

Re FCC ID GL7 HD52

731 Confirmation Number EA99540

Correspondence Reference Number: 19400

1) It has come to our attention that the device does not meet the requirements of 80.225(a). Paragraph 80.225(a) requires that DSC equipment installed in coast or ship stations must meet either the requirements of ITU-R M.493 (including only equipment classes A, B, D, and E) or RTCM Paper 56-95/SC101-STD. The application does not appear to meet either the ITU-R M.493 or the RTCM SC101 standards. Please explain. The application accordingly would be denied if it does not meet the requirement.

The HD52 has been designed as a simple to use handheld VHF radio with DSC distress alerting capability. It was designed in close co-operation with the UK Marine Safety and Coastguard Agency. The target market is the small boat owner who does not have a suitable position or battery capability to fit a Fixed DSC VHF radio. In addition to the normal voice operation it gives the user the security of generating a Distress call, especially after mandatory watch keeping of Channel 16 ceases in 2005.

Facilities to send and receive other types of call are not provided.

The Position and time can be added to the Distress message at any time by placing the radio in its dedicated charger base, connected to a suitable navigation receiver. The radio will not save this position after it has been turned off and shows the age of the position on the display for the benefit of the user.

Protection against misuse of the Distress button exceeds the requirements of IMO, given in MSC/Circ.862. The following items have been considered.

- 1) the Distress Button is protected by a sprung loaded cover (IMO requirement)
- 2) To initiate a Distress call requires two presses of the button. (In excess of IMO requirements)
- 3) The button needs to be held down on the second push for five seconds. (IMO requires three seconds)
- 4) Because the receiver does not have a DSC receiver the Distress call is not repeated automatically (ITU493-9, Annex 1, para 1.8)
- 5) The Distress function is not activated until a MMSI number is programmed into the radio. This cannot be done by the owner. It can only be done by a suitably equipped dealer.
- 6) The Distress burst is sent only once, hence the requirement for receiving the Distress acknowledgement is removed, as defined in ITU-R 493-10, para 1.8.

The above information has been provided to Alfredo Mistichelli at the USCG. He has indicated that in his opinion, due consideration has been given to protection against false alerting.

The FCC rules for DSC equipment are given below.

(a) DSC equipment voluntarily in-stalled in coast or ship stations must meet either the requirements of CCIR Recommendation 493 (including only equipment classes A, B, D, and E) or RTCM Paper 56-95/SC101-STD. DSC equipment must not be used with the sensors referred to in § 80.179(e)(2). DSC equipment used on compulsorily fitted ships must meet the requirements contained in subpart W for GMDSS.

(b) Manufacturers of Class C DSC equipment to be used on United States vessels must affix a clearly discernible permanent plate or label visible from the operating controls containing the following:

Warning. This equipment is designed to generate a digital maritime distress and safety signal to facilitate search and rescue. To be effective as a safety device, this equipment must be used only within communication range of a shore-based VHF marine channel 70 distress and safety watch system. The range of the signal may vary but under normal conditions should be approximately 20 nautical miles.

There is no provision in these rules to cover handheld VHF DSC equipment. Indeed, SC101 specifically excludes hand held equipment from its scope. Simrad Navico Ltd ask that due consideration is given to the interpretation of this requirement in view of the intended purpose of the equipment and the protection provided against false alerting.

2) With regard to the SAR measurements.

What was the conducted output power measurement of the SAR tests?

What is the maximum conducted output of the device including any tolerances or tune-up deviation.

The device was operating at only 4.65 W ERP on CH 88 during the tests. The test must be performed at maximum output power. Please address/retest accordingly.

Only the face held configuration was tested. It appears that the device has a belt clip. Appropriate body worn configurations should be tested. End users must have instructions to comply with FCC RF safety requirements.

Page 1 of the SAR report indicates compliance with uncontrolled environment limits while the results were compared to controlled environment limits

Address the calibration and measurement uncertainties due to dipole validation at 835 MHz rather than at the frequency of the device.

Power outputs given in the SAR test report are the conducted powers as given in KTL test report 98520831, supplied to the FCC previously in support of this submission. This power was measured directly from the PCB assembly as the radio does not have a true coaxial RF output port.

The conducted power on channel 88 is the power given for the highest channel in the test report. The power is not the same at all frequencies, therefore it is not possible to measure all channels at the maximum output power. Note that this power is only achieved under theoretical conditions of a supply voltage at approximately 1.3 times nominal and an ambient temperature of -20C. At room temperature and nominal battery voltage, the output power is below the levels you are suggesting we test at.

Only the face held condition was tested. There is no external microphone or headset that can be connected to this radio. Therefore it is impractical to use the radio when fitted to a belt.

The test report was requested, in error, for the controlled environment. Reference to the actual test results shows compliance with the limits for the uncontrolled environment.

Reference to page 5 of 8 of the calibration report shows the frequency response of the probe. This shows that even at the frequency of 10MHz (The lowest frequency quoted in the calibration record in the main report summary) the gain is still above 0.9. This error will not cause any of the measurements made to rise above the specified limits.

David Sheekey

June 4th 2001