

DeltaTRAK[®]

Your Total Quality Partner



DeltaTRAK, Inc. / P.O. Box 398 / Pleasanton, CA 94566 USA / (925) 249-2250 / (800) 962-6776 / FAX (925) 249-2251

Internet Web Site: <http://www.deltatrak.com> Email Address: salesinfo@deltatrak.com

10200 03G1

In-Transit Recorders

DeltaTRAK's In-Transit Recorders (TTM) are highly reliable, cost-effective time and temperature recording instruments. They are single use devices which provide permanent documentation of the environmental conditions encountered during the storage and transportation of temperature-sensitive commodities in refrigerated trucks, rail cars, ocean and air freight containers. These permanent records serve as corroborating evidence in supporting insurance claims, for quality assurance documentation and protection of your valuable products.

IN-TRANSIT TEMPERATURE RECORDERS

Various **In-Transit Temperature Recorder** models 1600-16562 are available, from **5-Day to 90-Day** transit periods, depending on the length and mode of transportation. There are three temperature ranges available: **Low Range Model** 40°F~80°F (-40°C~26°C), **Standard Model** -20°F~100°F (-28°C~38°C), and **High Range Model** 30°F~150°F (0°C~65°C). They provide maximum accuracy and generate a permanent record of transit conditions on a 36 inch strip chart. A view port allows users to visually confirm activation, after the start-up TAB has been pulled. (PATENT NO. 4,990,940)



IN-TRANSIT FLASHLINK® DATA LOGGER

The shock and water resistant **In-Transit FlashLink® Data Logger** are single-use electronic loggers available in two temperature ranges and logging periods from 5 to 75 days, depending on model. **Model 20011 thru 20014** are from -40°~150°F (-40°~65°C) and the low range models (**20041 thru 20043**) go as low as -112°F (-80°C) for dry ice and other low temperature applications. Accuracy is $\pm 1^\circ\text{F}$ ($\pm .5^\circ\text{C}$).

This compact data logger holds 3800 data points in memory (time,

date, and temperature). A manual

start button allows the user to easily activate the unit prior to shipment. A green LED confirms start-up and a red LED can be custom programmed to flash when an alarm condition occurs. (PATENT NO. 6,088,514)

The patented **Shadow Log™** on all **In-Transit FlashLink®** is a fail-safe feature against human error. Even if the shipper forgets to start the unit, the trip data is recorded in "shadow mode," and can be downloaded.

Data from the **In-Transit FlashLink® Data Logger** can be downloaded to a PC in 5 seconds using the **In-Transit FlashLink® Software** which is available free from our website. The downloaded data can be viewed in tabular or graph format, analyzed and emailed directly from the Program Manager.

The new **Database Manager Software** is a query program to find and sort through any number of data files by keywords or file names.

This program is a must to analyze and group multiple files with specific criteria.

The compact printer **Model 20103** allows direct download and printing of the data in a graph format without the need of a PC. Based on customer needs, we can also customize the printer to search and calculate specific criteria, such as degree minutes, from the logged data to trigger any corrective action *immediately* upon receipt of a shipment. A standard operating procedure (SOP) can be established based on the information produced by the printer.



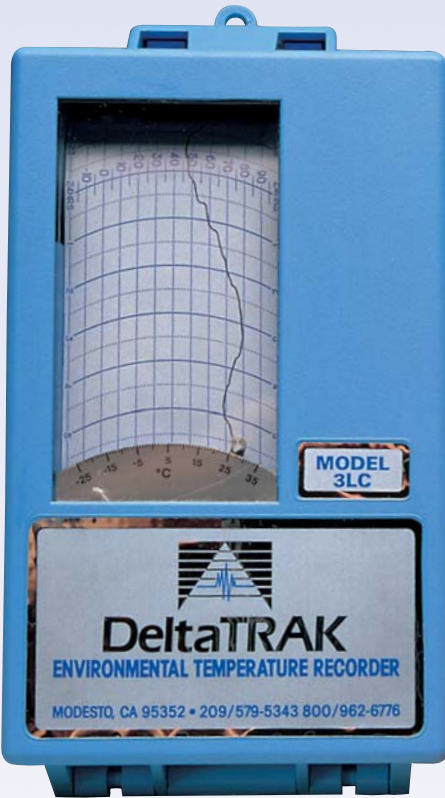
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10201A 03G1

Strip Chart Recorders

ENVIRONMENTAL TEMPERATURE RECORDER



The **Environmental Temperature Recorder Models 18002 through 18010**, are battery operated, analog temperature monitoring and recording instruments. They are compact, reusable and produce a continuous strip chart recording of environmental conditions. The completed chart is easily removed and replaced with a new chart in just seconds.

The **DeltaTRAK® Environmental Temperature Recorder** features a window which provides continuous visible access to the current and recorded temperature data. The unit is designed so it can hang from a chain or be attached to any surface with the wall mounting bracket and screws provided.

These convenient recorders are available in **3-Day, 10-Day, 31-Day or 62-Day models**, and in two temperature ranges: **-20°F~100°F (-28°C~38°C)** and **32°F~150°F (0°C~65°C)**.

The **Environmental Temperature Recorder** will provide you with valuable information for preventive maintenance, quality assurance and HVAC/R functional validation of environmental status to ensure maximum efficiency at all times.

HVAC/R DISPOSABLE TEMPERATURE RECORDER

This single-use instrument is a low-cost alternative to traditional chart recorders for use in places where expensive units may be damaged or stolen, or when multiple recorders are needed at the same time. Ideal for spot checking and trouble shooting for equipment & facility maintenance, and other heating, ventilation, air-conditioning and refrigeration applications.

Available in **5-Day and 10-Day** models, with a temperature range of **-20°F~100°F (-28°C~38°C)**, factory calibrated with a 36 inch pressure sensitive chart loaded and ready to use. Simple start-up instructions are printed on every recorder, a view port allows the user to visually confirm activation.



New See-Thru Window to view recorded temperature at any time!

