



DUPLEXERS

406-512 MHz

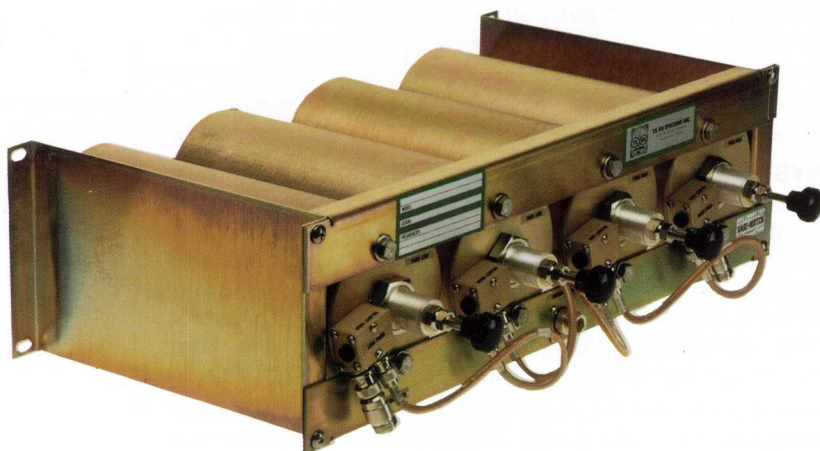
IN RANGES OF:
406 - 430 MHz
442 - 450 MHz
450 - 470 MHz
470 - 512 MHz



DUPLEXERS: 406-512 MHz



(PATENTED)

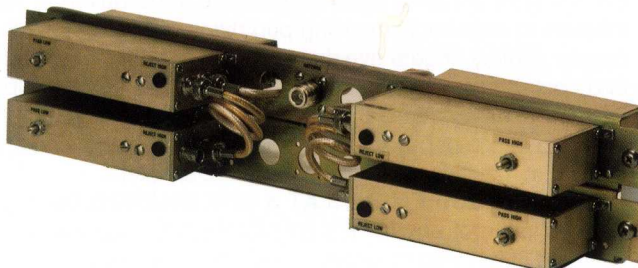


450-470 MHz
100 dB ISOLATION AT 5.0 MHz SEPARATION
350 WATT POWER RATING
MODEL 28-70-02A

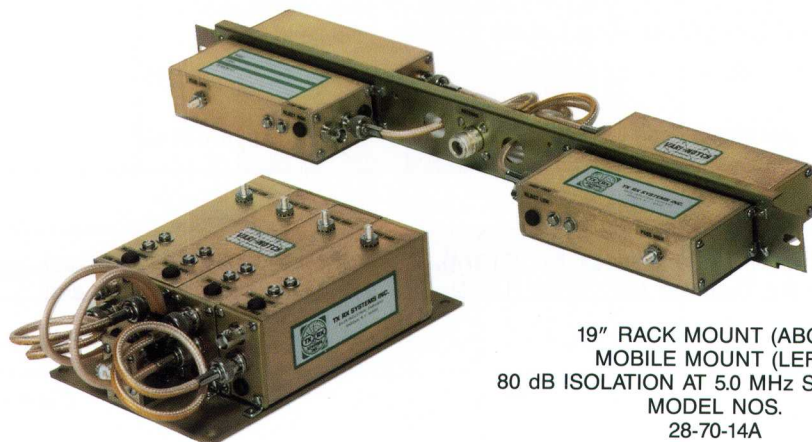
19" RACK MOUNTS
MODEL NOS.
28-65-02A 28-69-02A
28-65-07A 28-69-06A
28-66-02A 28-70-02A
28-70-09A
(ALTERNATE MOUNT AT LEFT)

ALTERNATE MOUNT "B"
19" REVERSE FLUSH MOUNT
MODEL NOS.

28-65-02B 28-69-02B
28-65-07B 28-69-06B
28-66-02B 28-70-02B
28-70-09B



19" RACK MOUNTS
MODEL NOS.
28-65-09A
28-71-01A
28-72-01A



19" RACK MOUNT (ABOVE)
MOBILE MOUNT (LEFT)
80 dB ISOLATION AT 5.0 MHz SEPARATION
MODEL NOS.
28-70-14A
28-70-15H

DUPLEXERS • CAVITY FILTERS • MULTICOUPLER SYSTEMS • SIGNAL BOOSTER SYSTEMS • RF SYSTEM PRODUCTS

TX RX SYSTEMS INC. 8625 INDUSTRIAL PARKWAY, ANGOLA, NY 14006-9696
TELEPHONE 716-549-4700 FAX 716-549-4772 (24 HRS.)

