

USB Configuration for Turtle Beach AudioAdvantage Amigo

GetDescriptor (Configuration)

Configuration descriptor				
Name	Value	Dec	Hex	Bin
bLength	Valid	9	0x09	00001001
bDescriptorType	CONFIGURATION	2	0x02	00000010
wTotalLength	253 bytes	253	0x00FD	00000000 11111101
bNumInterface	4	4	0x04	00000100
bConfigurationValue	1	1	0x01	00000001
iConfiguration	0	0	0x00	00000000
bmAttributes. Reserved	Zero	0	0x00	00000
bmAttributes. RemoteWakeup	Supported	1	0x1	1
bmAttributes. SelfPowered	No, Bus Powered	0	0x0	0
bmAttributes. Reserved7	One	1	0x1	1
bMaxPower	100 mA	50	0x32	00110010

Interface descriptor				
Name	Value	Dec	Hex	Bin
bLength	Valid	9	0x09	00001001
bDescriptorType	INTERFACE	4	0x04	00000100
bInterfaceNumber	0	0	0x00	00000000
bAlternateSetting	0	0	0x00	00000000
bNumEndpoints	0	0	0x00	00000000
bInterfaceClass	Audio (Find out more online)	1	0x01	00000001
bInterfaceSubClass	Audio Control	1	0x01	00000001
bInterfaceProtocol	None	0	0x00	00000000
iInterface	0	0	0x00	00000000

Audio Descriptor				
Name	Value	Dec	Hex	Bin
bLength	10 bytes	10	0x0A	00001010
bDescriptorType	CS_INTERFACE	36	0x24	00100100
bDescriptorSubtype	HEADER	1	0x01	00000001
bcdADC	1.0	256	0x0100	00000001 00000000
wTotalLength	100 bytes	100	0x0064	00000000 01100100
bInCollection	2	2	0x02	00000010
baInterfaceNr(1)	1	1	0x01	00000001
baInterfaceNr(2)	2	2	0x02	00000010

Audio Descriptor				
Name	Value	Dec	Hex	Bin
bLength	12 bytes	12	0x0C	00001100
bDescriptorType	CS_INTERFACE	36	0x24	00100100
bDescriptorSubtype	INPUT_TERMINAL	2	0x02	00000010
bTerminalID	1	1	0x01	00000001
wTerminalType	USB streaming	257	0x0101	00000001 00000001
bAssocTerminal	0	0	0x00	00000000
bNrChannels	2	2	0x02	00000010
wChannelConfig. Left Front (L)	Present	1	0x1	1
wChannelConfig. Right Front (R)	Present	1	0x1	1
wChannelConfig. Center Front (C)	Not present	0	0x0	0
wChannelConfig. Low Frequency Enhancement (LFE)	Not present	0	0x0	0
wChannelConfig. Left Surround (LS)	Not present	0	0x0	0
wChannelConfig. Right Surround (RS)	Not present	0	0x0	0
wChannelConfig.	Not present	0	0x0	0

Left of Center (LC)					
wChannelConfig. Right of Center (RC)	Not present	0	0x0	0	
wChannelConfig. Surround (S)	Not present	0	0x0	0	
wChannelConfig. Side Left (SL)	Not present	0	0x0	0	
wChannelConfig. Side Right (SR)	Not present	0	0x0	0	
wChannelConfig. Top (T)	Not present	0	0x0	0	
wChannelConfig. Reserved	0x0	0	0x0	0000	
iChannelNames	0	0	0x00	00000000	
iTerminal	0	0	0x00	00000000	

Audio Descriptor				
Name	Value	Dec	Hex	Bin
bLength	12 bytes	12	0x0C	00001100
bDescriptorType	CS_INTERFACE	36	0x24	00100100
bDescriptorSubtype	INPUT_TERMINAL	2	0x02	00000010
bTerminalID	2	2	0x02	00000010
wTerminalType	Microphone	513	0x0201	00000010 00000001
bAssocTerminal	0	0	0x00	00000000
bNrChannels	1	1	0x01	00000001
wChannelConfig. Left Front (L)	Present	1	0x1	1
wChannelConfig. Right Front (R)	Not present	0	0x0	0
wChannelConfig. Center Front (C)	Not present	0	0x0	0
wChannelConfig. Low Frequency Enhancement (LFE)	Not present	0	0x0	0
wChannelConfig. Left Surround (LS)	Not present	0	0x0	0
wChannelConfig. Right Surround (RS)	Not present	0	0x0	0

wChannelConfig. Left of Center (LC)	Not present	0	0x0	0
wChannelConfig. Right of Center (RC)	Not present	0	0x0	0
wChannelConfig. Surround (S)	Not present	0	0x0	0
wChannelConfig. Side Left (SL)	Not present	0	0x0	0
wChannelConfig. Side Right (SR)	Not present	0	0x0	0
wChannelConfig. Top (T)	Not present	0	0x0	0
wChannelConfig. Reserved	0x0	0	0x0	0000
iChannelNames	0	0	0x00	00000000
iTerminal	0	0	0x00	00000000

