



KTAG BEACON SPECIFICATION

Version 0.13 May 27, 2026
<https://ktag.clubk.club/Technology/BLE/>

	0/8	1/9	2/A	3/B	4/C	5/D	6/E	7/F
	Manufacturer Specific Data							
0x00	Length	Manufacturer Specific Data	Company: Other		KTag Packet Indicator			
	0x1E	0xFF	0xFF	0xFF	0x4B 'K'	0x54 'T'	0x61 'a'	0x67 'g'
	Manufacturer Specific Data							
0x08	KTag Packet Type	Event Number						
	(Varies—see below)	0xXX						
	Manufacturer Specific Data							
0x10								
	Manufacturer Specific Data							
0x18								

KTag Packet Format	4/C	5/D	6/E	7/F
Cleartext	0x4B 'K'	0x54 'T'	0x61 'a'	0x67 'g'
Encrypted (future)	0x4B 'K'	0x53 'S'	0x68 'h'	0x68 'h'

KTag Packet Type	
0x00	<i>Reserved</i>
0x01	Instigate Game
0x02	Event
0x03	Tag
0x04	Console
0x05	Status
0x06	Parameters
0x07	Hello
0x08	Transfer



OXOI INSTIGATE GAME

	0/8	1/9	2/A	3/B	4/C	5/D	6/E	7/F
	Manufacturer Specific Data							
0x00	Length	Manufacturer Specific Data	Company: Other		KTag Packet Indicator			
	0x1E	0xFF	0xFF	0xFF	0x4B 'K'	0x54 'T'	0x61 'a'	0x67 'g'
	Manufacturer Specific Data							
0x08	KTag Packet Type	Event Number	Game Length (milliseconds) A length of zero means an untimed game.				Time Remaining until Countdown (milliseconds)	
	0x01 Instigate	0XX	0XX	0XX	0XX	0XX	0XX	0XX
	Manufacturer Specific Data							
0x10	Time Remaining until Countdown (milliseconds)							
	0XX	0XX						
	Manufacturer Specific Data							
0x18								



OX02 EVENT

	0/8	1/9	2/A	3/B	4/C	5/D	6/E	7/F
	Manufacturer Specific Data							
0x00	Length	Manufacturer Specific Data	Company: Other		KTag Packet Indicator			
	0x1E	0xFF	0xFF	0xFF	0x4B 'K'	0x54 'T'	0x61 'a'	0x67 'g'
	Manufacturer Specific Data							
0x08	KTag Packet Type	Event Number	Target Bluetooth Device Address (BD_ADDR) FF:FF:FF:FF:FF:FF targets all devices					
	0x02 Event	0XX	0xFF	0xFF	0xFF	0xFF	0xFF	0xFF
	Manufacturer Specific Data							
0x10	Event ID UInt32				Event Data UInt32			
	0x00	0x00	0x00	0x00	0x00	0x00	0x00	0x00
	Manufacturer Specific Data							
0x18								

Event ID	Event Name	Event Data	Description
0	No Event	<i>Unused</i>	This is a reserved value. Devices should take no action when receiving this event.
1	Configure	<i>Unused</i>	This event indicates configuration is needed for the target device(s).
2	Configured	<i>Unused</i>	This event indicates configuration is complete for the target device(s).
3	Wrapup Complete	Next State	This event indicates wrapup is complete for the target device(s), and it/they should proceed to the <i>Next State</i> .
4	Game Over	<i>Unused</i>	This event indicates the game is over.
5	Quiet	Duration (ms)	The target device(s) should cease BLE advertisements for the specified duration, until an "Unquiet" is received, or until a quieted device receivers Parameters request addressed to it. A duration of 0 means remain quiet indefinitely. If a new Quiet is received when a Quiet is already in progress, the quiet timer is reset to the new duration.
6	Unquiet	<i>Unused</i>	The target device(s) is/are free to resume BLE advertisements.
7	Force State	Next State	The target device(s) should proceed immediately to the <i>Next State</i> . (This may ruin active games, or cause a device to reprogram itself! Use with care.)

Don't confuse *Event ID* with *Event Number*: Event IDs represent types of system-level events, and Event Numbers are used to differentiate logical instances of unique data per packet type, since the same BLE Advertisement is potentially sent multiple times.



