

MODEL 432A  
RC OSCILLATOR  
OPERATION MANUAL

印刷表紙使用のこと

KIKUSUI ELECTRONICS CORP.

SPECIFICATION of MODEL 432A

Power supply 100V 50/60 c/s approx. 85 VA  
Dimensions (max.) 430 (435) W x 167 (180) H x 350 (390) D mm  
Weight 15 Kg  
Oscillation frequency 6 ranges 10~100c/s 100c/s~1KC 1~10KC  
10~100KC 100KC~1MC 1~10MC  
Frequency accuracy  $\pm (2\% + 1c/s)$   
Frequency stability  $\pm 0.1\%$  to  $\pm 10\%$  fluctuation of the power  
supply voltage  
Output voltage 75 $\Omega$  unbalance 5Vp-p 10c/s ~ 10MC  $\pm 1dB$   
600 $\Omega$  balance 5VRMS 20c/s ~ 20KC  $\pm 1dB$   
Distortion factor 3% at 5Vp-p 75 $\Omega$  terminal 10c/s ~ 10MC  
1% " " " 20c/s ~ 20KC  
1% at 5VRMS 600 $\Omega$  terminal 20c/s ~ 20KC  
Output voltage stability (100KC)  $\pm 0.1dB$  to  $\pm 10\%$  fluctuation  
of the power supply voltage  
Meter Scale 0 ~ 5Vp-p, 0 ~ 5VRMS, -10 ~ + 16dBm  
Accuracy 5% of the full scale (at 1 KC)  
Output attenuator -10dB x 6 Accuracy:  $\pm 0.2dB$  between steps  
 $\pm 0.5dB$  aggregate  
Accessories Type 924-75 terminal 1  
Type 921-600 shunt resistor 1  
Type 941B terminal adapter 1  
Instruction manual & Test data 1 each

## EXPLANATION of PANEL FURNISHINGS

- RANGE** This is a switch for selecting a frequency range out of six ranges such as X10, X100, X1K, X10K, X100K and X1M.
- FREQ** This is a knob for continuously varying the frequency, which is increased when this knob is rotated clockwise. The values on this dial scale multiplied by the numerical figures pointed by the abovementioned RANGE knob indicate the oscillation frequencies.
- LEVEL** This is a knob for continuously varying the output voltage, which is increased when this knob is rotated clockwise.
- POWER** This is a switch for turning the power on and off.
- ON OFF**
- ATTENUATOR** This is an attenuator of -10dB step ( $=1/\sqrt{10}$ ) and attenuates the output voltage up to 60dB maximum. Accordingly, the output terminal voltage becomes that of the indication value of the output voltmeter multiplied by this attenuation quantity. But, when the output terminals are respectively terminated at 75 $\Omega$  and 600 $\Omega$  correctly, the correct attenuation quantities are given thereto.
- OUTPUT** This is a switch for selecting an output terminal, either the 75 $\Omega$  or 600 $\Omega$  terminal. The frequency range the 600 $\Omega$  terminal is applicable to is 20 c/s ~ 20 KC.
- 600 $\Omega$  75 $\Omega$**
- OUTPUT** This is the 600 $\Omega$  output terminal, and the output comes out thereto when the abovementioned OUTPUT selec-
- 600 $\Omega$**

tor switch is turned to  $600\Omega$ . The indication of the output voltmeter shows the output voltage value (RMS and dBm) of the time when the abovementioned ATTENUATOR is set to 0dB.

OUTPUT

$75\Omega$

This is the  $75\Omega$  output terminal, and the output comes out thereto when the abovementioned OUTPUT selector switch is turned to  $75\Omega$ . The indication of the output voltmeter shows the output voltage value (p-p) of the time when the abovementioned ATTENUATOR is set to 0dB.

## PRECAUTIONS for OPERATION

1. When the inside is checked for repairing, adjusting, etc., the top and bottom mesh panel shall be taken off. The front edges of the mesh panels are inserted inside the bent parts of the front panel, and the mesh panels shall be taken off by drawing them backwards after taking off the screws provided thereabout.
2. If the oscillation frequency is remarkably lost in comparison with the dial scale, the bridge circuit in the oscillator circuit shall be readjusted. When error is large at the point of 1 on the dial scale in a specific range, the resistance of the bridge circuit shall be checked. If the error is found only in the high frequencies of each range, the trimmer condenser shall be readjusted.

The trimmer for the three ranges of 10c/s~100c/s, 100~1Kc/s and 1Kc/s~10Kc/s is common. When the oscillation frequency is lost evenly in every range, the internal variable condenser and dial mechanism coupling shall be loosened and readjusted.

3. The output voltmeter of this instrument is connected to the input side of the output attenuator, and the indication value shows the value of the time when the 75 $\Omega$  and 600 $\Omega$  terminal on the panel are respectively terminated at 75 $\Omega$  and 600 $\Omega$  correctly. If a remarkable error is produced in the indication value, the voltmeter sensitivity adjusting semi-fixed resistor shall be readjusted. The sensitivity of the output voltmeter of this instrument is somewhat lowered at or near to the upper-limit and under-limit frequency of this instrument. (approx. 3% at 10c/s and 10Mc/s)

4. Be particularly careful not to touch the internal heat sink of this instrument, since it is provided with DC 200V.