Audio Descriptor				
Name	Value	Dec	Hex	Bin
bLength	9 bytes	9	0x09	00001001
bDescriptorType	CS_INTERFACE	36	0x24	00100100
bDescriptorSubtype	OUTPUT_TERMINAL	3	0x03	00000011
bTerminalID	6	6	0x06	00000110
wTerminalType	Speaker	769	0x0301	00000011 00000001
bAssocTerminal	0	0	0x00	00000000
bSourceID	9	9	0x09	00001001
iTerminal	0	0	0x00	00000000

Audio Descriptor				
Name	Value	Dec	Hex	Bin
bLength	9 bytes	9	0x09	00001001
bDescriptorType	CS_INTERFACE	36	0x24	00100100
bDescriptorSubtype	OUTPUT_TERMINAL	3	0x03	00000011
bTerminalID	7	7	0x07	00000111
wTerminalType	USB streaming	257	0x0101	00000001 00000001
bAssocTerminal	0	0	0x00	00000000

bSourceID	8	8	0x08	00001000
iTerminal	0	0	0x00	00000000

Audio Descriptor				
Name	Value	Dec	Hex	Bin
bLength	7 bytes	7	0x07	00000111
bDescriptorType	CS_INTERFACE	36	0x24	00100100
bDescriptorSubtype	SELECTOR_UNIT	5	0x05	00000101
bUnitID	8	8	0x08	00001000
bNrInPins	1	1	0x01	00000001
baSourceID(1)	10	10	0x0A	00001010
iSelector	0	0	0x00	00000000

Audio Descriptor				
Name	Value	Dec	Hex	Bin
bLength	10 bytes	10	0x0A	00001010
bDescriptorType	CS_INTERFACE	36	0x24	00100100
bDescriptorSubtype	FEATURE_UNIT	6	0x06	00000110
bUnitID	9	9	0x09	00001001
bSourceID	15	15	0x0F	00001111
bControlSize	1 byte	1	0x01	00000001
bmaControls(0). Mute	Supported	1	0x1	1
bmaControls(0). Volume	Not supported	0	0x0	0
bmaControls(0). Bass	Not supported	0	0x0	0
bmaControls(0). Mid	Not supported	0	0x0	0
bmaControls(0). Treble	Not supported	0	0x0	0
bmaControls(0). Graphic Equalizer	Not supported	0	0x0	0
bmaControls(0). Automatic Gain	Not supported	0	0x0	0
bmaControls(0). Delay	Not supported	0	0x0	0
bmaControls(1). Mute	Not supported	0	0x0	0
bmaControls(1). Volume	Supported	1	0x1	1
bmaControls(1). Bass	Not supported	0	0x0	0

bmaControls(1). Mid	Not supported	0	0x0	0
bmaControls(1). Treble	Not supported	0	0x0	0
bmaControls(1). Graphic Equalizer	Not supported	0	0x0	0
bmaControls(1). Automatic Gain	Not supported	0	0x0	0
bmaControls(1). Delay	Not supported	0	0x0	0
bmaControls(2). Mute	Not supported	0	0x0	0
bmaControls(2). Volume	Supported	1	0x1	1
bmaControls(2). Bass	Not supported	0	0x0	0
bmaControls(2). Mid	Not supported	0	0x0	0
bmaControls(2). Treble	Not supported	0	0x0	0
bmaControls(2). Graphic Equalizer	Not supported	0	0x0	0
bmaControls(2). Automatic Gain	Not supported	0	0x0	0
bmaControls(2). Delay	Not supported	0	0x0	0
iFeature	0	0	0x00	00000000

