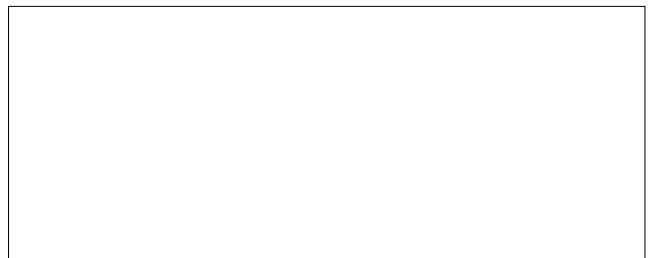


AERO INDIA-2021

13TH INTERNATIONAL SHOW ON AEROSPACE, DEFENCE, CIVIL AVIATION, AIRPORT INFRASTRUCTURE AND DEFENCE

**3rd – 5th FEBRUARY 2021
AIR FORCE STATION
YELAHANKA, BENGALURU**

FLYING MANUAL



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Note: The Flying Manual & Flight Rules should be read in conjunction with Exhibitor Manual for “AERO INDIA 2021”

SECTION – I**Programme of Activity**

1. The timing of flying activities from 27th Jan 2021 to 07th Feb 2021 as indicated below, and elsewhere in this manual are provisional. Changes, if any, will be communicated to the exhibitors during the Exhibition.

2. Customer Demonstration Flight (CDF) may also be undertaken outside these timings, with one day's advance notice subject to specific clearance by the Flying Display Committee (FDC).

Date & Time	Day	Events
27 th Jan 2021/0800 hours	Wednesday	Arrival of Aircraft for Flying Display
29 th Jan 2021/ 1600 hours	Friday	Mandatory Main Briefing for All Flying Display Pilots
30 th Jan –07 th Feb 2021/ 0800 hours	Saturday to Sunday	Daily Briefing/ Debrief for All Pilots
30 th Jan – 01 st Feb 2021	Saturday to Monday	Practice for Flying Display Sector Familiarization/ CDF Practice/ CDF Practice for Flying Display(30 th Jan- 01 st Feb 2021)
1000 – 1200 hours		
1201 – 1400 hours		
1330 – 1630 hours		
30 th Jan – 01 st Feb 2021 0800 – 1600 hours	Saturday to Monday	Arrival of Aircraft for Static Display (refer Note 2)
02 nd Feb 2021	Tuesday	Full Rehearsal
03 rd Feb 2021	Wednesday	Trade Day
0900 hours		Exhibition Open(Inauguration Ceremony)
1000 – 1200 hours		Flying Display
1201 – 1400 hours		CDF may be planned
1400 – 1700 hours		Evening Flying Display
04 th – 05 th Feb 2021	Thursday & Friday	Trade Days
1000 – 1200 hours		Flying Display
1201 – 1400 hours		Customer Demonstration Flights
1400 – 1700 hours		Flying Display
07 th Feb 2021/ 1600 hours	Sunday	Last Departure of Aircraft

Note:

1. Changes in the programme, if any will be intimated to all concerned.
2. No Aircraft will be permitted to land during the Flying Display Practice.
3. All timings are in IST.

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2.1 Introduction

This manual is intended for the use of participants to effectively display their aircraft at the AERO INDIA 2021 Exhibition to be conducted at Air Force Station Yelahanka (AFSY) from 3rd -5th Feb 2021.

2.2 Organizers' Address**Defence Exhibition Organisation (DEO)**

Government of India, Ministry of Defence
 Hotel Ashoka (Room 102-107), First Floor
 Chankyapuri, New Delhi - 110 021, India
 Tele : +91-11-26871991/ 011-20836145 (Extn 206)
 FAX: +91-11-26871988, E-mail : aeroindia-ddp@gov.in

Hindustan Aeronautics Limited, Bangalore

General Manager (Marketing)
 No. 15/1 Cubbon Road, Bangalore - 560001
 Tele :- +91-80-22320197

Indian Air Force

Chief Test Pilot (ASTE)
 Tele: +91-80-25220146
 e-mail: fdd.ai2021.gen@gmail.com

2.3 Participation Costs

Aircraft on display at AERO INDIA 2021 will be charged participation costs as follows:

Weight in Tonnes	Foreign Companies (In USD) (October Rate)	Indian Companies (In INR) (October Rate)	Foreign Companies (In USD) (November Rate)	Indian Companies (In INR) (November Rate)	Foreign Companies (In USD) (December onward Rate)	Indian Companies (In INR) (December onward Rate)
Upto1 Tonne	2040	106000	2100	111000	2200	116000
Upto 3 Tonnes	4250	220000	4500	231000	4700	241000
Upto10 Tonnes	5640	292000	5900	306000	6200	320000
Upto25 Tonnes	8500	437000	8800	458000	9200	478000
Upto 40 Tonnes	11300	583000	11800	610000	12300	638000
Upto 60 Tonnes	14100	728000	14700	763000	15400	798000
Above 60 Tonnes	14400	743000	15000	778000	15700	814000

Note : 1. Aircraft Display rates are applicable one time only.

2. Applicable Goods and Services Tax @18% extra for all rates.

2.4 Landing/Parking Charges

(a) Participation Aircraft

Aircraft participating in AERO INDIA-2021 would not be charged for landing/parking (including support aircraft) for the duration of the Exhibition. Parking charges for the stay outside the duration of Exhibition will be levied as per tariff applicable at the time of Exhibition. All Payments would only be made through card/ Online direct bank transfer to DEO account at site or in advance in the account mentioned.

(b) Non-Participating Aircraft

Non-participating aircraft (aircraft for support role) will not be permitted to park at Yelahanka Airport for duration longer than what is expected for normal loading and offloading. Parking facilities are not available at Yelahanka Airfield. The alternative airfields for parking will be Bangalore International (VOBL), HAL Bangalore (VOBG) and Chennai (VOMM). Parking charges for such aircraft will be levied as per tariff applicable at the time of Exhibition.

(c) Route Navigation Facility Charges (RNFC)

All aircraft landing at Yelahanka shall pay AFSY the RNFC as per tariff given in Aeronautical Information Publication – India FAL 3-1 to 3-4.

2.5 Aeronautical Authority

(a) The authority responsible for civil aviation in India is the Director General of Civil Aviation (DGCA) under the Ministry of Civil Aviation.

(b) **Address:**

Office of the DGCA
Technical Centre (Opp. Safdarjung Airport), New Delhi – 110 003

(c) **Commercial Telegraphic Address:**

AIR CIVIL, NEW DELHI, INDIA
Tel: +91 11 24654911, Fax: +91 11 24652760

(d) Exhibitors may note that all decisions made with regard to Customer Demonstration Flights (CDF) and Display Regulations as promulgated by the Flying Display Committee are final, and strict compliance by exhibitors is required.

Any damage to the airport and/or airport facilities will be charged to the operator concerned.

2.6 Ground Handling Requirements/ Services

The process for hiring of Official Ground Handling Service Provider has been initiated and will be finalised in the first week of November 2020. The details of the Ground Handling Service provider will be uploaded on the Aero India website <https://aeroindia.gov.in/> and thereafter the exhibitors are/may to engage the same.

(a) To tow their aircraft, when required, all section operators are required to carry towbar(s).

(b) Ground services that will be available with the Official Ground Handling Agency are listed in Form 1- Air (<http://www.aeroindia.gov.in/BookedAircraft>). The Ground Service Unit would be located next to the Crew Briefing Unit. Exhibitors must fill up Form 1-Air online on the above link.

(c) Handling of cargo associated with display of aircraft on ground and in the air during AERO INDIA 2019 would be undertaken by the Official Ground Handling Agency. This includes initial offloading and final loading of cargo/ luggage at Yelahanka. Custom formalities would be carried out by the Official Freight Forwarding Agency.

