



Agenda Date: 07/14/2015  
Agenda Item: 3.8

## STAFF REPORT

**Date:** July 14, 2015  
**To:** Bryan Montgomery, City Manager  
**From:** Dan Gomez, Chief of Police

Approved and Forwarded to City Council:

Bryan H. Montgomery, City Manager

**SUBJECT:** Resolution authorizing the Purchase of two Radar Trailers

### Summary and Background

During the course of the past 12 months many residents of Oakley have requested a more frequent traffic enforcement presence at more locations than the Police Department can cover with existing staff and equipment. The requests have been made to the Police Department, the Public Works Office, and the City Manager's Office.

It is well established that traffic safety is a very significant component under the public safety umbrella. In an effort to be responsive to the public, Staff has researched options in which traffic safety can be visibly enhanced and has determined that a reasonable and cost-effective solution would be to add two radar trailers to the fleet of traffic safety and education tools.

The recommended trailers are equipped with a software package that will allow the trailer to collect data regarding traffic vehicle count and traffic speeds during the time of deployment. The software package then converts the data to analytics that can be used to help police officers identify and target specific areas for enhanced enforcement by day, time and location. Traffic engineers can also use the information to help identify areas in need of traffic calming measures.

These radar trailers are also equipped with a camera that can be preset to take a photo of the license plate of a vehicle traveling faster than a speed preset by staff. For example, if the trailer is deployed along a roadway having a speed limit of 35 MPH, the camera may be preset to take photos of vehicles traveling at a speed greater than 10 MPH over the speed limit. While these photos could not be used for the purpose of issuing traffic citations, they could become part of a greater traffic education effort promoting public safety by sending the vehicle's registered owner a photo of the offending vehicle with a polite letter asking for their help keeping the streets of Oakley safe by complying with the posted speed limit.

Staff contacted multiple vendors; however, only RU2 Systems, Inc. could put together a product that satisfied all of our requirements.

**Fiscal Impact**

The cost of the two recommended trailers is approximately \$32,890. These funds can be made available from the FY 2014/15 fund balance.

**Recommendation**

Staff recommends the Council approve the resolution authorizing the City Manager to use FY 2014/15 fund balance monies to purchase two RU2 Systems Inc. Radar Trailers equipped with a Data Acquisition Package and Event Triggered Video Radar Package.

**Attachments**

1. Resolution
2. Radar Trailer information

RESOLUTION NO. \_\_\_\_\_

**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF OAKLEY AND  
AUTHORIZING THE PURCHASE OF TWO RADAR TRAILERS FROM RU2  
SYSTEMS, INC. IN A TOTAL AMOUNT NOT TO EXCEED \$34,000**

**WHEREAS**, the City of Oakley budgets for the procurement of public safety equipment; and

**WHEREAS**, RU2 Systems Inc. has t radar trailers meeting the Police Department's specifications in stock; and

**WHEREAS**, the public safety equipment specified is not available by other radar trailer vendors.

**NOW, THEREFORE, BE IT RESOLVED**, that the City Council of the City of Oakley authorizes the City Manager to purchase two radar trailers from RU2 Systems Inc. in an amount not to exceed \$34,000.

**PASSED AND ADOPTED** by the City Council of the City of Oakley at a meeting held on the 14<sup>th</sup> of July, 2015 by the following vote:

AYES:  
NOES:  
ABSENT:  
ABSTENTIONS:

APPROVED:

\_\_\_\_\_  
Doug Hardcastle, Mayor

ATTEST:

\_\_\_\_\_  
Libby Vreonis, City Clerk

\_\_\_\_\_  
Date

# RU2 Systems, Inc.

The Leader in Speed Display Technology

## RU2 E.T.P.R.

### Event Triggered Photo Radar



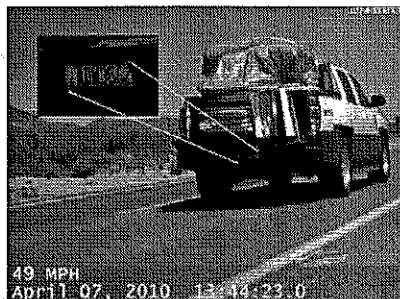
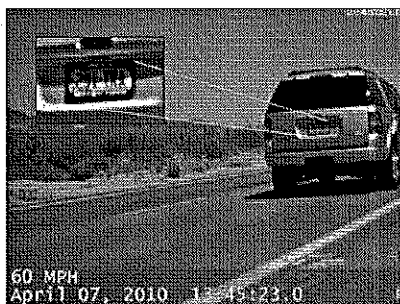
# Event Triggered Photo Radar



Full Sun



Split Sun/Shadow



Full Shadow



Full Sun / 45 Angle



Event Triggered Photo Radar (ETPR): Designed for private-party use in industrial, commercial and closed community applications, RU2 Systems now offers an economical means of photo-documenting speed violations. Industrial and educational facilities, military bases, private communities and the like can address speed violations within their ranks with hard documentation.

