

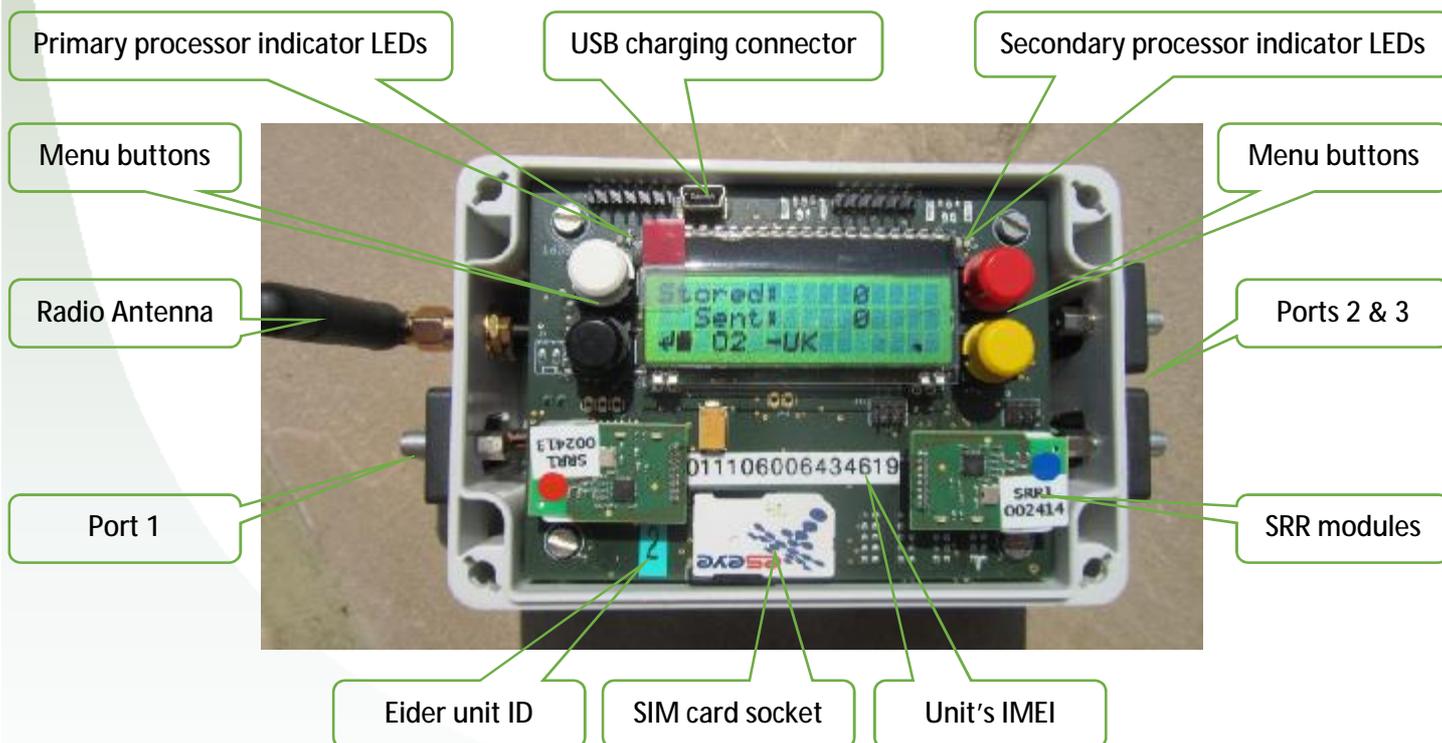
INTRODUCTION

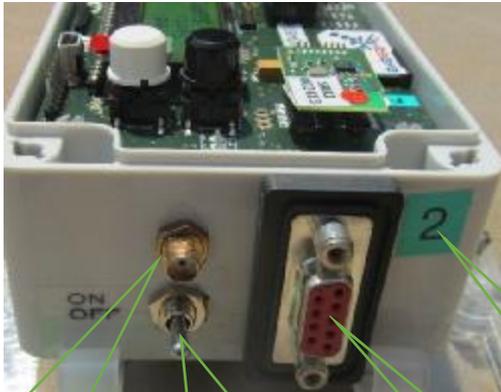
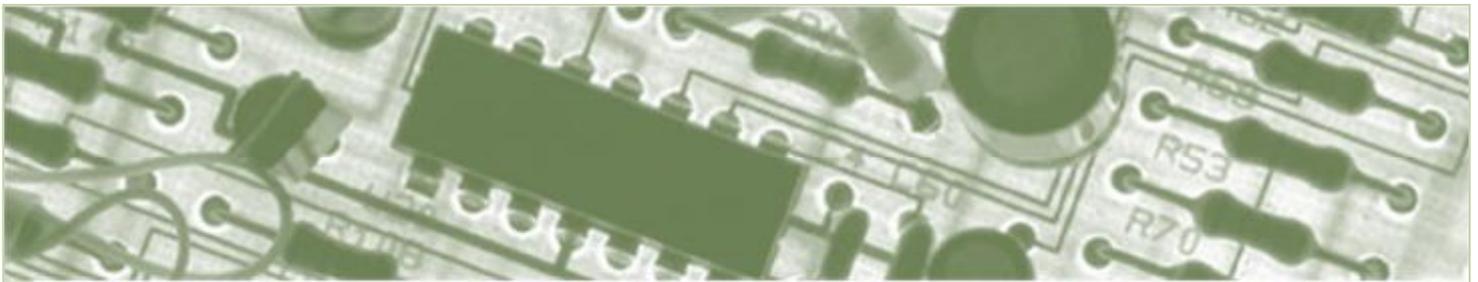


The Eider system provides a method of delivering punch data from remote controls wirelessly for safety or commentary purposes. Using the mobile phone networks (GPRS data), the Eider Control sends race data directly to the internet, from where it can be viewed for live web results, or pulled into commentary software. Short Range Radio (SRR) and merge modules give the Eider Control increased flexibility.

EQUIPMENT

ANATOMY OF AN EIDER CONTROL





Antenna connection

On / Off switch

Port 1

Eider unit ID

Ports 2 & 3

SCREEN ORIENTATION

The default screen for the Eider Control shows the status of the device.



Stored: Indicates the number of punch records received / stored by Eider Control

Sent: Indicates the number of punch records transmitted to the server

← Menu navigation button

↑ Option select up button

↓ Option select down button

Battery indicator:

 Battery empty

 Battery fully charged

 Battery charging

Signal strength indicator:

✖ Not connected

 Full signal

The network status can have the following states:

- ~ OFF-LINE – The GSM modem is powered off
- ~ SEARCH – The GSM modem is searching for a network
- ~ ONLINE – The Eider Control has registered on a network, but no network name is available
- ~ ROAM – The Eider Control has registered on a network, but no network name is available
- ~ DENIED – The Eider Control has been unable to register on a GSM network. The unit will try again.
- ~ STAT TX – A status message has been sent
- ~ GPRS – The Eider Control has successfully connected to the GPRS network.
