

## SUPERIOR COMMUNICATIONS EQUIPMENT THROUGH ADVANCED RESEARCH

P. O. BOX 23 • TONAWANDA, NEW YORK 14150 • CABLE ADDRESS (FOREIGN ONLY): UNIONTEX, N. Y.  
PHONE: AREA CODE 716 • 874-3682  
122 RAYETTE ROAD • MAPLE, ONTARIO, CANADA • PHONE: AREA CODE 416 • 669-1244

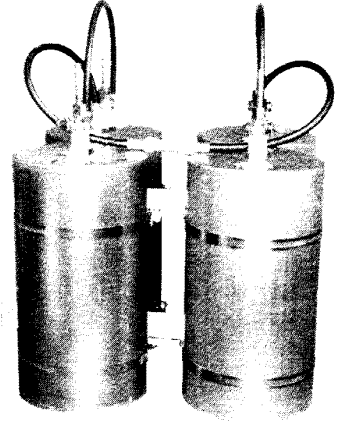
### BASE STATION DUPLXERS

P-201G P-202G  
(40<sup>1</sup>/<sub>8</sub>" x 22" x 17<sup>1</sup>/<sub>8</sub>" )

# BAND PASS DUPLXERS

P-301G  
P-302G  
P-303G  
(18" x 19" x ±7<sup>1</sup>/<sub>2</sub>" )

The family of duplexers, most suitable for extremely congested areas requiring optimum selectivity.



DUPLEXER SPECIFICATIONS	ELECTRICAL								MECHANICAL			
	MODEL NO.	FREQUENCY RANGE IN MHz	MINIMUM FREQUENCY SPACING Tx TO Rx IN MHz	POWER RATING IN WATTS		INSERTION LOSS IN DB		ATTENUATION IN DB AT		DIMENSIONS		
				Tx	Rx	Tx FREQ	Rx FREQ	MINIMUM ATTENUATION BETWEEN DUP. FREQ.S IN DB	ENCLOSURE OR MOUNT	H	W	D
P-1C01G	66-68	2.0	250	1.2	1.2	52	52	80	C	66.4	22.0	18.0
P-1C02G	"	2.0	500	1.2	1.2	52	52	80	C	66.4	22.0	18.0
P-201G	148-174	3.0	250	1.2	1.2	55	55	80	C	40.4	22.0	17.2
P-202G	"	3.0	500	1.2	1.2	55	55	80	C	40.4	22.0	17.2
P-203G	"	3.0	250	1.2	1.2	55	55	80	R	33.0	19.0	+ 7.5
P-301G	450-470	5.0	150	1.2	1.2	53	53	80	R	18.0	19.0	± 7.5
P-302G	"	5.0	350	1.2	1.2	53	53	80	R	18.0	19.0	+ 7.5
P-303G	"	5.0	150	1.7	1.7	60	60	80	R	18.0	19.0	± 7.5

#### OTHER SPECIFICATIONS — ELECTRICAL

VSWR: 1.5 to 1 or less; Impedance: 50 ohms; Temp. Range: Q, R, P: -40°C to +80°C, F: -12°C to +65°C, MR: -40°C to +60°C. Insertion loss and Isolation values are for minimum frequency separations shown. Typically, isolations on Q, P, and F series increase and insertion losses of R and MR series decrease with greater frequency separations.

#### OTHER SPECIFICATIONS — MECHANICAL

Connectors: Base N type; Mobile/Base UHF type unless otherwise specified. C—Cabinet; R—Rack; I—Integral Enclosure, ±D—Distance either side of mounting flange.

LIMITED STOCK MODELS: CONSULT FACTORY FOR DELIVERY. EQUIVALENT MODELS FOR ABOVE DUPLEXERS IN OTHER FREQUENCY RANGES (MHz). MODELS ON SAME LINE WITHIN RANGE BLOCK SHARE ALL OTHER DATA.

FROM ABOVE	132-148	FROM ABOVE	406-470
P-201G	P-2B01G	P-301G	P-3A01G
P-202G	P-2B02G	P-302G	P-3A02G
P-203G	P-2B03G	P-303G	P-3A03G

#### DUPLEXER NOMENCLATURE

PREFIX FAMILIES
Q = Spurious Suppression
F = Hybrid Ring
P = Band Pass
R = Band Reject
M = Mobile/Base

AFTER HYPHEN: FIRST DIGIT, OR DIGIT + LETTER OTHER RANGES		
1 = 30-50 MHz	1A = 25-30 MHz	2F = 300-400 MHz
2 = 148-174 "	1C = 66-88 "	2G = 225-400 "
3 = 450-470 "	1D = 88-108 "	3A = 406-420 "
4 = 470-512 "	2A = 108-136 "	3B = 406-512 "
5 = 890-960 "	2B = 132-150 "	3C = 450-512 "
	2C = 132-174 "	4A = 470-490 "
	2D = 215-260 "	4B = 490-512 "
	2E = 225-300 "	

