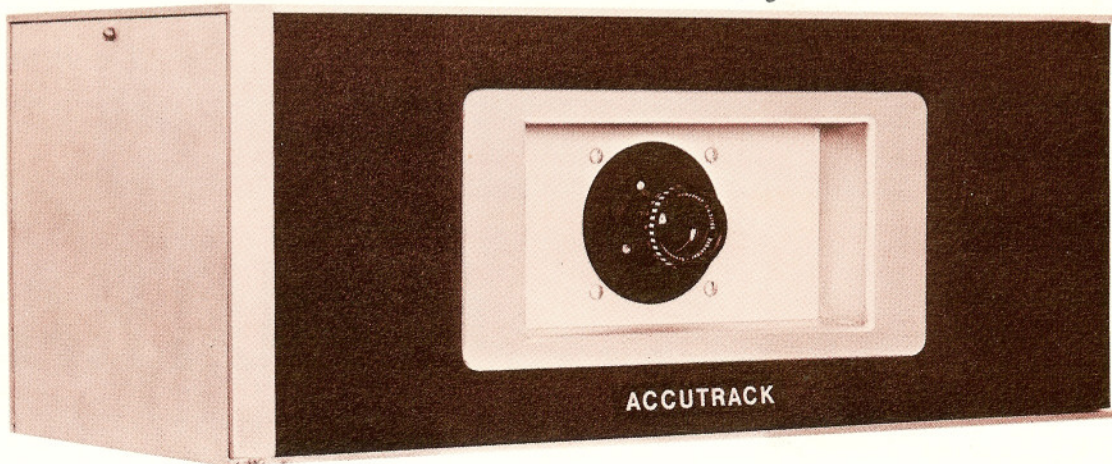


ACCUTRACK

DISTRIBUTED NATIONALLY BY
ZEMCO CORPORATION
6320 FALLS ROAD
BALTIMORE, MD. 21209
PHONE: (301) 825-0365



*photo finish camera
and electronic timer*

THE PROBLEMS

of timing and placing in track events

Since Man first started running foot races, the problem of accurate timing and place judging has existed. Even though the technological age has produced advancements in officiating most athletic and sports events, "track continues to rely on simple mechanical devices and the judgment of error-prone humans." (Track & Field News, October, 1971.)

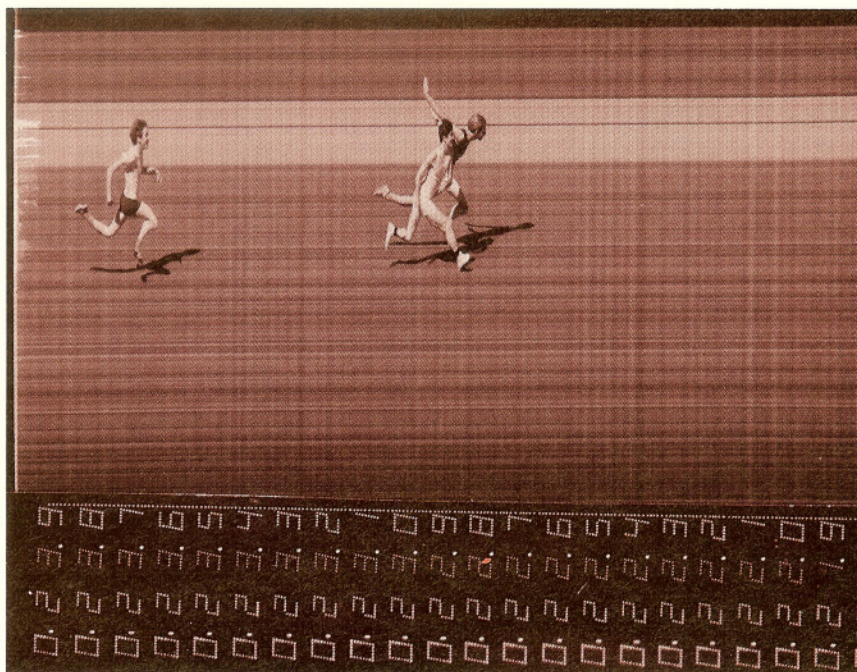
Even the most elaborate and costly electronic systems have failed to accomplish fully automatic, completely accurate timing and placing. The prerequisites are: 1-an accurate timer, 2-a means of starting the timer automatically, 3-a means of stopping the timer automatically, and 4-an affordable cost. The first three elements have been somewhat solved by photo-timers. But many such devices cannot be considered 100 percent accurate because they involve a combination of timer and synchronized camera, linked mechanically. And even if they were accurate enough, many have to be ruled out on the basis of cost. Is there an answer? YES!

