DATE 3/18/54
SH. 1 OF 5
COMPILED BY A.J.J.
APPROVED AJJ

TMC SPECIFICATION NO. S-198

TITLE: MODEL RSC

JOB

OBSOLETE

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A. GENERAL

The TMC Remote System Control, Model RSC consists of two separate functional blocks as follows:

1. The Tone Generators
2. The Audio Amplifiers

It is through the integrated action of these two blocks, and their combination with the other segments of the RCR System, that the operational behavior of a remotely positioned receiver or other devic is dictated.

B. DESCRIPTION

1. The Tone Generators:

The Tone Generators consist of three independent audio oscillators whose frequencies may be varied within predetermined limits by means of Front Panel Controls. Periodic coarse realignment of these frequencies is accomplished by means of a rear apron adjustment where the amplitude controls are also available.

There are, on the front panel, the additional ON-OFF switching features necessary to the full utilization of the BFO and RFG facilities.

2. The Audio Amplifiers:

The Audio Amplifier segment serves to alter the returning intelligenc from the remotely located receiver to fill the needs of the individual operator. The operator may therefore, from the front panel, adjust the audio gain to compensate for line losses and signal variations. He may also choose any one of four frequency components contain d in the return signal by means of a variable band pass filter, whose degree of selectivity may be continuously varied from the front panel. Additional facilities are provided for phones or speaker output and for muting by an external pair of contacts. The degree of muting is adjustable on the rear apron.

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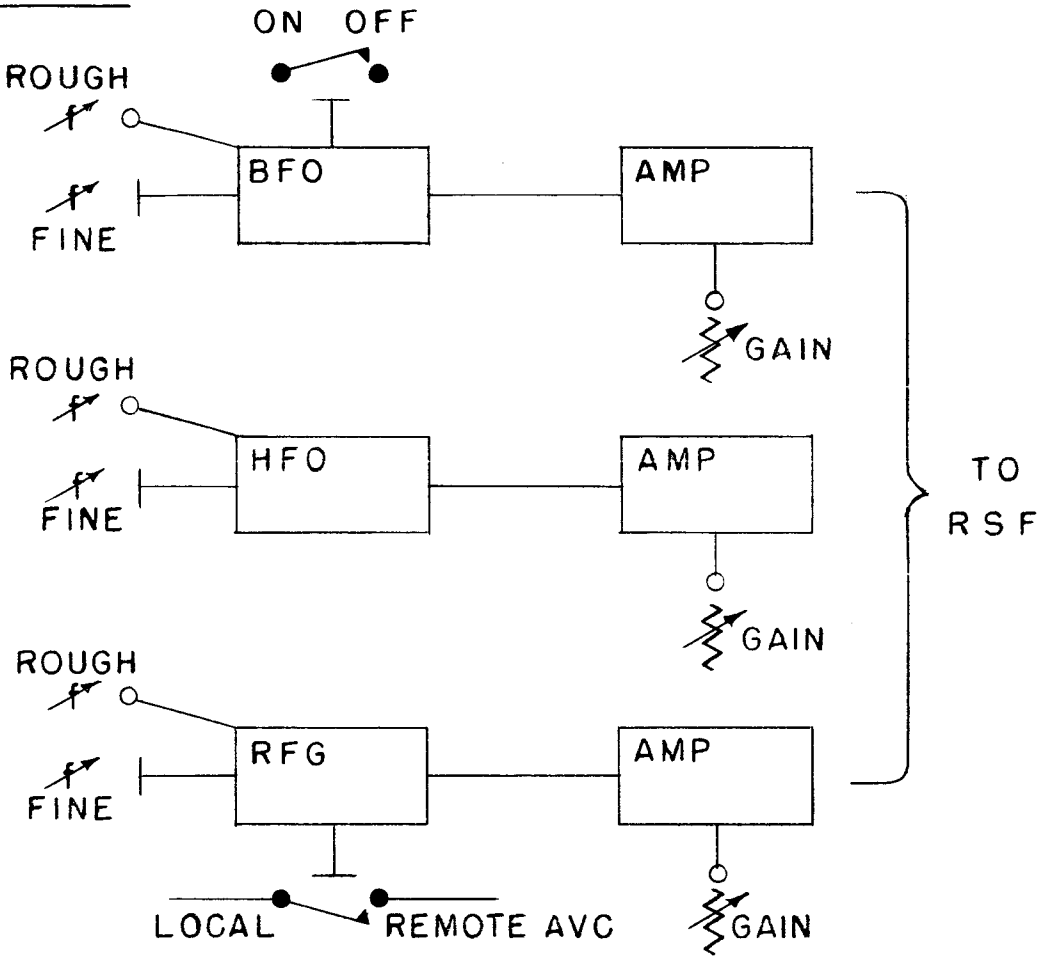
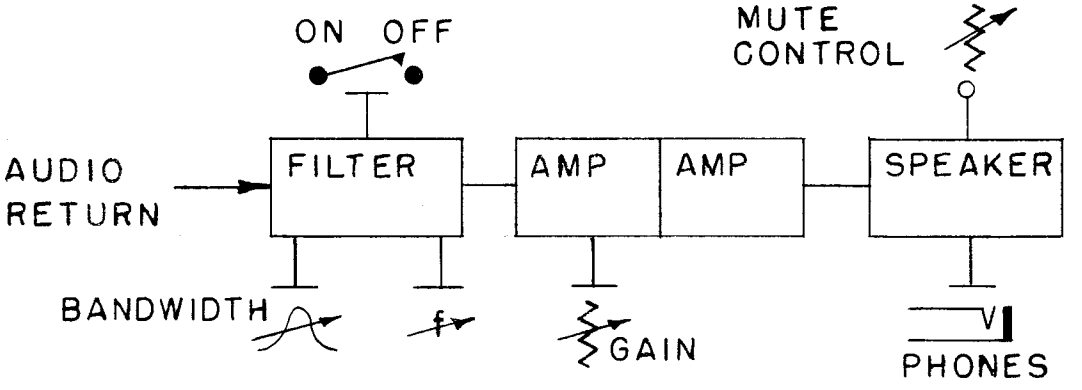
TONE GENERATORS



