Mackay

Marine Electronics & Satellite Communications

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Mackay Communications - SIM Cards
What You Need To Know But No One Ever Told You

1. Subscriber Identity Module (SIM) cards are the mechanism for provisioning service on Iridium and Inmarsat voice and IP data terminals and can be compared to SIM cards used in Global System for Mobiles (GSM) or personal cell phones.

   Globalstar satellite phones, Legacy Inmarsat-C (text only) and Fleet-77 (voice and ISDN data with 1 December 2020 service end date) terminals do not require a SIM card for satellite network registration and provisioning but use serial numbers assigned to the terminal at time of manufacture.

2. Satellite terminal SIMs are a standard size of 15mm x 25mm delivered in a plastic credit-card sized carrier and may look very similar to one another. The SIM-ICC ID or Serial Number is always printed on the SIM. The first few digits provide information about the general class of service with which it is associated. Iridium handheld SIMS commonly have a color differentiation for optional pre-paid (green accents) or post-paid (orange accents) services.

3. SIM cards are serialized to the service provider (i.e. Mackay) and cannot be reused by a different provider. For prepaid SIMs any needed top-up of service can only be obtained from the SIM's current service provider. A change of provider requires a new SIM which also results in the assignment of a new voice number.

4. The satellite network service configuration and operating parameters follow the SIM, not the terminal. The SIM card configuration is read by and applied to the terminal during the satellite network registration process.

5. It is important that any SIM that is permanently removed from a terminal be *deactivated* with the service provider. The SIM card remains billable and usable until the customer receives written confirmation it has been deactivated. This also applies to changes of financial responsibility or the sale of the terminal.

6. SIM cards are not serialized to a terminal nor to a terminal manufacturer. If the SIM supports the specified service platform (e.g. FleetBroadband, Fleet One, Iridium Handheld) it can be used to provide service to any compatible terminal. Terminal upgrades and replacements require only that the SIM be moved to the new terminal before it is powered on. There is a "SIM Lock" feature with some terminals and technologies restricting SIM swaps, but it is rarely used.

7. SIM cards can be delivered with a status of either active *or* inactive. Inactive delivery allows the SIM cards to be available on site and subsequently remotely activated and provisioned when delivery is confirmed, equipment is installed, and service is needed.

8. The SIM card, and not the equipment or its serial numbers define the terminal's satellite network configuration including voice or fax numbers, assigned WAN IP addresses, subscription service plans, and any network-based usage monitoring.

9. Operating parameters such as phone numbers are only assigned to a SIM when it is activated. Postpaid services are only provisioned concurrently with SIM of activation. Some Prepaid services can be provisioned after the SIM is activated.

10. When service is not needed for an extended period of time, a SIM card can either be suspended *or* deactivated provided it has met the specified commitment term obligations of the service contract. During a period of *suspension*, services are not available, but a monthly fee is still incurred, and the configuration including phone numbers and optionally assigned IP address are preserved until the suspension is lifted. When a SIM is *deactivated*, services are terminated as are the monthly fees. A subsequent SIM reactivation is treated as a new activation and new phone numbers and IP addresses may be assigned.

11. Some marine satcom technologies that use SIM cards are directly associated with safety services and require information about a vessel's particulars including manning and emergency shoreside contacts. For example, Safety services include Inmarsat's current free non-SOLAS emergency distress phone service (Dial "5-0-5") and both Iridium with their forthcoming Certus and Inmarsat with FleetBroadband are working towards GMDSS approval for their service platforms.

12. Mobile satellite phones and terminals will not register and cannot be tested on the satellite network without having an active SIM card installed. No harm is done if you power on a satellite phone with an inactive SIM card and for some devices, limited pre-activation status checks can be made without a SIM (e.g. initial hardware self-test errors and GPS position confirmation), but the satellite phone will not register and may continually cycle through the startup process trying to register on the network.

13. Mackay provides installation support for any SIM card that we provide. We have direct access to monitor the activity generated by that SIM, both from a historical perspective and in real time. Mackay can remotely decode error messages, track connection attempts, track previous connection attempts, monitor connection activity, and verify how much data or voice minutes were consumed. Having these capabilities allows Mackay to identify usage patterns and help make your satellite phone usage more efficient and cost effective.