

Round Solutions design in examples

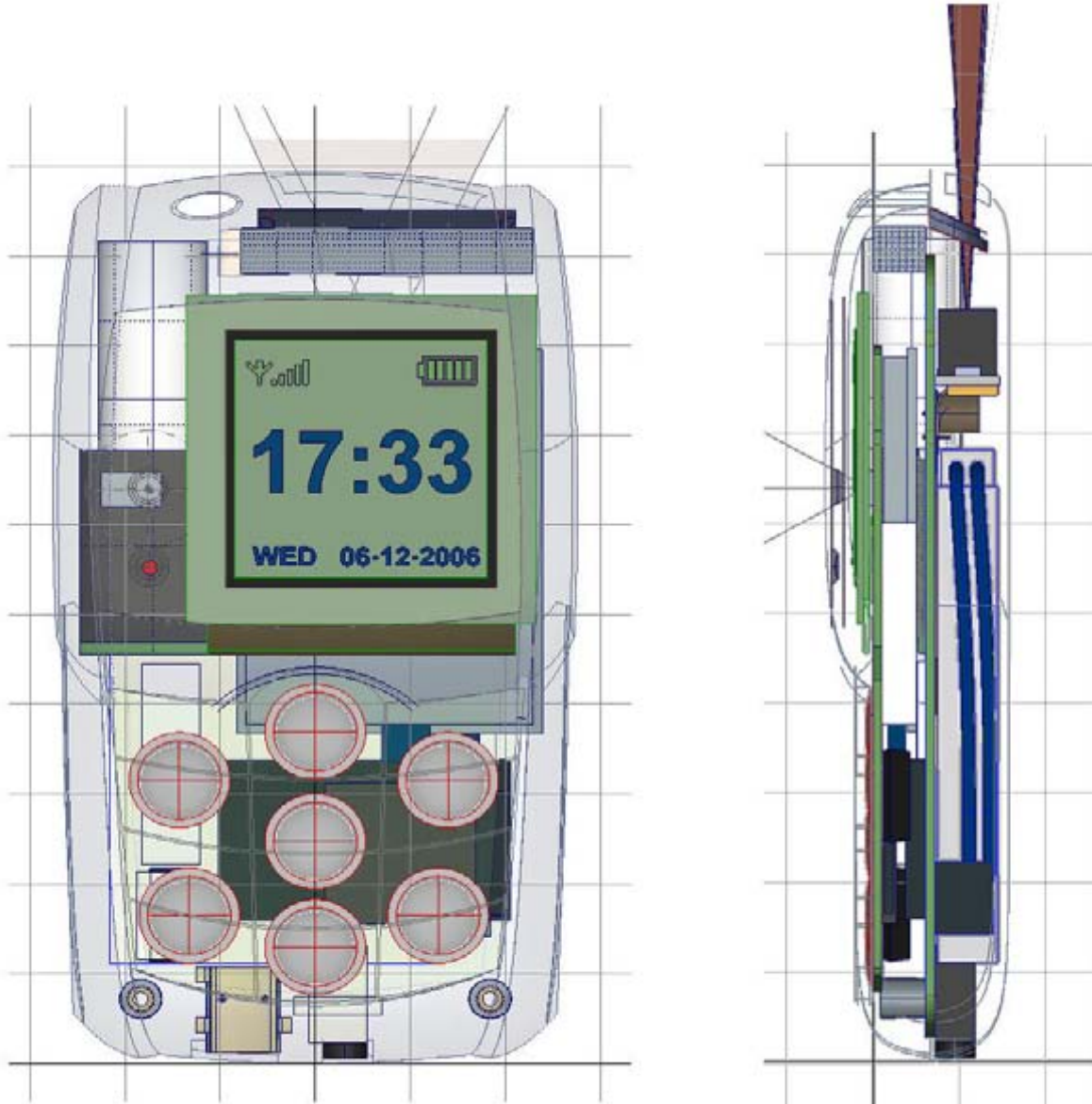
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1 Special mobile phone based on GE864

1.1 Transparent few of the special mobile phone

On top of the LCD display you can see the tiny embedded ceramic antenna inside this customised mobile phone.

