FAQ

SmartFind R8F UHF Fire Fighter Radio

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What is a fire fighter radio?

Fire Fighter Radio's (FFR) are hand held communications devices designed to specific standards to meet the situational requirement of fire fighter teams on board ships. The main purpose of the McMurdo Smartfind R8F FFR's is to provide a dedicated communication line between the team of fire fighters in a hazardous area, and the crew member/s outside this hazardous area who is positioned to control the team.

What is the difference between a FFR and standard on board radio?

The main difference between the radios, is the colour of the outer casing and that the radio is ATEX approved (Intrinsically Safe). Red, is the colour of the McMurdo Smartfind R8F radio which assists in differentiating between the radios for firefighting and general ship radios.

By when is the Fire Fighter Radio required to be implemented on board vessels?

The requirement in the SOLAS Chapter II-2, Regulation 10.10.4 states: For ships constructed on or after 1 July 2014, a minimum of two two-way portable radio telephone apparatus for each fire party for fire-fighter´s communication shall be carried on board. Ships constructed before 1 July 2014 shall comply with the requirements of this paragraph not later than the first survey after 1 July 2018.

What is the required frequency of the FFR's?

According to Regulation 10.10.4, there is no clear indication as to what frequency band the Fire Fighter Radios should be. However, to obtain maximum coverage on-board a vessel, UHF is the most commonly used frequency band for maritime use, working in the range of 457 MHz to 467 MHz. According to international radio regulations, six UHF frequencies are reserved for maritime use (on board communication) which can be increased by using 12.5 kHz spacing instead of 25 kHz spacing. UHF frequencies are the most common for on board communication due to the ability of the UHF frequency to propagate inside metal structures.

How many FFR's is required on board a vessel?

A minimum of 2 x two-way McMurdo Smartfind R8F FFR's for each fire party shall be carried on-board. The total number of FFR's to be carried on board will depend upon the number of fire parties detailed on the Muster List. The main reason why each party must have at least two of these dedicated radios is that the fire-fighters may need to use Direct Mode Operation (DMO) during fire-fighting operations. If the Fire Party consist of more crew members than the actual fire fighters, i.e. incident commander, the actual number of fire-fighter radios may vary from vessel to vessel as more than two radios may be required for each Fire Party.

What is DMO?

DMO stands for Direct Mode Operations. In DMO communication all radios working on the same frequency will have the ability to send and receive on the same channel. A dedicated channel should be reserved for the Fire Party for use only during firefighting operations in order to avoid disruptive interference from other radio communications on-board not being part of the operation. This will minimize the risk of the fire party, but it will not prevent interference from other nearby vessels which may use the same frequency (channel) for daily operations.

How does one prevent interference from surrounding vessels?

This can be done by using the CTCSS coding feature of the FFR'S. Continuous Tone Coded Squelch System (CTCSS) is a frequency code programmed with the frequency (channel) of the FFR. Only radios with this code on this specific frequency (channel) will be able to communicate.

What is provided with the radio/s when purchased?

This depends on the FFR package taken. Here is a list of the equipment that will come with each package:

Package 1 SmartFind R8F UHF Fire Fighter Radio, Antenna, Li-ion Rechargeable Battery, Belt Clip, Lanyard, Single Unit Charger, AC/DC Converter power supply, Operations Manual

Package 2 Basic - 2 x SmartFind R8F UHF Fire Fighter Radio, 2 x Antenna, 2 x Li-ion Rechargeable Battery, 2 x Belt Clip, 2 x Lanyard, 2 x Single Unit Charger, 2 x AC/DC Converter power supply, 2 x Operations Manual

Package 3 Basic + - 2 x SmartFind R8F UHF Fire Fighter Radio, 2 x Antenna, 2 x Li-ion Rechargeable Battery, 2 x Primary Battery Lithium (non-rechargeable), 2 x Belt Clip, 2 x Lanyard, 2 x Single Unit Charger, 2 x AC/DC Converter power supply, 2 x Operations Manual

What is the approval rating of the radios for use in hazardous areas?

To date, IMO has not yet set the performance standards for the above Fire Fighter Radios, however in order for such equipment to meet the explosion proof or intrinsically safe requirements, the radio telephone apparatus must be certified in accordance with relevant standards for equipment and protective systems intended for use in potentially ex-plosive atmospheres, and maintained as such, for example: Directive 94/9/EC (ATEX) - with approval rating of II 2G Ex ib IIB T4. Temperature rating "T3" may be accepted instead of "T4" but the T4 rating will cover all types of vessels including tanker vessels.

Can the FFR be used for general communications on board the vessel?

The R8F radio is designed to have the flexibility of daily use

With regards to the non-rechargeable lithium battery part of the Basic+ package, are these mandatory?

No. there is no information or mention in the Solas regulations for the FFR that the non-rechargeable battery is mandatory.

How long should a person charge a new McMurdo Smartfind R8F battery for the first time?

The time for a first charge on the battery will be a minimum of 12 hours

After the initial charge, what is the charge time of the battery to capacity?

Once the battery has received its initial charge, there after the charge times can either be 4 hours or 5 hours as approximate. With the battery still attached to the radio, which is off, or the battery on its own, it will take 4 hours to charge to capacity. With the battery attached to the radio, with the radio on, the charge time to capacity will be 5 hours.

What would be the advantages of taking a non-rechargeable battery pack with the radio?

The benefit of having the non-rechargeable battery is for back-up to the chargeable battery. If the option was taken to use the FFR for general communications, the risk will be that if a situation arises that the radio is required for emergency, the battery could be low on power. This is where carrying the non-rechargeable as part of the Fire Fighting kit will add redundancy of power to the radio.

Is it a requirement to attach the radio to a headset or integrate into a breathing apparatus?

There is nothing in the IMO Fire Safety Code that outlines this requirement. In saying that it will be of interest to have the FFR attached to either option to allow for hands free communication to improve situational mobility. It is the ships responsibility to implement any rules and guidelines to this effect.

Can I use the battery from my R5 in the new R8F radio and visa versa?

No, this is not possible as the design of the batteries is slightly different. The R5 has additional locking points that will not allow the battery to fit the R8F. Although the R8F battery can fit into the R5 radio, the radio will not work as the contact points between the battery and radio do not line up. The very important reason for this is that the R8F battery is approved to operate in the R8F only, therefore protecting the IS/ATEX approval of the radio.

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