

# Delcom Products Inc

## USB Hand Key Manual

Part Number: 906420

Revision A - Apr 14, 2010



### Overview

This manual describes how to use and setup the Delcom USB Hand Key Switch.

The Delcom USB Hand Switch products send a key code to the Host computer that represents a key on a standard computer keyboard. These products use the built in OS USB HID drivers. This device will work in parallel with other keyboard device and multiply Delcom Hand/Foot Key Switches can be used at the same time.

### Supports

This products is USB HID compliant an will run on Windows, MAC, Linux and other OS that support the USB HID architecture.

### Configuration

To start using your Foot Key you must first configure the device to send the key code of your choice. By default the device ship with the 'SPACE BAR' (0x2C) key code selected on S1 and no modifiers are selected on S2.

There are two dip switches located inside the device. Dip switch SW1 configures which key code will be sent when the hand switch is depressed. Dip switch SW2 configures the modifiers for the key code. The key code modifiers are right and left ALT, SHIFT, CTRL and GUI keys.

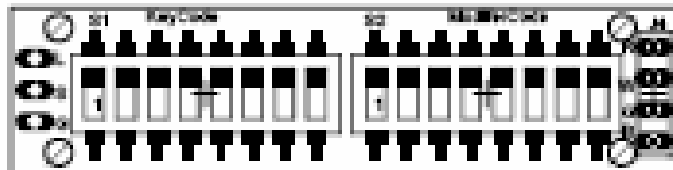
### Key Code Selection

To find your desired key code search table 4 for the key code value. Then enter this value on the dip switch S1. Then enter the modifier code on dip switch S2. Dip switches can be changed at any time.

### Diagram 1 – PCB board

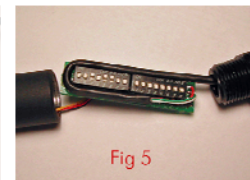
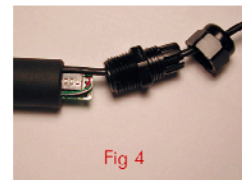
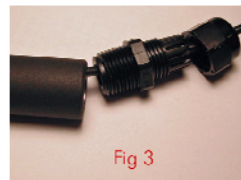
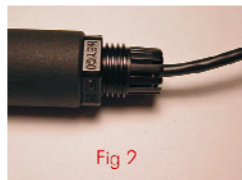
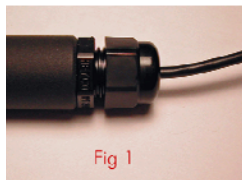
S1 – Key Code

S2 – Modifier Code



### Key code setup.

First unscrew the outer cable nut (Fig2). Then unscrew the center cable nut (Fig3). Using the black USB cable, pull the circuit board assembly out (Fig4). Change the key codes as necessary (Fig5), then reinstall the circuit board and cable nut in the reverse order.



**Table 1 – Samples Key Codes**

S1 – Key Code	S2 – Modifier	Description
00101100 (0x2C)	00000000 (0x00)	Sends a space bar key
00000100 (0x04)	00000000 (0x00)	Sends a lower case 'a' key
00000100 (0x04)	00000010 (0x02)	Sends a upper case 'A' key
01001110 (0x51)	00000000 (0x00)	Sends the Page Down Key
00111010 (0x3A)	00000000 (0x00)	Sends the F1 key
00111010 (0x3A)	00000001 (0x01)	Sends the Ctrl F1 key
00111010 (0x3A)	00000010 (0x02)	Sends the Shift F1 key
00111010 (0x3A)	00000100 (0x04)	Sends the Alt F1 key
00000110 (0x06)	00000001 (0x01)	Sends the Ctrl C key
00101010 (0x2A)	00000101 (0x05)	Sends the Ctrl + Alt + Delete key

**Table2 – Trouble Shooting**

Problem	Solution
Device does not work.	1) Check the dip switch are set correctly. Note a dip switch setting of S1=0x00 and S2=0x00 will not send any key codes. 2) Check that OS recognized the device. In windows use Device Manager to tell weather the system recognizes the device. If the device is not recognized contact tech support.
Key press repeats.	1) Use your OS settings to increase the delay before a key repeats. In windows use the Keyboard program in the Control Panel. Also see Modifier Codes Dip Switch Number 1.

