

Protection Switch Firmware-controlled AUTO Mode (FW_AUTO_MODE – Firmware Rev 97)

Historically, the ARM-based Protection Switch (PS) has not had much of a delay in its handling of incoming alarms from connected ODUs – block up converters, (BUCs,) or transceivers, (XCVRs.)

Typically, when an alarm is raised for the on-line device, RX or TX, the PS will log the fault immediately, and begin the process of moving the baseball switch over to the off-line unit. It may be desired, to hold off on this for some length of time measured in milliseconds, to see if the alarm persists.

This feature will enable the firmware running in the Protection Switch CPU, to take over the PS AUTO mode that was implemented in hardware, and also permit the user to specify a delay time in which an ODU alarm can be verified via its persistence.

This feature was added to firmware Rev 97, and will only work on a Protection Switch running this revision or later.

Important notes to consider before enabling this feature

With this feature enabled, the normal AUTO mode that is part of the PS hardware, will be disabled. This means the AUTO button that is on the PS box will not do anything, and the AUTO command, if used in Supervisor will also be disabled.

While this feature is enabled, the LEDs on the PS box itself, will be flashing on and off, as if the RX or TX circuit is in MANUAL mode; this is because the normal PS hardware-controlled AUTO has been disabled.

Supervisor, at this time, does not recognize this feature, and will not display any indication that this feature is enabled. It will indicate the 1+1 protection is in MANUAL mode. This firmware feature will have to be enabled/disabled via the Supervisor's terminal console.

To return to normal Protection Switch hardware-controlled AUTO mode, disable this feature with the command:

FW_AUTO_MODE OFF

Note also that when using the FW_AUTO_MODE command to configure this feature, the user should use the SAVE command, when finished, in order to make certain the changes will be saved before power is pulled from the device.

Commands Syntax and Examples

This is the syntax for the command to configure this feature:

FW_AUTO_MODE [RX | TX] [OFF | ON | time in msec]

Examples of using the command to control this feature are given below; note the default delay for RX is 300 msec, and for TX, 30 msec. Also, the default state for this feature, is to be OFF for both RX and TX.

Show current status only:

```
COMMAND> FW_AUTO_MODE
FW_AUTO_MODE RX: OFF delay=300 msec
FW_AUTO_MODE TX: OFF delay=30 msec
```

Enable this feature for the RX function, and verify that it is enabled:

```
COMMAND> FW_AUTO_MODE RX ON
COMMAND> FW_AUTO_MODE
FW_AUTO_MODE RX: ON delay=300 msec
FW_AUTO_MODE TX: OFF delay=30 msec
```

Change the RX delay, and also enable for RX if it is not already running:

```
COMMAND> FW_AUTO_MODE RX 150
COMMAND> FW_AUTO_MODE
FW_AUTO_MODE RX: ON delay=150 msec
FW_AUTO_MODE TX: OFF delay=30 msec
```

Disable this feature for both RX and TX:

```
COMMAND> FW_AUTO_MODE OFF
```

Upgrading a Protection Switch in the field

This is done using Supervisor, AnaCom, Inc. NMS. We recommend using a recent release, or downloading the latest release: www.anacominc.com/software.

For updating a device in the field, using Supervisor, please first read the document: **Remote Firmware Update Guide**, which is available on the same web page given previously.

We strongly recommend doing this update using an Ethernet connection to the device; as such the process is very fast and easy to accomplish. It is possible however to get it done over a serial cable, but that could take an hour or longer.