

Quick Function Guide: Select function by pressing the ON button one or more times. To count volume and basal area, look in the ECII-R display and press ON one time or until DIST is shown in the display. Automatic turnoff after approx. 30 sec' or by pressing '+' and '-' (plus/minus) buttons simultaneously.

- 1 press: DIST Distance, height (m/ft), basal area (bA)
- 2 press: HGT Height (m/ft)
- 3 press: DEG Angle/slope (%/° = percent or degrees)
- 4 press: REL Basal Area
- 5 press: SET Settings

Set Factors

1. Look in the display and press five (5) short times on 'ON'. **SET** is now displayed.
2. The last used factor is featured in the display (for example F 2.0)
3. Press '+' or '-' (plus/minus) button to change setting for factor. Confirm with 'ON'.
4. Last used form factor is displayed, for example u45 (0.45).
5. Press '+' or '-' (plus/minus) button to change form factor. Confirm with 'ON'.

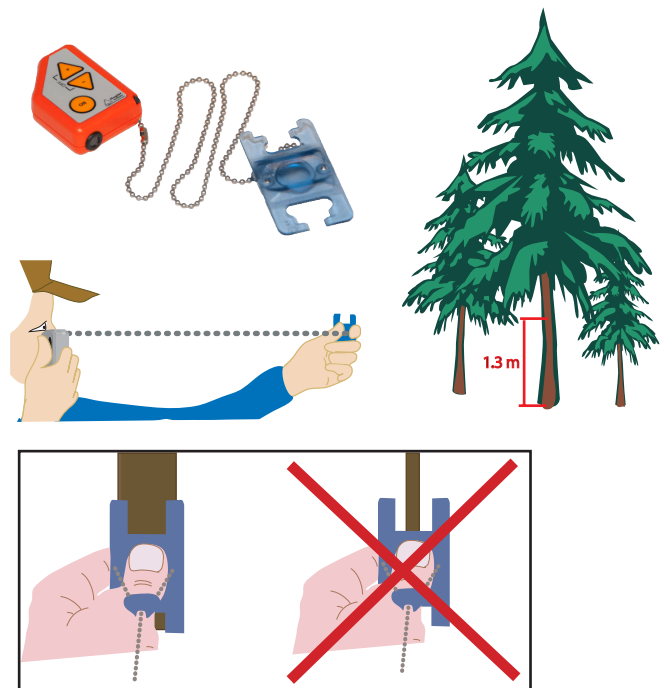
Volume and Basal Area Estimate

The ECII-R instrument offers an estimate of the volume based on average/dominant tree height and the basal area.

1. Measure and input with '+' or '-' (plus/minus) button the distance to the object. The distance is equal to the distance from your eye to the tree (object) diameter center at ground level (tree root). Set optional distance from 0-999m/ft. One press changes the input value with one (1). To scroll five (5) steps, keep the '+' or '-' button depressed and release when the correct value has been reached. Press 'ON' to confirm input value. The ECII-R uses the last input value as default. Note that the ECII-R will not measure distances! Use a tape, a thread meter or similar to measure the current distance. When the distance is input, measure the angle to the root by aiming with the horizontal lines visible when looking into the instrument display and press 'ON'. NOTE! Aim with both eyes open. Aim at the tree top (or other height) and press 'ON'. To measure more heights on the same object, simply aim and press 'ON'. By selecting 'HGT', it is possible to step to height measuring without first registering a distance.
2. When the height is input, give a short press on the ON-button and is displayed. **REL**
3. Approve **REL** with a short press on the button and the factor (see above) is displayed (f ex F 2.0)
4. Hold the ECII-R under your eye, thumb on the ON-button and stretch the beaded chain all the way out.
5. Aim with the scope and the factor at breast height on the measuring object.
6. Turn around a full circle from your position and press the 'ON' button for each tree to be counted on the plot. Press '-' (minus) button to delete input tree.
7. **To complete the plot area and show the basal area and volume:**
 - 7.1 Look in the display, press and hold 'ON' until **bA** is featured.
 - 7.2 With a new short press on 'ON', to see height. **H**
 - 7.3 Next short press on 'ON' **vol** for volume.
8. To count more trees on the same plot, press th ON-button and **REL** is displayed. Restart from point 4 above.
9. Complete the measurement with a simultaneous press on '+' and '-' (plus and minus) buttons.