- ~ Or, the name of the network the Eider Control is registered with.



PORT CONFIGURATION

Port 1 can double as an input by use of a Y-splitter cable.

When in SRR mode, ports 2 and 3 switch to the SRR channels and the external ports are unavailable.



OPERATION

CHARGING

The Eider Control is charged over USB (5 volt). Remove the waterproof lid on the Eider unit by releasing the 4 screws (turn by 90 degrees) to attach the USB to mini-USB cable in the charging connector.

Within 30 seconds the battery indicator on the screen will change to the battery charging symbol. The battery

may take up to 6 hours to fully charge. Unplug the USB cable, and check the battery symbol shows full charge.

Under medium usage conditions, the battery in the Eider control should last for approximately two days.

CONFIGURATION SET UP

When the Eider Control is turned on, the first screen displayed shows the date and version of the device software. These instructions are correct for version 270715 C0008.

Eider is based on a menu configuration system. The four buttons have consistent functions within each menu:

- ~ Black: Move to next menu
- ~ White: Restore setting to factory default
- ~ Red: Move the setting up
- ~ Yellow: Move the setting down

Hardware



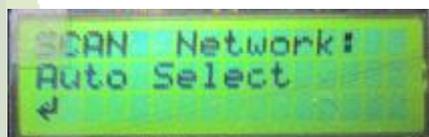
This menu selects what hardware is connected to device. SPORTident operates at either 4800 or 34000 baud rate. Therefore the options are:

- ~ SPORTident 4800
- ~ SPORTident 34000
- ~ SPORTident 4800 SRR
- ~ SPORTident 34000 SRR
- ~ Emit

When either of the two SRR options are selected, the two SRR channels become ports 2 and 3, and the SRR module LEDs flash red.

