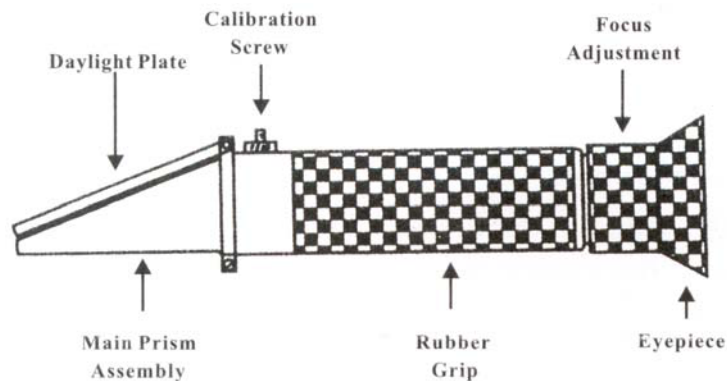


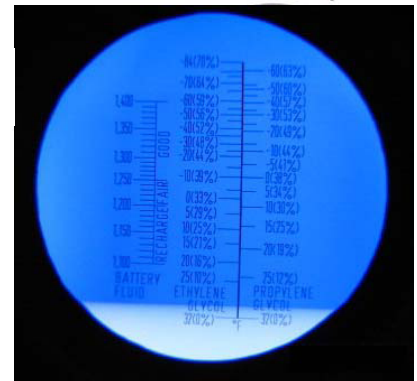
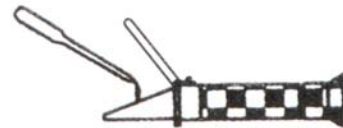
## OPERATING INSTRUCTION SHEET HAND REFRACTOMETER



### Operation:

1. Open daylight plate, and place 2-3 drops of distilled water on the main prism. Close the daylight plate so the water spreads across the entire surface of the prism without air bubbles or dry spots. Allow the sample to temperature adjust on the prism for approximately 30 seconds before going to step #2. (This allows the sample to adjust to the ambient temperature of the refractometer)

2. Hold daylight plate in the direction of a light source and look into the eyepiece. You will see a circular field with graduations down the center (you may have to focus the eyepiece to clearly see the graduations). The upper portion of the field should be blue, while the lower portion should be white. (The pictures shown here and shown in step 3 & step 4. are only as reference; the right specific scale is listed on the product.)



3. Look into the eyepiece and turn the Calibration Screw until the boundary between the upper blue field and the lower white field meet exactly on the zero scale. That is the end of the calibration process. Make sure the ambient room temperature is correct for the solution you are using (20°C / 68°F). When working temperature of the room or the environment (not the sample) changes by more than 5°, we recommend recalibrating to maintain accuracy. If the instrument is equipped with Automatic Temperature Compensation system, the ambient working temperature of the room must be (20°C/60°F) whenever the instrument is recalibrated. Once calibrated, shifts in ambient temperature within the acceptable range (10°C-30°F) should not affect accuracy.



Reading of Sample

4. Now place a few drops of the sample to be tested onto the main prism, close the daylight plate and check the reading. Take the reading where the boundary line of blue and white cross the graduated scale. The scale will provide a direct reading of the concentration.

### **Warnings/Maintenance:**

1. Accurate measurement depends on careful calibration. The prism and sample must be at the same temperature for accurate results.
2. Do not expose the instrument to damp working conditions, and do not immerse the instrument in water. If the instrument becomes foggy, water has entered the body. Call a qualified service technician or contact your dealer.
3. Do not measure abrasive or corrosive chemicals with this instrument. They can damage the prism's coating.
4. Clean the instrument between each measurement using a soft, damp cloth. Failure to clean the prism on a regular basis will lead to inaccurate results and damage to the prism's coating.
5. This is an optical instrument. It requires careful handling and storage. Failure to do so can result in damage to the optical components and its basic structure. With care, this instrument will provide years of reliable service.

### **Specifications:**

#### **Range:**

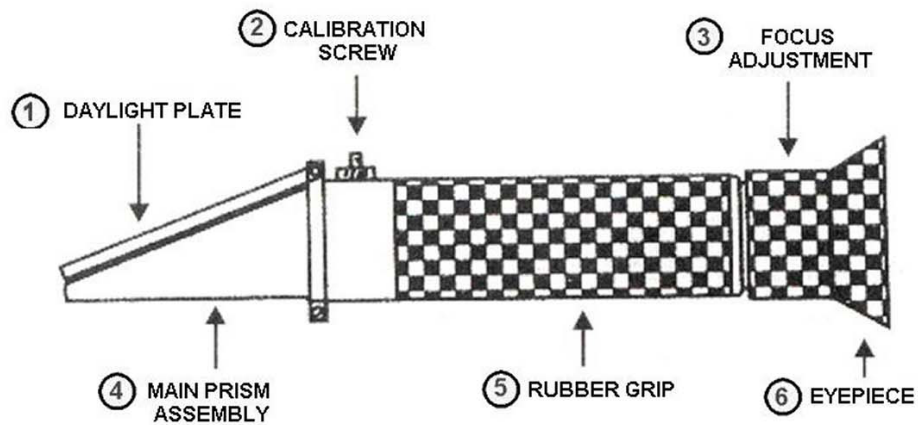
Ethylene Glycol: -84° F-32° F  
 Propylene Glycol: -60° F-32° F  
 Battery: 1.100-1.400sg

#### **Accuracy:**

Ethylene Glycol: ± 5° F  
 Propylene Glycol: ± 5° F  
 Battery: ± 0.01sg

#### **Min.Div.:**

Ethylene Glycol: 5° F  
 Propylene Glycol: 5° F  
 Battery: 0.01sg



ORDERING PART#	ITEM#	PART DESCRIPTION
PRT3705-01	1	DAYLIGHT PLATE
PRT3705-02	2	CALIBRATION SCREW
PRT3705-03	3	FOCUS ADJUSTMENT
PRT3705-04	4	MAIN PRISM ASSY
PRT3705-05	5	RUBBER GRIP
PRT3705-06	6	EYEPIECE