Date: 2019-03-20

CONFIDENTIALITY REQUEST CONTAINED WITHIN

Re: ImpulseRadar Sweden AB, application for Ground Penetrating Radar
FCC ID: 2ALZQ-Raptor-80TX

Dear Sirs,

ImpulseRadar Sweden AB, Storgatan 78, SE-939 32 Malå, Sweden, herein submits an application for Equipment Authorization for certification of a ground penetrating radar system under the FCC Rules Part.

ImpulseRadar Sweden request, pursuant to sections 0.459 and 0.457(d) of the FCC rules, long term confidentiality for portions of the material contained in this application such that the identified material will be withheld from public inspections following the grant of this authorization. This material indicated by request for confidentiality for the items during the electronic submission process, includes all material holding information that would be confidential, had this application not been submitted and further identified below:
- Schematics
- Operational description
- Block diagram
- Internal photos

Specifically, this material contains information relating to circuit function and systems design that could be of benefit for competitors. This material contains trade secrets and confidential information that ImpulseRadar Sweden does not customarily release to the public and which is not otherwise available to the public.

ImpulseRadar Sweden AB has spent substantial effort in developing this product and it is one of the first of its kind in the industry. Having the above-mentioned information easily available to competition would, in short time, negate the advantages this product has in the marketplace. Not protecting the details of the design will result in financial hardship.

We also refer to the following applications for which the same material has been granted confidentiality:

- FCC ID: QF742600, date: 12th of May 2016
- FCC ID: QF750350US, date: 5th of February 2017
- FCC ID: OPLQM1020, dated 17th of August 2016
- FCC ID: QLAWIDERANGE, dated 27th of September 2017
- FCC ID: QF750200HS, dated 4th of February 2019

A rationale, justifying the confidentiality is provided in the following pages.

Rationale for confidentiality request:

The product line to which this device belongs is marketed world-wide to specialists in the field of utility-locating/mapping and geophysical surveying. The distribution is managed through our own distribution network and our own sales offices. The market-place is a typical niece-market with 5-6 players on the international scene, of which the largest employs around 70 people. Given the small size, and limited resources of the players, it has become industry standard to safeguard the trade secrets and technical know-how by making it hard to open and inspect instruments as well as by not revealing the precise composition of the subsystems within each product in user manuals and other documentation. Larger corporations usually protect their intellectual property by patents and/or other legal means, but this is not widely seen in our industry. It's simply too expensive for companies in this niece to defend such rights internationally.

The price of a system containing the referenced product, to end-clients, is within 10 000 – 20 000 USD, dependent on specific configuration with respect to software and mechanical accessories. Service/repair is taking place only in our headquarters in Sweden. Material and information necessary for repair (such as schematics, blueprints and component lists) is never given out to distributors or end clients, its being held and maintained internally only.

It follows from the price range, the distribution/repair network and the niece type of market, that the application does not refer to a consumer product, furthermore we have explained that the unit is sealed and that specific measures have been taken to discourage customers from opening the units and that should someone anyway try, the likelihood is very high that the unit is destroyed beyond repair. The minimum cost for obtaining the information for which we seek confidentiality is hence the retail price of the unit. This cost may seem small, but in a marketplace with only small companies it still considerable, furthermore it is well above the cost of downloading from the internet. Since a great deal of expensive and proprietary engineering is revealed by the internal photos and that we may suffer competitive harm, we feel that our request is well underbuilt.

The application refers to a new and novel product, a result of 2 years' effort by our engineering group. In this development, we have finely tuned the product to match the applications it's built for. A knowledgeable competitor will get a jump start in his efforts by reviewing the block schematic and operational description. He may not be able to build a unit from these documents but he will get very specific hints on where to start and which kind of components to search for. This may save him considerable time, at our expenses, should the material be made publicly available.

The same holds true about the schematics and component lists. But with this additional information we also would provide information, indirectly, to knowledgably electronic engineers on how to raise the output power of a unit, beyond the limits permissible by the FCC emission masks. It may therefore be counterproductive, from FCC's point of view, to publish this kind of information.

In addition to the harm we may suffer from competitors obtaining technical knowledge about our product line we may also suffer from competitors estimating our gross margins. By viewing the internal photos, block schematics, functional description and electronic schematics and component lists, it may not be hard for a competitor to judge the manufacturing costs of the electronic boards and the man-hours required to assemble the product. The may also get a good hint on what our future plans looks like. We consider this kind of information as trade secrets, and even if competitors would not get precise values, they would be able to estimate these numbers to a much higher degree of precision, had the information not been public.

I have explained why we are at risk of suffering competitive harm, how the material we seek confidentiality for is protected and that it's not publicly available from other sources. Furthermore, I have pointed to that it may not be in the public's (FCC's) interest to publish information which can be used to violate emission masks. Formal, legal basis of our request may be found in the following two references:

1) McDonnel Douglas Corp. v. NASA, 180 F.3d 303, 304-05, (D.C. Cir. 1999), quoting Critical Mass Energy Project v. NRC, 975 F.2d 871, 879 (D.C. Cir. 1992)(en banc). See also National Parks & Conservation Ass'n v. Morton, 498 F.2d 765, 770(D.C. Cir. 1974).
2) Worthington Compressor. Inc., v. Costle, 662 F.2d 45, 51 (D.C. Cir 1981), citing National Parks & Conservation Ass'n v. Morton, 498 F.2d 765, 770 (D.C. Cir. 1974).

Further clarifications on what measures we take to withhold the inside of our products from inspection by the public, is provided in separate document.

Sincerely

Bernth Johansson
CTO
ImpulseRadar Sweden AB