

Bringing the DBS Advantage into the Laboratory

With heartfelt thanks to:

GSK Neil, Matt, Paul, Philip, Rakesh, Helene, Chris, Jon, Chet.....

EBF Philip, Liz, Steve, Silke, Christina

All

Brief Biography

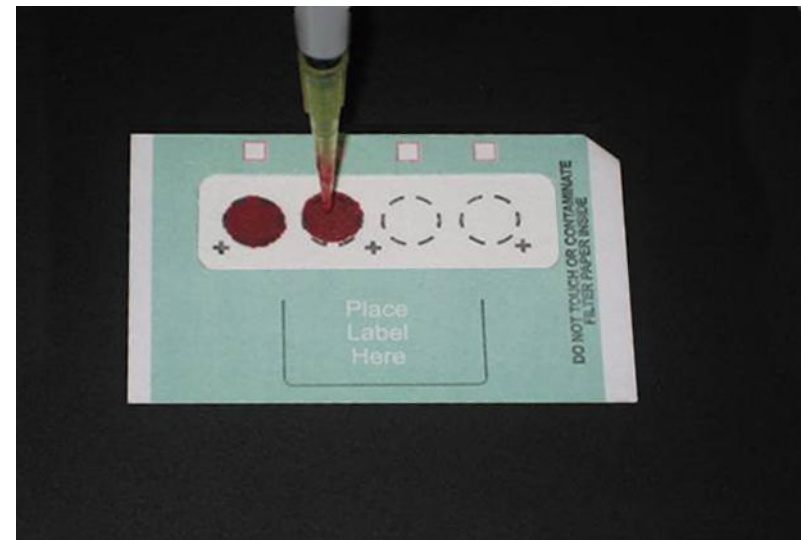
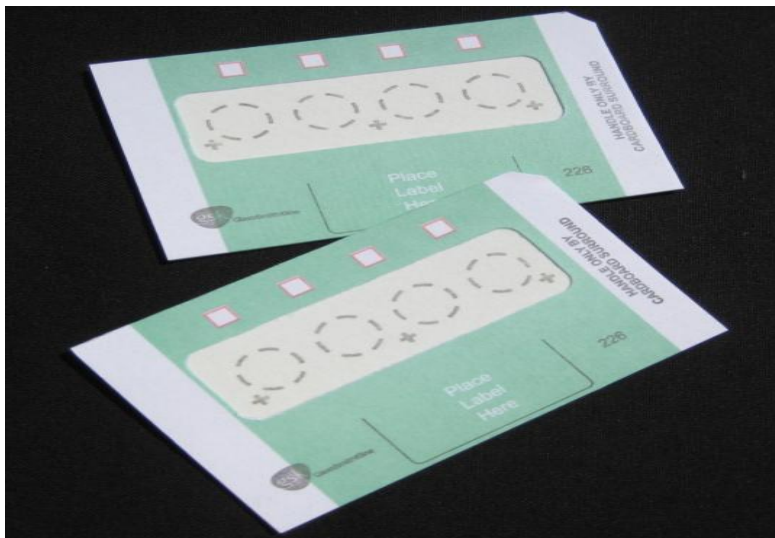
- **Started Schleicher & Schuell UK Ltd, March '97**
- **Won UK Newborn Screening Contract in '98**
- **Involved with GSK from early days of DBS in Bioanalysis ('04)**
- **Joined BSD Robotics & ID Biological Systems May 2008**

Brief Introduction to

ID Biological
S Y S T E M S



- CE, FDA & ISO accredited, dedicated IVD print facility
- Produce the 226 Bioanalysis Cards (IDBS1004)

