type sockets for many of the external facilities may lead to a tidier shack, I much prefer lots of phone sockets because I am, and always have been, rather a fiddler, liking to try all sorts of external combinations in a hurry. If I can avoid the nexessity of soldering wires onto a DIN socket, at almost any cost, I will do so, but I must admit to being very prejudiced against them for longstanding and personal reasons! I used to like the larger old 'Granny-type' 8-pin octal auxiliary sockets, but terminals or phonos are even better.

I could find no actual snags in either the receive or transmit side which would stop me recommending at least a good look at the rig, which is therefore certainly worth consideration. Don't forget to ask about accessories and after sales service facilities before you commit yourself to purchase, for this may influence where you buy the rig, as well as perhaps minor differences of price.

Lab test

Having had a play with the rig for several days we applied some very extensive tests to check performance in many areas, and probably the best way to comment on the test results is to first follow a received signal through from aerial input to loudspeaker out, and then in the same way have a look at the transmitter results.

The RF input sensitivity varied from band to band from excellent to good, to 10m sensivity unfortunately being one of the poorest, although completely acceptable, equivalent to a noise figure of around 8dB or so. Ironically, the most sensitive band was 14MHz, on which you don't really need ultimate sensitivity. RF intermodulation performance was checked with two carriers 10 and 20kHz off channel at three levels, the two carriers always being at the same level relative to each other. The first level was that required to develop a third order 1m product of 12dB SINAD, whilst the second and third levels produced products reading S5 and S9 respectively. Our choice of such close in tones spaced only 10 and 20kHz is a difficult test indeed, and my interpretation of the results is that the TS430 comes out pretty well. The reciprocal mixing test involved checks on the local oscillator sideband noise at 20 and 100kHz off channel, and whilst the 100kHz test result was very good, the 20kHz one was average, some rigs being better by quite a few dB. This close-in noise was quite possibly a contributory factor to the disappointing selectivity measurement for -60db, although the filter was good down to around -40dB, and thus the shape factor which works out at around 2.9 is not good. During the selectivity test we heard a series of small whistles etc. while we were measuring the -60dB point, which we assume to be synthesiser modulation components on the local oscillator. Selectivity was checked at two separate RF levels about 15dB apart with the same result. I must particularly praise the excellent S meter, characteristic of many Trio rigs, for its far better than usual law from low to very high levels. As can be seen from the chart, there is 35dB difference between S1 and S9, S5 being reasonably half way in dynamic range between these two points. S9 however, at

Parameter **RX Measurements**		**Comment**
Sens. for 12dB SINAD SSB @ 28.6/21.3/14.25 MHz (μV p.d).	0.17/0.14 /0.12	Good/V.good /excellent
Sens. for 12dB SINAD SSB @ 7.05/ 3.65/1.9 MHz (μV p.d.)	0.17/0.14 /0.14	Easily good enough
S meter: Levels for S1/S5/S9 + 20dB SSB @ 28.6 MHZ (μV p.d.)	1.2/11 69/400	Excellent
S meter: Levels for S9 SSB @ 21.3/ 14.25/7.05/3.65/1.9 MHZ (μV p.d.)	65/56/82 68/59	
Selectivity: SSB 3dB bandwidth /60dB bandwith (KHz)	2.3 16.6	Fair
Selectivity: SSB shape factor	2.9	Fair
RFIM: Listening at 28.6 MHz. Sending + 10 and + 20 KHz	1.6/7.1/14	Good
Level from each for 12dB SINAD/ S5/S9 product (mV p.d.)		
Reciprocal mixing: Level @ + 20 and + 100 KHz for 3dB degrad. in 15db SINAD Signal (mV p.d.)	2.2 120	Fairly good
T-notch: Max rejection of 1.4 KHz rel. 1 KHz beat (dB)	33	Excellent
T-notch: Max rejection of 1 KHz rel. 1.4 KHz beat (dB)	32	Excellent
Audio output distortion @ 125mW into 8 Ω (%)	0.5	Excellent
Audio output power in @ 10% THD 8 Ω (W)	1.7	Slightly restrictive
Frequency accuracy of readout (Hz)	within 20	V. good.
Current @ 13.8 V D.C. supply audio gain min. (A)	1	
TX Measurements		**Comment**
CW output power: 13.8 V.D.C. Supply 1.9/3.65/7.05 MHz (W)	85 /100/100	Good
CW O/P power @ 14.25/21.3/28.6 MHz (W)	100 /90/85	V. good
SSB O/P power @ 1.9/3.65/7.05 MHz (W P.E.P.)	140 /140/140	
SSB O/P power @ 14.25/21.3/28.6 MHz (W P.E.P.)	150 /140/140	
Current drawn on full power CW. 13.8 V supply (A)	16	Very efficient
Current drawn on SSB, mic gain min. (A)	2	Good
Harmonic O/P, CW @ 1.9/3.65/7.05 MHz (2nd/3rd) (dBc)	(-60/ -58) /(-66/ -54) /(< -68/ -49)	Good /Fairly good /Fair
Harmonic O/P, SSB @ 14.25/21.3/28.6 MHz (2nd/3rd) (dBc)	(-64/< -53) /(-64/< -65) /(< -65/< -65)	Fairly good /excellent /excellent
SSB Carrier rejection relative to full CW power: 28.6 MHz (dB)	-62	Superb!
Transmit freq. error on CW @ 28.6 MHz (Hz)	-160	Adequate

Table of Lab test results