THE SOLUTION.....ACCUTRACK

Now, for the first time, a product is available that resolves the many problems associated with timing and placing in track events, and at a very reasonable cost. ACCUTRACK utilizes the latest "state of the art" electronic components and optical system to provide a photo finish picture on Polaroid film with absolute accuracy of placing and timing.

It eliminates all human response limitations in timing race events. From automatic starting of the timer to accurate exposure of time on film, utmost accuracy is provided. Race times are exposed on film directly in line with instantaneous action at the finish line. In fact, ACCUTRACK easily meets all four requirements: 1-it has an electronic timer accurate to 1/10,000th second coupled to the film optically, 2-automatic starting from the starter's gun, 3-a timing strip printed on the film and easily aligned with each runner provides precise race time for each runner, and 4-ACCUTRACK costs less. ACCUTRACK is 100 percent accurate because no mechanical devices are used. The optical coupling of timer exposure on film eliminates all errors. ACCUTRACK is simple to operate and requires only one operator to provide a finished picture in less than 30 seconds.

ACCUTRACK Gives You Precise Determination of Time and Place



HERE'S HOW

The ACCUTRACK lens actually projects onto the film about two inches of track length, which is the finish line. This is equivalent to 10/1000th of an inch on film. The film moves past area of exposure recording continuously only the finish line or anything passing through it. This way you get a time-sequence and exact physical relationship of individuals passing the finish line.

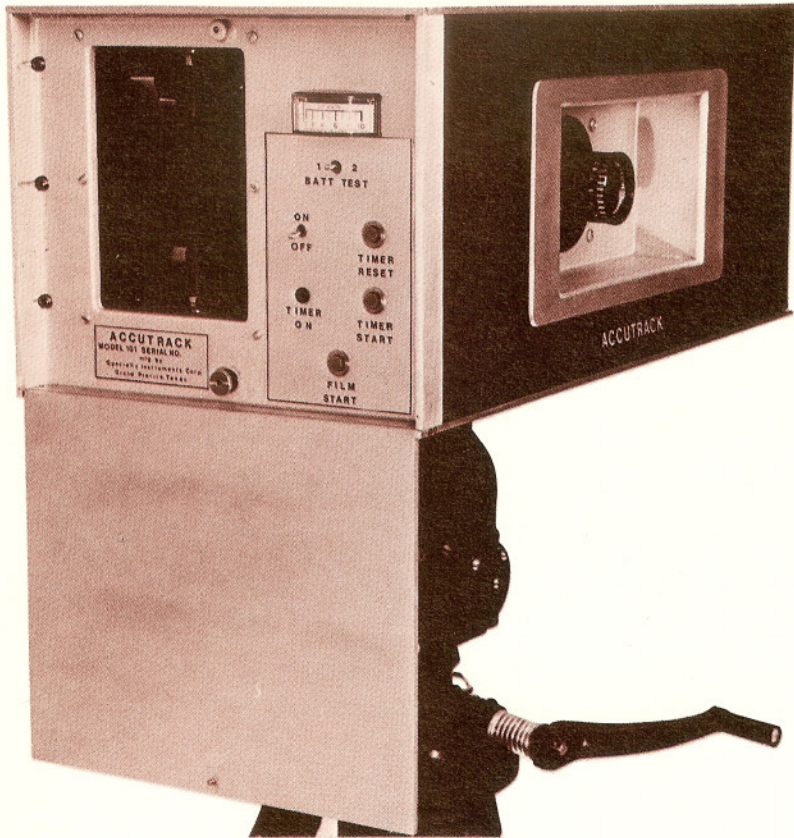
Times are projected onto the film very accurately by an electronic clock accurate to 1/10,000th which strobes a solid state display. The image of the display is projected optically onto the film instantaneously. There are no mechanical coupling devices required and therefore, no errors induced by them.