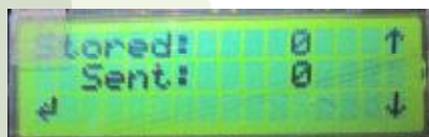


Network



Indicates the mobile network selection setting. By default, the setting is "Auto Select", which means the SIM will select one of the mobile signals it finds. The mobile network selection can be forced, e.g. if a non-GPPProjects SIM is used. To change the setting, press the white button which will initiate a network scan (this may take some time, during which time the screen will return to the default view). You can then select the mobile operator from those available with the red and yellow buttons. Press the black button to confirm. This setting will revert to Auto Select when the unit is switched off/on.

Flash Status



Indicates the current status of the record archive memory, including the number of records received from the radio control ('stored') and transmitted ('sent') to the server.

Adjusting the 'Sent' number down will force the most recently received records to be resent.

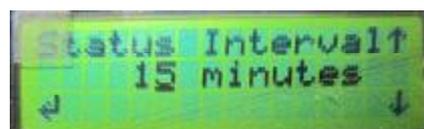
Reset Flash Boot Count



The boot count is the number of times the flash memory in unit has been reset, and helps in time correction by setting a 'baseline'. This should not need to be changed. However, if you need to reset the flash,

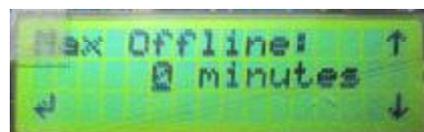
press the white button on this menu. This will reset both the 'Stored' and 'Sent' counters to zero and return you to the previous screen for confirmation.

Status Interval



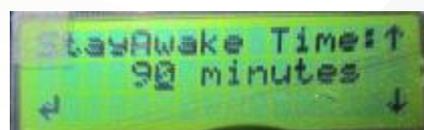
The Eider Control will automatically send a status message if there has been no punch data received during the time selected. This allows the base to confirm data is being received from the Eider Control, and its current status. To disable this feature set the interval to 0 minutes. The default setting is 65 minutes.

Maximum Time Offline

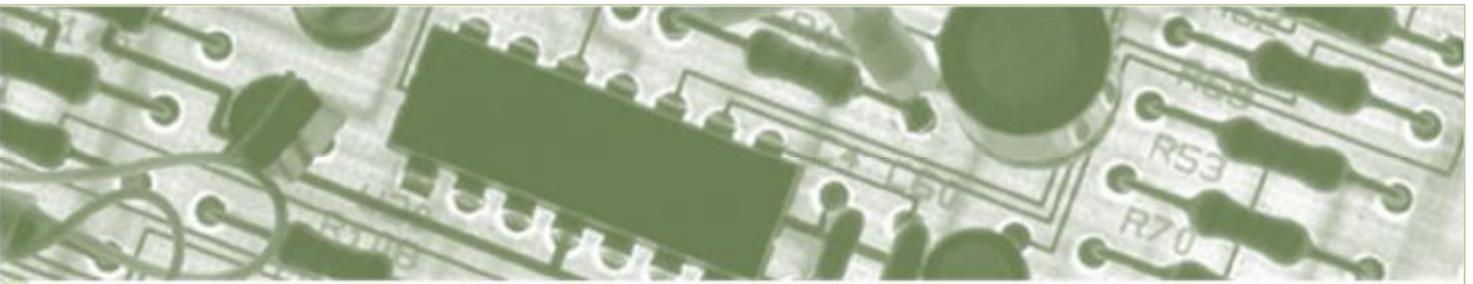


The Eider Control will go offline after a period of inactivity, as defined in the Stay Awake Menu, which helps to conserve battery if the Eider Control is deployed for extended periods. However, when the Eider Control is offline, it increases the latency for sending the data. This setting defines how long the Eider Control stays offline, assuming no punch data is received. The Eider Control will be continuously online if the time is set to 0.

Stay Awake Time



The Eider Control will remain online for the defined period after sending a record. Keeping the Eider control online reduces the latency for sending punch data, and



allows status packets to be sent. The default time is 90 minutes.

