

CLAIMS

1. A nasogastric tube comprising a nasogastric tubing having first and second ends, a power supply part located at or adjacent the first end, and a transducer part located at or adjacent the second end for transmitting or receiving an ultrasound-based signal.
2. A nasogastric tube according to claim 1, wherein the transducer part is sealed within a distal tip located at the second end.
3. A nasogastric tube according to claim 2, wherein the distal tip is at least substantially dome shaped.
4. A nasogastric tube according to any one of the preceding claims, wherein the power supply part is a power connector for connecting a power supply to the transducer part.
5. A nasogastric tube according to any one of claims 1 to 3, wherein the power supply part is a power supply for supplying power to the transducer part.
6. A nasogastric tube according to any one of the preceding claims, wherein the tubing comprises a first lumen extending along a length of the tubing, and one or more apertures extending through the tubing into the first lumen at or adjacent the second end thereof, the first lumen allowing fluids including food and medicine to be transferred therethrough and from the one or more apertures.
7. A nasogastric tube according to claim 6, wherein the tubing comprises a second lumen extending along the length of the tubing and separate from the first lumen, the second lumen supporting a wiring system therein electrically connecting the power supply part to the transducer part.
8. A nasogastric tube according to claim 7, wherein the wiring system is a twisted wire pair.
9. A nasogastric tube according to any one of the preceding claims, wherein a radiopaque line extends along the length of the tubing.

10. A nasogastric tube positioning system comprising a nasogastric tube according to any one of the preceding claims, and a control module comprising an at least one detector portion and a processor, wherein ultrasound-based signals are transmittable between the transducer part and the at least one detector portion, the processor being adapted to record the time taken for the ultrasound-based signal to travel between the transducer part and the at least one detector portion, and to calculate a distance between the transducer part and the at least one detector portion to thereby locate the transducer part.
11. A nasogastric tube positioning system according to claim 10, wherein the control module comprises two said detector portions located a fixed distance apart.
12. A nasogastric tube positioning system according to claim 10, wherein the control module is a handheld scanner having a housing for accommodating the detector portions.
13. A nasogastric tube positioning system according to any one of claims 10 to 12, further comprising a power supply within the housing for providing electrical power to the transducer part and the detector portions.
14. A nasogastric tube positioning system according to any one of claims 10 to 13, further comprising a display screen for showing when the detector portions are shaped equidistant from the transducer part.
15. A nasogastric tube positioning system according to any one of claims 10 to 14, further comprising a device for displaying a light or audio signal when the detector portions are shaped equidistant from the transducer part.
16. A detection method for a nasogastric tube positioning system according to any one of claims 10 to 15, comprising transmitting an ultrasound-based signal between the transducer part located at an end of the nasogastric tube and at least two said detector portions, recording the time taken for the ultrasound-based signal to travel between the transducer part and each of the detector portions, calculating the distance between the transducer part and each of the detector portions, and determining when the detector portions are equidistant from the transducer part to thereby locate the transducer part.

17. A detection method according to claim 16, comprising selecting the transducer part as a transmitter of the ultrasound-based signal, with the detector portions being ultrasound receivers.
18. A detection method according to claim 16, comprising selecting the detector portions as transmitters of the ultrasound-based signal, with the transducer part being a ultrasound receiver.
19. A detection method according to any one of claims 17 to 19, comprising scanning an abdomen of a patient in a first direction initially until the detector portions are equidistant from the transducer part, and subsequently repeating the scan in a direction that is 90 degrees from the first direction.
20. A method of manufacturing a nasogastric tube, comprising providing a tubing having the first and second ends, coupling a power supply part to the first end thereof, and a transducer part to the second end thereof, the transducer part being embedded into a distal tip of the second end.