Scope of Work & Specification for Development of AMCA 1:10 Scale Model

Contents

Development of AMCA 1:10 Scale model

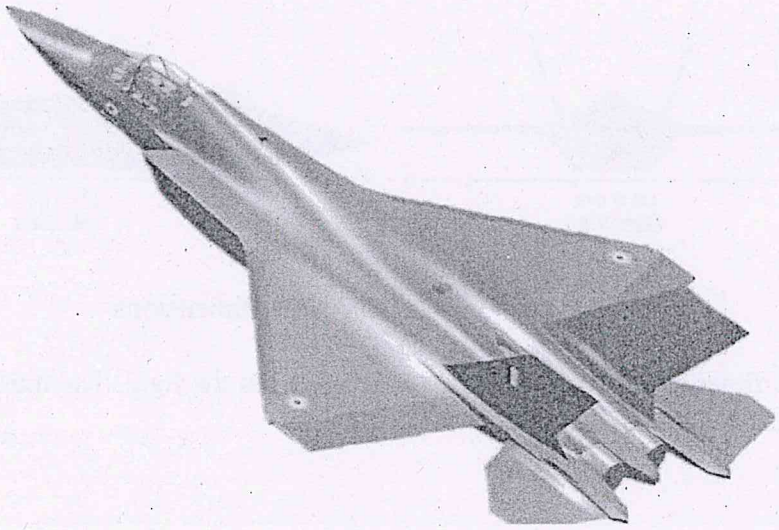
This specification covers the brief description, material including packing and transportation of the Scaled Models.

The rep of Director, ADA shall be the inspection authority /Approving Officer.

1. The manufacturer is responsible for fabricating and supplying the modelwith given scale of the Aircraft as per drawings and specifications.
2. Based on these drawings, manufacturer should prepare the scaled drawings for the models to be fabricated & obtain the approval from ADA.
3. Any proposals for the improvement in this specification are welcome andshall be addressed to the Director ADA.
4. The model should be in the given scale & should appear exactly as shown in respective photographs/drawings. The material like SS, acrylic, FRP etc. to be used so that it matches with the appearance of the original Aircraft with proper strength.
5. The manufacturing tolerances are to be adhered to as specified.
6. The surface finish shall be inspected using laser tracker and shall be compared with the CAD model.

Process involved in Development of 1:10 aircraft model :

1. Development of CAD Model:
The CAD drawings are provided by ADA, Bangalore. The given drawings shouldbe converted to required size (i.e., 1:10 scale).



3. A/c and model dimensions

AMCA Dimensions (Full Scale)

Sl.No	Parameter	Values
1	A/c Length	18.090m
2	A/c Height (static)	4.515m
3	A/c Span	11.130m

