Simple.Touchless.No Clamps



USERS GUIDE

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ABOUT YOUR FASTLIGN SYSTEM

FASTLIGN is a touchless, hands-free alignment and tracking verification system. Fully automatic and requires no operator and no wheel clamps, the vehicle is simply driven through the FastLign scan towers to get instance analysis of wheel dynamics. State-of-the-art rolling vehicle tracking and profiling provides individual toe, total toe, side-slip and other information to help identify faults in steering, suspension and wheel distortion that no conventional measurement devices can provide.

FastLign is designed to seamlessly compliment your front-end service work flow and to improve your service lane efficiency. The solution automatically identifies issues with alignment, suspension, steering components and other wheel tracking related issues as the customer drives their vehicle into your facility. The analysis is then instantly made available to the service advisor and technicians on their workstation and/or through the print-out.

FASTLIGN Feature	FASTLIGN Function	FASTLIGN Benefit
Automated	Automatically scans and stores test records of all vehicles travelling through the service lane.	No labor required, resulting in cost savings to the Dealer.
State of the Art Computing	Provides precise analysis of vehicle tracking.	FASTLIGN identifies possible issues with align- ment, steering, suspension and wheel distor- tion. FASTLIGN users report that 40-50% of ve- hicles entering the service lane require service attention.
Non– intrusive	Designed to seamlessly compliment service lane with no additional real estate.	Improves service lane efficiency with no back ups.
High precision laser and optical devices	Truly touchless, requires no clamps or hard- ware to be installed.	No interruption in service lane or inconven- ience to the customer. Scan completed in 3 seconds as the vehicle enters the service lane.
High speed color printer	Prints report almost instantaneously.	Effective delivery of the FASTLIGN report to the customer.
Point of Sale options	Effective display of FASTLIGN results.	Assists service advisor to effectively communi- cate with the customer.
Back office reporting	To provide reports on service lane activity and FASLTIGN results.	Assists the dealer management in service lane efficiency.
Online	Monitors FASTLIGN's functionality	Allows for remote diagnostics, repairs and spec updates.

FastLign system can be customized to fit your service work flow. As such some of the components described in this manual may not exist in your installation.

COMPONENT OVERVIEW



Each lane in your installation is equipped with a pair of towers. These towers connect to the FastLign network and derive their power from the network connection.

The FastLign server must be in a temperature controlled environment. Each location needs a single FastLign Server regardless of the number of lane. Its placement may be virtually anywhere, a data-room, closet, or office. However, the FastLign server must be able to communicate to the Scan Towers, Kiosk and/or FastLign Scanner, Printer and the Vehicle Snapshot Camera via the network.

The FastLign Server and the associated network switch may be mounted in a separate network rack or into your existing network infrastructure.

The FastLign system comes in two configurations:

- Kiosk Package
- Web Application Package

Both packages come with the hand-held scanner and Color Laser Printer for printing out customer reports. The Kiosk package includes a cabinet and POS Touchscreen computer that runs the FastLign Application.

CUSTOMER CARE

Our system automatically monitors the connectivity of your FastLign system and we will be able to correct or notify you if we notice problems. It's important that your updated 1st line of contact information is provided to our team upon installation. Our customer care team is available to assist you if you run into any issues and/or questions about your FastLign System and can be reached on the East Coast between 8:00am – 4:30pm @ 1-855-233-8632 and choosing Option #2 for Support.

You can also contact our customer care team at <u>customercare@banalogic.com</u>.

TOWER OPERATION

Your FastLign towers have been placed an optimal distance apart to allow the system to function as intended. This distance is between 9.5 - 10.5 feet.

- Vehicles are intended to driven between the tower as close to center as possible.
- Vehicle should be driven no more than 5 MPH through the towers
- Vehicle must fully clear the tower prior to turning
- While travelling through the towers the driver must not adjust the steering
- Vehicles are intended to be driven in one direction

Anyone can drive a vehicle through the scan towers. Drivers should essentially pretend that the towers are not there. For example, if FastLign is being used at an automotive dealership, the scan towers may be at the entry of the service lanes. In this case the customer may drive their vehicle through the towers. Alternatively, if the scan towers are positioned at the exit point of the service lanes, the service writer or porter may drive the vehicle between the towers upon taking the vehicle into the garage for service.