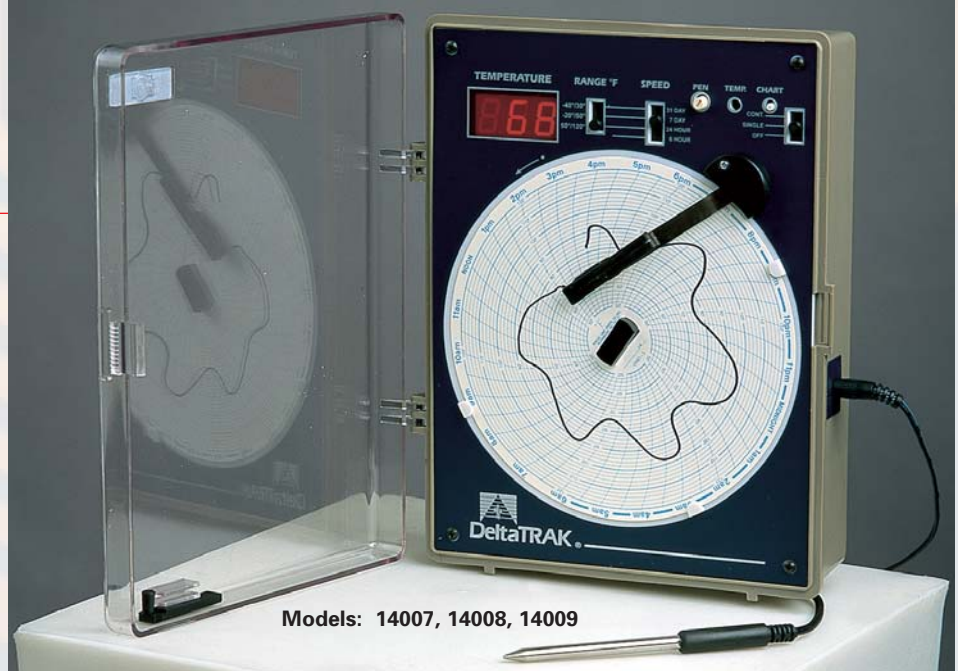
Circular Chart Recorders

ELECTRONIC CIRCULAR CHART TEMPERATURE RECORDER

DeltaTRAK's Electronic Circular Chart Recorder Models 14007 through 14009 now have four chart speeds to choose from! The user friendly control panel features 2 selector switches: one for chart speed, the other for temperature range. Switch from 6 hour, 24 hour, 7 day and 31 day chart speeds, and from three temperature ranges: -40°F~30°F (-40°C~0°C), -20°F~50°F (-30°C~10°C), and 50°F~120°F (10°C~50°C) for frozen, chill and ambient environments.

The external stainless steel probe allows you to measure temperature of air, gas, liquids, and semi-solids. It has a quartz clock time movement, motorized chart advance and temperature accuracy of $\pm 2^{\circ}\text{F}$ ($\pm 1^{\circ}\text{C}$). The recorder comes in $^{\circ}\text{C}$ or $^{\circ}\text{F}$ models, and runs on 120v or 220v AC, 50/60 Hz. A rear compartment houses a holder for 8 size AA alkaline batteries, which will provide 48 hours of continuous recording in the event of a power failure.

Current temperature is easily read on a large LED display, while a permanent record is traced on paper charts. Both charts and pens are easily replaced in a matter of seconds.



Models: 14007, 14008, 14009



Models: 14001, 14002, 14003, 14004, 14005, 14006

TEMPERATURE-HUMIDITY CIRCULAR CHART RECORDER

This recorder provides simultaneous monitoring of both temperature and relative humidity, with three different chart speed models available: 24 hours, 8 days and 32 days. Each model is available in either $^{\circ}\text{F}$ or $^{\circ}\text{C}$ scale. The recording range is $14^{\circ}\text{F} \sim 104^{\circ}\text{F}$ ($-10^{\circ}\text{C} \sim 40^{\circ}\text{C}$), and $0\% \sim 100\% \text{ RH}$.

A red pen tracks temperature and a blue pen tracks humidity measurements, permanently recording them on a 6.6 inch (165mm) diameter paper chart. The unit runs on a single AA alkaline battery for approximately 1 year of continuous use. A keyhole slot is on the back of the unit for wall mounting, or the recorder can stand free on a flat surface.

Applications vary from refrigerated storage facilities, office and manufacturing environments, to greenhouses and live animal production facilities.



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10202A 03G1

Temperature/Humidity Instruments

CDX-CENTRAL DATA REPORTING SYSTEM

The **DeltaTRAK® CDX Central Data Reporting System Model 22000** is a ten channel monitoring, recording, and alarm system. It provides continuous display of current temperature and humidity data on its LCD screen while recording the information in memory. Either temperature or humidity sensors can be used on any channel to meet the user's requirements.

The **CDX** is very simple to operate. The unit is designed to be fully programmable, using only the buttons on its instrument keypad. The internal microprocessor has program features such as access security code, upper and lower alarm limits, date, time, company identification, scale, recording intervals, and alarm response delay time. The recorded information can be downloaded directly to a printer, PC or laptop computer, or to an interface memory device through the serial and parallel ports. Alarm outputs may be used to activate a bell, light, pager system or automatic telephone dialer, to notify out of range conditions. The **CDX** operates on 12VDC power (A/C adapter included) and has a 7-day battery back-up in case of power failure. The unit will date and time stamp the alarm events that occur for each channel. Sensor readings are recorded at user selected intervals.

The **CDX** is ideal for documenting compliance with quality assurance procedures associated with **HACCP** and other government regulations. It can be used for monitoring multiple locations in cold storage facilities, greenhouses, smokehouse and food processing operations, in refrigerated display cases,



Model 22000

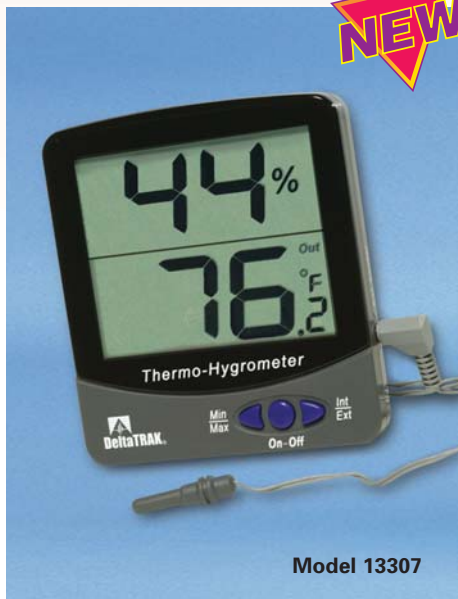
supermarkets, livestock production facilities, clean rooms and for pharmaceutical process room validations. It has been approved by the USDA for use in cold treatment of produce.

