

# Cellwatch Battery Monitoring System

## Technical Application Note



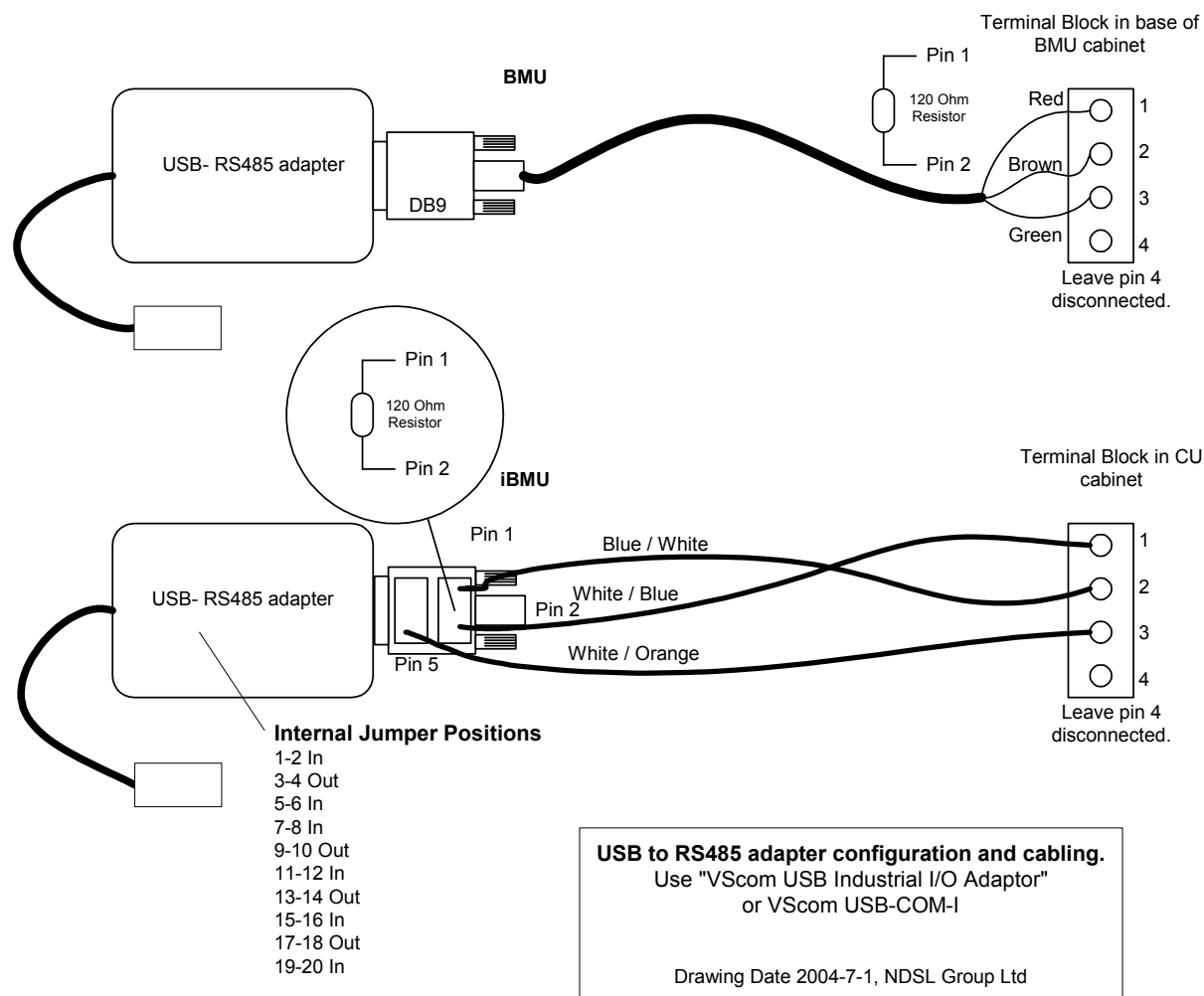
Tech 20040720-1-2

### Serial Port Connection using USB-485 adapter

The USB port adapter replaces the 9pin D type to 25 pin D-type adapter cable, and the KK Systems RS485 converter. This solution will be applied to all systems shipped from NDSL Group Ltd companies from 1<sup>st</sup> January 2005 and will be phased in during the second half of 2004.

There are three possible configurations and the installer should be familiar with all three for new installations and retrofit situations where serial ports or KK adapters are no longer available..

1. United Kingdom manufactured BMUs. Use the second illustration below.
2. United States Manufactured BMUs. Use the upper illustration below.
3. Globally manufactured iBMUs. Use the lower illustration below.



## Retrofit situations.

### To retrofit to a BMU or iBMU you will need.

The USB-485 adapter. NOTE: it may be unconfigured.

