CHAPTER TWO

OTHER COMMUNICATIONS METHODS

COURIERS

2.01 Courier systems are used for the hand-delivery of information and utilise various transport methods such as 'by foot,' road vehicle, boat or aircraft.

Advantages	Disadvantages
Movement of bulk items	Time consuming
Flexible	Personnel intensive
Secure	Expensive

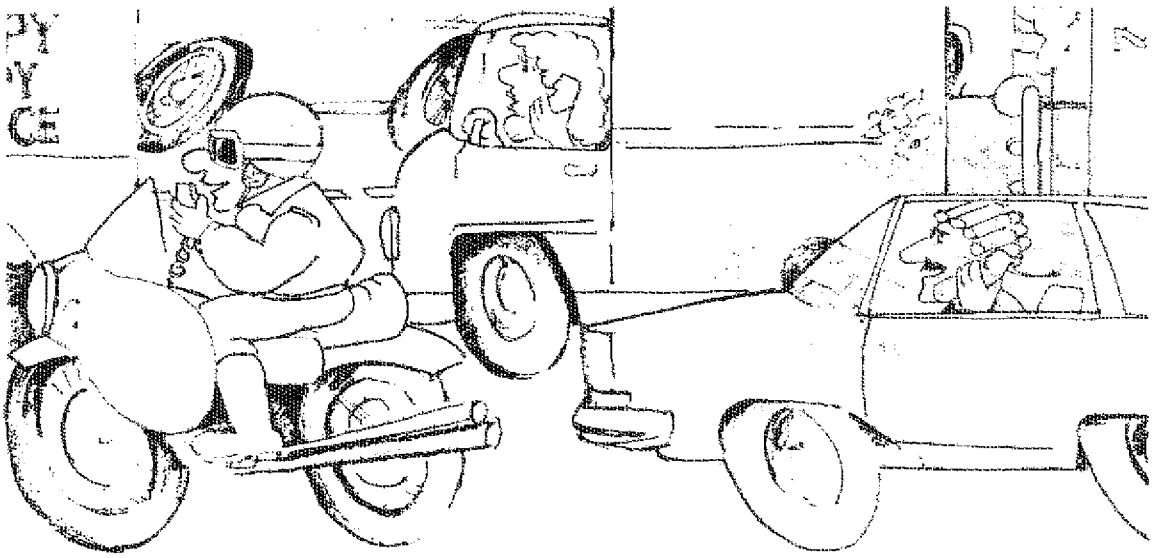


Figure 2:1
Courier Vehicles

VISUAL/AUDIBLE SIGNALS

2.02 Visual and/or audible systems are basic methods of passing information to others, or to attract attention. They may include hand signals, lights, sirens, whistles or voice.

Advantages	Disadvantages
Basic systems in daily use	Short range
Require no infrastructure	May be affected by weather
Inexpensive	

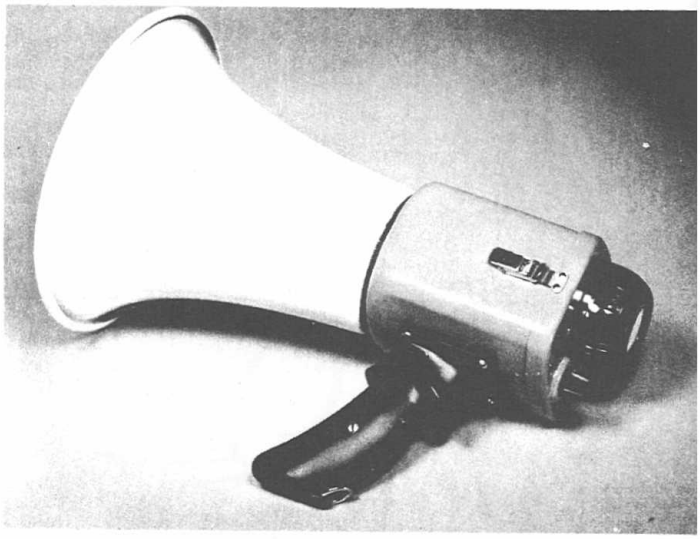


Figure 2:2
Hand-Held Megaphone

PUBLIC MEDIA

2.03 This system is used extensively for dissemination of information to the public in times of disaster by means of radio, television and newspapers.

Advantages	Disadvantages
Large audience	Non-selective
Audible and or visual	Difficult to control content
Easy access	Usually 'one way' only
	Reception not guaranteed

