Appendix A

Non-Conformities for US Radio Equipment Authorization

Non-Conformities FCC ID: O6XTG501 (CKC CS Ref # E08-000123-FCC-01)

The items listed below represent requests for information following review of this application for certification under United States (FCC) regulations. Further question may arise pending review of responses to these items.

OK	ID	#	Non-Conformity or Comment	Submitted Response	Respondent / Date of Response
x	A	1	Item 13 of the application is marked as a "composite device". Please verify whether this is a mistake and correct the application accordingly.	They do have multiple transmitters but there was a query that was opened with the FCC by Randy please speak with him to find out what the definitive answer is. They operate with 2 different specifications 15.231 and 15.231E but both of them can be filed under 1 equipment class. Therefore they can both be filed on one application under DSC if it is a transmitter only DSR if it is a Transceiver.	Mike Wilkinson 7/15/08 Randy Clark 12/8/08
x	C	2	Both 15.231(a) and 15.231(e) are listed on the application. However, 15.231(a) is " restricted to the transmission of a control signal such as those used with alarm systems, door openers, remote switches, etc. …. Data is permitted to be sent with a control signal ". The provided user manual and operational manual described the product as " Beacon tag transmitting a unique ID & data at pre-set intervals or at will by user" and " transmit its unique identification with a predefined time-interval," without the mentioning of a control signal. Please clarify how this product meets the data is permitted to be sent with a control signal	Update PI sheets (family and individual) should address ID C #2, #5, #10, and #12 I have sent this on to the customer. Then when I was talking to Eddie about a couple of Agent issues that he had with this application I found out that this may actually go to Randy since he is the one that told me to input both 15.231(a) and 15.231(e). Please have randy explain his	Edward Gonsavles 12/8/08 Mike Wilkinson 7/15/08

				reasoning. Thank you. They operate with 2 different specifications 15.231 and 15.231E but both of them can be filed under 1 equipment class. Therefore they can both be filed on one application under DSC if it is a transmitter only DSR if it is a Transceiver.	Randy Clark 12/8/08
			12/14/08: It is unclear whether a Control signal is always sent with data stream as required by 15.231(a). On page 12 of the user manual, please verify whether The ancillary data is the control signal while operating in "standard trans mission mode "? Likewise, please verify whether the Alarm bit is the control signal while operating in " Temper Alert mode" and lastly, please identify the control signal when the device is operating in Movement Alert Mode .	***When the device is in alarm mode, the first transmission in the Alert Tx rate is both a control signal and transmission. The reader firmware is always monitoring tag transmissions. A tag always starts up in Standard Transmission Mode, therefore at a rate of no less than ten seconds. The reader sets a counter for any unique tag ID and looks for the tag to transmit at pre-programmed transmission rates are shown as Status Tx Rates for L and W Series Tags. When a manual event occurs due tag movement initiated by an operator or outside event, this results in the operation of a motion sensor. This manual trigger in turn closes a switch and places the tag in Alarm Mode. The reader sees that a tag transmission for a unique tag occurred sooner than expected and sees this transmission as a control signal***	***Edward Gonsalves 1/5/09***

				to place the tag in Alert Mode. The reader then expects the tag to stay in Alarm Mode and transmit for no longer than 5 seconds at the rates shown in Alert Tx Rates for L and W Series Tags. The reader would expect this unique tag to revert to the Standard Transmission Mode. Should the movement event continue to occur, then the reader would see another transmission at the Alert Mode rate and then use that first transmission as a control signal to place the tag again in Alert Mode since it would have expected a longer period in between transmissions after the counter had been set after the Alert Mode period was completed. ***The use of an external magnet and an internal reed switch comprises an anti tamper circuit and is used to provide a tamper function for the tag. Removal of the tag from the tamper magnet causes the reed switch to open. This manual event triggers the tag into Tamper Alert Mode. The tag transmits in a pre-determined burst of transmissions and sets an alarm bit. The reader always sets a counter for a unique tag ID and looks for the tag to transmit at***	

