Radiodetection Limited
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FCC ID: K68ND2415B
- Application for Equipment Certification

Overview of Submission

Introduction

This submission relates to the following products:

Product	Radiodetection Part Number	FCC ID
Datasonde	10/ND2415-P	K68ND2415B

This product forms part of the Radiodetection Drilltrack system which is described in the User Manual (electronic file G2 User Manual.pdf). The DrillTrack system is designed to provide the operator of a horizontal directional drill machine with information on the drillhead. Datasonde type 10/ND2415-P is part of a family of similar datasondes. Applications for equipment certification have also been made for the following datasondes types:

Datasonde	10/ND2415-Y	K68ND2415A
Datasonde	10/ND2415-G	K68ND2415C
Datasonde	10/ND2415-OR	K68ND2415D

These products differ in that they transmit at differing frequencies and/or power levels. The above products are manufactured from the same hardware and software except:-

a) The crystal oscillator fitted to PCB ND2415/D has a different operating frequency for products 10/ND2415-Y and 10/ND2415-P than types 10/ND2415-G and 10/ND2415-OR.

b) The links on PCB ND2416/D are different for each product.

c) a different metal housing is used for products 10/ND2415-Y and 10/ND2415-G than types 10/ND2415-P and 10/ND2415-OR.

For this reason, except for different housing drawings (ND2415.N1 and ND2415.N2), all manufacturing drawings are the same for all four products.

Request for Material to be Withheld from Public Inspection

This is contained in electronic file ConfidentCase.doc

ID Label/Location Information

The FCC ID is permanently pin stamped on the product as shown on drawing ND2415.V1 (electronic file ND2415-V1.jpg)

The label required by 47CFR15.19(3) is shown in electronic file label.jpg. This is an undersurface silkscreened plastic label that is affixed to the product by a permanent adhesive. The location of the label is shown on drawing ND2415.V1 (electronic file ND2415-V1.jpg).

Block Diagrams

A block diagram of the hardware is shown in electronic file - Hardware Diagram.jpg. A functional block diagram is shown in electronic file – Y-P Functional Diagram.jpg.

Schematics

Circuit schematics are as follows:

Part Number	**Drawing Number**	**Electronic file**
09/ND2415/D	ND2415.A sheets 1 & 2	ND2415-A-1.pdf & ND2415-A-2.pdf
09/ND2416/D	ND2416.A sheets 1 & 2	ND2416-A-1.pdf & ND2416-A-2.pdf
09/1088/D	RS1088.A	RS1088-A-1G.jpg
09/1089/D	RS1089.A	RS1089-A-2A.jpg

Antenna

A schematic of the antenna is shown in electronic file – antenna schematic.doc. The specification drawing for the antenna windings is shown in electronic file ND1327-W2-SPEC.jpg. The antenna is self tuned when operated at 33 kHz nominal, but is tuned by a capacitor, which is switched in circuit, when operated at 8 kHz nominal.

User Manual

The user manual is contained in electronic file – G2 User Manual.pdf. This User Manual covers the complete Drilltrack System that includes the datasonde. Note datasonde type 10/ND2415-P is referred to as a Long Range Dual Frequency Datasonde (LDF Purple).

Operational Description

The circuit functions and operational description is contain in electronic file – Y-P Circuit functions.doc.

For and on behalf of Radiodetection Limited,

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