Promega

GeneMarker®HID Software

For Spectrum CE Systems

The Power to Solve... from Sample to Analysis

GeneMarker®HID
Software for Spectrum CE Systems

Overview

- Easy adoption: Simplified user interface and broad STR kit compatibility
- Accurate results: NDIS-validated, forensic DNA typing expert systems software
- Efficient operation: Increases throughput and improves time-to-answer by reducing user intervention
- Comprehensive analysis: Integrated modules for specialized applications, including relationship testing and database searching
- Cost-effective network and client configurations available

GeneMarker®HID Software for Spectrum CE Systems (GMHID-Spectrum) is designed for analysis of short tandem repeat (STR) data generated by capillary electrophoresis (CE) systems, including the Spectrum Compact and Spectrum CE Systems. GMHID-Spectrum allows genotyping using an allelic ladder and is optimized for human identification (HID) applications, including forensic casework analysis, databasing, missing person identification and relationship testing. GMHID-Spectrum provides a suite of integrated, post-genotyping applications that share its intuitive and easily accessible interface.

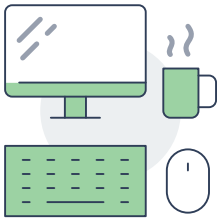
- Expert system review
- Database creation and profile searching
- Contamination check
- Kinship analysis
- Population statistics calculation

GMHID-Spectrum is compatible with commercial STR chemistries, including PowerPlex® and GenePrint® Systems from Promega, as well as custom STR chemistries. The software supports CE instrument data files from numerous platforms, including Promega (.promega, .fsa) and Applied Biosystems (.fsa, .hid). GMHID-Spectrum is developed by SoftGenetics, LLC, and is sold and supported by Promega Corporation.

Licensing Options: Local and Network/Client Set Up

Two licensing options are available for GMHID-Spectrum: a local license and a network license with client installation(s). With a local license, each license is installed on and registered to a specific computer. A local license is ideal for software use where a connection to the laboratory network is not always available. With a network license, GMHID-Spectrum client installations share licensing information over a network with a central registered computer, which is designated as the License Server Manager. When constant access to the laboratory network is available, the network license option provides access to more users than the local license. A client configuration can be installed on as many computers as desired, and the number of concurrent users possible will be determined by the number of licenses purchased.

GeneMarker®HID for Spectrum CE Systems Licensing Options



Local Setup

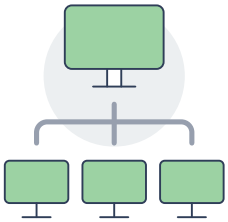
License tied to single computer with stable MAC address

Single licensed computer can install and run software

One user per license

No local network connection required

License Server Manager not required



Network Setup

Multiple networked computers share single license

Any computer on network can install and run client software

Simultaneous users cannot exceed the number of purchased “client seats”

