



# CUSTOMER TEST APP

VIDEO TUTORIAL SIDE NOTES

# HOW TO USE

Welcome to our HAPTICORE software solutions tutorial series.

HAPTICORE is our patented MR actuator with fully programmable haptic feedback, only with the use of software. To help you quickly generate your own haptic feedback patterns with your HAPTICORE, we have created a series of video tutorials.

Although all our HAPTICORE actuators can be controlled with our software solutions, they are designed for different forces and applications. Therefore, depending on the HAPTICORE you are using, you may need to use different parameters to generate clean haptic feedback. With these side notes, we give you all values to reproduce the examples shown in our Customer Test App video tutorials and to quickly create your own haptic modes with your HAPTICORE actuator.

If you have any questions about our HAPTICORE technology, please visit our support section at [www.xeeltech.com](http://www.xeeltech.com) or contact our customer support team who will be happy to assist you.

Your XeelTech Team

# VIDEO 1 – FIRST STEPS GUIDE

<b>Intro</b>	00:00	
<b>Download &amp; Installation</b>	00:47	
<b>Connecting the Encoder</b>	01:15	
<b>Reports</b>	01:48	
<b>Encoder Calibration</b>	03:04	
<b>Report Settings</b>	03:37	
<b>General Commands</b>	03:45	
<b>HAPTICORE &amp; Firmware Information</b>	04:03	
<b>Save / Load Haptic Modes</b>	04:44	Import HMC File for your HAPTICORE Encoder (05:18)
<b>Haptic Functions</b>	07:36	
<b>Idle Mode</b>	08:21	
<b>Set Encoder Angle</b>	09:08	
<b>Outro</b>	09:36	

# VIDEO 2 – ENCODER CALIBRATION

<b>Intro</b>	00:00
<b>Encoder Calibration</b>	00:54
<b>Outro</b>	01:48

If you have problems connecting your HAPTICORE encoder to your device, watch our setup video or take a look at the documentation available in the download center.

The following checklist can help you to connect your HAPTICORE:

- ✓ Is the HAPTICORE properly connected to your device?
- ✓ Is the driver installed?
- ✓ Is the latest firmware version installed?

If you have further questions about our HAPTICORE technology, please visit our support section at [www.xeeltech.com](http://www.xeeltech.com) or contact our customer support team.

They will be happy to assist you.

# VIDEO 3 – TICKS

		HAPTICORE 14		HAPTICORE 34		HAPTICORE 40	
<b>Intro</b>	00:00						
<b>Preparation</b>	00:53						
<b>Default Settings &amp; other HAPTICORE Encoders</b>	01:08			Tick Current: 0,070A	Tick Current: 0,050A	Idle Current: -60mA	Idle Current: -60mA
				Tick Mode: 3	Tick Mode: 3	Tick Window: 5°	Tick Window: 5°
<b>Tick Angle</b>	01:35	Tick A. CW: 12 (Default)	Tick A. CW: 12 (Default)	Tick A. CW: 12 (Default)	Tick A. CW: 12 (Default)	Tick A. CCW: 0 (Default)	Tick A. CCW: 0 (Default)
		Tick A. CCW: 0 (Default)	Tick A. CCW: 0 (Default)	Tick A. CCW: 0 (Default)	Tick A. CCW: 0 (Default)	12 (01:55)	12 (01:55)
						0 (02:02)	0 (02:02)
		Tick A. CW: 15 (02:06)	Tick A. CW: 15 (02:06)	Tick A. CW: 15 (02:06)	Tick A. CW: 15 (02:06)	24 (02:18)	24 (02:18)
		24 (02:18)	24 (02:18)	24 (02:18)	24 (02:18)		
<b>Tick Current &amp; Tick Velocity Factor</b>	02:37	Tick Vel. F.: 0,1 (Default)	Tick Vel. F.: 0,1 (Default)	Tick Vel. F.: 0,1 (Default)	Tick Vel. F.: 0,1 (Default)	0 (02:47)	0 (02:47)
		0 (02:47)	0 (02:47)	0 (02:47)	0 (02:47)	Tick Current: 0 (Default)	Tick Current: 0 (Default)
		Tick Current: 0 (Default)	Tick Current: 0 (Default)	Tick Current: 0 (Default)	Tick Current: 0 (Default)	0,12 (02:55)	0,10 (02:55)
		0,12 (02:55)	0,12 (02:55)	0,12 (02:55)	0,12 (02:55)	0,06 (03:02)	0,07 (03:02)
		0,06 (03:02)	0,06 (03:02)	0,06 (03:02)	0,06 (03:02)	0 (03:26)	0 (03:26)
		0 (03:26)	0 (03:26)	0 (03:26)	0 (03:26)	Tick Vel. F.: 0,1 (03:31)	Tick Vel. F.: 0,15 (03:31)
		Tick Vel. F.: 0,1 (03:31)	Tick Vel. F.: 0,15 (03:31)	Tick Vel. F.: 0,15 (03:31)	Tick Vel. F.: 0,15 (03:31)	0,3 (03:44)	0,25 (03:44)
		0,3 (03:44)	0,3 (03:44)	0,3 (03:44)	0,3 (03:44)	0,0 (03:56)	0,0 (03:56)
		0,0 (03:56)	0,0 (03:56)	0,0 (03:56)	0,0 (03:56)	Tick Current: 0,09 (04:04)	Tick Current: 0,06 (04:04)
		Tick Current: 0,09 (04:04)	Tick Current: 0,06 (04:04)	Tick Current: 0,06 (04:04)	Tick Current: 0,06 (04:04)	Tick Vel. F.: 0,1 (04:13)	Tick Vel. F.: 0,12 (04:13)
		Tick Vel. F.: 0,1 (04:13)	Tick Vel. F.: 0,12 (04:13)	Tick Vel. F.: 0,12 (04:13)	Tick Vel. F.: 0,12 (04:13)		

