Technical compliance checklist

This checklist applies to all aspects of the SCS: infrastructure and user devices/installations. There are two types of compliance checks:

1. **Visual Inspection**: to identify any obvious configuration issues, mechanical faults and damages. Do not require any tools or instruments. It is advised to take pictures to document findings.
2. **Functional checks**: these aim to verify that the installation/devices operate normally (as expected). Do not require any instruments but some basic tools might be needed.

This checklist is meant as a guide to ensure all points of compliance is reviewed and, as such, do not, in general, actual UN standard for SCS installations are. The details regarding these UN standards can be found the appropriate documentation, available from TESS.

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| Visual inspection |
| Common | **Chkd** | **Comments/Follow Up** |
| Equipment |  |  |
| End user devices are installed/located so they are easy to reach and use. |  |  |
| Equipment is protected from being damaged by water.  |  |  |
| Check RF connectors |  |  |
| Correct cable and connector combination |  |  |
| Antennas |  |  |
| Properly configured and installed as per manufacturer’s recommendations. For example, vehicle VHF/UHF antennas are straight, are tuned (cut) to the appropriate frequency (length) and are not tucked under any part of the vehicle (roof rack). |  |  |
| Physical separation from other antennas, as recommended by manufacturers |  |  |
| Fixed installation only | **Chkd** | **Comments/Follow Up** |
| Lightning arrestors  |  |  |
| All radio antenna cables have lightning arrestors installed |  |  |
| Lightning arrestors are located outdoors but in close vicinity to the RF units and ground point. The arrestors installed on a metal (ideally galvanized steel-avoid using coated aluminium) bar. |  |  |
| The ground point used for the lightning arrestors should be the same as used for the electric power and radio installations. |  |  |
| Appropriately sized ground cable (should be at least 6sqmm, or equivalent) which has crimped/soldered on lugs for connection to equipment. |  |  |
| Antenna cable |  |  |
| Type of antenna cable: VHF/UHF installations should use low-loss cable (typically LMR type). For HF it is sufficient with lesser quality cable, ie RG-213. Antenna cable length ideally less than 30m |  |  |
| Verify antenna cable length to ensure there is no excess length of cable between RF unit and lightning arrestor and from arrestor to antenna. Excess antenna cable must NOT be rolled up but rather cut to length and new connector(s) installed. |  |  |
| The cable should be fixed to structures it is running along at regular intervals: hanging horizontally-at least every meter; vertically-every 2 meters; horizontal tray-every 4 meters. |  |  |
| Appropriate strain relief is provided for connectors at the antenna side and they are protected by self-vulcanizing tape. |  |  |
| Power backup |  |  |
| Verify that batteries that are venting gases when charging are not located indoor. If located indoor must be installed in a well-ventilated isolated area equipped with an extractor fan. Also, even when located outdoors these batteries must have good ventilation to avoid explosion danger. |  |  |
| Verify that batteries are not installed directly on the floor. Should be elevated at least 10 cm on wooden platform preferably. |  |  |
| Verify that solar panels are appropriately fixed to a solid object (ground, roof etc.) to avoid them shifting due to wind etc. |  |  |
| Verify that solar panels are installed facing in the correct direction and elevation. |  |  |
| Verify that a proper procedure for regular (depending on the local conditions) checks and cleaning of the panels have been put in place. A logbook that document actions taken in regards of the solar panels should be in place and appropriately filled (action taken, date and signature) by the designated person. |  |  |
| Towers and masts |  |  |
| Check if the tower/mast is appropriately installed and guyed according to the manufacturer’s recommendations |  |  |
| Grounding |  |  |
| Check all grounding points and ensure they are not too far from equipment needing ground. |  |  |
| Check grounding cable dimension. It should be, at least, 6 sqmm (or equivalent). |  |  |
| Ensure continuity of ground. |  |  |
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| Responsible for checks (Name/Signature):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ /\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| Functional checks |
| VHF/UHF repeaters: the UN standard configuration settings (codeplug) have been applied. |  |  |
| VHF/UHF radios: verify that UN standard codeplugs, depending on role of the user, are applied |  |  |
| HF radios: verify that the correct UN standard codeplug, including IDs, frequencies etc., is applied. |  |  |
| Satellite Phones: verify that a compatible docking station with external antenna have been installed appropriately in the vehicles. |  |  |
| Power backup: verify that the power supply system meets UN standards in terms of safety and redundancy |  |  |
| Are key users capable of using the assigned SCS, i.e. are the drivers capable of using the radios in the vehicle?  |  |  |
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| Responsible for checks (Name/Signature):\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ /\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |