

Electron microscopy

Siemens Elmiskop I (1957, from US Steel Pittsburgh)

Accessory diffraction lens controller

Accessory shutter controller with air coil

HT Tank and all electronics included, but no power supply cabinet

Mechanical vacuum pump for roughing/backing

Box of misc. spare parts.

Lens and HT supply units from rack (rack not present)]

Microscope stand

Microscope column sections (lenses)

Homemade control for diffraction lens

Spare tank in EM room

Siemens Elmiskop Ia (2 units, 1964 and 1969)

1964 unit in operation

Exposure meter / electrometer (2 units)

Many spare parts, incl spare HT tank, regulator tank, and cable

Spare HT cable for Siemens Elmiskop

The column from 1969 Siemens Elmiskop

The stand, electronics rack, tank, and measuring resistor tank from 1969 Elmiskop.

Veeco MS-9 mass-spectrometer helium leak detector and Hastings dual-head thermocouple gauge

Modified Denton DV-502 (1960s)

Granville-Philips Film Thickness Monitor (on DV-502)

Granville-Philips ionization gauge controller (on DV-502)

Leybold-Heraus Turbotronix NT150/360 TMP power supply (on DV-502)

Leybold-Heraus Turbovac 150 Turbopump (on DV-502)

Vaian Ratiomatic 843 vacuum gauge controller

NRC 836 Vacuum gauge controller

Leybold-Heraus Turbotronix NT120 TMP power supply

Leybold-Heraus Turbovac 150VH Turbopump

Leybold-Heraus Turbovac 151 Turbopump

LKB Ultrotome 1 (4801A plus 4802A)

15 IVIC knives

2 DuPont knives

3 LKB knife holders

1 Diatome knife

LKB 7801 Glass knife maker (incl. spare glass strips)

Gatan 622 intensified camera for JEOL TEMs

Gatan US 4000 CCD camera for JEOL TEMs

Narashige Model MD 202 micromanipulator

Several stereo viewing devices

Light Microscopy

Reichert transmitted light fluorescence (1960s)

Homemade power supply 6V

Lenses:

Zeiss Neofluor Planapo 40X/0.9 NA oil/water/glycerin 160mm TL

Zeiss Neofluor Planapo 25X/0.8 NA oil/water/glycerin 160mm TL

AO 20X/1.20 NA 160mm TL

AO 10X/0.30 NA 160mm TL

Modified AO condenser NA 1.25

Hungarian DF and "3D" condenser (in wood box with other accessories)

Replaceable front lenses NA 0.8, 0.85, 1-1.2, 1.25

Reichert condenser mounting ring

Leitz polarizing microscope (1938)

Leitz power supply 6V, 85W

Several lenses in wooden box:

100X / NA 1.30 160mm TL

62X / NA 0.85 160mm TL

45X / NA 0.65 160mm TL

10X / NA 0.25 160mm TL

6X / NA 0.18 160mm TL

3.2X / NA = ?

Nikon phase-contrast microscope (1960s)

Nikon power supply 12V, 100W

Lenses:

100X / NA 1.25 160mm TL

40X / NA 0.80 160mm TL

20X / NA 0.40 160mm TL

10X / NA 0.20 160mm TL

4X / NA 0.20 160mm TL

Zeiss Jena Interphako microscope (1970s)

Jena power supply, 12VAC

Lenses:

100X / 1.30 NA TL = infinity

63X / 1.2 NA TL = infinity

25X / 0.5 NA TL = infinity

6.3X / 0.08 NA TL = infinity

HD microscope camera with Samsung Android cellphone for viewing

Zeiss condenser mounting ring

Light microscope stage (unknown mfg)

Parts for microscope stage (unknown mfg)

Digital camera and adapters – for connection to a laptop

Diatom test sample

Zeiss inverted microscope

B&L dissecting microscope

Leica illuminator

B&L illuminator

K. Nagayama plastic copy of Leeuwenhoek microscope

Spare Light microscope lenses

Objective lenses:

Leitz 54X / NA 0.95 170mm TL
Olympus Plan 20X / NA 0.40 160mm TL
Zeiss Planapo 100X / NA 1.25 TL = Infinity
BL 100X / NA 1.25 160mm TL
Zeiss Neofluar 16X NA 0.40 160mm TL
Leitz 170X / NA 1.10-1.32 170mm TL
Zeiss Planapo 10X / NA 0.32 160mm TL
Olympus Planapo 40X/ NA 0.8 oil 160mm TL
AO 87X / NA 1.25 oil WD = 1 mm 160mm TL
BL fl = 24mm / NA 0.2 160mm TL
BL fl = 10.25 / NA 0.40 160mm TL
BL fl = 1.8 mm / NA 1.30 215mm TL
BL fl = 4 mm / NA 0.86 215mm TL
BL fl = 39mm / NA 0.40 215mm TL
BL ? low magnification

Eyepieces:

10X 40mm diameter (2)
AO 10X 23mm
Zeiss 10X 23mm
Leitz 10x 23mm (2)
AO Barlow 23mm
Leitz Barlow 23mm
Zeiss adjustable projector 10X / 18 35mm diameter