# VIDEO 3 – TICKS

		HAPTICORE 14		HAPTICORE 34		HAPTICORE 40	
Tick Active Direction	04:17	Tick A. CCW:	0 (Default) 10 (04:55) 0 (05:09)	Tick Window:	4°	Tick A. CCW:	0 (Default) 10 (04:55) 0 (05:09)
Tick Modes & Tick Window	05:10						
Tick Mode 4	05:28						
Tick Mode 3	06:04	Tick Window:	1,2 (Default) 10 (06:13) 4 (06:22) 2 (06:33) 8 (06:42)	Tick Window:	1,2 (Default) 10 (06:13) 4 (06:22) 2 (06:33) 8 (06:42)	Tick Window:	1,2 (Default) 10 (06:13) 4 (06:22) 2 (06:33) 8 (06:42)
Tick Mode 2	06:45						
Tick Mode 1 & Example Mode	07:22	Tick Current:	0,2 (08:03)	Tick Current:	0,2 (08:03)	Tick Current:	0,2 (08:03)
		Tick Vel. F.:	-0,07 (08:32)	Tick Vel. F.:	-0,07 (08:32)	Tick Vel. F.:	-0,07 (08:32)
		Tick Window:	1 (08:43)	Duration Min.:	0,001	Duration Min.:	0,001
				Duration Max:	0,050	Duration Max:	0,050
				Tick Window:	1 (08:43)	Tick Window:	1 (08:43)
Example Mode 2	09:19	Tick Current:	0,06 (09:30)	Tick Mode:	2	Tick Mode:	2
		Tick Vel. F.:	0,03 (09:34)	Tick Current:	0,04 (09:30)	Tick Current:	0,05 (09:30)
		Tick Window:	9 (09:38)	Tick Vel. F.:	0,03 (09:34)	Tick Vel. F.:	0,03 (09:34)
				Tick Window:	7 (09:38)	Tick Window:	7 (09:38)
Outro	09:48						