Audio Descriptor				
Name	Value	Dec	Hex	Bin
bLength	9 bytes	9	0x09	00001001
bDescriptorType	CS_INTERFACE	36	0x24	00100100
bDescriptorSubtype	FEATURE_UNIT	6	0x06	00000110
bUnitID	10	10	0x0A	00001010
bSourceID	2	2	0x02	00000010
bControlSize	1 byte	1	0x01	00000001
bmaControls(0). Mute	Supported	1	0x1	1
bmaControls(0). Volume	Supported	1	0x1	1
bmaControls(0). Bass	Not supported	0	0x0	0
bmaControls(0). Mid	Not supported	0	0x0	0
bmaControls(0). Treble	Not supported	0	0x0	0
bmaControls(0). Graphic Equalizer	Not supported	0	0x0	0
bmaControls(0). Automatic Gain	Supported	1	0x1	1

Automatic Gain				
bmaControls(0). Delay	Not supported	0	0x0	0
bmaControls(1). Mute	Not supported	0	0x0	0
bmaControls(1). Volume	Not supported	0	0x0	0
bmaControls(1). Bass	Not supported	0	0x0	0
bmaControls(1). Mid	Not supported	0	0x0	0
bmaControls(1). Treble	Not supported	0	0x0	0
bmaControls(1). Graphic Equalizer	Not supported	0	0x0	0
bmaControls(1). Automatic Gain	Not supported	0	0x0	0
bmaControls(1). Delay	Not supported	0	0x0	0
iFeature	0	0	0x00	00000000

Audio Descriptor				
Name	Value	Dec	Hex	Bin
bLength	9 bytes	9	0x09	00001001
bDescriptorType	CS_INTERFACE	36	0x24	00100100
bDescriptorSubtype	FEATURE_UNIT	6	0x06	00000110
bUnitID	13	13	0x0D	00001101
bSourceID	2	2	0x02	00000010
bControlSize	1 byte	1	0x01	00000001
bmaControls(0). Mute	Supported	1	0x1	1
bmaControls(0). Volume	Supported	1	0x1	1
bmaControls(0). Bass	Not supported	0	0x0	0
bmaControls(0). Mid	Not supported	0	0x0	0
bmaControls(0). Treble	Not supported	0	0x0	0
bmaControls(0). Graphic Equalizer	Not supported	0	0x0	0
bmaControls(0). Automatic Gain	Not supported	0	0x0	0
bmaControls(0). Delay	Not supported	0	0x0	0
bmaControls(1). Mute	Not supported	0	0x0	0
bmaControls(1). Volume	Not supported	0	0x0	0

bmaControls(1). Bass	Not supported	0	0x0	0
bmaControls(1). Mid	Not supported	0	0x0	0
bmaControls(1). Treble	Not supported	0	0x0	0
bmaControls(1). Graphic Equalizer	Not supported	0	0x0	0
bmaControls(1). Automatic Gain	Not supported	0	0x0	0
bmaControls(1). Delay	Not supported	0	0x0	0
iFeature	0	0	0x00	00000000

Audio Descriptor

Name	Value	Dec	Hex	Bin
bLength	13 bytes	13	0x0D	00001101
bDescriptorType	CS_INTERFACE	36	0x24	00100100
bDescriptorSubtype	MIXER_UNIT	4	0x04	00000100
bUnitID	15	15	0x0F	00001111
bNrInPins	2	2	0x02	00000010
baSourceID(1)	1	1	0x01	00000001
baSourceID(2)	13	13	0x0D	00001101
bNrChannels	2	2	0x02	00000010
wChannelConfig. Left Front (L)	Present	1	0x1	1
wChannelConfig. Right Front (R)	Present	1	0x1	1
wChannelConfig. Center Front (C)	Not present	0	0x0	0
wChannelConfig. Low Frequency Enhancement (LFE)	Not present	0	0x0	0
wChannelConfig. Left Surround (LS)	Not present	0	0x0	0
wChannelConfig. Right Surround (RS)	Not present	0	0x0	0
wChannelConfig. Left of Center (LC)	Not present	0	0x0	0
wChannelConfig. Right of Center (RC)	Not present	0	0x0	0
wChannelConfig.	Not present	0	0x0	0

Surround (S)				
wChannelConfig. Side Left (SL)	Not present	0	0x0	0
wChannelConfig. Side Right (SR)	Not present	0	0x0	0
wChannelConfig. Top (T)	Not present	0	0x0	0
wChannelConfig. Reserved	0x0	0	0x0	0000
iChannelNames	0	0	0x00	00000000
bmControls	0x00	0	0x00	00000000
iMixer	0	0	0x00	00000000