Timing marks are projected onto the film directly in line with the exposure aperture, which is only .010 inch wide. This establishes a time on film for what is happening at the finish line at that instant.

The left hand column is minutes (up to 9); the next two columns are seconds (up to 59) and the next column, or fourth, is 1/10th second (up to 9). The right hand row of decimals are exposed on film at 1/100th second intervals. The runners as they appear on film were moving through the finish line at the time of their exposure.

The actual finish time for each runner may be obtained by reading the time directly in line with the first part of the runner's torso. Times can be read to 1/100th second and place determining is made so much simpler since the actual relationships of the runners crossing the finish line are permanently recorded on film.

BASIC UNIT INCLUDES THE ACCUTRACK, THE CARRYING CASE, AND THE PICTURE EVALUATION TOOL

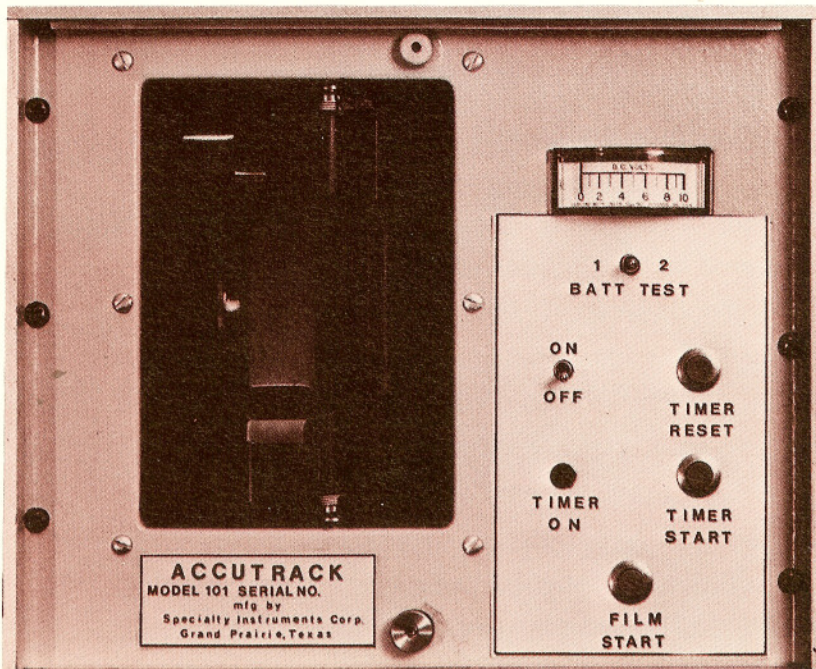


The ACCUTRACK camera has through the lens viewing for accurate alignment to the finish line. The camera system is completely portable, and may be moved from one finish line to another, ready for the next race in a short time.

Camera features are:

- fixed focus lens
- on & off switch
- battery test switch & indicator
- switch for resetting timer in event of false starts or recalls
- timer start switch for manual starting of electronic clock at control panel
- timer "on" indicator which flashes when electronic clock is "on."
- film start switch for manually initiating filming at control panel

