or other suppliers of this product have any obligation arising from contract or tort, or for loss of revenue or profit, or for indirect, special, incidental, consequential or other damages arising from the use of this product.

In purchasing and/or using this product, the user accepts all responsibility for its use and accepts all liability associated with such use.

Proceeding with assembly and use of this product indicates Agreement With and Acceptance of the Liability Disclaimer.

CAUTION

A Remote Control Model Aircraft is not a toy. It is a flying model that functions much like a full size airplane. If you do not assemble and operate this product properly you can cause injury to yourself and others and damage property. DO NOT FLY this model if you are not qualified.

You are ultimately responsible for the mechanical, aeronautical and electrical integrity of this model and it's structure, control surfaces, hinges, linkages, covering, engine, radio, wiring, battery and all other components. Check all components before and after each flight. Don't fly until it's right!

CARE & MAINTENANCE OF POLYCOTE ™ECS.

POLYCOTE ECS is a proprietary Enhanced Covering System engineered in Canada & available only from VMAR. With POLYCOTE ECS the graphics are inside the covering... not stuck on top. No Decals! No Layers! No Strips! No Stripes! POLYCOTE ECS utilizes ULTRA TOUGH polyester and our SURE SEAL system to ensure that the seams stay down! Best of all POLYCOTE is totally fuel proof! Quite simply... **POLYCOTE ECS leads the pack in ARF covering systems!**

By putting the graphics inside the POLYESTER covering... we've reduced the need for maintenance to a minimum. No seams to pick up, very few edges, extraordinary fuel proofing etc. With POLYCOTE ECS you will spend more time flying and less time reworking the covering! Polyester offers the best in covering performance and as with any POLYESTER covering here are a few tips to make it even easier to keep POLYCOTE ECS looking it's best!

REMOVING & USING TAPE: Tape may been used to hold control surfaces or other parts in place during shipping. When removing tape from POLYCOTE ECS, peal the tape back on itself so that the pulling is parallel to the surface of the covering. If the tape is near or across a seam or an edge, peal towards the edge or seam. Do NOT pull the tape up at right angles to the covering or away from a seam or edge. If you use tape during the assembly process use a low tack masking tape and remove it using the procedure noted above.

CLEANING INITIALLY: POLYCOTE ECS has very few seams and we use our SURE SEAL system to really lock the seams down. Upon initial inspection if you see a thin streaky film on any of the POLYCOTE ECS when looked at under bright light this is a residue from the SURE SEAL process. It is easily removed using Minerial Spirits (Paint Thinner, Varsol). If you've ever painted with oil base paints you probably have Mineral Spirits on hand already, if not, it is readily available at a paint or hardware store. **It is recommended that you work with Mineral Spirits outdoors and follow the directions on the container.** Use a paper towel and wipe a slightly wet film of Mineral Spirits over 1/4 of a wing or half a fuselage at a time. Rub gently while still wet. Change towels frequently. Use a clean towel to buff dry. If you want to accentuate the deep "clear coat" gloss of POLYCOTE ECS even more, use a bit of Armorall and buff shiny with a clean paper towel. Discard all soiled paper towels into a metal garbage can stored outdoors.

CLEANING AFTER FLYING: To clean POLYCOTE ECS after flying we recommend Fantastic household cleaner and disposable paper towels. You can use just about any cleaner and we are not aware of any cleaner that will damage POLYCOTE but it is a good idea to always test a small out of the way spot first. Wipe along seams, not across. To really show off your POLYCOTE ECS covering, after cleaning wtih Fantastic... use a bit of Armorall and buff dry & shiny.

CARE: Avoid puncturing. Avoid leaving your model in a closed car exposed to direct heating from the sun for lengthy periods. Temperatures under such conditions can exceed 50C (122F) and sagging may occur.

TIGHTENING: To tighten POLYCOTE ECS we recommend using a medium-high temperature **heat iron on the seams, edges, around perimeters and over solid surfaces**. Use a heat iron "sock" on the iron and push down firmly on the covering over solid areas to bond the covering to the underlying substrate. Work with the iron set at 250-300F. You may also work with a heat gun over solid surfaces provided that all edges and seams are set with a heat iron first. If using a heat gun over solid surfaces, make sure the edges are firmly set with a heat iron first then use the heat gun to heat about 1 square foot of area at a time, then rub the warm covering down firmly with a soft cotton cloth to bond the covering to the underlying substrate. **DO NOT USE A HEAT GUN NEAR EDGES & SEAMS.** Higher temperatures may assist with complex curved surfaces. Use a medium-high temperature **heat gun on POLYCOTE ECS applied over open bays.** Always practise on the bottom of a less noticable section first. Be patient and work systematically... you will likely only have to tighten POLYCOTE once or twice to accomodate any shrinkage of the airframe in dry hot conditions.

RESEALING SEAMS: POLYCOTE ECS seams are sealed with our SURE SEAL system and will not normally lift. If you find a loose edge, clean any oil residue from the area and the edge and reseal with thin CA.

