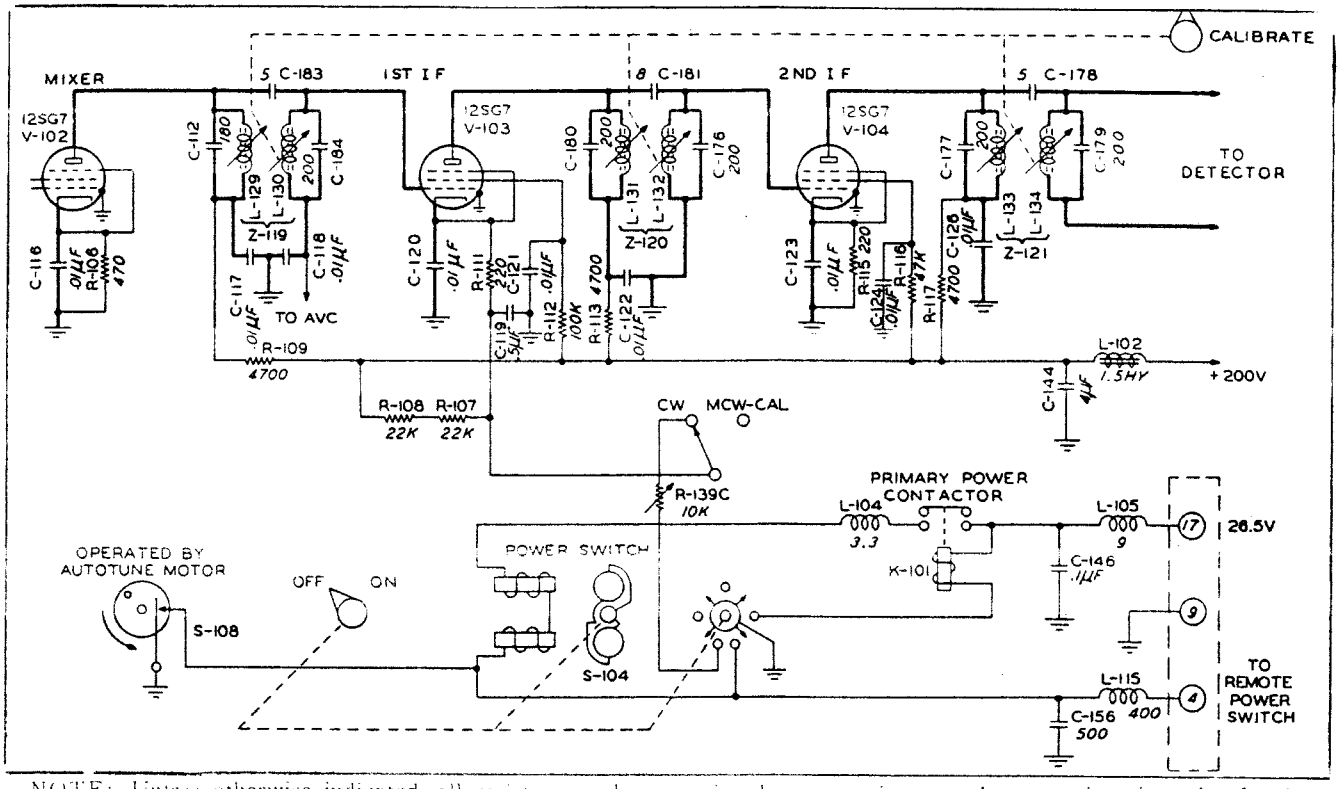

NOTE: Unless otherwise indicated, all resistance values are in ohms, capacitance values are in micromicrofarads, and inductance values are in microhenries.

Figure 4-7. IF Amplifier Circuits

ARR-15 IFT coupling capacitor analysis.

Formula from RDH4, pg 418, Figure 9.12

BW / fo = k = Cm / (C1 x C2) ^ 0.5

	Mixer	Ist IF	2ndIF
Cm =	5 pF	8 pF	5 pF
C1 =	180 pF	200 pF	200 pF
C2 =	200 pF	200 pF	200 pF
k =	0.026	0.042	0,025
BW =	13kc	21kc	12.5kc

IF Band Pass = (13 kc + 21 kc + 12.5 kc) / 3 + 15.5 kc

From selectivity graph in AN 16-30ARR15-3 on page 5-30
IF Band Pass = approximately 16 kc

Substitute IFT coupling capacitor analysis.

	Mixer	Ist IF	2ndIF
Cm =	3 pF	3 pF	3 pF
C1 =	180 pF	200 pF	200 pF
C2 =	200 pF	200 pF	200 pF
k =	0.0016	0.015	0,015
BW =	7.9kc	7.5kc	7.5kc

Total IF Band Pass = 7.63 kc

Cm =	3 pF	5 pF	3 pF
C1 =	180 pF	200 pF	200 pF
C2 =	200 pF	200 pF	200 pF
k =	0.0158	0.025	0,015
BW =	7.9 kc	12.5 kc	7.5 kc

Total IF Band Pass = 9.3 kc

Cm =	5+6 pF	8+6 pF	5+6 pF
C1 =	180 pF	200 pF	200 pF
C2 =	200 pF	200 pF	200 pF
k =	0.0144	0.0171	0,0137
BW =	7.2 kc	8.55 kc	6.85 kc

Total IF Band Pass = 7.53 kc

Cm =	5+3 pF	8+6 pF	5+3 pF
C1 =	180 pF	200 pF	200 pF
C2 =	200 pF	200 pF	200 pF
k =	0.0096	0.0171	0,0094
BW =	4.8 kc	8.55 kc	4.69 kc

Total IF Band Pass = 6.01 kc

Cm =	5+5 pF	8+8 pF	5+5 pF
C1 =	180 pF	200 pF	200 pF
C2 =	200 pF	200 pF	200 pF
k =	0.0132	0.02	0,015
BW =	6.6 kc	10 kc	6.25 kc

Total IF Band Pass = 7.62 kc