# VIDEO 4 – BARRIER

		HAPTICORE 14		HAPTICORE 34		HAPTICORE 40	
<b>Intro</b>	00:00						
<b>Preparations</b>	01:06	Tick Mode:	4 (01:38)	Tick Mode:	1	Tick Mode:	1
		Tick Angle:	24 (01:39)	Tick Angle:	24°	Tick Angle:	24°
		Tick Current:	0,08 (01:40)	Tick Current:	0,4	Tick Current:	0,4
		Velocity F.:	0,1 (01:41)	Velocity F.:	-0,110	Velocity F.:	-0,110
				Duration Min:	0,010	Duration Min:	0,010
				Duration Max:	0,080	Duration Max:	0,080
				Window:	1,0	Window:	1,0
<b>The Barrier Function / Start &amp; Stop Angle</b>	01:47	Start Angle:	90 (Default)	Start Angle:	90 (Default)	Start Angle:	90 (Default)
		Stop Angle:	-90 (Default)	Stop Angle:	-90 (Default)	Stop Angle:	-90 (Default)
<b>Set Encoder Angle</b>	02:30						
<b>Barrier Current &amp; Holding Current</b>	02:54	Barrier C.:	0,4 (Default) 0,3 (03:00)	Barrier C.:	1,0 (Default) 0,3 (03:00)	Barrier C.:	1,0 (Default) 0,3 (03:00)
		Barrier H. C.:	0,4 (Default) 0,3 (03:07)	Barrier H. C.:	1,0 (Default) 0,3 (03:07)	Barrier H. C.:	1,0 (Default) 0,3 (03:07)
<b>Barrier Polarity</b>	03:13	B. Start Angle:	0 (03:39)	B. Start Angle:	0 (03:39)	B. Start Angle:	0 (03:39)
		B. Stop Angle:	96 (03:41) 72 (03:54)	B. Stop Angle:	96 (03:41) 72 (03:54)	B. Stop Angle:	96 (03:41) 72 (03:54)
<b>Barrier Limit Angle</b>	04:25						
<b>Example Barrier Mode</b>	05:23	Tick Start A.:	0 (Default)	Tick Start A.:	0 (Default)	Tick Start A.:	0 (Default)
		Tick Stop A.:	0 (Default) 48 (05:55) 60 (06:45)	Tick Stop A.:	0 (Default) 48 (05:55) No polarity issue	Tick Stop A.:	0 (Default) 48 (05:55) No polarity issue
		B. Stop A.:	180 (07:04)	B. Stop A.:	180 (07:04)	B. Stop A.:	180 (07:04)
<b>Outro</b>	07:24						

# VIDEO 5 – TORQUE & CURRENT

		HAPTICORE 14	HAPTICORE 34	HAPTICORE 40
<b>Intro</b>	00:00			
<b>The Current Function</b>	00:41	Start C. (CW): 0,1 (Default)	Start C. (CW): 0,040	Start C. (CW): 0,040
<b>The Torque Function</b>	01:47	T. Start F. CW: 0,001 (Default)	T. Start F. CW: 0,0003 (Default)	T. Start F. CW: 0,0003 (Default)
<b>Start &amp; Stop Angle</b>	02:32	T. Stop A.: 0 (Default)	T. Stop A.: 0 (Default)	T. Stop A.: 0 (Default)
		180 (02:40)	180 (02:40)	180 (02:40)
		T. Stop F. CW: 0 (Default)	T. Stop F. CW: 0 (Default)	T. Stop F. CW: 0 (Default)
		0,001 (02:47)	0,0007 (02:47)	0,0007 (02:47)
		T. Start F. CW: 0,001 (Default)	T. Start F. CW: 0 (Default)	T. Start F. CW: 0 (Default)
		0 (03:12)	0 (03:12)	0 (03:12)
		T. Stop F. CW: 0,001 (03:17)	T. Stop F. CW: 0,0007 (03:17)	T. Stop F. CW: 0,0007 (03:17)
<b>Torque &amp; Barrier (+ Barrier Polarity)</b>	03:31			
<b>Separate CW &amp; CCW Feedback</b>	04:10	T. Start CW: 0,001 (04:20)	T. Start CW: 0,0004 (04:20)	T. Start CW: 0,0004 (04:20)
		T. Start CCW: 0,0005 (04:24)	T. Start CCW: 0,0001 (04:24)	T. Start CCW: 0,0001 (04:24)
		T. Stop CW: 0,0005 (04:26)	T. Stop CCW: 0,0001 (04:26)	T. Stop CCW: 0,0001 (04:26)
<b>Freewheeling</b>	04:31	Vel. Th.: 0 (Default)	Vel. Th.: 0 (Default)	Vel. Th.: 0 (Default)
		500 (04:43)	350 (04:43)	350 (04:43)
		Ext. Time: 0 (Default)	Ext. Time: 0 (Default)	Ext. Time: 0 (Default)
		0,1 (04:46)	0,3 (04:46)	0,3 (04:46)
		1 (05:30)	1 (05:30)	1 (05:30)
<b>Summary/Additional Information</b>	05:47			
<b>Active Directions</b>	06:56			
<b>Outro</b>	07:06			



# VIDEO 6 – LOCK

	HAPTICORE 14	HAPTICORE 34	HAPTICORE 40
<b>Intro</b>	00:00		
<b>Activate the Lock Function</b>	00:28		
<b>Lock Current</b>	01:04	Lock Current: 0,5 (Default) 0,3 (01:08)	Lock Current: 1,0 (Default) 0,3 (01:08)
<b>Lock Direction</b>	01:14		
<b>Outro</b>	01:52		



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