Extra Config



This menu allows the Eider Control to be set up as the receiving end of a RS422 feed, i.e. from a wired merge control. Select the input type that will be plugged into port 1: either RS232 or RS422.

DEPLOYMENT

RENTAL KIT

When an Eider Control is rented from GPPProjects, the following equipment will be supplied:

- ~ Eider Control, with SRR modules if requested, including a multi-network SIM card
- ~ Antenna
- ~ Y-splitter cable

SPORTident CONTROL SET UP

When using SPORTident controls, use SPORTident Config+ to program the units.

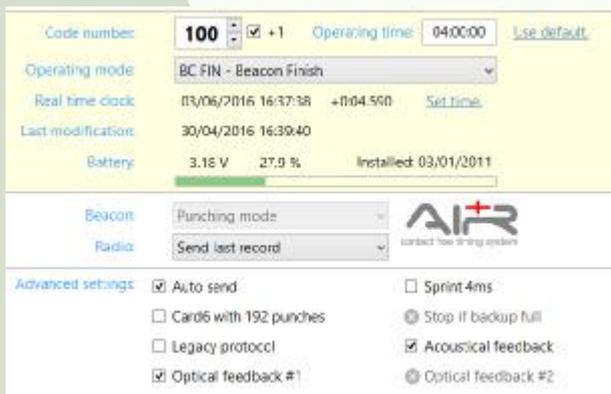
Note, when programming SI control units remotely (i.e. BSF8-SRR units), remember to revert the transmitting unit to a receiving unit before deployment. Simply change connection to 'Direct' and press the 'Read' button.

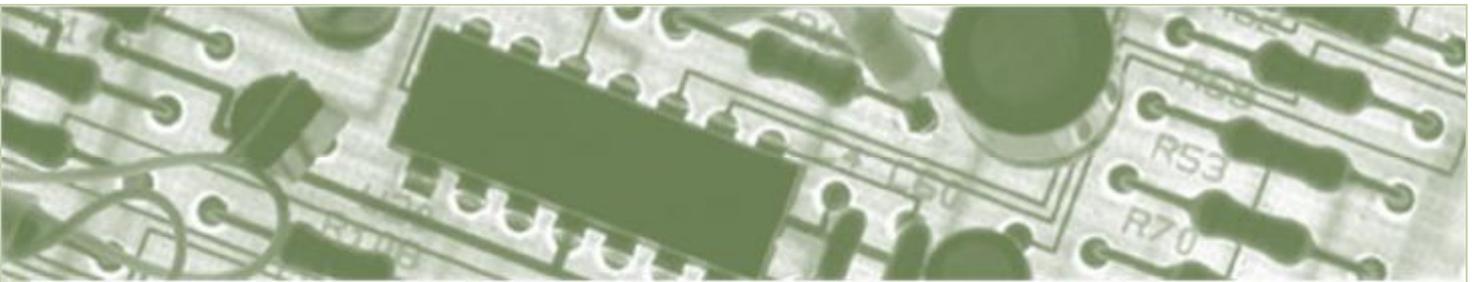
For an event *without* either SRR controls or Air+

- ~ Under 'Advanced settings', enable 'Autosend'
- ~ Eider supports normal and 'Legacy' protocols, but some results software only support 'Legacy'. We recommend checking!
- ~ We recommend the baud is set to 4800 for maximum compatibility

For an event *with* SRR controls but *without* Air+

- ~ Under 'Advanced settings', enable 'Autosend' and disable 'Legacy protocol'
- ~ Check the firmware is 623 or later
- ~ We recommend the baud is set to 4800 for maximum compatibility





