

Add:3CDE, Building6, Baoneng Science&Technology Park, Qingxiang Rd, Longhua Street,Longhua District,Shenzhen City,Guangdong Province, China. Website: www.kkmcn.com

KBeaconPro App Instruction

Revision History

Version	Date	Change Description	Author
V1.0	2017/11/12	Initial draft for KBeaconTools	Adam
V1.2	2018/02/23	Name updating	Elaine
V1.3	2022/11/2	Adding Power Profiler function	Elaine

CONFIDENTIAL

This document is the property of KKM Company Limited. KKM retains all rights pertaining to industrial property including patent applications. This document is only for the recipient(s) which authorized by KKM. It contains confidential information and any use, dissemination, distribution, or reproduction of this message by unintended recipients is not authorized and may be unlawful.

PDF

目录

1. Download KBeaconPro App
2. How to Connect KBeacon Device to KBeaconPro App
2.1 Turn on KBeacon
2.2 Connect KBeacon
3. How to Configure KBeacon
3.1 SLOT Definition
3.2 How to configure iBeacon and Eddystone
3.3 How to configure KSensor and System
3.4 View KSensor advertisement data
3.5 How to evaluate battery life
3.6 How to configure advertisement mode
4. How to Configure Trigger
4.1 Trigger event to advertisement
4.1.1 Trigger only advertisement
4.1.2 Trigger to an exist advertisement
4.1 Trigger event to record
4.2 Trigger event to App16
5. Other Settings
5.1 Unconnectable mode
5.2 Power off
5.3 Reset configuration

1. Download KBeaconPro App

Download the App 'KBeaconPro' from iOS App Store or Android Google Play or scan the QR code below to down the App.



iOS APP



Minimum requirements

A mobile phone with Bluetooth 4.0 support is needed. For Android devices, Android version 5.1 or newer. For iOS devices, iOS version 10.0 or newer.

Reminder: This instruction uses Android App to demonstrate. The iOS App interface is slightly different from Android App.

2. How to Connect KBeacon Device to KBeaconPro App

Kindly note: Please make sure your KBeacon device is with battery already. Enable your smart phone Bluetooth and run the App 'KBeaconPro'.

2.1 Turn on KBeacon

The factory setting of P1 Beacon is ON already.

2.2 Connect KBeacon

Let's use a Beacon (MAC: DD3311000588) to demonstrate, the MAC ID is printed on the device:



• Method 1: Scan QR code to connect

Run KBeaconPro App, Find 'Scan QR code' on the App, and then scan the QR code on the device to find this KBeacon device quickly.



Reminder: iOS App filter the device by Device Name when use the 'Scan QR code' method. If the device name is not KBPro, the device can not be found on iOS App when scan the QR code.

Method 2: Scan the Bluetooth signal to connect •

Run KBeaconPro App and tap 'SCAN' in the top right corner, the App can scan the device's Bluetooth signal, then the Beacon device will be displayed on the scan page.

Find the corresponding KBeacon device on the App according to its MAC ID, Tap it, it will start connecting and jump to the configuration page (see pictures below).

Devices	100	 Reacon Detail 	(MALER
The result from	~	Terrors teta	>
KBeacon_164508	-79dfim	Descar Marrie	
K8Pro_136307	-21dBm	Messare Power	>
Beaces Not Construction	5.00 C	Power On Always	~ >
Nagin Kinasian 134641	-87dBm	Mostly presword	->
Mec/00/2214-00/01/80	aftern 100%	TAH annur	>
New August	ander	Trigger Gertenand	>
AAX0250 Mac30:34.00:02:14:54	-75dBm lettery: 109%	Farriware lipstole	>
Max Mexi margine		Power-Off	>
KBeecon_150219 Me:00.33.04.13.08.A5	-83dBm Battery 14%	Reset Configuration	>
Bannes Mill Mirrora desirent eta Bann Manji m	La provincia da la compañía da la co	Power thallier	>
KBescon, 63486 Wax303481922FA) I Respective Maximum Ma	-91dBm intery:1005		
Kilmacon_40598	-85dBm	C	ant auto auto

If there are too many devices found, filter by RSSI to find a certain Beacon quickly.