Based on finely filtered approach-only radar in conjunction with high-end machine vision camera technology, the system records the rear license plate and general image of any vehicle exceeding a given speed. This threshold is set in 1 MPH (or KMH) increments. Operating day or night thanks to an IR sensitive camera, the captured photo sequence is superimposed with a time/date stamp and the offender's speed. Computer controls automatically determine primary gain settings and then optimizes shutter speed for the best stop action image possible. The numbers of images per incident as well as fine grain timing adjustments are user selectable.

The pictures are then stored on a local hard drive for retrieval via a USB port for desktop review and potentially, comparison to a list of known vehicles. Unlike constant-on video systems, only those vehicles in violation are recorded, ending the tedious chore of reviewing endless tape after tape. Thousands of images can be stored prior to off loading the hard drive. Images can be archived to CD or other media for long-term storage.

### RU2 Systems: The Industry Leader in Speed Display Technology

2631 North Ogden Road, Mesa, AZ 85215

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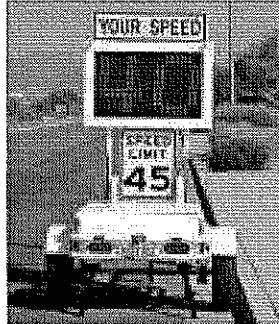
# RU2 Systems, Inc.

## The Leader in Speed Display Technology

2631 N. Ogden Road, Mesa, AZ 85215 • P 480-982-2107 • F 480-982-5237

**Proposal For:**

City of Oakley  
Chief Dan Gomez  
3231 Main Street  
Oakley, CA 94561  
USA



<b>Quote #</b>	2015JG1574
<b>Issue Date</b>	06/11/15
<b>Quote Expires</b>	08/11/15
<b>Fax</b>	
<b>Pages</b>	4
<b>Email</b>	gomez@ci.oakley.ca.us

Line	Qty	Description	Unit Price	Ext. Price
1	1	The RU2 Fast-870 Radar Speed Display Trailer is the latest design in RU2 Systems' stable of traffic calming trailers. Built with economy and utility foremost, this trailer is ideal for both busy thoroughfares and community streets where speeding is a problem. The Fast-870 has a bright 18" tall amber AllnGaP LED character display which, when raised into full operating position, stands over 7 feet tall, easily seen by oncoming drivers. The display is manually raised into position with assistance from dual gas springs so setup is quick and easy and the display folds down, creating a low trailer profile for easy transport and storage. The MUTCD conforming speed sign offers speed limits from 15 to 65 MPH. Expect approximately seven (7) to ten (10) days of service from a full charge and is virtually field autonomous with optional solar panel under many conditions.	\$7,495.00	\$7,495.00

**STANDARD FEATURES:**

- Curb Weight: 585 lbs. / ~35 lb. Tongue weight
- 2" tubular steel space-frame chassis
- UV and graffiti resistant white powder coat finish over high zinc primer
- Keyed On/Off switch
- Single directional K-band radar unit
- 18" Amber AllnGaP LED display characters
- RF fob for remote parameter set up, 100+ ft. range.
- Automatic intensity adjustment to ambient light conditions
- Display protected by 3/16" GE Lexan® with a smoked, non-glare finish
- 18" x 24" R2-1 Speed Limit Sign / 5-65 MPH overlays
- 2-ton rated axle / 13" wheels equipped w/ ST rated tires and locking lugs
- 2" ball hitch coupler
- One (1) Group 27 99 A/hr AGM battery / 7-10 days operation
- Integrated 'smart' battery charger
- Single cycle ON/OFF clock
- Flashing Digit Violator Alert - 1 MPH increments
- Directional Traffic Management Arrow Patterns
- Minimum Display Speed / High-speed Blanking
- "Dark" mode for data collection (when applicable)
- Unit defaults to last settings upon power-up

Line	Qty	Description	Unit Price	Ext Price
2	1	Data Acquisition Package: First Seat	\$595.00	\$595.00

This data acquisition package utilizes the streaming data received from the radar gun so that the deployment of pneumatic tubing is not required. Proprietary algorithms filter and analyze the data stream, detecting discrete oncoming vehicles that pass the location and records their speed with time/date stamps. Please note that single gun methodologies are situationally sensitive but have proven to provide data as accurate as any pneumatic method. Single gun technology is perfectly suited for determining peak load times and violation concentrations giving law enforcement agencies sufficient data for resource deployment. Please note that some system configurations may require external containment at a small additional cost.