For an event *with* Air+

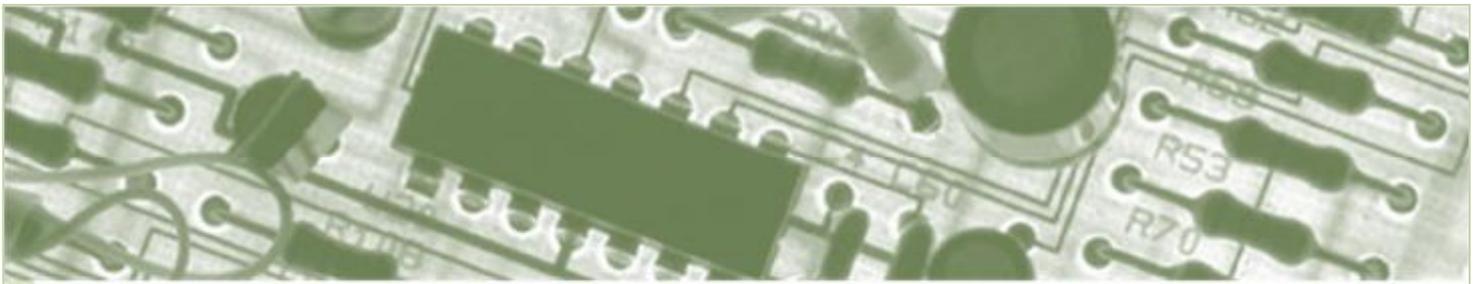
- ~ Set 'Operating mode' to "BC CN – Beacon Control" or "BC FIN – Beacon Finish"
- ~ In the 'Air+' section, set 'Radio' to whatever data you want transmitted (last record, unsent records, all records)

- ~ Under 'Advanced settings', enable 'Autosend' and disable 'Legacy protocol'
- ~ Check the firmware is 623 or later
- ~ We recommend the baud is set to 4800 for maximum compatibility

FUNCTION

The Eider Control can function as either a wireless or wired radio control, accepting up to three inputs, two of which can be SRR inputs. It outputs a GSM data feed, but will also output a RS422 or RS232 feed through port 1. The table below gives the possible hardware set up and menu options:

Function	Hardware	Menu settings	Comments
Eider control		Hardware: SportIdent 4800 Extra Config: RS232	
Eider SRR control		Hardware: SportIdent 4800 SRR Extra Config: RS232	The SRR control unit can be up to 8 meters from the Eider Control. When active the LEDs on the SRR modules flash red. Green LEDs indicate they are being turned on



Eider merge



Hardware: SportIdent 4800
 Extra Config: RS232

If three inputs are required, a Y-splitter cable can be attached to port 1, as shown in image 1, otherwise the RS232-RS422 adaptor can be attached directly (image 2).

Eider SRR merge



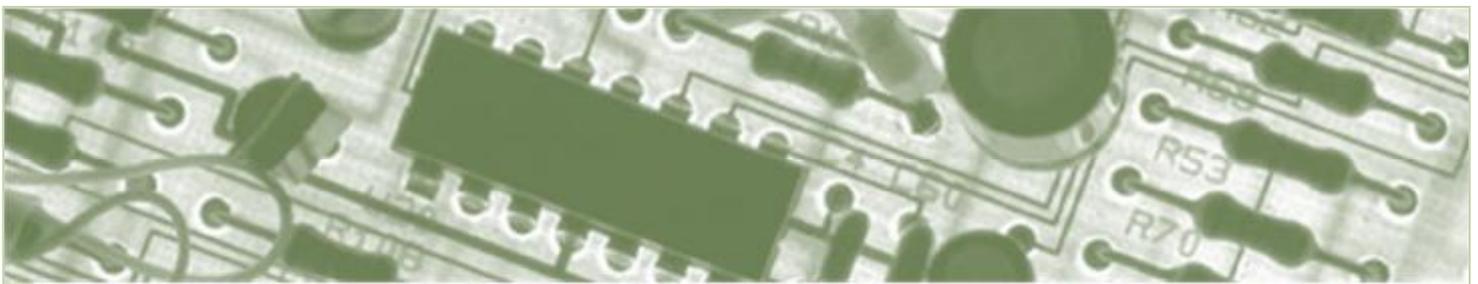
Hardware: SportIdent 4800 SRR
 Extra Config: RS232

Any accompanying SPORTIdent BSM7-RS232 unit must be plugged into port 1 via a Y-splitter

Eider daisy-chain



Hardware: SportIdent 4800 SRR
 Extra Config: RS232, if connecting units by serial cables, or RS422 if units are further apart and connected by an Ethernet cable.



Eider merge receiver



Hardware: SportIdent 4800 SRR

Extra Config: RS422

At the receiving end of the RS422 cable, connect the RS422-RS232 adaptor to a Y-splitter cable. The other end of the splitter cable is then attached to your computer by a standard serial to USB adapter.