Put the KBeacon device close to your phone (within 10cm range). Slide the RSSI bar to set the RSSI value at -30~-40dBm, tap the arrow on the top right corner, then the nearest KBeacon can be found



Devio	85		C m
Tay to 40	d film-		_^
Part 14	the ini phase and	Aris .	/
1111 -		•	-40iBm
Kliwaco	n_7886		-87d0m
Mec F2 B	F.18.8E.1E.CF	6	Battery:100%
KSeroor	dathiry-units Temperature		367
	Harriste		18.014
KBeaco	12644		-91d8m
Max:18-0	180-54-31-64	1 C	Battery:N/A
TUM	Kathayinyen Tanganiyinye Nilyi tourt Trincinges		7848 27575 75952168 81682168
(Beacco	Marke Kongan Indonesi	1100118-000-0	na min pair nimiter

-4002711		X V	
KBPm,	136307	-24dBm	
Maciou a	301100005588	Ballery 68%	
190010	Major Metar		

3. How to Configure KBeacon

3.1 SLOT Definition

KBeacon supports total 5 SLOTs (SLOT0 to SLOT4). Each SLOT is independent and configurable. The Beacon type can be set for each SLOT. Beacon parameters such as Adv interval, Tx Power, Connectable enable/disable etc can be configured separately for each SLOT. They are independent of each other.

Each SLOT can be set to one Beacon type ONLY. For example, if you set SLOT0 to be iBeacon, set SLOT1 to be URL, set SLOT2 to be TLM, then the KBeacon device will broadcast iBeacon, URL and TLM simultaneously.

🗧 Beacon Detail	usered a
Beacon Type	these >
Adv Interval	>
Ta Power	- >
Adv Mode	topog >
Connectable	-13. >
Trigger only advertisement	= >
Uuto	 ************************************
MajoriD	1.5
Mexerit	• >
Gancord Sums surf4	auarta subra auarte

KBeacon supports the following Beacon types:

• iBeacon

- Eddystone URL
- Eddystone UID
- Eddystone TLM
- KSensor: KKM self-defined protocol, includes battery level and sensor information
- System: Including the KBeacon device info such as System ID (ie.MAC ID), Model name.

and the second s			
eacon Type	>		
de Internal	- 2000 E		
Power	* > .		
ðv Wade	>		
onnentable	>	🗧 🗧 Bhacim Type .	
rigger only advertisement	= >	Duatrie	0
ub	<pre>concentation ></pre>	Aliense .	0
Grogo	- >	000	0
inort0		11.04	0
		186.	0
1		ileatur	۲
		N Restort	0

3.2 How to configure iBeacon and Eddystone

Take iBeacon as an example:

Tap: Beacon Type-> iBeacon-> Save-> Return

÷	Beacon Detail	UPLO	IAD
Beaco	n Type	iBeacon >	>
Adv In	terval	1000.0	>
Tx Poe	er	• >	>
Conne	ctable	trable >	>
Trigge	r only advertisement	Disable >	>
iBeaco	n UUID 77777725-6868	+6D63-6E2E-63 6F6D000001	>
iBeaco	n MajoriD	1 >	>
iBeaco	n MinorlD	1.)	>

iBeacon parameters (UUID, Major ID, Minor ID, Adv Interval, TX power etc.) can also be configured in the App. Eddystone URL, UID, TLM, can be configured by the same steps above.

Parameters	Defaults	Describe
	iBeacon	Disable: Slot does not broadcast
Beacon Type		KSensor: KKM sensor data, see Section 6.3 for details
		UID/TLM/URL: Google Eddystone, see Section6.2 for details
		iBeacon: Apple iBeacon, , see Section 6.1 for details
		System: KKM System data, see Section 6.4 for details
		Advertisement period is expressed in decimal and the unit is ms.
	1000.0	If you need to use it on Apple devices, it is recommended to
		follow Apple's specifications. Apple has some suggestions that
		make the device more easily discovered by IOS phones. (The
A du Interval		suggest value was: 152.5 ms; 211.25 ms; 318.75 ms; 417.5 ms;
Auv Intervar		546.25 ms; 760 ms; 852.5 ms; 1022.5 ms; 1285 ms). For more
		information, please refer to Section 3.5 in "Bluetooth Accessory
		Design Guidelines for Apple Products".
		https://developer.apple.com/accessories/Accessory-Design-
		Guidelines.pdf.

