

INSTRUCTION MANUAL

SELECTIVE AMPLIFIER

MODEL 673A

KIKUSUI ELECTRONICS CORPORATION

178.3.11

780684

TABLE OF CONTENTS

	<u>PAGE</u>
1. GENERAL	1
2. SPECIFICATIONS	1
3. EXPLANATION OF PANEL	3
4. MAINTENANCE	4

780685

1. GENERAL

This instrument has an amplifier stabilized with a negative feedback circuit and also has a 1-kHz tuning amplifier. By means of an attenuator (20 dB, 50 dB, and 5 dB ranges) connected in the input circuit, the noise level can be directly read on an output level meter. The instrument is fully transistorized, highly reliable, low noise, and high gain.

2. SPECIFICATIONS

Power requirements: 100 V, 50/60 Hz AC, approx. 1 VA

Dimensions: 220 W × 120 H × 230 D mm

(Maximum dimensions): 222 W × 140 H × 260 D mm

Input terminals: UHF-type receptacle and GND terminal spacing 19 mm. (Matches UHF-type or M-type plug)

Input impedance: 600 Ω , single-ended

Attenuator: Maximum 75 dB attenuation
0, 20 dB
0 ~ 50 dB (5-dB steps)
0 ~ 5 dB (0.5-dB steps)

Attenuator accuracy: ± 0.5 dB or better

Center frequency: 1 kHz

Amplifier gain: Approx. 80 dB (at 1 kHz, CALIBRATED)

Amplifier frequency response

FLAT: 20 Hz ~ 30 kHz (within -3 dB)

SELECT: 1 kHz ± 50 Hz (within -3 dB)
-20 dB or over with 1/2 octave
-40 dB or over with 1 octave

Output level meter: -5 ~ +5 dBm, 0.5-dB scale divisions

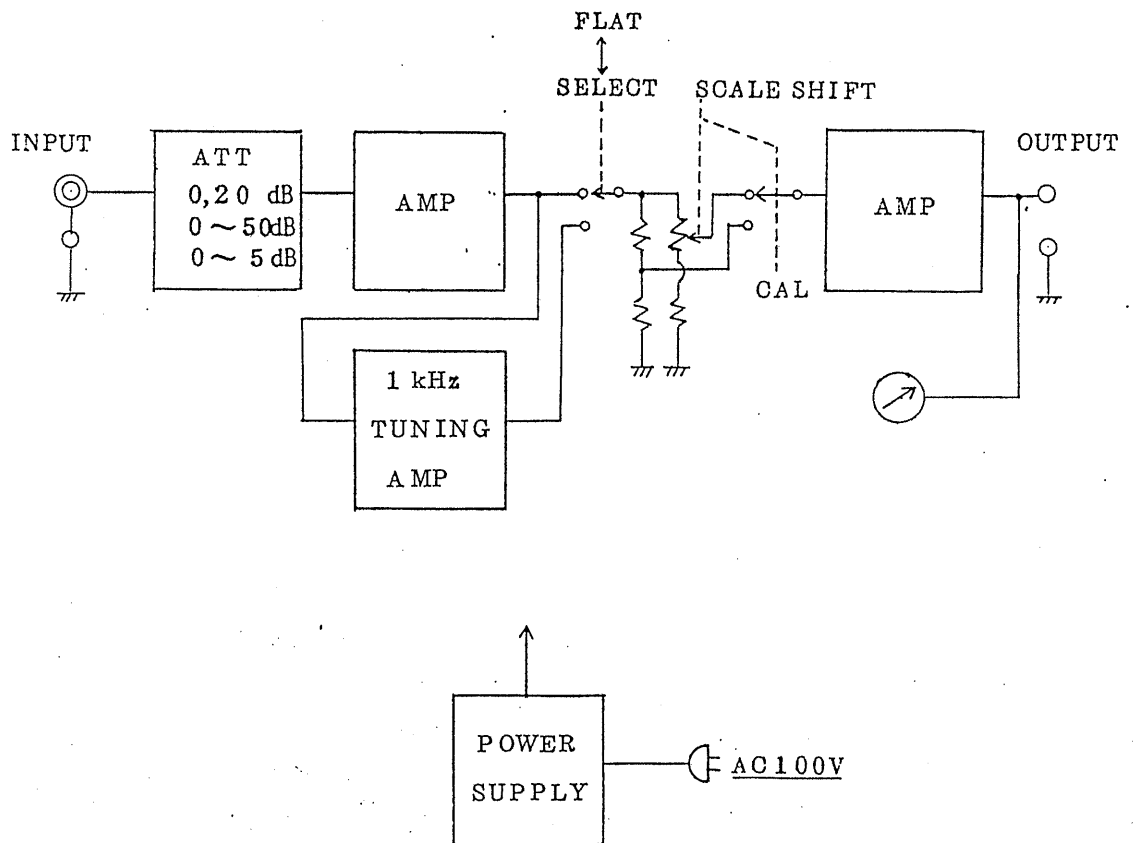
Output level meter sensitivity adjustment range (SCALE SHIFT range):
 ± 3 dB or over