A MEMBER OF BIRD TECHNOLOGIES GROUP

DUPLEXER NOMENCLATURE

FIRST PAIR OF NUMBERS		SECOND PAIR OF NUMBERS		THIRD PAIR OF NUMBERS PLUS LETTER	
CIRCUIT STYLE		FREQUENCY RANGE (MHz)		TWO DIGIT NUMBER	MOUNTING STYLE
26 - : BAND PASS CIRCUIT		- 13 - : 30 - 40	- 52 - : 215 - 250	ELECTRICAL SPECIFICATION IDENTIFIER	A : 19" RACK MOUNT
27 - : NOTCH CIRCUIT		- 14 - : 38 - 50	- 65 - : 406 - 430		B : 19" REVERSE FLUSH RACK MOUNT
28 - : VARI-NOTCH CIRCUIT (PSEUDO BAND PASS)		- 26 - : 66 - 77	- 66 - : 442 - 450		C : 19" CROSS RACK MOUNT
30 - : PSEUDO-BANDPASS/NOTCH (NON - VARI - NOTCH)		- 27 - : 77 - 88	- 69 - : 470 - 512		D : DUST COVERED SIDE-OF-CABINET OR WALL MOUNT
33 - : SERIES NOTCH CIRCUIT (TUNABLE PASS BANDS)		- 28 - : 66 - 88	- 70 - : 450 - 470		E : 24" RACK MOUNT
38 - : PSEUDO BANDPASS (NON - VARI-NOTCH)		- 29 - : 88 - 108	- 71 - : 470 - 490		F : WALL MOUNT
74 - : BAND PASS CIRCUIT (2 - CHANNEL T-PASS)		- 35 - : 108 - 136	- 72 - : 490 - 512		G : CABINET MOUNTED
		- 36 - : 132 - 150	- 88 - : 890 - 960		H : MOBILE PLATE MOUNTED
		- 37 - : 144 - 174	- 89 - : 806 - 866		
		- 38 - : 132 - 174	- 97 - : 1215 - 1300		
		- 41 - : 148 - 174			

EXAMPLE: A Model **28-70-02A** is a VARI - NOTCH circuit, 450 - 470 MHz range, 19" rack mount Duplexer.

VARI-NOTCH®, the trademark for **TX RX SYSTEMS'** pseudo bandpass circuit design, offers the best **cost-to-performance** ratio in its class and is unsurpassed for close-spaced duplexing, combining the low loss and close frequency spacing advantages of notch filters with the broad isolation and selective pass characteristics of bandpass filters. The small geometry and efficiency of this circuit design has also resulted in a variety of space efficient mountings.

SERIES NOTCH®, a band reject (notch circuit) design, has tunable passbands allowing use of construction techniques which optimize isolation specifications, normally traded off to obtain wide, fixed passbands. As a result, optimizing the passband when field tuning to a different separation is possible.

CONSTRUCTION: Our 4" and 6.625" diameter Duplexer cavities are constructed of hardened aluminum which does not easily dent, as some copper types do, causing detuning. Cavity surfaces are passivated inside and out with a chromate conversion coating (Alodine). A 1/4" thick end cap heliarc'd to the top of the cavity at the critical point eliminates the problem of noise generated by poor metal to metal contact inherent in constructions using pop rivets. Silver plating the movable brass tuning probes and hardened copper contact fingers avoids erratic tuning, high loss, and degraded selectivity which result in extra time and costs. Our 6.625" diameter Duplexer cavities have both coarse and fine tuning controls as well as calibrated, easily adjustable loops to speed tuning time.

The excellence of our Vari-Notch circuit is available in the high Q, 1.25" x 2" rectangular, extruded aluminum, cavities used in our smaller Duplexers.

SHOULD REQUIREMENTS AT A SITE CHANGE, the circuit style (Pseudo Bandpass, Bandpass, or Series Notch) of any TX RX SYSTEMS INC. Duplexer built from 6.625" diameter cavities can be easily changed in the field by ordering and installing the appropriate replacement conversion assemblies (loops), thus avoiding obsolescence. Conversion assemblies, along with adaptors, hookup cables, and other hardware are displayed on page 3 of the Duplexer/Filter Price List No. C6457.