AUDIO AMPLIFIERS



NOTE:

o—— LOCATED ON REAR APRON.

|—— LOCATED ON FRONT PANEL.

C. SPECIFICATION DATA

1. The Tone Generators:

(a). Center Frequencies - The center frequencies are distributed in groups of three channels as follows:

Model RSC-(A)	RFG Control	- 425 cps
	BFO	- 595
	HFO	- 765
Model RSC-(B)	RFG Control	- 935 cps
	BFO	- 1105
	HFO	- 1275
Model RSC-(C)	RFG Control	- 1445 cps
	BFO	- 1615
	HFO	- 1785
Model RSC-(D)	RFG Control	- 1955 cps
	BFO	- 2125
	HFO	- 2295
Model RSC-(E)	RFG Control	- 2465 cps
	BFO	- 2635
	HFO	- 2805

(b). These frequencies shall be adjustable from the front panel by plus and minus 42.5 cps; the end limits of which shall be within plus and minus 7.5 cps of this figure when the center frequency is correct.

(c). A coarse center frequency adjustment is provided for on the rear apron. This facility must allow at least ±5% continuous variation in the center frequency.

(d). The stability of each oscillator shall be such that drift in center fr quency is r stricted to plus-minus 20 cps over a period of time not to exceed one w ek.

This specification is met over a reasonable ambient room temperature range not to exceed 110 °F or drop below 32°F. The equipment will operate over a considerably wider temperature range; however, it is to be expected that the long term drift tolerance may increase.

(e). The output voltage is continuously variable at the rear apron from -30 dbm to +6 dbm when loaded with a 600 ohm termination. The harmonic distortion at full output does not exceed 3%.

(f). A rear apron test point is provided for output amplitude and frequency measurement.

2. The Amplifiers:

(a). The amplifier is capable of .3 watts output at less than 5% distortion when properly terminated.

(b). The sensitivity in the filter out condition is such that .3 volts input will produce full output. The gain is continuously variable from the front panel.

(c). Any one of four filter positions may be chosen and the band width in each position is continuously variable from the flat condition to that which produces a minimum sharpness of plus and minus 70 cps at the three db points.

(d). A phone jack output appears on the front panel.

(e). Provisions are made for muting the audio output by means of a pair of external contacts. The degree of muting is continuously variable from the rear apron.

3. Physical Dim. $7\frac{1}{4}$" high x 19" wide x 7" deep.

4. Power Requirements:

+280 V. at 70 ma. D.C.

6.3 V. at 2.6 A