USB Relay Device - HID Details

Device Path, found using *setupapi.dll* function calls, see Microsoft document page "Finding and Opening a HID Collection"
Device Handle, returned by CreateFile() function, *kernel32.dll*

Vendor ID = 0x16C0
Product ID = 0x05DF
[found using HidD_GetAttributes() function, *hid.dll* , values found in HIDD_ATTRIBUTES structure]

Product Name = USBRelay#, where # = number of relays on the device
[found using HidD_GetProductString() function, *hid.dll*]

Get Device ID/serial number and Relay States call HidD_GetFeature() function, *hid.dll*.
HID Get Feature, ReportBuffer parameter:

ReportBuffer definition; byte[] GetBuffer = new byte[9], 9 element byte array

ReportBuffer details; returned by HidD_GetFeature() function.
GetBuffer[0] = 0x00, report number
GetBuffer[1] = first char of ID string, cast to char
GetBuffer[2] = second char of ID string, cast to char
GetBuffer[3] = third char of ID string, cast to char
GetBuffer[4] = fourth char of ID string, cast to char
GetBuffer[5] = fith char of ID string, cast to char
GetBuffer[6] = 0x00, not used
GetBuffer[7] = 0x00, not used
GetBuffer[8] = relay_states, byte value representing 8-bit binary correlating to relay states

To set Device ID/serial number and Relay States call HidD_SetFeature() function, *hid.dll*.
HID Set Feature ReportBuffer parameter:

ReportBuffer definition; byte[] SetBuffer = new byte[9], 9 element byte array

Set Device ID/serial number (string having a length of 5 characters)
SetBuffer[0] = 0x00, Report number
SetBuffer[1] = 0xFA, Command
SetBuffer[2] = first char of ID string, cast to byte
SetBuffer[3] = second char of ID string, cast to byte
SetBuffer[4] = third char of ID string, cast to byte
SetBuffer[5] = fourth char of ID string, cast to byte
SetBuffer[6] = fifth char of ID string, cast to byte
SetBuffer[7] = 0x00, not used
SetBuffer[8] = 0x00, not used

Set Relay States (ReportBuffer details)

index	All Off	Single Off	All On	Single On	description
0	0x00	0x00	0x00	0x00	report number
1	0xFC	0xFD	0xFE	0xFF	command
2	0x00	*Relay number	0x00	*Relay number	data
3	0x00	0x00	0x00	0x00	Not used
4	0x00	0x00	0x00	0x00	Not used
5	0x00	0x00	0x00	0x00	Not used
6	0x00	0x00	0x00	0x00	Not used
7	0x00	0x00	0x00	0x00	Not used
8	0x00	0x00	0x00	0x00	Not used

*Relay number cannot be greater than the number of relays on device