CORD-Pager™
USER MANUAL

TABLE OF CONTENTS

Chapter 1 - Introduction

1.0 General

Rohrback Cosasco Systems CORD family of remote monitoring unit (RMU) instrumentation provides access to data from instrumentation in remote area's using several communications channels, including telephone lines, cell phone, satellite, and two way paging networks.

The use of remote monitoring instrumentation is designed to improve operations by enabling the user to access data remotely, receive notification when parameters fall out of tolerance, and adjust or change operating characteristics without going to the field.

1.1 CORD-Pager™

The CORD-Pager is a versatile wireless two-channel remote monitoring unit (RMU) designed to monitor outputs from instrumentation such as cathodic protection system rectifiers, 4-20 mA current loop outputs, or any other physical parameter that can be represented by a DC voltage of less than 100 volts.

Data is accessed using a simple interface over the World Wide Web (internet). The Skytel® two-way paging network is used to transfer data to and from the remote site through the internet web site http://www.cord-pager.com. The two-way paging network allows the user to query the unit for current status at any time, and reconfigure alarm parameters, data transfer schedules, and the like from any remote location with a connection to the internet.

When alarm conditions occur, the user is notified by e-mail that a value is out of tolerance. The e-mail may be directed to a computer, cell phone, pager, or any other device that has e-mail capabilities.

The CORD-Pager is 115 VAC powered. In addition to powering the electronics, the line power keeps a lead acid battery charged at all times. The battery provides power for transmission when AC power fails. A protection mechanism electronically disconnects the battery if AC power is OFF for more than 2 continuous hours. In this mode the quiescent current drain from the battery is minimal and the CORD-Pager will return to normal operation once AC power returns. The CORD-Pager can be without power for several months and still resume normal operation when AC power resumes. However, the CORD-Pager can <u>not</u> be reactivated over the air once it has electronically disconnected itself from the battery. Only the resumption of AC power can restart the CORD-Pager.

An antenna is installed as part of the system. The location of the antenna, inside or outside a building, is crucial to reliable data reporting.

For local setup and testing, a personal computer is connected to the CORD-Pager via the serial port. A menu allows the user to perform various functions and manipulate the parameter table. The parameter table is a list of items that customizes the operation of a given CORD-Pager, such as the time of scheduled transmissions to the network, or the time zone setting.

For more details about the operational characteristics of the CORD-Pager, see the "CORD-Pager Specification". This document specifies both hardware and firmware functional requirements.

1.2 CORD-Pager Manual

This manual describes the characteristics and features of the CORD-Pager Remote Monitoring Unit (RMU) and is primarily used to familiarize one with the installation process, technical terms and general operation of the CORD-Pager.

1.3 Communication Coverage

Prior to installation, the Skytel coverage map should be checked to make sure the installation location is supported by the SkyWriter/e-chat communication system. Access the map by going to Skytel's web site, http://www.skytel.com, and selecting "Coverage". Once you are on this screen, choose "SkyWriter or e-chat, Interactive 2 way messaging" and enter the address of the location to be remotely monitored.

1.4 Web Site Account Set-Up

The form attached as appendix B should be Faxed to Rohrback Cosasco Systems Customer Service (562) 949-3065 prior to installation. This information is required from the user to set up the Internet account, and allow the user to access data over the internet.

Chapter 2 - Specifications

General System Specifications

POWER SUPPLY
Power Supply: 115 VAC, 60 Hz
Battery Backup: 1.2 Amp-hour Sealed Rechargeable Lead Acid Battery
Battery Only Operation: CORD-Pager will operate for 2 hours without AC power

OPERATING ENVIRONMENT
Operating Temperature: -40°C to +70°C

ENCLOSURE (OPTIONAL)
Type: NEMA-4X Weather Proof – non corrosive
Overall Dimensions: 6" x 6" x 4"
Weight: 2 lbs.

ANALOG INPUT MODULE
Number of
Analog Inputs: 2

Input Voltage Ranges: Each input channel is user-configurable (jumper selectable)
                          to one of the following five ranges. 50 mV, 100 mV, 2.5 V,
                          25 V, and 100 V DC.

Accuracy: $\pm$5% of full scale
Resolution: $\pm$5% of full scale
Impedance: 1 Mega ohm

AC Power Detect: Detect the presence of AC power

COMMUNICATIONS
Supplier: Skytel Two-way paging network

Protocol: Motorola-Reflex 50 technology

Antenna: External Antenna with RG-58 coaxial feed-line

Antenna Cable Length: 18 feet maximum

Antenna Cable Connector: Female SMA

4

Chapter 3 – Installation

3.0 General

Prior to installation, the Skytel coverage map should be checked to make sure the installation location is supported by the SkyWriter/e-chat communication system. Access the map by going to Skytel's web site, http://www.skytel.com, and selecting "Coverage". Once you are on this screen, chose "SkyWriter or e-chat, Interactive 2 way messaging" and enter the address of the location to be remotely monitored. If the area does not have coverage, please contact Rohrback Cosasco Systems Customer Service at (800) 635-6898 for additional options.

The CORD-Pager is a field installed remote monitoring system designed to be mounted inside an existing enclosure, such as a rectifier, or its own NEMA-4X enclosure may be mounted near the instrumentation to be monitored. It is recommended that this section be completed in chronological order.