Data is saved on an SD memory card. 2GB provided (~44M+ vehicle capacity per GB) and can be downloaded to any computer with the provided SD/USB card reader. The data can then be analyzed by software capable of accepting a comma delimited ASCII text file, such as Microsoft® Excel or RU2's Traffic Count Software package, included. The Traffic Count package allows examination of data exceeding Excel's 65,536 limitation. Tabulated reports and charts include Survey Summary, Vehicle Count, Speed, and Time/date, 85th Percentile, 15 Minute, 1 Hour, Daily and Weekly analysis, etc.

Included Reporting Capability:

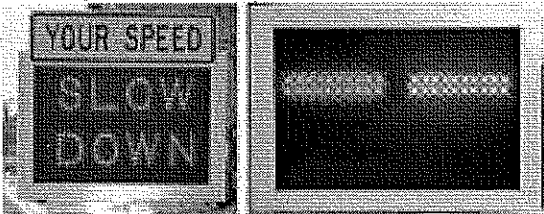
- a) Survey Summary
  - a. Variable Display Scheme
  - b. Total Surveyed
  - c. Incremental Speed Grid (Speed, Volume, % of Survey)
  - d. Speed Statistics Summary
    - i. Posted Limit
    - ii. At/Under Limit Qty. / %
    - iii. Over Limit Qty. / %
    - iv. Average Speed
    - v. 85th Percentile
    - vi. Maximum Speed
  - e. 10 MPH Pace
    - i. Pace Range
    - ii. Number in Pace
    - iii. % in Pace
  - f. Number Exceeding Limit (+10, +20, +30..., Number & %)
- b) Vehicle Speeds Graph
- c) Daily Volume/Time Graph
- d) 85th Percentile Graph
- e) 15 Minute Breakdown
  - a. AM/PM Analysis
    - i. Total
    - ii. Peak Hour
    - iii. Peak Flow
    - iv. Peak % of AM
    - v. Peak % to 24 Hr
- f) Weekly Summary - 4 Week Limit
- g) Time vs. Speed
  - a. Hourly numeric breakdown
- h) Comparative Survey Analysis
  - a. Virtual Week
  - b. Dynamic/Survey Week
  - c. Comparative Surveys
  - d. Selective Time View (Time Slice)

Line	Qty	Description	Unit Price	Ext Price
		i) Estimated Revenue Calculator a. Client defined fine schedule x Efficiency over Survey Results		

3	1	Solar Power: 80 Watt panel for Fast-870	\$655.00	\$655.00
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4	1	Violator Alert - Red LED "SLOW DOWN" 18"	\$375.00	\$375.00
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The display is equipped with a flashing "SLOW DOWN" message made of high intensity red LED's . The VA is activated by a vehicle exceeding a speed selected (in 1 MPH/KPH increments) by the operator. Once a reading from the radar registers above the selected speed, the violation lights are activated. The violator will see the flashing "SLOW DOWN" message on the display with no speed displayed. If the violator slows, the flashing message will stop and their speed is displayed again. If slowing continues until a speed is reached that is less than the set-point, the display will continue to show the speed being registered. If the violator maintains a speed higher than the setting for a time, the flashing message will come back on. If the violator increases speed while above the violation setting the message will come back on immediately. Available on models 350, 820, 870 & 1000.



5	1	Event Triggered Video Radar (ETVR): Designed for private-party use in industrial, commercial and community applications, RU2 Systems now offers an economical means of photo-documenting speed violations. Now industrial and educational facilities, military bases, private communities and the like can address, with photo-documentation, speed violations within their ranks.	\$7,000.00	\$7,000.00
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Based on approach-only K-band radar in conjunction with an X-band Doppler presence sensor, the system records the rear license plate and general (departing) impression of any vehicle exceeding a given trigger speed. This threshold is set in 1 MPH increments at time of deployment. Operating day or night thanks to a low-Lux IR sensitive camera, the captured image is overlaid with a time/date stamp and the offender's trigger speed. The video sequence is then stored on a Secure Digital Card for review and potentially, comparison to a list of known vehicles. Unlike constant-on video systems, only those vehicles in violation are recorded, ending the tedious chore of reviewing endless tape after tape. Dependent on desired resolution, hundreds of video clips can be stored on one card. Images can be offloaded to CD or other media for long-term storage, stills generated by an appropriate 3rd party graphics package (included).

