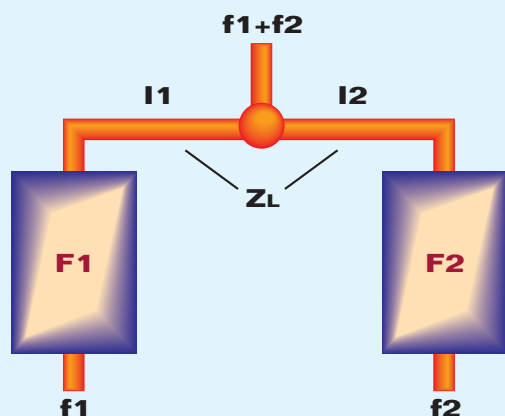


# Starpoint Combiners

A star-point combiner consists of two band pass filters tuned to different channels and a junction. Accurate tuning is critical to ensure that the impedance at the junction point is correct.



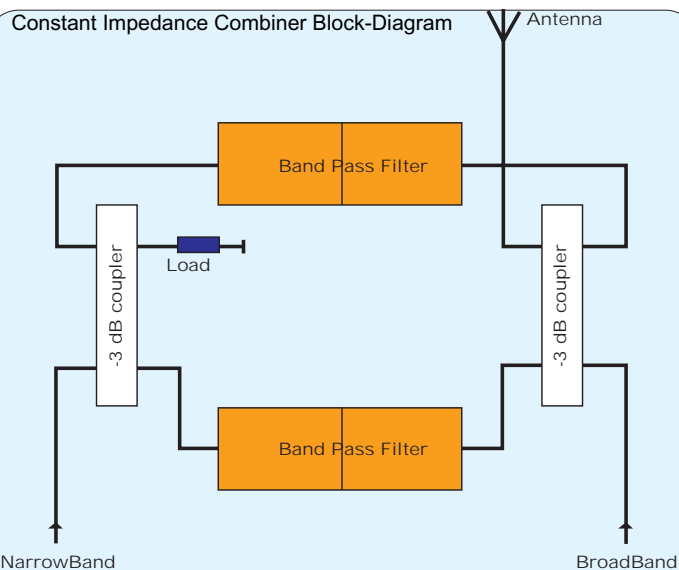
In the combiner shown here filter  $F_1$  allows frequency  $f_1$  to pass, whereas filter  $F_2$  blocks it. In relation to frequency  $f_1$ , filter  $F_2$  presents a short circuit at its inputs. In contrast, due to the matching of its input impedance for a frequency of  $f_1$ , filter  $F_1$  presents impedance  $Z_L$  at this point. The filter  $F_2$  functions in the same way in relation to frequency  $f_2$ .



Example of rack-mounted combiners.

A Starpoint Combiner consisting of two or more filters & a junction point has two or more narrow band inputs corresponding to the pass band characteristics of the filters. Frequencies of operation must be specified with order.

## Constant Impedance Combiners



Constant impedance combiners consist of 2 or more band pass filters, 3dB couplers and a dummy load. One or more inputs is/are narrow band, while one input can be broadband. Input impedance is not frequency dependent. The frequency at the broadband input can be changed without retuning the pass-band cavity filters. The broadband input can be used as spare input for expansion without requiring modification of the existing passband cavity filters. If only narrowband inputs are used, a very high cross attenuation (coupler attenuation plus filter attenuation) can be achieved for very close frequency spacings. When ordering constant impedance combiners pls specify desired operating frequencies for the narrow band inputs. The broadband input, however, will accept any FM frequency. These devices can also be tuned by the customer. Instructions are provided with each unit.

**COMBINERS & FILTERS SHOWN IN THIS LINE OF PRODUCTS ARE OFF THE SHELF EXAMPLES. CUSTOM UNITS CAN BE ORDERED TO FIT NEARLY ANY REQUIREMENT AND SPECIFIC APPLICATIONS. CALL BEXT TO INQUIRE.**