

# RESULTS

ICOM  
IC-290-E

YAESU  
FT-480R

## OUR OBSERVATIONS

+80Hz	-450Hz	
0.28uV emf	0.28uV emf	Tests 2 to 4 measure the practical maximum sensitivity at the band centre and its edges. There is nothing to choose between any of the sets in the FM mode; the overall result is no better than average.
0.28uV emf	0.36uV emf	
0.24uV emf	0.28uV emf	
none	none	
0.36uV emf @ 145 MHz 18.0mV emf @ 145.25MHz	0.56uV emf @ 145MHz 14.0mV emf @ 145.25MHz	This represents the dynamic range of the receiver sections in FM mode. Refer to Table one for the actual figure expressed in dB. They are all very good.
0.35uV emf @ 145MHz 1.6mV emf @ 145.025MHz	0.56uV emf @ 145MHz 1.2mV emf @ 145.025MHz	This represents the adjacent channel rejection. Refer to Table one for dB values. The Trio and Yaesu are really not too good in this respect. The Icom comes out as having a very good all round FM performance. However this is not true of the same set operating in SSB mode.
none	none	
+80Hz	-450Hz	
0.7uV emf	0.22uV emf	Receiver sensitivity in SSB mode. Both the Trio and the Icom are shown to be poor. There is no apparent reason why this should be so though.
none	none	
0.7uV emf @ 145MHz 3.5mV emf @ 145.05MHz	0.56uV emf @ 145MHz 8.0mV emf @ 145.05MHz	The dynamic range of each set in the SSB mode. Refer to Table one. The performance of the Yaesu and Trio sets is adequate given the conditions on the 2m band. However the performance of the Icom could pose a problem in some circumstances. For instance, some de-sensing could be experienced when a number of people are all trying to use the same crowded hill top at the same time.
0.7uV emf @ 145MHz 0.3mV emf @ 145.006MHz	0.56uV emf @ 145MHz 0.4mV emf @ 145.006MHz	This represents the adjacent channel performance when receiving SSB. Refer to Table one. The performance is not really adequate for a typical field day — the Icom comes out particularly badly in this respect. However you would probably have little trouble in the typical domestic situation where the RF population is much lower.
none	none	
+80Hz	-450Hz	
10w	9.5w	The Trio and Yaesu sets do not meet the manufacturers' specifications when determining FM power output, even at 13.8V supply. However a station at the receiving end would not notice the shortfall.
10w	9w	
none	none	
3rd order 28dB below tones 5th order 46dB below tones	3rd order 24dB below tones 5th order 23dB below tones	Trio set could not produce output power in accordance with manufacturer's specification. We suspect the review sample.
15w	12w	
3rd order 14dB below tones 5th order 30dB below tones	3rd order 22dB below tones 5th order 23dB below tones	This test causes the sets to develop the maximum sideband power of which they are capable. In practice it simulates shouting into the mic.
3rd order 38dB below tones 5th order 40dB below tones	3rd order 14dB below tones 5th order 23dB below tones	These are the intermod products associated with test 20. The Trio and Icom 3rd order products look poor but a further 6dB should be added to each to ascertain the true level of intermod products below the maximum PEP output level. Thus the Icom set would normally be quoted as having an intermod performance of -20dB below maximum output, a tolerable level.
No instability at 3:1 VSWR	No instability at 3:1 VSWR	This test represents the intermod performance at the quarter power level. The Yaesu performance is very poor suggesting that the bias circuitry in the review sample required adjustment.
Satisfactory	Satisfactory	

Notes: 1. Audio tones used 1100Hz, 1700Hz  
2. Test equipment used (T7 1055B C101 23)  
3. 2 signal generators type Marconi (T7205 C101 37)  
4. Spectrum Analyser type HP8554B C121 35  
5. R.F. Voltmeter Racal 9301A C105 25  
6. 100ohm dummy load Bird 6151 C108 15  
7. 100ohm 3dB attenuator Bird 6521 C112 27  
8. Counter R.F. Racal 9839 C102 25  
9. 2 Tone A.F. generator Dymar 1740 C104 24