(d) All payments related to ground handling services for aircraft would be made by the exhibitors directly to the Official Ground Handling Agency and other agencies whose services have been hired by the exhibitors.

(e) SOP for aircraft Recovery Procedure/Salvage Operation shall be brought by the Exhibitor and handed over to ground handling team with intimation to FDD.

(f) Details of Recovery /Salvage/Crash equipment being brought by the exhibitor must be specified.

2.7 Refueling

All refueling requirements will be provided by Official Aviation Fuel Supplier for Aero India-21 as notified on the website <https://aeroindia.gov.in/>. Details of the Official Aviation Fuel Supplier will also be finalised at the time of finalisation of Official Ground Handling Service Provider and will be updated on the Aero India website. To get your flight refueled please follow the following procedure:-

(a) Fill a fuel order form (available with IOC) mentioning the Type of fuel, expected off take etc. and pay in advance in INR or USD equivalent for the quantity required. IOC accepts USD and Indian Rupees for the fuel supplied. Only JET A1 (IS 1571 issue 2008) is supplied. Other requirements may be coordinated with Official Ground Handling Agency.

(b) The posted airfield prevailing fuel cost can be obtained online. It'll only be an indicative price & the rates applicable on the date of refueling will be charged. Fuel can also be delivered against advance authorization from international fuel vendors. Aircraft neither holding cards nor with advance authorization will be required to make advance deposits equivalent in value to anticipated off take.

Note: Fuel prices prevailing on the date of supply will be charged. Customer can settle the fuel bills in US\$ at the prevailing exchange rate on the date of supply.

2.8 Flight Coordination Centre

(a) This office will be manned by competent staff responsible for all matters relating to aircraft movements to/from VOYK. Aeronautical Information Publication (AIP), India and relevant NOTAMS will be available at this office. All forms required to be filled up before flights, e.g. Flight Notification Form, Flight Plan (FPL), etc. will be available here. A representative of the Ground Handling Agency will also be available in the Flight Coordination Centre, to facilitate necessary coordination.

(b) It is located on the first floor of ATC tower AFSY.

2.9 Search and Rescue Facilities

SAR helicopter, Air Ambulance, ALR vehicle and ambulance facilities will be available at AFSY during the Flying Display.

Note: In the unfortunate event of an incident / accident, the casualties picked up by the rescue team would be transferred to designated hospitals in Bangalore in close proximity to AFSY and thereafter shifted to specialized hospitals as per requirement.

2.10 Flying Briefings /Debriefs

(a) It will be mandatory for all aircrew participating in the Air Display and Customer Demonstration Flights to attend the main briefing to be held on **29 Jan 21** at 1600 hours.

(b) Failure to attend the daily flying briefings/ debriefs, as mentioned in Section-I, shall disqualify the participants for the day.

(c) Flying Programme for Air Display/ Customer Demonstration Flights

(i) Participants intending to carry out air display/ customer demonstration flights must obtain the approval of FDC and notify the FDD latest by 1400 hours on the previous day. Detailed flying programme will be prepared by FDD and displayed on the designated notice boards by 1800 hours daily.

(ii) All teams to nominate and provide details of contact persons to FDD on arrival.

2.11 Consumables (Liquid or Gaseous)

(a) Consumables would be arranged by Ground Handling Agency. Participants requiring gases may give their requirements to the Organizers, while submitting the Form1-Air. The supply of the gases will be arranged on payment.

(b) Arrangements for the supply of other consumables, such as specialty oils, lubricants etc. can also be made, provided the exhibitors specify types and quantities required within the deadline stipulated herein.

2.12 Telephone /Cellular Phone/Fax/Internet Services

Telephone and other communication facilities will be available on demand. For details please refer to the Exhibitor Manual. Requirements may be submitted online.

2.13 Security – Exhibitor/ Crew Badges and Other

(a) All Exhibitors at all times are required to wear badges issued to them during the period of AERO INDIA-2021. Requirements of Exhibitor Badges may be submitted for the Aircraft Exhibitors online as per the Exhibitor Manual. Passport size photograph may be submitted online. Entrance to the Exhibition area will be guarded and entry will be restricted to only those who wearing the exhibitor/official **badges**. Security guards have the right to refuse entry any person who does not have the authorized badges.

(b) Pilots and technicians requiring access to the Flying Display Aircraft Parking Area (FDAPA) and Static Aircraft Display Area (SADA) must be in possession of the special crew pass, which is to be obtained from the Organizers. Details of such persons may be furnished in PDF Form No. 10-A along with two copies of

passport size photographs with name and company written on the reverse. The Exhibition area is within the AFSY, which is a Protected Area.

(c) The entire area is well secured. Security will be provided by the Organizers.

(d) While general security measures will be ensured by the Organizers, exhibitors are advised to have a minimum of two of their own staff members at SADA/FDAPA at all times during the Exhibition hours.

(e) For CDF, exhibitors must ensure stringent security measures during the boarding of passengers. The possibility of stowaways, hijackers or terrorists embarking on the aircraft must always be borne in mind. It is the responsibility of the exhibitor that personnel on board are fully verified as bonafide potential customers or specially invited guests who are known to the exhibitor.

(f) A list of all persons on board the demonstration flight must be given to the FDC before boarding is permitted. No exception will be allowed.

2.14 Application /Order Forms

(a) All applications, declarations and order forms mentioned in this Manual must be submitted by the due date. Where no services are required or approval sought, the online form should be marked "Not Applicable" and submitted by due date.

(b) Care should be taken to complete these forms fully. Reference should be made to any applicable exhibitor regulation as well as supplementary regulations which may be promulgated and also any conditions mentioned in the text or forms.

(c) All forms are to be submitted online at www.aeroindia.in. It would be pertinent to mention here that getting clearance for aircraft to enter the Indian air space from the DGCA / Air Headquarters, as applicable, takes approximately 20 to 25 days. Hence in order to process the forms faster as well as to avoid embarrassment at a later date, exhibitors must submit all the forms well in advance. Also, Forms which contain application for approval of Non-scheduled flights and lists of crew / passengers may be routed through the relevant country Embassy / High Commission located now at Delhi

(d) For quick processing of forms, a sample letter to be submitted on Embassy letterhead to the Ministry of External Affairs (MEA), Government of India, along with relevant forms, are enclosed with the forms in the Manual.

Note: A Separate set of forms are required for each aircraft to be displayed.

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3.1 Organisers

AERO INDIA-2021 is being organized by the Defence Exhibition Organisation (DEO), Department of Defence Production, Ministry of Defence (MOD), Government of India and Ministry of Civil Aviation (MoCA), in association with Indian Air Force (IAF), Defence Research and Development Organization (DRDO), and Hindustan Aeronautics Ltd. (HAL).

3.2 Exhibitors

(a) License to participate in the Exhibition is specific to the exhibitor and is non-transferable. No licensing or sub-licensing may be granted by the exhibitor to any other party.

(b) Exhibits will be limited to materials, products, or services related with the Exhibition. Organizers reserve the right to determine the eligibility of any aircraft for display.

(c) Manufacturers and/or their authorized offices in India only are permitted to be the exhibitors. Agents will not be permitted to display exhibits.

3.3 Validity Of Contract

Contract as set out in the Exhibitor Manual and Flying Manual will be valid only after payment of full contract price. The exhibitor shall have a revocable permission to participate in the Exhibition. This agreement is not and shall not be deemed to be a lease or an agreement for lease.

3.4 Payments

(a) Applications for booking of space, chalet and aircraft must be submitted on the forms supplied by the Organizers as per the deadlines stated therein.

