MODEL 432 RC OSCILLATOR

INSTRUCTION MANUAL

This equipment is a wide range oscillator of Wien Bridge type, so designed to supply 10 c/s 10 Mc 5 Vp-p output with 75 ohms unbalanced terminal and 20 c/s 20 kc 5 Vrms output with 600 ohms balanced terminals and is fitted up with a large output voltmeter and a - 10 dB x 6 attenuator.

Kikusui Electronics Corporation

S P E C I F I C A T I O N S

Power Supply		.....V, 50/60 c/s Approx. 95 VA
Dimensions		520 (W) x 200 (H) x 350 (D) mm
(Max.)		550 (W) x 220 (H) x 385 (D) mm
Weight		Approx. 22.5 kg
Items supplied with equipment		Model 924-75 terminator - 1 Model 921-600 shunt resistor - 1 Model 941B terminal adaptor - 1 Short-bar - 1 Instruction Manual - 1 Test data - 1
Frequency	Range	10 ~100 c/s, 100 c/s ~1 kc, 1~10 kc, 10 kc ~100 kc, 100 kc ~1 Mc, 1 Mc ~10 Mc
	Accuracy	± (2% + 1c/s)
	Stability	± 0.1 % against ± 10 % line voltage variations
Output	Voltage	10 c/s ~10 Mc, 5 Vp-p across 75 ohms unbalanced terminal with 75 ohms load. 20 c/s ~20 kc, 5 Vrms across 600 ohms balanced terminal with 600 ohms load.
	Stability	Within ± 0.1 dB for ± 10 % line voltage variations.
Distortion		Less than 3 % from 10 c/s to 10 Mc, for 5 Vp-p output across 75 ohms unbalanced terminal with 75 ohms load. Less than 1 % from 20 c/s to 20 kc, for 5 Vp-p output across 75 ohms unbalanced terminal with 75 ohms load. Less than 1 % from 20 c/s to 20 kc, for 5 Vrms output across 600 ohms balanced terminal with 600 ohms load.
Attenuator		- 10 dB x 6, Accuracy : ± 0.2 dB between steps ± 0.5 dB at any step
Meter		Scale : 0~5 Vp-p, 0~5 Vrms, - 10~+ 16 dBm Accuracy : within ± 5 % of full scale

FUNCTIONS OF CONTROLS AND TERMINALS

RANGE — This is a knob to change frequency range. There are 6 ranges of x 10, x 100, x 1 k, x 10 k, x 100 k, and 1 Mc.

FREQ — This is a knob to change frequency continuously. Turn this knob clockwise to increase frequency. Oscillation frequency can be obtained by multiplying the indicated graduation of this dial by the value of the above RANGE knob.

LEVEL — This ia a knob to control output voltage vontinuously. Turn this knob clockwise to increase output.

POWER ON OFF — Power switch.

ATTENUATOR — This is - 10 dB step (= 1/10) attenuator. The maximum attenuation is 60 dB. Hence, output terminal voltage is the sum of the indicated value of output voltmeter and the attenuation quantity. A correct attenuation quantity is obtainable only when output terminals are properly terminated with 75 ohms and 600 ohms respectively.

OUTPUT 600Ω 75Ω — This is a changeover switch, by which to select 75Ω or 600Ω terminal. The available frequency range of 600Ω terminal is 20 c/s～20 kc.

OUTPUT 600Ω — This is 600 ohms output terminal. Output is supplied to this terminal when the above OUTPUT changeover switch is turned to 600 ohms. The indication output voltmeter represents the value of output voltage (RMS and dBm) at the timd when the said attenuator is set at 0 dB.

OUTPUT 75Ω — This is 75 ohms output terminal. Output is supplied to this terminal when the above OUTPUT changeover switch is turned to 75 ohms. The indication of output voltmeter represents the value of output (p-p) at the time when said ATTENUATOR is set at 0 dB.

M A I N T E N A N C E

1. This oscillator is equiped with a ventilation fan, and it is not desirable to place it in a badly-ventilated place. As the fan motor is fitted up with oilless bearings, you are saved from applying oil.

2. When you draw out the chassis for repairing, adjustment and so forth, you must handle carefully, by a panel handle, after removing the screws on the four corners of the panel and two screws on the back side of the case.

3. When oscillation frequency deviates greatly from the dial graduation, you must readjust by loosening the inside variable condenser and the coupling of the dial. When only higher frequency of each range shifts, readjust the trimmer from the bottom of the chassis. When, with more than two ranges, the mutual deviation of frequency is great at point 1 of the dial, you must replace the resistor of bridge circuit.

4. The output voltmeter of this oscillator is connected to the input side of the attenuator, and its indication equals to the voltage across the output terminal when 600 and 75 terminals on the panel are terminated with 600 ohms and 75 ohms respectively. When the error in indication of the voltmeter become very large, readjust the semi-fixed resistor which is connected in parallel to the meter. Adjust, with a screw driver, each semi-fixed resistor for the 600 ohms output and 75 ohms output respectively which is fixed on the leftside (viewed from the front panel) of the chassis.

5. The output attenuator of this oscillator represents the attenuation quantity at the time when each output terminal is connected with proper load.