When driving, attempt to align the vehicle so that it passes through the center point between the FastLign Scan Towers. Maintain a consistent "parking lot" speed of 5 miles per hour or slower until the vehicle has completely passed through the scan towers.

TOWER LIGHTS

The Scan Towers have indicator lights clearly visible on both sides of each tower. After a vehicle has passed through the scan towers, the indicator lights will display Red, Blue, Yellow or Green.

The colors of the scan tower lights indicate the following:

Green - Successful read. FastLign sensed the vehicle passing through the towers and successfully scanned the vehicle and stored the results.

Yellow - Processing. FastLign is assessing the results of a scan, storing and determining the results.

Blue - Scan tower obstruction. FastLign scanned an object that does not appear to be a vehicle. That could be caused by obstruction (physical or sunlight), or a person walking through.

Red - Faulty read. FastLign sensed a vehicle pass through the towers, but was unable to get an accurate read. A number of issues may cause a

faulty read, changing speed, braking, driving too slowly or turning while passing through the scan towers etc.

If you get a red indicator it's recommended that you simply repeat the inspection by driving the vehicle through the tower again. If this happens repeatedly with the same vehicle you may need to contact our Customer Care team. Please inform our customer care team of the issue by identifying the date/time stamp, vehicle type and lane the vehicle was travelling through.

HOW DOES FASTLIGN TAKE MEASUREMENTS

The FastLign system works by performing a high resolution laser scan of both sides of the vehicle as the vehicle passes through the tower. The system analyzes the vehicle's direction of travel against each wheel's movement in relation to each other to determine the alignment angles of the wheels.

The FastLign laser system has a "sweet spot" scanning range of 200mm to 800mm, or about 8" to 32". The system is optimal when the towers are placed around 9.5 feet from each other. At this distance, most vehicles from small compact to large light duty trucks will fall within this sweet spot when travel through the towers.



Each tower has 2 lasers at different height off the ground, each is designed for different functions. The laser at the bottom is intended to scan the wheel and the laser at the top is to scan the body of the vehicle. When tuning the laser angle, an ideal setup is to have the upper laser target (where the red laser spot will hit the vehicle) set at a height that will scan the longest part of the vehicle – bumper to bumper. The bumper height standard for North American vehicle is 16"-20". Therefore, our recommended default target height for the upper laser is 18" off the ground. The lower laser target on the other hand needs to scan only the wheels and avoid hitting the side of the vehicle. Most passenger vehicle has a ground clearance of 6" or more. However, some sports car models may have a lower ground clearance. The We recommend a default target height of 5". Both upper laser and lower laser target height as well as the stance between the towers can be adjust accordingly to accommodate the majority of the type of vehicles we expect to go through the system. (i.e. Dealership in the southern states may greet a lot of pickup trucks vs. a dealership in NYC will have smaller compact and sporty vehicles).

LASER PLACEMENTS

Each tower is equipped with two high speed lasers that point across to the opposite towers as described in the previous section. These lasers are low to the ground and will not interfere with your operations, however be reminded anyone bending down to look at the towers should avoid looking directly into the laser lights.

These lasers have been calibrated on installation by your FastLign installer and should not need adjustment.



The lasers on the left tower will be calibrated to point to locations on the right tower and the opposite for the right tower. A small hole on the bottom and side of the laser openings are used to calibrate the laser with an Allen key. This should only be done under the guidance of FastLign Customer Care team.

VEHICLE IDENTIFICATION

After a vehicle has been driven through the FASTLIGN Scan Towers a photo will be taken of the vehicle. The vehicle will then need to be identified with the Year / Make and Model (and it some cases the Trim). There are two ways to identify this:

- Scan the VIN on the vehicle with your Hand-held scanner. This will automatically look up the Year/Make and Model based on VIN position 1-10.
- Using the Web/Kiosk application (or Hand-Held Scanner) a user can select a photo from list of scanned vehicles and manually select a Year/Make & Model for the vehicle.