Optionally, a second, forward facing high resolution color camera can be included for the capture of the driver's image and color characteristics of the vehicle. These images are also time/date/speed stamped and recored in a sequenced fashion with the images of the departing view.

\*This system is NOT intended for the issuance of citations by Law Enforcement agencies.



Line	Qty	Description	Unit Price	Ext. Price
6	1	Crating: Fast-820/870	\$200.00	\$200.00

Please note shipping price below does not include any special or extra delivery services, i.e. lift gate services, call notification, or limited access delivery. If additional delivery services are needed, please request an update shipping quote.

SubTotal	\$16,320.00
Shipping	\$325.00
Sales Tax	\$0.00
<b>Total</b>	<b>\$16,645.00</b>

WARRANTY: RU2 warrants their LED Displays for Five (5) Years excepting batteries (1 yr.). The radar device is warranted for Two (2) years. On-site labor is not included. However, parts are repaired within five business days of receipt, and include ground-shipping expenses. Warranty does not include physical damage from misuse or vandalism.

- A. Shipping, crating and applicable sales tax are not included in the above pricing unless specifically listed.
- B. Shipping quotes do not include liftgate or any additional services that may be required at destination.
- C. Sign to be shipped approx. 30 days after receipt of purchase order.
- D. Prepaid or Terms: 2% 10, Net 30 on approved credit



Sustaining  
Member



[www.ru2systems.com](http://www.ru2systems.com)

FEIN: 80-0017092





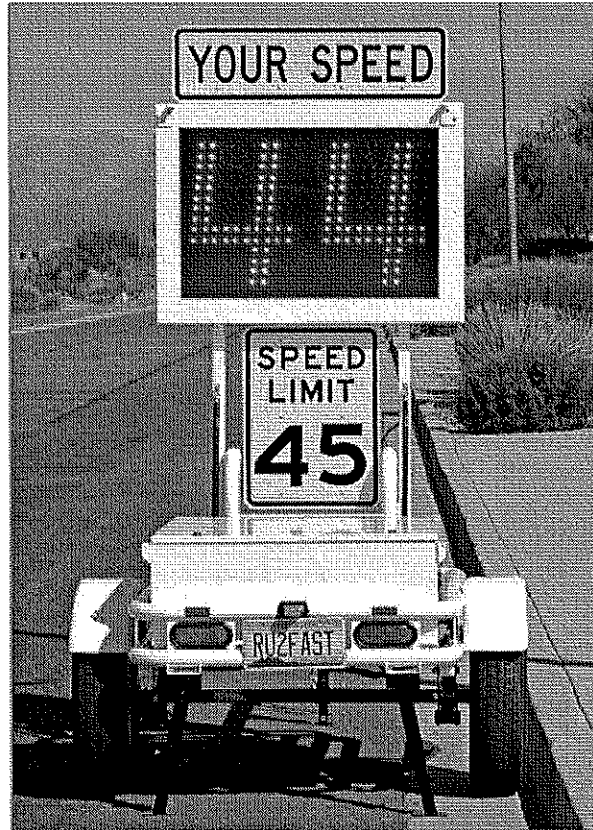
**RU2 Fast-870**

**RU2 Systems, Inc.**

**The Leader in Speed Display Technology**

# **RU2 Fast-870**

## **Radar Speed Display Trailer**



The RU2 Fast-870 Speed Display Trailer has a 18" tall character display and when in full operating position, stands over 8 feet tall. The speed display sign folds down creating a low trailer profile for easy transport and storage. Standard features include high & low speed blanking, flashing digit violator alert and traffic management arrows.

Optional features include our violator alert system (a flashing strip of red and blue LED's and/or the distinct "SLOW DOWN" message in red LED's) when approaching vehicles do not slow to the selected speed. Also available is our RU2 Systems Data Acquisition Package, which records the time, date and speed of oncoming vehicles without the use of cumbersome pneumatic tubes placed across the street! Please see the reverse for complete details.

