

SUBJECT: REQUEST TO REPLACE POLICE DEPARTMENT RADIO
FREQUENCY REPEATERS

SOURCE: POLICE DEPARTMENT

COMMENT Interoperable emergency communications is essential to emergency response, safety of our community, and national security. Of all the problems experienced during disaster events, one of the most serious is lack of communication due to the absence of appropriate and efficient means to collect, process, and transmit important and timely information. In some cases, radio communication systems are incompatible and inoperable not just within a region, but within departments or agencies within the same community. Non-interoperability occurs due to the use of outdated equipment, limited availability of radio frequencies, and lack of coordination between agencies.

In December 2004, the Federal Communications Commission (FCC) ruled that all private land mobile radio users operating below 512 MHz must move to 12.5 kHz narrowband voice channels and convert to high efficiency data channel operations. The rule change had considerable impact because most current public safety radio systems were using 25 kHz voice channels. Thus, all municipal governments and state and local public safety systems using 25 kHz radio systems had to migrate to 12.5 kHz narrowband voice channels by December 31, 2012.

In order to develop a single technical standard for public safety radio communications, industry and user groups helped to develop a suite of standards called Project 25 (P25), which is a digital voice format that can be used in conventional or trunked radio systems (a system that accommodates and manages multiple channels) operating on 12.5 kHz channel bandwidth. P25 standards include multiple interfaces, which allow the exchange of information between various components of a land mobile radio system, ensuring that two-way radios are interoperable and will enable public safety responders to communicate with each other. Presently, there are no time mandates associated with P25 compliance, but all communications equipment manufactured after January 1, 2011, must meet P25 standards, which results in non-compliant equipment being replaced through attrition.

In summary, narrowband channels are more efficient and will allow additional channels to be used and P25 compliant (digital) radio systems will ensure communication devices can talk to each other.



Director



Appropriated/Funded



City Manager

Item No.

13

A recent survey of the radio repeaters for Porterville Police Department radio channels revealed that all three (3) repeaters were analog systems that fail to meet P25 standards. Furthermore, the repeaters were installed at different times between 2002 and 2006, making all of them nearly obsolete as the life expectancy for such equipment is typically eight (8) to ten (10) years. The ageing repeaters have reached the end of their life expectancy and need to be replaced before a failure occurs. Additionally, the repeaters need to be replaced with P25 compliant equipment, as was accomplished when the Porterville Fire Department replaced their repeaters.

The suggested replacement equipment had been identified as dual-purpose equipment which is capable of analog operation for communicating with present radio equipment and digital operation that can be activated in the future for communicating with P25 compliant equipment. The first phase of the project will involve purchasing and replacing three (3) repeaters at the tower and setting them to analog mode for continued operation. The second phase of the project will involve purchasing and installing equipment necessary to transmit digital signals over existing phone lines. The second phase of the project will not be necessary until some point in the future, when all of our radio equipment meets P25 standards.

Department staff researched the estimated costs of executing the first phase of the repeater replacement project and sent requests for quotes to three (3) different vendors. SC Communications is a Motorola preferred vendor and can offer Los Angeles County contract pricing, which is presently the lowest price available from Motorola Corporation. The County of Tulare advised that we would have to purchase the equipment from SC Communications as quoted and hire them (Tulare County) to install the equipment. MD Communications was unable to purchase the equipment under the Los Angeles County contract, so their quote exceeded the other significantly. The quotes received were as follows:

SC Communications	-	\$53,411.30 - Equipment \$ 3,000.00 - Installation
MD Communications	-	\$57,825.69 - Equipment \$ 1,550.00 - Installation
County of Tulare	-	Equipment to be Purchased from SC Communications \$ 1,040.00 - Installation

In order to meet the aforementioned narrowband mandate, the City set aside funds (Narrowband Project) for the modification or replacement of all radio equipment that failed to meet the new standards. All City-owned radio equipment was brought into compliance or replaced before December 31, 2012. At the conclusion of the project, \$76,715.06 remained in reserve. This reserve could be

utilized to fund the first phase of the repeater replacement project. The second phase of the project is not necessary at this time and has been estimated to cost between \$22,000.00 and \$25,000.00.

