

# Disk and Show Data Management

By Mike Falconer

## So why should I back-up?

Most lighting consoles are basically computers. Computers crash, computers break down, computers get stolen and computers don't like beer or soda being poured into them!

In short computers can be pretty fragile things.

## How should I back-up?

Almost all lighting consoles these days have a 3.5 floppy disk drive and most larger consoles also have a hard drive. There was a time when consoles saved to audio cassette, a memory card or had no storage at all.

Backing up to floppy disk is always a good idea as it is a removable (and cheap) media that allows you to take your show home with you when you leave at night. If your console gets stolen or damaged you still have a copy of your show and you can load it into a replacement console. The downside to saving to floppy disk is that they tend to take a comparatively long time, particularly if you have a lot of data.

Backing up to a console's hard drive has the advantage of being fast and some consoles even allow you to "auto save" so you don't have to even remember to save; the console will do it for you. Of course a hard drive is not removable so if something nasty happens to your console your show could well be lost so it is a good idea to also back up to floppy disk.

## When should I back-up?

The short answer to this is that you can never back up enough! It all comes down to risk and what would happen if it all went horribly wrong. For example; if you save every hour then theoretically the most you would ever lose in the event of a software crash, hardware problem or someone pulling power unexpectedly would be 1 hour. If this is acceptable, then run with it.

## What's all this grandfather business?

When you save critical data you should never save over your previous backup. You could have a problem while saving or you could have a corruption in the data you are trying to save. If you save over your last backup you may have lost your best hope of recovering your data if you have a problem.

Grandfather, father, son means that you are never saving over your last backup. The term is normally reserved for consoles where you are saving to floppy disk. Your first save is done to disk one, your second save is done to disk two, your third is done to disk three and your fourth save is done on disk one completing the cycle.

Floppy disks are a very low cost medium so good practice would be to use a fresh set of disks every day. This way you can always go back to a previous days programming.

With hard disk based consoles number of disks and disk space tends not to be a problem so the only thing to remember is to periodically rename your show so that you can go “back in time” if required.

With consoles that auto save you will almost certainly be saving to new backup files every time the auto save runs. However it is still good practice to rename your show file periodically as auto save features tend to recycle backup files eventually.

Also remember to save your show to floppy and keep the floppies somewhere other than beside the console to really protect yourself.

### What's Verify?

Some consoles have a feature called verify. By switching on this feature the console will read back the data it writes to disk and compares it with what is in its own memory. It is a way of making sure that there is not a problem with the physical disk media.

Typically verify functions will not detect corrupt show data.

The only way to be sure that your show data has been saved to disk (hard or floppy) is to reload it or load it into another console such as a backup console.

A good habit to get into is to reset your console last thing, every night, before you go home and then load your last back up. By doing this you will confirm that your show has been saved ok and that there will be no nasty surprises waiting for you in the morning!

### I have a tracking back-up so I don't need to save to disk!

Wrong!

A tracking back-up system is where two consoles (or processor units) are connected together and one console mimics the other exactly. The concept is that if there is a problem on the main console the back-up can take over, nothing is lost, and there is no interruption in the playback or programming of your show.

The thing to remember when using a tracking back-up is that you are only really protected against hardware failures. If you have a software problem the chances are that the back-up console, because it is using the same software and executing the same commands, will also hit the same problem.

Tracking back-up systems are great but they are not a replacement for proper disk practice.

**Are lighting consoles really that unstable that I have to do all this?**

No! In general the technology that we use today is of an extremely high quality. However problems can and do occur. By taking a few simple precautions you can prevent all sorts of issues from arising in the first place. Good disk practice can also save you a lot of grief should something extraordinary happen such as your console getting stolen or damaged.

Always remember that floppy disks are cheap and that hard drives are large & fast. So why not use them? You don't only back-up because the problems you can foresee; its for all the ones that you can't!