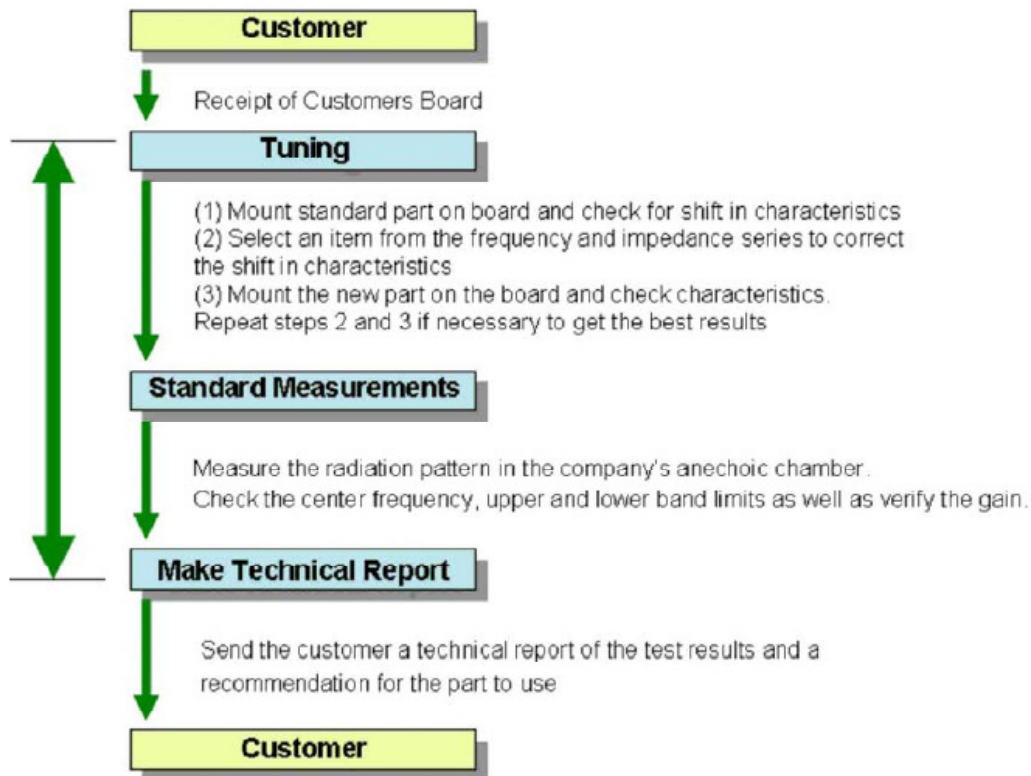


1.2 Top few and back few of the special mobile phone

The size of this customised phone is 99 mm x 55 mm only. It has high sensitivity on its optimised ground plane. We build a mobile phone around an existing field approved embedded antenna of Round Solutions. From first meeting and consulting to a running prototype it was just a few weeks only.



1.5 Tuning work flow



1.6 Do's and don'ts in antenna design

Numerous things can go wrong with an antenna design. The following list provides a few do's and don'ts which may serve as a good checklist in a final design. Many of these items seem obvious to the experienced antenna designer, but many of these issues are routinely encountered in practice. This is obviously not a complete list.

- Never place ground plane or tracks underneath the antenna
- Never place the antenna very close to metallic objects
- Be careful about the wiring in the finalized product, not too close to the antenna
- A monopole antenna should have a reasonable ground plane to be efficient
- Do the final tuning in the end product, not in free air
- Never install a chip antenna in a vastly different layout than the reference design, and expect it to work without tuning
- Do not use a metallic enclosure or metallised plastic for the antenna
- Test the plastic casing for high RF losses, preferably before production
- Never do a cut and paste antenna design and expect it to work without testing
- Never use low-Q loading components, or change manufacturer without retesting
- Do not use very thin PCB tracks, the tracks should be fairly wide

2 Further applications based on our GPRS modules

2.1 Tracking device for Alzheimer patients

A GSM /GPS device in a size of a watch of a diver.



3 Tracking devices made by Value Added Partners

Round Solutions Value Added Partners are interested to design products for other companies that will order later on from Round Solutions.

3.1 Tracking device to track kids

A GSM /GPS device to track kids. On right picture you will find our tiny GSM antenna again. The GPS patch antenna is on the other end of the PCB to minimise interferences.



3.2 Tracking device inside a pack of bank notes

A GSM / GPS based tracking device to track bank notes.



3.3 ISM band based Tracking device to track falcons

It is an ISM band / GPS based tracking device with a weight of 15 gram including RF transmitter, battery and our tiny embedded GPS antenna. Sorry, but we have no pictures yet.

3.4 GSM based Tracking device to track falcons

A GSM / GPS based tiny ultra light tracking device will follow later on. Sorry, but we have no pictures yet.

3.5 Study of a GSM / GPS based tracking device to track dogs

A GSM / GPS based tracking device to track dogs.