Local network connection required

License Server Manager installed on “server” computer

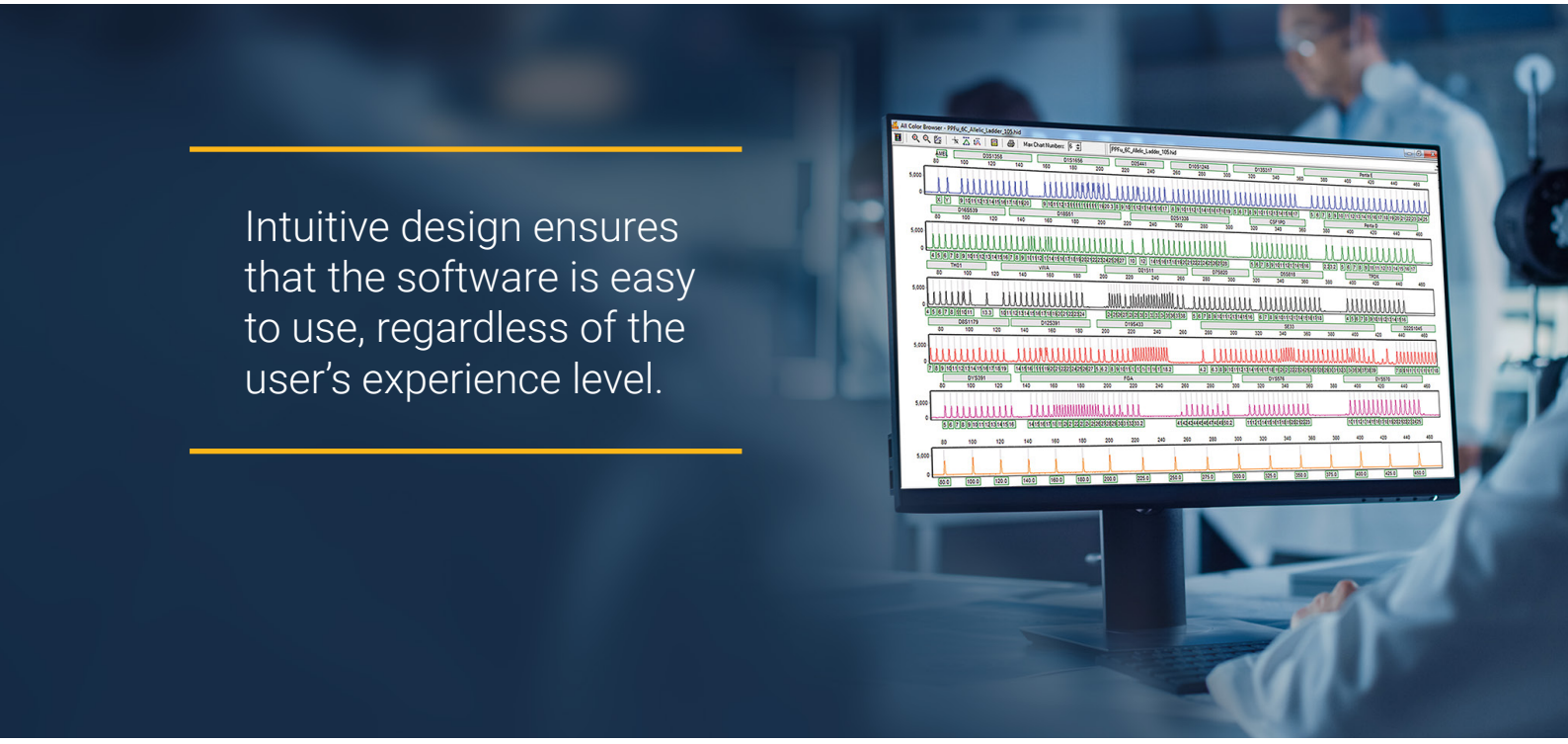
Work Smarter, Not Harder

GeneMarker®HID Software for Spectrum CE Systems includes several features that enable laboratories to quickly and confidently analyze and interpret their STR results.

- Analysis of samples is faster than GeneMapper® *ID-X* and can be done in seconds, rather than minutes
- Automatically select the best allelic ladder for each sample in the dataset
- Streamlined "copy and paste" of individual sample files into an import window, instead of a lengthy file "tree" that is cumbersome to navigate
- Easy sharing of templates improves staff efficiency and effectiveness
- Run Wizard includes pre-installed templates for each Promega amplification kit, eliminating the need to download and import panels, bins and stutter files

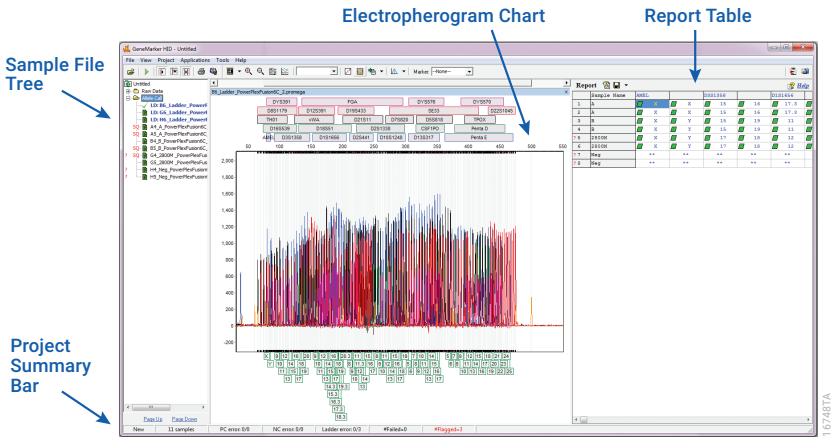
User Management and Audit Trail

Users can be confident and secure when using GeneMarker®HID Software for Spectrum CE Systems. Equipped with optional password control, an extensive user management system and a built-in audit trail, the software ensures that unauthorized individuals are unable to inadvertently modify a project or settings. Access rights for each user may be selected by the administrator. Users must provide the authorized password to open the program. The login information is used to generate an audit trail, complete history of program usage and electronic verification of user/parameters in the final allele report.



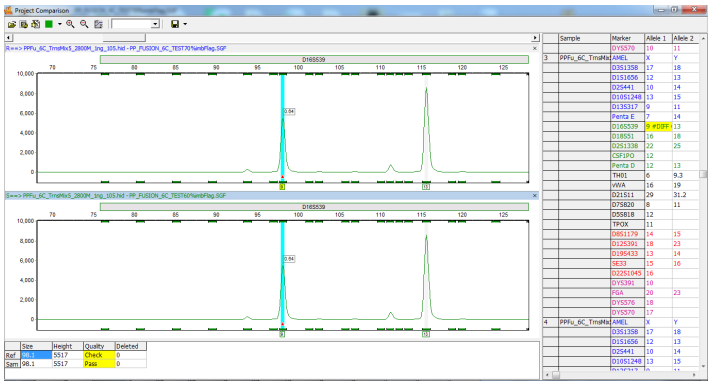
Profile Quality Evaluation

DNA profile quality can be assessed at three levels within GMHID-Spectrum: size match, size-standard quality and analysis quality. Samples designated as positive controls, negative controls or ladders are assessed by the additional metric of concordance to an expected result.