NEW

DIGITAL THERMO-HYGROMETERS

The **DeltaTRAK® Digital Thermo-Hygrometers** are available in a pocket **Pen-Type Model 13306**, and a **Jumbo Display Model 13307**. These instruments are valuable preventive maintenance and quality assurance tools for checking temperature and relative humidity readings in greenhouses, broiler houses, hatcheries, clean rooms, drying rooms, and for HVAC/R applications, to name a few. They feature an LCD display, °F/°C switch and minimum/maximum memory buttons.

NEW



Model 13307



Model 13306

The temperature range for the **model 11036** is 14°F - 122°F (-10°C~50°C) The internal sensor temperature range on the **model 13307** is 32°F - 122°F (0°C~50°C), and the external sensor range is -58°F - 158°F (-50°C~70°C). Both models have a relative humidity range of 10% to 90%.

Electronic Data Loggers

ELECTRONIC MULTIFUNCTION DATA LOGGERS

The **DeltaTRAK[®] Electronic Data Logger** is a portable, pocket sized electronic device powered by a 10-year lithium battery. It is designed for easy and reliable tracking of parameters such as temperature, relative humidity, electric current, pressure, process signals, and pulse signals. All **Data Loggers** have a built-in temperature sensor plus single or multiple external channels where different sensors can be attached for remote monitoring of a variety of parameters. The **DeltaTRAK[®] Data Loggers** interface with a PC and have an internal memory for up to 32,000 readings. Each data point is automatically time and date stamped as it is recorded. Sampling intervals are set by the operator via a user-friendly Windows program on the PC. Recorded data is downloaded and graphed or exported in ASCII format to a spreadsheet for numerical print outs.

Aside from a built-in temperature sensor, each model's additional capabilities are as follows: The **20500** has one channel for remote temperature monitoring, while the **20508** has seven external temperature channels. The **20501** has an on-board RH sensor and two external channels for temperature, relative humidity or resistance. The **20502** has three external channels for electrical current probes. The **20503** has two channels for pulse signals and dry switch contact closures. The **20504** has an optional on-board RH sensor and three channels for pressure, temperature or a combination RH/temperature sensor. The **20506** has six channels for types J, K, S or T



Model 20508

thermocouples. The **20507** has seven channels for analog voltage and current loop signals via commercially available transducers.

Use of the **IC-200 Multi Logger Interface Cable** lets your PC communicate with up to 8 remote Data Loggers simultaneously via telephone line and modem. Whether inside the same building or on the other side of the world, the **IC-200** allows you to set-up, analyze and retrieve information remotely!

Recognized for its accuracy and reliability, **Data Logger** information can be used to provide documentation to regulatory agencies, in research and development, for validating process control criteria, for equipment qualification and as evidence in claim settlement disputes. Enhance your operation's quality standards with the **DeltaTRAK[®] Data Logger**.

EBI HIGH RANGE DATA LOGGER

The high temperature range **DeltaTRAK[®] EBI** is a compact, water-proof, stainless steel encased data logger measuring only 28mm thick and 48mm in diameter. The instrument housing can withstand temperatures of 257°F (125°C), ideal for steam and high temperature applications. It can also be packaged together with products (e.g. food) to record processing temperature conditions. The **EBI Model 20600** is available with

an internal sensor and **Model 20601** has an external temperature probe which measures up to 302°F (150°C).

When sampling is complete, collected data is downloaded to a PC and can be viewed in either numeric or graphic format with a variety of reporting options. The logger is cleared after data is stored on disk, and then the unit can be reprogrammed as needed.



Model 20600



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10203A 03G1

FlashLink® Data Loggers

FLASHLINK® AND FLASHLINK PRO DATA LOGGERS



Model 20201

Model 20269

DeltaTRAK® FlashLink and FlashLink Pro are re-usable credit card sized electronic data loggers. **Model 20201** has a single internal temperature sensor; **Model 20209** has a single external sharp tip probe; **Model 20203** is equipped with both a temperature & humidity sensor; **Model 20202** comes with an internal sensor and an external probe on a 3-ft (1 meter) wire, while **Model 20204** has two external probes.

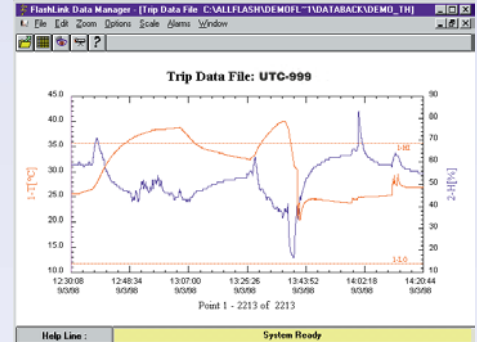
Model 20205 with 6-ft (2 meter) teflon wire and stainless steel external probe is a low temperature model that records as low as -112°F (-80°C).

As an extension of the line of FlashLink data loggers, the new **Pro series** offers twice the memory capacity and an LCD screen for viewing current temperature. **Model 20261** has a single internal temperature sensor; **Model 20268** comes with a 6-ft (2 meter) Teflon wire and external 1 inch blunt temperature probe; **Model 20269** has a 10-ft (3 meter) Teflon wire and an external 8 inch L-shaped tapered tip temperature probe.

Standard internal temperature sensor range is -40°F~150°F (-40°C~66°C), and External temperature sensor range is from -40°F~302°F (-40°C~150°C), with accuracy of ±1.0°F (±0.5°C) and 0.1°F/°C resolution. Relative humidity range is 20%~90%, with an accuracy of ±5% or better.

The **FlashLink® Program Manager Software** is very user friendly compatible with Windows 3.1, 95, 98 and NT operating systems. Programmable features include logging intervals from 3 seconds to 24 hours, high and low alarm settings, adjustable alarm delays, and delayed start from 0 seconds to 256 days.

