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SH. 1 OF 1

TMC SPECIFICATION NO. S-377

COMPILED BY
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TITLE: FFR CW MODIFICATION

JOB

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Modification of FFR-2 receiver for improved reception of CW signals.

The receiver is greatly improved for CW reception with and without the use of AVC by the simple change of three components.

1. C114 changed from CC21SL100D a 10 uufd capacitor to CC21SL200D a 20 uufd capacitor.
2. C134 , CC-101-3 a 220 uufd capacitor is deleted.
3. R114 changed from RC20GF682K a 6800 ohm resistor to RC20GF333K a 33 K ohm resistor.

The following data has been taken from the modified FFR-2 receiver.

Frequency 6.0 MC
BFO ON
AVC OFF

RF gain adjusted to bias voltage shown.

Bias	S/N 10 db	Sensitivity 2 W. Out	BFO OVERLOAD Input	Output Above Noise	Receiver Overload Input
0	0.6 uv	0.2 uv	7.0 uv	20 db	300 uv
-1.0	0.7 uv	1.2 uv	40 uv	32 db	700 uv
-2.0	0.75 uv	7.0 uv	150 uv	42 db	3K uv
-3.0	1.4 uv	40 uv	800 uv	53 db	20K uv
-4.0	7.0 uv	450 uv	10K uv	58 db	300K uv
-5.0	150 uv	16K uv	300K uv	64 db	1000K uv

CONCLUSION:

The operation of the receiver for CW reception has been improved as shown by the data. The dynamic range of signals when the audio note increases linearly with input signal is shown by the sensitivity and the BFO overload figures. Note that the receiver is still usable for stronger signals up to those shown under the receiver overload column.

The AVC operation has not been impaired for us either with or without the BFO. With BFO on the AVC holds the signals well below the overload point.