				it's pre-programmed transmission rates are shown as Status Tx Rates for L and W Series Tags. The reader sees that a tag transmission occurred sooner than expected for this tag with it's unique ID and sees this transmission as a control signal to place the tag in a non standard transmission mode. When the reader sees that the alarm bit has also been set, it knows that the tag is not in Alert Mode but in Tamper Alert Mode. The reader then expects the tag to stay in Tamp Alert Mode and transmits for no longer than 5 seconds, since it only sends out 4 bursts at 0.4 second intervals.	
x	C	3	The confidentiality letter includes a request for temporary confidentiality for test report. This request is not legitimate per DA04-1705. Please provide a revised confidentiality letter 12/12/08: New letter requested a short term confidential for 180 days after the Grant Date of Equipment Authorization. This request exceeds the 45 days limit per DA04-1705. Please revise the letter to comply with requirement and file an extension with the TCB at a later date. The submitted new letter "TG501 Temporary Confidentiality Request - FCC - rev EMG - 12-07-08" still request temporary confidential for test report. Please review DA04-1705 for item s eligible for temporary confidential. Also, the name of the person signing the letter is not legible; please provide a letter with signature and legible signee.	New Letters Provided. ***New Letters Provided.*** 1/7/09 : Provided authorization letter by Saleem Miyan, appointing Edward Gonsalves to sign letters and applications. Short term confidential applied for 45 days.	Edward Gonsavles 12/8/08 Mike Wilkinson 7/15/08 Randy Clark 12/8/08 ***Edward Gonsalves 1/9/08***
x	C	4	The porvided letter of confidentiality is signed by Salem Miyan.	New Letters Provided.	Edward Gonsavles

			Authorised individual named in the applicants grantee code is Edward Gonsalves, where as on FCC Website, the contact person is listed as Bishop Chris. In accordance with FCC Policy (KDB 852134), please provide all cover letters signed by the authorized individual named in the applicant's grantee code information or by an authorized designee. In the latter case, please also provide letters of authorization signed by the authorized individual designating the alternate(s). In all cases, a paper trail must be demonstrated leading back to the person named under the grantee code. Please note that there are three individual involved in this case. 12/12/08, The person signing confidential letter" TG501 Confidentiality Request - FCC - rev EMG - 12-07-08" is not identified on the letter. Please provided a signed "TG501 Confidentiality Request - FCC - rev EMG - 12-07-08" with legible name of the signee and a letters of authorization signed by the authorized individual designating the alternate(s) to comply with the original non-conformity.	 ***New Letters Provided.*** 1/7/091/7/09 : FCC grantee contact is now Saleen Miyan. Provided authorization letter by Saleem Miyan, appointing Edward Gonsalves to sign letters and applications.	12/8/08 ***Edward Gonsavles 1/5/09***
x	C	5	The provided operational description does not adequately describe how the device operates. Please provide an update operational description detailing the working principle of the device, including modulation, tuning circuit, transmit interval, modulation type, transmitter circuit and antenna. 12/10/08: PI sheet does not satisfy the non conformity. There is no mentioning of the working principle of the circuit. Unlike PI sheet which provide pertinent information for the user, an operation description for evaluation purposes shall be include the working principal of the RF circuit, the function of key RF component, including modulation, tuning circuit, transmit interval, modulation type, transmitter circuit and antenna. Note that per FCC ,user manual is not a substitute for operation description.	Update PI sheets (family and individual) should address ID C #2, #5, #10, and #12 ***The tag circuit uses a discrete circuit SAW stabilized oscillator to generate the necessary power at the required operating frequency. A discrete filter and matching circuit follow the oscillator to meet the necessary regulatory output power within the appropriate spectral mask.***	Edward Gonsavles 12/8/08 ***Edward Gonsavles 1/5/09***