Tx power	-40 ~ 8?	Beacon TX power. The value range depends on the support capability of the device, some devices are -40~4dBm, some devices are -40~8dBm.
Connectable	Yes	Whether the device can be connected. For detailed description, please refer to Section 5.1.
Trigger only advertisement	No	When this feature is set to be 'YES', this slot will be broadcasted only when the trigger happens.For example, if you set 'Trigger Adv Slot' of 'Button single click' to be SLOT0 and SLOT0 is iBeacon, then iBeacon will be broadcasted only when the button single click happens.
iBeacon parameters (UUID/Major/Minor)	NA	Configuration parameters of iBeacon

After the parameters are modified, you need to tap: UPLOAD > OK, then all the parameters configured can be loaded to the device successfully.



3.3 How to configure KSensor and System

KSensor is KKM defined protocol, it includes battery level and sensor information (for example temperature&humidity sensor, acceleration sensor etc).

Tap: Beacon Type-> KSensor-> Save-> Return

 Beacon Type 	-5895		
Disable	0	· Becom Ortali	- HELINA
KSensor	۲	Reacon Type	>
лю	0	Adv. Interval	>
TLM.	0	As Prover	\rightarrow
e.	0	Adv Mule	>
	0	Connectable	2
Beacon	0	Trigger unly advertiservent	>
System	0	Service Anni	->
		Server Hk7	->

"System" can also be configured by the same steps above.

3.4 View KSensor advertisement data

When we configure KSensor to broadcast sensor information in section 3.3, we can scan sensor data through app.

Devices	eron i	Devices	A STOP
BC5729006234	× v	BC572904F050;-38d8m	хv
KBPro_274249 Mac:BC:57:29:00:62:34 KSensor Introduction And Temperpand Meet	-37dBm Battery: 100% 23.23 *36/20.2004	KBPro_426323 Mac:BC:57:29:04:F0:50 KSensor Buttey Level Temperature PIS Aust	-36dBm Battery:100% 24.25% 1
Devices	D 2000 1	Devices	🜔 STOP 🗄
BC072903IIF48;-3568m	× v	BC57290089E0;	X V
KBPro_393164 Mac:BC:57:29:03:8F:48 KSensor Battey Level Temperature Acc. PR Aset	-35dBm Battery:100% 3637 38.976 6.735, y %, r 445 1	KBPro_296910 Mac:BC:57:29:00:B9:E0 KSensor BatteryLevel Temperature	-40dBm Battery:73% 2867 27.44%

The broadcast content of different sensors is displayed differently on the APP.

Туре	Describe
Battery Level	The unit of battery level is mV. For example, if it is 3210, it means the battery voltage is 3210mV.

Tomporatura	The unit of temperature is °C. For example, if it is 25°C, it means that the current
remperature	temperature detected by the beacon is 25°C.
Uumidity	The unit of humidity is %. For example, if it is 60%, it means that the current humidity
Humany	detected by the beacon is 60%.
A 00	Acc means the acceleration sensor.
Att	It includes the value of Axis X, Axis Y and Axis Z, and the unit is mg.

3.5 How to evaluate battery life

KBeaconPro supports evaluating the battery life of beacon according to the configured parameters.

		Statistic Contents	
lystem toto	>	Battery voltage	1000
Reactor Name		Battery capacity	2010
dessure Power	- >	Adv standby	().000
Power Dit Ahnaya	>	Adv Skot (A/KSennor)	1.11%
Addly passwert	->	Acc standby	125.4
BH sensor	>	Acc Airs Adv(Ingger-false)	0.000
ingger Dominand	>	Hi§T standby	(helety
invivuane Opidato	>	H&T Meanare(Wirrial 2)	100
tuwer Off	>	Summary	
least Configuration	>	Average current	
tower Pholiler	>	Ballery efficiency	-9%
		Estimated battery life	10 bisine