**Table 3 – Modifier Codes**

The modifier codes add to the key code. Default is no modifiers (0x00). Any combination of modifiers can be added the key code. Place the dip switch in the ON position to enable the modifiers.

Dip Switch Number	Function
1	*Button Mode - 0=Momentary and 1=Hold (Repeat)
2	Right ALT – The left ALT button
3	Right Shift – The left shift button
4	Right CTRL – The left control button
5	Left GUI – The left windows start button
6	Left ALT – The left ALT button
7	Left Shift – The left shift button
8	Left CTRL – The left control button

\*In momentary mode only one key code is sent per foot press. In hold mode the key code is sent when the foot switch is pressed and the release key code is sent when the foot switch is released. Hold mode allows for the key code to repeat and should also be used when using modifier keys in conjunction with your keyboard. For example, using SHIFT key code on the foot switch and the a key on our keyboard.

**Key Codes** – To enter the key code into S1 dip switch use the binary value, where a zero means dip switch OFF and a one means dip switch ON. For example to enter the 'B' key, use binary the value of 00000101. Set all switch on S1 to OFF except dip switch 6 and 8 which are set to ON.

0=OFF 1=ON

**Table 4 – Key Codes Table**

<i>Binary</i>	<i>DEC</i>	<i>HEX</i>	<i>Description</i>	<i>OS</i>	<i>Binary</i>	<i>DEC</i>	<i>HEX</i>	<i>Description</i>	<i>OS</i>
0000000	0	00	Reserved (No event indicated)	PC,MAC,UNIX	0100000	64	40	Keyboard F7	PC,MAC,UNIX
0000001	1	01	Reserved (Keyboard ErrorRollOver)	PC,MAC,UNIX	0100001	65	41	Keyboard F8	PC,MAC,UNIX
0000010	2	02	Reserved (Keyboard PostFail)	PC,MAC,UNIX	0100010	66	42	Keyboard F9	PC,MAC,UNIX
0000011	3	03	Reserved (Error Undefined)	PC,MAC,UNIX	0100011	67	43	Keyboard F10	PC,MAC,UNIX
0000100	4	04	Keyboard a and A	PC,MAC,UNIX	0100100	68	44	Keyboard F11	PC,MAC,UNIX
0000101	5	05	Keyboard b and B	PC,MAC,UNIX	0100101	69	45	Keyboard F12	PC,MAC,UNIX
0000110	6	06	Keyboard c and C	PC,MAC,UNIX	0100110	70	46	Keyboard PrintScreen	PC,MAC,UNIX
0000111	7	07	Keyboard d and D	PC,MAC,UNIX	0100111	71	47	Keyboard Scroll Lock	PC,MAC,UNIX
00001000	8	08	Keyboard e and E	PC,MAC,UNIX	01001000	72	48	Keyboard Pause	PC,MAC,UNIX
00001001	9	09	Keyboard f and F	PC,MAC,UNIX	01001001	73	49	Keyboard Insert	PC,MAC,UNIX
