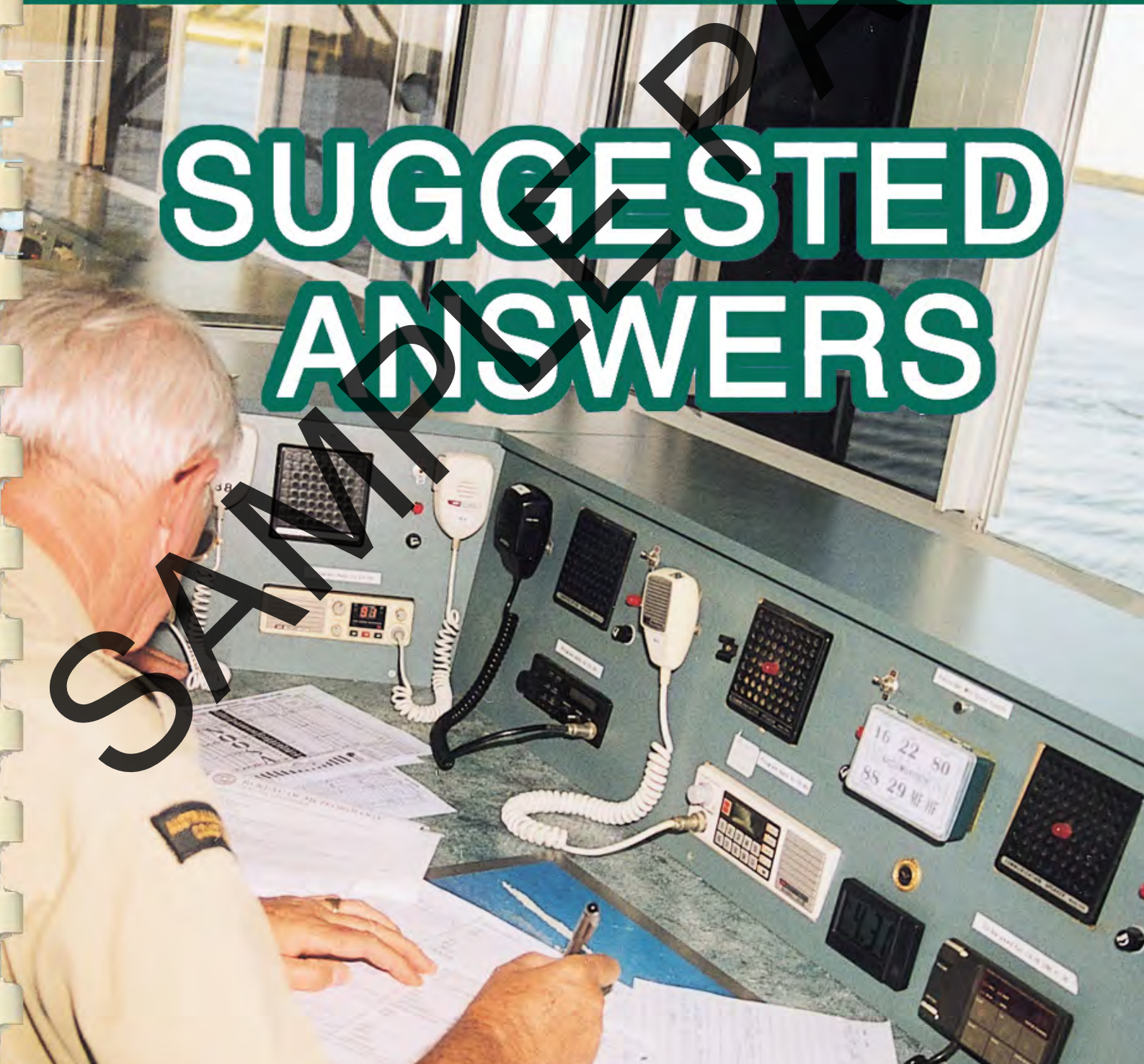


Marine Science
For Australian Students

Marine Radio Worksheets



SUGGESTED ANSWERS



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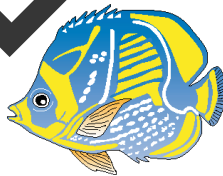
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Worksheet 1: Principles of Transmission

1. Hertz discovered that radio waves could be made by using a generator to charge an antenna.
2. A carrier wave is a radio wave that “carries” information to produce a sound.
3. a) amplitude
b) wavelength
c) trough.
4. a) modulation is altering the frequency of amplitude of a carrier wave to transmit sound.
b) skip is when a 27 MHz radio wave is bent back to Earth by the ionosphere, and can be detected hundreds or thousands of km away. (See Fig 7.2).
c) radiotelephony is the sending of voice signals by radio waves.
5. The “theory of propagation” explains how radio frequency energy is transmitted through space from the antenna as ground waves or sky waves.
6. Modulation A = amplitude modulation (am)
Modulation B = frequency modulation (fm)
7. Sky waves travel through the air and can bounce back off the ionosphere. Ground waves use up their energy quickly and can be blocked by island.
8. Skip could be a problem because you might pick up messages sent from hundreds or thousands of km away, but might not be able to communicate with your local coast station.