The **Database Manager Software** finds and sorts through any number of data files by keywords or filenames. It can analyze and group multiple files with specific criteria.



Recorded information includes date, time, temperature and humidity data. **FlashLink's** patented design downloads 3,800 data points within 5 seconds, without the need for interface cables, by plugging directly into your parallel port. Data can be listed, graphed, imported to a spreadsheet, or can be sent anywhere by E-mail.

The **FlashLink® Data Loggers** are housed in a shock-resistant, water-resistant case. A green LED indicator flashes when the logger is active, and a red LED indicator flashes to alert you to out of range conditions.

(PATENT NO. 6,088,514)

Seq #	Date	Time	T-TC	RH%
0	Sep 03 98	12:30:08	25.7	59
1	Sep 03 98	12:30:11	25.7	59
2	Sep 03 98	12:30:14	25.7	59
3	Sep 03 98	12:30:17	25.7	59
4	Sep 03 98	12:30:20	25.7	59
5	Sep 03 98	12:30:23	25.7	59
6	Sep 03 98	12:30:26	25.7	59
7	Sep 03 98	12:30:29	25.7	59
8	Sep 03 98	12:30:32	25.7	59
9	Sep 03 98	12:30:35	25.7	59
10	Sep 03 98	12:30:38	25.7	59
11	Sep 03 98	12:30:41	25.7	59
12	Sep 03 98	12:30:44	25.7	59
13	Sep 03 98	12:30:47	25.7	59

Seq #	Date	Time	T-TC	RH%
0	Sep 03 98	12:30:08	25.7	59
1	Sep 03 98	12:30:11	25.7	59
2	Sep 03 98	12:30:14	25.7	59
3	Sep 03 98	12:30:17	25.7	59
4	Sep 03 98	12:30:20	25.7	59
5	Sep 03 98	12:30:23	25.7	59
6	Sep 03 98	12:30:26	25.7	59
7	Sep 03 98	12:30:29	25.7	59
8	Sep 03 98	12:30:32	25.7	59
9	Sep 03 98	12:30:35	25.7	59
10	Sep 03 98	12:30:38	25.7	59
11	Sep 03 98	12:30:41	25.7	59
12	Sep 03 98	12:30:44	25.7	59
13	Sep 03 98	12:30:47	25.7	59

Infrared Non-Contact Thermometers

INFRARED NON-CONTACT THERMOMETERS

ThermoTrace Model 15030 (with laser guide) is a very compact and affordable unit (soft case optional). It has a field of view of 8:1, temperature range of -40°~590°F (-40°~310°C), and is an ideal screening tool for foodservice use and all industrial applications.

NEW



Model 15030

ThermoTrace Mini, Model 15031 is a handy, portable unit that is less than 3 inches (71mm) long. It is very accurate when held near to a surface. The temperature range is -8°F~230°F (-22°C~110°C), and it automatically displays time when not reading temperature.

NEW



Model 15031



Model 15005

Model 15006

Infrared technology makes difficult temperature measurements easy, giving virtually instantaneous readings with speed and accuracy. Safely measure extremely hot surfaces, moving objects, odd shapes, take measurements from a distance, and eliminate threat of contamination of food products or sterile mediums in biological or clean room applications. The ideal tool for quality assurance inspection, equipment and facility maintenance. Our **Model 15005** has an amazingly focused 33:1 field of view, for very accurate temperature readings when measuring from great distances. The coaxial laser beam points to the very center of the field of view, allowing the user to aim with high accuracy for small or up-close targets. It's temperature range is -4°F~752°F (-20°C~400°C), with selectable emissivity of .95 and .70. **ThermoTrace Waterproof Model 15006** (with laser guide) is the world's first waterproof infrared thermometer (IP67 compliant). It can be washed and sanitized, especially

useful for applications in the food industry. It also includes alarm settings and a memory function that holds up to 99 points of temperature data. It features a 15:1 field of view.

The high-visibility yellow utility case, **Model 15101**, fits the **ThermoTrace 15005** or **15006**, to keep it clean and protected, and to clip it onto your belt. Fold back the Velcro flap on the front end, and you can take temperatures with it inside the case. A clear window displays the LCD while making the measure button accessible. **Model 15102** (not shown) is a black faux leather storage case, also with a belt clip, that fits the **Thermotrace 1505** or **15006**. **Model 15108** (not shown) is a black utility case for the **ThermoTrace 15030**.



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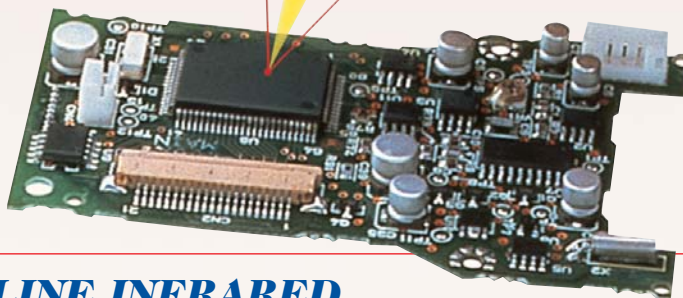
Specialized Infrared Thermometers

CLOSE-FOCUS INFRARED THERMOMETER

The **ThermoHunter Model 15019** is a pen-type infrared thermometer that measures an extremely small 2.5mm spot. An LED marker with an audible focusing guide beeps when optimum focus has been reached, for the most accurate measurements.

It has a temperature range of 32°F~392°F (0°C~200°C), 0.1° resolution, and a 0.8 second response time. Applications range from microelectronics, printed circuit boards, electrical panels, to biotech and clinical applications. It is an ideal tool for non-contact surface temperature measurement in sterile or clean room environments, and when measuring extremely small areas.

