

1 ch / 2 ch Combiner and Duplexer System

Key features:

Two transmitter duplexing with amplifier on a single antenna.

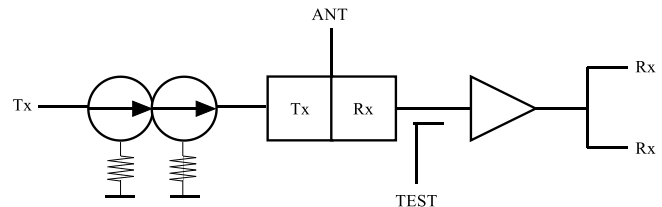
- Two Base Stations to operate on a single antenna
- Low Noise amplifier included for maximum sensitivity
- Band-pass selectivity in the duplexer for high level carrier suppression
- Test port included for accurate receiver sensitivity measurements
- Integrated isolators on the Duplex system shelf
- Low PIM design for a two channel duplexer
- Integrated receive distribution for one or two channels
- Hybrid design to allow combining without regard to transmit frequency separation
- Compact 19" design
- Wide bandwidth for UHF
- Full band for 7/8/900 MHz
- Multiple units allows more than two channels to be combined on multiple antennas
- Very economical compared to two duplexers, two antennas, and two antenna cables



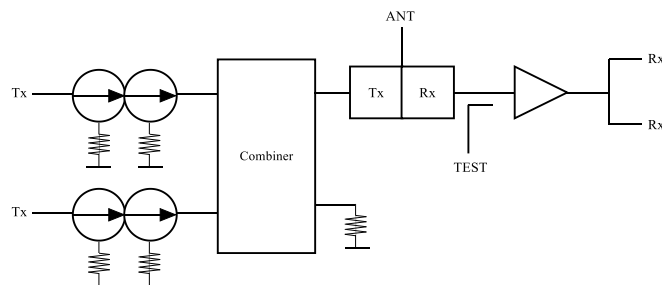
Front view



Back view



Schematic 1 ch version



Schematic 2 ch version

Cost / installation advantages:

- Reduces the number of antennas and cables on the tower, reducing wind loading, icing problems, tower climbs, etc.
- Reduced time for installation, less time at the site
- Less cable on the tower and fewer antennas results in lower long-term maintenance costs
- Compact – takes up less rack space.
- Fewer tower climbs, a distinct cost advantage

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Part numbers:

Description	Part number	Part number
Antenna connector	7-16 female	4.3-10 female
2 ch duplexer 380-420 MHz	CP05445	CP06408
2 ch duplexer 450-470 MHz	CP04491	CP06409
2 ch duplexer 480-512 MHz	CP05446	CP06410
2 ch duplexer 700 MHz Rx: 793-805 MHz/ Tx: 763-775 MHz	CP05455	tbd
2 ch duplexer 800 MHz Rx: 806-824 MHz / Tx: 851-869 MHz	CP05456	CP06427
2 ch duplexer 800 MHz Rx: 806-816 MHz / Tx: 851-861 MHz	CP06406	N/A
2 ch duplexer 900 MHz Rx: 896-902 MHz / Tx: 935-941 MHz	CP01031	CP06412

Description	Part number	Part number
Antenna connector	7-16 female	4.3-10 female
1 ch duplexer 380-420 MHz	CP06423	CP06424
1 ch duplexer 450-470 MHz	CP06405	CP06411
1 ch duplexer 480-512 MHz	tbd	tbd
1 ch duplexer 700 MHz Rx: 793-805 MHz/ Tx: 763-775 MHz	tbd	tbd
1 ch duplexer 800 MHz Rx: 806-824 MHz / Tx: 851-869 MHz	CP06425	CP06426
1 ch duplexer 900 MHz Rx: 896-902 MHz / Tx: 935-941 MHz	CP01011	CP06413

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Specification, System

Frequency	According to part number
Tx / Rx bandwidth UHF	See table below. Please specify frequencies
Duplex spacing UHF	See table below
Tx insertion loss	See table below
Tx input power	2*100 W
Tx input return loss	>18 dB
Tx-Tx isolation	>75 dB (2 ch only)
Tx to ANT selectivity in Rx band	>80 dB
ANT port return loss in Tx band	>17 dB
PIM	Tolerant
Rx gain	5 dB to 14 dB in 1 dB steps settable by rotary switch
Noise figure (at max. gain)	See table below
Integrated test port	30 dB
OIP3 (at max. gain)	+35 dBm
Rx port return loss	>15 dB.
Rx to Rx isolation	>20 dB
ANT to Rx selectivity in Tx band	>80 dB
ANT port return loss in Rx band	>17 dB
Operating temp.	-10°C to 60°C
Enclosure	Indoor
Connectors, Tx	N-female in the back
Connector, ANT	According to part number table
Connectors, Rx and TEST	BNC-female in the back
Dimensions	19", 2U, 15.8" deep
Weight	25 lbs
Drawings	OD19457

Part number	Band width	Duplex spacing	Tx-insertion loss (typical)	Rx noise figure (typical)
CP05445 / CP06423	5 MHz	10 MHz	5.3 dB / 1.8 dB	3 dB
CP04491 / CP06405	2.5 MHz	5 MHz	5.8 dB / 2.3 dB	3 dB
CP04446	5 MHz	10 MHz	5.3 dB	3 dB
CP05455	Full band	30 MHz	4.8 dB	2.7 dB
CP05456 / CP06425	Full band	45 MHz	4.8 dB / 1.3 dB	2.7 dB
CP06406	10 MHz	45 MHz	4.6 dB	2.5 dB
CP01031 / CP01011	Full band	39 MHz	4.8 dB / 1.3 dB	2.7 dB

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