

ALGEBRA 3M MK II

The original 3M MK I was put into production during 1983, it proved an immediate success and very popular with all who flew it. During the intervening years several evolutionary improvements have been incorporated into the kit, most of them being of a minor nature. However in the contest scene the trend has moved towards very fast tow launches so as to gain the maximum height from the zoom at the top of the launch. This puts great demands upon the wing structure. The 3M MK II has a wing strength to withstand any "reasonable" tow and be capable of a good zoom off of the top of the line. There have been other changes which reduce drag and improve performance. With a wing span of 10ft this model is probably the most popular true thermal soarer available this size of model will have a definite advantage over the 100" span models when it comes to finding and soaring away in lift, it will even hold its own with models of much greater span. As the wings are two piece (held in place with steel rods) it is not too large for transportation, even with the smallest of vehicles offer a problem with the greater span models. This model's main virtues is its vice free handling, there are many people who have tried thermal soaring who never seem to find any lift with the model they are flying, on changing to the Algebra 3M immediately find the thermals and start to do long exhilliarating flights which have previously elluded them. There are two versions of this model, one with a fibreglass fuselage, the other is constructed from ply/balsa. When finished there is little to choose between the fibreglass and the wooden versions. The fibreglass is probably a little stronger but its weight is about 2 ozs heavier, an advantage of the wooden version is that it is easier to repair should you damage it. The wings are made from obechi veneered styro foam, which are pre-slotted to take two full depth spars, the flight loads from the spars is transferred to heavy ply wing dowel blocks which hold the metal tubes which in turn take the steel joining rods. There are details on the plan of how to make your own airbrakes or if you wish we can supply suitable commercial brakes, these are operated from a servo mounted within the fuselage. There is available (on request) a plan for an aileron version. These are operated by miniature servo in each wing, we can supply the Micro Star servo with ballraces and all metal gears, it also has lugs for mounting it flat inside the wing, ideal for ailerons. The rudder and elevator are of balsa sheet that require sanding to section. The wing section is Selig 3021 or SD 7032, one of the later sections developed by Michael Selig for thermal duration. Please state which is required when ordering, the S3021 is better in windy conditions and the SD 7032 in lighter air. Ballast tubes are supplied with the kit and these are fitted in the wing at the c of g location. We can supply weight to fit which comes in 24" lengths. When fully ballasted the weight is increased by two lbs (almost 1 kilo) There is sufficient space within the fuselage for any normal RC gear with a 500mha battery and three servos to operate rudder, elevator and airbrakes. The rudder is operated by a closed loop system and the elevator by a pushrod, the elevator is the all-moving type. The kit is very complete all links, pushrods, closed loop, ballast tubes etc are included, everything to complete the model except for glue and covering material. The model is suitable for launching from a 3/8th EMP bungee, hand towing or power winch - if correctly operated.

WING SPAN	124"	CONTROLS - RUDDER ELEVATOR AIRBRAKE OR RUDDER ELEVATOR AILERON AIRBRAKE RUDDER BY CLOSED LOOP SYSTEM
WING AREA	960 <sup>2</sup> "	ELEVATOR BY PUSHROD
OVERALL LENGTH	50"	AILERON MINIATURE SERVO IN EACH WING
WEIGHT APPROX UNBALLASTED		AIRBRAKE SERVO IN FUSELAGE
RUDDER VERSION	58ozs	
AILERON VERSION	62ozs	
WING LOADING RUDDER VERSION		WING SECTION SELIG 3021 or SD 7032
UNBALLASTED	8.8 ozsft <sup>2</sup>	
BALLASTED	13.5 ozsft <sup>2</sup>	ASPECT RATIO 15.7 to 1