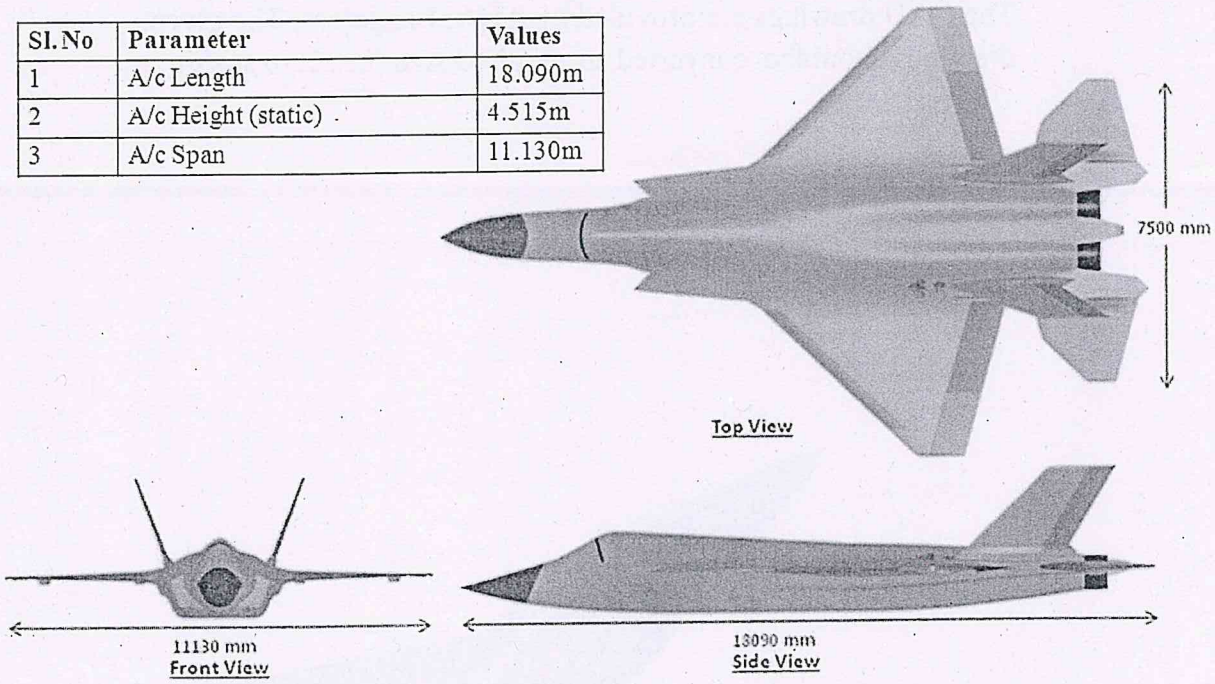
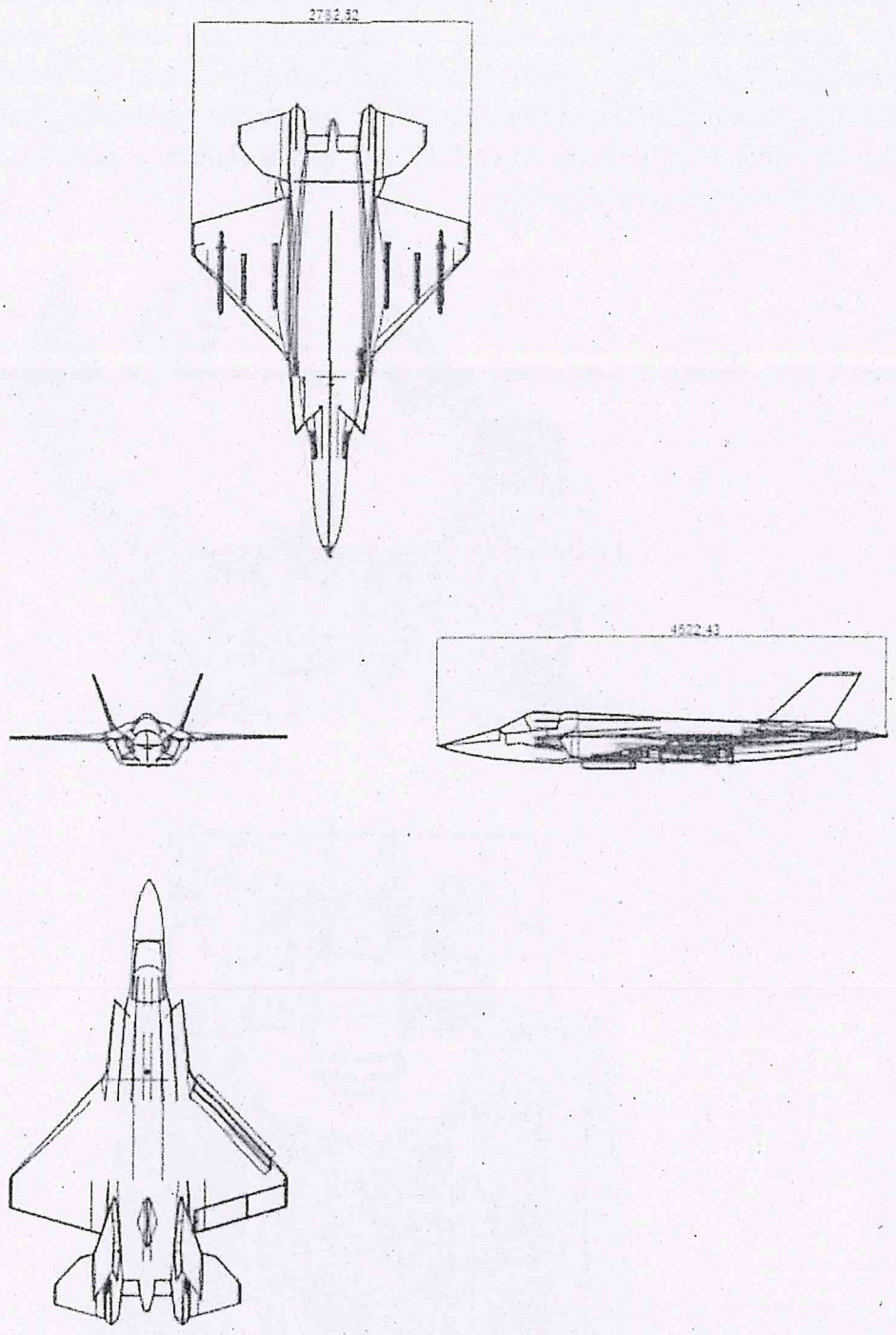