ACCUTRACK CAMERA AND CONTROL PANEL

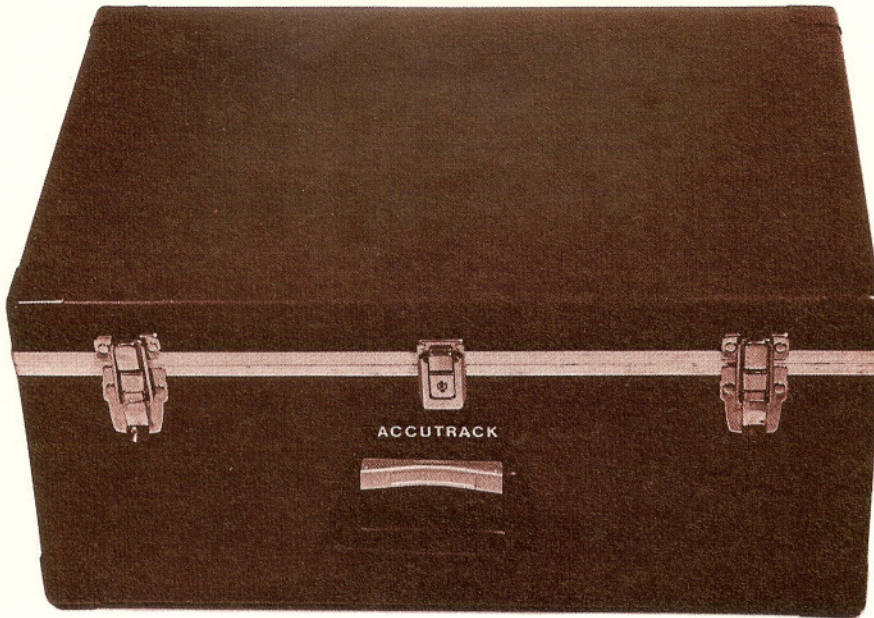


FILM:

ACCUTRACK camera uses standard Polaroid film holder using standard Polaroid film, size 4 x 5, available at local photographic supply houses or may be ordered from SIC if necessary.

Film may be obtained for indoor and outdoor meets, black & white and color.

ACCUTRACK



CARRYING CASE

The sturdy carrying case will hold camera, cable, starting gun, tripod head, film, and picture evaluation tool.

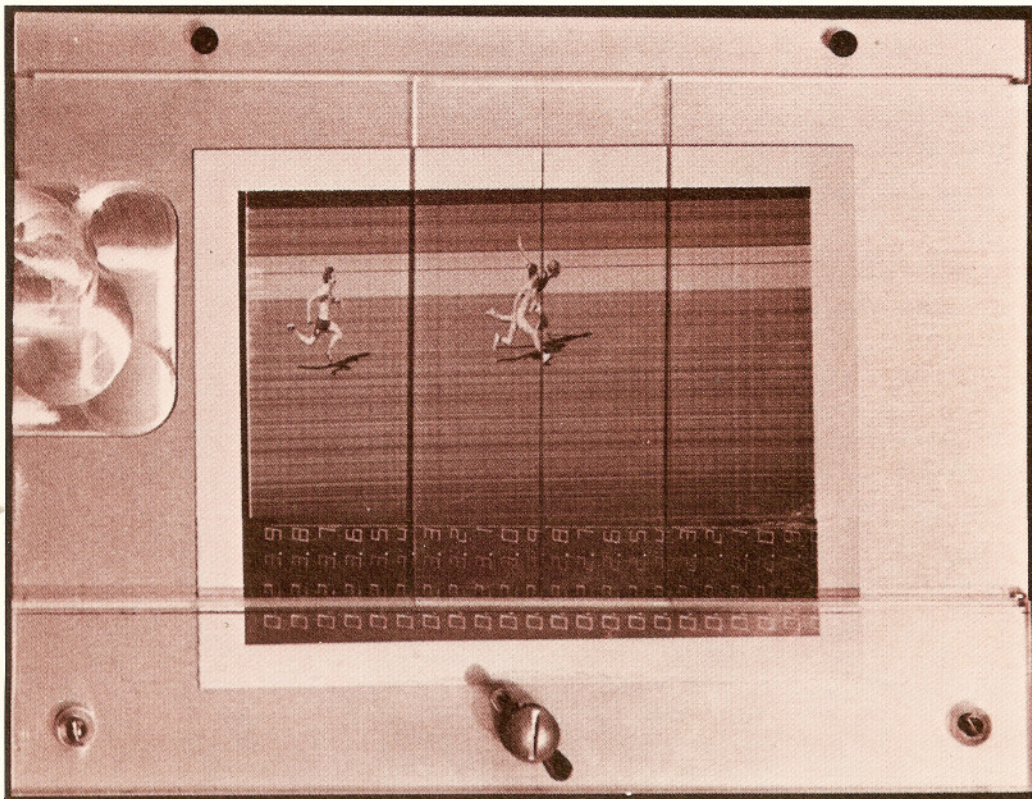
Batteries or power supply are housed in carrying case.