USING THE HAND-HELD SCANNER

SCANNER FEATURES



CHARGING YOUR HAND-HELD SCANNER

The battery should be charged until the LED indicator light turns solid green

To charge the battery using USB / Charge cable:

- 1. Connect the power supply output connector to the input power port on the USB/Charge cable.
- Remove the protective rubber and carefully connect the USB/Charge cable to the bottom of your FastLign hand-scanner. The battery charge LED indicates the battery charging status:

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LED Status	Indication
OFF	The scanner is NOT charging or not properly connected.
Solid Red	Low battery
Solid Orange	Charging in progress
Solid Green	Charging complete

TURNING ON AND OFF THE SCANNER

To Turn On:

- 1. Press and hold the power button for 3 seconds. This button is located on the right side of the unit.
- 2. When the device vibrates, release the power button and the FastLign screen is displayed.





To Turn Off:

1. To turn off the device, press and hold the power button until the options menu appears

2. Tap the **Power Off** and then confirm.

USING FASTLIGN VEHICLE QUICK-SCAN APPLICATION

When the FastLign Scanner is turned-on the vehicle scanning application is loaded. The system will display the most recently scanned vehicles. If the system does not automatically load the FastLign vehicle screen, see the Trouble-Shooting Section for more details.

The FastLign Scanner is capable of scanning the traditional linear bar-codes or the QR Codes found in some of the newer vehicles.

To identify a vehicle simply select the vehicle from the list of vehicles on the home screen (if you do not see the screen displayed press the Home button).



Contact our Customer Care Team via e-mail with first 10 digits of the VIN plus expected Year, Make, and Model.



Plate may be manually entered to provide reference to the vehicle in future – however not required. The Find button will allow you to look up the previous information on this vehicle by plate for returning vehicles.

From the Vehicle Detail screen, you have three options in identifying the vehicle

- 1. Scan the VIN located on the vehicle
- 2. Manually select Year, Make, Model of the Vehicle
- 3. Skip this vehicle

The **Skip** vehicle feature is used to remove this vehicle from the list and from reporting. This is often used by customers for vehicles that are loaners, company shuttle etc. It is encouraged that you have porters identify such vehicles. There are reports that identify the "Scan Efficiency" of vehicles coming it and these should be excluded from the report (More on this in the reporting section).

TO SCAN THE VIN

- 1. Press the barcode scanner trigger button (located on right side of scanner below power button)
- 2. Aim the laser beam on the barcode
- 3. Ensure the entire barcode is within the rectangular area formed by the brackets in the laser framing
- 4. Release the trigger



If the vehicle identification information is found in the database the Year, Make and Model will be automatically populated. A small number of vehicles may require the selection of a Trim level before proceeding.

Confirm the vehicle identification is correct by simply selecting the "Next" button.

MANUALLY SELECTING THE VEHICLE

If the system is unable to locate the vehicle assigned to the VIN or you are unable to scan the VIN, you are able to manually select the vehicle on this screen. When all fields are filled the **Next** button will display the scan results.



TIP: FOR DEALERSHIPS THE MAJORITY OF VEHICLES WILL BE THE SAME MAKE. YOU CAN SET THE DEFAULT VALUE FROM THE SETTINGS SCREEN



What if a vehicle is not on the list? The customer care team at FastLign are continually adding new vehicles as specification information becomes available. Our system has the majority of vehicles 1996 and newer. As new ones become available they are entered into the system and your system is automatically updated. If you find this situation, please contact us with

information with the Year, Make and Model of the missing vehicle and our team will investigate.

FASTLIGN SCAN RESULTS

The scan results are displayed to the porter scanning the vehicle. These results should be printed if either or both of the Front/Rear toe show yellow or red. All results can be printed regardless of results by changing the default setting to "Auto Print".

The following picture illustrates the various scenarios that may be presented.



The scanner application has a few default settings that may be customized by hand-set. The settings screen is accessed by touching the tool item on the home screen.



Simply touch on the setting to adjust the appropriate setting. The table below describes the features.