The Project Comparison Tool can be used to quickly compare data analyzed in two different projects. Users may want to perform such a comparison to assess differences in analyses between analysts; changes in run or analysis parameters; or results generated from two different capillary electrophoresis instruments.

Replicate projects are opened in one screen; any differences in the selected parameters are highlighted in the report table and linked to the electropherogram. The tool reduces time required for administrative review of analysis results and software validation, making it ideal for analyst training and laboratory validation efforts.



Additionally, the Contamination Check feature allows analyzed profiles to be evaluated for possible contamination. You can compare different profiles within a project or run a comparison to your lab's established Contamination Database. The settings of the Contamination Check feature may be customized to reflect the requirements in a laboratory's operating procedures.

Validation Assistance Tools

GMHID-Spectrum has Validation Assistance Tools to assist labs in performing internal validation of STR kits. There are several calculations available in the Validation Assistance tool menu: LOD (limit of detection), height ratio and migration precision.

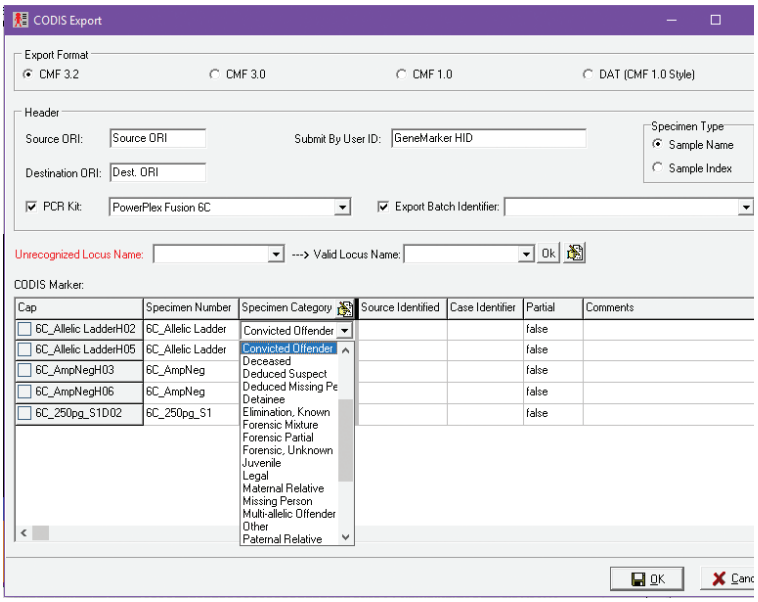
The LOD Tool analyzes each sample in the dataset for the presence of noise peaks. Peaks recognized as alleles and/or stutter are excluded from this calculation. The software determines the LOD by calculating the average peak high and standard deviation of observed noise peaks and then adding a user defined number of standard deviations to the average.

The Stutter Ratio Tool reports the number of stutter peaks as well as the maximum observed stutter ratio at each position at each marker. The ratio is expressed as the lower peak height of the two alleles divided by the higher peak height of the two alleles. The software then calculates the average peak height ratio, standard deviation and minimum and maximum peak height ratios observed at each marker across the dataset.

The Migration Precision Tool calculates sizing precision of alleles present in all allelic ladders within a dataset. The software reports the observed peak size for each allelic ladder peak, then calculates the average size and standard deviation for each allelic ladder peak and marker across the entire dataset.

Customizable Reports

The user-friendly interface enables you to easily print reports in batches, customize viewing/editing preferences by individual color or all-color-browser and format reports to fit the requirements of your lab's workflow and standard operating procedures. Formats include options for printed allele reports, spreadsheets for import into a laboratory information management system (LIMS) and automated CODIS-compatible export.



Support and Training

We realize that bringing a new software system online can be daunting to laboratories. We are pleased to offer training for GeneMarker®HID Software for Spectrum CE Systems. One of our Technical Service and Support personnel will provide this detailed training to your laboratory, ensuring that you'll be running analyses in no time.

GeneMarker®HID for Spectrum CE Systems easily integrates into laboratories' information management workflow.

Computer System Requirements

Promega recommends the following computer configuration for installation and use of GMHID-Spectrum:

- Windows® 10 Operating System
- Dual-core processor
- ≥4GB RAM and 256GB of available disk storage

Ordering Information

Product	Cat.#
GeneMarker®HID Software for Spectrum CE Systems, Local	CE3001
GeneMarker®HID Software for Spectrum CE Systems, Network	CE3010
GeneMarker®HID Software for Spectrum CE Systems, Client	CE3011
GeneMarker®HID Software for Spectrum CE Systems Training	S3114

For more information about GMHID-Spectrum, visit:
www.promega.com/gmhid/

For information on the Spectrum CE Systems, visit:
www.promega.com/SpectrumSystems

For more information on PowerPlex® Systems for amplification of STRs, visit: **www.promega.com/STR**

For Technical Services support, contact your local Promega representative or e-mail: **genetic@promega.com**

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