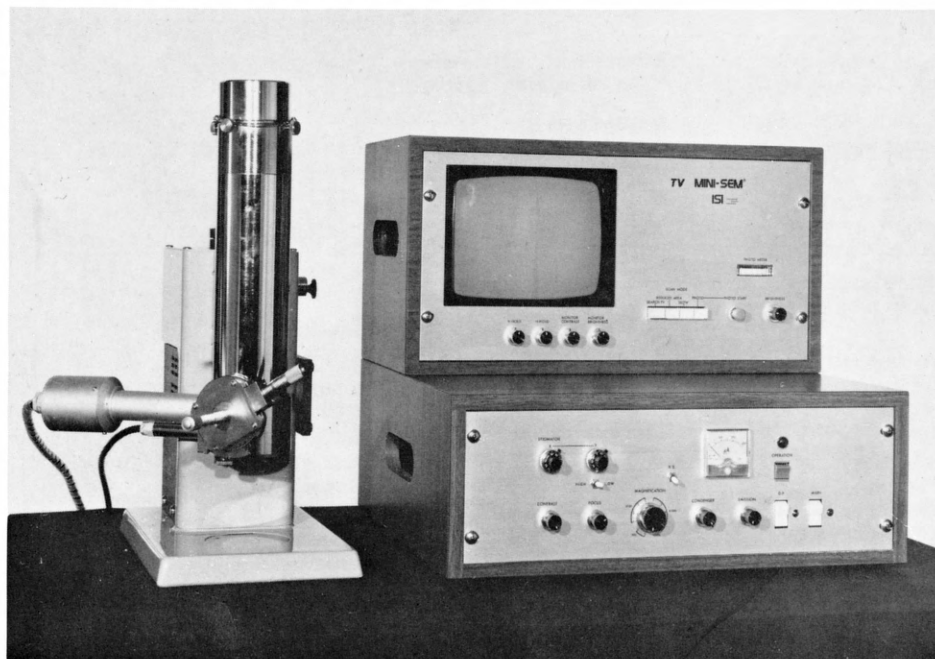


ISI International Scientific Instruments, Inc.

THE TV MINI-SEM®



The first high performance, desk top TV Scan Mode Scanning Electron Microscope priced within reach of every laboratory.

The TV MINI-SEM® represents two years of effort by International Scientific Instruments to satisfy the increasing need for a Scanning Electron Microscope that combines good performance at the lowest possible price.

Capable of producing excellent quality micrographs with magnifications of 5,000X and priced under \$10,000, the TV MINI-SEM® makes it possible for virtually any laboratory to acquire this versatile analytical instrument.

Outstanding Features

Performance

Guaranteed resolution—	Less than 500 angstroms
Magnification range—	20X to 20,000X
Accelerating voltage—	10KV
Lens system—	3 prealigned electromagnetic lenses

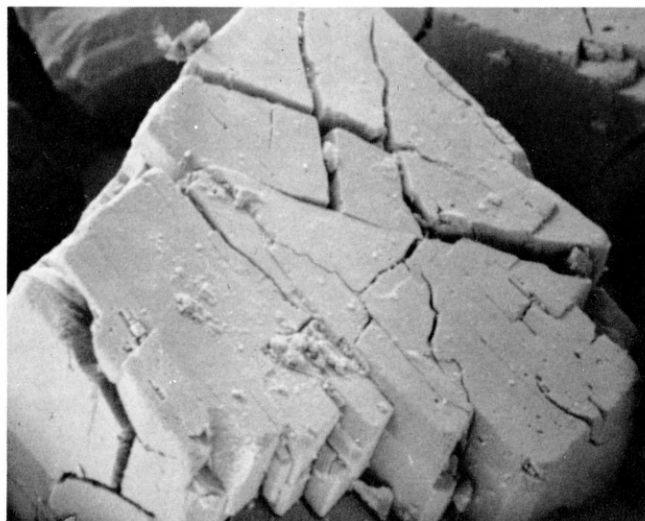
Operation

- Unique TV scan mode selection
- Search mode
- Reduced area mode
- Slow scan TV viewing mode
- Photo mode

- Built-in photometer for perfect micrograph exposure
- Easy specimen insertion
- Rapid pumpdown (less than 1 minute)
- Variety of cameras available for recording