Alternatively, an RS422-USB adaptor can attach the feed directly to your computer (image 2)

AT THE CONTROL SITE

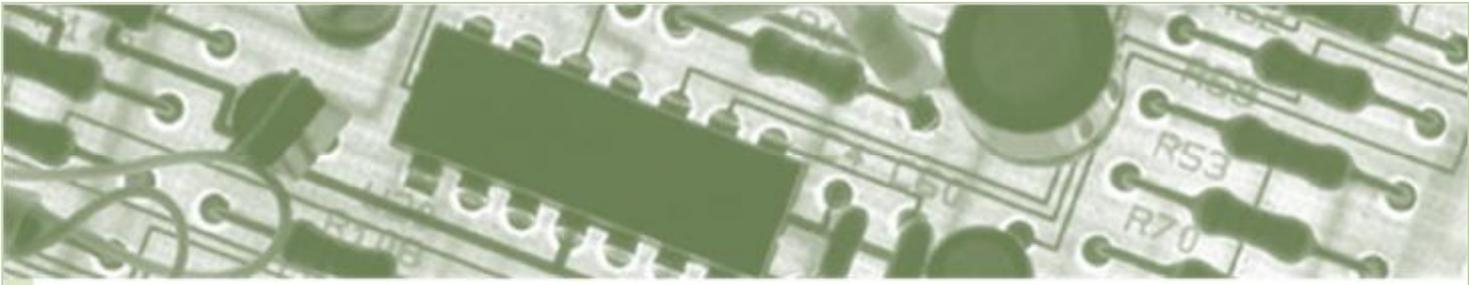
Ensure the screws are tightened (turn through 90 degrees) to maintain the waterproof seal. At the control site, attach the radio control(s) to the Eider unit, and switch it on. The screen will go through the welcome messages to the base view. Check battery status and network signal detection (this may take a minute or two).

Punch radio control, and watch the 'Stored' count increment. If more than one radio control is attached, punch every one. Additionally, the red button can be used to create a dummy punch, which can be helpful if, for example, your dibber is full. The 'Stored' count will include status updates, so may show a number greater

than the number of punches – check every punch makes a corresponding 'Stored' count increment.

Watch the Eider unit find a network and send the data – the network status will change to 'GPRS SEND' and the 'Sent' number will increment to the same number as 'Stored'.

Using cable ties through the plastic loops on the back of the Eider Control unit, attach it securely to the stake or nearby tree. Neatly gather any loose cable and secure with cable ties. If any cable needs to run between the radio control and the Eider Control, or between daisy-chained Eider Controls, either dig-in the cable or locate the two stakes back to back so that competitors cannot trip over, or damage, the cable.



FAQ

Q. I am not receiving data back from my radio control, what should I do?

A. Check the Eider Control and radio controls are on.

Check the Eider Control battery level. Check for any Status Messages on the screens - refer to the Product Specification document on our website for more information.

Check 'Stored'/'Sent' status of punch data:-

If punching the radio control doesn't cause the 'Stored' number to increment, press the red 'dummy punch' button to help identify if the issue is with the control units:

- ~ Check the connection(s) between the radio control and the Eider Control are securely fixed,
- ~ Check the Eider Control is set to receive data from the correct radio control type,
- ~ If using the SRR channels, any accompanying BSM7-RS232 control unit must be plugged into port 1. Check Extra config menu is set to RS232,
- ~ Check the radio control hardware is programmed for autosend.

If 'Stored' numbers increment with punching, but data is not being sent:

- ~ Check network status and signal strength – consider moving the unit or longer/larger aerials to find a network,
- ~ Power cycle the Eider Control (no unsent data will be lost) to force re-authentication on the network,
- ~ Consider forcing the mobile network to a single operator.

If data is being sent from the Eider Control, but is not seen in commentary software, check:

- ~ There is internet connection at the receiving end,
- ~ Punch data and/or status packets can be seen on the 'Remote Data Access Rules' page of the Eider portal (see Eider online results instructions),
- ~ Click on this link http://eider.gpprojects.net/www/get_packet.php?apikey=XXX&serial=YYY where XXX is your API ad YYY is the device IMEI. This will show you if there is any raw data on the server for your software to collect,
- ~ Software used for retrieving data from the Eider server is correctly set up (check IMEI numbers, date ranges, port numbers and event settings that may affect data seen, e.g. hide test punches).



8 Fredrick Sanger Road
Surrey Research Park
Guildford, GU2 7YD
Tel: +44 (0) 1483 685200
Fax: +44 (0) 1483 685201