3.1 Equipment Required

The following items are required for field installations:

1. CORD-Pager unit consisting of the CORD-Pager electronics module, backup battery, antenna, and installation software
2. NEMA-4X enclosure (optional) if ordered
3. Hand tools (Drill, Small Crescent Wrench, Screw Drivers, etc.)
4. Miscellaneous hardware including bolts, screws, flexible conduit and other equipment required to mount RMU.
5. Laptop computer with Windows 95, 98, NT or 2000 Operating System with CORD-Pager Setup software installed.
6. Serial Cable
7. A digital voltmeter (DVM)

   Note:
   A. For Cathodic Protection Rectifier Applications: If the rectifier current shunt is not installed on the negative output leg, an external shunt rated for maximum rectifier rating must be installed.
   B. For 4-20 mA applications, 100 ohm resistors are required for each channel.

3.2 Enclosure – CORD-Pager Mounting

Determine whether or not the unit will be mounted in the optional NEMA 4X enclosure, or directly in another enclosure. To remove the electronics module from the NEMA- 4X enclosure, remove the screws in the upper right hand corner, and lower left corner of the circuit board. These screws fasten the electronics module into the enclosure. To remove electronics module, gently lift unit up and out of the enclosure. Velcro has been supplied on the back of unit and battery. Use the Velcro after all connections have been made.

To mount the NEMA-4X enclosure, loosen the screws on the back, and turn the ears out.
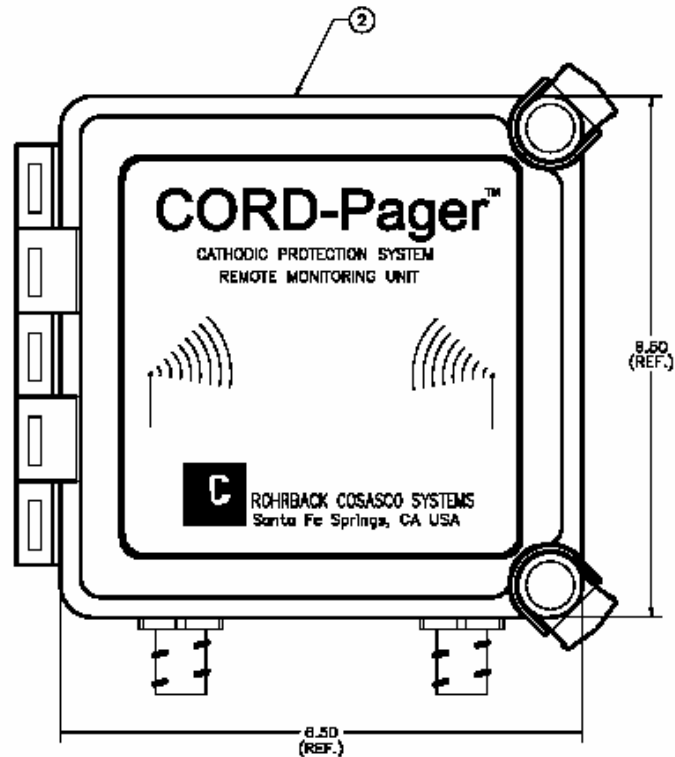
3.3   Set Input Ranges On Module

The CORD-Pager can accept inputs of up to 100 VDC. To maximize resolution, it is recommended that you set the hardware at lowest range possible for the input voltage that is expected. For example, if the maximum input Voltage will be 20 VDC on channel one, the hardware should be configured to accept 0 – 25 VDC on channel one.

If a channel is configured to measure voltage, three full scale ranges are available: 2.5, 25 or 100 Volts. If a channel is configured to measure current, 50 mV or 100 mV shunts are supported. The CORD-Pager only works with cathodic protection "low side" shunts. If the cathodic protection system to be measured does not have a low side shunt, (on negative leg) one will have to be installed. Damage to the equipment will result if a high side shunt is wired to the channel inputs. In addition, the shunt will require wiring capable of carrying the maximum current.

To set the input range for each channel please make sure that the battery and line power are disconnected, and perform the following:

Step 1: Remove the black thumb screws that hold the "red" cover to the module. These screws are located in the upper left and lower right corners on the front face of the module.

Step 2: Remove the cover, and look at the center of the circuit board. In the lower center you will see the following table, and electrical jumpers:

Amplifier	Install Jumper				
Channel 1 or 2	A	B	C	D	E
100 Volts			X		
25 Volts		X			
2.5 Volts	X				
50 mV Shunt	X			X	
100 mV Shunt	X				X

Underneath this table are two vertical rows of 5 two pin jumpers. To select the "X" from the above table, slide the black connector over the two pins.

JUMPER CONFIGURATION:

	Channel 1	Channel 2
A	I I	I I
B	I I	I I
C	I I	I I
D	I I	I I
E	I I	I I

For example, if channel 1 is to be set for 0-25V, and channel 2 for 50 mV Shunt, the following jumpers should be set.

	Channel 1	Channel 2
A	I I	■
B	■	I I
C	I I	I I
D	I I	■
E	I I	I I

For channel 1, the brass pins on B will be connected, and for channel 2, the brass pins on A and D will be connected. The connector can be placed over the pins using your fingers or a pair of needle nose pliers.

Step 3:   Reinstall Red cover to the module.

Note: If you are monitoring 4-20mA inputs, set the module to the $0 - 2.5$ V range, and install a 100 ohm resister across the positive and negative terminals of the channels. The terminal strip is located on the bottom of the board. Channel 1 has red (+) and blue (-) wires, channel 2 has yellow (+) and orange (-) wires.

3.4   Power Connection

SHOCK HAZARD!! WARNING!!

PRIOR TO WIRING, TURN OFF POWER SOURCE. DISABLE POWER AT THE SOURCE USING A BREAKER OR OTHER MEANS.

Step 1: Plug battery into socket on right side of the module. Match the "D" shapes of the connector, and clip together. The socket is configured so that it may be plugged in only one way.