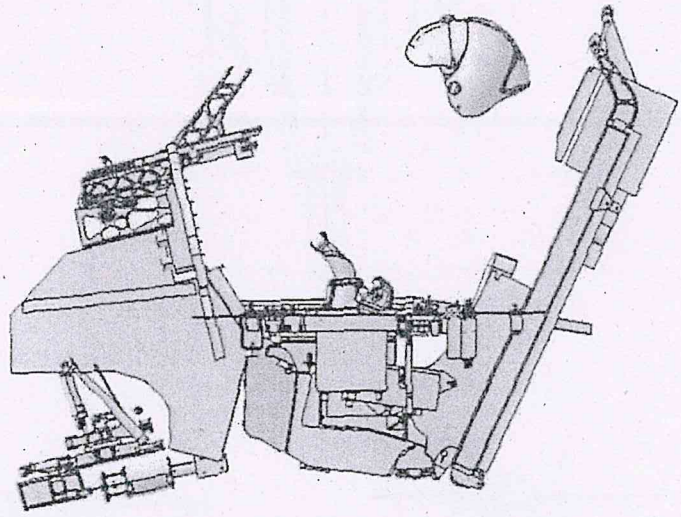
Fig. 2 AMCA Dimensions

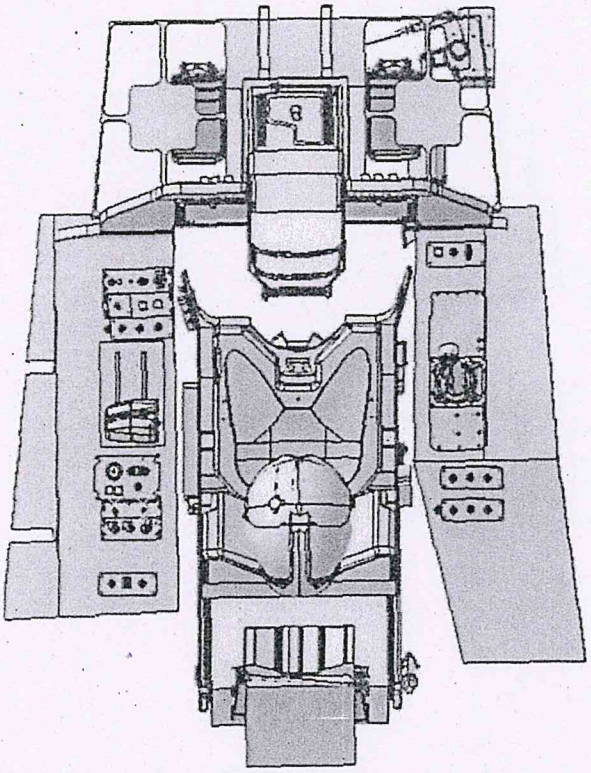
Over all dimensions of the AMCA are provided in the fig.2. The model dimensions can be derived from this.

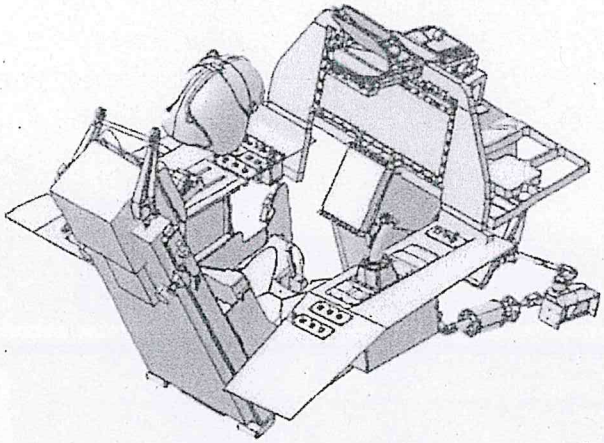


First stage is Development of CAD mode to the required scale for preparing master template.

