

Equipment Authorization Division  
**Federal Communications Commission**

Request for Permanent Confidential Treatment of Exhibits to Application for Equipment Authorization for the **JANUS® HOTPass® Interior OBU**, JQU802120

On behalf of Kapsch TrafficCom IVHS ("IVHS"), we request confidential treatment for the following exhibits filed with IVHS's application for equipment authorization for the **JANUS® HOTPass® Interior OBU**, JQU802120 being filed concurrently:

JANUS® HOTPass® Interior OBU - OPERATION DESCRIPTION

JANUS® HOTPass® Interior OBU - SCHEMATICS and PARTS LIST

JANUS® HOTPass® Interior OBU - BLOCK DIAGRAM

JANUS® HOTPass® Interior OBU - VOLTAGES, CURRENTS AND TUNE UP

IVHS requests that these exhibits be treated as confidential and withheld from public inspection in accordance with Section 0.457(d) (trade secrets) of the Commission's Rules, pursuant to Section 0.459(b) of the Commission's rules.

These exhibits were submitted to the commission in support of IVHS's application for equipment authorization and provide the additional detail needed for the Agency's staff to properly evaluate the equipment. IVHS's practice to file a request for confidentiality at the time it submits an application for equipment authorization is intended to provide information relevant to the FCC Processing of its application without public disclosure of proprietary information.

These exhibits contain highly confidential and proprietary technical information about the equipment design and operating characteristics and internal construction.

IVHS provides the following information in support of its request for confidential treatment of these exhibits:

- (1) This equipment is used for intelligent transportation systems (ITS) applications, primarily roadway safety enforcement, traffic monitoring, and tolling operations applications. Its design is intended to meet the stringent robustness and security requirements of the 24 member E-ZPass Interagency Group of toll authorities operating in 13 states in the northeast, who are responsible for collecting billions of dollars in toll revenue annually.
- (2) These applications are public services that are largely deployed and managed by government agencies. The integrity and security of these systems is critical to their ongoing operation, and they require that the product design inhibit the production of counterfeit devices and the avoidance of roadway safety



enforcement or toll payments. One aspect of that security is to restrict casual view of the internal workings of the IVHS equipment, to avoid any incentive for end users to tamper with the devices.

(3) This equipment is expected to be used for more than a decade in some cases. Moreover, this equipment will be used in revenue collection (i.e. toll collections) where it is important that its design and operational details not be made available to unauthorized persons who might attempt to use knowledge of such details to compromise the applications for which the equipment will be employed.

(4) This equipment is not a consumer device; it is provided to the public under a contract with the agencies that offer the ITS applications. The equipment contains unique electronic identification as well as physical unique identification through which it is individually trace-able to the user and to the vehicle(s) to which it is registered by such agencies.

(5) The equipment is a listen-before-talk device. It will only transmit in the presence of a substantially higher power site-licensed roadside transmitter and outside such sites is a non-radiating device.

(6) The equipment contains no provisions for service or repair. Outside of documentation supplied to the agencies under non-disclosure, there are no documents or manuals detailing the operation of the device that would permit a member of the general public to ascertain the operation of the device.

(7) There is no value to a member of the public modifying this equipment to operate outside the FCC granted performance since they cannot provide any added functionality beyond the purposes of the contract with the agency. There is no incentive to a member of the public modifying them to operate outside the FCC granted performance since it could prevent them achieving the benefits of the contract.

(8) The equipment is non-service-able sealed device, employing an ultrasonically welded polycarbonate case approach to realize the seal. This method was selected by MARK IV and accepted by the E-ZPass Interagency Group as being sufficient to prevent members of the general public from getting inside the units. MARK IV has made nearly 35 million of such devices, most using the same ultrasonically welded polycarbonate case approach. We are not aware of a single instance where an end user has cut open the case and changed the operating characteristics of the radio.

(9) In our opinion it would be virtually impossible for an end user with common tools to open the equipment without leaving evidence of tamper. Further, should a user ever obtain access to the internals of the equipment, the circuitry contains no provisions that would permit the user to significantly modify the transmission characteristics. In particular:

- Each equipment contains no provisions for service or repair.
- Outside of documentation supplied to the agencies under non-disclosure, there are no documents or manuals detailing the operation of the equipment that would permit a member of the general public to ascertain the operation of the device.

- The majority of the equipment functionality, in particular the control of reception, the generation of transmit signals and control of transmit modulation and power are implemented in a proprietary ASIC.
- The transmit power level is a function of the ASIC transmit control and the battery voltage. Any attempt to cause the battery voltage to increase significantly will destroy the circuits, and prior to this will significantly change the receiver operating point, which is defined by the proprietary ASIC in conjunction with the battery voltage.
- The equipment will only transmit if it receives an appropriate transmission from a roadside reader, and hence it can only transmit when in the presence of a specific high power transmitter at the right power level with the right signal information. Significant modification of the operating point can prevent operation, or cause mis-operation, with the roadside reader which would become noticeable to the operating agencies.
- Any attempt to significantly modify the circuitry without knowledge of the exact specifics of operation, which are not public knowledge, will prevent the equipment from operating in the manner for which it is intended.

(10) Further, IVHS competes with a number of companies that are developing and marketing similar transponders for ITS applications. Disclosure of such information to competitors could compromise IVHS's ability to develop this technology, in that other companies could reverse engineer products using this information.

(11) Disclosure would cause IVHS to relinquish valuable proprietary information about the technologies it has developed and its manufacturing processes. Disclosure would also offer competitors an unwarranted insight into the state of IVHS's product development thereby allowing competitors an unfair advantage that would otherwise be unavailable to IVHS.

(12) IVHS is careful in protecting proprietary aspects of its equipment design and processes. The information for which confidential treatment is sought has been kept confidential from public disclosure by IVHS and has not been made available to third parties except pursuant to non-disclosure agreements.

In conclusion therefore, IVHS requests that the information in the referenced exhibits be withheld from public disclosure until and unless IVHS notifies the Agency that such information may be publicly released. Our goal is simply to keep the information confidential as that is in the best interest of the public transportation agencies relying upon our technology. Confidential treatment of exhibits, such as these, allows IVHS to provide a full technical description of the equipment to the FCC, which disclosure is in the public interest. Refusal to treat such documents as confidential would result in submission of insufficient information on which the FCC could base its decision to grant authorizations and delay deployment of these new and improved devices for ITS applications.

