

# PROCONTROL3

## INTEGRATED FUEL DELIVERY SYSTEM



# ProControl<sup>3</sup>

## FUEL DELIVERY SYSTEM

1

**ADDITIONAL  
DELIVERY PER ROUTE**

275

**ADDITIONAL  
GALLONS DELIVERED  
PER ROUTE**

\$495

**ADDITIONAL  
REVENUE GENERATED  
PER ROUTE**



Via increased operator efficiency, as reported by current customer base.



Based on 500 gallon residential tank, filling at 1/4 full to 80 percent.



[https://www.eia.gov/dnav/pet/pet\\_pri\\_wfr\\_a\\_EPLL-PA\\_PRS\\_dpgal\\_w.htm](https://www.eia.gov/dnav/pet/pet_pri_wfr_a_EPLL-PA_PRS_dpgal_w.htm)

# Universal Remote Control

**ProControl3** - BASE Engineering's newly designed handheld control center - is the first and only all-in-one wireless solution for the Oil & Gas Industry

Complete delivery management

Monitor & control all key system functions

Automate processes to increase efficiency

Wirelessly, from the end of the hose

Designed specifically for the fuel industry by the company with over 100,000 systems on fuel trucks around the world, this universal remote can significantly improve delivery efficiency and reduce costly fueling mistakes.

This system is easily retrofitted to existing trucks or installed on new equipment.



# NEW



## MEC Smart Interlock Integration

The Base ProControl3 Universal remote is now compatible with all MEC Smart Interlock devices for increased safety and efficiency of LPG trucks.

- MEC Interlocks prevent delivery trucks from operating under unsafe conditions by responding to the presence or absence of other devices, such as a door being latched, or a hose nozzle being seated in its storage housing.
- The PC3 receiver reads the interlock sensor signal and transmits them to the handheld for display. The user simply enters the MAIN MENU and selects the INTERLOCK STATUS icon to view a list of the interlocks and their state.
- This upgrade allows for the connection of up to 5 smart interlocks to be integrated with the PC3 handheld for fast & easy visual indication of truck interlock status.
- Not only does this function add a layer of safety, it also increases reliability by allowing for rapid and accurate real time troubleshooting of interlocks while the truck is on route.



## ProControl3 Barcode Scanner

Coupled with the ProControl3 RFID reader is the new Barcode Scanning feature. This option allows the fleet manager the flexibility of choosing between our rugged RFID tags or inexpensive universal barcodes for asset identification.

Whether a residential, commercial or fleet fueling delivery; the barcode and RFID features eliminate the need for your operator to manually identify the fill point. The scanner on the PC3 illuminates and reads the barcode or RFID tag for identification of each account, vehicle or piece of equipment. With an OBC storing the customer asset data, the ProControl3 begins the delivery process from the end of the hose capturing the volume delivered for each piece of equipment. Eliminating the need to return to the cab of the truck for manual data entry or delivery ticket manipulation, streamlining your process.



## Lube Truck Application

The ProControl3 Lube Truck feature enables complete delivery control of both tank truck and box truck lube delivery systems.

With its sophisticated logic, PC3 can control up to 8 meters, 15 totes or compartments, and multiple pumps.

The fully automated system allows for the inter-connection of product, compartment, meter, pump and purge functionality. When combined with our application specific design, the PC3 sets the industry standard in cross contamination prevention and operator efficiency.

# ProControl3 Enhanced Point of Sale



## Full Point of Sale

An easy to use delivery setup menu controls all available delivery pricing parameters including price per unit, taxes, discounts, miscellaneous charges and presets, for single or multi-meter applications, all extending to the ticket, creating a customer invoice at the time of delivery.