1. **Cockpit Internal Details and Lighting:** The cockpit details should be shown properly as per given drawings which should be appropriate size and be given proper lightning arrangement so that the initial details of the cockpit should see clearly (the LED lights should not be seen).The cockpit should be transparent so that the installs of the cockpit should visible clearly. Scale down Pilot mannequin should be placed on the pilot seat with proper helmet and other details.





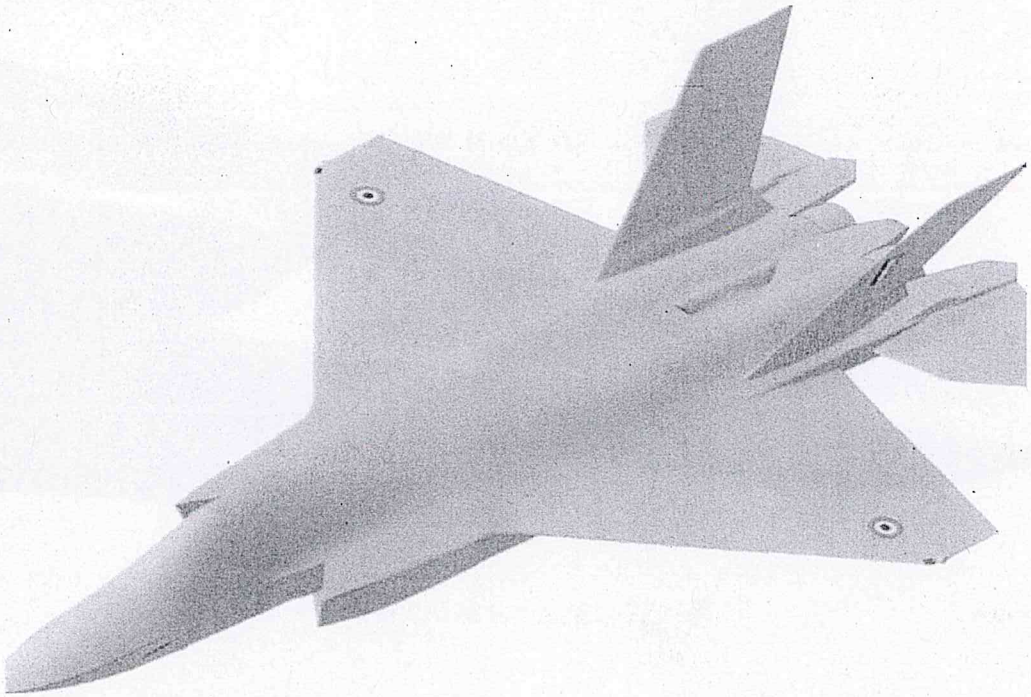


Cockpit internal model can be made by RP process

2. Painting and Stickeriag as per scheme to be made

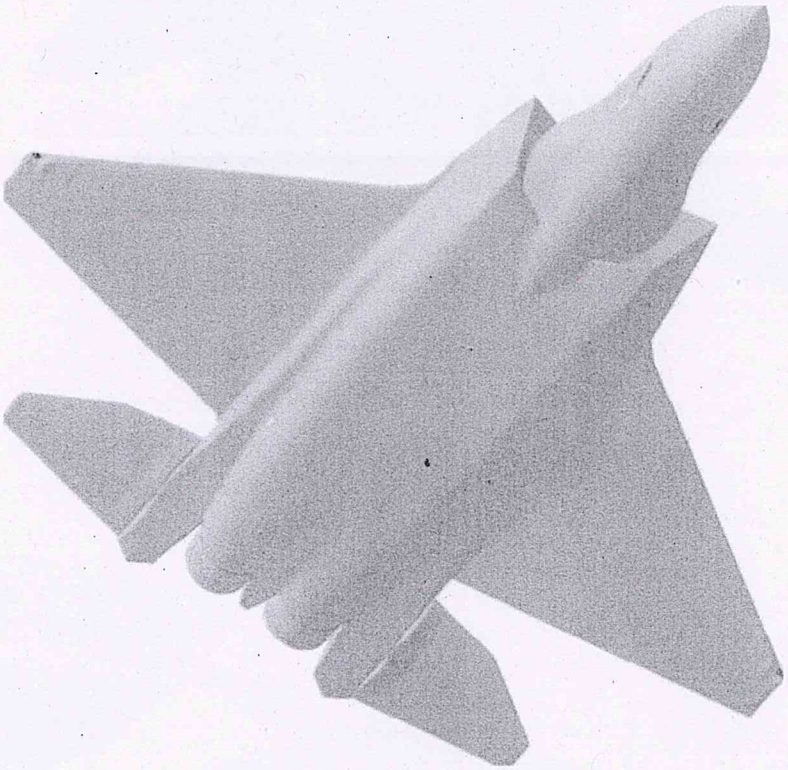
- Painting Scheme: The Surface treatment and painting of fabricated Aircraft model should be carried out as per our painting scheme. The painting scheme will be given to the bid awardee. High quality lacquer coating *h*nish is required.

