

## Portable Radio Station

P80

### Features

Single or two frequency simplex

Up to six channels

Available in an intrinsically safe version

Small size and weight

High reliability

### Description

The P80 portable radio station has been introduced into the Marconi product range to meet the demand for pocket-sized transceivers. Use of integrated circuits and high density design of components are utilized to achieve optimum space reduction with increased reliability. The intrinsically safe version personal radio is supplied in a leather case with carrying strap, allowing free movement of the hands when the equipment is not in use. The rubber-covered antenna for the transceiver is plugged into the top of the equipment. The microphone/loudspeaker also plugs into the top of the transceiver.

Three models of the frequency modulated transceivers are available. Two v.h.f models operate in the 68–88MHz and 146–174MHz

bands respectively and can be supplied with up to three channels in two frequency simplex operation, or six channels in single frequency simplex operation. The third model operates in the u.h.f band of 420–470MHz and can be supplied with up to four channels in single frequency simplex operation or up to two channels in two frequency simplex operation. The unit can be equipped with an automatic frequency shifter for simultaneous watch on a maximum of three v.h.f or four u.h.f predetermined channels in one frequency simplex operation, or two channels in two frequency simplex operation.

The transceivers are powered by a 12·4V rechargeable Nickel–Cadmium battery. The battery endurance is enhanced by an economiser circuit which reduces power consumption during reception (stand-by condition) by 80% if no carrier wave is present on the channel. An intrinsically safe version of the transceiver is also available.

Two types of battery charger are available. A simple version which merely charges the battery for 13 hours regardless of its condition and a more sophisticated type which first discharges the battery at a controlled rate before recharging it to the fully charged condition. Should a battery be required for use before a complete charging cycle has been completed this latter charger is fitted with a state-of-charge indicator which shows the battery condition. This overcomes the two main causes of complaint about portable equipments, poor performance (caused by lack of battery charge) and reduced battery life (caused by over-charging batteries).



### Data Summary

	P82	P84	P85
Operation	Single or two-frequency simplex		
Modulation	Frequency (phase)		
Frequency range	68–88MHz	146–174MHz	420–470MHz
Channel spacing	20, 25 and 50kHz		
Number of channels			
in one frequency simplex operation	Max. 6	Max. 6	Max. 4
in two frequency simplex operation	Max. 3	Max. 3	Max. 2
Switching bandwidth	800kHz	1 000kHz	1 200kHz
Power output	1W	0·8W	0·5W
A.F response	Increasing 6dB/octave within +1dB to –3dB relative 1kHz		
Max. transmitter modulation	±4, ±5 and ±15kHz		
Sensitivity	0·25μV±2dB	0·35μV±2dB	0·45μV±2dB
Audio output power	200mW ±1dB (in 50Ω load)		
Audio response	Decreasing 6dB/octave within +1dB to –3dB relative 1kHz		
Power supplies	12·4V (nominal) rechargeable Nickel–Cadmium battery containing 10 cells		
Operating temperature range	–25°C to 60°C		–25°C to 55°C
Dimensions	91×175×22mm (3·6×6·9×1·0in)		91×209×26mm (3·6×8·2×1·0in)
Weight			
excluding battery	470g (1·1lb)		570g (1·3lb)
including battery	625g (1·4lb)		725g (1·6lb)

As we are always seeking to improve our products, the information in this document gives only general indications of product capacity, performance and suitability, none of which shall form part of any contract.

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