

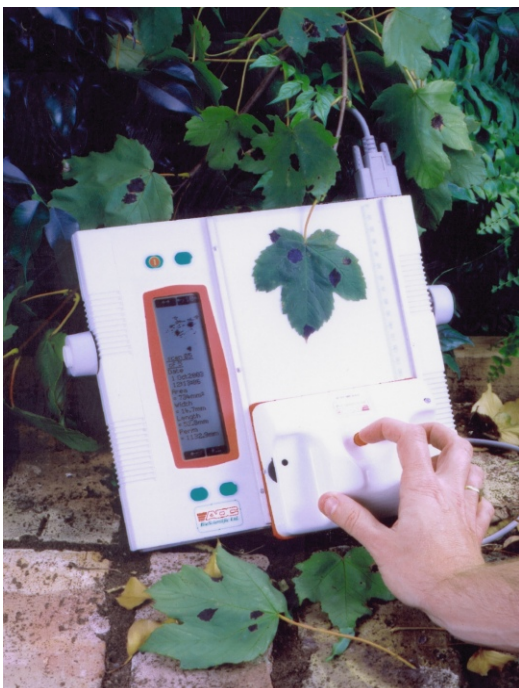
AM 300 Field Portable Leaf Area Meter

The World Wide Market Leader

World Class Precision

40 years of experience in plant science

U. S. warrantee and service center



Stores image and data together

- Non-destructive measurement of whole leaf area, and areas with leaf disease
- **Unique leaf imaging feature** provides confidence that a proper field measurement is made, and it allows storage of the high resolution image in a permanent record
- Highly portable with battery, carrying handle, and carrying bag
- Download images and data to a PC

The AM 300 - *Unique imaging feature provides greater measuring confidence and a permanent image record*

Field Portable - 3000 measurements per battery recharge - Easy to Use

What Can be measured?

- ***Leaf area***
- ***Leaf length***
- ***Leaf width***
- ***Leaf perimeter***
- ***Average area per file***
- ***Accumulated area per file***



Image subtraction allows additional measurements

- ***The area of a leaf that has disease or herbivory damage***
- ***The area of a leaf that is free from disease and herbivory damage***



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ADC BioScientific Ltd.
located in
Great Amwell, Herfordshire
England.

Opti-Sciences, a manufacture of precision Chlorophyll Fluorometers, is now the exclusive US distributor for ADC BioScientific products.

Opti-Sciences also operates the US customer service and repair center at it's headquarters in Hudson NH.

ADC- a history of innovation, precision and portability.

- In 1970 ADC introduces the *first* “Differential” Infrared Gas Analyzer (IRGA) system available anywhere for plant science.
- ADC champions the first “Open” plant IRGA system in 1970. Open IRGA systems are now the standard in photosynthesis investigation.
- ADC introduced the *first* portable IRGA system with hand held leaf chamber in 1983.
- The *first* micro-environmental control system for photosynthesis was an ADC innovation in 1987.

Leaf Area Meters were introduced in 1994

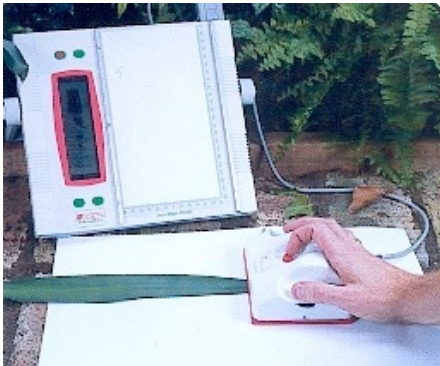
- The AM 100 introduced in 1994
- The AM 200 introduced in 2001
- The AM 300 introduced in 2004

The AM300 is the only field portable leaf area meter available with leaf image display and storage.