RECOMMENDATION: That the City Council:

- 1) Authorize the purchase of the equipment from SC Communications in the amount of \$53,411.30; and
- 2) Authorize the acceptance of the lowest bid on installation services in the amount of \$1,040.00, which was offered by County of Tulare IT Radio Comm.

Attachments: Motorola Quote for Equipment (from SC Communications)
SC Communications Quote for Installation Services
County of Tulare Quote for Installation Services
MD Communications Quote for Equipment and Installation Services

**MOTOROLA**

Motorola
Jaime Hastings
5303 Woodmere Dr.
Bakersfield, CA 93313
Phone - 661.831.0191 Fax 661.831.0587

To: City of Porterville PD
Atten: R. Standridge
350 North D Street
Porterville, California 93257
(559) 782-7400

Cust#

Quotation No:

032713GTR8000

Page 1 of 1

Date: 6/4/2013

Based on LA contract price

In response to your request we take pleasure in quoting:

Terms of Payment Net 30 Days		DELIVERY: 3 weeks ARO	FOB: Pre-Pay & Add	
Item	Qty	Description	Unit Price	Total Price
1	3	T7039 GTR 8000 Radio	\$ 4,800.00	\$ 14,400.00
2	3	X640AL UHF 435-524 MHZ Mid Power	\$ 5,040.00	\$ 15,120.00
3	3	CA01948AA Astro 3.1 Conventional Software	\$ 4,745.00	\$ 14,235.00
4	3	CA01946AA Conventional Mixed Mode Operation	\$ -	\$ -
5	3	X182CA ADD: Duplexer	\$ 1,104.00	\$ 3,312.00
6	3	CA01504AA antenna relay	\$ 280.00	\$ 840.00
7	3	X265AP BR Preselector 380-512 MHZ	\$ 400.00	\$ 1,200.00
8	3	X153AW Rack Mount Hardware	\$ 40.00	\$ 120.00
		Note: Prices do not include programming or installation Prices are based on the LA Fire Contract		
		Equipment Sub Total		\$ 49,227.00
		Estimated Surface Freight		
		8.50% Tax		\$ 4,184.30
		Grand Total:		\$ 53,411.30

This quotation expires 60 days of the date set forth above unless
purchaser's acceptance is received by Motorola prior to that date.

This quote is a non-binding quotation and should be used
for budget planning purposes only.

Terms on this quote are net 30 days form shipment

Special instructions: FOB
Shipping point: ORIGIN
Shipping date: 30 DAYS ARO
Completion date:

Freight Terms: Pre-pay & Add

Motorola
By: Jaime Hastings
Title: Account Manager
Date: April 17, 2013

Purchaser's Acceptance
By:
Title:
Date:

The warranty period ("Warranty Period") is 12 Months from
the date Motorola completes installation or from date of
shipment if Motorola is not responsible for installation.

Signature: Signature:

Purchaser's Order No:



SC COMMUNICATIONS, INC.

Date: Jun. 11, 2013

Quote

5303 WOODMERE DR., BAKERSFIELD, CA 9331

Quote #: 032713GTR8000

Prepared By: *Jamie Hastings* Phone: 661.831.0191

Fax: 661.831.0587

E-Mail Address: *jamie@sc-comm.com*

PREPARED FOR: **Richard Standridge**

COMPANY: **Porterville Police Dpt**

PHONE:
FAX:

To
Address:

Ship to
Address:

Equipment Details and Pricing

<u>Qty.</u>	<u>Model</u>	<u>Description</u>	<u>Unit Price</u>	<u>Total Price</u>
3	LABOR	Installation of Repeaters	\$950.00	\$2,850.00
		Installation includes: removal of old repeater, installation of new repeater, and aligning and tuning of new repeater for proper functionality		
3	PROGRAMMING	Programming and FCC check of repeater	\$50.00	\$150.00

SHIPPING

\$5.00

\$0.00

EQUIPMENT TOTAL

\$3,000.00

NOTE: Installation does no include any parts

If additional installation parts are required, additional time and material fees may apply.

