

## IRIS 8.02 Release Notes

These notes cover changes made in IRIS since release 8.01 of 12 May 2003. If you are upgrading from an earlier release, please read those notes also.

### Important Upgrade Notes

1. We have added the new RCP8 manual online, and removed the old RxNet7 manual. To support the new **RCP8** Manual online, you will need to make changes to your `${IRIS_CONFIG}` profile file. Remove the `IRIS_MANUALS_RXNET7` line, and add a line for the RCP8 which reads:

```
export IRIS_MANUALS_RCP8="${IRIS_ROOT}/manuals/rcp8_ug.ilcab/rcp8updf/rcp8/"
```

Place this just after the `IRIS_MANUALS_RVP8` line. Also add a new line defining the extras directory such as:

```
export IRIS_MANUALS_EXTRA="${IRIS_ROOT}/config/extraspdf/"
```

The extras directory is intended to include customer written documents. Note that IRIS 8.01 had a different definition for this variable, you will need to change this if you are upgrading from 8.01

### Data Format Changes

1. The real-time display V1 format has changed, so it will not work between versions 8.01 and 8.02. That means you transmitter and receiver must be of similar version.

### Bug Repairs

1. Fixed a bug in the Task Configuration Menu. The File->Open list would not pop-up if the menu was not widened.
2. Repaired bug in which PRFs less than 92 would yield an invalid PRT.
3. In the **overlay** utility: When displaying Lat/Lon in decimal format, we were not doing an absolute value of the number. Therefore at times the sign was wrong.
4. We raised the VTV stack size from 56000 to 80000 to reduce VTV Fill Region stack panics on large windows.
5. Thick diagonal lines (such as protected area boundaries when alerted) were causing the error message "Requested position out of display window" when the lines extended off the edge of the window.
6. Repaired a bug introduced in 7.32 when using the new full color gif underlays. Each time a new overlay was drawn, the gif file was opened but not closed. This would eventually use up all the allowed open files for the output process. There is a patch on our ftp site for this on version 8.01. Starting in 8.02, these files are now stored in memory which saves time when it is drawn.

7. Added checking to see if the kept product inventory is full before setting the keep bit. This prevents the problem that setting an extra kept file caused the system to immediately delete a kept file.

## New Features

1. Passive task scheduling constraints are now imposed in the menu server. There are now 3 kinds of passive IRIS: Multi-tasking, Single Tasking, and Status Slave. There are many changes to the setup fields related to passive IRIS. If you are using passive IRIS, after upgrading you will need to reenter the type of passive, and whether PRF is monitored, and the site code for status product slaving. In Single Tasking passive mode you can now use sector scans and RHI's.
2. RHI's and sector scan PPI's now can specify the starting end of the sector in the task configuration menu.
3. IRIS now supports DVDs for archive media, both for backups and in the Archive menu. There is a new utility **init\_iris\_dvd** to initialize the DVDs.
4. There are many changes to **ascope** that were requested for ORDA:
  - When **ascope** starts up it negotiates with the DSP to determine if continuous spectra sizes will be supported. If both agree, then any size spectra can be requested and processed, not just powers of two. When spectra are computed from timeseries, ASCOPE is also capable of computing DFTs (rather than FFTs) of any length.
  - The maximum sample size has been raised from 256 pulses to 1024 pulses.
  - Mag Spec plot now shows peak and median spectrum power, as well as the SNR of the signal according to the R1/R2 estimator. The new '-stats' startup flag must be used to get them.
  - Addition of Exact Blackman and VonHann windows.
  - Repaired bug in which **ascope** would crash if A/D data were requested along with timeseries data. This bug dates back to 7.31 or before. Also repaired many minor bugs.
  - The parameter plots now provide printouts of mean and standard deviation of each scientific parameter. These numbers will be displayed whenever the '-stats' startup flag is given, or whenever simulated data are being used.
  - The data simulator now provides separate timeseries for every bin that is being processed. Along with the statistics mentioned above, this provides a very convenient way to study the bias and uncertainty of processing algorithms on simulated data.
  - When both dBZ and dBT are displayed, the dBZ window will contain a field showing the mean clutter suppression, averaged over all bins in the ray.

- Several bugs were repaired in **ascope**'s generation of simulated phase sequences. The most observable error was that the sequences were discontinuous at the boundary between the groups of pulses that contribute to each ray.
5. The maximum number of bins for the RVP8 is raised to 3072 from 2048.
  6. The CAPPI product now supports calculation of SHEAR data. The configuration options are the same as the SHEAR product, with choices of radial, azimuthal, and elevation shear.
  7. The SRI product now supports using a terrain map to determine the height that the radar beam is corrected to. The file used is **surface\_height.conf** in the `${IRIS_CONFIG}` directory.

## Setup Changes

1. There are numerous changes to the RCP section of **setup**. There are 2 new questions: "System has antenna" and "Interface type". If your system is not an IRIS/Radar system then answer "No" to the "System has antenna" question.
2. Ingest section: Removed the "BCD TAGs" option from "Manner of Angle Acquisition".
3. Removed single channel alternating receiver mode from the available polarization options.
4. The setup for output windows now includes an "Initial tool state". This allows you to configure your window to popup without the tools and legends.
5. The questions related to the Real-Time Display now appear in the RVP section, moved from the general section. These should only be answered on radar systems. There are many changes. You can now specify the port number and conversion program separately for each channel. The reception port used by **rtdisp** is configured inside that utility. IRIS can now send different RTD data formats on different ports. For systems using the SIGMET **rtdisp** program, use transmitter "rtd\_v1\_xmt". Customers can write their own format, if they wish.
6. The RVP section *System Parameters* now has a new question "HV off time before PW change". This is used to tell the DSP library to turn off radiate before each pulse width change. Setting this to zero disables the radiate off. Otherwise the radiate is turned off this long before the pulse width is changed. The radiate is turned back on after the "Wait time after PW change", at the same time as the new PRF in a low-to-high PRF transition.