Versatile

Applications:

- + Whole leaf area on a variety of plant species
- + Diseased leaf and discolored leaf area
- + Insect damage
- + Long leaves
- + Wide leaves
- + Some roots and rhizomorphs
- + Scan on independent surface

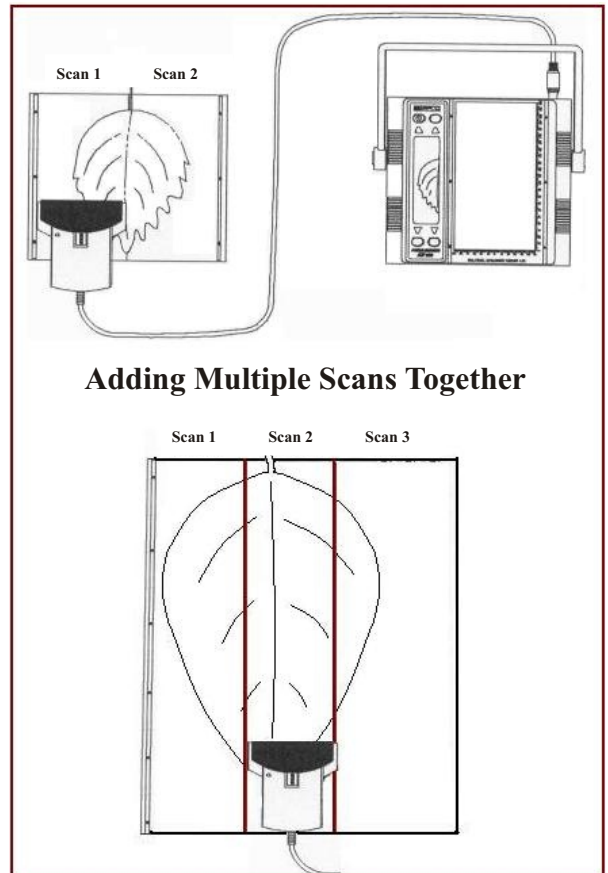


Scanning long leaves - The image on the display scrolls as the measurement is made. The complete image is stored in the file.



Scanning wide leaves - leaves up to 4 inches wide can be scanned on the AM 300 scanning surface. Leaves wider than 4 inches can be measured on a larger scanning surface because the AM 300 can add images together.

Instrument display showing diseased leaf area and measurement values



Attention to detail



- Up to 2000 data / image sets can be stored.
- Review of previously measured data and images is possible on the display screen
- Images and data may be transferred by computer interface
- Automatic time and dated stamp on measurements
- Internal battery backup
- Measurements may be made and stored in mm, cm and inches
- A resolution of 0.065 mm² makes the AM 300 great for Arabidopsis leaves
- 4.4 lbs with carrying handle and carrying bag
- Rugged design with weatherproof case
- Repeatability +/- 1% linear, +/- 2% area, +/- 5% perimeter
- Maximum measurement width on a single scan is 4 inches
- Maximum measurement width with two scans on a flat surface, and combining scans, is 8 inches. Wider leaves may be measured with multiple scans.
- Stored leaf images can be transferred in bitmap or tiff formats to commercially available image analysis systems
- 3000 leaf scans between battery recharges.
- Adjustable and repeatable contrast settings for different leaf samples

Technical specifications

Measured Parameters:	Leaf Area, length, width, perimeter, average area, and accumulated area.
Contrast adjustment:	Contrast may be adjusted to image only the diseased part of the leaf on many types of samples, or the full leaf.
Image scan subtraction and addition:	Multiple scans can be added or subtracted. Subtraction can be used for diseased leaves and addition can be used for wide leaves.
Units of measurement:	mm, cm, or inches
Scanner:	Contact image sensor array with integral LED lamp.
Maximum measurement width:	100 mm, or 200 mm with two scans, adding one image to the other.
Precision or repeatability:	+/- 1% linear, +/- 2% area, and +/-5% perimeter.
Resolution:	0.065mm ²
Memory:	256k bytes RAM, or 2000 data sets
Display:	64 X 240 pixel graphic LCD
Battery:	Nickel metal hydride 1.2Ah
Battery Charger:	Built in fast charger. The system can be supplied with a mains adapter, or it may be used with a 12 Volt car battery
Computer Interface:	RS232C with baud rates from 300 to 57600 xon/xoff or CTS handshake
Printer interface:	Centronics parallel or RS232
Dimension:	275 mm x 250 mm x 30 mm
Weight:	1.8kg, or 4.4 lbs.



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