Other Instruments

Diffraction attachment for Elmiskop I [already mentioned]
Shutter controller for Elmiskop I [already mentioned]
Photometer/shutter controller for Elmiskop Ia (2 units) [already mentioned]
Polepieces from Elmiskop I #216
Polepieces from Elmiskop I from Pittsburgh
Homemade Siemens plate-numbering device
BL binoculars (66X) with missing eyepieces
JEOL TEM binoculars
Low-end light microscope in wooden box
Spencer Graf/APSCO light microscope with mirror but no condenser (in radio room)
 40X / NA 0.65
 10X / NA 0.25
Photographing attachments for light microscopes, including three 35-mm cameras
 (in wooden box)
Precision Scientific Model 75 mechanical vacuum pump
MacLeod mechanical (mercury) vacuum gauge
Branson B-220 ultrasonic bath
Granville-Philips series 275 full-range vacuum gauge
Dual-sensor Hastings VT-652 thermocouple vacuum gauges (2 units)
Spare ion-gauge tubes and vacuum fittings
NRC 836 vacuum ionization gauge (2 units -- one also in radio room)
NRC 802A thermocouple vacuum gauge
Leitz inverted light microscope with three objective lenses
Wood box for the Leica polarizing microscope in the EM room

Electronic test equipment

Weston 280 mA meter (very early, in original box)
Weston 0 – 0.03 – 0.3 -3 A meter (very early, in original box)
Leeds and Northrup test set 5430-AM-1
US Signal Corps wavemeter TS-117/GP
General Radio 432-N decade resistor box
General Radio 14331 decade resistor
Heathkit DR-1 decade resistor box
Keithly Modell 471/4170 picoammeter
Mechanical electrometer – unknown manufacturer (0-100 scale)
Leeds and Northrup mechanical electrometer (+/1 15 scale)
Rubicon electrometer (Wood box – very early)
Industrial Instruments RC16B2 conductivity bridge
Wavetek Model 180 function generator
Hewlett-Packard function generator
Level Electronics Type 9B DC Multimeter
Manchester, NH Wattmeter (400V, 5A)
Tektronix 5111 storage oscilloscope with no plug-ins
Tektronix 5103N Single-beam storage (1970s, last oscilloscope with plug-ins)
 5A18N Dual trace amp
 5B12N Dual time base

Self-powered in Tek TM503 for 5000-series plugins
AM501 operational amp
PS 503 Dual power supply
DM501 Multimeter

Self-powered in Tek TM503 for 5000-series plugins
PG602 Pulse generator
PG506 Pulse generator
PG501 Pulse generator

Tektronix 561A (1960s, first oscilloscope with plug-ins)
3A74 amplifier (4 channels)
2B67 Time base

Tektronix 564 (1960s, first series-produced storage oscilloscope)
3A1 amplifier
2B67 time base
2A63 amplifier
U-Tech Characteristic curve tracer

Tektronix 2213A oscilloscope (60 Mhz)
Siemens Oscillazet M765 mini-scopes (2 units)
Tektronix 502 Dual-beam oscilloscope (early 1960s, first commercial dual-beam oscilloscope)
Keithly 610 Electrometer (AC supply) (2 units)
Heathkit 1G-42 Signal generator (100 KHz to 30 Mhz)
Yew VOM
Micronta VOM
AVO VOM (to 3000V)
Triplet model 630 VOM
HP 412A VTVM
VIZ VTVM
Micronta DMM
Data-Technology Corp. DMM (with Nixie tubes)
HP 3430A DC voltmeter (100mV to 1000V, Nixie tubes)
RCA WA-44 audio generator
Yellow Springs 43TD tele-thermometer
Metered Variac model 24 W20HMT 3A

Miscellaneous

Sherline 4400 Lathe incl accessories
Sherline 5400 Milling machine incl. accessories

Mitutoyo PJ-250 optical comparator with 10X, 20X, and 50X lenses and right-angle mirror for epi-illumination

Photography and video equipment

Simons-Omega enlarger with Componon lenses with EM film holder
Durst S45EM point-source enlarger
 3 Schneider objective lenses (for 35mm to 3.25x4" negatives)
 12 condenser lenses (85-240 mm)
 Variac for illumination
Jobotronic 2000 exposure controller
Lektra Lab PTM-YA exposure controller
Ilford print processor (uses "Ektamatic" chemicals)
Film reels, racks and tanks for developing
Technal print dryer
Nikon "Super-Coolscan" LS-9000ED film scanner
Backlight light box
Pacific Image PS3650 slide scanner
Kodak P880 digital camera
Star 2000 slide viewer
Kodak Carousel slide projector with case and manual loader
Carson Pro "Magnivisor Deluxe" slide viewer
Home-made slide copier
Olympus flash unit
Olympus Auto Bellows
Right-angle viewer for Olympus OM camera
Accessories for Olympus camera
Olympus OM-1 camera in case
50mm / 1.4 lens on OM-1
85-205mm / 3.8 lens
Two Olympus OM-4 camera bodies
35 mm / 2.8 lens
20 mm / 2.8 lens
28-90 mm / 2.8 lens
Sony TRV-140 camcorder
Grundig multistandard (NTSC, PAL, SECAM) analog TV
Mitsubishi HS-45TO VCR
Panasonic DMT T2020 DVD recorder