

SECTION 4

AERIAL COUPLING UNIT ACU/5

Introduction

The aerial coupling unit ACU/5 enables up to four receivers to be operated from either of two aerials.

Description

The unit consists of a panel on which are mounted three co-axial plugs and four 82-ohm resistors supported on tag strips. As indicated in Fig. 4.1, the two outer plugs are connected via co-axial cable to two aerials of which one is normally a main aerial and other a reserve aerial. The centre plug is connected via the 82-ohm resistors and lengths of co-axial cable to the receivers. The centre plug can be connected to either of the two outer plugs by a U-link which thus permits rapid exchange of one aerial for the other.

Each of the co-axial cables to the receivers should have an electrical length of half a wave-length at the mid-band frequency (91.5 Mc/s). This ensures that the impedance at the tag strip end of the cable is equal to the input impedance of the receiver. If 82-ohm resistors are used, the net

impedance presented across the centre plug is a reasonable match to the characteristic impedance

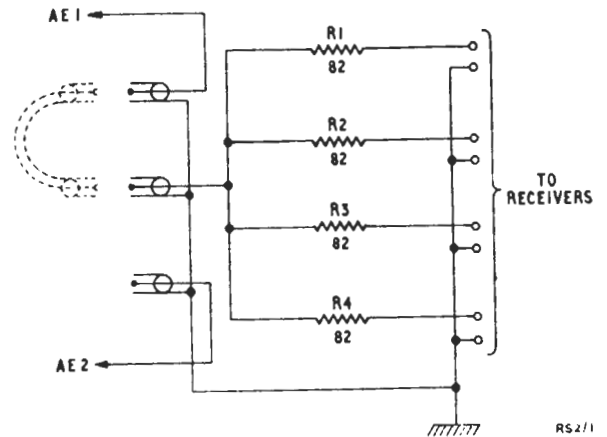


Fig. 4.1 Circuit Diagram for the Aerial Coupling Unit ACU/5

of the aerial cable for any number of receivers up to four.