The total weight with everything in it is 50 lbs.

It measures 22 inches X 16 X 13.

PICTURE EVALUATION TOOL

The Picture Evaluation Tool is standard equipment and is used for quickly determining time of finish to 1/100th second for each runner and aids in deciding place finishing. Simple to operate, the tool has a scribe mark on a slide captured in tracks for precise measurement.



ACCUTRACK ACCESSORY ITEMS

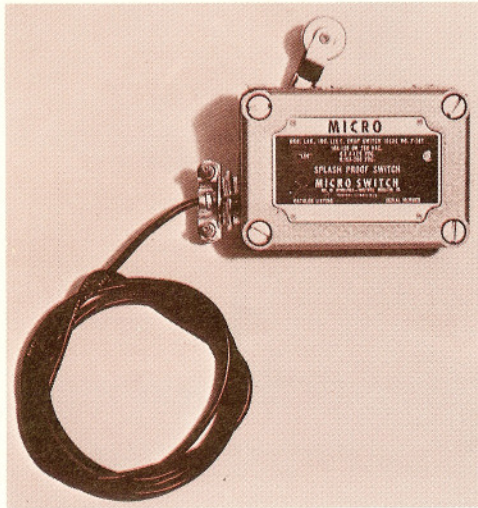
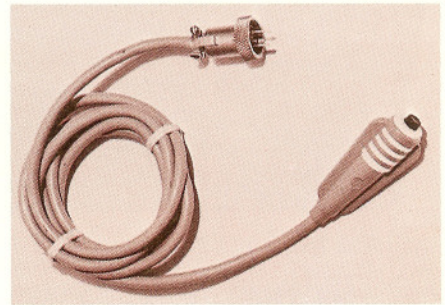


STARTER'S GUN

Used for automatic starting of electronic clock in camera. Meets NCAA rules requirements: "The electronic timer is started by the energy of the shell exploding in the starter's gun which provides the signal to start the timer."

EXTERNAL SWITCH CONTROL CABLE

This cable allows the electronic clock to be manually started from some distance. It can also be used to start filming.

