Thermo-Anemometer GVA 0430

The Anemometer GVA 0430 was designed to eliminate using analogue charts that are hard to read and take to calculate.

The Anemometer GVA 0430 was designed to save the technician time and money.

The Anemometer GVA 0430 was designed for checking FPM and CFM in residential, light commercial and standard commercial systems.

The Anemometer GVA 0430 also displays temperature in °F or °C to aid you in your equipment analysis.

Make sure to obtain the „Free Area" on the grilles and registers you are servicing form ghe grille and register manufacturer.

By using the instrument properly you may obtain single readings on residential systems as well multipoint readings on commercial systems which can eliminate the purchase of costly hoods.

Please replace your instrument in the hard case provided to protect it for future use.

To request our complete testing and measurement catalogue write:

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Operation of the Anemometer GVA 0430

A. MEASURING AIR VELOCITY (SINGLE POINT)

Feet Per Minute (FPM)

1. Press the ON/OFF button an turn meter on. Meter will show full display when first powered on.

2. Unit is ready for use when LCD display shows „vel" in upper left corner and temperature in lower right corner (Fig. 1).

3. Hold sensor in front at air source instrument will display feet per minute readings (FPM).

B. CONTINUOUS MOVING AVERAGE

The CFM Master has the ability to display continuous moving average for up to two (2) hours.

1. Power unit ON.

2. Place sensor in front of air flow source.

3. Press MIN/MAX record key and unit will begin to display moving average.

Meter will record the reading every second.

C. MIN/MAX/AVG (SINGLE POINT)

To obtain MIN/MAX/AVG readings on a single point.

1. Power unit ON:

2. Place sensor in front of air flow source.

3. Press MIN/MAX record key.
   A. The unit will begin to record readings.

4. Press HOLD prior to moving instrument away from air flow source to store readings.
   A. Press MIN/MAX key once to display AVG velocity readings.

B. Press MIN/MAX key again to display MIN velocity readings.

C. Press MIN/MAX key again to display MAX velocity readings.

D. Press MIN/MAX key again to display current velocity.

Feet per minute (FPM) reading can be converted to CFM readings. (See section D, steps 2-5)

5. Press ON/OFF RESET to clear the current MIN/MAX average readings.

D. DIRECT MEASURING AIR FLOW (SINGLE POINT) CFM

Air velocity measurement is calculated by multiplying the air velocity readings times the free area dimension. Free area is published by the grill and register manufacturer you are servicing.

Determine the free area of the air source you are measuring and enter into meter.

1. Power unit ON.

2. Press mode select once (you will hear one beep). Meter will display „AREA" in upper case and „1.111" with a flashing digit. (Fig. 2) This is the free area default setting.

3. To increase numbers the flashing digit can be changed by pressing HOLD/ADVANCE key.

4. To change value of other digits press NEXT DIGIT key.

5. Press the Record key to stop the flashing and save the change.

The meter is now ready to measure air flow (CFM).

MIN/MAX AVG CFM Readings

Repeat steps 1-4 in section B to obtain MIN/MAX/AVG CFM readings from single point.

E. AIR VELOCITY AVERAGE FOR MULTI POINTS

1. Turn the meter on and position the fan at the first point to be measured. as soon as the first measurement is completed press the HOLD key, (you will hear a single beep), and release. The display will show a HOLD above the reading (Fig. 3.). The reading is now being held.

2. Press MIN/MAX RECORD key, (You will hear a single beep), and release, (the display will show a digit 1-8). This number represents the point that is being recorded (Fig. 4).

Repeat this process until all desired points have been measured and recorded.

3. Once all measurements have been recorded press NEXT DIGIT/MULTIPOINT AVERAGE key. The until will display the average air velocity reading and number of points measured (Fig. 5).

Unit can recorded a total of 8 points at one time.