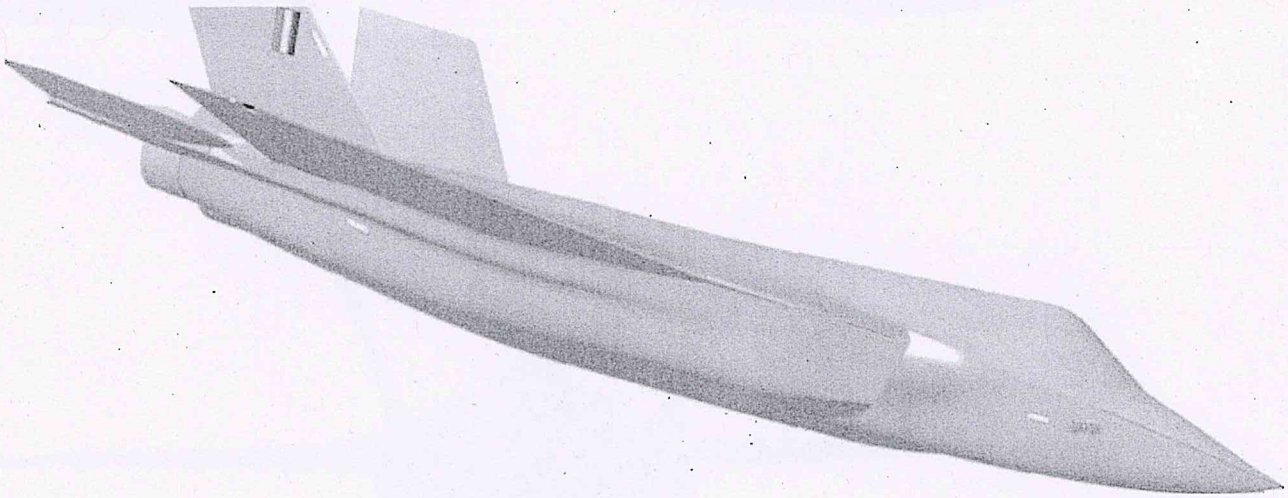
- 5tickering Scheme: Indian flag, Round tricolor, No step, and other appropriatestickering should made pasted according to given drawings and photographs.