Step 2: The module is pre-wired for your convenience. Thread wires through the access holes on the bottom of the NEMA 4X box and/or any conduit that will be used. Connect the black wire to AC power line voltage (120V), white wire to AC power neutral, and green wire to ground at the power source. If you should need to use your own wiring, simply remove the red cover, remove the supplied wires from the terminal block, and connect the new wiring to the labeled ground, neutral, and line.

Step 3: After all connections are secure, turn on power source.

Step 4: Look to the lower left corner of the module at the two green LED lights. The light on the right is on when power is coming to the unit. If this light is not illuminated, please check the power source.

Step 5: Within two minutes of having the power supplied, the light on the left will begin to flash. The flashing light indicates that the software on the module is operating properly. If this light does not begin to flash, please contact customer service.
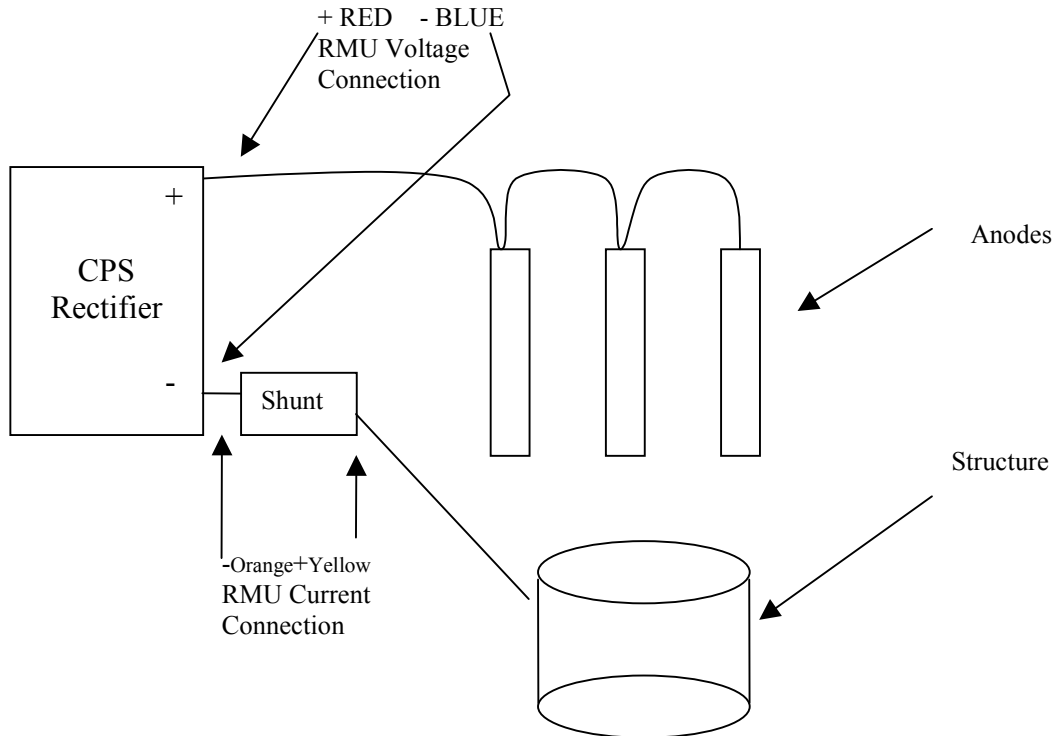
3.5   Input Channel Connection

Step 1: Turn off 115V power to the CORD-Pager.

Step 2: The module is pre-wired for your convenience. Thread wires through the access holes on the bottom of the NEMA 4X box and/or any conduit that will be used. Connect the red wire to the positive terminal for channel 1, the blue wire to the negative terminal for channel 1, the yellow wire to the positive terminal for channel 2, and the orange wire to the negative terminal for channel 2. The terminals are located on the piece of equipment you are monitoring. If you should need to use your own wiring, simply remove the red cover, remove the supplied wires from the terminal block, and connect the new wiring to the labeled positive and negative terminal block for channel 1 and 2.

	Positive	Negative
Channel 1	RED	BLUE
Channel 2	YELLOW	ORANGE

For example, if a Cathodic Protection Rectifier is to monitored, the wiring is as follows:

Step 3: Turn Power back on.

+ RED   - BLUE
RMU Voltage
Connection

CPS
Rectifier

+

-

Shunt

Anodes

Structure

-Orange+Yellow
RMU Current
Connection

3.6   CORD-Pager Antenna Hook Up

The CORD-Pager antenna is a black round disk about 4" across with a coaxial cable coming out of the center of the bottom side. An adhesive is covered by wax paper on the bottom side. DO NOT REMOVE THIS WAX PAPER UNTIL LOOP BACK TESTS HAVE BEEN COMPLETED! (see step 12) This disk MUST be placed on a metallic surface to function properly. An "L" shaped bracket is supplied with the CORD-Pager to serve this purpose. If the CORD-Pager is being installed inside a metallic enclosure with a flat top, for example a CP rectifier, a hole may be drilled into the top of the enclosure, and the cable placed through the hole into the enclosure. The antennae should be placed in a location that is unobstructed by metal sheeting, or other materials that may interfere with signal transmission and reception.

Step 1: Place the cable through the center hole in the mounting bracket, and pull through until the wax paper is in contact with the mounting bracket.
Step 2: Connect the cable to the module. The connection point is at the top of the module on the right hand side.
Step 3: Use the serial cable to connect your laptop to the module. The serial port is located on the right side of the module, and is a standard 9 pin D sub connector.

