

# Multi-Channel Anemometers



**KANOMAX**  
The Ultimate Measurements

## Application Note

### Powerful and Efficient Data Gathering for Research and Design Applications

#### Kanomax Multi-channel Anemometers

Kanomax offers 4 instruments for multi-channel measurements. Model 1570 is a fixed 4-channel anemometer; while models 1550 and 1560 are modular systems. Our airflow transducer model 6332/D can also be used to gather simultaneous measurements at multiple fixed points and send the results to a datalogger via analog output for analysis.

Deciding which product is right for your application is relatively easy.



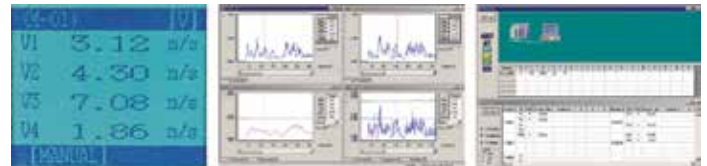
Models 1550 and 1560

#### Multi-Channel Anemometer Models 1550 & 1560

Models 1550 and 1560 are the most advanced multi-channel anemometers offered by Kanomax. These systems are capable of measuring many channels simultaneously and are capable of measuring temperature and relative humidity as well as airflow.

These systems offer many more channels and flexibility, but are slightly more complicated to configure. In addition to the main unit, probes and cables you will also need to buy the correct modules to be installed in the system to accommodate the probes you'll be using. If you need analog output you'll also need to buy a separate module for that as well.

Each module takes up one slot in the main unit. The main difference between the 1550 and 1560 is how many slots are available for modules. The 1560 holds 6 while the larger 1550 can hold up to 16.



1560 Display

Kanomax Multi-channel Anemometer Software

These units can be connected to a PC and then data can be viewed and saved via the optional PC software, or data can be sent to any device capable of receiving analog output with the optional D/A Module. Note that 1 D/A card is needed per module so if you have 2 modules with 4 channels of air velocity each you will need 2 separate D/A modules if you wish to send data from all 8 channels.

The units can also be cascaded in a daisy chain configuration if more channels are needed for a particular application.

**Configuration of a 1550 or 1560**

The modules are installed in the base unit similar to expansion cards in a PC. Probes are then connected to the modules via cable and the whole unit is then connected to a PC or data logger.

3 types of probes available:

- Air Velocity
- Air Velocity / Temperature
- Air Velocity / Temperature / Humidity

4 types of modules available:

- Air Velocity
- Air Velocity / Temperature
- Air Velocity / Temperature / Humidity
- Analog Output

Cables are available in lengths of 2 to 30 meters

### 4-Channel Anemomaster Model 1570

Model 1570 is good for small applications where you'll be measuring the airflow at 4 simultaneous points or less. The unit can accept a variety of air velocity probes and cable lengths giving you some flexibility for your application. The unit comes standard with an analog output that can be connected to a data logger, alarm or controller.

There are a few limitations to keep in mind when using this unit; like the 6332, the 1570 cannot measure temperature and humidity and the probes must remain connected to the main unit which while relatively small and portable needs to be powered by the included AC adapter to function. You can also only view a single channel at a time on the LCD display, although you can scroll through the channels to view each in turn. If you're using the instrument in tandem with the software you can view all 4 channels simultaneously in real-time on your PC.

When you order this product you will need the base unit, between 1 to 4 probes, and 1 cable for each probe you order. The probes do not have to be the same type and the cables can also be of varying lengths to suit your needs (standard cables range from 2 to 30 meters).



Models 6332D and 1570

### Airflow Transducer Models 6332 & 6332D

The airflow transducer model 6332/D is designed for fixed installation. You need one transducer, one probe and one probe cable (available in 2 to 30 meter lengths) per location. The units can be wired with local electric for power and can be connected to any device that can accept analog output. As each transducer is a separate instrument they're a good choice if you need to simultaneously measure airflow at multiple fixed points that may not be in proximity to the other point(s). The relatively low cost of this solution makes it a good choice for facility management and integration into existing systems, but you do need some technical know-how to install the units and integrate them with your other equipment such as dataloggers, alarms or controllers.



### Air Velocity Probes

One of the key features of this product line is the flexible selection of Kanomax research grade air velocity probes. Nearly a dozen different options are available in varying shapes, sizes and measurement capability. Coupled with the modular nature of the main units this allows you a great deal of flexibility in selecting an end product that is the perfect fit for your needs.

Probes are available in a variety of sizes, shapes and velocity ranges to suit your needs. Any of the units mentioned in this article is capable of using any of the air velocity probes available, but only the 1550 and 1560 can utilize the probes that incorporate temperature and relative humidity.



### Applications for Industrial Users

Multi-channel Anemometers are a flexible tool for gathering large amounts of data accurately and efficiently. They are particularly useful in the automotive, transportation and architectural industries, but can also be used for thermal testing of semiconductor boards.

The applications are diverse and interesting enough that it's challenging to cover them in a small article, but a few examples include:

- Aerodynamic testing for many vehicles including planes, cars and trains
- Automotive: engine in-take, exhaust, defroster, cabin comfort
- Thermal properties of semiconductor boards in PCs and other electronics
- Civil Engineering: wind tunnel testing of scale models and sympathetic vibration testing for tall buildings



No matter what your airflow application needs are Kanomax has a solution that will fit your needs and budget. In addition to the multi-channel instruments discussed here we also carry a high temperature anemometer capable of measuring airflow in environments up to 500°C, handheld hot-wire and vane type anemometers and an airflow capture hood designed to make testing and balancing applications easy.

If you have a question about our products, need technical support or want help finding the right instrument for your application give us a call or send us an email and we'll be glad to help you out.

### About Kanomax USA, Inc.

Kanomax has delivered the best measurement solutions in its products and services that adapt precision measurement technology for fluids and particles. Kanomax product lines include anemometers, particle counters, dust monitors, and IAQ monitors. Kanomax is contributing to technological innovation and quality improvement for the processes of quality management, environment management, and technology development in the areas of environment, health, and energy, which are essential to sustain human well-being, as well as in other industrial areas including automobile, aerospace, semiconductor, electronics manufacture, heavy industry, steel, shipbuilding, pharmaceutical, biotechnology, food-processing, medical, construction, and civil engineering.



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