

# HOWTO

## RDA Basics

0.0	DESCRIPTION.....	1
1.0	PREREQUISITES .....	1
2.0	INSTALLING RDA SOFTWARE.....	1
3.0	START THE RDA .....	3
4.0	STOP THE RDA.....	7

### 0.0 DESCRIPTION

- 0.1 These instructions will tell the user how to install, start and stop the WSR-88D Radar Data Acquisition (RDA) software on using a PC.

### 1.0 PREREQUISITES

- 1.1 The user must have access to a Linux PC set up according to ROC Software Engineering specifications and connected to the ROC Linux network.
- 1.2 ROC Linux PCs have an *ordal* account set up for installing a single version of the RDA software.
- 1.3 These instructions require two terminal windows to be open at the same time.  
 “T1 → ” will be used to indicate actions to be performed in terminal window #1.  
 “T2 → ” will be used to indicate actions to be performed in terminal window #2.

### 2.0 INSTALLING RDA SOFTWARE

- 2.1 Open a terminal window and lg in to the *ordal* account.

```
[mweeks@lnxeng1 ~]$ ssh -XY localhost -l ordal [ENTER]
** warning *** warning *** warning *** warning *** warning *** warning *
```

---

This is a Department of Commerce computer system. This computer system, including all related equipment, networks, and network devices (specifically including internet access), are provided only for authorized US Government use. DoC computer systems may be monitored for all lawful purposes, including to ensure their use is authorized,

for management of the system, to facilitate protection against unauthorized access, and to verify security procedures, survivability, and operational security. Monitoring includes active attacks by authorized DoC entities to test or verify the security of this system. During monitoring, information may be examined, recorded, copied, and used for authorized purposes. All information, including personal information, placed on or sent over this system, may be monitored.

Use of this DoC computer system, authorized or unauthorized, constitutes consent to monitoring of this system. Unauthorized use may subject you to criminal prosecution. Evidence of unauthorized use collected during monitoring may be used for administrative, criminal, or other adverse action. Use of this system constitutes consent to monitoring for these purposes.

---

```
** warning *** warning *** warning *** warning *** warning *** warning *
```

```
ordal@localhost's password: PASSWORD [ENTER]
Last login: Wed Oct  7 10:01:12 2009 from localhost.localdomain
ordal@/export/home/ordal$
```

## 2.2 Install the ORDA software using the installation script, **update**. Select the build to install using the **-v** option or use the **-h** option for help.

```
ordal@/export/home/ordal$ ./update -v 11 [ENTER]
```

```
=====
                UPDATING RDA BUILD 11.0
=====
Copying CM nightly build 11 code ...
Finished copying CM nightly build 11 code ...
Setting up configuration and simulators ...
Finished build update for RDA build 11!
=====

Please logout and login before running system

=====
ordal@/export/home/ordal$
```

## 2.3 Log out of the *ordal* account, then log back in. This will establish the proper run-time environment.

```
ordal@/export/home/ordal$ exit [ENTER]
logout
Connection to localhost closed.
[mweeks@lnxeng1 ~]$ ssh -XY localhost -l ordal [ENTER]
** warning *** warning *** warning *** warning *** warning *** warning *
```

---

This is a Department of Commerce computer system. This computer system, including all related equipment, networks, and network devices (specifically including internet access), are provided only for authorized US Government use. DoC computer systems may be monitored for all lawful purposes, including to ensure their use is authorized, for management of the system, to facilitate protection against unauthorized access, and to verify security procedures, survivability, and operational security. Monitoring includes active attacks by authorized DoC entities to test or verify the security of this system. During monitoring, information may be examined, recorded, copied, and used for authorized purposes. All information, including personal information, placed on or sent over this system, may be monitored.

Use of this DoC computer system, authorized or unauthorized, constitutes consent to monitoring of this system. Unauthorized use may

subject you to criminal prosecution. Evidence of unauthorized use collected during monitoring may be used for administrative, criminal, or other adverse action. Use of this system constitutes consent to monitoring for these purposes.

---

```
** warning *** warning *** warning *** warning *** warning *** warning *
```

```
ordal@localhost's password: PASSWORD [ENTER]
Last login: Wed Oct  7 10:03:47 2009 from localhost.localdomain
ordal@/export/home/ordal$
```

## 3.0 START THE RDA

### 3.1 T1 & T2 → Open two terminal windows and log in to the *ordal* account in both windows.

```
[mweeks@lnxeng1 ~]$ ssh -XY localhost -l ordal [ENTER]
** warning *** warning *** warning *** warning *** warning *** warning *
```

---

This is a Department of Commerce computer system. This computer system, including all related equipment, networks, and network devices (specifically including internet access), are provided only for authorized US Government use. DoC computer systems may be monitored for all lawful purposes, including to ensure their use is authorized, for management of the system, to facilitate protection against unauthorized access, and to verify security procedures, survivability, and operational security. Monitoring includes active attacks by authorized DoC entities to test or verify the security of this system. During monitoring, information may be examined, recorded, copied, and used for authorized purposes. All information, including personal information, placed on or sent over this system, may be monitored.