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# RU2 Fast-870

## Radar Speed Display Trailer

### Standard Features:

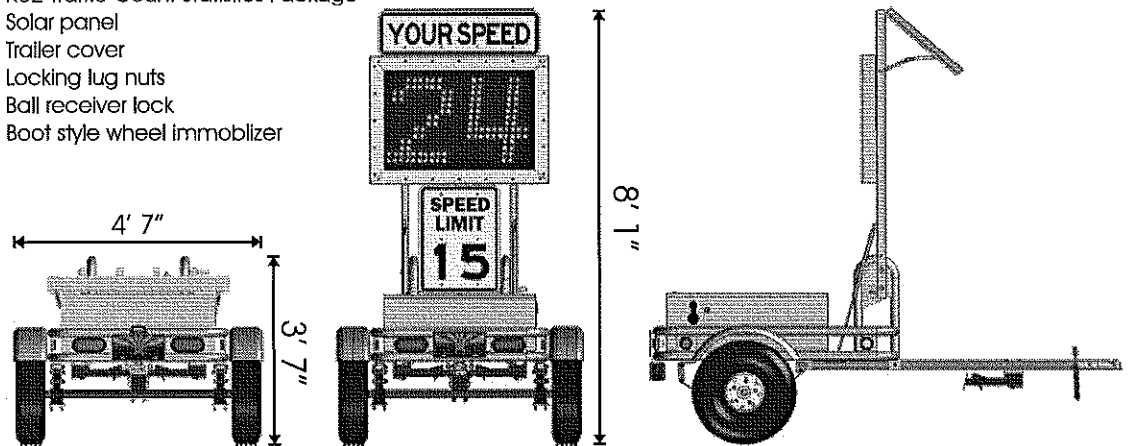
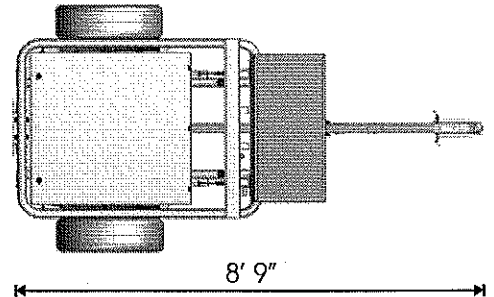
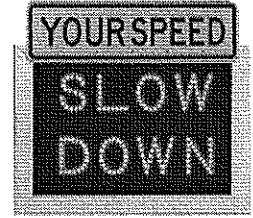
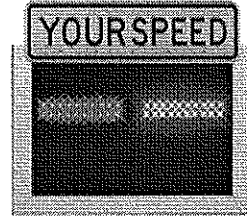
- Single directional K-band radar unit
- 18" Amber AllInGaP LED full graphic display characters
- Display protected by 3/16" GE Lexan® with a tinted, non-glare finish
- Automatic intensity adjustment to ambient light conditions
- 18" x 24" MUTCD R2-1 speed sign / 5-65 MPH overlays
- Keyed On/Off switch
- RF key fob for remote set up (100'+)
- One (1) 92 A/hr AGM aviation grade battery (7-10 days operation between charges)
- Single cycle 24 hour ON/OFF clock
- Flashing Digit Violator Alert
- Directional Traffic Arrow Patterns
- Minimum Display Speed / High Speed Cut-off
- Unit defaults to last settings upon power up

### Construction:

- 2"Ø tubular steel space-frame chassis
- Polyester powder coat finish over high zinc epoxy primer
- 4.80 x 13 ST tires on 5 lug automotive type hubs
- (3) Stabilizer jacks with a 750 lb capacity each. Capable of raising the trailer up to 8" from ground height
- Full 7" wide, 14 gauge steel fenders
- 2" Class II ball coupler
- 2000 lb rated axle
- Leaf spring suspension
- Taper roller bearings
- Curb Weight: 580 lbs

### Options

- Violator alerts\*
  - > "SLOW DOWN"
  - > Red-Blue Flashing Bars
  - > White LED Photo-Flash simulation
- Additional batteries for extended deployment
- 10" x 50" Scrolling VMS message display
- RU2 Traffic Count Statistics Package
- Solar panel
- Trailer cover
- Locking lug nuts
- Ball receiver lock
- Boot style wheel immobilizer



Technical specifications are subject to change without notice.

### WARRANTY:

RU2 Systems warrants their LED Displays for Five Years. The Radar Gun is warranted for Two years. On-site labor is not included. However, parts are repaired within five business days of receipt, and include ground-shipping expenses. Warranty does not include physical damage from misuse or vandalism.

**RU2 Systems, Inc.**  
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