OX03 TAG

	0/8	1/9	2/A	3/B	4/C	5/D	6/E	7/F
	Manufacturer Specific Data							
0x00	Length	Manufacturer Specific Data	Company: Other		KTag Packet Indicator			
	0x1E	0xFF	0xFF	0xFF	0x4B 'K'	0x54 'T'	0x61 'a'	0x67 'g'
	Manufacturer Specific Data							
0x08	KTag Packet Type	Event Number	Tx Power Level (dBm) Sint8	Protocol	Team ID	Player ID	Damage (Sint16) 32767 = One-Shot Kill -32767 = Restore to Full Health	
	0x03 Tag	0XX	0XX	0XX	0XX	0XX	0XXXX	
	Manufacturer Specific Data							
0x10	Color (Brightness-Red-Green-Blue)				Target Bluetooth Device Address (BD_ADDR) FF:FF:FF:FF:FF:FF targets all devices			
	0x00	0x00	0x00	0x00	0xFF	0xFF	0xFF	0xFF
	Manufacturer Specific Data							
0x18	Target Bluetooth Device Address (BD_ADDR)							
	0xFF	0xFF						



OX04 CONSOLE

	0/8	1/9	2/A	3/B	4/C	5/D	6/E	7/F
	Manufacturer Specific Data							
0x00	Length	Manufacturer Specific Data	Company: Other		KTag Packet Indicator			
	0x1E	0xFF	0xFF	0xFF	0x4B 'K'	0x54 'T'	0x61 'a'	0x67 'g'
	Manufacturer Specific Data							
0x08	KTag Packet Type	Event Number	ASCIIZ Console String					
	0x04 Console	0XX						
	Manufacturer Specific Data							
0x10	ASCIIZ Console String							
	Manufacturer Specific Data							
0x18	ASCIIZ Console String							



OX05 STATUS

	0/8	1/9	2/A	3/B	4/C	5/D	6/E	7/F
	Manufacturer Specific Data							
0x00	Length	Manufacturer Specific Data	Company: Other		KTag Packet Indicator			
	0x1E	0xFF	0xFF	0xFF	0x4B 'K'	0x54 'T'	0x61 'a'	0x67 'g'
	Manufacturer Specific Data							
0x08	KTag Packet Type	Event Number	Tx Power Level (dBm) SInt8	Protocol	Team ID	Player ID	Health UInt16	
	0x05 Status	0XX	0XX	0XX	0XX	0XX	0XX	0XX
	Manufacturer Specific Data							
0x10	Maximum Health UInt16		Primary Color (Brightness-Red-Green-Blue) A brightness of 0xFF indicates a False Flag				Secondary Color (Brightness-Red-Green-Blue) A brightness of 0xFF indicates a False Flag	
	0XX	0XX	0x00	0x00	0x00	0x00	0x00	0x00
	Manufacturer Specific Data							
0x18	Secondary Color (Brightness-Red-Green-Blue) A brightness of 0xFF indicates a False Flag		SystemK Top-Level State	Shots Remaining	Shot Capacity			
	0x00	0x00	0x00	0x00	0x00			

SystemK Top-Level States	
0	Initializing
1	Reprogramming
2	Configuring
3	Ready
4	Instigating
5	Responding
6	Counting Down
7	Interacting
8	Tagged Out
9	Consenting
10	Wrapping Up



OX06 PARAMETERS

	0/8	1/9	2/A	3/B	4/C	5/D	6/E	7/F
	Manufacturer Specific Data							
0x00	Length	Manufacturer Specific Data	Company: Other		KTag Packet Indicator			
	0x1E	0xFF	0xFF	0xFF	0x4B 'K'	0x54 'T'	0x61 'a'	0x67 'g'
	Manufacturer Specific Data							
0x08	KTag Packet Type	Event Number	Target Bluetooth Device Address (BD_ADDR) FF:FF:FF:FF:FF:FF targets all devices					
	0x06 Parameters	0XX	0xFF	0xFF	0xFF	0xFF	0xFF	0xFF
	Manufacturer Specific Data							
0x10	Subtype	Parameter Key 1 UInt16		Parameter Value 1				Parameter Key 2 UInt16
	0x00	0xFFFF		0x00	0x00	0x00	0x00	
	Manufacturer Specific Data							
0x18	Parameter Key 2 UInt16	Parameter Value 2						
	0xFFFF	0x00	0x00	0x00	0x00			

