

**FCC CLASS II PERMISSIVE CHANGE APPLICATION**  
**FIELD DISTURBANCE SENSOR**

Model: TMAN II

FCC ID: SFX-TMAN

Grantee Code: SFX

Product Code: -TMAN

Date of Original Grant: 21<sup>st</sup> October 2004

Manufacture and applicant:

Interactive Sports Games (ISG) A/S

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July 25, 2006

**Description of Product as Marketed.**

The model TMAN II is marketed as a TrackMan™ Radar Unit. Together with a computer installed with TrackMan™ application software, the TMAN II forms the TrackMan™ system. The TrackMan™ system enables the user to measure flight paths of sports balls.

**Rules.**

The TMAN II will be operated under FCC rules CFR 47 part 15 subpart C, §15.245.

**Type of emission:**

Fixed frequency, continuous wave

**Frequency range:**

Fixed frequency in 10.500 to 10.550 GHz range, factory fixed.

Note that the original grant was only given for 10.0095-10.0105 GHz, but now the emission measurements have been made at the edges of the band, to allow for grant in the entire frequency band 10.500-10.550 GHz.

**Range of operating power values:**

When transmitting, the power is fixed at 500 mW equivalent isotropic radiated power. The system only transmits when arm by the user. When the system is not armed all the microwave components are turned off.

**Maximum power rating of applicable rule:**

The maximum field strength rating as defined in §15.245 is 2500 mV/m at 3 meter distance. This corresponds to an equivalent isotropic radiated power of 1874 mW.

**DC voltage applied and dc current the final frequency amplifying device for normal operation:**

The frequency is generated and fully amplified in the oscillator circuit. This device is supplied with +12 V DC and consumes totally 180 mA.

**Change Contents:**

The cabinet is changed to a plastic cabinet and the motorized legs are now integrated in the front cabinet.

The USB hub, USB memory and A/D converters, is now all integrated in the newly designed Camad-board.

The power supply board PSU-100 now also consists of motor driver circuits and electronic switches are also placed on this board to control power to Camad-board and microwave components.

The servo-board Servo-2 is now limited to consist of only the leveling sensor, data from the board is now transmitted via a SPI bus to the Camad-board.

The motorized legs are now controlled from the Camad-board, via the driver circuits on the PSU-100 board, earlier they were controlled by an analog circuit on the servo board.

All the microwave components are identical to the previous version of the product.

**The following Attachments have changed:**

1. Confidentiality request letter
2. Agent authorization letter
3. TMAN II installation and operation manual
4. Operational and Technical description
5. Block diagram
6. Schematics
7. Report of measurements
8. External photos
9. Internal photos
10. Test setup photos
11. Label and location

**The following Attachment is unchanged:**

12. Maximum permissible emissions (MPE)

July 25, 2006



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