Interface descriptor				
Name	Value	Dec	Hex	Bin
bLength	Valid	9	0x09	00001001
bDescriptorType	INTERFACE	4	0x04	00000100
bInterfaceNumber	1	1	0x01	00000001
bAlternateSetting	0	0	0x00	00000000
bNumEndpoints	0	0	0x00	00000000
bInterfaceClass	Audio (Find out more online)	1	0x01	00000001
bInterfaceSubClass	Audio Streaming	2	0x02	00000010
bInterfaceProtocol	None	0	0x00	00000000
iInterface	0	0	0x00	00000000

Interface descriptor				
Name	Value	Dec	Hex	Bin
bLength	Valid	9	0x09	00001001
bDescriptorType	INTERFACE	4	0x04	00000100
bInterfaceNumber	1	1	0x01	00000001
bAlternateSetting	1	1	0x01	00000001
bNumEndpoints	1	1	0x01	00000001
bInterfaceClass	Audio (Find out more online)	1	0x01	00000001
bInterfaceSubClass	Audio Streaming	2	0x02	00000010
bInterfaceProtocol	None	0	0x00	00000000
iInterface	0	0	0x00	00000000

Audio Descriptor				
Name	Value	Dec	Hex	Bin
bLength	7 bytes	7	0x07	00000111
bDescriptorType	CS_INTERFACE	36	0x24	00100100
bDescriptorSubtype	AS_GENERAL	1	0x01	00000001
bTerminalLink	1	1	0x01	00000001
bDelay	1 frame	1	0x01	00000001
wFormatTag	PCM	1	0x0001	00000000 00000001

Audio Descriptor				
Name	Value	Dec	Hex	Bin
bLength	14 bytes	14	0x0E	00001110
bDescriptorType	CS_INTERFACE	36	0x24	00100100
bDescriptorSubtype	FORMAT_TYPE	2	0x02	00000010
bFormatType	FORMAT_TYPE_I	1	0x01	00000001
bNrChannels	2	2	0x02	00000010
bSubframeSize	2 bytes	2	0x02	00000010
bBitResolution	16 bits	16	0x10	00010000
bSamFreqType	2 discrete sampling frequencies	2	0x02	00000010
tSamFreq(1)	48.0 kHz	48,000	0x00BB80	00000000 10111011 10000000
tSamFreq(2)	44.1 kHz	44,100	0x00AC44	00000000 10101100 01000100

Endpoint descriptor				
Name	Value	Dec	Hex	Bin
bLength	Valid	9	0x09	00001001
bDescriptorType	ENDPOINT	5	0x05	00000101
bEndpointAddress	1 OUT	1	0x01	00000001
bmAttributes. TransferType	Isochronous	1	0x1	01
bmAttributes. SynchronisationType	Adaptive	2	0x2	10

bmAttributes. UsageType	Data endpoint	0	0x0	00
bmAttributes. Reserved	Zero	0	0x0	00
wMaxPacketSize	200 bytes	200	0x00C8	00000000 11001000
bInterval	1 frame (1 ms)	1	0x01	00000001
bRefresh	Not used	0	0x00	00000000
bSynchAddress	Not used	0	0x00	00000000

Audio Descriptor				
Name	Value	Dec	Hex	Bin
bLength	7 bytes	7	0x07	00000111
bDescriptorType	CS_ENDPOINT	37	0x25	00100101
bDescriptorSubtype	EP_GENERAL	1	0x01	00000001
bmAttributes. Sampling Frequency	Supported	1	0x1	1
bmAttributes. Pitch	Not supported	0	0x0	0
bmAttributes. Reserved	0x00	0	0x00	00000
bmAttributes. MaxPacketsOnly	Not supported	0	0x0	0
bLockDelayUnits	Milliseconds	1	0x01	00000001
wLockDelay	1	1	0x0001	00000000 00000001

Interface descriptor				
Name	Value	Dec	Hex	Bin
bLength	Valid	9	0x09	00001001
bDescriptorType	INTERFACE	4	0x04	00000100
bInterfaceNumber	2	2	0x02	00000010
bAlternateSetting	0	0	0x00	00000000
bNumEndpoints	0	0	0x00	00000000
bInterfaceClass	Audio (Find out more online)	1	0x01	00000001
bInterfaceSubClass	Audio Streaming	2	0x02	00000010
bInterfaceProtocol	None	0	0x00	00000000
iInterface	0	0	0x00	00000000

Interface descriptor				
Name	Value	Dec	Hex	Bin
bLength	Valid	9	0x09	00001001
bDescriptorType	INTERFACE	4	0x04	00000100
bInterfaceNumber	2	2	0x02	00000010
bAlternateSetting	1	1	0x01	00000001
bNumEndpoints	1	1	0x01	00000001
bInterfaceClass	Audio (Find out more online)	1	0x01	00000001
bInterfaceSubClass	Audio Streaming	2	0x02	00000010
bInterfaceProtocol	None	0	0x00	00000000
iInterface	0	0	0x00	00000000