Step 4: Open the program WinC2XT.EXE Program. (This is accomplished through Microsoft Explorer and selecting A: then double clicking on WinC2XT.EXE)
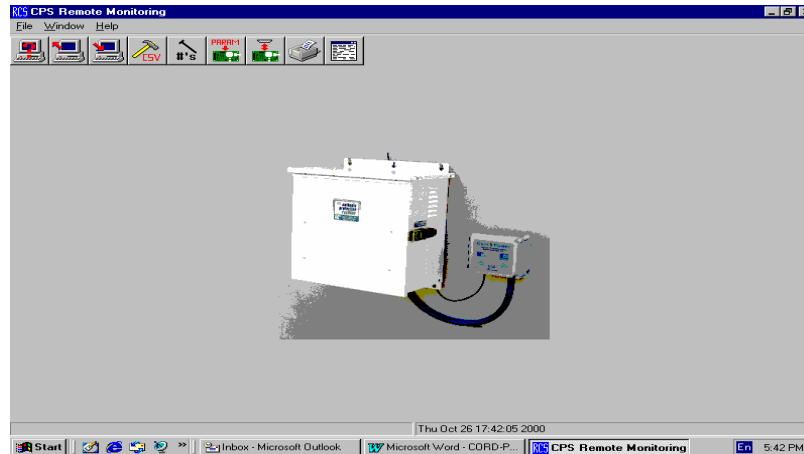
Figure 3.1 will appear on your screen. Figure 3.1 – Initial WinC2XT.EXE Screen

Step 5: Mouse click on the 7th button from the left, (or 3rd button from the right). After a few moments, the serial port viewer program (TTY.EXE) will open.
Step 6: Go to settings, and select the com port connected to your cable, this is usually com 1. (See Figure 3.2) . The baud rate of 19.2k, data bits 8, parity even, and stop bits 1 are preset, and should not be changed.
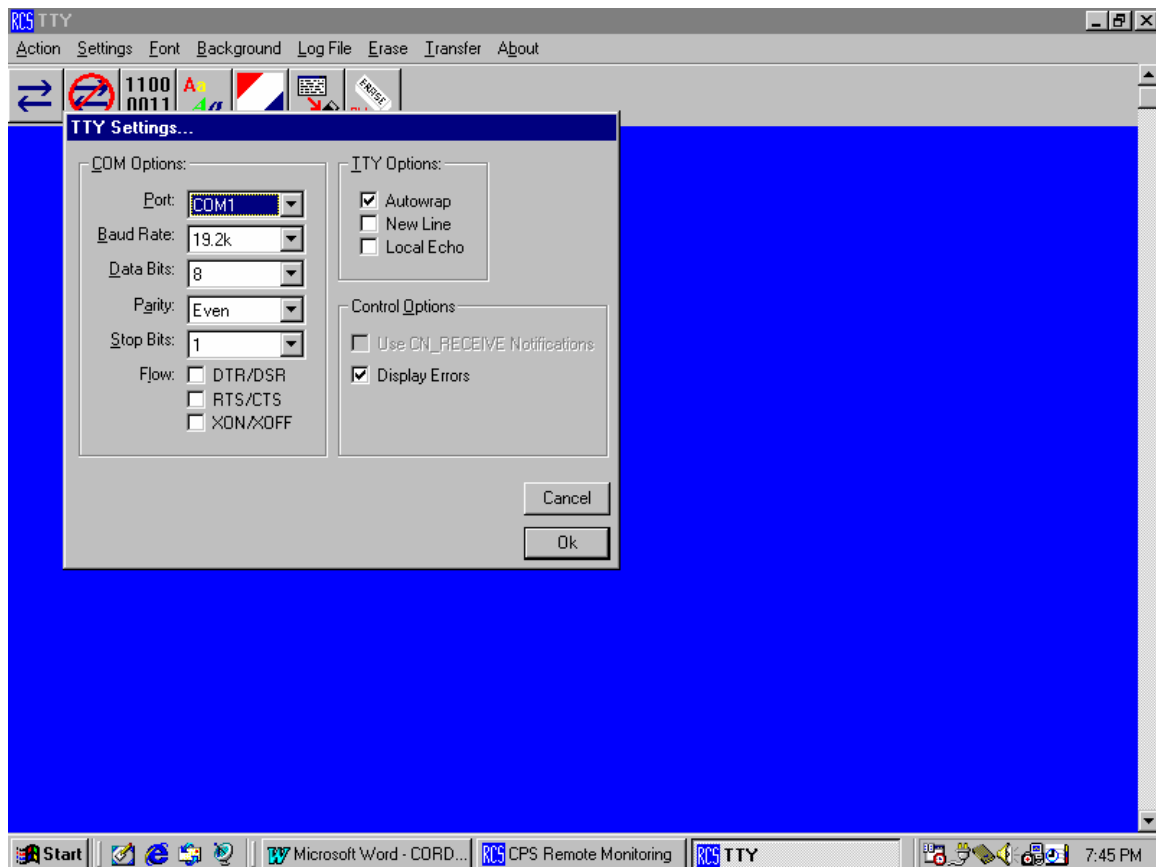

Figure 3.2 – Settings Menu in Serial Communication Program

Step 7: Click OK, and then click on the left button with arrows pointing in each direction. This opens the serial port on the computer to allow communication with the CORD-Pager.