PATCHING: If you puncture POLYCOTE ECS, clean any oil residue from the area of the puncture. We clean using Fantastic and then a paper towel moistened with Pacer De-Bonder or alcohol or water to remove any remaining residue from the surface. The patch should be 1/2" bigger than the hole on all sides. We recommend using POLYCOTE patch sheets if provided with your model or polyester covering such as POLYCOTE, ULTRACOTE or ORACOVER and the use of a heat iron and soft cloth. Monokote, SolarFilm or V-COTE covering material will also work. Cut the patch with rounded corners. Seal the patch in place with a heat iron set at 250F first and then tighten the patch and the original covering around the patch as outlined in the tightening section above. To repair larger more extensive damage areas, you may wish to obtain the appropriate POLYCOTE ECS covering set for this model.

CUTTING: POLYCOTE ECS is made from ULTRA TOUGH POLYESTER. Where possible, use scissors to cut POLYCOTE. Scissors work well. Otherwise use a new sharp #11 Blade. **The blade must be SHARP**.

Check for updates and more information about POLYCOTE ECS at www.richmondrc.com/polycote.htm

HINTS & TIPS

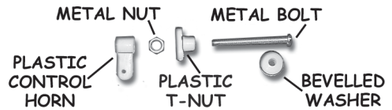
JODEL DR400 45-61 ARF

INFORMATION SOURCES

Please use this Important Information Sheet for...
Components & Parts Supplied with this model.
General Hints & Tips.
After Market Parts for this model.

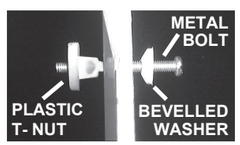
Please see the Documentation Set packed with your model for...
Tools & Shop Materials... Documentation Set
Assembly Procedure... Colour Manual Page 2-12
Setup Information... Colour Manual Page 13-15

OUR CONTROL HORNS are unique. They do not look like most of the control horns you have seen before and you may think they are missing. They are in the control horn parts bag &/or wing parts bag inside the master bag of hardware and consist of a metal bolt, metal nut, beveled white plastic washer, a white plastic T-nut and the white plastic control horn itself that connects to a clevis or rod.
Control Horn Set Before Installation. Note 5 parts make up the set.

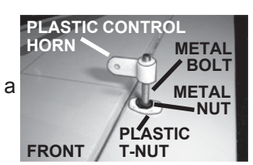


(Note: In Light Duty applications the Metal Nut may not be included)

Control Horn Set Partially Installed
Note that the bevelled washer has the bevel side facing the control surface and the flat side against the head of the metal bolt.



Control Horn Set Fully Installed.
Note that the metal nut has been tightened down snugly against the top of the T-Nut as a safety lock. Then the plastic control horn is threaded on to the metal bolt as shown.



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CHECK OFF LIST FOR COMPONENTS & PARTS

MAJOR COMPONENTS

1 Fuselage with pre-installed control rods, servo tray, fuel tank and power module, canopy, cockpit & pilot
2 Wing halves (left and right) with butterfly nuts and collars
2 Wing spars (aluminum)
2 Wing root fairings (white plastic)
1 Horizontal stabilizer with pre-installed elevators
1 Vertical stabilizer with pre-installed rudder
1 Cowl
1 Documentation Set with Read Me First sheet & Important Information sheet, Assembly Manual & patch sheets
1 Master Bag of Hardware

CONTENTS OF MASTER BAG OF HARDWARE

1 Main Gear Parts Bag with...
- 2 landing gear assemblies with struts
- 2 main wheels
- 2 wheel collars
- 4 landing gear straps
- 8 mounting screws

1 Nose Gear Parts Bag with...
- 1 nose gear with strut
- 1 nose wheel
- 1 wheel collar
- 1 steering arm with EZ Connector

1 Spinner Parts Bag with collet set, allen key & screws
- collet set for different engine shaft sizes
- retaining screws (loosely fitted into spinner)
- allen key for the screws

1 Wing Parts Bag with... 4 control horn assemblies (2 for ailerons, 2 for flaps) consisting of
- 4 metal nuts
- 4 metal bolts (3 x45mm)
- 4 plastic control horns
- 4 plastic T-nuts
- 4 plastic bevelled washers
- 2 Aileron control rods each with a clevis and EZ connector
- 2 Flap control rods each with a clevis and EZ connector

1 Control Horn Parts Bag with 3 control horn assemblies (2 for the elevators & 1 for the rudder) consisting of
- 3 metal nuts
- 3 metal bolts (3 x45mm)
- 3 plastic control horns
- 3 plastic T-nuts
- 3 plastic bevelled washers

1 Spare Parts Bag with...
- 1 control horn assembly
- 2 clevises
- 1 long metal bolt with washers and nut
- 1 short metal bolt with washers and nut

PLEASE READ EVERYTHING BEFORE ASSEMBLY!