00001010	10	0A	Keyboard g and G	PC,MAC,UNIX	01001010	74	4A	Keyboard Home	PC,MAC,UNIX
00001011	11	0B	Keyboard h and H	PC,MAC,UNIX	01001011	75	4B	Keyboard PageUp	PC,MAC,UNIX
00001100	12	0C	Keyboard i and I	PC,MAC,UNIX	01001100	76	4C	Keyboard Delete Forward	PC,MAC,UNIX
00001101	13	0D	Keyboard j and J	PC,MAC,UNIX	01001101	77	4D	Keyboard End	PC,MAC,UNIX
00001110	14	0E	Keyboard k and K	PC,MAC,UNIX	01001110	78	4E	Keyboard PageDown	PC,MAC,UNIX
00001111	15	0F	Keyboard l and L	PC,MAC,UNIX	01001111	79	4F	Keyboard RightArrow	PC,MAC,UNIX
00010000	16	10	Keyboard m and M	PC,MAC,UNIX	01010000	80	50	Keyboard LeftArrow	PC,MAC,UNIX
00010001	17	11	Keyboard n and N	PC,MAC,UNIX	01010001	81	51	Keyboard DownArrow	PC,MAC,UNIX
00010010	18	12	Keyboard o and O	PC,MAC,UNIX	01010010	82	52	Keyboard UpArrow	PC,MAC,UNIX
00010011	19	13	Keyboard p and P	PC,MAC,UNIX	01010011	83	53	Keyboard Num Lock and Clear	PC,MAC,UNIX
00010100	20	14	Keyboard q and Q	PC,MAC,UNIX	01010100	84	54	Keypad /	PC,MAC,UNIX
00010101	21	15	Keyboard r and R	PC,MAC,UNIX	01010101	85	55	Keypad *	PC,MAC,UNIX
00010110	22	16	Keyboard s and S	PC,MAC,UNIX	01010110	86	56	Keypad -	PC,MAC,UNIX
00010111	23	17	Keyboard t and T	PC,MAC,UNIX	01010111	87	57	Keypad +	PC,MAC,UNIX
00011000	24	18	Keyboard u and U	PC,MAC,UNIX	01011000	88	58	Keypad ENTER	PC,MAC,UNIX
00011001	25	19	Keyboard v and V	PC,MAC,UNIX	01011001	89	59	Keypad 1 and End	PC,MAC,UNIX
00011010	26	1A	Keyboard w and W	PC,MAC,UNIX	01011010	90	5A	Keypad 2 and Down Arrow	PC,MAC,UNIX
00011011	27	1B	Keyboard x and X	PC,MAC,UNIX	01011011	91	5B	Keypad 3 and Page Down	PC,MAC,UNIX
00011100	28	1C	Keyboard y and Y	PC,MAC,UNIX	01011100	92	5C	Keypad 4 and Left Arrow	PC,MAC,UNIX
00011101	29	1D	Keyboard z and Z	PC,MAC,UNIX	01011101	93	5D	Keypad 5	PC,MAC,UNIX
00011110	30	1E	Keyboard 1 and !	PC,MAC,UNIX	01011110	94	5E	Keypad 6 and Right Arrow	PC,MAC,UNIX
00011111	31	1F	Keyboard 2 ans @	PC,MAC,UNIX	01011111	95	5F	Keypad 7 and Home	PC,MAC,UNIX
00100000	32	20	Keyboard 3 and #	PC,MAC,UNIX	01100000	96	60	Keypad 8 and Up Arrow	PC,MAC,UNIX
00100001	33	21	Keyboard 4 and \$	PC,MAC,UNIX	01100001	97	61	Keypad 9 and Page Up	PC,MAC,UNIX
00100010	34	22	Keyboard 5 and %	PC,MAC,UNIX	01100010	98	62	Keypad 0 and Insert	PC,MAC,UNIX
