



# QA Mamchex Tool – for Kodak DirectView CR Mammography



## Product Description:

The QA MAMCHEX Tool – for Kodak DirectView CR Mammography is a factory X-ray-calibrated NIST/PTB traceable meter that can be used instead of a dosimeter to 1) assess and calibrate automate exposure control (AEC) sensitivity, and density control settings; 2) assess calibration “drift” of the Mammo CR plate reader

## Specifications:

**X-ray energy dependence:** Simulates relative light output of Photostimulatable Phosphor Plate (PSP) within +/- 5% over kVp range of 20kVp to 32 kVp and a patient equivalent thickness range of 2 cm to 8cm (within specified operating rates).

**Digital Range:** Mammo Light Units(MamLU);  
MamLU: 0 to 6553.5

**Minimum MamLU Rate:** 15.0/Sec (approx. 1.5 mR/Sec cassette entrance exposure rate)

**Maximum MamLU Rate:** 3000/Sec (approx. 300 mR/Sec cassette entrance exposure rate)

**Power On/Off:** Manual Switch

**Power requirements:** Built in NiMH rechargeable battery pack (9.6V)

**Operating environment:** 15°C to 35°C (59°F to 95°F)

**Electronic Cassette Dimensions:** Fits 18 x 24 cm Bucky;  
Fits 24 x 30 cm Bucky with L adaptor

**Electronic Cassette Weight:** 1.8kg (3.9 lb);L adaptor 0.73kg (1.6lb)

## Primary End Benefit:

Since the meter has the same energy response to x-rays as the imaging plate, the meter can **take the place of the plate and reader** when assessing the AEC system performance for thickness and kVp ‘tracking’, and density selector settings providing a **tremendous (eight-fold) boost in productivity and hence, cost savings!** The meter can be used by the technologist for QA or by service and biomedical engineers to calibrate the AEC, troubleshoot the X-ray tube, CR plate reader, AEC, and density selector settings. Physicists can use the instrument to assess the performance of Mammo CR systems for compliance to clinical recommendations and breast dose.

## Applications

The QA MAMCHEX Tool – for Kodak DirectView CR Mammography is ideal for use by technologists and QA personnel to periodically check and document the performance of the Mammo CR system and to compare CR to film/screen systems to achieve desired ALARA objectives. Service and biomedical engineers can use the meter to initially calibrate the AEC and troubleshoot the X-ray tube, CR plate reader, AEC, and density selector settings. Physicists can use the instrument to assess the performance of Mammo CR systems for compliance to clinical recommendations and breast dose.

## Product Positioning

The QA Mamchex has the same energy response to X-rays as a Mammo CR imaging plate (X-ray-to-light conversion), and displays an accurate and precise value for the light produced by the plate when exposed to X-rays (MamLU--Mammographic Light Units: which is directly proportional to the light produced by the CR imaging plate when scanned by laser light in the plate reader). The QA Mamchex is the only device of its kind and is available exclusively from DISC Corp. This QA MAMCHEX Tool – for Kodak DirectView CR Mammography device is designed to work with **Kodak DirectView** Mammo CR equipment.

## Demo Instructions

Nothing could be easier. Turn on the QA MAMCHEX electronic cassette and place in the Bucky, or table-top and make an exposure. The self-contained display in the cassette will register three values; Optical Density (OD) for a Kodak MinR 2000 system; Mammo Light Units (MamLU); and radiation exposure time (sec). Comparison to benchmark values can be performed daily to confirm the integrity of the X-ray tube and calibration of AEC and plate reader. The QA MAMCHEX can be used in place of the CR plate and plate reader to perform lengthy AEC or plate reader calibrations and/or assessments. QA MAMCHEX can deliver an eight-fold improvement in productivity over conventional calibration techniques.