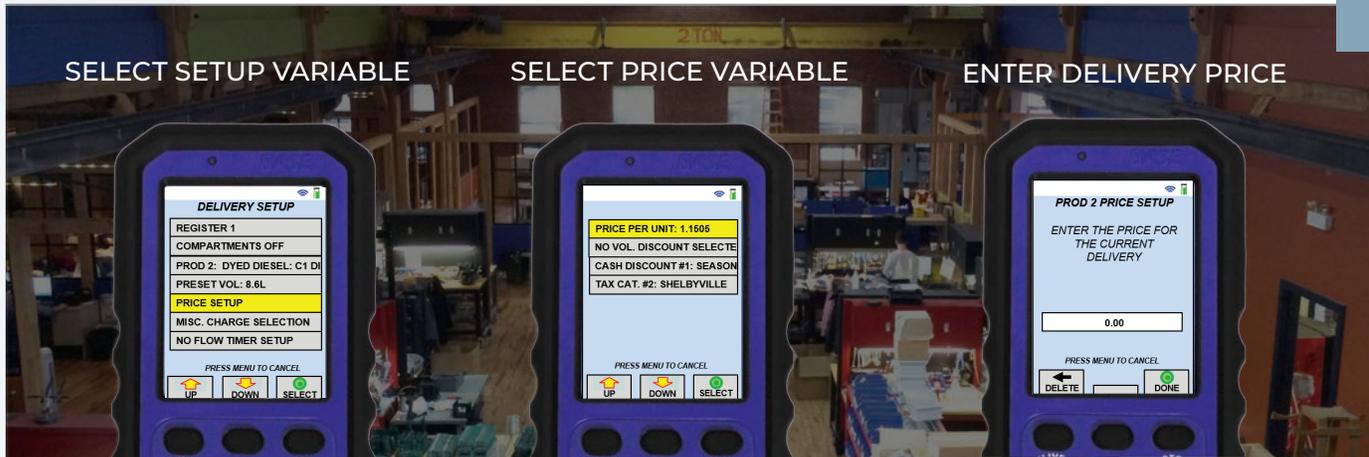
## Enhanced Security

The PC3 Point of Sale improves delivery system security with administrative level settings that are password protected. Managers are able to access register setup, product codes/details and register diagnostics; enabling and disabling delivery parameters. Operators have access to the appropriate delivery functions, preventing costly mistakes.

## Increased Efficiency

The sophisticated logic of the PC3 allows for the inter-linking of product, compartment, meter, pump and hose reel functionality. Automating your delivery process, without the need for additional hardware.

## OPERATION OVERVIEW



When connected to any LCR register with pricing enabled, the PC3 allows for full point of sale functionality; pricing, tax, discounts, miscellaneous charges, etc. which will extend wirelessly to the delivery ticket - straight from the palm of your hand!

The intuitive simple to use menu allows the operator to press the delivery setup button on the handheld which brings them to the delivery setup menu. Next the operator is presented with the delivery options that are available to customize as was predefined per delivery. Once the desired parameter to be adjusted is selected the PC3 moves through the subsequent screen flows thus, customizing only those delivery parameters required.

# Features

## ENTRY POINT TO A FULL AUTOMATION DELIVERY SYSTEM



- Brilliant 3/5" color back-lit display with heater for optimal performance regardless of climate
- Shock, weather, explosion proof and fully submersible IP67 design
- Alpha-numeric keypad for enhanced control, including hose-end data entry
- Radio signal strength and low battery indicator
- Vibration and audible alarm feedback and messaging
- Standard in-cab charging cradle facilitates field software updates and includes an optional interlock to prevent 'drive aways' without remote
- Operator control of up to 8 custom remote functions, complimented by customizable delivery screens specific to your operation
- Works with all types of electronic and mechanical registers, including multi-meter configurations
- Real-time meter volume display to 1/10th of a unit, with Product, Preset, Start, Stop and Print control along with electronic register status
- Intuitive menu driven user interface includes simple to use diagnostic and dedication wizards
- Full suite of payload function controls and status indicators including PTO, Throttle, Interlock status, Product, Meter, and Compartment
- Direct control of all delivery functions from the end of the hose making for an ideal 'will call' management system



**PROCONTROL3  
PRODUCT VIDEO**

SCAN ME

# Complete Control

- Hose Reel remote control allows operator to unwind or rewind delivery hose, reducing the hose wear and tear; and injury claims
- Tank valves can be opened with automatic 'delay' feature to engage PTO/cargo pumps. Allows piping to charge preventing internal valve slugging which reduces pump wear by engaging pump only when the product line is charged and nozzle is connected to tank
- Engine RPM can be remotely controlled to increase or decrease pump volume
- Emergency Stop feature closes all tank valves and stops the truck engine
- Available with optional 5-minute 'Query' automatic emergency shut-down feature
- Designed to work seamlessly with the BASEstation On-Board Computer and other industry leading automation systems
- Perform pre-trip truck inspections and produce a printed report (requires on-board computer interface)
- RFID and Barcode 'Scan & Pump' technology helps prevent theft, tracks tank assets, and ensures the appropriate product is delivered and the right customer gets invoiced (requires on-board computer interface)
- New Smart Receiver allows for future expandability of I/O for engine, tank equipment, chassis, and automation needs
- Designed and built in-house at BASE Engineering



# BASEstation

## TRUCK MOUNTED ON-BOARD COMPUTER

Taking a step beyond the capabilities of a stand-alone ProControl3 system, at the center of BASE's Automation platform, the BASEstation HUB does all of the heavy lifting for the fully automated truck. The HUB communicates with the ProControl3, the BASEstation Android Tablet and other third-party devices. It connects the chassis, the tank, the pumps, the valves, the meter, the gauges and the engine to get a thorough understanding of what's happening on the truck. All data collected and stored in the HUB can be transmitted real-time to the back office through a variety of methods including cellular, WiFi, and USB sticks.