Use of this DoC computer system, authorized or unauthorized, constitutes consent to monitoring of this system. Unauthorized use may subject you to criminal prosecution. Evidence of unauthorized use collected during monitoring may be used for administrative, criminal, or other adverse action. Use of this system constitutes consent to monitoring for these purposes.

---

```
** warning *** warning *** warning *** warning *** warning *** warning *
```

```
ordal@localhost's password: PASSWORD [ENTER]
Last login: Wed Oct  7 10:03:47 2009 from localhost.localdomain
ordal@/export/home/ordal$
```

### 3.2 T1 → Start the RDA simulator by executing the **start\_sim** command. NOTE: The RDA simulator will continue to run and display status messages until the user hits [Ctrl]+[C] to stop the simulator.

```
ordal@/export/home/ordal$ ./start_sim [ENTER]
      SIGMET Incorporated, USA
RCP8 Embedded Radar Control Processor V11.1 IRIS-8.11.1
-----
Initial startup at: 10:09:42  7 OCT 2009 CDT
Loading setup files...
WARNING: Attempting to run without RDA kernel module
07-OCT 10:09:42.755 RCP8-Main: ENOENT; No such file or directory </dev/rda/slot-0>
Attaching to SIGMET PCI hardware...
07-OCT 10:09:42.757 RCP8-Main: ENOENT; No such file or directory </dev/rda/io62-0>
Configuring Softplane...
WARNING: Running without 'root' privileges
Shared library build dates:
```

```

RCP8/Core: Thu Mar 22 10:12:04 EST 2007
RCP8/Open: Thu Jun 19 15:33:23 CDT 2008
RCP8/Site: Thu Jun 19 15:33:18 CDT 2008
Parsing Boolean equations...
Update rates - Servos:50Hz Logic:50Hz

```

```

*****
WARNING: Configuration/Startup errors were detected
*****
Initializations complete - The RCP8 is now operational.

```

RCP>

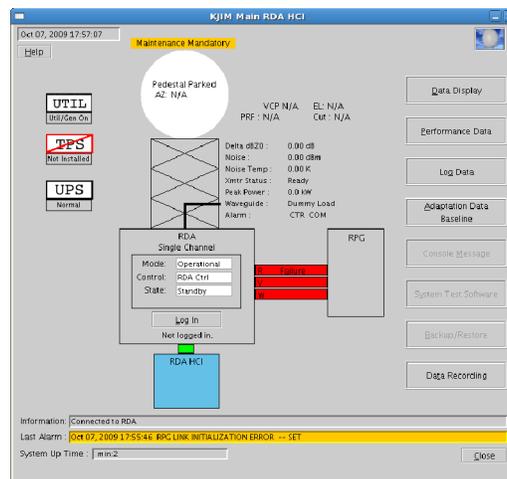
### 3.3 T2 → Start the RDA software with the **rdastart** command. When the command is complete, the *Main RDA HCI* will open.

```

ordal@/export/home/ordal$ rdastart [ENTER]
running rssid...
10/07/09 15:10:22 Local address to use is 129.15.58.110
10/07/09 15:10:22 lnxeng1 is selected as local host
10/07/09 15:10:22 Client: lnxeng1 (IP 129.15.58.110)
10/07/09 15:10:22 22 user function(s) defined
10/07/09 15:10:22 Max number of fds set to 1024
10/07/09 15:10:22 The UNIX socket is
/export/home/ordal/orda/.rssd/.rmt.12670.lnxeng1.eng.osf.noaa.gov
10/07/09 15:10:22 Connecting to other server for AN ...
10/07/09 15:10:22 Max number of children set to 64
10/07/09 15:10:22 The port number is 12670
10/07/09 15:10:22 Going to background
You (ordal) are not allowed to use this program (crontab)
See crontab(1) for more information
You (ordal) are not allowed to use this program (crontab)
See crontab(1) for more information
You (ordal) are not allowed to use this program (crontab)
See crontab(1) for more information
Making iris_signal230.dat link for sig_signals
rm: cannot remove `/import/linux/sigmet-8.11.1.1/bin/nls/C//iris_signal230.cat': No such
file or directory
ln: creating symbolic link `/import/linux/sigmet-8.11.1.1/bin/nls/C//iris_signal230.cat'
to `/export/home/ordal/orda/config/iris_signal230.cat': Read-only file system
[1] 2749
ordal@/export/home/ordal$ mv: cannot stat
`/export/home/ordal/orda/config/suis_access.dat.back': No such file or directory
Redirecting output on a linux host...

ordal@/export/home/ordal$

