SERVICING CENTER TESTS USING 5U (J98705U) TEST SET 529A AND B, 530A THROUGH 530H, 530J THROUGH 530L, 530P OR 531B, 530R OR 531C AND 531F FILTERS O AND ON CARRIER SYSTEMS—FILTER TESTS

These filters are used to select the correct band of frequencies for transmission on the high frequency line of the type O and ON carrier systems. These systems are single-sideband transmission; therefore, filters such as the 529 A and 529 B select the appropriate sideband by orientation in a socket. Some auxiliary and group receiving filters are 2-section filters while others are one-section filters. In all cases correct positioning of the filter in its mounting position is important. These tests are not intended to be manufacturing requirements, but only to indicate whether or not a trouble or defect has developed.

APPARATUS:

1—Vacuum Tube Voltmeter
1—Oscillator
1—Frequency Counter
1—P20D Cord
2—P2B Cords
1—125A Adapter

STEP	PROCEDURE
1	Switches A and B on 5U test set on OFF position.
2	Set ATT. to 0 db for *all* filter tests.
3	Connect filter, oscillator, vacuum tube voltmeter, and frequency counter to 5U test set as shown on associated sketch. To meet the requirements in this section a frequency counter *must* be used to set the frequency. If a counter is not available, only approximate readings can be made.
4	Adapter 125A is used for testing all filters.
5	Adjustment of the oscillator frequency is made with the frequency counter connected to the oscillator. Remove this connection before CAL adjustment is made and reading taken.
6	CAL setting for all filter tests is -10 db on VTVM.
7	SECT A test is made with the plug numbers on the filter corresponding to the socket numbers on the 125A adapter. SECT B is made by orientating the filter 180° from that of SECT A. Use the socket on the 125A adapter which corresponds to the plug on the filter.
8	If trouble is encountered in meeting the requirements on low level measurements, check the ground connections to the test equipment. It may be necessary to remove the ground from the VTVM to avoid pickup in the ground circuit.

TYPE	SECT	SWITCH POS C	SWITCH POS D	FREQ (KC)	TEST LIMITS (db) MIN	TEST LIMITS (db) MAX	SECT	SWITCH POS C	SWITCH POS D	FREQ (KC)	TEST LIMITS (db) MIN	TEST LIMITS (db) MAX
529A	A	11	8	178.0		−36.3	B	11	8	189.0		−54.3
				181.5	M − 1.2	M + 1.4				191.3		−59.3
				183.0	* −25.3	−21.5				192.4	M − 1.6	M + 1.2
				183.6	M − 1.6	M + 1.2				193.0	* −25.3	−21.5
				184.7		−59.3				194.5	M − 1.2	M + 1.2
				187.0		−54.3				198.0		−36.3
529B	A	11	8	181.0		−54.3	B	11	8	186.0		−36.3
				183.3		−59.3				189.5	M − 1.2	M + 1.4
				184.4	M − 1.6	M + 1.2				191.0	* −25.0	−21.8
				185.0	* −25.3	−21.5				191.6	M − 1.4	M + 1.2
				186.5	M − 1.2	M + 1.2				192.7		−59.3
				190.0		−36.3				195.0		−54.3
530A	A	11	7	30.0		−39.0	B	11	7	40.0		−49.0
				36.0		−50.0				56.5		−50.0
				40.0	−12.8					60.0	−13.2	
				56.0	−13.2					76.0	−13.1	
				59.0		−46.0				80.0		−46.0
				80.0		−42.0				100.0		−43.0
530B	A	11	10	76.0		−46.0	B	11	10	96.25		−46.0
				80.0	−13.1					100.0	−13.4	
				88.0	−11.4					108.0	−11.5	
				96.0	−13.4					116.0	−13.7	
				99.75		−46.0				120.0		−46.0
				103.0		−33.0				123.0		−36.0
530C	A	12	11	62.0		−33.0	B	12	11	180.0	+ 0.4	
				72.5		−42.0				188.0	+ 0.2	+ 3.2
				80.0	+ 1.0					196.0	+ 0.2	
				96.0	+ 0.7					280.0		−50.0
				103.5		−42.0				300.0		−34.0
				108.0		−29.0						
530D	A	12	11	82.0		−32.0	B	12	11	180.0	+ 0.4	
				92.5		−32.0				188.0	+ 0.2	+ 3.0
				100.0	+ 0.8					196.0	− 0.2	
				116.0	+ 0.7					280.0		−45.0
				123.5		−42.0				300.0		−34.0
				130.0		−29.0						

* Measured value between these limits is "M" value.