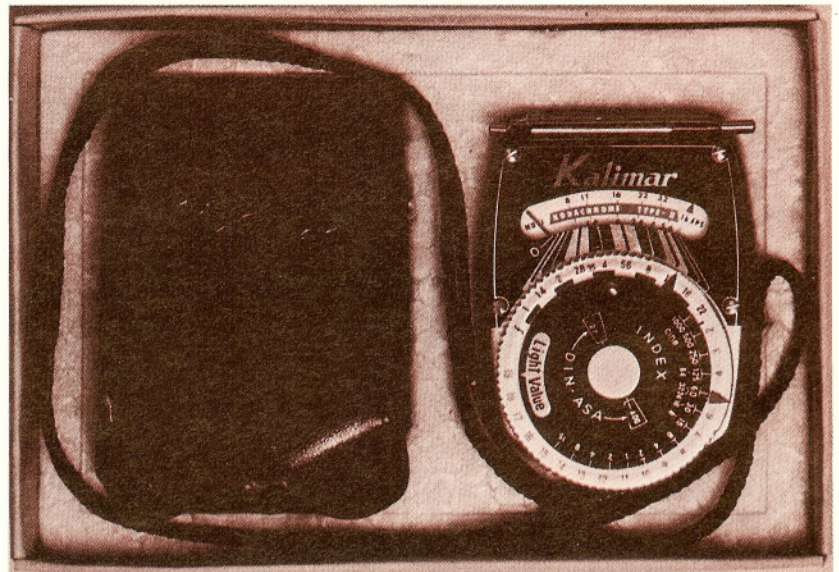


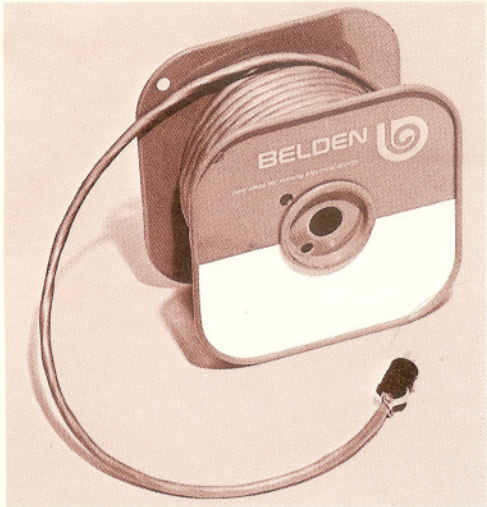
STARTING GATE SWITCH

This switch is used for horse races. Mounts on starting gate and automatically starts electronic clock in camera when gates are fully open.

LIGHT METER

The Light Meter is used to determine available light level and aids in setting up camera for proper film exposure.





EXTENSION CABLE

Available in several lengths — 120, 250, or 500 yards. Used for connecting the starting gate switch or the starting gun to the camera.



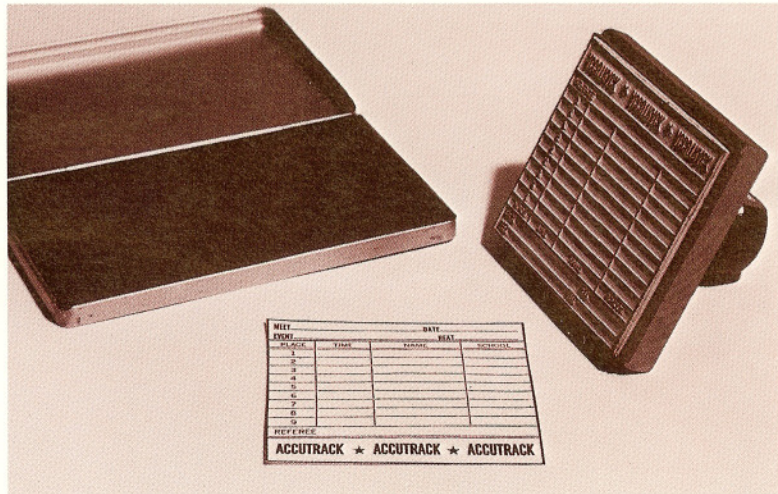
TRIPOD

A tripod can be purchased to support camera on platforms or on tracks away from home. Provides portability of total camera unit.



TRIPOD HEAD

Tripod head is used with tripod or may be used on a permanently installed post at proper relationship to the finish line.



RUBBER STAMP AND PAD

A rubber stamp and pad is available for recording data on back of picture.

SPECIAL ORDER EQUIPMENT

Power supplies for AC operation may be provided on special order. It provides power to camera and would replace a requirement for batteries.

Rechargeable batteries may be obtained on special order. Can be recharged up to 200 times and eliminates need to replace batteries.

Light beam system is available to automatically start film process when first runner gets within five feet of finish line. The system consists of a lamp and sensor unit and is used to signal camera automatically to start film.

APPLICATIONS

ACCUTRACK provides the most accurate photo finish picture and electronic timing at the lowest cost for quarterhorse races and high school and college track meets. It is a valuable aid in training for determining improvement in getting off the starting blocks or out of the starting gate.

ACCUTRACK can be used in training and practice meets by one operator, eliminating the necessity for eight or more officials.

The ACCUTRACK camera can be used for any race event in which racers move through a finish line with a speed of foot racing or horse racing.

FOR FURTHER INFORMATION

Write or Call

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ACCUTRACK

**the greatest advancement in the history
of track officiating since the stop watch.**



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