

ZODIAC

DUPLEX FILTER DF-7270 - DF-7470

Specifications:

Frequency range:	DF-7270: 146 - 174 MHz
	DF-7470 68 - 88 MHz
Frequency separation:	> 4 MHz
Max. input power:	30 W
Insertion Loss, TX - Ant:	< 1 dB
Insertion Loss, RX - Ant:	< 1 dB
Attenuation, TX - Ant:	> 80 dB
Attenuation, RX - Ant:	> 80 dB
VSWR:	< 2
Temperature range:	-25 - +55°C
Dimensions:	120 x 190 x 66 mm

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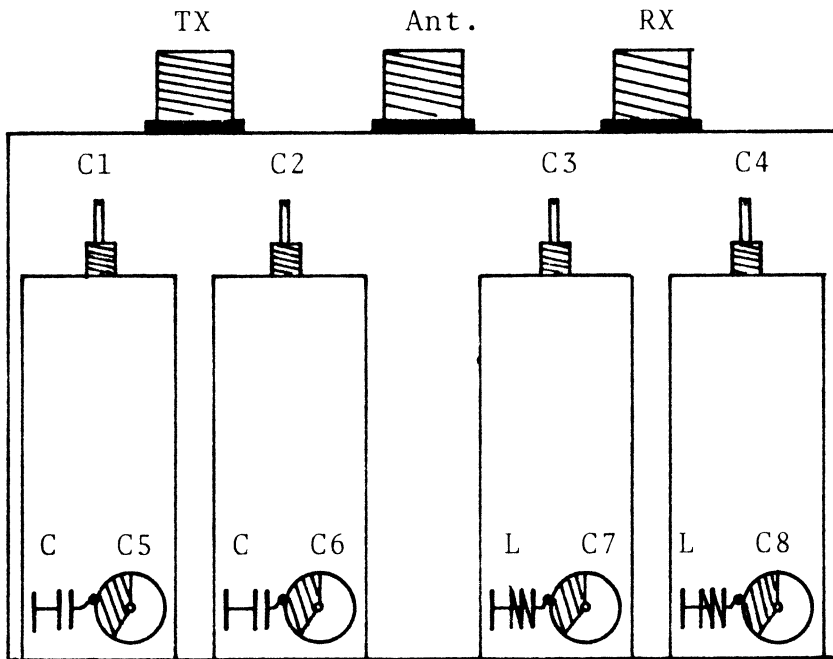
Duplex Filter DF 7270 - DF 7470

Adjustment Procedure

Type Designation:

DF 7470	68- 88 MHz	5	MHz Spacing
DF 7270/2A	146-174 MHz	9	MHz Spacing
DF 7270/2B	146-174 MHz	4/4,6	MHz Spacing

Mechanical Arrangement:

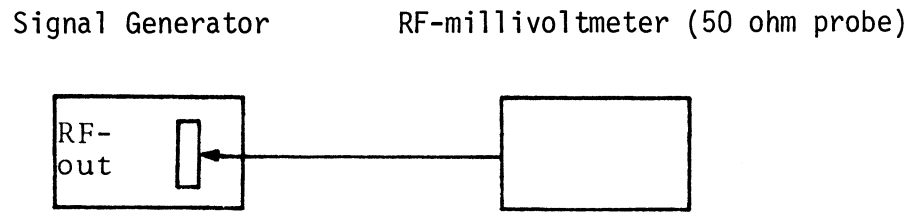


L and C are shown in place for TX-frequency higher than RX-frequency, for RX higher than TX change position of L to C and opposite.

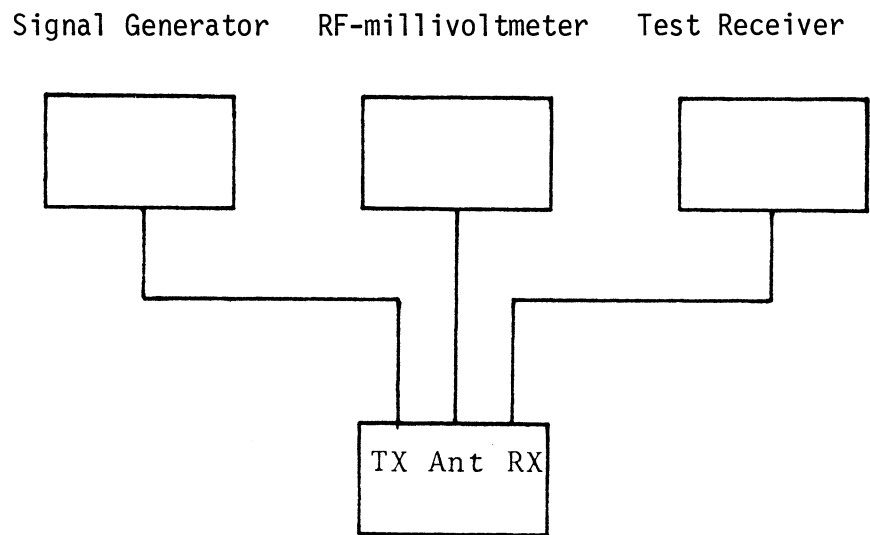
Values for L and C:	L	C
DF-7470	3 3/4 windings, 4 mm inner diam., 0,8 mm CU Ag	33 pF
DF-7270/2A	2 3/4 windings, 3,5 mm inner diam., 0,8 mm CU Ag	12 pF
DF-7270/2B	2 3/4 windings, 3,5 mm inner diam., 0,8 mm CU Ag	18 pF

Adjustment - Procedure.