Model 15019



ON-LINE INFRARED THERMOMETER

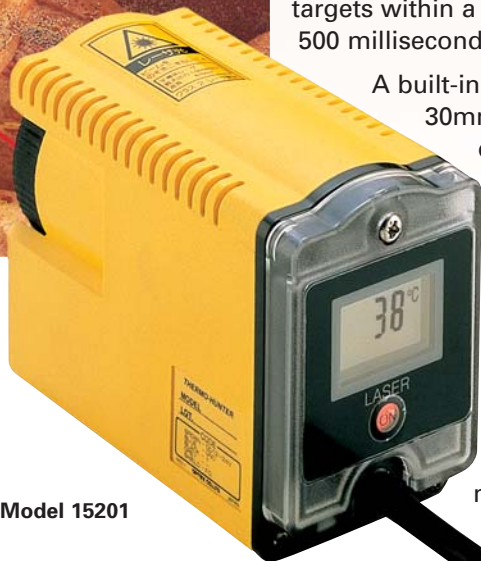
The **BA Series** of infrared thermometers **Models 15201 thru 15204** are engineered specifically for use on the production line to measure moving objects quickly and accurately from a safe distance. They measure targets within a temperature range of 32°F~932°F (0°C~500°C) with a 500 millisecond response, at a $\pm 1\%$ level of precision.

A built-in coaxial laser marker easily targets objects, with a 30mm diameter field of view. It has a 1° resolution on its digital display, and a 0.2° output resolution. Temperature scale is °F/°C switchable.

One of its most unique features is the **E-TEACH** function for automatic adjustment of the emissivity ratio. The **BA Series** thermometers have two choices of analog output: TV-type (1mV/°C) which connects to such devices as a panel meter, or TA-type (4-20mA), for long distance transmissions. An optional air purge collar adapts this unit to dusty environments.

Applications range from the manufacturing of food, metal, glass, ceramics, rubber, synthetic resin, to medical, petro-chemical, automotive, electrical and industrial uses.

Model 15201



Digital Probe Thermometers

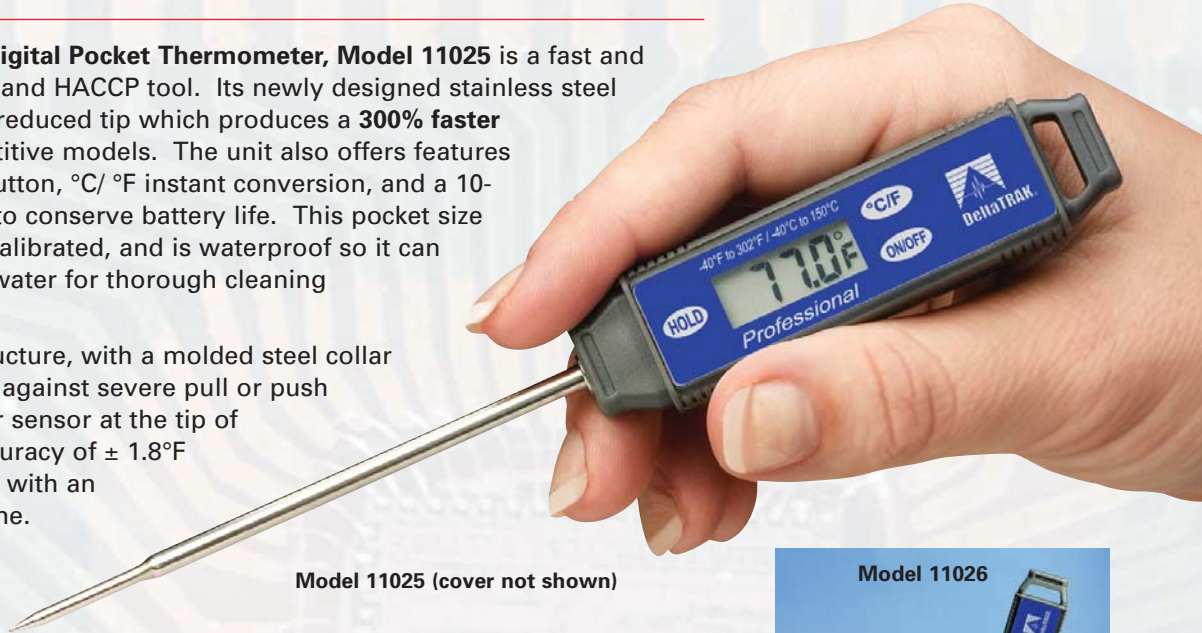
FLASH CHECK® DIGITAL POCKET PROBE THERMOMETERS

DeltaTRAK's Flash Check Digital Pocket Thermometer, Model 11025 is a fast and accurate quality assurance and HACCP tool. Its newly designed stainless steel probe has a .095" (24mm) reduced tip which produces a **300% faster** response time than competitive models. The unit also offers features such as a display "hold" button, °C/°F instant conversion, and a 10-minute automatic shut-off to conserve battery life. This pocket size thermometer can be field calibrated, and is waterproof so it can be washed with soap and water for thorough cleaning and sanitization.

A rugged ABS unibody structure, with a molded steel collar probe construction, braces against severe pull or push flex actions. The thermistor sensor at the tip of the probes provides an accuracy of $\pm 1.8^{\circ}\text{F}$ (1°C) over the entire range, with an extremely fast response time. Flash Check has an operating range of -40°F to 302°F (-40°C to 150°C) with $.1^{\circ}$ resolution.

Use Flash Check digital pocket thermometer for spot-checking product temperatures for QC inspections, and validation of processing conditions. Flash Check satisfies regulatory compliance with the FDA, and US Public Health Services Food Code section 4-203-11.

Model 11026 Veterinary & Laboratory Thermometer is available with the same design features except it has a round tipped probe. This instrument is ideal for scientific, veterinary and laboratory use, and as an alarm check thermometer for blood bank use.
(PATENT NO. 5,709,476)



Model 11025 (cover not shown)



Model 11026

INDUSTRIAL THERMOMETER

The **Model 11024** has similar features as Models 11025, but was engineered especially for **HVAC, refrigeration** and other **industrial applications**. The patented magnetized probe cover design for attaching to a register in the ceiling allows hands free measurement of air temperature. A Velcro strip is supplied with the unit, to wrap and secure the probe tip against a refrigerant line, ideal for superheat calculation. Its high-visibility yellow case makes it easier to spot, reducing the chance of leaving it at a job site. A tethering hole also minimizes losses.