OTHER DUPLEXER BROCHURES are available for bands **30-88 MHz** (Lit. No. C1014), **132 - 250 MHz** (Lit. No. C1024), and **806 MHz to 1.3 GHz** (Lit. No. C1044). Also write for Tech-Aid No. 76007 (Lit. No. C3004), "Duplexer Problems and Remedies"

GENERAL SPECIFICATIONS, ELECTRICAL: TEMPERATURE RANGE: -40° C TO +80° C IMPEDANCE: 50 Ohms VSWR: 1.3:1

FREQUENCY RANGE MHz (SUB-RANGE)	MODEL NO.	ELECTRICAL					MECHANICAL									
		MIN. FREQ. SEP. MHz	POWER RATING WATTS	ISOLATION dB		INSERTION LOSS dB	CAVITIES		DIMENSIONS					TX AND RX PORTS	ANTENNA PORT	
				PER CHAN.	BET. CHAN.		NO.	SIZE	STYLE	ALT. MODEL NO.	H"	W"	D"		STD.	OPT.
406-430	28-65-08A	4.5	100	80	35	1.2	4	1.25" X 2" RECT.	A	.....	1.75	19	±2.5	BNC	N	.....
	28-65-07A	3.0	250	85	60	1.25	4	4" DIA.	A	.....	5.25	19	+3-9	N	N	.....
									B	28-65-07B	5.25	19	12			
	28-65-02A	3.0	350	80	30	0.8	4	4" DIA.	A	.....	5.25	19	+3-9	N	N	.....
									B	28-65-02B	5.25	19	12			
	28-65-09A	2.5	100	80	30	1.8	6	1.25" X 2" RECT.	A	.....	3.5	19	±2.5	BNC	N	.....
442-450	28-65-01A	1.5	350	90	50	1.5	4	6.625" DIA.	A	.....	17	19	±7.5	N	N	.....
	28-65-05A	0.7	350	100	50	2.2	6	6.625" DIA.	A	.....	34	19	±7.5	N	N	.....
									G	28-65-05G	36.9	22	14.8			
	(ATV) 26-66-01A	6.0	100	70	55	1.2	2	COMBLINE	A	.....	10	21.5	7.5	N	N	.....
	28-66-02A	5.0	350	100	46	0.6	4	4" DIA.	A	.....	5.25	19	+3-9	N	N	.....
									B	28-66-02B	5.25	19	12			
450-470	28-70-14A	5.0	100	80	35	1.2	4	1.25" X 2" RECT.	A	.....	1.75	19	±2.5	BNC	N	.....
	74-70-02A	5.0	185	62	80	2.3	4	6.625" DIA.	A	.....	17	19	±7.5	N	N	.....
									G	74-70-02G	36.9	22	16.4			
	74-70-04A	5.0	225	80	100	2.4	6	6.625" DIA.	A	.....	24.8	19	±8.5	N	N	.....
									G	74-70-04G	36.9	22	14.8			
	28-70-09A	5.0	250	100	70	1.25	4	4" DIA.	A	.....	5.25	19	+3-9	N	N	.....
									B	28-70-09B	5.25	19	12			
	28-70-02A	5.0	350	100	46	0.6	4	4" DIA.	A	.....	5.25	19	+3-9	N	N	.....
470-512									B	28-70-02B	5.25	19	12			
	28-70-01A	1.5	350	90	50	1.5	4	6.625" DIA.	A	.....	17	19	±7.5	N	N	.....
	28-70-07A	0.7	350	100	50	2.2	6	6.625" DIA.	A	.....	34	19	±7.5	N	N	.....
									G	28-70-07G	36.9	22	14.8			
	28-69-06A	3.0	250	86	60	1.25	4	4" DIA.	A	.....	5.25	19	+3-9	N	N	.....
									B	28-69-06B	5.25	19	12			
470-512	28-69-02A	3.0	350	80	30	0.8	4	4" DIA.	A	.....	5.25	19	+3-9	N	N	.....
									B	28-69-02B	5.25	19	12			
	28-69-01A	1.5	350	90	50	1.5	4	6.625" DIA.	A	.....	17	19	±7.5	N	N	.....
	28-69-04A	0.7	350	100	50	2.2	6	6.625" DIA.	A	.....	34	19	±7.5	N	N	.....
									G	28-69-04G	36.9	22	14.8			