Туре	Describe
Adv standby	When the device is in standby mode, it also consumes a certain amount of power. This power consumption is usually between 1~4uA.
Adv slot: 0	When a slot broadcast is enabled, the slot will periodically send broadcast messages, which will generate a certain power consumption.
Acc standby	When the device has an acceleration sensor, even if the acceleration sensor is not

	working, there will be about 0.9uA of power consumption.
Acc Axis Adv	If you set KSensor to broadcast 3-axis information, the accelerator will start measuring.
	If the broadcast interval is shorter, the power consumption will be higher.
H&T standby	When the device has an humidity sensor, even if the sensor is not working, there is about
incer standoy	1uA of power consumption.
H&T measure	Indicates the power consumption when the temperature and humidity sensor measures
(Intermel:2)	once every 3 seconds. The shorter the measurement interval, the higher the power
(Interval:3)	consumption.
	The average current of the device is based on the current configuration parameters,
A verge current	and calculated after the device is powered on for 30 seconds for current stabilizes.
Average current	The average current does not include power consumption by trigger broadcasting.
	Also, it does not include the power consumption when the device is connected.
	Usually the battery capacity is based on the ideal 1mA discharge model at room
Battery efficiency	temperature. In actual use, the capacity of the battery is related to temperature,
	current and self-discharge. We recommend 75%.
Estimated battery	- Battery capacity * Battery officiancy/ Average current/24(hours)/20(days)
life	- Dattery capacity - Dattery efficiency/ Average current/24(nours)/30(days)

3.6 How to configure advertisement mode

For some KBeacon models that support BLE5.0 long range feature, 'Adv Mode' can be configured.

- Legacy: BLE 4.0 advertisement
- **PHY Code:** BLE 5.0 long range feature
- **PHY 2Mbps:** BLE5.0 broadcasting at a rate of 2Mbps

KBeaconPro App can detect which Adv Mode your phone support (Only supported on Android phones).

		 Adv Made 	644
+ Beacon Detail	UPLONE	Segrey	۲
Basarran Tatad	and N	Point Escaled.cong nangad	0
and the	- (WHY ZMRAW	0
Ads interval	1000.0 >	Thereit a state and the state of the state o	mertjamen Pity
Ta Power	+ >	to the server of starting by a server receiver the short article by a strength in Eq. (1) a transmission of a strength of a server by Eq. (1) a transmission of the server	ningen freisrung einfelst, som 1. Freisf (2005pat), anbeidt, politi- siant (2005pat), anbeidt, politi- lansmant kunten.
Adv Mode	Logary >	phone appainting)
Connectable			1 3

Reminder:

Please make sure that your phone supports BLE 5.0 PHY Code (Long range) feature, otherwise you will not be able to scan the PHY code advertisement if the Beacon was set to PHY Code (Long range) Mode. If you set the Beacon to PHY code advertisement, and your phone doesn't support PHY Code broadcast, you can

force the device to enter the Legacy mode for 30 seconds by single click the button of the device.

4. How to Configure Trigger

For some KBeacon device that has some motion sensor, temperature&humidity sensor, push button, etc., The application can configure the KBeacon to monitor some trigger event. For example, button was pressed, the temperature is too high, or device was motion. The KBeacon can do some action when the trigger condition was met.

When the conditions of the Trigger are met, we can trigger a specific advertisement, or trigger the event to be recorded in memory, or report an event to the App.

Tap: Trigger Command—>Trigger Type The following example is based on the K21 device

Applace also	>
Name Torne	- min
Association in the second	->
Towner Die Alleriagen	- >
And by Theorem .	-)
Tager Comment	>
himmer Spille	>
lana 18	>
And Colligension	2
Ised Poliai	>

tipped)	->
tappet.	>
Lipper 2	~ >
Transet #	- >

Triager Type	
Null	0
Motion	0
Head burban	0
Baltur single chik	۲
Burbon Alicable chick	0
Battus Tiple click	0

4. Lobburg	Unines	Tracow Action	i de
Trappler Type	1000 mga 100 3	Advertisement	
Tiggle' Action		Daning Harry	
Trager Adv Skil		Record	0
dvettoenwet Overge	>	Sequent to app	
Trigger Adv Time	- >	Apressi 1. Charte Aubarritary and diploce	the second set in a

4.1 Trigger event to advertisement

The trigger advertisement has follow parameters:

- Trigger No: Trigger instance number, the device supports up to 5 Triggers by default, the No is $0 \sim 4$.
- Trigger type: Trigger event type
- Trigger action: Action when trigger event happened. For example: start broadcast, make a sound, or send a notification to the connected App.
- Trigger Adv slot: When the Trigger event happened, which advertisement Slot starts to broadcasting
- Trigger parameters: For motion trigger, the parameter is acceleration sensitivity. For temperature above trigger, you can set to the temperature threshold.
- Trigger Adv duration: The advertisement duration when trigger event happened. Unit is second.
- Trigger Adv TX power: The advertisement TX power when trigger event happened. Unit is dBm.
- Trigger Adv interval: The advertisement interval when trigger event happened. Unit is ms.

4.1.1 Trigger only advertisement

The device usually does not broadcast by default, and we want to trigger the broadcast when the trigger event happened.

Example:

1. Setting slot 0 to iBeacon advertisement(adv period = 211.25ms, trigger only adv = true).

2. Add a single button trigger(Trigger No = 0, Trigger type = Btn single click, Action = advertisement, Adv slot = 0, Adv duration = 20).



4.1.2 Trigger to an exist advertisement

For some scenario, we need to continuously monitor the KBeacon to ensure that the device was alive. The device usually broadcasting iBeacon1 (UUID=xxx1), and we want to trigger the broadcast iBeacon2 (UUID=xxx2) when the button is pressed.

Example:

- 1. Setting slot 0 to iBeacon advertisement (UUID=xxx1, adv period = 1280ms, trigger only adv = false).
- 2. Setting slot 1 to iBeacon advertisement (UUID=xxx2, adv period = 211.25ms, trigger only adv = true).

We set an larger advertisement interval during alive advertisement and a short advertisement interval when trigger event happened, so we can achieve a balance between power consumption and triggers advertisement be easily detected.

3. Add a single button trigger(Trigger No = 0, Trigger type = Btn single click, Action = advertisement, Adv slot = 1, Adv duration = 20).



4.1 Trigger event to record

For some Triggers, the device supports recording the Trigger events. For more information, see 2.1.1 Trigger capability.

For the Trigger event, we can set the Trigger Action to "Record". After setting, when the trigger event is triggered, KBeacon will record the Trigger event.

Reminder: Currently, only some devices support recording Trigger events, including:

Example:

1. We assume that the current ambient humidity is 60%, and we set an trigger event to be logged when the humidity exceeds 70%.

+ TriggerD	100
Tappel Typer	10000 (1000)
Ngger Action	1 2
-Lambship (Annualis)	10

 Trigger Action 	-55
Advertise	0
Device Alami	
Record .	2
Report to app	
 Olsade Talmering, F. and mark the least white a brigged local scheme. Dipole Talger to apply follow start the beam millipation to the opply of the stringer scheme. 	era mer alarraa mer alaraba areas

the unit is T%.

+ Triggin®	a series	- Humidity thresho
Trigger Type		The second second second second
Trigger Action	- >	70
Partially Product	- >	NOTED. The valid range is from 1 ~ 100, and
	L_,	

- 2. Put the KBeacon in an environment with a humidity over 70%.
- 3. Observe whether the event is logged.

In order to verify that the record is generate by the Trigger, we can turn off the T&H Logger during the test, which means that when the temperature and humidity change exceeds the specified threshold, the recording will not be performed. It will only be logged when the Trigger event happened.

 Hearter Debit 	or channels				
Name into	>				
Naco Rene	>				
Name of Process	->				
Newsy Ch. History	= >				
Marry Parameter	->	+ Tabe service	100000		
19pt series	>	Tertope	- >		
Tripper Sciences of	>	Massure stornel	- 2	4 TRHAMANY	August 1
formane (aplate	- 2	Temperature change log threehold	- >	Becaution (also in	Temperature 181818 Normiting 82 (75
News Of	>	Handlife change tog threshold	- 3		
Brief Califyration	>	and the second second second	2		
Town Profess	>		1		

4.2 Trigger event to App

We can also set KBeacon to send an event message to the App when the Trigger is happened.