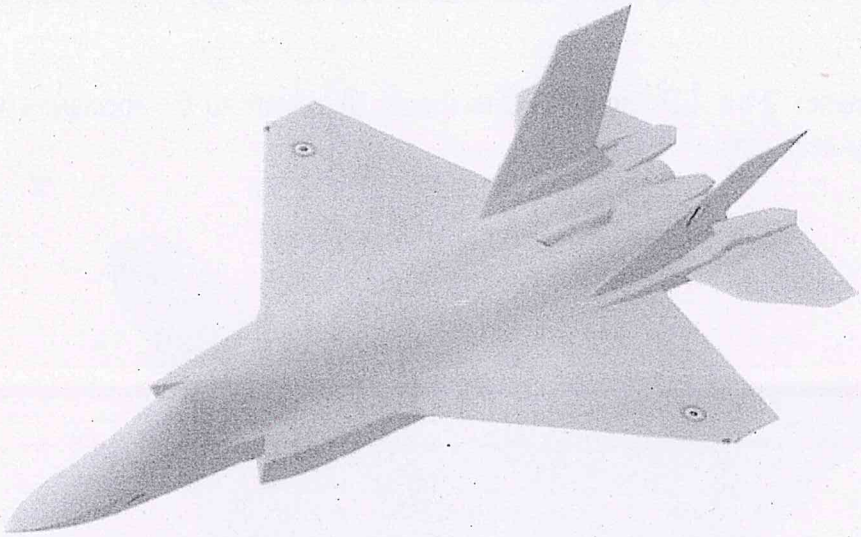


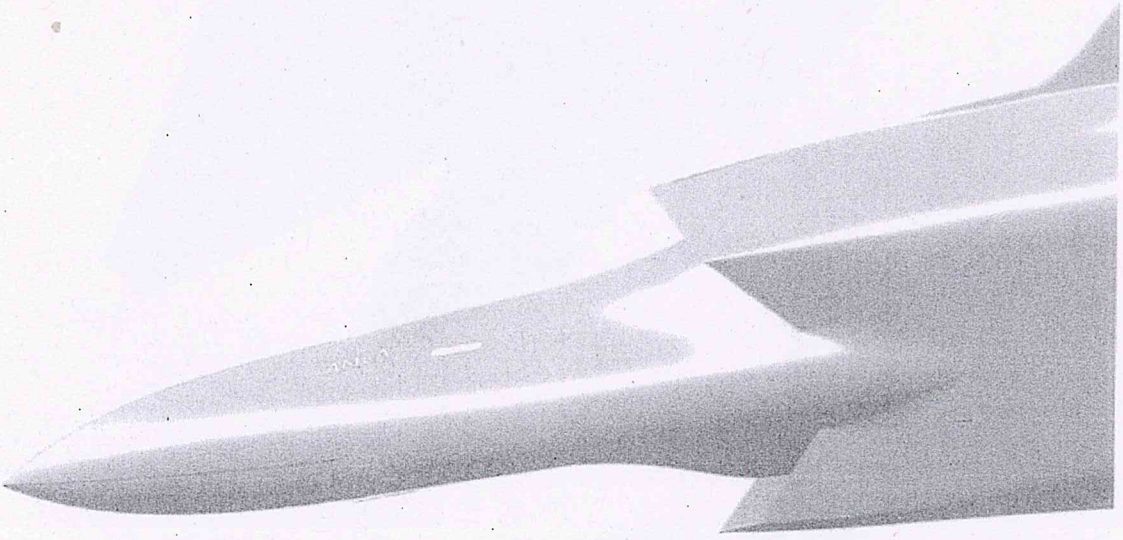
3. Model Mounting Stand: The mounting stand should bear the weight of 1:10 scale Aircraft Model.

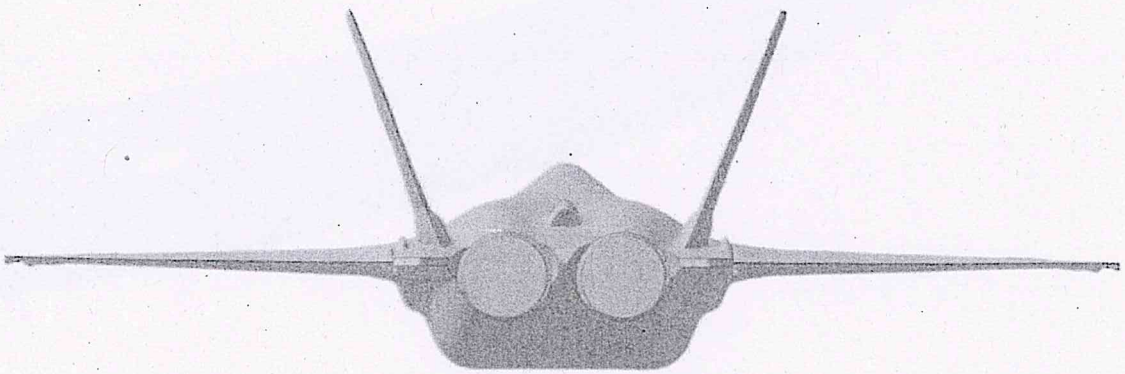
4. Lightning Schematic: The LH and RH lights should illuminate to the spectators while the Aircraft rotating on its axis.