To Clear Memory of Current Multi Point Average Readings

Press and hold NEXT DIGIT/MULTIPOINT AVERAGE key until beeps twice, then release. Unit must be in velocity/FPM mode in order to clear current average readings.

F. TO OBTAIN AIR FLOW (CFM) AVERAGE FOR MULTIPOINTS

Simply complete steps 1-3 in D. Once all the multipoint average is determined.
1. Press MODE button once and confirm correct free area setting is locked into instrument. (If free area setting must be adjusted make necessary changes now. See section C Steps 2-4).

2. If free area setting is correct press MODE button again to enter air flow mode.

3. Unit will now display average air flow reading and number or points measured (Fig. 6).

This meter's free area dimension has been set to 1.111 square feet, a most commonly used free area dimension in the U.S.A.. If you want to measure the air flow for a single point without changing the area dimension, please power as the meter, position the fan and then press the MOD key twice, you will be into the air flow (CFM) mode and the air flow (CFM) displayed is equate to the current air velocity reading (FPM x FREE AREA = CFM) times the 1.111 square feet.

We would suggest to set the free area dimension before you start measuring the air velocity so after you measure the air velocity, you can jump to the air flow mode... the cubic feet per minute without further changing the free area dimension.

G. NON SLEEP MODE

To bypass auto power off: for continuous operation press ON and HOLD at the same time and then release ON only. An „n" appears on the LCD then you can release the HOLD key. The instrument will remain on until the OFF button is pressed.

H. HOW TO CHANGE THE DEFAULT SETTING/IMPERIAL TO METRIC

1. The default setting for the measuring unit of air velocity is feet/min and the default setting for the unit of temperature is °F. You can change the measuring units to meter/sec and °C by following steps.

2. Turn on the meter by pressing ON and AVERAGE key at the same time. Release ON first then Average. The LCD display will show small printing of „ft/m" on the right upper corner and a „F" on the right lower corner.

   B. Press HOLD key to change the measuring units to metric system and you can press AVERAGE dye for imperial measuring units.

   C. Press RECORD key to save the unit changes.

I. SETTING THE RS232 OUTPUT

1. After you save the unit changes you will see a „S" on the LCD and then a „2400" number on the screen. The 2400 is the default setting of Baud Rate for RS 232 output. You can change the setting to „1200" by pressing HOLD key and change the setting back to „2400" b pressing the AVERAGE key.

2. Please remember to save you changes by pressing the RECORD key. Then the LCD screen will be under the air velocity measuring mode.

J. AUTO POWER OFF

The unit will turn off automatically after 20 minutes to save the battery. This will be proceeded by 3 beeps. Press the ON button the unit will resume operation.

TROUBLESHOOTING

LOW BATTERY

Indicates low battery. Please change your 9 volt battery.

E6

Indicates the probe is disconnected form the instrument body or not connected properly.

PRODUCT SPECIFICATIONS OF Anemometer GVA 0430

RANGES	RESOLUTION	ACCURACY
AIRFLOW		
80-4900 ft/min	1	± 2 %
0.4-30 m/sec	0.01	± 2 %
TEMPERATURE		
- 10 °C to 50 °C	0.1	±0.6 °C
+ 14 °F to 122 °F	0.1	±1.0 °F

BATTERY TYPE: 9 volt

BATTERY LIFE: 100 hours (under normal usage)

DISPLAY TYPE: LCD

DISPLAY SIZE: 37 mm x 42 mm (1 1/4" x 1 5/6")

MAX READING: 9999

DIMENSIONS: 181 mm x 71 mm x 38 mm (7 1/8" L x 2 3/4" W x 1 3/8" D)

DIAMETER OF FAN: 70 mm (2 7/8")

RS232 OUTPUT: FORMAT: TXXX XF, VXXXXFTM
                               TXXX XC, VXXXXMPS

CFM AND CMS READ-OUT

AUTO POWER OFF: 20 minutes (bypass see section G)

DATA HOLD