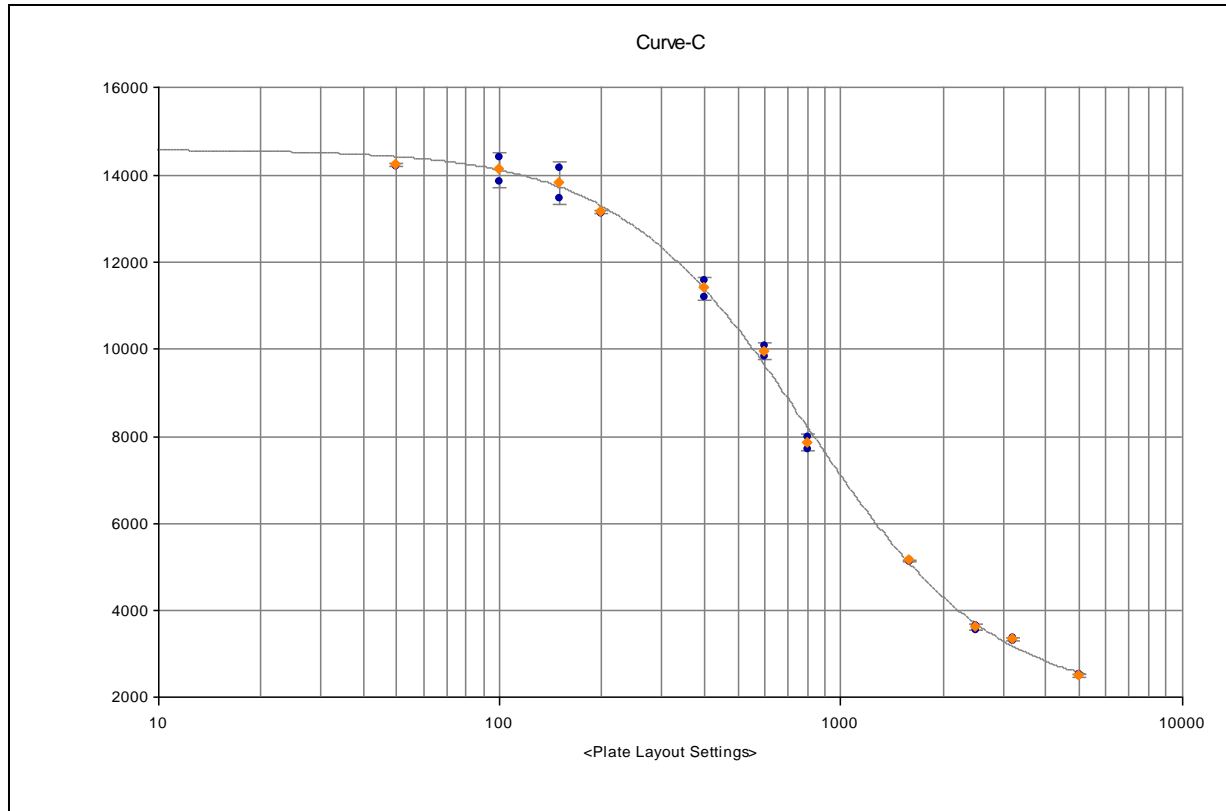


Advantages of 226 Bioanalysis Cards

- **“Excellent Uniformity”** as presented by GSK, AstraZeneca, and many other industry leaders
- No halo, giving larger available dry blood spot area for punching
- Untreated paper, enabling versatility in application
 - Metabolite Profiling as presented by Chris Smith et. al. AstraZeneca
 - Proteomics
 - Viral load quantification
 - Enzymology
 - Immunodiagnosics

Dried Blood Spot Analysis

Determination of Exenatide in Human Blood Using ELISA



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 - Metabolite Profiling as presented by Chris Smith et. al. AstraZeneca
 - Proteomics
 - Viral load quantification
 - Enzymology
 - Immunodiagnosics
- **Immediately available - OFF THE SHELF**

Advantages of 226 Bioanalysis Cards

- **LLOQ 0.5 ng / mL**

See Neil Doleman Poster BASi



Bringing the DBS Advantage into the Laboratory

BSD ROBOTICS

BSD Robotics

- **Global market leading filter paper punch manufacturer.**
- **Hold critical IP for punching dried samples.**
- **Manufacture to ISO9000 and US FDA's QSR Australian equivalent.**
- **All instruments are CE approved.**

BSD Instruments

Applications:-

- Forensics
- Neonatal Screening
- Human Genetics
- Animal Genetics
- Plant Genetics
- Molecular Diagnostics
- Drug Discovery
- Pharmacogenomics
- **DMPK (Pharmacokinetics)**
- **DMPK (Toxicokinetics)**
-

