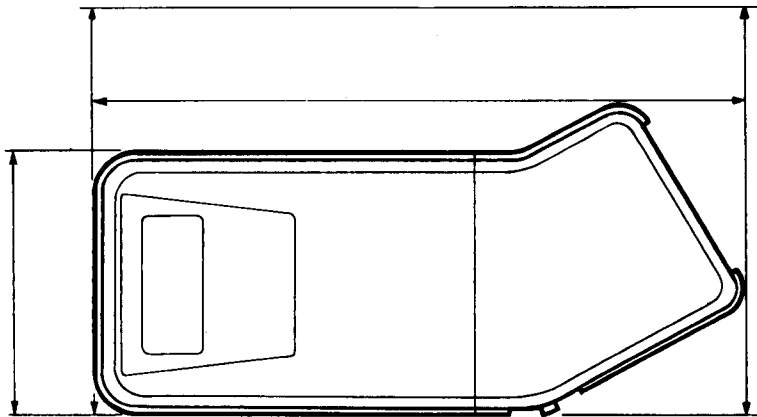


# Annie<sup>®</sup> II A-100PH

**Digital Photoelectric Tachometer**

OWNER'S MANUAL



IMPERIAL EASTMAN<sup>®</sup>

## General Description

### **This feature-packed, easy to use Digital Photoelectric Tachometer**

electronically measures RPM from 10 to 10,000; in shop or field without torque loss. There are no electrical or mechanical connections to make. The foolproof "electronic eye" and bright digital read-out with solid state circuitry provide instant readings. Use this compact instrument to obtain readings in close quarters on any type of moving machinery.

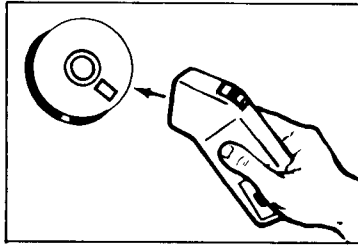
### **Features of the A-100PH**

- Reads RPM from 10 to 10,000.
- Portable. No external power required.
- Long life light bulb.
- Measures RPM in shop or field.
- Easy to use.
- No electrical or mechanical connections.
- Solid-state electronic construction.
- Obtain readings in close quarters.
- Rugged — Polypropylene housing.
- Measures RPM electronically. NO TORQUE LOSS.
- Use on any type of moving machinery.
- Lightweight.
- Made in U.S.A.

## Operating Instructions

1. Make sure that the surface of the device to be measured is relatively clean.
2. Place reflective tape (provided with A-100PH) on clean surface of device to be measured by peeling off anti-stick back. Tape should be approx. 3/4" long.
3. Turn A-100PH to "ON" position and direct light beam at reflective tape on the revolving device to be measured from a distance of approximately 10 to 20 inches.
4. Hold the unit as steady as possible; the reading will be automatically displayed. Multiply the reading by 10; this will give you the RPM.
5. If you wish to hold the reading after moving the instrument, press down the "MEMORY" button. The reading is now locked in until the "MEMORY" button is released.
6. Turn unit off after taking several readings by returning power switch to "OFF" position. (The light beam will extinguish).

## Applications of the A-100PH



### Using reflective tape

Initially, it is recommended that a reading be taken before the placing of the reflective tape on the device to be measured. This will show you that if there are variations on the surface of the device to be measured, they may activate the photo cell. These variations could lead to a false reading if a marker of sufficiently large size is not used. Care must be taken to provide a sufficient marker so that the photo-tach can distinguish the desired mark from undesired variations on the surface.

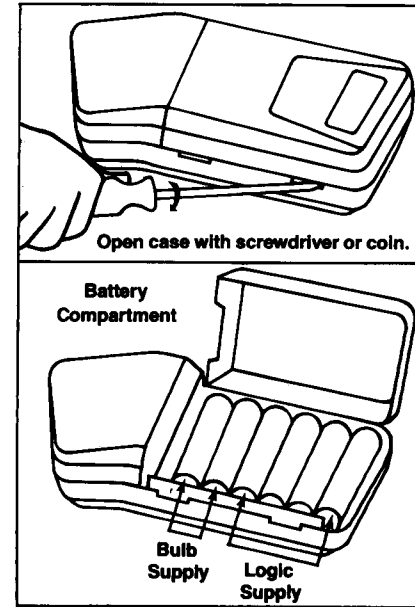
The photo-tach will also recognize multiple markers of essentially the same size. Using this method, the error in the reading can be reduced using the following formula:

$$\frac{10,000}{\text{No. of Markers}} \times .02 = \text{Max. error}$$

**Note:** Smooth surface reflecting tapes **are not** recommended, as false readings could be caused by ambient light. A2-773 tape is recommended.