```

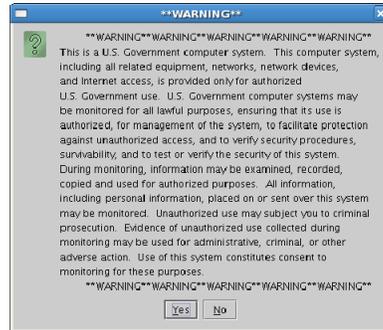


**NOTE: T1** → This window will begin displaying a series of Self Test status messages.

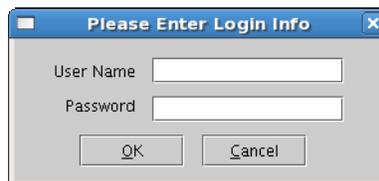
```

07-OCT 10:10:25.255 WSR-88D/DCU: ST1 packet delay: 42, 2
07-OCT 10:10:25.749 WSR-88D/DCU: ST1 packet delay: 42, 2
07-OCT 10:10:26.247 WSR-88D/DCU: ST1 packet delay: 48, 2
07-OCT 10:10:26.741 WSR-88D/DCU: ST1 packet delay: 43, 2
07-OCT 10:10:27.283 WSR-88D/DCU: ST1 packet delay: 48, 2
07-OCT 10:10:25.255 WSR-88D/DCU: ST1 packet delay: 42, 2
07-OCT 10:10:25.749 WSR-88D/DCU: ST1 packet delay: 42, 2
07-OCT 10:10:26.247 WSR-88D/DCU: ST1 packet delay: 48, 2
07-OCT 10:10:26.741 WSR-88D/DCU: ST1 packet delay: 43, 2
07-OCT 10:10:27.283 WSR-88D/DCU: ST1 packet delay: 48, 2
07-OCT 10:10:27.773 WSR-88D/DCU: ST1 packet delay: 41, 2
07-OCT 10:10:28.268 WSR-88D/DCU: ST1 packet delay: 41, 2
07-OCT 10:10:28.810 WSR-88D/DCU: ST1 packet delay: 45, 2
07-OCT 10:10:29.304 WSR-88D/DCU: ST1 packet delay: 45, 2
07-OCT 10:10:29.845 WSR-88D/DCU: ST1 packet delay: 45, 2
07-OCT 10:10:30.339 WSR-88D/DCU: ST1 packet delay: 45, 2
07-OCT 10:10:30.837 WSR-88D/DCU: ST1 packet delay: 41, 2
07-OCT 10:10:31.373 WSR-88D/DCU: ST1 packet delay: 45, 2
07-OCT 10:10:31.871 WSR-88D/DCU: ST1 packet delay: 45, 2
07-OCT 10:10:32.363 WSR-88D/DCU: ST1 packet delay: 45, 2
07-OCT 10:10:32.861 WSR-88D/DCU: ST1 packet delay: 48, 2
07-OCT 10:10:33.353 WSR-88D/DCU: ST1 packet delay: 42, 2
07-OCT 10:10:33.850 WSR-88D/DCU: ST1 packet delay: 42, 2
07-OCT 10:10:34.345 WSR-88D/DCU: ST1 packet delay: 42, 2
07-OCT 10:10:34.841 WSR-88D/DCU: ST1 packet delay: 41, 2
07-OCT 10:10:35.380 WSR-88D/DCU: ST1 packet delay: 42, 2
07-OCT 10:10:35.874 WSR-88D/DCU: ST1 packet delay: 42, 2
07-OCT 10:10:36.372 WSR-88D/DCU: ST1 packet delay: 45, 2
07-OCT 10:10:36.863 WSR-88D/DCU: ST1 packet delay: 45, 2
07-OCT 10:10:37.404 WSR-88D/DCU: ST1 packet delay: 45, 2
07-OCT 10:10:37.902 WSR-88D/DCU: ST1 packet delay: 45, 2
07-OCT 10:10:38.393 WSR-88D/DCU: ST1 packet delay: 45, 2
07-OCT 10:10:38.889 WSR-88D/DCU: ST1 packet delay: 46, 2
07-OCT 10:10:46.726 WSR-88D/DCU: ST2 packet delay: 543, 2
    
```

3.4 Press the **Log In** button of the *Main RDA HCI* window. After a few seconds, the **\*\*WARNING\*\*** window will open.



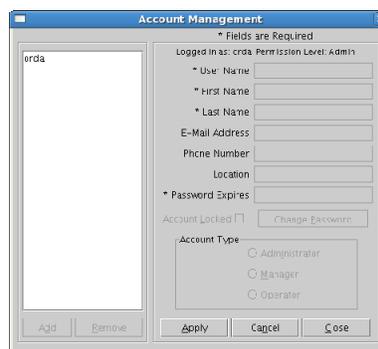
3.5 In the **\*\*WARNING\*\*** window, press **Yes**. After a few seconds, the *Please Enter Login Info* window will open.