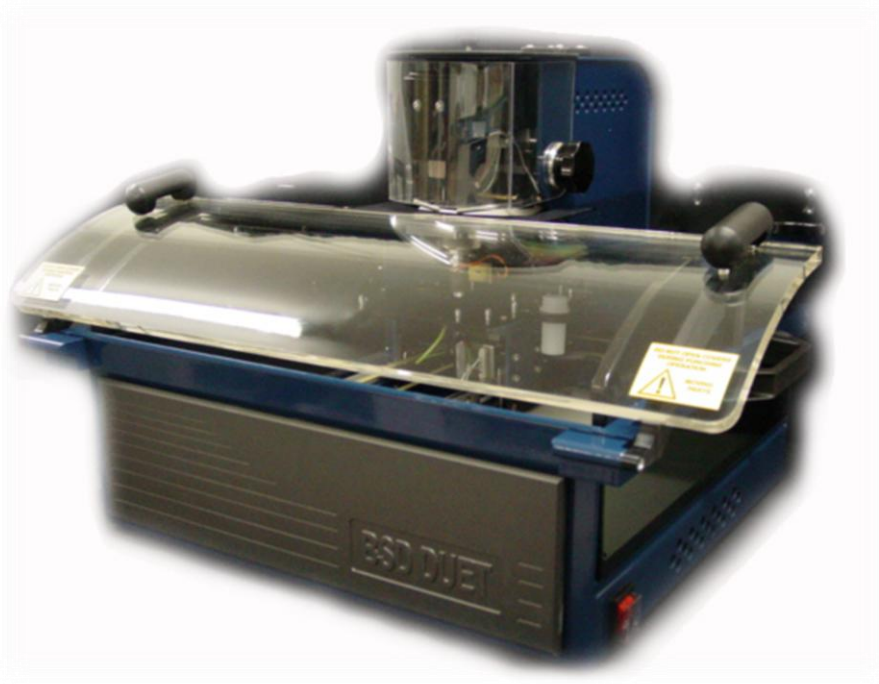
Punching Options

- Manual hand punching
- Semi-automated punching
 - **BSD600-Duet**
 - BSD700
- Fully-automated punching
 - **BSD1000-GenePunch**

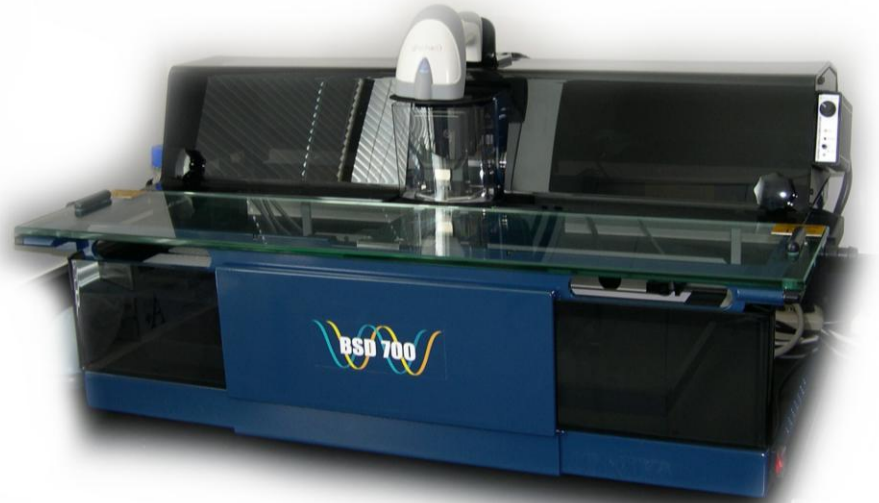
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BSD600-Duet



BSD700



BSD600-Duet / BSD700

Main Features:-

Semi-automated instrument

- Much faster plate production , ca. 15-20 minutes per 96 well plate
- Much less labour intensive than manual punching
- Positively identifies punches in each well of 96 / 384 well plates / tubes
- Enables downstream tracking with ASCII driven output files for LIMS
- Very user friendly and simple to learn to use / program / maintain.