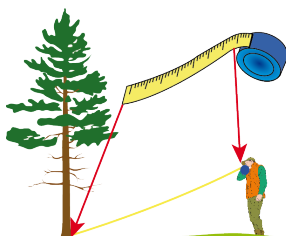
Calculate the Basal Area

1. Look into the display and press 'ON' four (4) times or until **REL** is featured in the display. The input factor is featured.
2. Hold the instrument's eyepiece under your eye, thumb on the button and stretch the beaded chain all the way out.
3. Aim with the scope and the set factor at breast height on the measuring objects.
4. Turn around a full circle from your current position and press 'ON' for each tree to be counted on the plot (trees larger than the factor gauge column). Press '-' (minus) button to delete input tree.
5. To complete the area and show basal area and volume estimate:
 - 5.1 Look in display, press and keep pressing 'ON' until **bA** is featured (the value for the basal area).
 - 5.2 Another short press 'ON' features (Height). **H**
 - 5.3 Another short press 'ON' features **vol** (Volume). The volume estimate is based on dominant tree height or average height.
6. To count more trees on the same plot, give a short press on 'ON'. **REL** is featured. Restart from point 3 above.
7. Complete with simultaneous press on '+' and '-' (plus/minus) buttons.

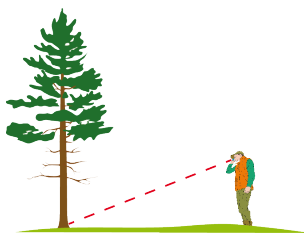


Technical specification

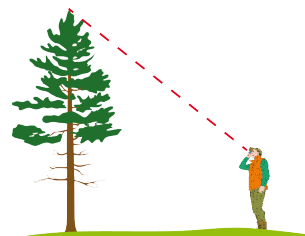
Size: 20mm x 63mm x 44mm/0,8x2,5x1,7"
 Weight: 70g/2.8oz incl battery
 Battery: 1AA, Consumption: 30mW
 Max height: 99,9 m/ft
 Resolution height: 0.1m/ft<100m/ft, 1m/ft>100m/ft
 Max angle: -55deg — +85deg
 Accuracy angle: +0.2deg
 Resolution angle: 0.1deg
 Factors: 0,5, 1, 2, 4 m²/ha; 5, 10, 20, 40 ft²/acre
 Form factor/quotient: 0.10...0.95 (default 0.45)
 Volume form factor: height x form factor x basal area
 Volume unit: m3sk/ha (alt. ft3/acre/1000)
 Chain: 60cm/24", beaded, metal



MEASURE CURRENT DISTANCE WITH A TAPE OR THREAD METER. INPUT DISTANCE IN THE EC II-R



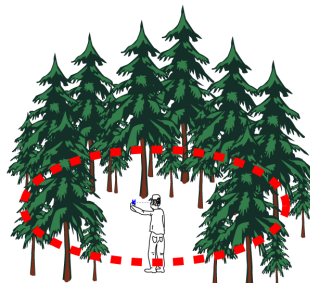
MEASURE THE ANGLE TO THE BASE OF THE TREE



MEASURE THE ANGLE TO THE TOP OF THE TREE OR OTHER HEIGHT



HOLD THE EC II-R INSTRUMENT WITH THE BUTTON OVERLAY FACING UPWARDS WHEN MEASURING ANGLES AND HEIGHTS.



STRETCH THE CHAIN ALL THE WAY OUT WITH A STRAIGHT ARM, AIM WITH THE FACTOR GAUGE AND MEASURE TREES IN A FULL CIRCLE. USE THE COLUMN AND SET FACTORS IN YOUR EC II-R INSTRUMENT.



HAGLÖF SWEDEN AB IS A FAMILY OWNED COMPANY WITH A LONG TRADITION OF DEVELOPING AND PRODUCING FOREST & FIELD MEASUREMENT INSTRUMENTS FOR PROFESSIONALS.

More than 70 years of experience and a profound know-how in workshop production has grown to encompass our state-of-the-art development capacity, with classic working tools and complex system solutions in a fruitful symbiosis. At Haglöf Sweden, we keep everything in-house: from the early stages of developing of a new product, throughout the production process and marketing, sales, support and after-service. Our philosophy and working mode ensure quick problem solving, product availability that you can depend on, and reliable deliveries, prompt service and the support you want, when you need it.