(b) All payments to be net of bank charges and other service charges. For foreign participants, payments in US\$ only shall be accepted. Payments be made in favour of Defence Exhibition Organisation (DEO).

(c) Full payment must be made within 10 days of issue of the invoice.

(d) Payments for additional services referred to in this Manual must be made to the Agencies mentioned as per state conditions.

Note: These details will be published in the Brochure, Exhibitor Manual and the official website www.aeroindia.gov.in.

3.5 Cancellations

Except as otherwise provided in the rules, no refund will be made in the event of an exhibitor deciding not to participate in the Exhibition. The following rules shall apply.

3.6 Clearance/Refunds

Balance amount of security deposits, wherever applicable, shall be refunded to the exhibitors after adjusting charges for services used at site at the time of according clearance on conclusion of the Exhibition. Refunds shall be made through the Organiser's bank. All exhibitors' banks shall clear their payments before departure from AFSY. Based on the clearance, a "no dues" certificate will be issued by DEO, after which aircraft will be permitted to leave AFSY.

3.7 Suitability of Aircraft

Exhibitors shall ensure that their aircraft types are suitable for safe operation from AFSY. Aircraft not registered and/or certified for airworthiness by the State of Registry shall not be permitted for display flying. The certificate of airworthiness of an aircraft shall be produced in original to the FDC at their office at AFSY, prior to commencement of the first sortie of the concerned aircraft. Failure to do so would disqualify the aircraft from participating in the Exhibition.

3.8 Radio Equipment

Participants shall note that display aircraft should have only such electronic/ telecom equipment fitted in the aircraft, which is essential for Flying Display and is capable of two way communication with ATC units on appropriate Very High Frequencies (VHF) indicated in Section VII. No other type of equipment is permitted from security point of view. List of electronic/ telecom equipment on board should be provided to the Organizers. A backup radio set is strongly recommended.

Note: It may be noted that High Frequency (HF) band radio is used mainly for long range communication and cannot be used for display flying operations. Any aircraft not capable of two way VHF communication with ATC shall not be permitted to take part in the display/ demonstration flying. For Microlight/ Ultralight aircraft without VHF communication facility, separate Flying Display slots will be provided

3.9 Supply of Tow-Bar

Due to multiplicity of design, shape and size of aircraft, exhibitors should bring their own tow-bars (with aircraft name marked), which are to be handed over to the Ground Handling Agency on arrival at AFSY.

3.10 Customs and Immigration

(a) **On Arrival** - Aircraft landing directly at Yelahanka from abroad or from an airport within India without obtaining customs/immigration/health clearance will need clearances from such authorities at Bangalore. Customs clearance and immigration facilities will be available at AFSY.

(b) **On Departure** -The exhibitors contact the Organizers and the Official Ground Handling Agency for assistance and advice regarding final departure procedures. No aircraft will be permitted to leave AFSY without clearance from the Defence Exhibition Organisation gate. This is to be presented to the ATC who will issue an appropriate departure certificate.

3.11 Responsibilities

(a) **MOD, IAF, DGCA, AAI** - The Government of India, MOD, IAF, DGCA, the Airport Authority of India (AAI) and the employees or agents of any/all of them

will not be liable to any exhibitor, its servants or agents or any other persons in respect of any loss, damage or injury direct or indirect and howsoever caused, arising out of or in any way connected with the participation or proposed participation of any exhibitor or its aircraft in Static / Flying Display, CDF or in any other aspect of the Exhibition.

(b) Each exhibitor shall indemnify the Government of India, MOD, IAF, DGCA, AAI and the employees or agents of any/ all of them, against all claims of whatsoever nature which may be made against any of them arising out of or in any way connected with aircraft, with all including without limitation, any claims made against the Government India, MOD, IAF, DGCA, AAI or any Government or regulatory agency, department, statutory board body, arising out of or in any way connected with the use of Bangalore /or proposed Yelahanka airfield/airspace during the period of Exhibition. Exhibitor is to be in possession of valid Certificate of aircraft Registration (C of R) and Certificate of Airworthiness (C of A) issued by the appropriate authority of the country of registration for its aircraft in the static aircraft display, Flying Display, CDF and any other aspect of the exhibition. Each exhibitor shall be liable to the Government of India, MOD, IAF, DGCA and AAI and exhibitor is to ensure that in the case of a civil aircraft, the aircraft is fully airworthy for participation in the Exhibition or ownership or control or use of any International Civil Aviation Organisation (ICAO) standards exist all times during the flying activity of the aircraft, which is acceptable as per DGCA and MOD norms and is to be able to carry out all such aerial activities (including aerobatics) during the Exhibition.

(c) Each exhibitor shall be liable to the Government of India, MOD, IAF, DGCA and AAI to ensure that, in the case of military aircraft, the aircraft is fully airworthy as per Military Design Standards of the country of origin or ownership and airworthiness exists at all time during the period of Exhibition. A valid certificate of maintenance and a full or partial military clearance for operations, issued by the appropriate military authority of the Ministry of Defence of the country of origin, or manufacturer on behalf of military authority/agency, and that such certificate covers all such aerial activity (including aerobatics) to be carried out during the exhibition.

(d) Each exhibitor shall indemnify and hold harmless the Government of India, MOD, IAF, DGCA and AAI for any claim or expenses arising out of the non-airworthiness of the aircraft participating in the exhibition.

3.12 Insurance

(a) The exhibitor shall take third party liability insurance policy in connection with the participation of its aircraft in the static/Flying Display, CDF or any other aspect of the Exhibition for a minimum amount of Rs.100 million per accident or its equivalent in US\$.

(b) Such insurance policy shall be taken in the names of the exhibitor with the Government of India, MOD, IAF, DGCA, **HAL** and AAI, as additional assured with a cross liability provision whereby, subject always to the policy limit of the liability, the additional assured will receive protection from policy in the same manner as though a separate policy had been issued to each.

(c) Insurance company will indemnify the exhibitors against their legal liability to pay any expenses anywhere in India, in accordance with Indian Law.

(d) Loss, without compensation including claimant's costs, fee right of contribution from any other insurance, which may be available to the additional assured.

The exhibitor's insurance policy shall be the primary insurance for any Cost.

(e) It is hereby understood and agreed that in connection with AERO Exhibition / Flying Display organized by MOD to be held at AFSY from 03 to 05 Feb 2021, subject the policy coverage and policy limits, the insurers shall indemnify the insured and the Government of India, MOD, IAF, DGCA, HAL, AAI against public liability arising under any regulation incorporated in any agreement between the insured and MOD but excluding: Loss or damage to the aircraft loaned. Any charge for the loan of the aircraft.

(f) No tickets or passes or invitations of admission shall be required to contain any disclaimer of liability.

(g) In respect of accidents arising while the insured aircraft are operating from any airfield in India during the period of Exhibition or whilst the aircraft are flying between their home base and Yelahanka enroute to participate in the Exhibition or returning to their base from the Exhibition, if any party suffers death, body injury or damage to personal effects caused by an Aircraft insured by this policy, the insurers without raising as a defence.

(i) That the insured were not legally the owners of any aircraft loaned to the insured. OR

(ii) That spectators voluntarily accept the risk of injury or damage or are in any worse legal position than ordinary wayfares. Any other purely technical defence, will pay compensation in respect of any one person up to an amount not exceeding Rs. one million which is considered adequate taking into consideration any contributory negligence, provided that if any third party refuses to accept the amount of compensation offered, then the insurer shall not be liable under the policy to make any payment in respect of the claimant.

(iii) Except as expressly stated, this endorsement is subject to the terms and conditions of the Policy.

(iv) Proposal for Aviation Insurance.

(v) It is the duty of the exhibitor to provide the proof of acceptance of liability in the terms stated above for all military/civil aircraft whether loaned or entered by a Government.

