

IRIS 7.18 Release Notes

These notes cover changes made in IRIS since release 7.17 of 28 April 2000. If you are upgrading from an earlier release, please read those notes also.

Data Format Changes

1. Added the horizontal and vertical beamwidth to the `task_misc_info` structure. See the *IRIS Programmer's Manual* for details.
2. Added the task start time to the status product. This is helpful for determining when a new task has started.

Installation Changes

1. There were numerous changes made to the **install_iris** script, generally intended to make internet installations easier. The “-tape” option is removed. To install from downloaded files, use the new “-files” option followed by the directory where the files reside. The “-mount” option is removed, replaced by a mount point specified after “-cdrom” option.

HP Platforms only: **install_iris** now uses gunzip to uncompress. This must be in root's path. If needed we recommend that you provide this with a symbolic link as follows:

```
# ln -s /usr/contrib/bin/gunzip /usr/bin/gunzip
```

HP Platforms only: When mounting the IRIS release cdrom you now need to use the “-ocdcase” option as follows:

```
# mount -ocdcase /dev/dsk/clt2d0 /cdrom
```

To do an internet upgrade to an existing IRIS: Download the files **install_iris**, **install.gz**, and **app.gz** of the desired version. Place them in a temporary directory (for example `/tmp/7.17.2`), renaming to remove the version filename extension. Then copy **install_iris** to the IRIS install directory where you will run it. Then install as root with a command like:

```
# ./install_iris -upgrade -files /tmp/7.17.2
```

Note that it is not practical to do a new installation, or to upgrade manuals from the internet.

Setup Changes

1. Added a new question “AZ speed tolerance” to the *Ingest/Scanning Options* section. During PPI continuous scans, the antenna speed must be within this tolerance of the requested speed before data collection will start. To disable this feature, enter a large number here. In 7.17, two times the “AZ maximum speed at end positions” was used.
2. Added a new question “Make product for each task” to the *Product/Status Products* section. If set to “Yes”, then a new status product is made each time a task starts. If you do not need this feature for passive IRIS, and you do not want a lot of status products, then set this to “No”.

3. Setup has additional questions on passive iris in the *Ingest/Scanning Options* section.

“**Task Scheduling Control**” can be set to either “Active Only”, “Active/Passive”, or “Passive Only”. Previously we only had active or passive choices. The “Active/Passive” mode means that the control is in the TSC menu.

“**Passive: use external trig rate**” is used to indicate whether the passive system shares the trigger with the active system. If there are two different radars sharing the same antenna, then answer this “No”.

“**Passive: use status product task**” is used to switch to passive iris using the master system’s status product, as apposed to just using the antenna angles. If enabled, you must then type in the master site code in the next box. See details in New Features 6.

Bug Repairs

1. Fixed a bug in the WARN product which caused centroids on the left and right edge of a product to be combined into one centroid. This would then produce a thin horizontally oriented centroid somewhat near the middle of the product. A previous attempt to fix this in release 7.17 resulted in the top four lines to be ignored in the WARN product.
2. Finished a repair to the WARN product started in 7.17: All centroids whose centers are inside another centroid will be combined.
3. The reporting of remote site status to the RCP was based on faults, not critical faults.
4. Fixed crash or hang bug in the PCF menu. Crash or hang occurs when pushing the Data:Display button twice.
5. Fixed crash bug on HP in the PCF menu. Occurred when in RHI product and pressing the Data:Display button. This was caused by of the new radial shear data type.
6. Several improvements made to the new azimuth speed checking: It now uses a speed clipped at the maximum antenna speed. Before it would always generate a fault when you request a speed faster than the antenna can go.
7. Radial shear was broken for no range smoothing. This bug was introduced in 7.16, 10 March 2000. To prevent this problem, make sure your range average is set $> 3 \times$ data resolution. Even when working, it is very important to have a range smoother of at least several bins.
8. The QLW cursor position was not saving correctly on RHI displays with tower offset.
9. IRIS overlays containing icons with no text were getting text from other overlays containing text loaded earlier.
10. The *RxNet7 User’s Manual* was missing from the /manuals directory on the IRIS cdrom.
11. The RAINN product was crashing when running on data generated from releases earlier than 7.00 which had a zero filled in for the Y-scale.

12. IRIS windows would not work with a hostname longer than 19 characters. The limit is now closer to 40.

New Features

1. Searchlight mode now working. This is a variation of the manual scan in which you can specify a starting position in azimuth and/or elevation.
2. RHI radial shear now works. This is selected by choosing “V:Shear” in the Data:Display section of the RHI product configuration menu. RHI also contains a new range averaging field used for the radial shear calculation.
3. **Irisnet** now has a new configuration menu. This menu lets you change the update rate, and control the number of polling processes. For effective operation, **irisnet** requires that you run more polling processes than you have unreachable nodes on the **irisnet** screen. Set this value to 5 for normal use, raise it for large networks.
4. RHI tasks can now be configured to go over the top. You can scan from -10 to +190 degrees, for example.
5. The RHI product can now be configured with both a starting and ending range. Starting range of 0 gets the old displays. Starting ranges larger than zero will blow up a portion of the data. Starting ranges less than zero will allow the radar to be placed in the middle of the screen for over-the-top RHI scans. There were numerous improvements to the user cursor and RHI grid lines to support these new displays.
6. IRIS now supports a new style of passive ingest with another IRIS system. In this new mode status products are passed between the systems to synchronize the tasks. All task types are supported. The TSC menu has a new command on the menubar which allows you to switch between active and passive modes quickly. This allows two companion IRIS systems to share a single antenna. Briefly, here is how to configure this new mode:
 - 1) Set each system to network transfer its status products to the other.
 - 2) In **setup** *Product/Status Products* section set “Make product for each task” to “Yes”,
 - 3) In **setup** *ingest/Scanning Options* section set:
 - “Task Scheduling Control” to “Active/Passive”
 - “Passive: use external trig rate” to “No”
 - “Passive: use status product task” to “Yes”
 - “Supplied by (Site Code)” to the site code for the other radarEverything else in the *Scanning Options* section should be the same on both systems.
 - 4) Set the antenna limits for elevation position, and maximum speed the same on both RCP02's.
 - 5) When running, on the menubar of the TSC menu, set one system to “Active”, and one to “Passive”. You need to configure the tasks on both system to have the same names, and the same scan limits.

7. IRIS 7.18 marks the debut of a new calibration program **zauto7** designed for the RVP7. The old **zauto** program should be used only for the RVP6, and is renamed **zauto6**. The **utils** program will automatically launch the correct program. Since most of our upgrade customers use the RVP7, and are used to using **zauto**, we have supplied a symbolic link between **zauto** and **zauto7**. If you are using an RVP6, you should explicitly run **zauto6**, or change the link. The new program correctly labels all the data in dB rather than A/D units left over from sampling at video frequency.