There are over 200 companies representing the Haglöf Sweden brand name around the world. Many Haglöf instruments are used outside forestry applications, such as in building dimensions and utility industry, for road construction, in police work, gardening, power line survey, archaeology, geology and wildlife management. We consider every operator of a Haglöf Sweden product a valuable member of our innovation team. We mark our resources for product development and maintain the flexibility of a small organization. Contact us for your most efficient and updated forest, survey & field measurement solution - ever!

DECLARATION OF CONFORMITY

According to the EMC Directive with amendment 92/31/EEC, Low Voltage Directive 73/23/EEC and CE Marking Directive 93/68/EEC Type of equipment Clinometer, Brand name or trade mark Haglöf. Manufacturer Haglöf Sweden AB®, Klockargatan 8, SE-882 30 Långsele, Sweden. The following standards and/or technical specifications, which comply with good engineering practice in safety matters in force within the EEA, have been applied: Test report/ technical construction file/ normative document Ref.no 03087/Issued by Haglöf Sweden AB. Standards EMC Emission EN61000-6-3: 2001, EN 55022 Class B EMC Immunity EN61000-6-2: 2001, EN 6100-4-2, -3, The H EC Product was CE marked 2003 As manufacturer established within EEA, we declare under our sole responsibility that the equipment follows the provisions of the Directives stated above.

WARRANTY AND SERVICE INFORMATION IN SHORT

Haglöf Sweden AB warrants that this product shall be free from defects in materials and workmanship, under normal intended use, for a period of 12 months after date of shipment. The warranty excludes the battery, the accessories and any written materials. The warranty does not apply if the product has been improperly installed, improperly calibrated or operated in a manner not in accordance with the user guide. Warranty is also automatically expired if the product has been opposed to external force and warranty is not applicable for cosmetic defects and/or damage, misuse, accidents or equal. The one-year limited warranty time covers obvious fabrication defects. Defects in the electronic components that are impossible for the manufacturer to detect prior to assembling and shipping of the product may occur. Haglöf Sweden can in no case be responsible for problems of this nature and has no liability for any loss of business, profits, savings, consequential damages or other damages resulting from use of the products described. The warranty is valid in the country where your Haglöf product has been purchased. A product covered by warranty will be object to exchange, service, and repair or according to special agreement between seller and buyer, within the frames of the limited warranty. Haglöf Sweden reserves the right to determine which option will be most suitable for each separate case after having examined and evaluated the product.

- For a valid warranty, a copy of invoice or dated receipt of your purchase must be presented. The serial number of the returned product has to be clearly stated upon return. **Turn to your Haglöf Sweden instrument supplier for assistance. For distributors:** Go to <http://www.haglofsweden.com/PDF/HaglofRMA.pdf> for return form. The return freight to us should be prepaid on buyer's expense. After warranty repair or exchange, the return freight to you is on our expense. If warranty has expired or is null and void, all freights are on buyer's expense.
- If no original invoice can be presented upon shipment, or if two years have passed from date of purchase, a customs fee will be added by the applicable customs authorities and possibly in receiving country as well. These fees are on buyers account.
- We perform repair and service of products where warranty has expired when possible. Cost estimation will be sent to you after evaluating the returned product for cost approval. Please also see above paragraph on customs fees.
- Do not hesitate to contact us directly and/or your Haglöf Sweden® representative for questions or comments!

Storage, Care, Maintenance and Safety: Handle the instrument with care. Do not expose to excessive temperatures or ultraviolet rays. Store cool and dry. Wipe off with dry clean cloth if exposed to moist, dirt or other, immediately after exposure. Do not use alcohol, benzene, thinner or other organic agents to clean instrument body. Remove battery for longer periods of inactivity. Do not swing instrument by its strap. Keep instrument and any of its parts out of reach from children. Immediately consult a doctor if a small child has swallowed any parts of instrument or its packing. Keep away from fire and water. Do not disassemble instrument or battery. Do not attempt to recharge battery. Any signs of corrosion or leaking on batteries should result in changing the battery. Do not throw defective batteries or instruments in trash!

© Copyrights belong to Haglöf Sweden AB. Unauthorized duplication is prohibited. Haglöf Sweden AB is registered trademark and H EC is a recognized trademark of Haglöf Sweden AB. Made in Sweden.