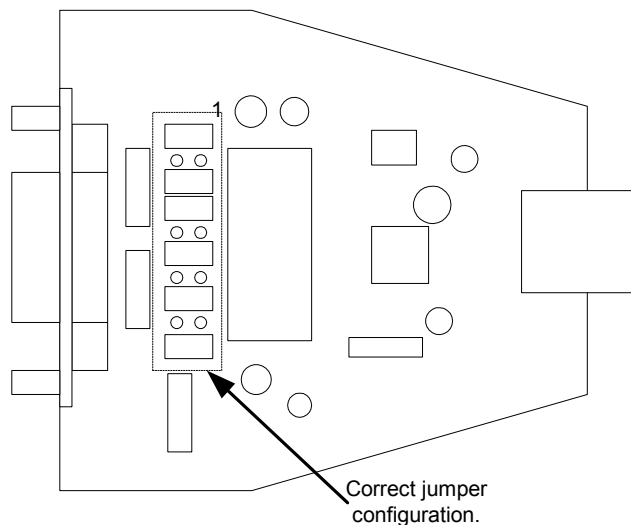
The CD-ROM containing the driver.

A small piece of Dual Lock®.

Small handtools.

### Hardware

First configure the adapter. Remove the two small, cross head screws and remove the plastic molding around the card. Between the larger 9 pin connector and the black power supply chip in the center of the card are located 10 jumpers which should be configured as the illustration below for RS485 compatibility.



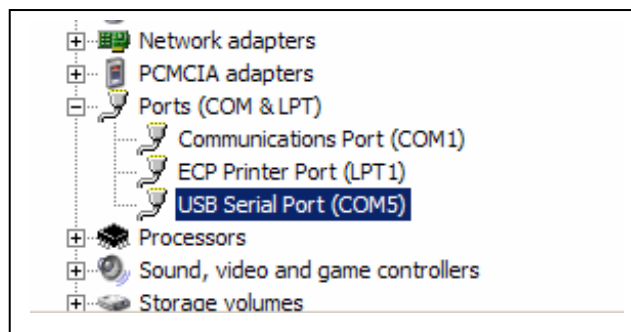
After reassembling the USB-RS485 converter, plug into the laptop USB port.

The connector from the Control Unit to the BMU or iBMU will now need to be modified and should be done in the manner described in the illustration on page 1 taking care to refit the 120 ohm resistor in the correct location.

### Software

Place the CD-ROM in the computer CD drive and install the drivers for the USB device.

The port chosen by the USB adapter can be verified by going to the **Start** button and selecting **System** in the **Control Panel**. Look under Ports(COM & LPT) and the USB serial port should be identified with a COM number (in the case below, COM5).



Open Cellwatch Software and stop it running (it should be set to auto-start). Open the **Configuration** drop down menu and select **View configuration**. Select **Edit** and enter the password (*deafcat*) and select the grey area for

editing by pressing Ctrl-Alt-left click anywhere in the grey area. Change the column content headed PT (second column from left) – see below.

Change all the port references to the new port. If multiple ports are being installed, this will have to be done one at a time, carefully selecting which control units belong to which ports.

Cellwatch battery system configuration settings											
File Edit											
PC	PT	CU	DCM	CH	TY	CT	TP	VF	VT	ZI	HY
1	5	1	0	1	C	1		1			
1	5	1	0	2	C	2		2			
1	5	1	0	3	C		1	3			
1	5	1	0	4	C		2	4			
1	5	1	0	5	C	3					
1	5	1	0	6	C	4					
1	5	1	0	7	C		3				
1	5	1	0	8	C		4				
1	5	1	1	1	Z				1	1	
1	5	1	1	2	Z				2	2	
1	5	1	1	3	Z				3	3	
1	5	1	1	4	Z				4	4	

### Problems with ports?

Cellwatch was designed around using com port 1. It is necessary to make sure that the configuration file (batconfig.cfg) in the Cellwatch folder is looking at the USB com port which may be com port 5 or 6 or 7..

Also when using the Cellwatch diagnostics, it is necessary to make sure the USB com port is selected, as the diagnostic tool defaults to (com) port 1.

Most times, the USB port will install itself onto com port 5 as described above. However, for a number of reasons it may be that it installs onto com port 6 (or even 7). One reason is that the computer you are installing the USB device onto has two USB ports and you have unplugged the USB device having already installed the drivers for it and plugged it into the second port. Under these circumstances it will create a new com port (probably com port 6).

You can set the port back to com port 5 or even com port 1 by accessing the *System* window from *Control Panel* and selecting the *Hardware* tab. Then select *Device Manager* and open the *Ports* list by left clicking on the + sign to the left of the title. Choose the port entry relating to the USB device and right clicking, select *Properties*.

Select *Port Settings* and then *Advanced*. Pull down the drop down list of ports available. Select the port that relates to your configuration file and select it. If you are told that port is already in use and you are sure that this is in fact incorrect, proceed anyway. The USB port will now work with your chosen port number.

**Note**, Windows reports on port allocations that have been allocated as “*being in use*” when in fact they are not in use at all so it is entirely safe to reallocate an alleged *in use* port providing you are sure it is not currently used!