Subtype	
0x00	Request Current Parameter Information
0x01	Current Parameter Information
0x02	Request Parameter Change
0x03	Acknowledge Parameter Change
0x04	Error Changing Parameters
0x05-0xFE	Reserved
0xFF	Error Responding to Request

Parameter Key	Meaning	Value Format
0	Reserved	
1	Team ID	UInt32
2	Player ID	UInt32
3	Game Length (milliseconds) – 0 is untimed	UInt32
4	Maximum Health	UInt32
5	Secondary Color	Bright-Red-Green-Blue
6	Special Weapons Received on Game Reentry	UInt32
7	Shot Capacity	UInt32
8	Reload on Game Reentry	UInt32 (Boolean)
9	Minimum Time Between Shots	UInt32
...	<i>Reserved</i>	
10001	Shots Fired This Game	UInt32
10002	Tags Received This Game	UInt32
10003	Times Tagged Out This Game	UInt32
...	<i>Reserved</i>	
65535	Unused Key/Value Pair	



0X07 HELLO

	0/8	1/9	2/A	3/B	4/C	5/D	6/E	7/F
	Manufacturer Specific Data							
0x00	Length	Manufacturer Specific Data	Company: Other		KTag Packet Indicator			
	0x1E	0xFF	0xFF	0xFF	0x4B 'K'	0x54 'T'	0x61 'a'	0x67 'g'
	Manufacturer Specific Data							
0x08	KTag Packet Type	Event Number	SystemK Major Version	SystemK Minor Version	Device Type UInt16	Team ID	Device Name ASCIIZ	
	0x07 Hello	0XX	0XX	0XX	0XXXX	0XX		
	Manufacturer Specific Data							
0x10	Device Name (continued)							
	Manufacturer Specific Data							
0x18	Device Name (continued)							
	Manufacturer Specific Data							

Device Type is used by the mobile apps to display appropriate icons, etc.

Device Type	
0x0000	Little Boy BluE
0x0001	2020TPC
0x0002	Mobile App
0x0003	32ESPECIAL
...	
0xFFFF	Unknown



OX08 TRANSFER

	0/8	1/9	2/A	3/B	4/C	5/D	6/E	7/F	
	Manufacturer Specific Data								
0x00	Length	Manufacturer Specific Data	Company: Other		KTag Packet Indicator				
	0x1E	0xFF	0xFF	0xFF	0x4B 'K'	0x54 'T'	0x61 'a'	0x67 'g'	
	Manufacturer Specific Data								
0x08	KTag Packet Type	Event Number	Target Bluetooth Device Address (BD_ADDR) FF:FF:FF:FF:FF:FF targets all devices						
	0x02 Event	0XX	0xFF	0xFF	0xFF	0xFF	0xFF	0xFF	
	Manufacturer Specific Data								
0x10	Subtype	Team ID	Transaction Number	Item 1 ID UInt16		Item 1 Quantity (UInt16) 65535 = All of the item		Item 2 ID UInt16	
	0x00	0x00	0x00	0XXXX		0XXXX		0x00	
	Manufacturer Specific Data								
0x18	Item 2 ID UInt16	Item 2 Quantity (UInt16) 65535 = All of the item		Item 3 ID UInt16		Item 3 Quantity (UInt16) 65535 = All of the item			
	0x00	0x0000		0x0000		0x0000			

Subtype	
0x00	Reserved
0x01	Request Inventory
0x02	Inventory (information only—no transfer)
0x03	Request Voluntary (needs player acknowledge)
0x04	Request Involuntary Friendly (unload)
0x05	Request Involuntary Unfriendly (steal)
0x06	Offer Unlimited (no 2PC needed)
0x07	Offer Atomic
0x08	Acknowledge Atomic Offer
0x09	Commit Atomic Offer
0x0A	Acknowledge Atomic Commit
...	
0xFF	Reserved

Item ID	Item
0x0000	Reserved
0x0001	K-Point
...	
0xFFFF	No Item (ignore this ID/Quantity pair)

More items will be added in future revisions.

Transaction Number is an arbitrary number which remains constant for the duration of the transfer. It is used to prevent making the same transfer twice.