![WestwoodOne logo]

How to Configure the
Alarm Relay Function
on XDS Pro4 Receivers

The X-Digital Systems (XDS) Pro4 receiver contains an Alarm Relay (closure) function that can be configured by a station engineer to report only those faults that the station wants reported.

Connector and Pins

The Alarm Relay closure is located on the DB-9 connector labeled **Console,** on pins 4 and 5, where Pin 5 is ground. The receiver reports the alarm condition to you by closing pin 4 to ground. When there is no reported alarm, Pins 4 and 5 are open.

You may connect these pins to your remote control or automation system so that receiver faults are recorded and reported.

Choose Your Alarms

You can set which fault conditions activate the Alarm Relay closure by using the following chart, which is also on Page 36 of the User's Guide posted at http://myxdsreceiver.westwoodone.com under the Help menu.

Error Value	Error Name	Error Value	Error Name
0x00000001	FPGA Load Error	0x00010000	Recorder Overflow
0x00000002	DSP Load Error	0x00020000	Temp Warning
0x00000004	Ethernet Failure	0x00040000	Temp Critical
0x00000008	No Storage Device	0x00080000	reserved
0x00000010	Tuner Not Locked	0x00100000	reserved
0x00000020	reserved	0x00200000	reserved
0x00000040	reserved	0x00400000	reserved
0x00000080	reserved	0x00800000	LNB Over-current
0x00000100	reserved	0x01000000	reserved
0x00000200	reserved	0x02000000	reserved
0x00000400	reserved	0x04000000	reserved
0x00000800	reserved	0x08000000	URL Event Overflow
0x00001000	NV Config. Bad	0x10000000	Internet Down
0x00002000	reserved	0x20000000	Storage Full
0x00004000	DSP Timeout	0x40000000	SW Download Rdy
0x00008000	Fan Stopped	0x80000000	SW Download Err.

Table 3. SS and SF Error Code Values

To configure your Alarm Relay, find the items from the above list that you want reported by the Alarm Relay closure. Delete the leading "0x" then add the remaining hexadecimal values to come up with a single number, which XDS calls an Alarm Mask. The Alarm Mask governs which faults are allowed to be reported by the Alarm Relay.

Example

For example, if you want Tuner Not Locked, Fan Stopped, Internet Down and SW Download Err to make the relay close (when those faults actually occur), delete the 0x from each, and add them:

```
00000010  Tuner Not Locked
00008000  Fan Stopped
20000000  Internet Down
80000000  SW Download Err

A0008010  Sum (Alarm Mask)
```

Remember, you must add the digits in hexadecimal (base 16). Digits greater than 9 are represented by letters A through F where 10 = A, 11 = B, . . . , 15 = F. In the above example, 2 plus 8 equals A.

The Alarm Mask shown above is an example. You may choose your Alarm Mask to include different items and therefore your Alarm Mask number will be different.

➔ **Note about "Tuner Not Locked":** If you include the Tuner Not Locked alarm, the relay will close for every small glitch that momentarily unlocks the tuner, even if the satellite audio continues uninterrupted. We recommend that you set your downstream device to recognize only those Pro4 alarm closures that last for a few seconds or more to prevent too many false alarms.

Entering Your Alarm Mask

- In versions 1.6.5 and 1.6.6, the Alarm Mask setting is retained if your receiver is rebooted or power-cycled – as long as it was entered through the front panel.

- If you are using version 1.7.1 or later, the Alarm Mask settings are retained regardless of whether they are set via the **Console** port or the front panel.

(a) From the front panel

Go to Setup > Alarms

Press **Set**

Use the arrow keys to change the Alarm Mask on the front panel to the number in our example. Your front panel will look like this when you're done, using the Alarm Mask from our example:

```
Setup
Alarms
A0008010
```

Press **Set** again to save it.

(b) You may also enter the Alarm Mask via the Console port serial connector but, in Version 1.7.0 and earlier, the Mask will <u>not</u> be retained if your receiver is rebooted or power-cycled. Type the commands in bold below.

```
Hudson> login tech radio
You are logged in as TECH
```

To view the current Alarm Mask,

```
Hudson> ALARM
ALARM 1FFDBFFF
```

To change the Alarm Mask to our sample value of A0008010:

```
Hudson> ALARM A0008010
ALARM A0008010

Hudson> logout
```

Default Alarm Mask and Red Fault LED

For a new receiver, the factory default Alarm Mask is 1FFDBFFF. Under this default Mask, these items make the relay close:

Internet Down
URL Event Overflow
LNB Overcurrent
Temp Critical
Fan Stopped
DSP Timeout
NV (non-volatile memory) Config Bad
Tuner Not Locked
No Storage Device
Ethernet Failure
DSP Load Error
FPGA Load Error

These default items are also the ones that cause the red Fault LED on the front panel to light up.

However, only the items you select through the Alarm Mask will make your Alarm Relay close.

In other words, depending on how you elect to set your Alarm Mask, the red Fault LED may turn on at different times (i.e., more often) than your Alarm Relay closes, because the LED may be reporting more fault conditions than the Relay is.