Step 8: Press the space bar on the computer to access the menu. The only two menu items that should be used are:

♦ a: Perform Loop Back Test This PIN

♦ 6: Perform a Reading (see parameter table set up)

♦ d: Power down unit (see parameter table set up)

Step 9: Type the letter a, and press the return key. The screen will ask for a message length, enter 25, and press enter. The screen will appear as in figure 3.3 (see next page)

Step 10: When the CORD-Pager communicates with the paging network, the following sequence of numbers will appear after a minute or two, 01 02 03 04 05 06 07 08 09 0A 0B 0C 0D 0E 0F 10 11 12 13 14 15 16 17 18 19. If a transmission fails to be received, move the antennae to a new location, and perform another loop back test. Should several try's prove to be unsuccessful, please contact customer service.

Step 11: After the successful transmission, disconnect the cable from the CORD-Pager. Remove the mounting bracket if it will not be used. Thread cable through the hole in the enclosure, any conduit, and the access hole on the NEMA 4X box. Reconnect cable to CORD-Pager.

Step 12: Make sure the area under the wax paper is clean, remove wax paper to expose adhesive, and press down onto metallic surface. If the mounting plate is not used, a small amount of caulking or other sealant may be applied inside the enclosure as an extra precaution against water leakage.
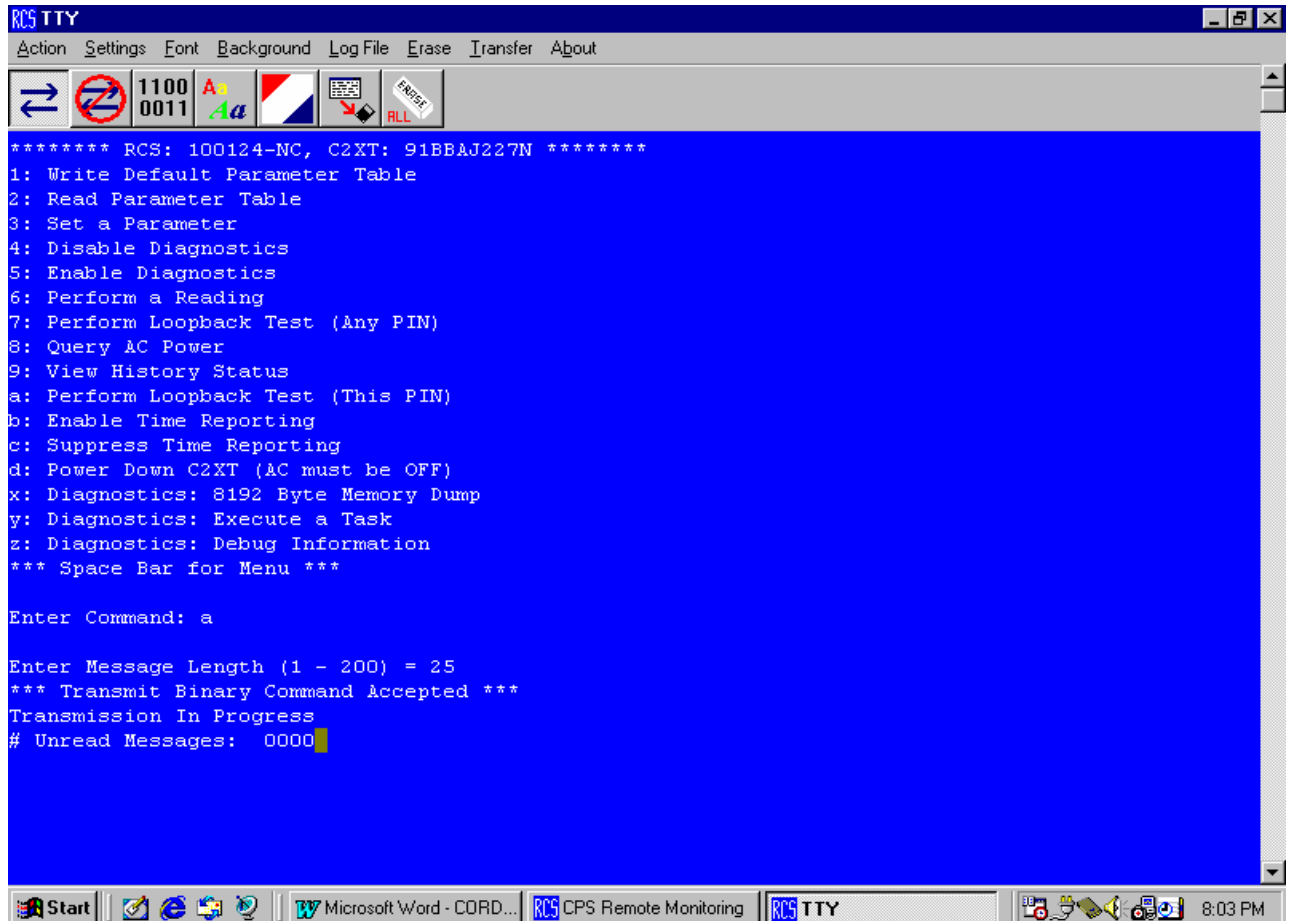
Figure 3.3 – CORD-Pager TTY Program – Menu and Loop Back command

3.7   Parameter Table Set Up

Once the CORD-Pager hardware is in place and hooked up, the last step is to set up the Parameter Table. The Parameter table is used to set the frequency of scheduled readings, alarm limits, when alarm notifications occur, and let the CORD-Pager know how the Jumpers are set.

Step 1: To access the Parameter Table, exit the Serial Interface program (TTY) by going to the action button in the upper left hand corner, and select exit.
Step 2: Open the WinC2XT.exe program. The program may already be open.
Step 3: Make sure the program is set for proper communication by clicking on the first button on the left side to get the following screen.

Make sure the proper COM port is selected. Please note, that the TTY program must be closed for the serial port to be available for this program to run. The internet functionality is not supported by the CORD-Pager, and should be ignored.