Model 11024



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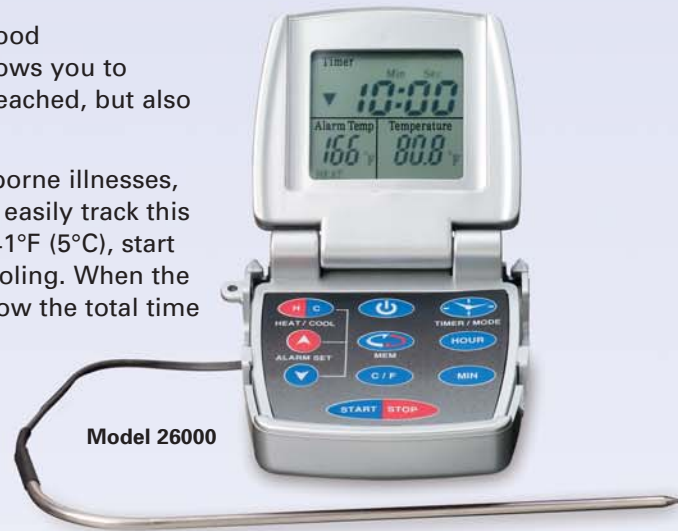
Digital Thermometers

HEAT/COOL COOKING THERMOMETER

The Heat/Cool Cooking Thermometer model # 26000 is the first ever food safety tool which helps you achieve culinary perfection. It not only allows you to program an alarm when the desired internal cooking temperature is reached, but also tracks the cooling rate of foods.

Improper cooling of cooked food is the most common cause for foodborne illnesses, and **DeltaTRAK's** Heat/Cool Thermometer is the first thermometer to easily track this cooling rate. After the food is cooked, set your alarm temperature to 41°F (5°C), start the timer and follow your SOP (standard operating procedures) for cooling. When the food cools down to 41°F (5°C), the timer will automatically stop to show the total time it took to cool to the safe temperature.

Without ever opening the oven door, you can also use the Heat/Cool thermometer to see the core temperature while your food is cooking, reducing the risk of undercooking, another cause for a foodborne illness. **DeltaTRAK's** multi-use Heat/Cool thermometer is a simple, low-cost, and a very effective food safety tool for the commercial kitchen.



Model 26000

NEW MIN/MAX ALARM DIGITAL THERMOMETER



Model 12207

For a spot check or a permanent installation, the **Model 12207 Min/Max Alarm, Dual Sensor Digital Thermometer** is an economical and convenient QA tool. Use it to check the performance of freezers, refrigerators, display cases, water tanks, etc.; or for liquids, food and any temperature sensitive products. Its onboard internal sensor shows ambient air temperature, while the fast response stainless steel external sensor attached to a 10-ft (3 meter) cord shows the temperature to which it is exposed.

MIN/MAX WATERPROOF LOLLIPOP THERMOMETER



Model 11036

DeltaTRAK introduces the new **Waterproof Lollipop Probe Thermometer** with minimum and maximum memory capability. It can be used where steam or condensation is a problem, or it can be completely submerged into water. The **Model 11036** will record the lowest and highest temperature reached from last reset, between -58°F ~ 392°F (-50°C ~ 200°C) and is accurate to within ±1°F (±.5°C). This waterproof instrument is an ideal food service thermometer to verify dishwasher and holding temperatures for **HACCP** compliance.



Model 25000

DIGITAL THERMOCOUPLE THERMOMETER

The **DeltaTRAK Digital Thermocouple Thermometer, Model 25000**, is an expanded range hand-held instrument important for food service and quality control inspectors. It is designed with a rugged plastic casing and 5 interchangeable stainless steel probes: Immersion, Penetration, Surface Contact, Air/Gas, and Needle Probe.

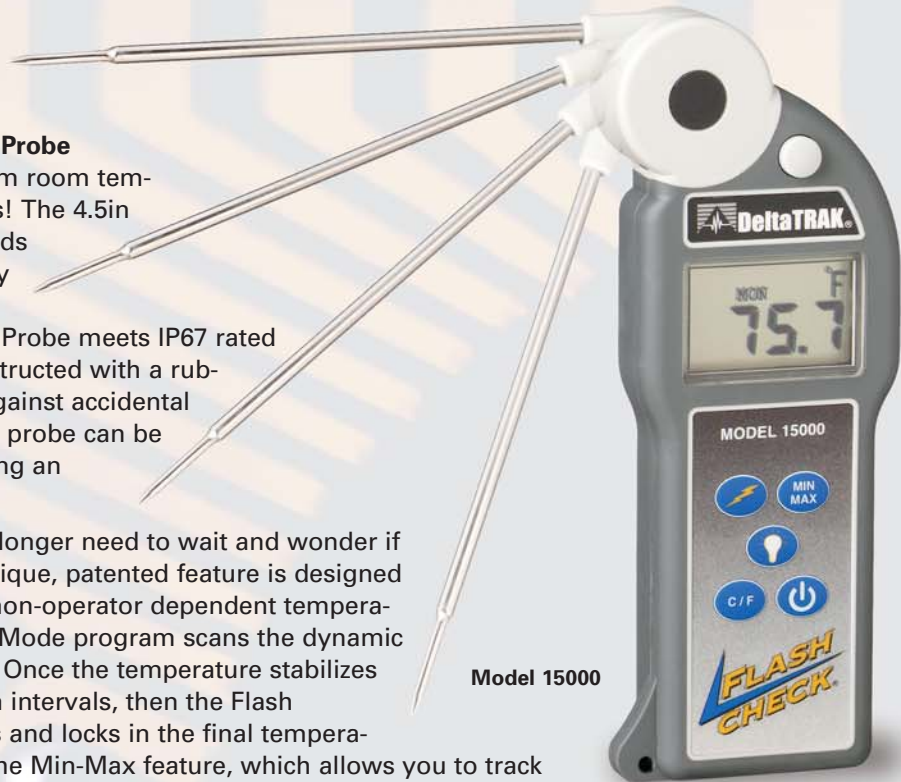
The **Thermocouple Thermometer** is available in °F or °C models, and has a wide temperature range of -160°F ~ 999°F (-106°C ~ 850°C).