BSD600-Duet / BSD700

Main Features:-

Dual punch system



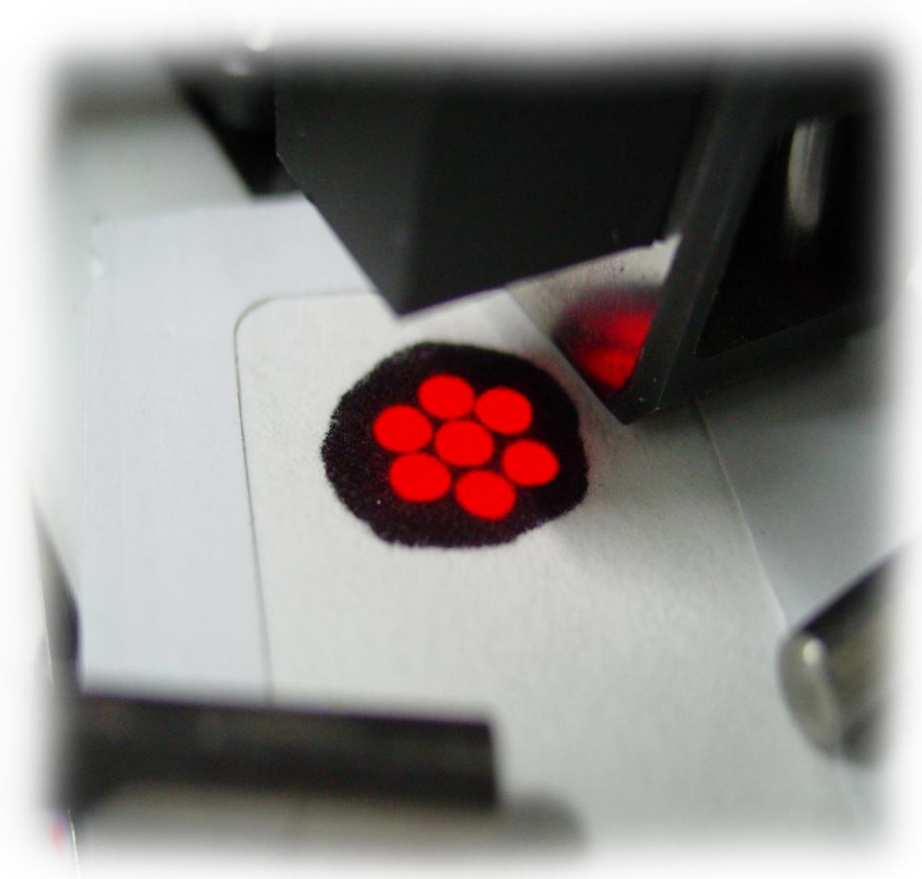
- Delivers versatility
- Series 3 – Quick Release Punch



BSD600-Duet / BSD700

Main Features:-

- Light targeting system
- Multi strike function
- Total punch accuracy.
- Significantly speeds up processing.



BSD600-Duet / BSD700

Main Features:-

- Auto trigger system
- Recognises when a card has been entered and punches automatically dependent on set delay.