(vi) The insurance policy in connection with the aircraft participating in static/Flying Display or CDF, shall be produced in original at the office of the FCC failing which the exhibitor would be disqualified from participation.

3.13 Display Of Military Aircraft Equipment

Exhibitors must ensure that full details of military aircraft are made known to the MoD through PDF Form 4-Air. If weaponry is to accompany the aircraft, then PDF Form 5-Air is also to be completed and the declaration signed. Any weaponry displayed around or under an aircraft, must have been declared by the exhibitor in Form 5-Air and cleared for import into India for display by the Organizers. Failure to provide the declaration and details on PDF Form 5-Air will result in delay, or even dis allowance to display.

A special team constituted by FDC would be co-located at the Customs Office at AFSY for clearing the Static/Flying Display of military equipment or weaponry. This team may visit the SADA or FDAPA before the Exhibition and check the exhibits against the listing stated in PDF Form 5-Air. All inert rockets, bombs, dummy projectiles and other items of weaponry must be clearly marked "INERT" in easily readable font. No live ammunition, mines, missiles, bombs, propellant charges, etc. are permitted under any circumstances.

3.14 Restrictions on Aerial Photography

(ii) Any aircraft equipped with on-board cameras must have these cameras disabled before arriving in India and whilst in India.

(iii) Rules on use of drones for aerial photography at the venue will be conveyed through a separate notification.

3.15 Restrictions on Ground Photography

Restriction on ground photography will be as per promulgated guidelines.

3.16 Clearance of Foreign Military Aircraft

The Organizers will inform Air Headquarters (IAF) for military aircraft flying into India for the sole purpose of participating in AERO INDIA-2021. Further clearance/modalities would be undertaken by the ACAS (Ops.), Air HQ. For early clearance, please route your PDF Forms No. 9, 10 & 11 – Air through your Embassy/High Commission in India.

3.17 Tarmac Damage

All exhibitors of aircraft are advised to place drip trays in position at all times. Exhibitors will be charged for any damage caused to the tarmac due to oil/fuel leakage from the aircraft as determined by MOD, IAF or AAI.

3.18 No Smoking Area

FPADA and SADA are strictly "No Smoking" areas. Smoking in public is prohibited by law in India. Smoking may be carried out at designated smoking areas, which will be properly marked.

3.19 Fire Services

Aircraft Crash Fire fighting services would be available during ATC watch hours only. Other fire services would be available near the site of the Exhibition.

3.20 Round The Clock Notification of Person On Board Aircraft

Before any flight is made during the period of Exhibition, the details of persons on board along with their nationalities, sex and age are to be given to the FCC. At the time of start up, the pilot shall pass number of persons on board to Aerodrome Control on Radio Telephony (R/T). For arrivals and departures, requisite clearances will be obtained by the aircraft from the FDC, only then the aircraft will be permitted to land or take off from Yelahanka.

3.21 Presence of Aircraft Throughout Exhibition

It is a condition of acceptance for participation in the Exhibition, that exhibitors must agree to their aircraft remaining in the SADA or any other area allotted to them throughout the period of the Exhibition. Premature removal will not be permitted unless under exceptional circumstances. As a part of the departure process, all pilots are required to complete a departure form in the FCC which is required to be endorsed by Director, Defence Exhibition Organisation.

3.22 Departure Of Aircraft

Exhibitors have to vacate the Exhibition site latest by 1600H on 07th February 2021. Aircraft remaining thereafter will be liable to additional charges levied by ATC. International departures must comply with normal out bound procedures such as customs/ immigration/ health clearances etc.

SECTION IV

Static Aircraft Display		
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4.1 Arrival Of Aircraft

Exhibitors who have applied to the Organizers for **Static Display only**, are required to present their aircraft at AFSY between 0800 hours on 29th January 2021 and 1600 hours on 31st January 2021.

Notes: Aircraft arriving for Static Display before **27th January 2021** need to take clearance from AF Stn, Yelahanka before planning their arrival.

In order to facilitate the entry and exit of aircraft engaged in CDF or Flying Display, the positioning of aircraft in SADA will be at the discretion of FDC. Aircraft solely on Static Display will be positioned to the South, away from the taxiway. Exhibitors must indicate on Form 1 (<http://www.aeroindia.gov.in/Login>) for civil and military aircraft respectively, whether their aircraft is on Static Display only or is also being utilized for Flying Display. To facilitate the clearance of incoming aircraft, exhibitors should ensure that all flight plans contain the following information. This applies particularly to the last flight plan filed in the event of an intermediate stop. The owner or operator is to be entered in the appropriate column. Under "Remarks," enter "Participating in AERO INDIA-2021."

Exhibitors should complete PDF Form 7-Air (A) and Form 7-Air (B). The information above refers only to participating aircraft, and not support aircraft.

4.2 Static Aircraft Display Area (SADA)

The SADA is located to the south of Yelahanka Runway. Two aprons have been earmarked at SADA (refer site plan on the front inner cover page of this manual). Aircraft will be available for viewing by visitors in the SADA. However, aircraft may be removed to take part in the Flying Display or Customer Demonstration Flights. Under no circumstances are exhibitors allowed to park vehicles, caravans, mobile stands, construct temporary buildings in the SADA, or place packing material in this area. All movements into and out of the SADA will be carried out by the Ground Handling Agency who must be notified the day before the arrival of the aircraft and also the intended time for moving out. The SADA lies in the security area of AFSY.

(a) Unauthorized personnel are not permitted within this security area, which is guarded by security personnel.

(b) Exhibitors are advised to read Section II Para 2.13, on the subject of security in the SADA. The SADA is strictly a "No Smoking Area" and no refueling is permitted on the site.

SECTION – V

Customer Demonstration		
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5.1 Customer Demonstration Flights (CDF)

(a) Flights for the purpose of demonstrating the aircraft to potential customers, press, publicity and other purposes will be possible on each of the Exhibition days from 03rd to 05th February, 2021 (refer Section-I).

(b) AFSY Airport will remain open for normal traffic throughout the exhibition, except for the period when the Flying Displays are taking place. Practice flights and CDF must, therefore, be coordinated to fit in with the scheduled arrivals and departures. The time allocated for CDF is from 1200 -1400 hours on all days. Flight plans must be submitted to the FDC and FCC for approval on a special form available at the location.

5.2 Regulations Governing Customer Demonstration Flights

(i) Aircraft which are presented for Static Display during the initial days of the AERO INDIA-2021 and are required to undertake CDF subsequently would be towed from the SADA to the appropriate apron on the eve of their demonstration flight. The exhibitors should indicate such a requirement for towing their aircraft in Form1-Air.

(ii) All aircraft departing from their allocated parking position may do so only after appropriate clearance has been given by the ATC at AFSY. The relevant airfield procedures (including R/T calls) are given in the "ATC Procedures" (Section-VII).

(iii) CDF may be conducted in the designated sectors. Aircraft not equipped with VOR receiver would maintain within the sector radials centred on Yelahanka NDB. Instrument Flight Rules (IFR) and Visual Flight Rules (VFR) flights for civil as well as military aircraft would be conducted only in the designated sectors for AERO INDIA 2021. Procedures would be briefed during the main briefing on 29 January 21.

(iv) Exhibitors intending to carry out CDF are required to submit their FPL to the FCC on the evening prior to their demonstration flights. CDF will be

made available on a first-come-first-served basis. Submission of multiple flight plans for CDF will be acceptable.

(v) Flight crews are to familiarize themselves and comply with the rules and regulations applicable for flying within Indian Air Space.