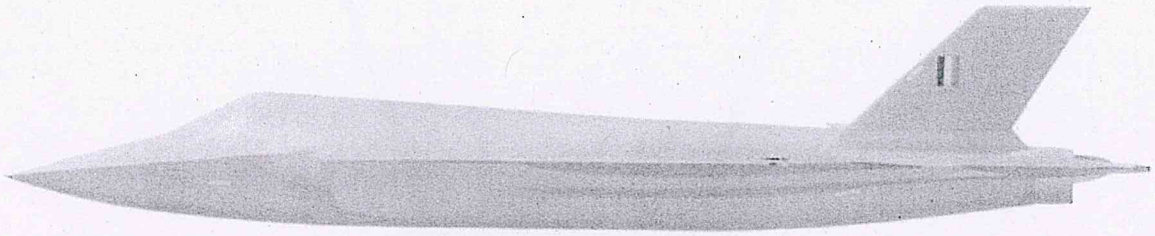


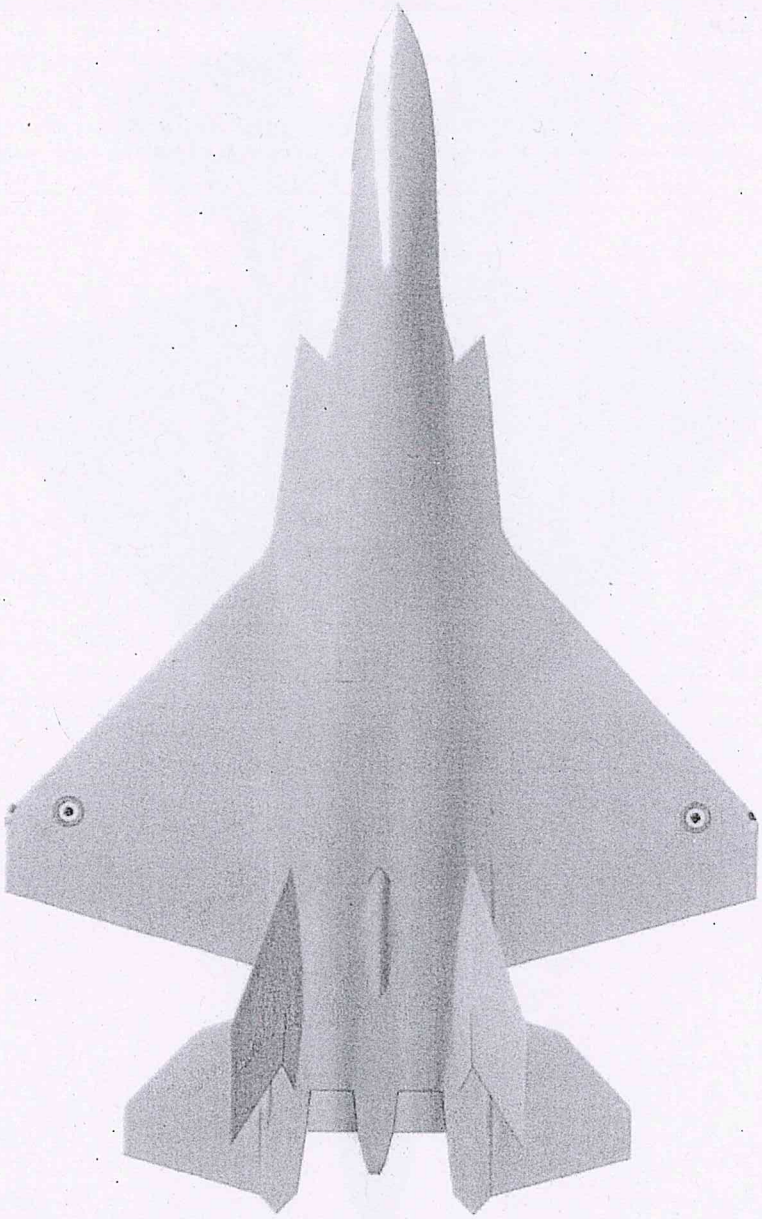


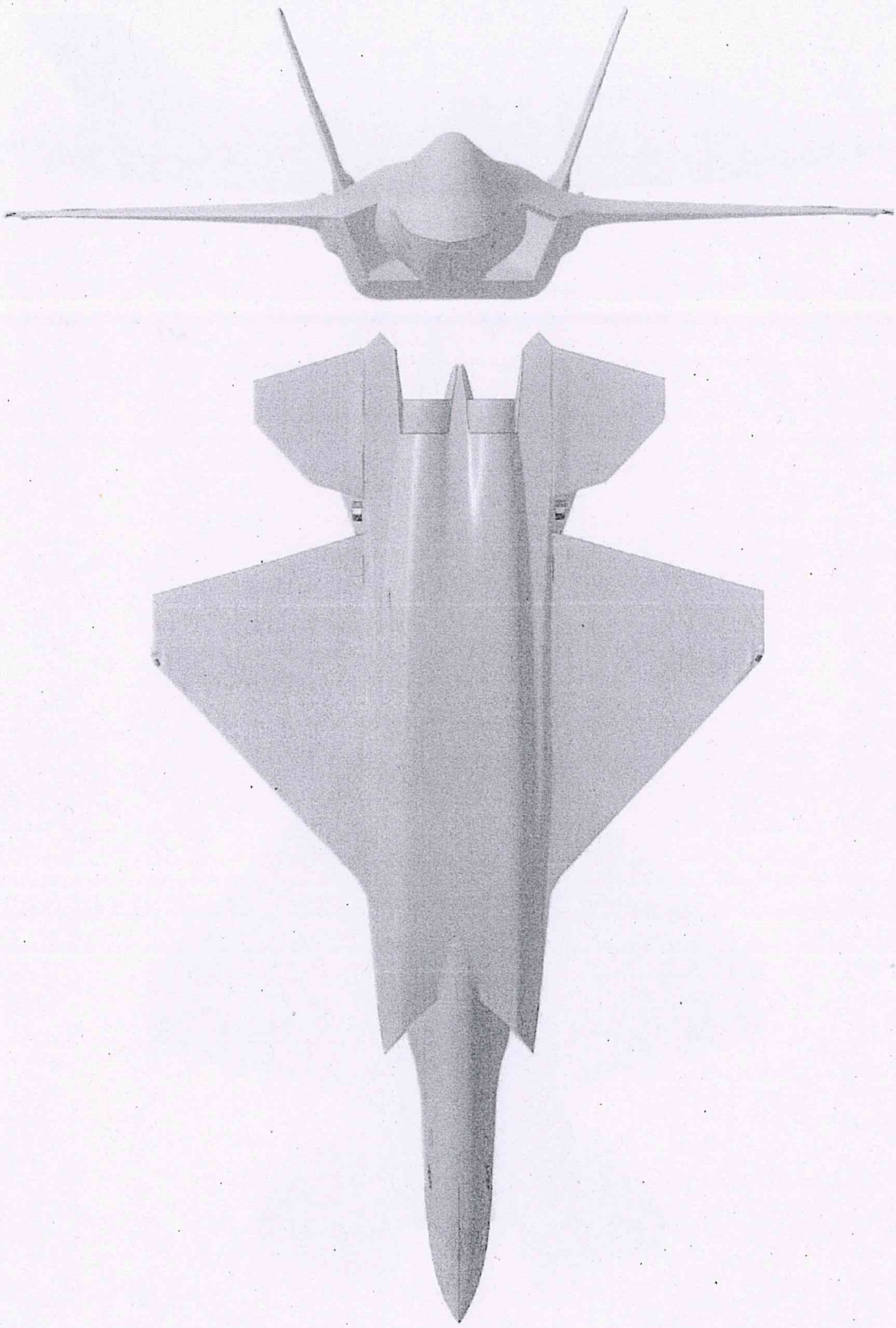












5. Missile Configuration: The internal weapon shall be manufactured as per given drawings. Themissile should fit to the Aircraft in their appropriate place. Data will be provided at subsequent stage.

1. AMCA, 1:10 Scale.

a) Development as per CAD drawings.
b) Cockpit Internal Details as per drawing and lightning to be shown.
c) Introduction of RP scaled pilot.
d) Appropriate Lightning to be shown.
e) Painting and Stickering as per scheme to be made.
f) The models will be made in FRP.
g) Will be mounted with SS (Sand Blasted) tail mounted stand only.
h) The development of Model will be as per recommendations of ADA-AMCA designers.
i) Weapon configuration, Cockpit, pylons and launchers as per ADA supplied models and drawings.
j) For Scale models, mirror to be provided at the bottom for clear visibility of internal Weapon Bay and External Stores.