Antenna Information

The 1400 MHz transmitter uses antenna ANT 1, the schematic also shows a second antenna ANT2 which is not fitted. However, a small amount of power (typically -23dB below the ANT 1 feed) is permanently diverted to the patient lead wire connection to assist with unit testing:

a) The antenna ANT is fabricated part of the Bare PCB construction as etched copper tracking in the form of a typical inverted F design. This has an omnidirectional / dipole equivalent pattern with a peak gain of 3.3dB in the transmitter frequency range. This is the designs' typical value with an appropriate matching network and the recommended ground plane. This antenna is permanent feature of part of the transmitter PCB assembly.

b) A second Antenna ANT 2 was designed into the original prototypes but was found to offer no advantage in diversity and is consequently a not fitted.

c) Signal power is split asymmetrically such that the lead wires receive approximately 23dB less than is fed to the inverted F antenna to ensure that it plays little part in the radiated pattern of the transmitter; schematic 676-1632-00 shows the circuitry. Its purpose is to provide an external means to carry out tests on the transmitters rather than as an intentional radiator. The patient lead wire ECG Lead-wire antenna, lead-wire type Spacelabs 013-1004-21. This is a 610 mm long ECG lead-wire of ordinary design, making a connection between the transmitter and an adhesive electrode on the patient. The connection to the transmitter is a plug conforming to DIN 42802 for touch-proof medical connectors.