

MIC 1160, MIC 1800, MIC 1400 Series

Calibration Procedures

March 4, 1997

Note: Calibration should be attempted only on instruments on which calibration errors have been encountered (See calibration check).

EQUIPMENT REQUIRED:

1. Input source with accuracy better than +/- 0.05% of reading.
 - A. Thermocouple: T/C simulator, K type with compensated leads
 - B. DC: 0 to 50 mV OR
 0 to 10 V OR
 0 to 20 mA
 - C. RTD: Decade resistance box with 3 wire input
2. MIC Series case (1/16 DIN, 1/8 DIN, or 1/4 DIN) wired for appropriate input voltage supply (90 to 264 VAC, 50/60Hz).

PROCEDURE:

1. Before applying power, position the input conditioning jumpers on the CPU circuit board as appropriate for model and input, see Figure 1.
2. Connect the appropriate input from the Input Source. Set the Input Source as follows:

INPUT TYPE	INPUT SOURCE
DC 0-50 mV	50 mVDC
DC 0-10 V	10 VDC
DC 0-20 mA	20 mADC
RTD	200 ohms
T/C	0 deg. C "K"

3. Apply power to the instrument and leave powered for five (5) minutes for RTD and DC inputs or thirty (30) minutes for T/C inputs, then power down.

4. Apply power to the instrument and within 30 seconds of power up, press and hold the "DOWN" and "SCROLL" keys simultaneously for about 5 seconds. The upper display will show "ip_1" and the lower display will show "CAL".
5. Use the "UP/DOWN" keys as needed to change the input type number as required:

CAL INPUT No.	INPUT TYPE
1	DC 0-50 mV
2	DC 0-10 V
3	DC 0-20 mA
4	RTD
5	Thermocouple

Note: If required, only one input type may be calibrated. EXCEPTION: If it is required to calibrate the thermocouple input (Input Type 5), it is necessary to calibrate the DC 0-50 mV (Input Type 1) first.

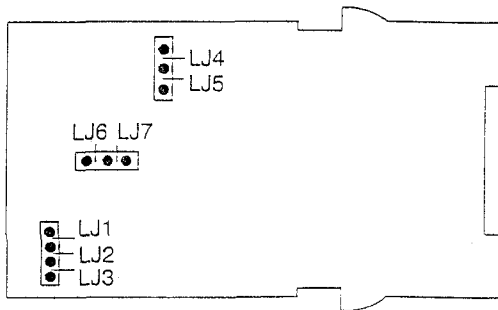
6. Press the "AUTO/MAN" key, the upper display will show "----".
7. After a few seconds, the upper display will show "ip_X", where "X" is the CAL INPUT No., IF the calibration was successful. If the upper display shows "FAIL", the calibration was NOT successful – check the jumper positions, wiring, CAL INPUT No., and try again.
8. To calibrate all inputs, repeat steps 2 through 7 for each of the other input types.
9. The calibration procedure is now complete. Disconnect power, remove input connections.

CALIBRATION CHECK

1. Set the instrument to the required configuration as described in the appropriate Operators manual.
2. Power up the instrument and allow to stabilize for at least 5 minutes (RTD and DC) or 30 minutes for T/C input.
3. After the stabilization period, connect the appropriate input device and check a number of input points.

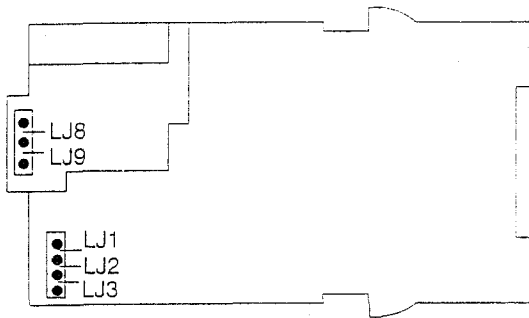
FIGURE 1

CPU Circuit Board with Relay or SSR MIC 1160 (or other 1/16 DIN Models) only



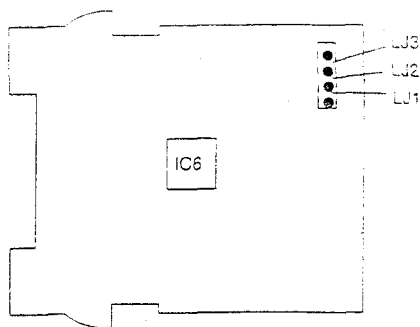
Input Type	LJ1, LJ2, LJ3 Jumper Position
RTD DC (mV)	None Parked
T/C	LJ3
DC (mA)	LJ2
DC (V)	LJ1

CPU Circuit Board with DC Output MIC 1160 (or other 1/16 DIN Controllers) only



Input Type	LJ1, LJ2, LJ3 Jumper Position
RTD DC (mV)	None Parked
T/C	LJ3
DC (mA)	LJ2
DC (V)	LJ1

CPU Circuit Board for 1/8 DIN & 1/4 DIN Units



Input Type	LJ1, LJ2, LJ3 Jumper Position
RTD DC (mV)	None Parked
T/C	LJ3
DC (mA)	LJ2
DC (V)	LJ1