Delivery: is 14 working days from receipt of PO

PO PAGE TOTAL

\$3,000.00

SC COMM. DISCLAIMS ALL OTHER WARRANTIES WITH RESPECT TO THE ORDERED PRODUCTS, EXPRESS OR IMPLIED INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SC COMMUNICATIONS TOTAL LIABILITY ARISING FROM THE ORDERED PRODUCTS WILL BE LIMITED TO THE PURCHASE PRICE OF THE PRODUCTS WITH RESPECT TO WHICH LOSSES OR DAMAGES ARE CLAIMED. IN NO EVENT WILL SC COMMUNICATIONS, INC. BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

County of Tulare IT Radio Comm.

11871 Ave 272
Visalia, CA 93277
559-735-1380 Fax: 559-737-4552

Date:	6/4/2013
Service Quote #:	73
Page:	1

Ship To:

Porterville, Police Department
350 N. "D" St.
Porterville, Ca 93257

Manufacturer:

Model: GTR8000
Serial Number:
Alternate ID:
Reference: repeaters
Mileage:

Phone: 559-782-7404		Alternate Phone:		Terms:	
Service Rep: BDSMITH		Cust PO: Install new		Valid Date: 7/4/2013	
Job # Stock Code	Description	Indications/Work Performed	Quantity	Price	Extended

1 Technician: BDSMITH

Remove three MTR2000 repeaters and install three new GTR8000 repeaters at Scenic Heights. Remove old equipment and deliver to Porterville PD. The existing repeaters are mounting in 19 inch racks within the building. The new equipment will be installed in the same location as the old equipment.

Drive to Porterville. Pickup three new GTR8000 repeaters and duplexers. Drive to Scenic Heights. Remove a MTR2000 repeater, one at a time, and replace with a new GTR8000 repeater. Program all new GTR8000's for analog operation. Connect each repeater to the existing wireline connections to the PD console. Test each repeater with units in the field.

Note: these repeaters can do digital communications, but not without having an external Digital Interface Unit (DIU3000, available separately from Motorola). This unit takes the digital signal as heard over the air and converts it to analog audio, which can then be sent over the wireline to the PD console. The installation and or purchase of these modules are not covered in this service quote, and will need to be estimated separately. While we have quoted 16 hours of labor, we will bill what the actual time is, even if its is less than this estimate. We do not expect anything out of the ordinary with the installation of this equipment. However, if we come across something unforeseen, we will use prudence in causing any extra cost, and depending on the magnitude of the issue, will contact Porterville PD with the issue before we proceed, for guidance.

Labor is two people. 1 day

LABOR

16.00	65.00	1,040.00
	Sublet:	0.00
	Disposal:	0.00

Pickup/Delivery:	0.00
Service Call:	0.00
SubTotal:	1,040.00
Tax:	0.00
Shipping:	0.00
Total:	1,040.00

MD COMMUNICATIONS

Quote

Date
Customer Name
Customer Address
City, State, Zip
CONTACT

5/29/2013
PORTERVILLE PD

SGT. R. STANDRIGE

Quantity	Description	Model #	Item \$	Extended
3	GTR8000 BASE RADIO	T7039	\$ 6,000.00	\$ 18,000.00
3	ADD:UHF R2 435-524MHZ	X640AL	\$ 6,300.00	\$ 18,900.00
3	ADD:ASTRO 3.1 CONV SW	CA01948AA	\$ 6,500.00	\$ 19,500.00
3	ADD:DUPLER	X182BZ	\$ 1,380.00	\$ 4,140.00
3	ADD: PRESECTOR	X265ZP	\$ 500.00	\$ 1,500.00
3	RACK MOUNT HW	X153AW	\$ 50.00	\$ 150.00
3	ADD:FALL BACK IN CAB (WL)	CA01503AA	\$ 600.00	\$ 1,800.00
3	MIX MODE OPS	CA01946AA	\$ -	\$ -
1	DISCOUNT		\$ (10,878.00)	\$ (10,878.00)
				\$ -
				\$ -
				\$ -
				\$ -

Subtotal				\$ 53,112.00
	Tax			\$ 4,713.69
	Shipping			
	Programming			\$ 50.00
	Installation			\$ 1,500.00
	License			
Total				\$ 59,375.69

M D Communications INC
4539 N Brawley Ave., Ste 103
Fresno, CA 93722
(559) 276-0971
EUGENE ORTA