TYPE	SECT	SWITCH POS C	SWITCH POS D	FREQ (KC)	TEST LIMITS (db) MIN	TEST LIMITS (db) MAX	SECT	SWITCH POS C	SWITCH POS D	FREQ (KC)	TEST LIMITS (db) MIN	TEST LIMITS (db) MAX
530E	A	11	10	113.0		−35.0	B	11	10	133.0		−35.0
				116.0		−43.0				136.0		−43.0
				120.0	−13.5					140.0	−13.4	
				136.0	−13.9					156.0	−14.0	
				140.0		−43.0				160.0		−43.0
				160.0		−45.0				180.0		−45.0
530F	A	12	11	102.0		−32.0	B	12	11	180.0	+ 0.1	
				112.5		−42.0				188.0	+ 0.1	
				120.0	+ 0.4					196.0	0	
				136.0	+ 0.2					320.0		−50.0
				143.5		−40.0				380.0		−37.0
				148.0		−30.0						
530G	A	12	11	122.0		−31.0	B	12	11	180.0	+ 0.3	
				132.5		−42.0				188.0	+ 0.3	+ 3.0
				140.0	+ 0.4					196.0	+ 0.2	
				156.0	+ 0.2					320.0		−42.0
				163.5		−41.0				380.0		−37.0
				168.0		−29.0						
530H	A	11	9	10.0	−11.8		B	11	9	10.0		−20.0
				17.0	−13.1					15.59		−46.0
				20.01		−46.0				17.0		−33.0
				21.0		−37.0				18.0		−40.0
				23.2		−50.0				21.0	−13.4	
				35.0		−31.0				35.0	−11.7	
530J	A	18	9	6.0	−13.9		B	11	10	180.0	−12.9	
				17.0	−12.4					188.0	−12.4	−10.1
				21.0		−45.0				196.0	−12.7	
				24.0		−35.0				198.0		−50.0
				40.0		−36.0				203.0		−42.0
										210.0		−41.0
530K	A	18	9	10.0	−28.9							
				16.0	−28.1							
				17.0	−26.7							
				21.3		−50.0						
				26.6		−50.0						
				34.2		−50.0						

TYPE	SECT	SWITCH POS C	SWITCH POS D	FREQ (KC)	TEST LIMITS (db) MIN	TEST LIMITS (db) MAX	SECT	SWITCH POS C	SWITCH POS D	FREQ (KC)	TEST LIMITS (db) MIN	TEST LIMITS (db) MAX
530L	A	18	9	17.0		−50.0	B	18	9	10.0		−32.0
				19.5	M + 3.5					13.0		−44.0
				25.0	* −44.7	−41.7				20.0	−11.4	
				36.0	M − 2.2					28.0	−11.3	
				42.8		−50.0						
				55.0		−50.0						
530P or 531B	A	12	11	32.5		−50.0	B	12	11	180.0	+ 0.3	
				40.0	+ 1.6					188.0	+ 0.3	+ 2.9
				43.0	+ 0.9					196.0	0	
				54.0	+ 0.9					236.0		−35.0
				56.0	+ 1.4					300.0		−24.0
				63.0		−34.0						
530R or 531C	A	12	11	52.5		−50.0	B	12	11	180.0	+ 0.3	
				60.0	+ 1.6					188.0	+ 0.3	+ 2.5
				63.0	+ 0.7	+ 3.0				196.0	0	
				74.0	+ 0.8					256.0		−35.0
				76.0	+ 1.3					300.0		−29.0
				83.0		−44.0						
531F	A	18	9	17.25		−50.0	B	11	10	180.0	−11.7	
				20.3	M + 1.1	M + 3.8				188.0	−11.5	
				28.0	* −42.0	−38.0				196.0	−11.7	
				35.7	M − 1.5	M + 0.9				216.0		−50.0
				42.0		−50.0				225.0		−43.0
				50.0		−50.0						

* Measured value between these limits is "M" value.