ReadyNAS LED Language [*]

Legend:

- ○ LED off
- ● ● LED on
- ✸ Power LED fast blinking
- ✸ ✸ Power or disk LED slow blinking
- ✿ Power LED pulsating
- ✳ ACT LED blinking occasionally or constantly

Pattern	Description
○○○○ ○ ✸	Normal BIOS boot, this stage should not last for longer than 30 seconds. Otherwise, try re-seat SODIMM or replace SODIMM. If it still does not work, perform NAND recovery. If NAND recovery does not go through or does not solve problem, PSU is in question.
●●○○ ○○ ↘ ↖ ●●●○ ○○	SODIMM fails SPD check, re-seat SODIMM or replace SODIMM
●○○○ ○○ ↘ ↖ ●●●○ ○○	SODIMM fails memory access test, re-seat SODIMM or replace SODIMM
●○○○ ○○	Boot loader fails to locate valid RAIDiator image, TFTP or USB OS image recovery required
●●○○ ○ ✸	TFTP boot request, Server should be at 192.168.125.1 and provide kernel_conf and initrd_conf.
●●●○ ○ ✸	TFTP boot request, Server should be at 192.168.125.1 and provide kernel_init and initrd_init.
●●○○ ○ ✸	NAND device has been initialized, it could be a sign of NAND corruption, NAND image recovery is needed only if system behavior is abnormal.
●●●○ ○ ✸	Ethernet PHY fails to link, please double check network cable and switches/Routers are good.
●○○○ ○ ✸ ↘ ○●○○ ○ ✸ ↘ ... ↘ ○○○● ○ ✸ ↘ ●●●● ○● ✸ ●●○○ ○ ✸ ↘ ↖ ●●●○ ○ ✸	Memory test ongoing, Disk LEDs indicate pattern number is under testing. Memory test is triggered by press Power switch for 25 seconds(5th all disk LED blink) Memory test finishes without error, press power button to reboot or re-do test again if needed. Memory test failed, Re-seat memory or replace memory.
○○○○ ○ ✳	ReadyNAS OS is booting, this stage should not last for more than 3 minutes. Otherwise, one of disk may be bad or incompatible. SATA backplane is the next to be questioned, and then NAND or SODIMM.
●○○○ ○ ✿ ↘ ↖ ●●●● ○ ✿	RAIDiator image does not match NAS platform, contact tech support to convert OEM NAS to ReadyNAS.
○●○○ ○ ✿ ↘ ↖ ●●●● ○ ✿	No disks detected, please choose disks from hardware compatible list.
●●○○ ○ ✿ ↘ ↖ ●●●● ○ ✿	Corrupted, do not mix used disks and cold boot up. In most cases, problem may be solved by OS reinstall with optional NAND recovery. Contact tech support before taking actions.
●●●○ ○ ✿ ↘ ↖ ●●●● ○ ✿	OS image on NAND is corrupted, please perform NAND recovery through TFTP or USB
●○○○ ✳ ✿ ↘ ○●○○ ✳ ✿ ↘ ○○●○ ✳ ✿ ↘ ↖ ●●●● ✳ ✿	Volume expansion ongoing, it takes from less than half hour up to half day depends on existing volume and new volume size. ACT LED should be blinking often during expansion, if no ACT LED blinking for long period, there might be something wrong with disks.
●●●● ✳ ●	Boot finishes, normal operating mode. ACT indicates disk access. Disk LED indicates corresponding disk is healthy. Example shows 4 healthy disks.
●○●● ✳ ●	Disk 2 is bad or under resync.

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	Factory switch pressed while power on
	1st Blink at 5th second: OS reinstall (All blinks below actually last for 2 seconds so you will not miss it)
	          Release switch as soon as you see 1st blink for OS reinstall
	2nd Blink at 30th second: Factory Reset
	          All data will be wiped out!
	3rd Blink at 50th second: TFTP recovery(System will start to boot at 53rd second even you keep pressing factory switch)
	          Setup TFTP server at 192.168.125.1 with kernel_init, initrd_init and recovery images

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	Power switch pressed while power on
	1st Blink at 5th second: Factory boot option, do not use
	
	2nd Blink at 10th second: TFTP Boot
	          Setup TFTP server at 192.168.125.1 with kernel_conf, initrd_conf and service files
	3rd Blink at 15th second: Factory boot option, do not use(Please press front power button to gracefully shutdown and reboot NAS if you run into it by mistake)
	4th Blink at 20th second: USB Boot
	          Use Raw-writer service images from tech support.
	5th Blink at 25th second: Memory test
	          See above memory test LED patterns for test progress and result readings.
	6th Blink at 50th second: TFTP recovery (System will start to boot at 53rd second even you keep pressing power switch)
	          Setup TFTP server at 192.168.125.1 with kernel_init, initrd_init and recovery images