Easy Maintenance

- High reliability—solid state design
- Plug-in electron gun cartridges
- Unique column liner tube
- Entire column never need be disassembled for cleaning



WO₃ magnified 1000X

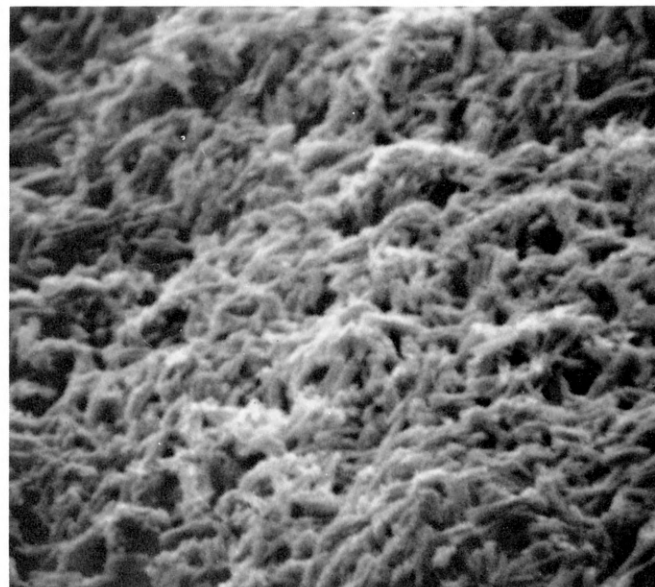
SPECIFICATIONS:

Resolution	Less than 500 Angstroms guaranteed
Magnification	20X to 20,000X (19 steps—direct reading)
Operating Mode	Secondary Electron
Accelerating Voltage	10KV—Fixed
Cathode	Prealigned, Plug-in type (5 assemblies complete with filaments)
Filament	Precentered tungsten hairpin—no adjustment of filament to grid cap is required.
Emission Control	Emission control meter 0 to 300 microamperes. Design prevents accidental burn-out of filaments.
Electronics	Completely solid state (except TV tube & photomultiplier tube)
Electron Optical System	Pre-aligned electro-magnetic 3 lens system. First condenser lens control for varying spot size and electron beam current density. Objective lens control for focusing Stigmator-Electro-magnetic—8 pole with X-Y controls Column liner-column never need be disassembled for cleaning. Objective aperture—prealigned 200 and 300 microns. Aperture holder easily interchangeable.
Scan Modes	TV Rate Search Mode Reduced Area Slow Scan TV Viewing Mode Photo Mode
Display	9" TV Monitor
Photometer	Built in for perfect micrograph exposure
Vacuum System	Pumpdown time less than 1 minute. Air cooled oil diffusion pump and mechanical pump. Volume of column—less than 1 liter. Manual vacuum valve—3 step operation (1 stop, 2 prepump, 3 high vacuum)
Vibration Isolation	Unique design allows TV MINI-SEM® to be installed anywhere. Any desk, table or lab bench is suitable.
Specimen Stage	T-X-Y stage provided standard. Specimen size 15mm diameter x 10mm thick X-Y movement ± 7.5 mm. Tilt Angle -30° to $+60^\circ$.

Safety Features	Vacuum protection circuit. Protection for vacuum leaks and/or improper operation.
Power Requirements	110V AC—60 cycle—1KVA single phase
Water Requirements	None
Dimensions and Weight	Column unit 9" x 13" x 22" (H)—57 pounds Display unit 20" x 20" x 17" (H) 70 pounds Rotary pump 17" x 8" x 12" (H) 53 pounds.

Accessories:

CU-5 Polaroid Camera with special hood—3" lens—4 x 5 film back	3" IC Wafer Stage
Large Specimen Stage	Vacuum evaporator—Model VEF with tilting and rotating stage
Tilting Rotating Stage	E-5000—Sputter Coater
Voltage Contrast Stage	E-3000—Critical Point Drying Apparatus
2" IC Wafer Stage	



Magnetic tape magnified 5000X



International Scientific Instruments, Inc.

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North America—Sales and service located in Los Angeles, Calif.; Denver, Colorado; Chicago, Illinois; Newington, Conn.; Boston, Massachusetts; Atlanta, Georgia; and Ottawa, Canada.

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Manufactured by Akashi-Seisakusho, Ltd., Tokyo, Japan.