BSD600-Duet / BSD700



- Humidifier system
- Disk detector system

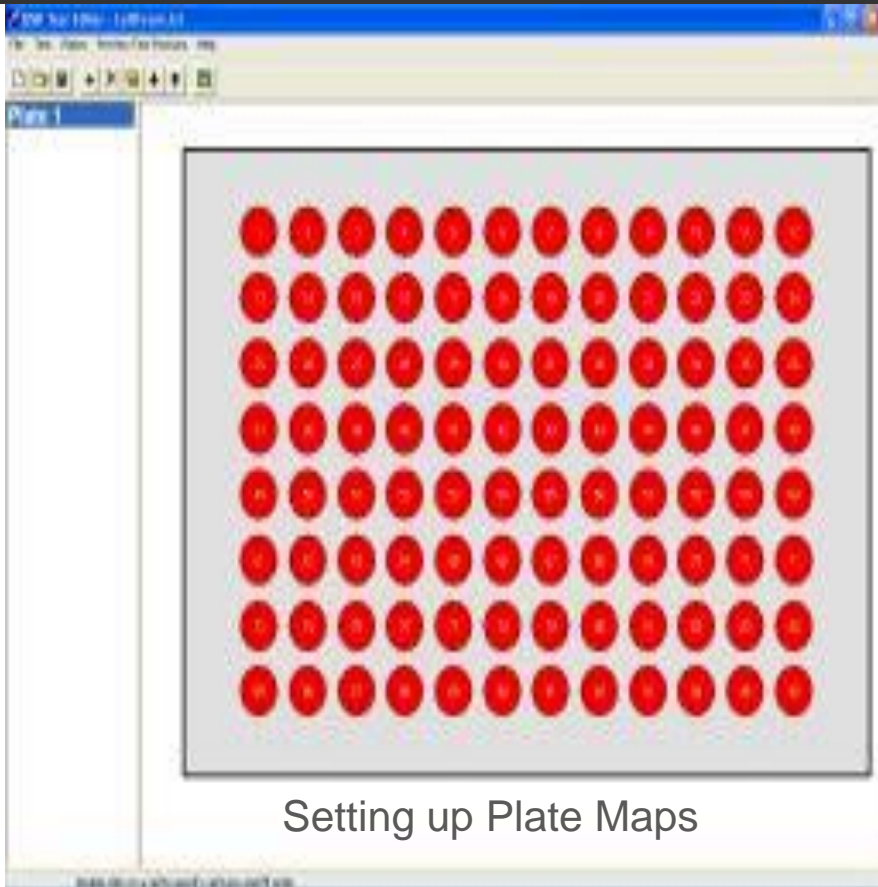
These systems combine to ensure punches are delivered to the correct well and not hindered by static electricity or disruptive air-flow.

BSD600-Duet / BSD700

Main Features:-

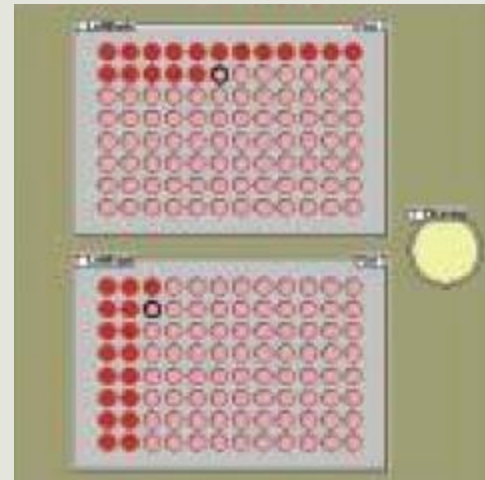
- Punch cleaning system
- Dust extraction system
- Can configure the instrument to punch as many cleaning strikes from clean paper as required into a dedicated waste receptacle
- DES built in (as standard) to remove dust

BSD600-Duet / BSD700



Setting up Plate Maps

- Flexible software



Screen view during punching

BSD600-Duet / BSD700



- Barcode reader

- Can scan plates, samples, controls and standards to dissect every aspect of the punch process enabling complete traceability. Complies with the increasing laboratory regulatory requirements.

BSD600-Duet / BSD700 Plate Map

TEST180210											Plate 1	
	01	02	03	04	05	06	07	08	09	10	11	12
A	4122155008 64	4122155008 88	4137157373 94	4137157374 47	4137157373 57	4137157373 93	4115754209 61	4115754209 60	4115754209 59	4115754209 74	4115754209 58	0364404612 43
B	0364404612 44	4115754209 73	4115754209 72	4115754209 71	4115754209 69	4115754209 70	4115754209 69	4122155008 60	4122155008 56	4122155008 52	4122155008 44	4122155008 20
C	0364304688 08	0364304688 07	4115754209 64	4115754209 63	4115754209 65	4115754209 65	4115754209 67	4115754209 88	4115754209 75	4115754209 75	4115754209 77	4115754209 65
D												
E	4137157373 94	0364304688 08	4137157373 94	4122155008 44	0364304688 08	4122155008 44					Standard S0+IS	Standard S0+IS
F	Standard S0	Standard S0	Standard S0	Standard S0	Ic Ic1	Ic Ic1	Ic Ic1					
G	Control QC LOQ	Control QC LOQ	Control QC 1	Control QC 2	Control QC 3	Standard S0	Control QC LOQ	Control QC LOQ	Control QC LOQ	Control QC 1	Control QC 2	Control QC 3
H	Standard S1	Standard S1	Standard S1	Standard S2	Standard S3	Standard S4	Standard S5	Standard S6	Standard S7	Standard S8	Standard S8	Standard S8

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Customer Testimonials

- “The use of the BSD600 has considerably increased the size and the number of the runs per day, compared to the previous situation with manual punchers. The software is easy to be used: Only 2 hours training are required to be completely autonomous. The validation of the software is easy”.

