## Low Dose Technologies

#### <u>Auto mA</u>

- Auto mA is the state-of-the-art technology that can modulate mA during both axial and helical scanning, maintaining image quality on each slice. Four modes that affect image quality are selectable; IQ, Normal, LowDose & Max.
- mA is optimized based on body size and oval ratio.
- The primary benefits of Auto mA, as less mAs are used during low dose mode, include:
  - Reduces patient dose.
  - Reduces tube cooling wait time.
  - Extends tube life.
  - Expands helical capability by using Low Dose Mode.
- With Auto mA constant signal-to-noise ratio irrespective of patient's body size is ensured; like electric-eye in cameras.

#### **SmartHelical**

- SmartHelical is a unique helical algorithm that can reduce mAs up to 33% while still maintaining image quality.
  - CT/e has 200mA at maximum but virtually has 300 mA in image quality when using SmartHelical.
- The primary benefits of SmartHelical include:
  - Can use thin slices (1,2,3mm) routinesly
  - Excellent image quality by reducing helical artifacts
  - Virtually eliminates tube cooling
  - · Expands helical capability as less mAs are used
  - Eliminates unnecessary patient dose
  - When 3D images are reconstructed with SmartHelical, artifacts are drastically reduced.





## 200mAs Axial Equivalent 140mAs SmartHelical



## **Designed for Patient Comfort**

#### Adjustable Table Height

- CT/e table height can be adjusted from 40 to 90 cm.
- Lowering to 40cm allows seniors and children to sit and lie down comfortably.
- Before scanning, the table height can be adjusted as needed for the scan.
- After scanning, patients are lowered safely and can easily exit.
- Overall this feature minimizes any mental or physical discomfort for the patient.





## **Designed for Patient Comfort**

#### **Breathing Lights**

- Breathing lights are a simple, graphical indicators for patients as when to hold their breath, then begin breathing again.
- Breathing lights ensure the right timing of breaths and are particularly helpful for children, seniors, foreignlanguage speaking, and hearing impaired patients.
- Proper breath hold during the scan can reduce motion artifacts and can lead to better image quality.
- Overall this feature minimizes any mental or physical discomfort for the patient.



Hold and count down remaining time

# Q

## Simultaneity

CT/e's simultaneity brings four useful automated functions. <u>AutoFilming</u>

 Images are automatically printed by a laser printer during scanning. It saves an operation time to fill in a print format. Operators can focus on patient care after scanning rather than operations.

#### <u>AutoView</u>

 Reconstruction starts and images are displayed immediately one after another. You don't have to wait for all of scans to be finished. Priority reconstruction key is available if you want to check the last image immediately.

#### <u>AutoStore</u>

 Reconstructed images are automatically stored into a 5inch MOD(option). It saves an operation time to select and store images.

#### <u>AutoTransfer</u>

 Reconstructed images are automatically transferred to AdvantageWorkstation with DICOM3.0 network capability. It saves an operation time to select and push images.



# Q

## Upgradeablity

#### Upgrade Options

CT/e is upgradeable with the following key options anytime, with minimum downtime.

- 1 second scan speed
- 60 seconds helical
- Fast Recon (3 second)
- 3D software
- Navigator software
- SmartPrep software(Contrast medium monitoring)
- DantaScan software
- 5 inch MOD







## HiLight Detectors

### GE's HiLight Detector Makes the Difference

#### Red Light Output and Photodiode Matching

 HiLight detectors emit strong red light. The peak wavelength 610 nm of the light output is matched to the sensitivity of the photodiode. HiLight is the only scintillator that has the red light output.

#### 99% Absorption Efficiency and Superb Signal-to-Noise Ratio

 HiLight converts 99% of X-ray captured by the detector components into the red light. This high efficiency generates a high signal-to-noise ratio and results in less noisy images.

#### Low Dose Technique & Superb Image Quality

 HiLight's high output reduces technique(mAs) and maintains diagnostic confidence in images. It also prevents patients from taking redundant dose and helps contribute to longer tube life.



### **HiLight Characteristics**



RETURN DU

## **HiLight Characteristics**

## C

### (Explanation of the HiLight illustration)

 Other SSD materials - GOS emits green light(about 510nm in its peak). CdWO4 is blue(about 480nm). Photodiode plays a role to convert light to electric signal. It is supplied to worldwide mainly by one monopolizing Japanese manufacturer. Its maximum sensitivity is in red light range and it effectively meets the GE HiLight's red output(610nm). The light output is approximate 1.5 times as intense as GOS and 2.5 times as CdWO4. It is the reason of getting a high signal-to-noise(less noisy images) and low dose images.

HiLight is the sophisticated detector material developed exclusively for GE CTs. The greatest track record of install base numbers over 10 years proves its excellent reliability and image quality.

## Six Sigma Quality, Reliabilility, & Confidence

### CT/e Quality & Reliability

 Six Sigma is a GE Corporate Initiative to increase the quality of everything we do. Design for Six Sigma (DFSS) means that our products, processes, & services are not only customer driven, but customer defined. CT/e is a DFSS scanner. The result is a product that offers enhanced financial viability through highly reliable components, optimized user interface, & streamlined operation.



### **Global Installed Base & Customer Satisfaction**

- We introduced CT/e in NOV '99 and as of January '01 we have over 400 installed globally!
- CT/e is being used in a range of facilities around the globe providing ample opportunity to share information with your peers.
- CT/e customers are impressed with the many highquality features, performance, & similarities between CT/e and the rest of GE's CT product line; at a price point they can afford.

"Our patients are seeing and feeling the difference. We have been able to do new exams using CT that we could not before"

Paula Walker, RN, Director of Radiology Franklin Medical Center

"I know GE spends money on R&D, and always stay up with the latest & greatest technologies. I knew in buying GE's HiSpeed CT/e, we would get quality, service, and the strong GE backing to which I'd become accustomed. All in all, CT/e met the most important criteria we sought." John Kanski, Director Downstate Diagnostic Laboratories Corporation Q

113

### CT/e Global Installed Base



China	129	Germany	11	Turkey	3	Tunisia	2	Uruguay	1	Lebanon	1
Japan	101	Spain	10	Argentina	2	Chile	1	Australia	1	South Africa	1
Italy	25	Venezuela	8	New Zealand	2	Colombia	1	Vietnam	1	Yugoslavia	1
Brazil	23	Russia	5	Poland	2	Honduras	1	Indonesia	1		
US	22	Portugal	5	France	2	Jamaica	1	Denmark	1		
India	12	Mexico	3	Morocco	2	Panama	1	Hungary	1		

#### 383 units...and GROWING!!!