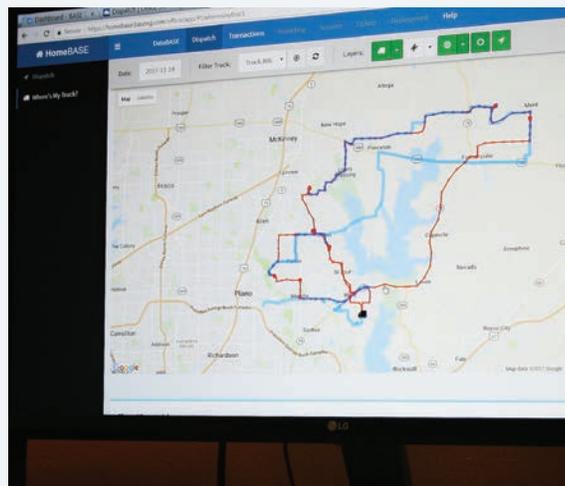
### HUB

- Mounts in-cab like standard BASE receivers
- Two-way data communication to back office using our secure and 99.99% uptime cloud service or directly using our cellular, WiFi, or USB connections
- Maintains detailed customer database, and optimized route
- Sends, receives, updates, and stores delivery data until signal available or USB download
- Connects to all industry standard electronic registers; integrating with each register manufacturer's file-formats
- I/O to connect to in-cab printers, truck gauges, tank valves, flow meters, PTO, hose reel, engine, and other accessories
- Connects via Wi-Fi or Ethernet to optional rugged BASEstation Android tablet and other wireless devices

### HOMEBASE

The HomeBASE, office control center pulls delivery data from your back office, optimizes and dispatches routes, then synchronizes with your trucks via USB, WiFi, or real-time cellular.

- Route Optimization - Dispatch
- Where's My Truck
- Viewing Customer DataBASE
- Verify transactions
- Reporting



# Configurations



## HUB & PROCONTROL3

- All PC3 standard functionality, plus complete BASEstation system control in the palm of your hand
- Customized data entry and display screens, configured to match the “day in the life” of a truck driver
- Perform, record & print DOT pre-trip inspections with handheld
- Captures and displays inventory levels on truck - both initial loading and post delivery
- Displays optimized customer delivery list, will calls and remaining deliveries
- Built-in GPS brings up customer account details automatically when in proximity
- Search by customer name, location or address, or use the built-in RFID or barcode scanner to pull up detailed account information to scan, pump, and invoice automatically
- Flow rate display, payload control and system status
- In addition to register’s Weights & Measures block, system prints customer invoice details
- Scans RFID or Barcode tags for customer asset identification
- Account for non-metered transactions, such as miscellaneous charges and packaged goods
- Produces detailed ‘end of shift’ reconciliation report

## HUB & TABLET

- Ruggedized touchscreen tablet design ideally suited for intuitive in-cab control center
- Show customized data entry and display screens, configured to match the “day in the life” of a truck driver
- Wi-Fi or Ethernet connection to BASEstation HUB
- Touchscreen captures driver input, such as log-in details, signature capture, inventory, percentage full and payments received
- Perform, record, and print DOT pre-trip truck inspections - includes built-in camera, allowing for photos
- Captures and displays inventory levels on truck - both initial loading and post delivery
- Displays optimized customer delivery list, will calls, and remaining deliveries
- Turn by turn map navigation to customer location
- Built-in GPS brings up customer account details automatically when in proximity
- Search by customer name, location, or address
- Complete measurement system control and real-time status indication
- Portable for customer signature if required

# Fleet Fueling

## PROCONTROL3 WITH RFID AND BARCODE



### Asset Identification

Rugged RFID tags or inexpensive Barcodes are affixed to each vehicle or piece of equipment. The fuel truck operator reads the ID with a simple button push on the BASE handheld which records the vehicle ID and identifies the appropriate product. The operator then uses the same remote control to start the pump, increase the flow if needed, monitor the volume of fuel delivered, and shut down the pumping operation in the event of an emergency. The handheld captures the exact volume delivered to each piece of equipment without returning to the truck for manual data entry.