CENTER DIGIT PAIR
ENG. NUMBERS

TRAILING LETTERS CAVITY DIAMETER	
A .0-	H 7.0
B 1-	I 8.0
C 2.0	J 9.0
D 3.0	K 10.0
E 4.0	L 11.0
F 5.0	M 12.0
G 6.0	

- Power rating equals the sum of the power of each channel, except in the Q-Series Duplexers where rating applies to each channel simultaneously. In general, Power ratings can be increased with shortened duty cycles, consult factory.
- Attenuation measured with 50 ohm load on the antenna terminal.
- C F: Consult factory for Duplexer mounting options other than listed.

P-1C01G  
P-1C02G  
P-201G  
P-202G  
  
P-203G  
P-301G  
P-302G  
P-303G

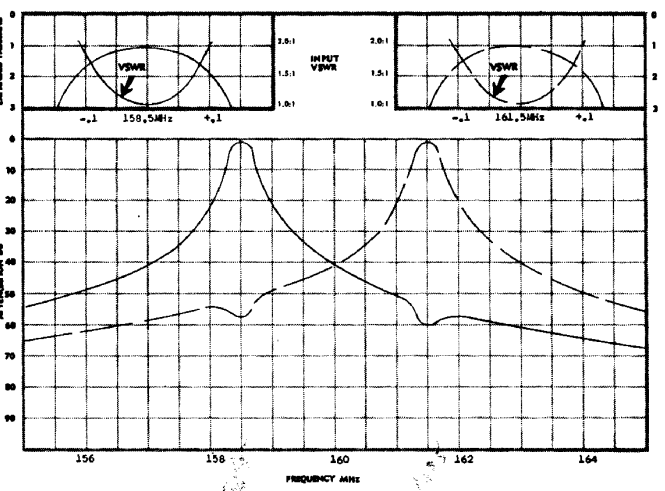
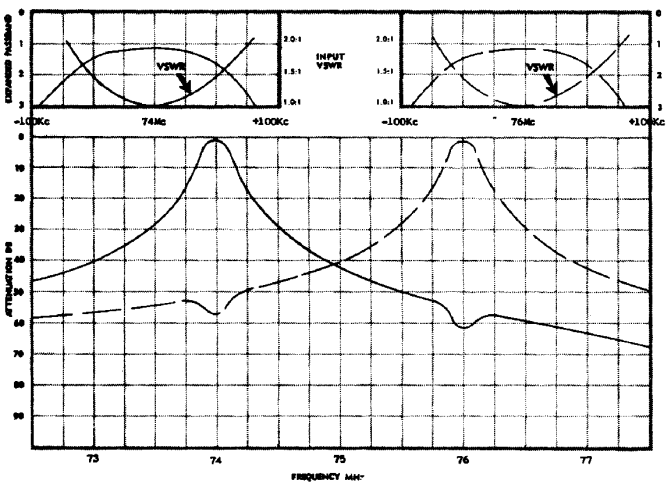
RESPONSE CURVES

In highly congested metropolitan areas, or on "antenna farms", the **Bandpass family of duplexers** afford the greatest overall protection, excepting Rx crystal filters, against outside interference and reduction in sensitivity due to high ambient noise levels. They relieve much of the intermodulation problems of high level mixing in receiver front ends. They will also reduce transmitter spurious and overall extraneous radiations which add to the already polluted frequency spectrum. This family utilizes the same **high performance cavities** which form the **building blocks** of Sinclair's custom designed **Multicouplers**. In fact, if your system is to be expanded, it is advisable that a multicoupler be investigated to prevent obsolescence and unwarranted future expenditures. (Request Sinclair's Multicoupling Guide).

- All cavities in the eight models listed in this brochure are from 6 5/8" diameter alodined aluminum with silver plated brass and copper tuning probe assemblies. They are temperature compensated with invar and possess coarse and fine tuning adjustments. The input and output loops are rotateable and can be adjusted for other than the 0.5 db loss per cavity, common to this family.
- The frequency spacings plotted in this brochure are typical of the minimum at which these models meet the current average duplex specifications.
- Models have been added for internal radio cabinet mounting where space permits.
- The P-303G provides an extra measure of isolation and reflects increasing requirements in this respect.
- Cabinet mounting options are available. Consult factory.
- Specify Tx and Rx operating frequencies when ordering.

P-1C01G P-1C02G

P-201G P-202G P-203G



**CURVE KEY**

: LOW PASS TO ANTENNA

: HIGH PASS TO ANTENNA

P-301G P-302G

P-303G