00100011	35	23	Keyboard 6 and ^	PC,MAC,UNIX	01100011	99	63	Keypad . and Delete	PC,MAC,UNIX
00100100	36	24	Keyboard 7 and &	PC,MAC,UNIX	01100100	100	64	Keyboard Non-US\ and	PC,MAC,UNIX
00100101	37	25	Keyboard 8 and *	PC,MAC,UNIX	01100101	101	65	Keyboard Application	PC,UNIX
00100110	38	26	Keyboard 9 and (	PC,MAC,UNIX	01100110	102	66	Keyboard Power	MAC,UNIX
00100111	39	27	Keyboard 0 and )	PC,MAC,UNIX	01100111	103	67	Keypad =	MAC
00101000	40	28	Keyboard Return (ENTER)	PC,MAC,UNIX	01101000	104	68	Keyboard F13	MAC
00101001	41	29	Keyboard ESCAPE	PC,MAC,UNIX	01101001	105	69	Keyboard F14	MAC
00101010	42	2A	Keyboard DELETE (BackSpace)	PC,MAC,UNIX	01101010	106	6A	Keyboard F15	MAC
00101011	43	2B	Keyboard Tab	PC,MAC,UNIX	01101011	107	6B	Keyboard F16	MAC
00101100	44	2C	Keyboard Spacebar	PC,MAC,UNIX	01101100	108	6C	Keyboard F17	MAC
00101101	45	2D	Keyboard - and _ (under score)	PC,MAC,UNIX	01101101	109	6D	Keyboard F18	MAC
00101110	46	2E	Keyboard = and +	PC,MAC,UNIX	01101110	110	6E	Keyboard F19	MAC
00101111	47	2F	Keyboard [ and {	PC,MAC,UNIX	01101111	111	6F	Keyboard F20	MAC
00110000	48	30	Keyboard ] and }	PC,MAC,UNIX	01110000	112	70	Keyboard F21	MAC
00110001	49	31	Keyboard \ and	PC,MAC,UNIX	01110001	113	71	Keyboard F22	MAC
00110010	50	32	Keyboard Non-US# and ~	PC,MAC,UNIX	01110010	114	72	Keyboard F23	MAC
00110011	51	33	Keyboard ; and :	PC,MAC,UNIX	01110011	115	73	Keyboard F24	MAC
00110100	52	34	Keyboard ' and "	PC,MAC,UNIX	01110100	116	74	Keyboard Execute	UNIX
00110101	53	35	Keyboard Grave Accent and Tilde	PC,MAC,UNIX	01110101	117	75	Keyboard Help	UNIX
00110110	54	36	Keyboard , and <	PC,MAC,UNIX	01110110	118	76	Keyboard Menu	UNIX
00110111	55	37	Keyboard . And >	PC,MAC,UNIX	01110111	119	77	Keyboard Select	UNIX
00111000	56	38	Keyboard / and ?	PC,MAC,UNIX	01111000	120	78	Keyboard Stop	UNIX
00111001	57	39	Keyboard Caps Lock	PC,MAC,UNIX	01111001	121	79	Keyboard Again	UNIX
00111010	58	3A	Keyboard F1	PC,MAC,UNIX	01111010	122	7A	Keyboard Undo	UNIX
00111011	59	3B	Keyboard F2	PC,MAC,UNIX	01111011	123	7B	Keyboard Cut	UNIX
00111100	60	3C	Keyboard F3	PC,MAC,UNIX	01111100	124	7C	Keyboard Copy	UNIX
00111101	61	3D	Keyboard F4	PC,MAC,UNIX	01111101	125	7D	Keyboard Paste	UNIX
00111110	62	3E	Keyboard F5	PC,MAC,UNIX	01111110	126	7E	Keyboard Find	UNIX
00111111	63	3F	Keyboard F6	PC,MAC,UNIX	01111111	127	7F	Keyboard Mute	UNIX