Microprocessor Thermometers

FLASH CHECK[®] FOLDING PROBE

DeltaTRAK's new Flash Check Folding Probe Thermometer Model 15000 can go from room temperature to 32°F (0°C) in just 6 seconds! The 4.5in (111.76mm) long reduced tip probe folds back for safety, the large backlit display is easy to read and you can carry it in your shirt pocket. Flash Check Folding Probe meets IP67 rated waterproof standards. The unit is constructed with a rubberized overmold to protect the unit against accidental drops up to 6 feet. Flash Check folding probe can be field calibrated to ensure you are getting an accurate reading every time.

With the Flash Measure mode you no longer need to wait and wonder if your measurement is finished. This unique, patented feature is designed to provide a consistent and accurate, non-operator dependent temperature measurement method. The Flash Mode program scans the dynamic temperature curve every 2.7 seconds. Once the temperature stabilizes to within +/- .3°F (.2°C) within two scan intervals, then the Flash Measure program automatically beeps and locks in the final temperature. Another very useful function is the Min-Max feature, which allows you to track the minimum and the maximum temperature taken during a measurement cycle.



Model 15000

(PATENT NO. 5,801,968)

TQM 500 MICROCOMPUTER RECORDING THERMOMETER

DeltaTRAK[®] introduces the HACCP Microcomputer Recording Thermometer, TQM 500 Model 23003, accurate to $\pm 0.5^{\circ}\text{F}$ ($\pm 0.3^{\circ}\text{C}$), with a temperature range of -40°F ~ 450°F (-40°C ~ 232°C). This water resistant thermometer has three operating modes. The **MEASURE** mode allows instantaneous measurement of temperature on demand, the **LOG** mode allows automatic recording of data at programmed intervals. The **MONITOR** mode allows for constant monitoring of temperature, and can be used as a calibration reference thermometer. Our unique patented microcomputer design provides a **Fast, Accurate, and Non-user Subjective** temperature measurement feature. It is fully programmable from its keypad to record **Name, Lot Number ID, Sample Number, Date and Time**. The TQM 500 stores 1540 data points in memory. Recorded data can be scrolled on the LCD for review or downloaded to a printer or PC using Windows 3.1 or Windows 95 software. The TQM 500 is the most advanced thermometer available to fulfill your **Quality Assurance** and **HACCP** documentation needs. (PATENT NO. 5,801,968)



TQM 500
Model 23003



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10206A 03G1

ISFET pH Meters

POCKET ISFET pH METER

The **Pocket ISFET pH Meter Model 24002** eliminates the problems associated with ordinary glass pen-type pH meters. It calibrates easily with a single drop of buffer, stores dry and fits conveniently in your pocket. The versatile **Pocket ISFET pH Meter** handles everything from foods to dirty samples and semi-solids. In addition it is designed with automatic temperature compensation and a replaceable reference electrode. The reference electrode is designed to provide visual indication when replacement becomes due. It also features a one-touch calibration, one drop measurement, fast response time, long term stability, splash-proof housing, and automatic power-off.



Model 24002

NON-GLASS (ISFET) pH METER

DeltaTRAK's new non-glass ISFET (Ion Sensitive Field Effect Transistor) pH meter **Model 24200** does away with all the drawbacks of a glass pH meter and lasts 3 times longer than glass. The non-glass, rugged, completely submersible probe stores dry and requires no-fill solutions or routine maintenance. The combination pH and temperature probe features a high temperature automatic temperature compensation (ATC), lightning fast readings and set up time for a new or dry probe is just 10 minutes. The only cleaning required is brushing the tip with a toothbrush. Measuring pH for semi-solids, slurries and liquids is now fast, easy and accurate to ± 0.01 with ISFET technology. The advanced **Model 24201** features a data logging capability.

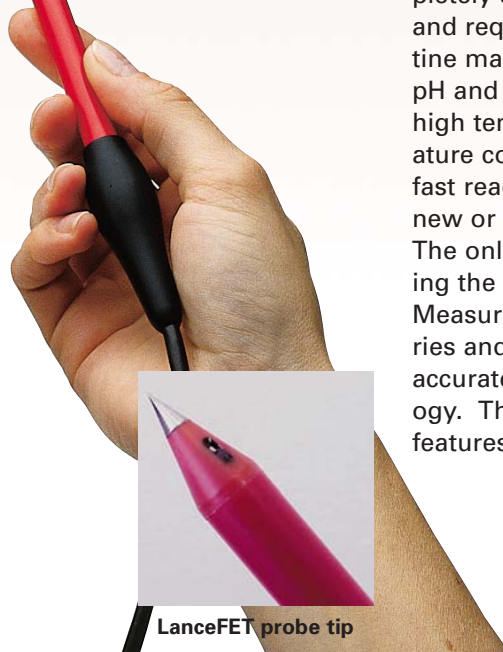
Model 24201



Recharging Cradle for Model 24201



ConeFET probe tip



LanceFET probe tip

Food Safety Products

THE FOOD SAFETY KIT

The Hazard Analysis Critical Control Point (HACCP) concept uses a system approach to food safety. The **DeltaTRAK® Food Safety Kit Model 50001** will provide you with the tools allowing you to monitor those critical control points and help prevent foodborne illnesses at your facility. The comprehensive kit, carried in a convenient multi-pocketed fanny pack, holds many items needed to conduct food safety checks. Originally developed for the **Inspectors and Sanitarians of the California Department of Health Services**, this same kit is now available for restaurants, schools, hospitals, health care facilities, and all food service establishments where food safety is critical.



The kit comes with an easy to understand, bilingual English/Spanish reference guide, "**Food Safety Made Easy.**" This step-by-step guide discusses how to use each tool, and lists the safe temperatures for cooking and storing of various food, temperature and chemical levels necessary for proper sanitization and the pH level

needed to assure food safety. **Record Keeping Log** forms are also supplied to meet the recommended food safety documentation criteria. The **Food Safety Kit** contains the following items:

Waterproof Digital Probe Thermometer, Model 11025:

The Professional use Digital Thermometer is one of the most important Food Safety tools. Totally waterproof, built tough and engineered for accuracy, it is designed for commercial use.

Alcohol Swabs (50015): The 70% Isopropyl Alcohol swab cleans the thermometer probe to help prevent cross contamination, especially important for prepared, ready to eat foods. Each swab is individually foil wrapped.