### Customer Tank Interlock

Prevents unintended tank filling. When the fuel truck operator scans either the RFID tag or barcode on his/her ProControl3, the ID information and product for this specific tank is transmitted back to the BASEstation Hub on the truck. If the tank ID corresponds to an authorized customer delivery then the system automatically authorizes the correct meter and opens the corresponding product compartment. Pushing "PTO" or "Pump" button on the remote will start the delivery process. If no signal is received the pump will not operate. Unauthorized, accidental, or incompatible product deliveries cannot be made without the deliberate multi-step bypass sequence that is "red-flagged" to management.

### Asset Tracking

Tank location is confirmed with each delivery and fed daily to the back-office database. A report is generated showing the location of all "active" tanks and the last known location of all "inactive" tanks.

Tanks that are exchanged in the field will show the new ID, date, and location of subsequent fills. Tanks that are taken out of service for repair/testing will be logged as such when the new ID is assigned. This helps to manage tank inventory and track asset location.

\*RFID and barcode option requires an interface to an on-board computer database.



## PROCONTROL3 HANDHELD SPECIFICATIONS

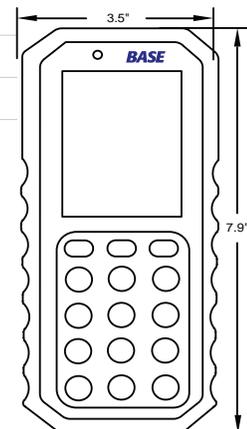
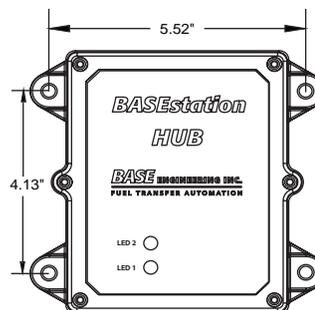
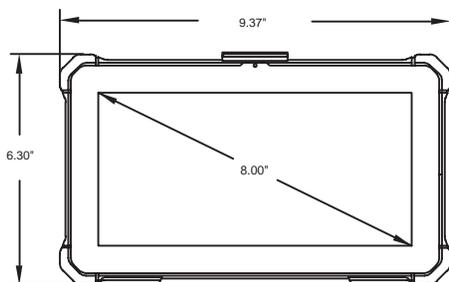
SCREEN	3.5" color LCD, 240 x 320 (QVGA)
FREQUENCY OF OPERATION	2.4 GHz DSS or 900MHz FHS
TRANSMITTER POWER	Up to 60mW
METHOD OF TRANSMISSION	56 bit DES encryption key
ANTENNA	Internal (no visible antenna to damage)
NORMAL RANGE	1000 ft (300m)
CONSTRUCTION	Designed to IP67 and explosion-proof standards
TEMPERATURE SPECIFICATION	Minus 20°F to 125°F
BATTERY LIFE	Up to 12 hours of continuous transmission, with low battery indicator
BATTERY TYPE	Rechargeable Lithium Ion supplied with 12/24VDC charging cradle
ROHS LEAD-FREE COMPLIANT FCC	Approved system meets US and Canadian DOT requirements for "Off Truck" remote controls

## BASESTATION HUB SPECIFICATIONS

FREQUENCY OF OPERATION	WiFi: Dual frequency 2.4GHz/5GHz   GPS: 1575.42MHz with PC3 RX: 2.4GHz
POWER SUPPLY	12/24VDC
CURRENT LOAD	Up to 3A without RX power   Upt to 13A with PC3 RX
CONSTRUCTION	Dust-proof plastic enclosure
ANTENNA	External combo antenna included
WIRING CONNECTIONS	Pre-wired to meet customer requirements, quick connect fittings supplied
TOTAL SYSTEM WEIGHT	2.2lbs, 4.2lbs with PC3 TX

## BASESTATION ANDROID TABLET SPECIFICATIONS

FREQUENCY OF OPERATION	WiFi: Dual frequency 2.4GHz/5GHz   GPS: 1575.42MHz with PC3 RX: 2.4GHz
POWER SUPPLY	5V USB
CURRENT LOAD	1.5A when charging
CONSTRUCTION	IP65 rated, ruggedized, 8" TFT LCD touch screen
ANTENNA	Internal antenna
WIRING CONNECTIONS	USB Type A charging and comm, RS232 serial, Ethernet
TOTAL SYSTEM WEIGHT	1.25 lbs
ROHS LEAD-FREE COMPLIANT	



# GET IN TOUCH

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BASE Engineering offers a four year, no hassle, replacement warranty on every product we manufacture, and one year warranty on products that are not manufactured at BASE Engineering. Our Technical Support group is available Monday to Friday from 7 am through 5 pm EST to assist with warranty, service, or installation questions.

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