**Table 4 – Key Codes Table Cont.**

<i>Binary</i>	<i>DEC</i>	<i>HEX</i>	<i>Description</i>	<i>OS</i>	<i>Binary</i>	<i>DEC</i>	<i>HEX</i>	<i>Description</i>	<i>OS</i>
10000000	128	80	Keyboard Volume Up	UNIX	11000000	192	C0	Keypad E	
10000001	129	81	Keyboard Volume Down	UNIX	11000001	193	C1	Keypad F	
10000010	130	82	Keyboard Locking Caps Lock	UNIX	11000010	194	C2	Keypad XOR	
10000011	131	83	Keyboard Locking Num Lock	UNIX	11000011	195	C3	Keypad ^	
10000100	132	84	Keyboard Locking Scroll Lock	UNIX	11000100	196	C4	Keypad %	
10000101	133	85	Keypad Comma		11000101	197	C5	Keypad <	
10000110	134	86	Keypad Equal Sign		11000110	198	C6	Keypad >	
10000111	135	87	Keyboard International 1		11000111	199	C7	Keypad &	
10001000	136	88	Keyboard International 2		11001000	200	C8	Keypad &&	
10001001	137	89	Keyboard International 3		11001001	201	C9	Keypad	
10001010	138	8A	Keyboard International 4		11001010	202	CA	Keypad	
10001011	139	8B	Keyboard International 5		11001011	203	CB	Keypad :	
10001100	140	8C	Keyboard International 6		11001100	204	CC	Keypad #	
10001101	141	8D	Keyboard International 7		11001101	205	CD	Keypad Space	
10001110	142	8E	Keyboard International 8		11001110	206	CE	Keypad @	
10001111	143	8F	Keyboard International 9		11001111	207	CF	Keypad !	
10010000	144	90	Keyboard LANG1		11010000	208	D0	Keypad Memory Store	
10010001	145	91	Keyboard LANG2		11010001	209	D1	Keypad Memory Recall	
10010010	146	92	Keyboard LANG3		11010010	210	D2	Keypad Memory Clear	
10010011	147	93	Keyboard LANG4		11010011	211	D3	Keypad Memory Add	
10010100	148	94	Keyboard LANG5		11010100	212	D4	Keypad Memory Subtract	
10010101	149	95	Keyboard LANG6		11010101	213	D5	Keypad Memory Multiply	
10010110	150	96	Keyboard LANG7		11010110	214	D6	Keypad Memory Divide	
10010111	151	97	Keyboard LANG8		11010111	215	D7	Keypad +/-	
10011000	152	98	Keyboard LANG9		11011000	216	D8	Keypad Clear	
10011001	153	99	Keyboard Alternate Erase		11011001	217	D9	Keypad Clear Entry	
10011010	154	9A	Keyboard SysReq/Attention		11011010	218	DA	Keypad Binary	
10011011	155	9B	Keyboard Cancel		11011011	219	DB	Keypad Octal	
10011100	156	9C	Keyboard Clear		11011100	220	DC	Keypad Decimal	
10011101	157	9D	Keyboard Prior		11011101	221	DD	Keypad Hexidecimal	
10011110	158	9E	Keyboard Return		11011110	222	DE	Reserved	
10011111	159	9F	Keyboard Separator		11011111	223	DF	Reserved	
10100000	160	A0	Keyboard Out		11100000	224	E0	Keyboard Left Control	PC,MAC,UNIX
10100001	161	A1	Keyboard Oper		11100001	225	E1	Keyboard Left Shift	PC,MAC,UNIX
10100010	162	A2	Keyboard Clear/Again		11100010	226	E2	Keyboard Left Alt	PC,MAC,UNIX
10100011	163	A3	Keyboard CrSel/Props		11100011	227	E3	Keyboard Left GUI	PC,MAC,UNIX
10100100	164	A4	Keyboard ExSel		11100100	228	E4	Keyboard Right Control	PC,MAC,UNIX
10100101	165	A5	Reserved		11100101	229	E5	Keyboard Right Shift	PC,MAC,UNIX
10100110	166	A6	Reserved		11100110	230	E6	Keyboard Right Alt	PC,MAC,UNIX
10100111	167	A7	Reserved		11100111	231	E7	Keyboard Right GUI	PC,MAC,UNIX
10101000	168	A8	Reserved		11101000	232	E8	Reserved	
10101001	169	A9	Reserved		11101001	233	E9	Reserved	
10101010	170	AA	Reserved		11101010	234	EA	Reserved	
10101011	171	AB	Reserved		11101011	235	EB	Reserved	
10101100	172	AC	Reserved		11101100	236	EC	Reserved	
10101101	173	AD	Reserved		11101101	237	ED	Reserved	
10101110	174	AE	Reserved		11101110	238	EE	Reserved	
10101111	175	AF	Reserved		11101111	239	EF	Reserved	
10110000	176	B0	Keypad 00		11110000	240	F0	Reserved	
10110001	177	B1	Keypad 000		11110001	241	F1	Reserved	
10110010	178	B2	Thousands Separator		11110010	242	F2	Reserved	
10110011	179	B3	Decimal Seperator		11110011	243	F3	Reserved	
10110100	180	B4	Currency Unit		11110100	244	F4	Reserved	
10110101	181	B5	Currency Sub-unit		11110101	245	F5	Reserved	
10110110	182	B6	Keypad (		11110110	246	F6	Reserved	
10110111	183	B7	Keypad )		11110111	247	F7	Reserved	
10111000	184	B8	Keypad {		11111000	248	F8	Reserved	
10111001	185	B9	Keypad }		11111001	249	F9	Reserved	
10111010	186	BA	Keypad Tab		11111010	250	FA	Reserved	
10111011	187	BB	Keypad BackSpace		11111011	251	FB	Reserved	
10111100	188	BC	Keypad A		11111100	252	FC	Reserved	
10111101	189	BD	Keypad B		11111101	253	FD	Reserved	
10111110	190	BE	Keypad C		11111110	254	FE	Reserved	
10111111	191	BF	Keypad D		11111111	255	FF	Reserved	