Step 4: Select the Sixth Button from the right, labeled PARAM. The following screen will appear:

After all items in this dialog are set as desired (as described below), it can be sent to the C2XT via the serial port by clicking the "Download Parameter Table" button. Since not all parameters generally need to be changed, it is usually easier to press the "Get Parameter Table", and then change as necessary. All information in this dialog can be saved to an "RMU" file by clicking the "Save As" button.

Again, it is recommended that you select "Get Parameter Table" first, and change data as needed.

Following is a summary of how to set the parameter table:
♦ Pin Number: This is the 7 digit number listed on the label.
♦ Mail Box number: This shall always be set to 4160649 as of 10/01/00.
♦ Channel Configuration: Use the pull down menu to select how channel 1 and 2 are set.
♦ Channel Full Scale Volts: Enter the number that corresponds to the jumper settings. For example, if channel 1 jumper setting is A only, full scale is 2.5 V. When a shunt is used, the amperage shall be entered for channel 2. For example, when a 50mV, 60 A shunt is used, 60 is entered as full scale.
♦ Time Zone: The Skytel network operates in Greenwich Mean Time (GMT) format. In order to display local time, the correct time zone has to be configured. The supported time zones (Standard and Daylight Savings Time) are listed below for reference:

$$
\begin{aligned}
EDST &= -4 \\
EDT &= -5 \\
CDST &= -5 \\
CST &= -6 \\
MDST &= -6 \\
MST &= -7 \\
PDST &= -7 \\
PST &= -8
\end{aligned}
$$

Note: When a time zone is changed in the parameter table, the CORD-PAGER must be re-booted in order for the change to take effect.
♦ Leave Sleep Mode, Re-Boot before XMIT, and Auto Reboot, **DISABLED**.
♦ Scheduled Read and Transmission Time: This area sets the frequency and time of scheduled transmissions. Readings may be scheduled to occur hourly, daily, weekly, or monthly. Select the settings according to the table below to meet your requirements. Please remember the frequency of transmission will effect your communication charges. The hour and minute columns are used to select the time the transmission will be sent. For example, when hour is set at 2, and minutes is set at 2, the transmission will occur at 2:02 am.

Settings For:	Monthly	Weekly	Daily	Hourly
Day Of Month	Set Day (0-28)	Disabled	Disabled	Disabled
Day Of Week	Disabled	Set Sunday - Saturday	Disabled	Disabled
Daily	Disabled	Disabled	Enabled	Disabled
Hour	Set Hour (0-23)	Set Hour (0-23)	Set Hour (0-23)	Disabled
Minutes	Set Minute (0-59)	Set Minute (0-59)	Set Minute (0-59)	Set Minute (0-59)

♦ Alarm Parameters: Set the MODE to either IGNORE to have the alarm function disabled, or NOW, to have the alarms transmit when detected. Please note, the CORD-Pager has a 15 minute measurement cycle. Any transient alarm conditions that occur and are corrected in

between the measurements will NOT be detected. For Scheduled alarm transmissions, set Mode to Scheduled, and set time in same manner as above.

♦ Alarm Limits: Enter the numeric value of when you shall be notified of alarms for low and high conditions.   A notification will also be sent when alarm conditions are cleared.

♦ AC Power Alarm: In addition to detecting high and low alarms on each channel, interruptions and return of AC power to the CORD-Pager can also be detected.   Alarm messages will be sent when the AC power is applied or disconnected. When the AC power is removed, the CORD-PAGER starts an internal timer that will transmit the Power OFF message after 2 hours of continuous AC power interruption. If the power is resumed during the 2 hour counting process, the timer is reset and a subsequent power interruption will not cause a Power OFF message for another 2 hours.   In other words the power must be OFF continuously with no intermittent conditions. After the Power OFF message is reported to the network, the battery will be electrically disconnected. Just before this happens, the parameter table is written to non-volatile memory. In this mode, a 1300 mA-Hr battery will last several months. Reapplication of AC power will cause the CORD-Pager to start up, and if enabled, an alarm will be sent.

♦ Once the parameter table has the correct information, click on the "Download Parameter Table" at the bottom of the screen.

♦ Next click on the serial viewer program and set up the COM port as described in the Antennae Set Up section.

♦ Turn off the AC power to the CORD-Pager, press the space bar on the computer, type the letter "d", and <enter>. This will store the parameter table just downloaded into Non-Volatile memory.

♦ Re-apply power to the CORD-Pager.

The last step before leaving the site is to verify that the CORD-pager is measuring the values correctly. Type the number 6 and press <enter>. The computer screen will be updated with the measurements next to the word user. The measurements should be in mV and/or mA. If the reading is not correct (check with a multi-meter), verify that the Jumpers and Parameter table are set correctly, and that the polarity is correct.

3.7 Using NEMA-4X Enclosure or Module

If the NEMA-4X enclosure is used, velcro battery to door and close door. If the module is used, attach module and battery with velcro.

Chapter 4 - Accessing Data Via The Web

4.0 Summary

This chapter describes operation of the CORD-Pager Web Server and how to access data over the web. At the current time, the site will allow you to view data from selected RMU locations, download CSV files, and perform demand readings. User names and passwords are required to access RMU data. You can access the site at the following URL:

http://www.cord-pager.com

4.1 Accessing the WEB Site, a user's point of view

The first page of the site, accessible to any user, is shown below. You don't need a user name or password to see this page.