(b) Rotary Wing Aircraft–

(i) All rotary wing aircraft, which are intended to be flown for CDF, would be parked at Apron C, Helicopters which are presented for Static Display during the initial days of the AERO INDIA-2021 and required for CDF subsequently would be towed from the SADA to the appropriate apron. The exhibitors should indicate such a requirement for towing their aircraft in Form1-Air.

(ii) The relevant airfield procedures are given in the ATC Procedures (Section VII). The sectors allotted for CDF of rotary wing aircraft are in VOR 185 B and 185 C. The upper limit in these sectors is 6000 ft. If higher levels are required, then the aircraft would proceed to VOR" 185D (fixed wing sectors).

(iii) No attempt is to be made to enter the runway for a take off to the South until positive ATC clearance has been obtained.

(c) Microlight/ Ultralight Aircraft

Microlight/ Ultralight aircraft intended to be flown during AERO INDIA 2021 would be parked at Apron C. Specific time slots would be allotted for the demonstration flights of microlight/ ultralight aircraft. Considering that some of these aircraft may not be equipped with radio communication facilities, it is of utmost importance that the pilots of these aircraft strictly adhere to their take off and landing times.

SECTION – VI

Programme for Flying Display		
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6.1 Introduction

Exhibitors who wish their aircraft to be considered for the Flying Display must first make an application to the Organizers on the forms provided in this manual and submit their proposed display sequence to the FDD. The proposed sequence should be in the form of a written description together with a three dimensional ribbon diagram. Landing and takeoff maneuvers can be seen from the viewing areas and thus, may be included in the sequence. If accepted, exhibitors must ensure their aircraft and pilots arrive in time and are present for the main briefing at 1600H on 29 Jan 2021 which precedes practice days of 30 Jan 21 to 01 Feb 21 (inclusive). Pilots who have flown in on the same day may need rest and their aircraft may need maintenance before commencing practice flights. Teams may cater to this aspect.

6.2 Arrival of Aircraft

Aircraft participating in the Flying Display should arrive at AFSY by noon of 27 Jan 2021. The main briefing for all display flying will take place at 1600 hours on 29 Jan 2021. Exhibitors should complete Form 7-Air (A) & Form 7- Air (B). Teams may cater for maintenance before commencing practice flights.

6.3 Flying Display Programme

Flying Display Programme is shown in Section I. In view of the limited number of display slots available during the periods, it is expected that the demand will be high. Only exhibitors who have applied to the Organizers by completing PDF Form 4- Air and have submitted other relevant documents by 01 January 21 at the latest, will be considered for participation. There will be no

additional charges for participation in Flying Display but the FDD reserves the right to decide which aircraft will be accepted for inclusion, the order and duration of flying and to impose restrictions on the display content as they see fit. The time allocated by the FDD to each aircraft for display within the Flying Display Programme will be sufficient for an interesting and convincing demonstration.

6.4 Regulations Governing Flying Displays

(a) Control of the Presentation of Aircraft:

(i) Control of Flying Display Aircraft is vested in the FDC. Exhibitors presenting aircraft and their pilots must comply with Exhibition regulations governing the presentation and flying of aircraft and all subsequent instructions issued by the FDC. The Organizers reserve the right to change and interpret any regulation governing the presentation and flying of aircraft. The FDD is empowered to withdraw the Flying Display approval of any pilot who disregards instructions or disobeys the regulations. During the Flying Display, positive control will be exercised by the FDD at all times, on 119.4 MHz. The authority of the FDD is absolute in that instructions given in the interest of safety are mandatory and must be complied with immediately.

(ii) Control of flying will be exercised by R/T using English language and all pilots participating in the presentation of aircraft must be adequately fluent in this language. Briefing/ debrief for all pilots taking part in the Flying Display will be held daily. These briefings will be conducted in English. A notice board showing the daily flying programme with times for engine start, taxi, take offs and landings will be available at Flight Operation Centre, FCC and FDC Office by 1900H.

(iii) A copy of the day's flying programme would be sent by email to all the participating crew.

(iv) Exhibitors must comply with all Indian statutory requirements and regulations applicable to their presentation of aircraft.

(v) Exhibitors must submit evidence to the Organizers that each aircraft has valid Certificate of Registration and Certificate of Airworthiness, or equivalent military approvals recognized as valid in India which do not prohibit public Exhibition (see Para 3.7 of Section-III).

(vi) All the participants must mention the minimum visibility and cloud base for carrying out both fair weather and bad weather Flying Displays.

(b) Other Mandatory Requirements

(i) No live ammunition, rockets or bombs, external tanks containing fuel, or radioactive material may be displayed with aircraft in the SADA nor carried on aircraft during the Flying Display. No equipment transmitting powerful electromagnetic signals or lasers shall be operated during the flight or the static display.

(ii) On board cameras, if fitted, must be immobilized during all flying in India, including the Flying Display and practice flights.

(iii) The use of smoke is permitted during the Flying Displays.

(iv) Exhibitors are responsible for ensuring that their nominated pilots are adequately qualified to undertake all flying activities of display as well as CDF. All participating crew shall report to FDD prior to practices.

(v) Clearance of flying display by individual pilots will be subject to the approval of the FDD after having seen the flying display practice. On approval of the display programme by the FDD, pilots shall provide a written undertaking that flight display will conform in every respect to the approved demonstration. Forms for this purpose will be provided by the office of FDD, in which all manoeuvres shall be listed by the owner of the demonstrating aircraft.

(vi) The FDD reserves the right to exclude any particular manoeuvres or the complete Flying Display. In the latter case, a revised Flying Display shall be demonstrated to the satisfaction of the FDD before the aircraft can participate in the Flying Display. A Flying Display revised at the request of the FDD, or by the pilot, must not include any manoeuvres or linking manoeuvres not previously authorized by the FDD. Although the sequence of the individual display may be changed with the approval of the FDD, it may not be possible to arrange further demonstration(s) for the FDD in the time available. The FDD is solely empowered to decide on the inclusion or exclusion of the aircraft from the Flying Display in such cases.

6.5 Flying Limitations during the Flying Display

During the Flying Display, it is the intention of the FDD to permit skillful and convincing displays, but flight safety and the safety of the public are of paramount importance. Only manoeuvres consistent with the designed role of the aircraft shall be permitted. The following rules are to be complied with during practice flying as well as in the Flying Display:

(i) The minimum height for straight and level fly pasts is 300 ft above ground level (AGL), provided the aircraft is clear of any constructed structure by 800 ft laterally and 300 ft vertically.

(ii) The minimum height for all other manoeuvres including fly past is 500 ft AGL. However, all pilots are to note that manoeuvres in the looping plane which involve pulling through the vertical must be completed higher than 500 ft above obstruction level (AOL).

(iii) The minimum height for all helicopters is 150 ft AOL. Helicopters are not permitted to perform more than one rolling manoeuvre during any one pass.

(iv) The above quoted heights are to be observed as minimum separation distances (MSD) from any structure on the surface/land. The MSD is defined as the distance between the lowest part of an aircraft and the highest point of any surface obstacle in the Aircraft "must path remain within the designated

display zone at all times, except for takeoff and landing. Breach of this regulation may lead to immediate exclusion.

(v) A multi-engine aircraft must not fly below the speed at which it is not possible to climb away, without change of configuration, should any engine fail to respond to an acceleration demand.

(vi) Engines are not to be shut down during Flying Display.

(vii) Aircraft should not be flown outside the aircraft's proven limitations and must not exceed a true speed of **M 0.95**.

(viii) No manoeuvre is to be attempted which is likely to jeopardize the safety of spectators in the event of mishap or mis-judgement. Only manoeuvres which have been validated by the FDD shall be performed.

(ix) Whilst carrying suspended loads, helicopters must not be flown within such proximity to personnel, aircraft or buildings that hazard would be caused if the load were to become detached or control difficulties be experienced.

