

SURVEILLANCE CHECK LIST RADIO SHOP

Name of Organisation:

Name of QCM:

Name of Shop i/c:

Scope of approval:

Location:

Name & Designation of Inspecting Officer:

Date of Inspection:

Check the followings in addition to common checks of shop (DGCA STD.DOC/CL/15):

S/N	ITEMS OF INSPECTION	SAT/UNSAT	REMARKS
1.	Rectification of Previous inspection findings.		
2.	Check availability of following documents/ literatures: <ul style="list-style-type: none"> • Approved capability list; • Latest technical literature issued by manufacturer/ vendor; • Approved Bench Check/ FTD Check/ Procedure Sheet etc.; • IPC • Approved Release Note/ Serviceable Tag; • Approved Quality Control/ Maintenance System Manual; 		
3.	Availability of Integrated Circuits, Printed Circuit Boards, other spares/ materials and procured from approved sources.		
4.	Whether facilities for bench check/ overhaul as per manufacturer recommendations.		
5.	FTD checks of ADF/ VHF/ HF/ VOR/ ILS equipments as per manufacturer's test data.		
6.	Important parameters like sensitivity, AGC, selectivity, output power, frequency stability, ADF bearing accuracy, modulation and other specific checks as recommended by the manufacturer/ DGCA.		

S/N	ITEMS OF INSPECTION	SAT/UNSAT	REMARKS
7.	Proper facility to check Weather Radar, RMI, Radio altimeter, DME etc.		
8.	Facility of operational testing of ELT using terminated non-radiating load.		
9.	Availability of Frequency generator output power meter, Oscilloscope, Audio signal generator, ILS/ VOR signal generator, ADF antenna simulator etc.		
10.	Whether staffs are aware and is following the company procedures and safety precautions.		
11.	Microfilm is current and reader is available.		
12.	Incoming and out going components are segregated.		
13.	Modification control and system to review all ADs/ SBs on the components. Procedure of ensuring incorporation of all applicable modifications.		
14.	Check History cards if maintained at the shop is updated and all columns are filled up. Whether this reflect modification status.		
15.	Check component reliability report by Q.C. is available in the shop.		
16.	Check for records of environment control like temperature, humidity, dust particle count etc.		
17.	Check test benches for clean layout and proper wiring. Check for proper routing of earthing wires.		
18.	Check supply voltage & frequency are within limits.		

S/N	ITEMS OF INSPECTION	SAT/UNSAT	REMARKS
19.	Check that the Automatic Test Equipment is serviceable. Do they modify the software. Check that the software is current and check currency of interface module. Check that the personnel working with ATE are trained and approved.		
20.	Check that the PCB repair station is well equipped with static charge protective devices such as insulated mats, proper earthing and wrist straps etc.		
21.	Check items like rubber seals are stored properly.		
22.	Check all out going units have serviceable tag and are properly blanked and packed.		
23.	Check whether the shop undertakes any maintenance of ESDs. If yes, Check the followings:		
(a)	The air in the shop has a relative humidity of 40% to 60%.		
(b)	Work surface of the bench is covered with a conductive mats/ dissipative surface.		
(c)	The floor area in front of the working bench have conductive mat which is electrically bonded to the work surface by means of a bonding strap. <i>(The bonding strap should have a resistance of 2000-4000 ohms per linear foot and should be as short as possible)</i>		
(d)	Working personnel wears wrist strap that is connected to the workbench. <i>(The strap should have a resistance of 200 K ohms)</i>		
(e)	The work surface is connected to a suitable ground. <i>(Under no circumstances the work surface of a static free workstation be connected to the electrical power supply ground circuit of the building.)</i>		

S/N	ITEMS OF INSPECTION	SAT/UNSAT	REMARKS
(f)	Electric soldering iron in use should be grounded at the tip.		
(g)	All testing of equipment with ESDs devices are as per manufacturer's instructions.		
(h)	Hand tools with painted wooden or plastic handles are not used in the static controlled work area in case the maintenance personnel does not use wrist strap.		
(i)	Whether tools with highly static generative handle are used? If yes, whether these are checked for static generation with an Electro-static detecting meter before use.		
(j)	Whether manuals, technical documents are carried to a static control work station in plain plastic envelope. <i>(This should be avoided. Such documents can be carried in cardboard binder or stiff paper.)</i>		
(k)	Check whether personnel working on ESDs are not wearing dress made of nylon or synthetic fabric.		
(l)	Ensure that the body is grounded before commencing any work on the ESDs.		
(m)	Whether proper safety techniques as recommended by the vendors are followed strictly while testing the units with ESDs devices under power.		
(n)	Whether effectiveness of the electro-static free workstation is periodically checked using electrostatic detecting meter. <i>(The electro-static detecting meter should able to detect the polarity and level of static electricity ranging from 30 to 50,000 volts at a distance of 6.5 to 30 cm.)</i>		

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(o)	Whether periodic checking of the followings are carried out atleast once in six months: <ul style="list-style-type: none"> • work bench; • ground connection; • cords; • limiting resistors; • work mats 		
(p)	Whether wrist strap integrity is measured with wrist strap tester or standard ohmmeter? <i>(The resistance value should be between 2,50,000 ohms to 1.5 mega ohms.)</i>		
(q)	Check that the resistance value of the conductive work surface is less than 1000 mega ohms?		
(r)	Check that the resistance value of conductive floor and anti-static work surface is less than one tera-ohms.		
(s)	Check whether the following caution is displayed in the work station in capital letters: " CAUTION: REMOVE ESDs DEVICES FROM AREA BEFORE USING THE MEGOMMETER".		
(t)	Whether procedure exists for intimation to Customs Department for proper handling of ESDs.		
(u)	Whether any Electro-static device is kept along side non-electrostatic devices.		
(v)	Whether ESDs components are packed in conductive material?		
(w)	Check that the racks/ cupboards used for keeping ESDs are provided with conductive mats. Whether these are grounded properly?		
(x)	Check whether the ESDs are transported to/ from shop with proper container and taking proper precautions.		