



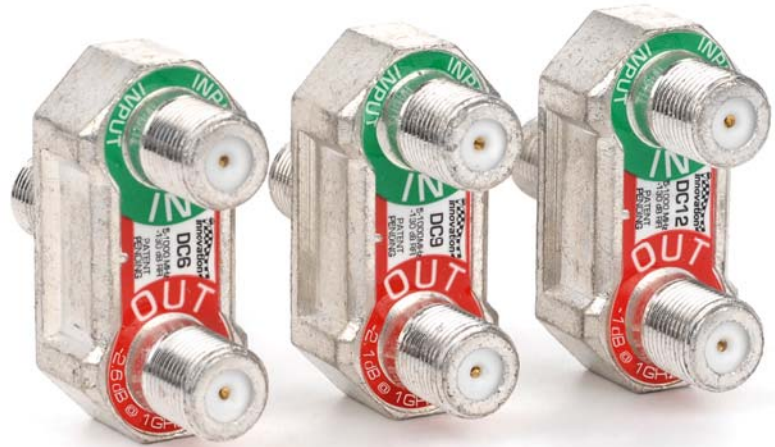
## Information Sheet



# Innovation™ Directional Couplers

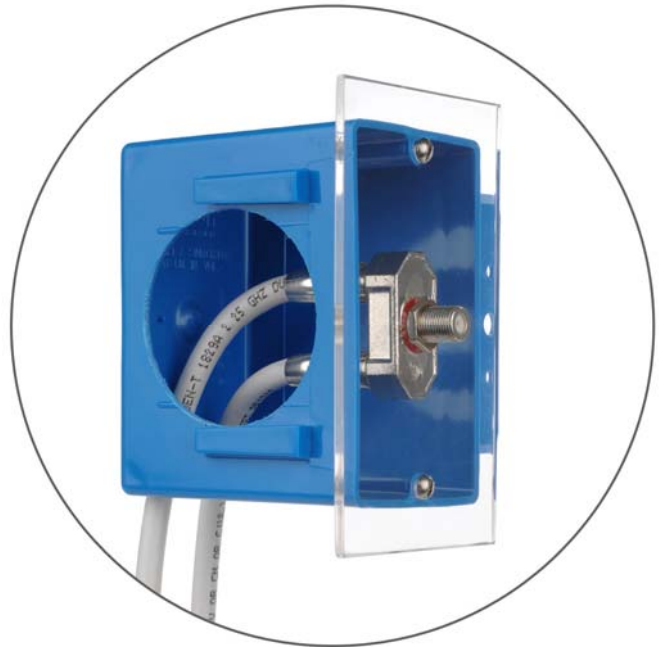
*Ultra compact and high performance!*

Gale Corporation's patented, ultra-compact Directional Couplers (DC) make "loop-through" cable design a breeze! Smart, ergonomically designed DC devices attach directly onto a standard wall plate making the most of limited space. Additionally, the Gale Corporation DC nearly eliminates the potential for crushed cables and stressed connectors – and return service calls.



## FEATURES

- Available in 6dB (DC6), 9dB (DC9), and 12dB (DC12) tap port attenuation
- 25% improved circuit performance over our competitors' splitters
- 360° seizing pins on all ports
- SMT components on internal PCB
- Unmatched circuit performance
- 6kV surge withstand
- Premium Intermodulation distortion & second harmonics performance
- Flat end machine-threaded F-ports with no parting lines at base
- Easy access to ports for cable installation
- Soldered back plate
- Easily identified color-coded port labels
- Heavy duty cast zinc case & rear cover with nickel plating, soldered together for -130dB RFI





## Directional Coupler Specifications

| Model Number                        |                        | DC6                 | DC9  | DC12 |
|-------------------------------------|------------------------|---------------------|------|------|
| <b>Insertion Loss (Out)</b>         | <b>Frequency (MHz)</b> | <b>Maximum (dB)</b> |      |      |
|                                     | 5-15                   | 2.0                 | 1.3  | 0.6  |
|                                     | 15-40                  | 1.9                 | 1.2  | 0.5  |
|                                     | 40-300                 | 1.8                 | 1.1  | 0.5  |
|                                     | 300-500                | 2.0                 | 1.3  | 0.6  |
|                                     | 500-750                | 2.1                 | 1.4  | 0.7  |
|                                     | 750-1000               | 2.6                 | 2.1  | 1.0  |
| <b>Tap Insertion Loss Tolerance</b> | <b>Frequency (MHz)</b> | <b>(±dB)</b>        |      |      |
|                                     | 5-15                   | 0.3                 | 0.1  | 0.5  |
|                                     | 15-40                  | 0.3                 | 0.1  | 0.5  |
|                                     | 40-300                 | 0.2                 | 0.1  | 0.3  |
|                                     | 300-500                | 0.1                 | 0.3  | 0.1  |
|                                     | 500-750                | 0.2                 | 0.4  | 0.4  |
|                                     | 750-1000               | 0.3                 | 0.2  | 0.2  |
| <b>Isolation</b>                    | <b>Frequency (MHz)</b> | <b>Minimum (dB)</b> |      |      |
|                                     | 5-15                   | 31.0                | 32.2 | 41.0 |
|                                     | 15-40                  | 36.0                | 32.4 | 43.3 |
|                                     | 40-300                 | 33.1                | 31.2 | 39.1 |
|                                     | 300-500                | 28.6                | 30.7 | 31.4 |
|                                     | 500-750                | 29.5                | 33.2 | 29.3 |
|                                     | 750-1000               | 30.5                | 30.3 | 25.5 |
| <b>Return Loss (In)</b>             | <b>Frequency (MHz)</b> | <b>Minimum (dB)</b> |      |      |
|                                     | 5-15                   | 23.1                | 25.0 | 21.1 |
|                                     | 15-40                  | 23.0                | 26.8 | 24.2 |
|                                     | 40-300                 | 22.6                | 25.5 | 23.9 |
|                                     | 300-500                | 20.8                | 21.4 | 21.6 |
|                                     | 500-750                | 22.4                | 23.4 | 21.9 |
|                                     | 750-1000               | 33.8                | 23.4 | 29.7 |
| <b>Return Loss (Tap)</b>            | <b>Frequency (MHz)</b> | <b>Minimum (dB)</b> |      |      |
|                                     | 5-15                   | 31.4                | 22.5 | 24.9 |
|                                     | 15-40                  | 40.3                | 25.8 | 27.6 |
|                                     | 40-300                 | 36.8                | 26.7 | 30.9 |
|                                     | 300-500                | 24.0                | 25.7 | 29.3 |
|                                     | 500-750                | 24.5                | 26.9 | 25.0 |
|                                     | 750-1000               | 31.0                | 24.1 | 26.0 |
| <b>Return Loss (Out)</b>            | <b>Frequency (MHz)</b> | <b>Minimum (dB)</b> |      |      |
|                                     | 5-15                   | 25.0                | 24.2 | 24.1 |
|                                     | 15-40                  | 28.2                | 27.3 | 31.6 |
|                                     | 40-300                 | 27.8                | 26.1 | 30.2 |
|                                     | 300-500                | 21.9                | 20.5 | 22.6 |
|                                     | 500-750                | 21.7                | 19.7 | 21.5 |
|                                     | 750-1000               | 29.3                | 23.5 | 25.8 |
| <b>RFI Isolation</b>                | <b>Frequency (MHz)</b> | <b>Minimum (dB)</b> |      |      |
|                                     | 5-1000                 | 130                 | 130  | 130  |