(x) The aircraft shall not cross the foul line (southern edge of the runway) towards the viewers at any altitude. Spectators shall strictly not be overflowed, at any altitude.

Notes:

1. The above limitations may be superseded by more stringent limitations, if any, imposed by national authorities, manufacturer or other operational authorities.
2. The FDD may impose increased limitations on individual aircraft at their discretion.
3. Dispensations will only be given in exceptional circumstances.
4. Helicopter aerobatics are permitted only by those helicopters which have a certified capability proven to the satisfaction of the FDD.
5. Breach of flying discipline will result in termination of the current flying display. Series of breaches during the Exhibition will result in complete suspension. Pilots taking part in the display must attend the daily briefing held at the Flight Operations Centre at 0800H hours and present themselves for individual debrief to the FDD post completion of the display block.

6.6 Description of Flying Displays

(a) Exhibitors presenting aircraft in the Flying Display must submit for each aircraft, a full written description, with accompanying sketches in the form of a three dimensional ribbon diagram of the flight manoeuvres and linking manoeuvres to be used in the proposed display in both good and bad weather conditions. Should it subsequently become necessary to change or reduce the length of the flight display, only those manoeuvres shown may be performed.

(b) Good weather conditions, when the display is permitted, are defined as cloud base at 5,000 ft, visibility 8 km and 1,000 ft clearance from clouds vertically and horizontally.

(c) Bad weather conditions, when the display is permitted, are defined as cloud base at 3000 ft, visibility 5 km and 1,000 ft clearance from clouds vertically and horizontally. Flying Display will not be permitted in weather conditions which are more adverse than that given for bad weather. However, horizontal profiles may be permitted by the FDD.

(d) The FDD will decide on the appropriate display after considering the prevailing weather conditions. The description of the Flying Display should commence with entry into the display area at a minimum height of 500 ft AOL after take off from Yelahanka Runway (RWY) 27 or 09, and the timing of the display would be considered from the take off to landing.

6.7 Briefing, Practice, Validation and Rehearsal of Flying Display

(a) Briefing for Flying Display Practice

(i) The Main briefing will be held at the Exhibition site in the FCC, AFSY for all participating air crew in the Flying Display on 29th January, 2021 at 1600H. The presence of all participating pilots (including reserve pilots) at this briefing is mandatory.

(ii) Inability to attend these briefings will result in the display pilot not being allowed to participate in the practice sessions, or the display itself.

(iii) All briefings/ debriefs will be held at Flight Operations Centre, AFSY. A full schedule of all briefings is as follows:

Description	Day and Date	Time
Main Briefing	Thursday, 29 th January ,2021	1600H
Daily Briefing/ Debrief	30 th Jan 2021 – 05 th Feb 2021	0800h/Post Display

(b) Individual Practice

(i) Pilots of all participating aircraft are encouraged to carry out individual practice of their display from 29th January to 02nd February, 2021 at VOYK. Practice sessions will be coordinated by the FDD.

(ii) Exhibitors are to make known individual practice requirements along with their flying display profiles / CDF profiles to the FDD as early as practicable (latest by Main Briefing at 1600H on 29th January 2021).

(iii) Flight profile in tabular form and ribbon diagram should be sent to FDD through e-mail in advance. This should also indicate the total display time from Take Off to Landing.

(iv) The time allotted may be modified by the FDD, depending on the number of participants. The decision of FDD would be binding and all participants would have to modify their profiles accordingly.

(c) Validation

(i) Prior to the opening of AERO INDIA-2021, a demonstration must be given before the FDD of the intended Flying Display previously described in writing. The demonstration is known as validation.

(ii) Where more than one pilot is nominated to fly an aircraft in the Flying Display during the period of the Exhibition, the FDD will require each pilot to validate the flight display. Once approved by the FDD, this demonstration cannot be changed without the express approval of the FDD.

(iii) Exhibitors are reminded of the requirement to file the list of all persons on board with the before each flight, including the Flying Display, as specified in Section III of this Manual.

(d) Rehearsal

(i) A full scale rehearsal of participating aircraft whose pilots have successfully completed the qualification procedure will be carried out on 02nd Feb 2021 at 1000H, with an alternative plan at 1500H on the same day in the event of unsuitable weather or an unsatisfactory rehearsal. The purpose of the rehearsal is to enable both the pilot and the FDD to become accustomed to the sequence of the display including the actual flight manoeuvres of the aircraft preceding and following their own.

(ii) Exhibitors shall forward the details as commentary to be made during the Flying Display.

(iii) Failure to participate in at least one full-scale rehearsal display will disqualify pilots from participating in the actual displays

6.8 Terminology to be used during the Flying Display

The general R/T terminology to be used during the AERO INDIA 2021 is given in the "ATC Procedures" (Section VII)

6.9 Restrictions on Persons on Board (POB) During Flying Displays

Only those persons performing the essential functions of crew members of an aircraft are to board an aircraft during Flying Display, including practice and validation. No passengers are to be carried during Flying Displays and practice sessions.

SECTION VII

ATC Procedures		
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7.1 Aim

To provide all relevant information to operators, to facilitate planning and display of their aircraft/ products effectively at AFSY.

7.2 Parking Facilities

A general layout plan of AFSY is given at front inside cover page. Aircraft parking areas are indicated for aircraft taking part in Flying Display and for aircraft taking part in static display.

7.3 Display Information

All activities connected with the Flying Display will be controlled and coordinated by the FDD.

7.4 Flight Coordination Centre (FCC)

FCC will provide all necessary information regarding flight planning, briefing, local flying and general ATC procedures. The FCC will be located in the ATC premises.

7.5 Official Ground Handling

In coordination with surface movement control unit/ Aerodrome Control, this agency would arrange for the ground movement/ refueling of aircraft (see Para 2.6 of Section II for details of the Agency). Any technical assistance as requested by crew/ operator will be provided by this agency.

7.6 Airfield Information

(a)	Yelahanka Aerodrome Co-ordinates (ARP)	130811.16 N 0773632.36E	
(b)	Elevation	3047 ft (928.672m)	
(c)	Runway	09R/27L	8004 ft x150 ft
(d)	Pavement Classification Number	Rigid-101 Flexible-109	
(e)	Distances	Rwy 09	Rwy 27
	Take Off Run Available (TORA)	8004 ft	8004 ft
	Take Off Distance Available (TODA)	8200 ft	8500 ft
	Available Landing Distance Available (LDA)	7707 ft	7485 ft
	Accelerate Stop Distance (ASDA)	8200ft	8500 ft
	Over-Run Area	200 ft	500 ft

Landing threshold for Runway 09 is permanently displaced by 297 ft due to ILS Localizer antenna on approach. Landing threshold for Runway 27 is permanently displaced by 519 ft due to presence NH-44 on approach.

- (f) Runway Markings (standard markings as per ICAO)
- (g) Lighting: Runway edge lights – High Intensity Runway Light (HIRL) 200 ft apart. Taxi way edge lights. A precision Approach Path Indicator PAPI for Runway 27 on the right shoulder and for RW 09 on the left shoulder. **(Glide Angle 3 degrees).**

HIALS of 900 Mtr is available for Rwy 27 however categorized as BALS due to non availability of two lights at 330 and 360 Mtr. SALS of 420 Mtr is available for Rwy 09 Categorized as IALS. Aerodrome Beacon (white & green; RPM – 12) Threshold lights and RW end lights.

- (h) **Gradient of Runway Surface at AFSY** Average Slope Segment wise RW 09 beginning to 375 m=+0.51 degree 375 m – 765 m = - 0.37 degree 765 m – 1500 m = +0.55 degree 1500 m – 2100 m = -0.10degree
- (j) The rate of change of slope is more than 0.1 percent.