4.2 Unauthorized Access

If a mistake is made entering a user name or password, the following page will be presented. Usernames and passwords are case sensitive. You can't go any further into the site until you get the username and password correct. User's who forget their passwords should call customer service.
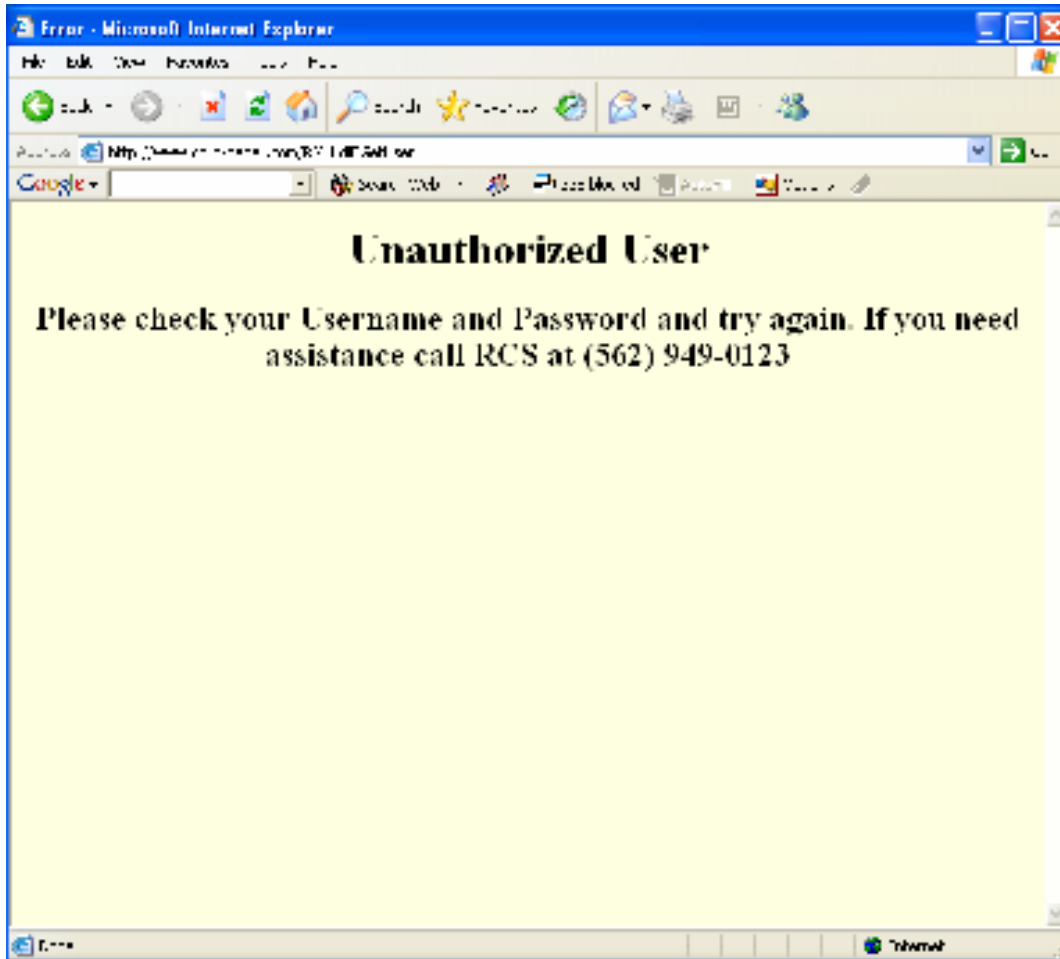
4.3 Validated Access

When the correct user name and password are submitted, you are presented with the following page. This page allows the user to select and view all CORD-Pager locations where the user is authorized.

When RMU's in the field are reporting frequently or have been running for a long time, there is a substantial amount of data collected which takes a long time to download from the server. You can elect to view only a few of the most recent readings by typing a number in the "Number of Readings to Display" edit control.
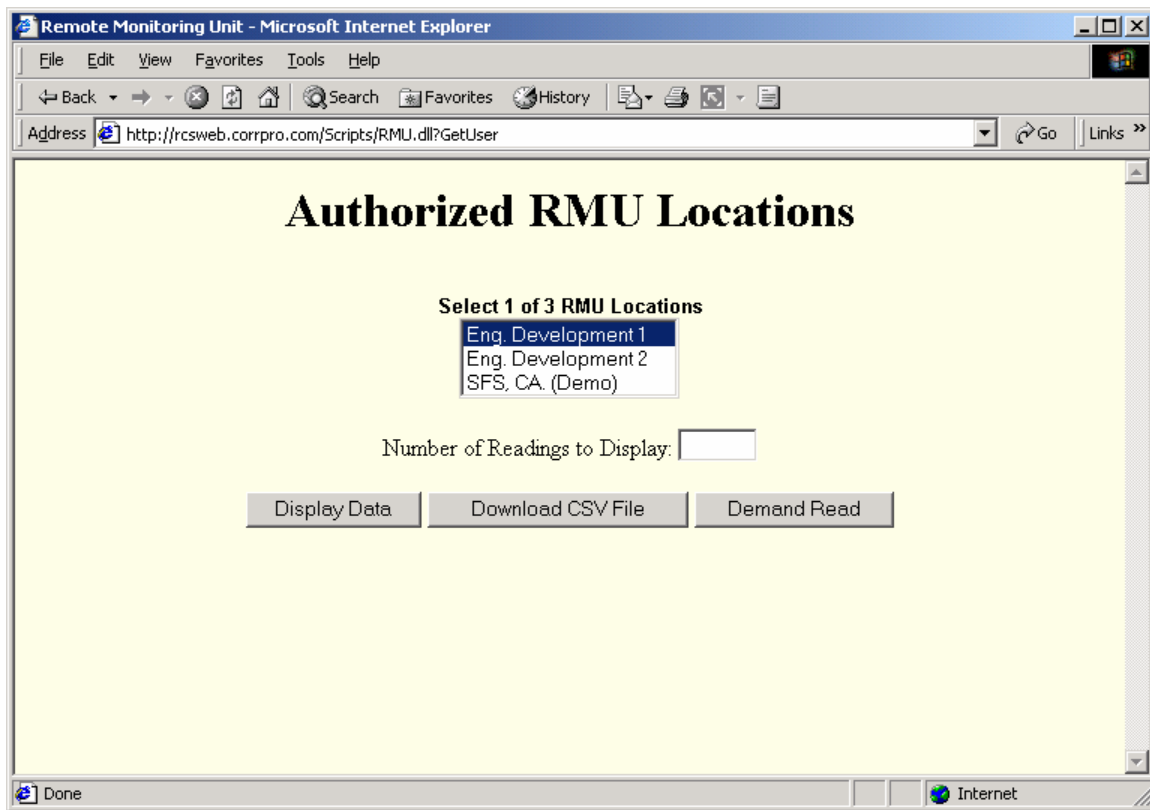
The three push buttons allow one to perform various functions. The "Display Data" button sends a command to the server to retrieve previously collected data from the server. This data is presented in a most recent first format, the number of readings possibly limited by the user, as discussed earlier. A screen shot of this page is shown below.