### Batteries (see figure)

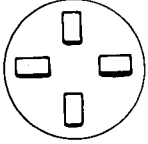
The light bulb and logic circuits use different power supplies (see silhouette label in battery compartment). If light bulb doesn't work, check battery group marked "**bulb supply**" on the label in the battery compartment. If the batteries check okay, replace the light bulb. If readings are erratic and unit will not calibrate, check battery group marked "**logic supply**."



## RPM readings on slow rotating devices

The A-100PH, being digital, has good accuracy on low RPM. It is recommended, however, that the use of multiple markers be employed, when practical. The markers should be spaced equidistant on the device.

(BE CERTAIN THAT THEY ARE NEVER CLOSER THAN 1 1/2 INCHES TO EACH OTHER.)



Any number of markers are acceptable. After you take the reading, remember to divide the reading by the number of markers, to obtain RPM, because the addition of markers increase the RPM reading. (Be careful not to exceed the full scale limits of the A-100PH when using this method.)

## Calibration

Your A-100PH has been factory calibrated and should not require recalibration in the field.

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## Effects of surfaces

Reflective characteristics of various types of surfaces can affect the reading of the A-100PH, if they are not considered. A gleaming surface of either highly polished metal or a flat white surface will reflect light back to the photo-tach. The surfaces can be dulled with flat black spray paint, if convenient. It is important to use the reflective tape, A2-773, supplied with the photo-tach. Also, experiment by holding the photo-tach at different angles and distances until a steady reading is noted.

## Back light readings

Readings from several feet away are possible at some locations with lighting from natural or artificial sources. Fan blades, pulley spokes, etc., are measured with ease using this method. Just remember to divide the RPM reading by the number of blades or spokes contained on the rotating device.

## Specifications

Range:  
10 to 10,000 RPM  
(no range selection necessary).  
Accuracy:  $\pm 2\%$ .  
Photo cell:  
Cadmium sulphide.  
Batteries:  
6 AA size batteries  
Operating temp. range:  
32° to 100°F (0-38°C)  
Dimensions:  
Measures 6" x 2½" x 1¾"  
(15.24 cm x 6.35 cm x 4.45 cm)  
Weight:  
9.5 ounces = 270 grams.

## Replacement Parts:

A2-771.....Replacement Bulb  
A2-773.....Reflective Tape

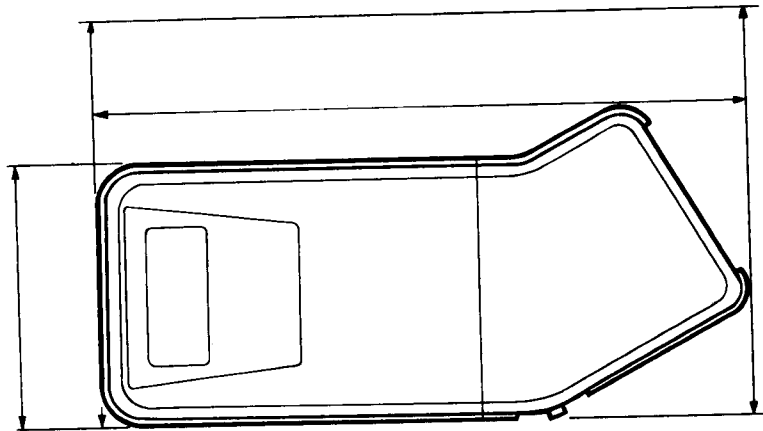
## Limited Warranty and Repair Policy

This instrument is designed and produced to provide unlimited service. Should it become inoperative after the user has performed the recommended maintenance, a no-charge repair or replacement will be made to the original owner within one year of the date of purchase. This applies to all repairable instruments which have not been tampered with or damaged. This warranty does not cover consumable items such as batteries, tips and fuses, nor physical damage and wear to components such as probes, sensors and adaptors. For repair or customer service send your tool to: **IMPERIAL EASTMAN**, Imperial Division, Annie II Service Center, 3360 NW 110 St., Miami, FL 33167 or call 1-800-848-6010. Repaired tools will carry a 90-day warranty.

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