7.7 Aerodrome Obstructions

SI No.	Obstructions	Bearing/ Dist (NM)	AMSL Feet	AMSL Mtr
1.	Hangars (North	020°/0.08	3068	935
2.	Bethalsur Hill	028°/1.5	3338	1017
3.	Huttanahalli	047°/2.7	3072	938
4.	NDB Mast	257°/1.6	3104	946
5.	Water Tank (near PO)	115°/0.6	3107	947
6.	Water tank (Domestic Area)	115°/1.0	3113	949
7.	ATC Tower	170°/0.15	3111	948
8.	SRE ATCR 33S	356°/0.61	3135	956
9.	ASTRA IDL Chimney	180°/2.3	3176	968
10.	WCDMA Tower near NDB	248°/0.89	3170	937
11.	WCDMA Tower near Dog Squad	152°/ 0.37	3173	967
12.	Hangers South	177°/0.5	3111	948
13.	MWT at Domestic Area	125°/0.5	3163	964
14.	Ecopolis Building (Guif oil)	148°/0.9	3111	948
15.	Ramky Estates Resi Building	269°/2.3	3120	951
16.	Shri Prop Building	268°/2.26	3111	949
17.	Power Grid Corp. Tx Lines	287° to 307°/ 3.45 – 7 NM	3291	1003
18.	M/s Prestige Estates	276°/1.23	3153	961
19.	Signal Tower on Hill Top	023°/1.43	3285	1001
20.	M/s Vijram Estates	273°/2.33	3101	945
21.	Yelahanka Chimney	198°/2.6	3075	937
22.	Water tank (Wheel & Axle)	198°/2.6	3075	937
23.	KPCL Chimney / Crane	218°/1.99	3185	971
24.	Spice tower(Frm 27 db)	192°/1.0	3209	978
25.	Hutch tower(Frm 27 db)	015°/1.1	3209	978
26.	Reliance Tower(Frm 27 db)	018°/0.6	3183	970

27.	Shobha Developers	258°/2.0	3150	960
28.	Canara Housing Proj. Ltd	247°/2.0	3193	973
Within 10 NM				
1.	TV Tower at Bengaluru	187°/8.1	3521	1073
2.	High Ground	270 °/10.0	3445	1050
3.	Group of signal tower at high ground	315 °/9.9	3363	1025
4.	MWT in group signal tower	311°/9.9	3363	1025
5.	MWT at Tagor Nagar	186°/7.0	3347	1020
6.	MWT at Banshankari	186°/9.1	3363	1025
7.	MWT at Bengaluru city	186°/9.5	3347	1020
8.	MWT at Bengaluru	206°/7.6	3314	1010
9.	Kundana Hills	012 °/7.5	3304	1007
10.	MWT at Chokkasandra	222 °/7.5	3297	1005
Within 25 NMs				
1.	MWT on Hill Top Nandi Hill	018 /14.5	4902	1494
2.	Sivaganga Hills	274°/23.0	4548	1386
3.	High terrain near Magadi	237°/23.0	4023	1226
4.	MWT at Bengaluru	188°/13.9	3363	1025
5.	MWT at Bengaluru City	186°/10.1	3346	1020
6.	MWT at Timmondyakar	284°/21.3	3330	1015
7.	MWT at Building Top	180°/10.2	3298	1004
8.	MWT at Along Road	259°/23.3	3293	1004
9.	MWT chik ballapur	022°/19.0	3281	1000
10.	MWT at Chintamani Hill Top	059°/30.3	3281	1000

7.8 Navigational Aids and Landing Aids

Non Directional Radio Beacon(NDB)	223KHZ	Code(YH)
Instrument Landing System(ILS) (RW 27)/DME	110.3MHZ	Glidepath 335MHZ
DVOR/DME	117.70 MHZ	Code (YLK)
ARSR BIA Radar(Freq 127.75 MHZ)		
ARSR Radar (Freq 127.7 MHZ)		
LFA (LFA (VOR 185 A, B, C and D) of Yelahanka is with Yelahanka Approach. Approach control service for enroute traffic coming from/ proceeding to the North is provided by BIA (127.75 MHz).		

7.9 Frequencies

Preflight/Procedure and Surface Movement	118.3 MHz
Flying Display (Main)	119.4 MHz
Flying Display (S/by)	118.7 MHz
Approach Yelahanka	122.9 MHz
Tower Control	120.9 MHz

7.10 Local Flying Restrictions

(a)	Circuit Pattern: Right hand circuit for RW 09 and left hand circuit for RW 27.
(b)	Restricted Air spaces VOR 181-A & 181-B - Bangalore Approach (127.7 MHz) VOR 185-A, 185-B, 185-C& 185-D - Yelahanka ATC VOD179 - Yelahanka ATC

(c) ATC Procedure and Operations

- (i) For the conduct of flypast and flying displays the airspace available would be as follows

Vertical Limits- Ground level to FL 150

Horizontal Limits - From 5 NM to 30 NM between radials 300 and 060 from BBG. No manoeuvres permitted over BIAL runway.

- (ii) **Rehearsal Flights.** Pilots shall obtain a time slot for their rehearsal flights by notifying their flight plan to FDD and the time slot allocated by FDD must be adhered to. Changes, if any, would be with the approval of FDD.

Note: As far as possible ATC procedures, timings and R/T phraseology will be the same as for the actual display and the rehearsal flying.

7.11 Timing

Time allowed for display will be measured from wheels roll for take off or entry into display area (if the aircraft was over holding pt) till the aircraft touches down after completing the display.

7.12 Taxi Holding Point

RW 09/27 – Short of Dumbell 09/ 27 as marked on the taxi way. Note: As per prevailing wind pattern RW 09 is likely to be in use.

7.13 R/T

- (a) Aircraft participating in the Flying Display will use the following frequencies:

(i)	Preflight Procedure/ Surface Movement	-	118.3 MHz
(ii)	Flying Display (Main)	-	119.4 MHz
(iii)	Flying Display (S/by)	-	118.7 MHz
(iv)	Approach Yelahanka	-	122.9 MHz
(v)	Approach HAL	-	127.7 MHz
(vi)	Tower Control	-	120.9 MHz

(b) R/T Procedure

(vii) The first contact (at least 15 minutes before take - off) is to be made on pre-flight procedure frequency using the air show call sign. ATC will pass Altimeter Setting (QNH), temperature prevailing surface winds and runway in use. This call is only to confirm to the tower that the aircraft is ready to perform the flight as planned and that occurred. Start up will be at the crew's discretion.

(viii) Taxi clearance will be on the same frequency. After obtaining clearance, the pilot will taxi to the runway holding point for the runway in use. At taxi-holding point, pilot to change over to FDD frequency and maintain listening watch. Pilot can ask for line-up after "cleared to land" call for preceding aircraft, and line-up behind the landing aircraft. In case of any doubt, ask on tower channel.

(ix) During the display the FDD will give 2 minutes and by 1 minute remaining calls, which shall be acknowledged by the pilot

(x) The Down Wind call shall include call sign, Aircraft type manoeuvre of the aircraft associated with landing. FDD shall acknowledge with prevailing surface wind and providing landing clearance before the aircraft approaches on final.

(xi) After vacating runway, the pilot will change over to surface movement frequency and taxi back to parking area as briefed, if require revised instructions would be passed on R/T by the ATC.

7.14 Visual Holding Point

Display aircraft that intend to get airborne and hold in the air till their allotted time slot, would maintain with VOYK approach. This is to be indicated to FDD, in advance.