ThermoLabels (50111): The self-adhesive thermolabel is applied to a ceramic plate before loading into a hi-temp dishwasher. When the actual plate temperature reaches the proper sanitization of 160°F (71°C) during the final rinse cycle, the label irreversibly turns from white to black. Attach the used label to the Record Keeping Log as evidence of this CCP.

Tempilstik (50016): The Tempilstik quickly checks the manifold (hot water line) temperature of a hi-temp commercial dishwasher. It is like a chalk stick, and a mark drawn on the manifold will melt when the temperature exceeds 182°F (83°C). Accurate to 1%, it checks that a hi-temp dishwasher can reach the proper sanitization temperature.

Quat Test Paper (50013): Quaternary Ammonium can be used to wash and hand-sanitize eating utensils. A color change of the test paper (0~400 ppm) compared against a color chart shows if the Quat level is sufficient for sanitization.

pH Strips (50012): Acidity hinders bacterial growth and by controlling the level of acidity, or pH, foodborne illnesses can be prevented. The stiff plastic sticks (0~6 pH) allow easy pH measuring of liquid, semi-solid and solid foods.

Chlorine Test Paper (50014): The Chlorine level in a low-temp dishwasher, or when hand-washing utensils, determines the proper sanitization. Verify the chlorine level by the color change of the test paper (10~200 ppm).



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10207A 03G1

Temperature Indicator Labels

TEMPDOT® TIME-TEMPERATURE LABELS



BEFORE AFTER

The new **TempDot** is a low-cost time/temperature label that indicates the time period of up to 60 minutes that a product has been exposed above the threshold temperature. When the temperature exceeds the threshold a color change begins, but if the temperature falls under the threshold, the color change will stop. This shows the **cumulative degree minutes** time of exposure, important for many QA applications. Four models with respective temperature thresholds of 41°F (5°C), 46°F (10°C), 50°F (10°C) and 77°F (25°C) are available.

WARMMARK® TIME-TEMPERATURE LABELS

WarmMark ThermoLables monitor temperature of products during shipping, storage or processing. Response temperatures available range from 0°F (-18°C) up to 99°F (37°C).

These self-adhesive labels apply directly to product, package, carton or master pack. When activated, irreversible color change occurs once response temperature is reached or exceeded. Red indicates if exposure was for a **brief, moderate or prolonged** period of time.

These valuable tools enable you to see at a glance if temperature abuse has occurred, providing permanent records for quality assurance purposes.



BEFORE AFTER

COLDMARK THERMOLABELS

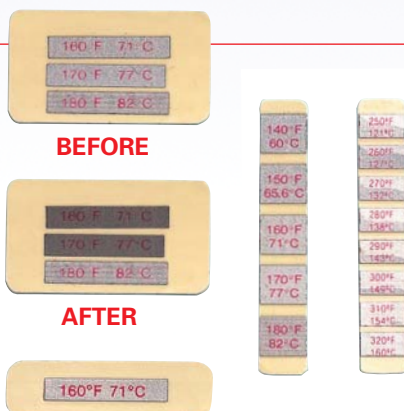
These freeze indicators are used to protect products that are sensitive to extremely cold temperatures. Available in either 32°F/0°C or 26°F/-3°C, these stick-on labels can be applied to a product, package, carton or master pack.

It has a tiny tube with a colorless bulb. When exposed at or below its response temperature for approximately 30 minutes, it will turn cloudy with streaks of violet. Once warmed up above the response temperature again, the bulb changes irreversibly to a uniform violet color.

ColdMark is a tamperproof method of verifying when freeze damage has occurred during shipping, storage or handling; thus providing a permanent record for quality assurance purposes.



HIGH TEMPERATURE THERMOLABELS



These disposable, accurate, inexpensive heat indicators provide permanent record of temperature changes. They come with **one, three, five or eight temperature steps**, available from 90°F (32°C) up to 500°F (250°C).

When rated temperatures are reached at each step, an irreversible black color change occurs. These stick-on labels affix directly to the clean dry interior or exterior surface of products or equipment.

Applications range from manufacturing, processing, storage, shipping, shelf temperature of heat sensitive products, for dishwashers, animal cage washers, heat sanitizing, sterilization, ovens, dryers, retort and curing operations.

Ethylene Absorbers

Air Repair®

PROTECT YOUR PROFITS!

From the moment they are picked, fruits, vegetables and flowers are highly perishable commodities requiring proper ethylene management in post harvest handling to maximize freshness, quality and shelf life from the field to the table.

DeltaTRAK's Air Repair® products can dramatically reduce harmful levels of ethylene gas. They are composed of high efficiency, activated alumina beads impregnated with potassium permanganate. The beads' large surface area allows for maximum absorption capability. Loose weave packaging material ensures optimum airflow and oxidation of ethylene and other contaminant gases.

Air Repair® oxidizes ethylene, changing it into harmless CO₂ and water. When fresh, the beads are a bright purple color. Upon exposure to air, and as ethylene is oxidized, they turn brown starting from the surface and eventually penetrating the core of the bead. Often not immediately noticeable, ethylene will have an effect even if exposure time is short.



or



AN EXTREMELY SMALL QUANTITY OF ETHYLENE CAN CAUSE IRREVERSIBLE DAMAGE!



or



PRODUCT APPLICATIONS



Mini-Packets

Mini-Packets: 5 gram mini-packets are recommended for floral shipments, 8 gram mini-packets for produce shipments. They are placed in cartons along with the product to protect it from the time it is packed until it reaches the retail level.

Tubes: The 5 inch mini tube is typically used for display cases, reach-ins and small walk-in coolers, by attaching it to the fan guard. The 20 inch tube can be used in walk-in coolers or in the air chute of a refrigerated container.



Mini Tubes



Blankets & Tubes

Blankets: These come in three different sizes: the 10" x 10" for small coolers, the 20" x 20" and the 20" x 25" for larger coolers, warehouses and refrigerated containers. The blankets should be hung from the ceiling or an over hang, preferably on the return side of the fans, where there is maximum airflow.



Mini Blankets

Bulk Beads: Available by the pound, loose beads are used as filter medium.



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NEW

For more detailed product specifications, or to learn more about the ColdTrakSM program for cold chain information management, please visit our web site at : www.deltatrak.com

