

DCI Frequency Filters

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ZCG are the Australian distributor of frequency filters manufactured by DCI Digital Communications Inc. in Canada. DCI specialise in Radio Frequency Interference (RFI) products which reduce interference problems in the 30MHz to 6GHz range.

DCI's strength in this market is the design and fabrication of custom devices where your needs are not met by "off the shelf" models.

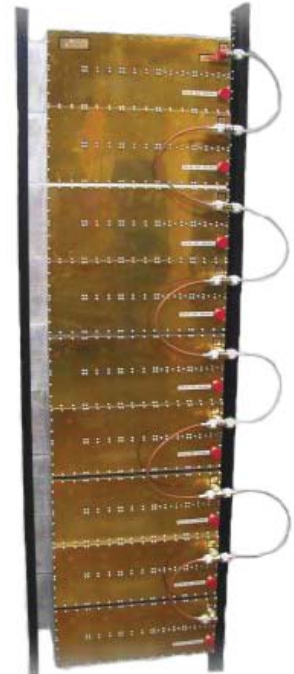
There are frequency filters solutions available for numerous applications:

- Television Broadcasting
- FM Radio Broadcasting
- Cellular Providers
- Wi-Fi Providers
- Paging Companies
- Military, Airports, Railways, Road transport and more.

The range of products DCI Digital Communications design and manufacture are:



Filter Type Available
Bandpass Filters
Lowpass Filters
Duplexers & Diplexers
Multiplexers
Tower Top Low Noise Amplifiers
Discrete Component Filters
Receive Multicouplers
WiMax Bandpass Filters and Duplexers



For more information on each filter please see the following pages...

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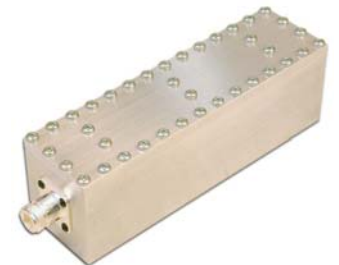
Bandpass Filters

VHF and UHF bandpass filters from DCI are available in 4-, 6-, 8- or 10-poles, depending on how much rejection is required. DCI filters are passive and can be used in both the Tx and Rx pass. They are DC-grounded on both inputs and outputs for additional lightning protection. The filters come standard with N-type connectors, with other types of connectors being optional.



Lowpass Filters

Lowpass filters are typically used on transmitter outputs to reduce harmonics and broadband noise, and on receiver inputs to reduce fundamental overload from higher frequency transmitters. DCI lowpass filters have extremely low loss (0.1 dB) with an estimated power handling capability of 2Kw.



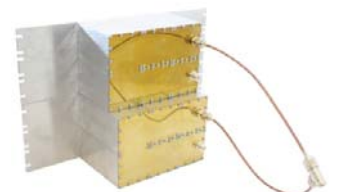
Duplexers and Diplexers

Duplexers are used to connector broadband transmitters and receivers to the same antenna for simultaneous operation. They provide excellent isolation between Rx and Tx, suppress intermod from adjacent signals and provide additional lightning protection with DC grounded inputs.

They are useful where the Tx and Rx use a range of frequencies such as multi-channel trunked systems or video repeaters.

DCI broadband duplexers have steeper skirt selectivity than most duplexers on the market and are used where 800MHz trunking systems coexist with cellular systems. They provide excellent separation between services, reduce broadband transmitter noise and reduce desense.

Each duplexer is made up of two bandpass filters linked together into a 3-port device with a cable harness.

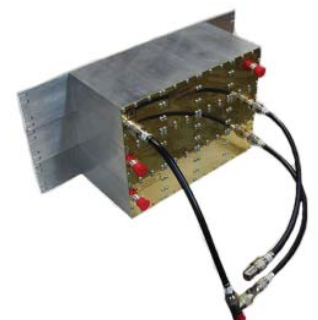


Multiplexers (Tx and Rx Combiners)

DCI makes a wide variety of transmit combiners linking as many as 8 bands to one antenna.

These units are used where multiple transmit and receive bands exist and there are multiple receivers and/or transmitters in each band. They allow the use of multiple transmitters and receivers on one antenna while providing considerable protection from other interfering signals.

Multiple window filters are made up of three or more band pass filters linked together with a cable harness that is specifically phase-matched.



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Tower Top Low Noise Amplifiers

DCI tower top amplifiers achieve excellent sensitivity by using very efficient Low Noise Amplifiers (LNA) while maintaining better than average intermod immunity through the use of very sharp, low-loss filtering.

Each unit consists of a low-loss filter and low noise amplifier, a transfer switch, and lightning protection on both the input and output coax.

The units are housed in a weatherproof aluminium enclosure that bolts to the tower leg.



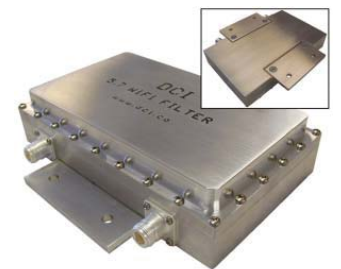
Discrete Component Filters

Discrete component filters provide a wider variety of filter types and bandwidths than is attainable with cavities or helical resonators

They can be made in low pass, high pass, bandpass and bandstop versions at almost any frequency and passband width. These filters are typically used for research and test bench applications.

Receive Multicouplers

Receive Multicouplers (RMC's) are used to achieve maximum sensitivity when multiple receivers are connected to one antenna. Typically a band pass filter is included for increased sensitivity and intermod immunity. RMC's can have multiple tower top Low Noise Amplifiers for optimum sensitivity.



WiMax Bandpass Filters and Duplexers

DCI manufacture filters in the common WiMax bands. The filters are of a milled cavity design and therefore high in Q and sensitivity. The filters are available in bandpass, duplex, diplex and multiplex designs. The variety of bands, poles and extras is large, and therefore all WiMax filters are made to order.