7.15 Run-in-Direction

Run-in-Direction for the display manoeuvres will be along the runway axis (East/West) and all further manoeuvres will be to the North of runway. All manoeuvres should be conducted without violating the foul line of VOYK (in such a manner that the display aircraft's flight path is along runway centre line). The Flying Display is expected to be concluded within the allotted display timing. R/T messages will be kept to the minimum so that the pilots may concentrate on Flying Display with minimum distraction. Minimum R/T transmission will be satisfactorily achieved only if the participants in the Flying Display adhere strictly to ATC briefing.

Diversion

(a) Aircraft intending to carry out CDF and have been cleared by the FDD for the conduct of the same, shall notify the ATC briefing unit by filling of FPL at least one hour prior to Expected Time of Departure (ETD) and obtain necessary clearance from the FCC.

(b) All demonstration flights shall normally be conducted in VOR 185 D. However, VOR 181A or 181B could also be allotted. Allotment of sectors would be based on the density of traffic, nature of operation, level of operations. Helicopter flights will be in VOR 185 B or C.

7.17 Diversion

Helicopters intending to use higher levels would be accommodated.

(a) The participating pilot shall indicate the intended diversion airfield in the FPL. If the aircraft wishes to divert or is instructed to divert, Yelahanka shall issue necessary clearance (track and flight level) (FL) to proceed to the diversionary airfield. Information on the diversionary airfield will be available at the ATC Briefing/ Operations Room.

(b) The following airfields are designated as diversion airfields:

SI No		<u>BANGALORE</u> <u>VOBG</u>	<u>BIAL</u> <u>VOBL</u>	<u>CHENNAI</u> <u>VOMM</u>
1.	Location	125707N/0773952E	131155N/07742219E	125941N/0801031E
2.	Elevation	2912 ft (888M)	3001 ft (914.68M)	52 ft (16M)
3.	Watch hrs	H 24	H 24	H 24
4.	Runway	09/27 (088°/268°)	09/ 27(092 / 272°)	07/25 (069/249 °)
5.	Length	10847 ft (3306)	13120 ft (4000m)	12016 ft (3641M)
6.	Surface	Tarmac	Asphalt	Tarmac
7.	LCN	60	80	71
8.	Circuit	09 RIGHT HAND 27 LEFT HAND	09 RIGHT HAND 27 LEFT HAND	07 LEFT HAND 25 RIGHT HAND
9.	Safety lane	260		303
10.	Transition Altitude	7000 ft	7000 ft	4000 ft
11.	Transition Level	FL 080/085	FL 080 / 085	FL 050/055
12.	MDA	3600 ft	3620 ft	600 ft
13.	DH	247 ft		250 ft
14.	ILS/DME	110.5 MHz	-	-
15.	VOR/DME	BBG 115.5	BIA116.8	MMV 112.5
16.	Radial/ Distance	164°/11.3 NM	056°/6.7 NM	092°/150 NM

7.18 Operations from Bangalore

Aircraft operating from Bangalore (VOBL/ VOBG) may be required to hold for sequencing in the display. The visual reference point for hold shall be Magadi (245/35 from VOR BIA, coord N12°56'30"E077°11'59")

7.19 Ejection Area

Whenever possible, aircraft should be abandoned in straight and level flight and clear of populated area provided that this does not prejudice the chance of successful abandonment. In circumstances where it may not be possible to land even though the aircraft is controllable in flight, it is to be abandoned west of VOYK, on a westerly heading, approx 20 nm from base. The aircraft should be abandoned below 10,000 AGL at the optimum escape speed. The maximum possible warning to bail out or eject should be given in order to alert the rescue services. Jettisoning of fuel is to be avoided, but if unavoidable, it is to be undertaken west of the airfield.

7.20 Radio Communication Failure (RCF) Procedure

Aircraft experiencing radio failure during the display flying should:

(a) Complete the pre-briefed sequence and land on time.

(b) If unable to land, leave the display area on a heading of 270 degree, at 6000 ft on QNH up to 10 NM and then proceed to VOBG or to the diversionary airfield as mentioned in the FPL. Aircraft equipped with transponders to squawk 7600.

(c) If the receiver only is functional, listen out on 122.9 MHz for instruction from VOYK after leaving the display area.

(d) Should an aircraft already in the air and waiting to carry out manoeuvres, develop RCF, it shall fly overhead along the runway axis at the allotted time and join circuit for landing without carrying out any display manoeuvres.

7.21 Time Standard

All operations will be in Indian Standard Time (IST) (UTC plus 5 ½ hours)

7.22 Meteorological Facilities

(a) A class B Meteorological (Met) Office is available in the ATC building manned 24 hours. Telephone lines exist from operations room to Met section. A notice of at least 3 hours is required for departing aircraft for flight documentation and other services.

(b) However, for Flying Display the following services will be available:

- (i) Area forecast.
- (ii) Route and aerodrome forecast.
- (iii) Aerodrome warnings.

SECTION VIII**Abbreviations**

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8.1	Abbreviations	34-35

AAI	Airport Authority of India
AFSY	Air Force Station, Yelahanka
AGL	Above Ground Level
AIP	Aeronautical Information Publication
AIS	Aeronautical Information Service
ALR	Air Land Rescue
Alt	Altitude
AMSL	Above Mean Sea Level
AOL	Above Obstruction Level
ASDA	Accelerate Stop Distance Available
ASTE	Aircraft and Systems Testing Establishment (Indian Air Force)
ATS	Air Traffic Control
CDF	Customer Demonstration Flight
C of A	Certificate of Airworthiness
C of M	Certificate of Maintenance
C of R	Certificate of Registration
CIQ	Customs, Immigration and Quarantine
Cm	Centimeter
DEO	Defence Exhibition Organisation
DGCA	Director General of Civil Aviation
DME	Distance Measuring Equipment
DRDO	Defence Research & Development Organisation
ETD	Expected Time of Departure
FAX	Facsimile
FCC	Flight Coordination Centre
FDAPA	Flying Display Aircraft Parking Area
FDC	Flying Display Committee
FDD	Flying Display Director
FIR	Flight Information Region
FL	Flight Level
FOC	Flight Operations Centre
FPL	Flight Plan
Ft	Feet
HAL	Hindustan Aeronautics Limited
HF	High Frequencies
HIRL	High Intensity Runway Light
IA	Indian Airlines
IAF	Indian Air Force
ICAO	International Civil Aviation Organisation
IFR	Instrument Flight Rules
ILS	Instrument Landing System
MC	Instrument Meteorological Conditions

IOC	Indian Oil Corporation
IST	Indian Standard Time
JET A1	Aviation Turbine Fuel, also known as AVTUR
kg	Kilogram
kt	Knot
LCN	Load Classification Number
LDA	Landing Distance Available
M	Mach Number
m	Meter
MAS	Madras/Chennai
MEA	Ministry of External Affairs, Government of India
Met	Meteorological
MOD	Ministry of Defence, Government of India
MSD	Minimum Separation Distance
MTOW	Maximum Take Off Weight
NDB	Non Directional Radio Beacon
NM	Nautical Miles
POB	Persons On Board
RCC	Rescue and Coordination Centre
RCF	Radio Communication Failure
RNFC	Round Navigation Facility Charges
R/T	Radio Telephony
RW	Runway
RW 09/27	Two Runways at Yelahanka Airport
SAR	Search And Rescue
SSR	Secondary Surveillance Radar
TBD	To Be Decided
Tel	Telephone
Tlx	Telex
TORA	Take Off Run Available
TODA	Take Off Distance Available
VASI	Visual Approach Slope Indicator System
VFR	Visual Flight Rules
VHF	Very High Frequency
VOR	Very High Frequency Omni-directional Range (Beacon)
VOBL	Designator for Bangalore International (BIA) Airfield
VOBG	Designator for Bangalore (HAL) Airfield
VOYK	Designator for Yelahanka (Bangalore) Airfield