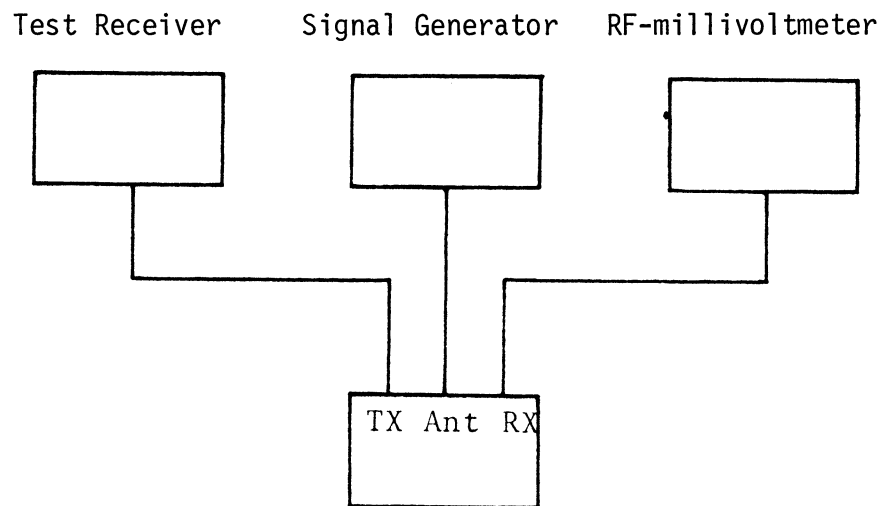
Test Set-up I(TSI):



Test Set-up II (TSII):



Test Set-up III (TSIII):



Instruments: RF-millivoltmeter, Boonten Model 92 C
 Signal Generator, Rohde & Schwarz SMDU or equal
 Test Receiver, Rohde & Schwarz ESU or equal

Step 1

With TSI adjust "RF-out" to an adequate level on the RF-millivoltmeter.
Choose highest possible level.
Level is used as reference when measuring insertion loss, therefore do not
change RF-out during later adjustments.

Step 2

Use TS II.
Set frequency of Signal Generator and Test Receiver to Rx-freq.
Adjust C1 and C2 for a minimum output to Test Receiver.

Step 3

Set freq. of Signal Generator and Test Receiver to Tx-freq.
Adjust C3 and C4 for a minimum on the Test Receiver.
Adjust C5 and C6 for a maximum on the RF-millivoltmeter.

Step 4

Use TS III.
Set freq. of Signal Generator for Tx-freq.
Adjust C7 and C8 for minimum on the RF-millivoltmeter.

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Repeat steps 2-4 until no further improvement is gained.

Check with data sheet that data are inside specifications.

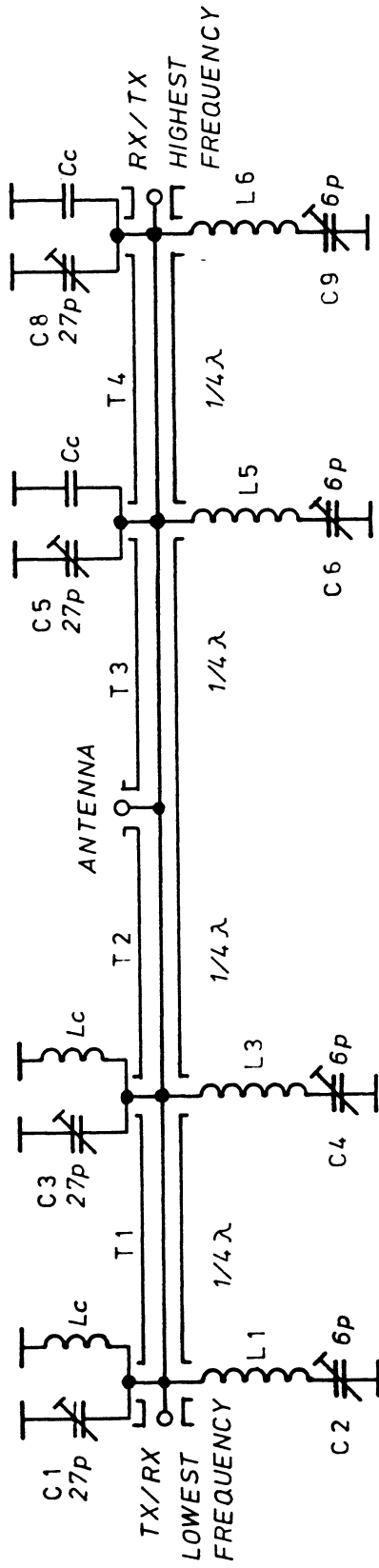
Tighten the nuts of $C_1 - C_4$ to secure adjustment.

Check that there is no change of adjustment.

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