

QUATTRO is a programmable 2-axis motion arm and semi-anthropomorphic, TEM phantom

Vertical motion for breathing surrogate motion
e.g. reflective block on Varian RPM

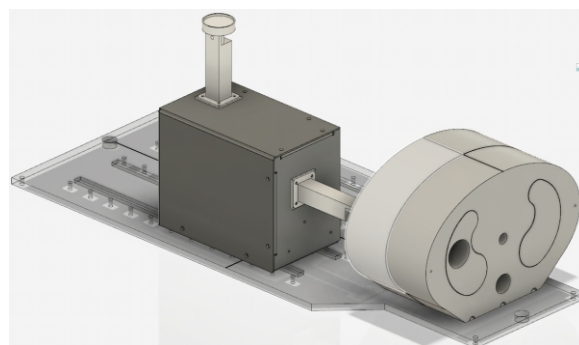
Horizontal motion for inserts within the phantom to be imaged/treated
e.g. simple 'tumour', TLD/film dosimetry, PET 'lung' insert, etc

Features

- Programmable Z-axis motion (speed 0 - 7.5cm/s, distance range of 6cm)
- Maximum error in timing of 1.4%, typically within 0.3% of intended
- Clamp to affix cylindrical inserts
- Mains powered
- USB interface
- Start and Reset buttons
- Stores last program uploaded
- Free software
- Semi-anthropomorphic phantom
- Series of inserts for QC of 4DCT, dosimetry, PET etc.

Benefits

- Dynamic image quality scoring for
- CT and PET



Ask for optional items:

Bespoke phantoms
and layouts



File builder

Define simple waveforms for the phantom

e.g. sine wave, 2 cm peak-to-peak amplitude at 10 breaths per minute for simple QA testing

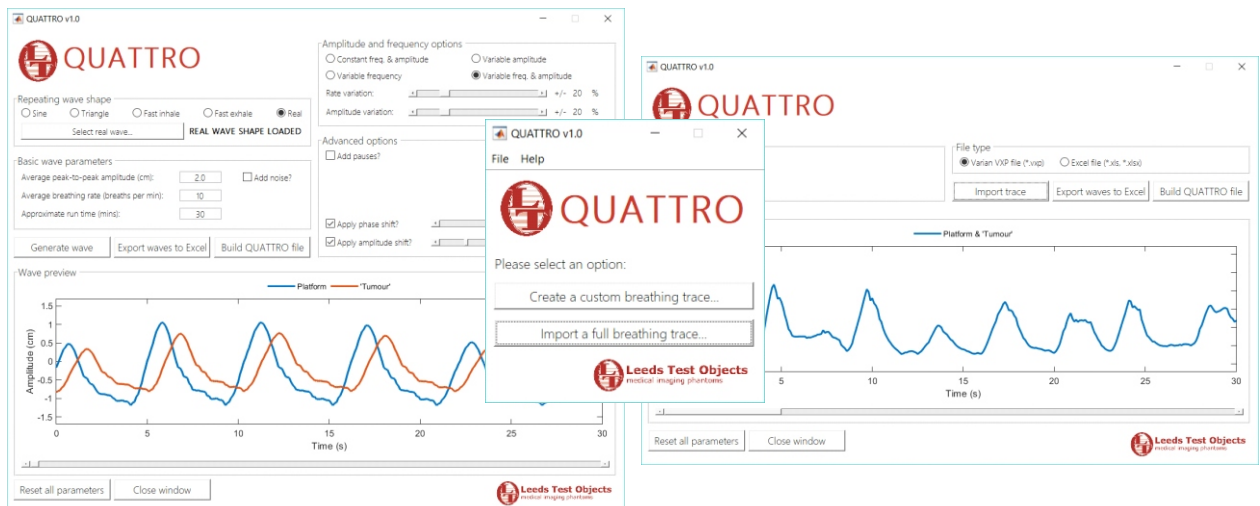
Generate complex waveforms

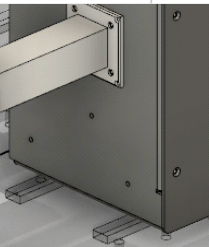
e.g. real breathing pattern at nominal 2 cm amplitude and 10 breaths per minute (but with random variations in amplitude and rate), random pauses, offset motion, etc.

Import real breathing traces

i.e. exported from motion management system

Currently able to directly import Varian (.vxp) and Excel (.xls, .xlsx) files





For sine waveform, 6 cm amplitude at 23 bpm is possible
Note, additional options may impact on performance but software always informs the user if a waveform is not deliverable

With real patients, 1-2 cm amplitude/ 6-20 bpm is more typical

For 2 cm amplitude, the QUATTRO can go up to 80 bpm for a sine wave!

Uploader

Can create a library of files offline and then upload when required with separate software tool

Upload tool also has a set of simple 'Examples' built in, ready for upload to the phantom e.g. sine and triangle waves of varying amplitude and speed