When the "Download CSV File" button is pressed, the server creates a Comma Separated Variable (CSV) file from data stored on the server's hard drive. These CSV files contain all available readings and are not affected by the "Number of Readings to Display".

When the "Demand Read" button is pressed, the server formats a message and delivers it to Skytel. When Skytel transmits this message, using wireless technology, the receiving CORD-Pager will immediately take a reading and send the results back to the Skytel. The server polls the Skytel mailbox for messages once per minute and if it finds anything, it appends the data to a file that holds all readings for that particular CORD-Pager PIN number. This process typically takes a couple of minutes. When the response from the CORD-Pager is received and processed, the message type is marked as "DEMAND" to differentiate it from the periodic "SCHEDULED" readings.

4.4 CORD-Pager Data Presentation

The data is presented in a most recent first format. A header is presented above the data with the following information. Each line presented in the header is described below.

1. The location of the CORD-Pager. This can be any text, defined when the user account is setup.
2. The PIN Number of the CORD-Pager.
3. The date and time that the data was retrieved.
4. The number of transmissions the RMU has performed for the current billing period.
5. The number of readings that are displayed followed by the number of readings that are available.

A typical screen shot of CORD-Pager data is presented below.

Chapter 5 - Maintenance

5.0   Battery Replacement

It is recommended that the CORD-Pager battery be replaced once every three years.

5.1   Communication Charges

Corrpro will invoice for the communications charges per the sales agreement.

Appendix A – CORD-Pager Installation Checklist

The steps for installing the CORD-Pager remote monitoring unit are summarized in this checklist.

1.0   Site Assessment/Preparation

    1.1 Verify coverage on Sky Tel web site (http://www.skytel.com)

    1.2 AC Power Availability

    1.3 Rectifier Shunt – Install additional shunt on negative rectifier output leg if existing rectifier shunt is installed positive output leg.

2.0   Install CORD-Pager RMU

    2.1 <u>External Mounting</u>

        2.1.2 Mount NEMA-4X Enclosure to Wall
Install AC Conduit (Use flex conduit or requirements of local regulations). Typically a single flexible conduit will run from the rectifier to the CORD-Pager. This conduit will contain the AC power cables and the signal wires for rectifier volts and amps.

    2.2 <u>Internal Mounting</u>

        2.2.1 Select site for RMU

        2.2.2 Install RMU Velcro

        2.2.3 Install Battery Velcro

3.0   Set Input Range Select Jumpers

    3.1 Set Channel 1 Input Range Select Jumper

    3.2 Set Channel 2 Input Range Select Jumpers

4.0   Connect Power

    4.1 Turn Off AC Power at Breaker

    4.2 Connect AC Power

    4.3 Connect Battery

5.0   Connect CORD-Pager Channel 1 & Channel 2

    5.1 Channel 1 is typically rectifier volts

    5.2 Connect CH1+ terminal to rectifier + output lug

    5.3 Connect CH1- terminal to rectifier – output lug

    5.4 Channel 2 is typically rectifier amps

    5.5 Connect CH2+ terminal to rectifier shunt (side connected to the structure)

    5.6 Connect CH2- terminal to rectifier shunt (side connected to rectifier negative terminal)

6.0   CORD-Pager Antenna Installation

    6.1 Temporarily place antenna

    6.2 Connect antenna to RMU

    6.3 Perform loop back test

    6.4 Permanently mount antenna

7.0   Set up CORD-Pager Parameter Table

8.0   Test and Verify CORD-Pager Operation

    8.1 Power Up CORD-Pager

Rohrback Cosasco Systems, Inc.
11841 East Smith Avenue
Santa Fe Springs, California 90670-6201
(562) 949-0123 FAX (562) 949-3065
www.rohrbackcosasco.com

Certificate No. FM 10694
EN 29001 / ISO 9001 / BS 5750
Approved by BSI

Appendix B – CORD-Pager Password Form

Fax to: RCS Customer Service @ (562) 949-3065

From: Name:
Phone #:
e-mail:

Dear Customer Service:

For CORD-Pager Pin # _____, please set up the following web accounts.

Username:
(case sensitive)

Password:
(case sensitive)

e-mail Address for Alarm: _____
_____
_____

Description of Location: _____

Please use multiple sheets for multiple accounts.