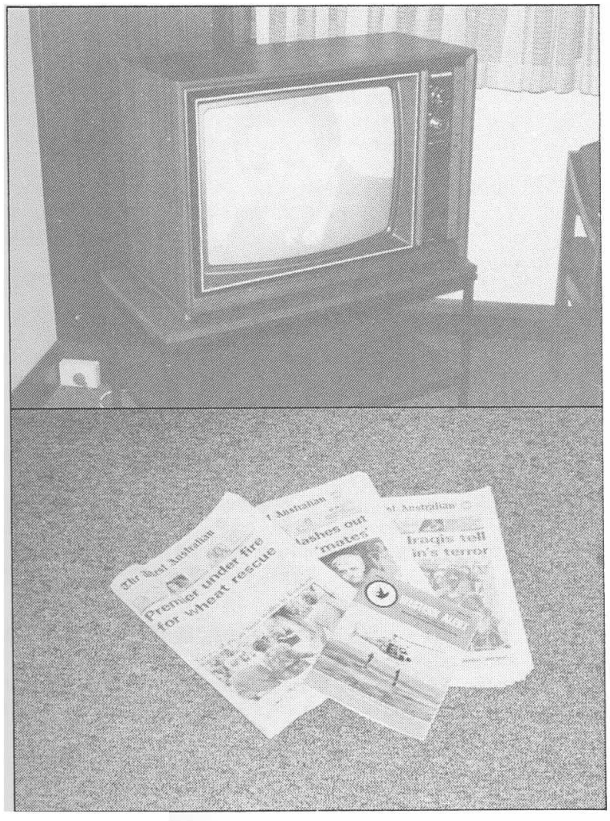
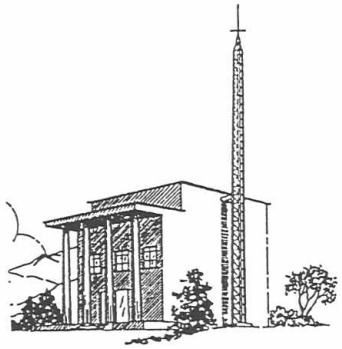


Figure 2:3

3.04 BASE STATION

This is an essential part of any radio communication system and is usually installed in a fixed location. The base station's function is one of central control for the despatch and receipt of messages or information to field personnel.

Figure 3:1
Local Control Base Station



MOBILE RADIO TRANSCEIVERS

3.05 TRANSCEIVER MOUNTING

These transceivers are specifically designed to be fitted to vehicles and are permanently connected to the vehicle battery. Some vehicles present mounting difficulties. Therefore a remote control unit is placed within easy reach of the operator, allowing the transceiver to be installed in a more convenient location (eg boot-mounting).

3.06 ANTENNAS

A variety of antenna configurations and installations can be used, which are determined by considering:

a. performance enhancement;

b. mechanical convenience; and/or

c. aesthetic appeal

HF multi frequency transceivers are used with antennas that require adjustment according to the frequency in use. Some of these antennas are automatically tuned. Other types require manual selection according to the frequency.

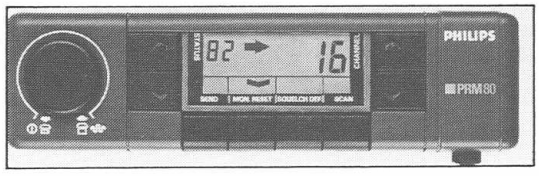


Figure 3:2
Mobile Radio Remote Control Head

3.07 INTERFERENCE

Care is required to ensure that vehicle electronic electrical systems and radio transceivers do not interfere with each other. Ancillary equipment MUST NOT be connected to the permanent power lead of a mobile radio transceiver, as it may cause current overload of the power lead and interference to the transceiver.

HAND-HELD PORTABLE RADIO TRANSCEIVER

3.08 PORTABILITY

Hand-held portable transceivers are specifically designed to be conveniently carried by a person. Transceivers may be attached to waist belts, or shoulder straps for ease of carrying.

3.09 SIZE

They are physically small and have an output power of up to 5 watts. Small battery packs are fitted to these low-powered transceivers thus reducing their range and endurance when compared to mobile transceivers. Battery packs are usually rechargeable 'nicad' cells although 'dry' cells may also be used.

3.10 OPERATION

When operation of the radio transceiver is required it must be removed from its carry pouch, held vertically adjacent to the operator's mouth, if the internal microphone is being used. If an external speaker/microphone is attached the radio should be held in the operators free hand at shoulder height. Hand-held portable transceivers should ALWAYS be operated with the antenna held clear of other objects and in the VERTICAL position.

Figure 3:3
VHF/UHF Hand-Held
Portable Transceiver

3.11 PERFORMANCE ENHANCEMENT

The performance of hand-held transceivers is enhanced when they are used with repeater base stations.

MANPACK PORTABLE RADIO TRANSCEIVERS

3.12 FEATURES

Manpack portable transceivers consist of a backpack containing a mobile transceiver attached to a battery case. While the entire set is larger and heavier than a hand-held portable, it offers improved range and endurance. A manpack portable radio transceiver may comprise:

a. HF/VHF/UHF Mobile radio transceiver;

b. battery and charging circuitry;

c. external loud speaker;

d. microphone, connector and bracket;

e. antenna and or antenna connection;

f. battery charger (240 volt AC);

g. battery charger lead (12 volt DC); and

h. canvas carry bag.

3.13 USES

Items listed above may be enclosed within or attached to a metal case. This type of equipment offers versatility and may be used as

a. a Base Station with external elevated antenna connected and powered by the internal batteries on permanent charge,

b. a portable mobile with external vehicle antenna and powered from its own internal batteries or vehicle battery, or

c. a portable radio operating from the attached portable antenna and internal batteries.

3.14 BATTERY RECHARGE

A manpack portable radio can usually be operated for an average of 8 hours without recharging the batteries.

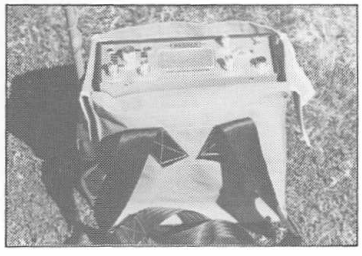


Figure 3:4
Manpack Portable Radio Transceiver