Application Setting	Description
Default Vehicle Make	When set, this option will move the selected Vehicle Make to the top of the Vehicle Make pick-list. If the given business primarily deals with only one vehicle make, Ford, for example this feature will save time in data entry.
Auto Print	The default option upon reaching the Alignment Advisory Results screen, a user must select Save, then Print if a printout is desired. If Auto Print is selected, the results screen will display a "Finish" button; upon selecting Finish, save and print are completed in one step. Having Auto Print enabled is recommended.
Specification Display	Deprecated, no longer used.
Individual Toe Display	Deprecated, no longer used.

Total Toe Display	Deprecated, no longer used.	
Tracking Display	Deprecated, no longer used.	
Update	Update will cause the scanner to check for an updated version of the FASTLIGN scanner application on your server and install it if it is present.	
	Note: We will notify you if an update is required.	
WIFI Settings	Brings up WiFi configuration Screen. Confirm you are connected to "FastLignNet" network. The status under the network name should say "Connected".	

USING FASTLIGN WEB APPLICATION

The FastLign web application is part of both the Kiosk and Web Application package. For the Web Application package this application will run on your existing dealer computers. For the Kiosk package you will be provided with a POS Touchscreen Computer that will automatically start only into this application.

The applications are virtually identical with the minor exception that the POS Touchscreen application provided does not show in a web browser button. As such **Home** and **Back** buttons have been provided next to the **Reports** item in the top right corner.



The colors surrounding each of the vehicle pictures has the following meaning:

Yellow (1)	This indicates the vehicle has been identified and at least one of the front or rear has readings that are close to the specification range.
Grey (2)	This vehicle has not been identified when it went through the FASTLIGN scan towers. Add the Year,

	Make, and Model by selecting the image on this screen.
Green (3)	This indicates the vehicle has both front and rear readings in the acceptable range.
Dark Grey (4)	When identifying this vehicle, the SKIP option was selected to indicate this vehicle should be ignored as it may be a loaner vehicle or one of your site vehicles.
Red (5)	This indicates one or more of the front or rear axles has readings that exceed specification.

Selecting a vehicle which has already been identified will automatically bring up the Alignment Advisory Report. Selecting a vehicle which is still Grey will bring up the screen to enter the vehicle information.



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You must select **Save** before choosing **Display Printo**ut or your report will be empty.

From the Printout screen the user will have three options to choose from:



FASTLIGN REPORTS

CUSTOMER REPORT

A customer report can either be printed directly from the hand-held scanner or web-application. The following is a sample report showing a passing vehicle. Information on the side indicates the reading







REPORTS ON DEMAND

There are several reports available through the Web or Kiosk Application. These reports can be accessed by choosing Reports from the main screen.



Reports include:

Inspection Detail	Provides a list of veicles with date/time when they have passed through the FASTLIGN scan towers
Performance - Vehicles out of Spec, Scan Efficiency, Vehicles in Warning	Provides graphical view of warning, failure rates for vehicles, as well as how efficient the porters are at scanning vehicles that have travelled through the FASTLIGN towers.
Vehicle Model Analysis	Provides breakdown of failure / warning rates by Year, Make and Model. This is only useful when you have accumulated enough inspection data.
Equipment Performance	This report may be used by engineers for trouble- shooting.
FastLign Lane Status	This report simply shows the network connectivity of each of the pieces equipement in the lane – towers, camera, and printer

The following show the general fucntions and features available on each report. Note the Additional Fitler options shown at the top the sample report are only available on some reports.



INSPECTION DETAIL REPORT



PERFORMANCE REPORTS



VEHICLE MAKE / MODEL ANALYSIS



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PERFORMANCE REPORTS

Based on your initial preferences our team sends out weekly or daily performance reports. These reports allow management to view the overall trends of the users of the system. FASTLIGN will be successful if vehicles are "Scanned". We use the term Scan Efficiency to identify the number of vehicles that came through the scan towers vs. the number of vehicles that were identified (i.e. VIN scanned and/or Year, Make, and Model entered.

Sample Weekly Report:



The Daily Report includes additional detail on the traffic pattern for the day as well as the scan efficiency by time of day.