				The output of the matching circuit is connected to the antenna. The operation of the entire tag is controlled via firmware that is run on a microcontroller. The microcontroller is used to control broadcasting of the tag protocol and status via the modulation of signals using a modified on /off keying scheme on the fundamental oscillator frequency. The circuit obtains it's power from a coin lithium battery.	
x	C	6	The provide block diagram does not provide suffient oscillator information. Please provide a revised block diagram with frequencies of all the oscillator in the device clearly indicated at each block.	New Block Diagram Provided.	
x	C	7	Component X1 of the scematic diagram is not identified, please provide an update schematic diagram with the value of X1 properly labeled.	New Schematic Diagram Provided.	
X	TL	8	The device is a portable equipment, please clarify whether the emission profile of three orthogonal orientations have been investigated.	During preliminary investigations three orthogonal orientations were investigated and the worst case was test as stated in the test conditions of the data sheet.	7/16/08 TL
X	TL	9	The setup diagram shows the product was tested with EUT antenna placed flat on a cart, please verify whether the surface of the cart is made of material with diaelectric constant near that of air .	The cart in question is of non-absorptive/reflective plastic with dielectric constant near that of air.	7/16/08 TL
x	C	10	Page 6 of the user manual indicated that the transmit interval of L series can be configured to 0.4, 0.8, 1.5, 15 and 30 second intervals and transmit interval of W series can be configured to 0.4, 0.8, 1, 1.5, 2, 5, 10, 15, 20, 30 and 45 second intervals as well as 1, 1.5, 2, 3, 5 and 10 minute intervals. Please elaborate how the product meets FCC15.231(a) (3) " Periodic	New Users Manual Provided. Update PI sheets (family and individual) should address ID C #2, #5, #10, and #12	Edward Gonsavles 12/8/08

			transmissions at regular predetermined intervals are not permitted" and FCC15.231 (e)…In addition, devices operated under the provisions of this paragraph shall be provided with a means for automatically limiting operation so that the duration of each transmission shall not be greater than one second and the silent period between transmissions shall be at least 30 times the duration of the transmission but in no case less than 10 seconds. 12/14/08: On page 12 of the user manual, under 1.4.1 it is indicated that under standard transmission mode the tag will transmit at regular interval, which does not meet the 15.231(a)(3) requirement, but place it under the regulation of 15.231(e). However 15.231 (e) has a one second transmission length limit and the silent period between transmissions shall be at least 30 times the duration of the transmission but in no case less than 10 seconds. The transmission length is not identified in the provided document; please verify whether the transmission length operating under standard transmission mode exceeds one second and also please verify whether the silent period meets the 30 times the duration of the transmission requirement.	***New Users manual Provided.***	***Edward Gonsavles 12/15/08***
X	TL	11	The test report did not demonstrate the device was tested with a fresh battery. Please confirm whether a fresh battery was used.	A fresh battery was used.	7/16/08 TL
x	C	12	The manual did not address changes or modifications to the equipment. Please provide an updated users manual incorporating the statement required by 15.21	New Users Manual Provided. Update PI sheets (family and individual) should address ID C #2, #5, #10, and #12	
x	C	13	The FCC logo on the case of the device is only applicable to products subject to authorization under a Declaration of Conformity . Please remove the FCC logo from the device and provide a revised FCC ID label photo.	New Labels Provided.	

The items indicated above must be submitted before processing can continue on the referenced application. Failure to provide the requested information within 60 days may result in application dismissal pursuant to Section 2.917(c) and forfeiture of the filing fee pursuant to Section 1.1106.

How to read the table:

OK column indicates closure by CKC CS.

ID column is for use with Agents to assist in identifying the probable source for closure.

- A – Application issue
- TL – Test lab issue
- C – Client issue
- R – Retesting may be necessary

column indicates unique or separate non-conformity items (note some items may be related).

Non-Conformity or Comment column indicates the evaluators specific question or comment.

Submitted response column indicates the response or a summary of the response provided.

Respondent / Date of Response column indicates the responding party or agent and the date of the response was either received or logged.