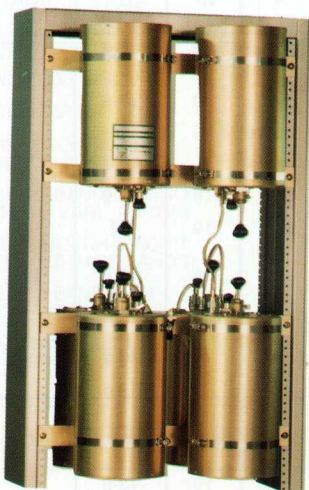
MOBILE MODELS

406-430	28-65-10H	4.5	100	80	35	1.2	4	1.25" X 2" RECT.	H	.....	2.7	5.12	7.4	BNC	U	N
442-450	28-66-04H	5.0	100	80	35	1.2	4	1.25" X 2" RECT.	H	.....	2.7	5.12	7.4	N	U	N
450-470	28-70-15H	5.0	100	80	35	1.2	4	1.25" X 2" RECT.	H	.....	2.7	5.12	7.4	BNC	U	N
	TX LOW 28-70-16H	5.0	100	80/40	30	1.2/0.8	3	1.25" X 2" RECT.	H	.....	2.7	3.8	7.4	BNC	U	N
	TX HIGH 28-70-17H	5.0	100	80/40	30	1.2/0.8	3	1.25" X 2" RECT.	H	.....	2.7	3.8	7.4	BNC	U	N

NOTE : Specifications for duplexers of unsymmetrical construction or response are listed as follows: ISOLATION - noise suppression/carrier suppression; INSERTION LOSS - TX insertion loss/RX insertion loss.

MODELS FOR VERY CLOSE SPACING

100 dB ISOLATION
AT 0.7 MHz SEPARATION
350 WATT POWER RATING



19" RACK MOUNTS
MODEL NOS.
28-65-05A
28-69-04A
28-70-07A

CABINET MOUNTS
MODEL NOS.
28-65-05G
28-69-04G
28-70-07G

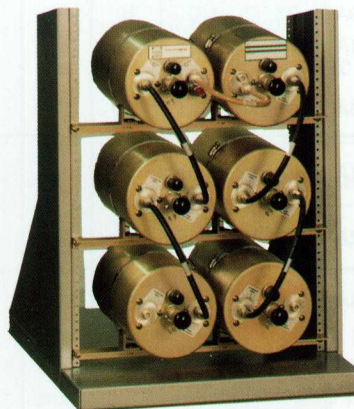
BANDPASS APPLICATIONS

DUPLEXERS FROM OUR T-PASS EXPANDABLE
MULTICOUPLER FAMILY

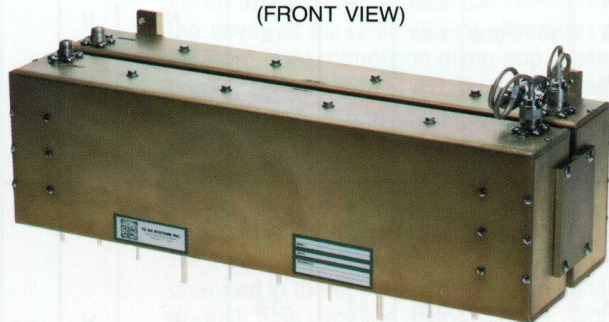
T-PASS®
(PATENTED)

19" RACK MOUNTS
MODEL NO.
74-70-04A

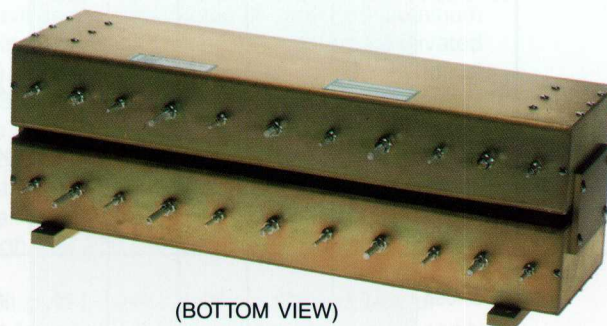
CABINET MOUNTS
MODEL NO.
74-70-04G

**COMBLINE DUPLEXER FOR ATV APPLICATIONS**

19" RACK MOUNT
MODEL NO.
26-66-01A
(FRONT VIEW)



(BOTTOM VIEW)

**MOBILE MOUNTS**

MODEL NOS.
28-65-10H
28-66-04H