Output voltage: Approx. 2.5 V (at level meter full scale)

Output terminals: Binding posts, spacing 19 mm

Accessories: Type 941B Terminal Adaptor 1
Instruction manual 1

Block diagram



780687

3. EXPLANATION OF PANEL

POWER: AC line power switch. Top position is for ON and the power pilot lamp turns ON.

INPUT: Accepts the input signal. Matches the UHF-type or M-TYPE plug.

GND: Electrically connected to the chassis.

INPUT NOISE LEVEL: 600-ohm T-type attenuator. Maximum 75 dB with 20 dB, 5 dB \times 10, and 0.5 dB \times 10.

FLAT/SELECT: Amplifier characteristics selector switch -- FLAT for flat frequency response and SELECT for 1-kHz selective amplifier. The gains in FLAT state and SELECT state at 1 kHz are the same.

SCALE SHIFT (CALIBRATED): Indicator level adjustment. The meter pointer moves toward "+" as this knob is turned clockwise. The extremely counterclockwise position (CAL position) is the calibrated position for 75 dB at 1 kHz.

OUTPUT: Output terminals for using this instrument as an amplifier. Provide an output voltage of approximately 2.5 V for the meter full scale. Thus, the output voltage level is higher by approximately 5 dB than the value indicated by the level meter.

4. MAINTENANCE

- R18: This potentiometer controls the instrument gain by varying the feedback rate of the former stage amplifier. So adjust this potentiometer that the meter pointer indicates "0" when the INPUT NOISE LEVEL attenuator for each range is set at 0 dB, the SCALE SHIFT knob is set in the CALIBRATED position, and an input signal of 0 dBm (0.775 V), 1 kHz is applied to the INPUT terminal. In this case, set the mode selector switch in the FLAT state.
- R45: This potentiometer varies the input signal of the selective amplifier in order to align the level of the 1kHz signal with the instrument gain when in the SELECT mode. At first, adjust the gain with R18 and, next, change the instrument to the SELECT mode and so adjust R45 that the meter pointer indicates "0". In this case, in order to ensure that the signal has not been shifted from 1 kHz, vary the frequency and check that the meter pointer deflects largest.
- R78: So adjust this potentiometer that the voltage of TP1 (refer to the schematic diagram) becomes +18 V ± 0.5 V as measured with a DC voltmeter.

Notes:

- (1) When replacing an amplifier transistor for troubleshooting, use a low-noise-type transistor.
- (2) Potentiometers R43 and R61 of the 1-kHz selective amplifier circuit are for adjustment of the frequency selective characteristics. To adjust the characteristics, adjust these potentiometers while monitoring the signal of the OUTPUT terminal. The circuitry is designed for very stable operation and these potentiometers require adjustments only very rarely.

780689