

File No. 4/18/79-AI(I)

EFFECTIVE : FORTHWITH

Subject : Installation of Communication, Navigation and Radar equipment.

1. PURPOSE

Aircraft Rule 9 sub-rule 3 and rule 57 specify that every aircraft shall be fitted and equipped with radio apparatus as may be specified according to the use and circumstances under which the flight is to be conducted. This part of the CARs describes the procedures and requirements to be complied with for installation of airborne communication, navigation and radar equipment.

2. APPLICABILITY

Whenever it is desired to install a new radio equipment on aircraft or existing avionic installation is required to be replaced, the following procedure is to be followed in the absence of manufacturer's guidelines.

2.1 The appropriately licenced AME/ Approved person shall make a feasibility study to check that

- a) The proposed equipment is of the approved type and is compatible with the existing system.
- b) Necessary electrical power is available in the aircraft for the proposed equipment.
- c) Required space is available at suitable location in the aircraft.
- d) C.G. should remain within the limits if proposed installation is carried out.

2.2 After feasibility study, an appropriately licensed AME shall prepare the structural installation drawing and appropriately licensed AME shall prepare the system wiring drawing. Six copies of the drawing alongwith the modification details shall be submitted to the local airworthiness office for approval.

2.3 On receipt of formal approval, the installation work is to be undertaken by appropriately licensed AME/approved or authorised person.

2.4 On completion of the structural and electrical wiring work, the complete wiring shall be checked for continuity and insulation. The equipment chassis shall be checked for proper bonding.

2.5 The AME should ensure the serviceability of the equipment by checking proper maintenance/manufacturer's certificate issued by an approved firm or carry out a Final Test Data (FTD) check before the actual installation of the equipment.

2.6 The AME should ensure that there is no radio interference due to installation of the new equipment which affect the performance of any other radio equipment installed in the

aircraft.

- 2.7 The antenna shall be suitably insulated so that precipitation static interference is minimum.
- 2.8 The equipment shall be installed and tested in the aircraft by the AME and all relevant paperwork/entries shall be completed by him.
- 2.9 The empty weight and C.G. shall be amended accordingly by the appropriately licenced AME/ authorised/ approved person.
- 2.10 In case the installation is new or the existing one is being replaced a short term aeromobile license for operating radio apparatus is to be obtained from WPC Wing of Ministry of Communications. For the purpose, registered owner shall apply in quadruplicate on the prescribed form (available from WPC Wing, Ministry of Communication) alongwith a copy of Certificate of registration and requisite fee to the Wireless Advisor, Ministry of Communication through the local airworthiness office, who shall forward it to the DGCA. The Certificate of inspection is to be signed by an appropriately licensed AME indicating his license number on the application.
- 2.11 On receipt of the short term permit the operator shall complete all the installation checks including ground and flight tests as per the approved installation check schedule. The operator shall prepare the schedule of the above tests based on the guidelines contained in the BCAR Section R and FAA Advisory Circular AC 43-13 and forward it to the local Airworthiness office for approval. The flight tests referred to above shall be carried out to assess the range and performance of the new equipment in various altitudes of flight and to check the compatibility with other radio equipment installed in the aircraft.
- 2.12 On receipt of the installation check report vide 2.11 the aircraft shall be offered for inspection and communication check to the local airworthiness office.
- 2.13 After the satisfactory checks the operator should obtain the regular aeromobile license from the WPC Wing of the Ministry of Communication by applying in the prescribed form (Appendix 'A') through the local airworthiness office who will forward the same to the DGCA alongwith a communication check report.

Sd/-

(S. L. Srivastava)

Director of Airworthiness
for Director General of Civil Aviation

Appendix 'A'

Application for Licence to establish, Maintain and Work Wireless
Telegraphs in Aircraft Registered in India.

1. Name and Address

of the applicant :

2. Particulars of the Aeromobile
Licence, if any, already held :
3. Particulars of Aircraft in respect of which a licence is required.
 - a) Call Sign
 - b) Name and Type of Aircraft
 - c) Name of Owner
 - d) Passenger or Freight Aircraft
 - e) Normal Route
 - f) Place of Registry
(an attested copy of Certificate of Registration to be attached).
4. State whether the Radio Installation is provided in pursuance of statutory requirements or otherwise (i.e. compulsory fitted or non-compulsory fitted).
5. Nature of Service performed
6. Description of apparatus for which the licence is applied for:

A. Radio Communication Transmitters.

Manufacturers	Type	Output rated power (Watts)	Freq. (khz)	Range	Emission	Freq. tcla- rance
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Main

Standby

B. Radio Communication Receivers.

Manufacturers	Type No.	Frequency Range (khz)
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Main

Standby

C. Radio Navigation Apparatus

	Manufacturers	Type No.	Frequency Range (khz)
i)	Automatic Direction Finder (ADF)		
ii)	Instrument Landing System (ILS)		
	a) Localiser Receiver		
	b) Glidepath Receiver		
	c) Marker Receiver		
iii)	VOR Receiver		
iv)	DME Interrogator		
v)	ATC Transponder		
vi)	Weather Radar		
vii)	Radio Altimeter		
viii)	LORAN Receiver		
ix)			
x)			

Certificate of Inspection

(Must be completed by a competent Wireless Telegraph Engineer).

It is certified that the Radio Apparatus detailed hereinbefore has been satisfactorily installed/ and the particulars given thereof are correct.

Signature of the
Certifying Engineer

Dated _____ Name _____
(in Block Letters)

Address: _____ Designation (SEAL)

Declaration

I hereby solemnly declare and say that foregoing facts are true and correct and nothing is false therein and nothing material has been concealed therefrom. I also agree that in case any information given by me hereinbefore is found false at a later date, the licence, if granted will be cancelled.

I further solemnly give an undertaking that the apparatus described hereinbefore will be worked in accordance with the conditions of the licence and operators holding approval certificate of proficiency shall only be employed to work the said apparatus.

Place : Signature of applicant

Dated : Name _____
(in Block Letters)

Designation _____

Note : This application duly completed should be forwarded to the Wireless Advisor to the Government of India, Ministry of Communications, Sardar Patel Bhavan, Parliament Street, New Delhi -110 001 (through Director General of Civil Aviation, Technical Centre, Opp. Safdarjung Airport, New Delhi)

Rate of fees

The Rate of fees per station per annum is Rs 250/-

Manner of Payment

The fees may be paid through a crossed Bank Draft drawn in favour of Pay and Accounts Officer (Secretariat) Ministry of Communications, Payable at State Bank of India, New Delhi.

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