Marie-Claude Fraschini, Bioanalytical Lab, Head, GMPK. Sanofi-Aventis, Paris, France

- “The easy to use BSD600 really is the enabling factor for using the DBS technique in our lab”.

Joern Krause, Bioanalytical Lab Head, GMPK, Sanofi-Aventis, Frankfurt, Germany

Punching Options

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- Semi-automated punching
 - BSD600-Duet
 - BSD700
 - Wallac / PerkinElmer DBS Punching
- **Fully-automated punching**
 - **BSD1000-GenePunch**

BSD 1000-GenePunch

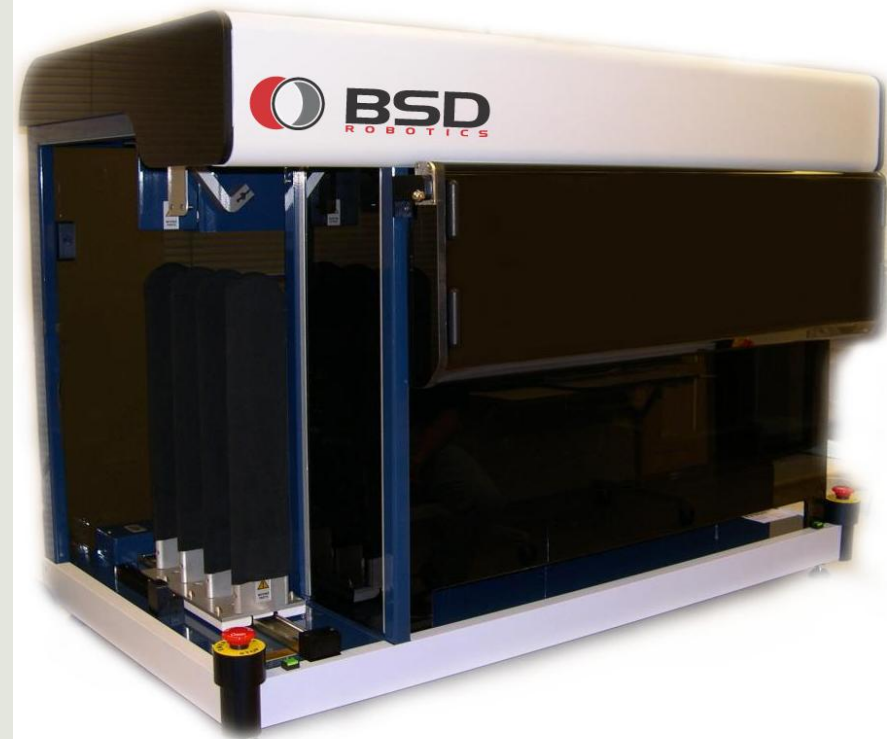
Main Features

Fully automated

Minimal operator involvement

Positive identification

Integration with external
liquid handling platforms for
seamless operation



BSD 1000-GenePunch

MAGAZINE MODULE

- 3 magazine storage
- 100 cassetted cards (cardboard) per magazine / Magazine Server
- card sizes:
 - 50mm X 50mm
 - 85mm X 50mm
 - 108mm X 50mm
- cards are removed for processing and replaced in the same slot by Card Grippers



BSD 1000-GenePunch

TRAY CAROUSEL

- capacity for six plates and/or tube racks
- tray carousel able to move to a position to enable a liquid handling platform robot to pick up the plates/racks for processing.

BSD 1000-GenePunch

SCANNER MODULE

- automatically scans card for sample
- automatically determines best positions to punch
 - Central / peripheral depending on requirement
- **Can also be the eyes for DIRECT ELUTION targeting**

Conclusion

Increases process flow and sample management to help bring the DBS advantage into the Bioanalysis Laboratory

My Contact Details

I AM HERE TO HELP IN ANY WAY I CAN

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Thank you sincerely for your attention!!