 Trigger Act 	2001 EAVE
Advertisement	8
Device Alarti	
Record	
Peport to app	
News) 1. Dark Adverturent of adverturent often might 2. Over Teppet to say if a helfstatter to again when	yory wood the balance shall in event bagalened play watchic balance ki most bagan anothi bagarmal

If set "Report to App", there will be a message notification displayed on the cell phone when the trigger event happens.

+ Trigger Action	
divertuariant	
Sevite Alarti	
Necord	
Apport to appl	
nation - Charle Advertisement II you ment the lass	inter com
. (Tatol: Separit in any of pro-well) the loss	



5. Other Settings

5.1 Unconnectable mode

Each SLOT has two different advertising status, connectable mode and unconnectable mode. Only when the advertising status is connectable, the KBeacon is configurable. But the unconnectable mode saves about 20% -30% power consumption than connectable mode.

After the KBeacon is deployed, we recommend setting the KBeacon to be unconnectable mode. This can lower battery power consumption and the Beacon also have better security performance.

How to set unconnectable mode:

Tan: Connectable NOFE Save Neturn - NUPLOAD

 Beacon Detail 	Uniced		
Поверт Туре	>		
Adv Imprival	\rightarrow >		
Ta Power	- >		
Adv Mode	input >	+ Convectab	in i
Comectable	>	10	C
Trigger only advertisement	~ >	762	
000	(1) (1) (1) (1) (1) (1) (1) (1) (1)	Notice - Terms Generation In-	102 yan proversi sifter daminan ber
Magento	• >	addition, satisfy the bran- metal present strength of the	or to reaction of the contract of the sec- tor by should 20 ~ 20 h.
Minuel11	:>	following two wapping to be built on the particulation of the particulation of the particulation of the particulation of the transfer (in the particulation of the transfer (in the particulation of the transfer (in the particulation of the particulation).	of the derive, he assure of a se- paration. In terms of outer the corrected
		Holdstein, Michael Stein, 2017, 19 19 Januar, Michael Stein, Stein, 2017, 19 19 - Holdstein, 2017,	we share and even is some
Association and and and and and and and and and an	1 32012 02014	$\Box \rangle$	

Warnning: If your device is in the following two situations, once you set No connectable, you will not be able to connect the device again:

1. The device does not have a button and cannot be opened to reinstall the battery. For example, K12, T1, etc.

2. The device has a button and a Button Trigger was set, and it cannot be opened to reinstall the battery. For example, K7, F1, etc.

Question: How can I configure KBeacon again if it was set to be unconnectable mode?

• For KBeacon with button: click the button, the Beacon will enter a connectable mode for 30 seconds, users can connect the device within these 30s. Or re-install battery.

(Reminder: If the KBeacon device is configured with button trigger, the Beacon will NOT enter a connectable mode by clicking the button.)

Copyright by KKM Company Limited

• For KBeacon without button: Re-install battery

(Reminder: For the KBeacon device that doesn't have button and whose battery can not be re-installed, once the device was set to unconnectable mode, it can not be configured any more!)

5.2 Power off

For KBeacon device WITH BUTTON, you can use the App to turn off the device.

Tap:	Power	Off-	->	OK
------	-------	------	----	----

< Baberri Detail	- and the		
prime's influ-	>		
united frame	>	1.0	desired in the local diversion of
main different	>	100	
r bri Aknige	->	-	
Py Paneerst	\rightarrow		
er Continuant	2		
nice Salats	>	-	And being the state of the second sec
- 10	>	-	(Landa)
Calquette	>		
a dialay			

5.3 Reset configuration

You can reset the KBeacons setting to factory default configuration on the App.

Reminder: If you customize some of your own parameters to KKM, such as Trigger parameters, multiple slots broadcast parameters. KKM will configure these parameters for you before leaving the factory. If you perform the "reset configuration" operation, these pre-configured parameters may be lost.

Tap: Reset configuration—> OK

- Bewoon Detail	1000.00
tern johs	>
cacor Name	
anned Powe	- >
tive Or Alvings	~ >
foolity Panaward	->
tigger Communif	>
intravjana ()godate	>
haiver CH	>
Next Configuration	>
have the liter	>
Barts with the	n ann ann

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is

connected.

-Consult the dealer or an experienced radio/TV technician for help

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any

interference received, including interference that may cause undesired operation.