- 3.6 Enter the User Name **orda** and password **xxxxxx** and press the **OK** button. When you press **OK**, you will be forced to change your password via the *Force Password Change* window.



- 3.7 In the *Force Password Change* window, press the **Yes** button. The *Account Management* window will open.



- 3.8 In the *Account Management* window, select the **orda** user and press the **Change Password** button to open the *Change Password* window.



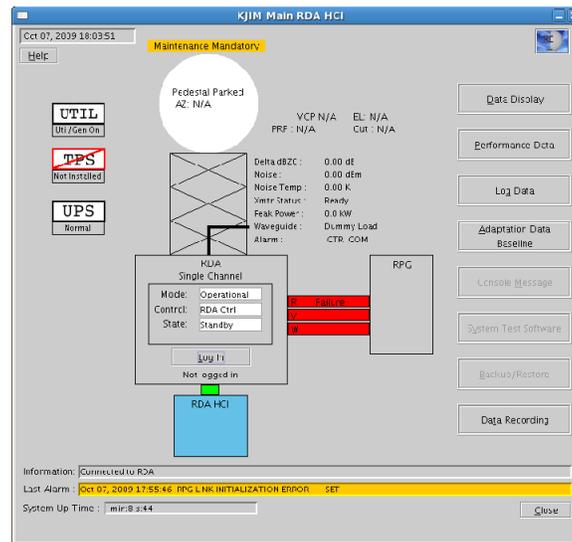
- 3.9 In the *Change Password* window, enter the old password in the **Verify Current Password** field. Enter the new password in the **New Password** and **Confirm New Password** fields. The new password must confirm to the strict RDA password requirements. Press the **OK** button and you will be asked to confirm the password change. **NOTE:** If you forget this password, you must re-install the RDA software. There is no password recovery procedure.



- 3.10 In the *Password Change Confirm* window, press the **Yes** button to return to the *Account Management* window. In the *Account Management* window, press **Apply** to open the *Confirm Apply* window.



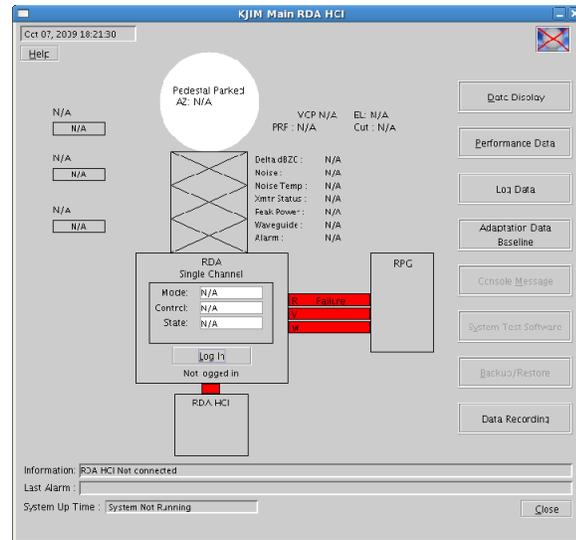
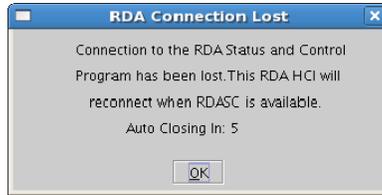
- 3.11 Press the **Yes** button to return to the *Account Management* window. Press the **Close** button to return to the *Main RDA HCI*.



## 4.0 STOP THE RDA

- 4.1 **T2** → Stop the RDA by executing the **rdastop** command. This will display an *RDA Connection Lost* window and update the *Main RDA HCI* window as shown. **NOTE:** Users may see messages about not being allowed to use crontab. This is normal.

```
ordal@/export/home/ordal$ rdastop [ENTER]
You (ordal) are not allowed to use this program (crontab)
See crontab(1) for more information
rtd_v1_xmt: no process killed
ordal@/export/home/ordal$
```



4.2 Close the Main RDA HCI by clicking the [X] in the upper right corner of the window, or wait for it to close automatically.

4.3 **T1** → Stop the RDA Simulator by pressing [Ctrl]+[C] in that terminal window.

.  
.  
.

```
07-OCT 10:10:38.393 WSR-88D/DCU: ST1 packet delay: 45, 2
07-OCT 10:10:38.889 WSR-88D/DCU: ST1 packet delay: 46, 2
07-OCT 10:10:46.726 WSR-88D/DCU: ST2 packet delay: 543, 2
```

**[Ctrl]+[C]**

```
RCP8-Main: Requesting exit due to signal 2
ordal@/export/home/ordal$
```

4.4 **T1 & T2** → You may now close both terminal windows.