Traffic by Time of Day

Jun 22 nd, 2016

Time of Day	Vehicles Scanned by FastLign	# of Reports Generated	% of Vehicles Identified
6:00 AM	0	0	0.0%
7:00 AM	13	11	84.6%
8:00 AM	9	7	77.8%
9:00 AM	16	12	75.0%
10:00 AM	11	8	72.7%
11:00 AM	9	6	66.7%
12:00 PM	6	4	66.7%
1:00 P M	7	0	0.0%
2:00 PM	7	1	14.3%
3:00 P M	12	5	41.7%
4:00 PM	6	4	66.7%
5:00 P M	6	1	16.7%
6:00 PM	6	2	33.3%
7:00 P M	4	0	0.0%
8:00 P M	4	3	75.0%
9:00 P M	2	0	0.0%
10:00 P M	5	0	0.0%
11:00 PM	1	0	0.0%

We can generate performance and traffic analysis reports at customer request over a longer period of time. The following is an example of a report created over a 9-month period.

FASTLIEN

FastLign Traffic By Time of Day August 2014 - April 2015

Time of Day	Vehicles Scanned By FastLign	# of Reports Generated	% of Vehicles Identifed	# of Vehicles Failed	% of Vehicles Failed
6:00 AM	1	0	0.0%		0.0%
7:00 AM	1,161	696	59.9%	377	54.2%
8:00 AM	2,279	1422	62.4%	710	49.9%
9:00 AM	1,865	1157	62.0%	60.5	52.4%
10:00 AM	1,604	876	54.6%	456	52.1%
11:00 AM	1,300	647	49.8%	313	48.4%
12:00 PM	1,195	552	45.1%	281	50.9%
1:00 PM	1,137	492	43.3%	24.4	49.6%
2:00 PM	912	400	43.9%	207	51.8%
3:00 PM	912	395	43.3%	196	49.6%
4:00 PM	718	22.9	31.9%	123	53.7%
5:00 PM	352	76	21.6%	49	64.5%
5:00 PM	131	12	9.2%	7	58.3%
7:00 PM	9	1	11.1%		0.0%
Total	13,579	6,955	51.2%	3,569	51.3%



OPERATIONAL TIPS

TROUBLE-SHOOTING THE FASTLIGN HAND-HELD SCANNER

Depending upon where the vehicle is located when it is being scanned, network connectivity could be an issue. The network indicator is located on the top right corner of the scanner window.



The above image shows low signal strength. It will be bright white for full strength or nearly grey for no connectivity. If the scanner has no connectivity the application will not show anything. When you press the Home button at the bottom it will take you to the initial FastLign application screen and no vehicles will appear in the window.

There multiple reasons why no vehicles will show up in this window:

- You are located **too far** from the FastLign Network Access Point (the installer will point out the location of this access point. It will be located near where the vehicle scanning occurs).
- The FastLign **network may be down** check connectivity with other devices, restart access point. Contact technical support for assistance.

You may show strong network connectivity – but not connected to the FastLign Network. Under the Settings item check WiFi settings to ensure you are connected to the correct Network.

CHANGING PRINTER TONER CARTRIDGES

The following are the toner cartridges the are used in this printer:

Color	Cartridge number	Part number
Standard-capacity replacement black ink cartridge	HP 970	CN621A
High-capacity replacement black ink cartridge	HP 970XL	CN625A
Standard-capacity replacement cyan ink cartridge	HP 971	CN622A
High-capacity replacement cyan ink cartridge	HP 971XL	CN626A
Standard-capacity replacement yellow ink cartridge	HP 971	CN624A
High-capacity replacement yellow ink cartridge	HP 971XL	CN628A
Standard-capacity replacement magenta ink cartridge	HP 971	CN623A
High-capacity replacement magenta ink cartridge	HP 971XL	CN627A

Replacing the Ink Cartridges:

The product uses four colors and has a different ink cartridge for each color: yellow (Y), cyan (C),

magenta (M), and black (K).

1. Open the ink cartridge door.



2. Push the old ink cartridge inward to unlock it.



3. Grasp the edge of the old ink cartridge and then pull the cartridge straight out to



remove it.

- 4. Remove the new ink cartridge from the packaging.
- 5. Do not touch the metal connector of the ink cartridge. Fingerprints on the connector can cause print-quality problems.



6. Insert the new ink cartridge into the printer



7. Close the ink cartridge door.