Audio Descriptor				
Name	Value	Dec	Hex	Bin
bLength	7 bytes	7	0x07	00000111
bDescriptorType	CS_INTERFACE	36	0x24	00100100
bDescriptorSubtype	AS_GENERAL	1	0x01	00000001
bTerminalLink	7	7	0x07	00000111
bDelay	1 frame	1	0x01	00000001
wFormatTag	PCM	1	0x0001	00000000 00000001

Audio Descriptor				
Name	Value	Dec	Hex	Bin
bLength	14 bytes	14	0x0E	00001110
bDescriptorType	CS_INTERFACE	36	0x24	00100100
bDescriptorSubtype	FORMAT_TYPE	2	0x02	00000010
bFormatType	FORMAT_TYPE_I	1	0x01	00000001
bNrChannels	1	1	0x01	00000001
bSubframeSize	2 bytes	2	0x02	00000010
bBitResolution	16 bits	16	0x10	00010000
bSamFreqType	2 discrete sampling frequencies	2	0x02	00000010
tSamFreq(1)	48.0 kHz	48,000	0x00BB80	00000000 10111011 10000000

tSamFreq(2)	44.1 kHz	44,100	0x00AC44	00000000 10101100 01000100
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Endpoint descriptor				
Name	Value	Dec	Hex	Bin
bLength	Valid	9	0x09	00001001
bDescriptorType	ENDPOINT	5	0x05	00000101
bEndpointAddress	2 IN	130	0x82	10000010
bmAttributes. TransferType	Isochronous	1	0x1	01
bmAttributes. SynchronisationType	Asynchronous	1	0x1	01
bmAttributes. UsageType	Data endpoint	0	0x0	00
bmAttributes. Reserved	Zero	0	0x0	00
wMaxPacketSize	100 bytes	100	0x0064	00000000 01100100
bInterval	1 frame (1 ms)	1	0x01	00000001
bRefresh	Not used	0	0x00	00000000
bSynchAddress	Not used	0	0x00	00000000

Audio Descriptor				
Name	Value	Dec	Hex	Bin
bLength	7 bytes	7	0x07	00000111
bDescriptorType	CS_ENDPOINT	37	0x25	00100101
bDescriptorSubtype	EP_GENERAL	1	0x01	00000001
bmAttributes. Sampling Frequency	Supported	1	0x1	1
bmAttributes. Pitch	Not supported	0	0x0	0
bmAttributes. Reserved	0x00	0	0x00	00000
bmAttributes. MaxPacketsOnly	Not supported	0	0x0	0
bLockDelayUnits	Undefined	0	0x00	00000000
wLockDelay	0	0	0x0000	00000000 00000000

Interface descriptor				
Name	Value	Dec	Hex	Bin
bLength	Valid	9	0x09	00001001
bDescriptorType	INTERFACE	4	0x04	00000100
bInterfaceNumber	3	3	0x03	00000011
bAlternateSetting	0	0	0x00	00000000
bNumEndpoints	1	1	0x01	00000001
bInterfaceClass	Human Interface Device (Find out more online)	3	0x03	00000011
bInterfaceSubClass	Unknown (0x00)	0	0x00	00000000
bInterfaceProtocol	None	0	0x00	00000000
iInterface	0	0	0x00	00000000

HID descriptor				
Name	Value	Dec	Hex	Bin
bLength	Valid	9	0x09	00001001
bDescriptorType	HID	33	0x21	00100001
bcdHID	1.0	256	0x0100	00000001 00000000
bCountryCode	Not Supported	0	0x00	00000000
bNumDescriptors	1	1	0x01	00000001
bDescriptorType[0]	REPORT	34	0x22	00100010
wDescriptorLength[0]	50 bytes	50	0x0032	00000000 00110010

Endpoint descriptor				
Name	Value	Dec	Hex	Bin
bLength	Valid	7	0x07	00000111
bDescriptorType	ENDPOINT	5	0x05	00000101
bEndpointAddress	3 IN	131	0x83	10000011
bmAttributes. TransferType	Interrupt	3	0x3	11
bmAttributes. Reserved	Zero	0	0x00	000000
wMaxPacketSize	4 bytes	4	0x0004	00000000 00000100
bInterval	32 frames (32 ms)	32	0x20	00100000