

recording and duplicating

Many churches now record their services as an aid for the household or to allow members of the congregation to have access to a series of sermons. Audio Promotions supply a range of suitable recorders and duplicators.

RECORDING

There are various methods of recording the service. Most church recording systems use the standard audio cassette recorder. This is simple and straightforward to operate, and with a good source sound the quality of the recording can be very good.

Today, digital recording must be considered as costs have fallen dramatically. The choice is between recording direct to CD or direct to hard disk/memory card. Recording direct to disc is relatively straightforward but consumer CD recorders have all but disappeared and professional machines are expensive. Unless you must have finished discs available at the end of the service, it is more reliable and cheaper to record to hard disc. Hard disk recorders vary from a standard laptop or desk computer to the *ipod*® type of recorder. All computers operating Windows XP have a built in recording facility. The Windows recorder is very basic, with a fairly poor frequency response but there is lots of third party recording software available, often free or at a nominal cost. There are many sites on the internet that offer this software. Follow the link from the Audio Promotions website (recording section)

If you like the idea of a smaller dedicated "jukebox" recorder it is important to make sure that it can record audio direct via a *line in* socket and it should also ideally be able to record .wav as well as .mp3 formats. (.wav is the CD audio format, .mp3 is a compressed audio format). The recording from the jukebox will need to be transferred to a PC and once in the PC there is a range of software that takes care of producing the master CD. Nero is probably the best known (www.nero.com) but there are plenty of others available. We have recently introduced the Gemini recorder that will take the signal from your sound

system and record it directly to any USB storage device. The simplest option is to use a 1GB memory stick. This will hold up to 90 minutes of CD quality audio that can be transferred to your PC and burnt to CD in the usual way. The big advantage of the Gemini recorder is that it is very easy to operate. Unlike mp3 player/recorders, there are no menus to navigate - basically you press a large button labelled RECORD!

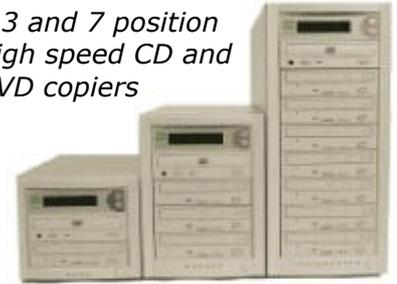
Irrespective of whether you choose cassettes or CDs, it is vitally important that the recording level is controlled so that the recorder receives the optimum level of signal. If the signal is too low, playback will be noisy, particularly with cassettes and if it is too high, distortion will occur. Distortion on cassette is not too much of a problem unless it is really excessive because analogue distortion is not too unpleasant to the ears but a distorting digital signal is raspy and buzzy and needs to be avoided at all costs. Virtually all cassette, CD or Hard Disk recorders have a manual recording level control. Some have auto record level but this is not recommended as these systems work by increasing or reducing the recording level depending on the signal detected. The problem is that during silent periods, an auto record level system will turn itself up high in order to optimise the recorded signal, leading to increased background noise on the recording.

DUPLICATION

Cassettes can be copied either in real time by a series of standard cassette machines linked together or by a high speed copier. If only one or two copies are needed they can be copied on a double deck cassette machine. Some churches even record the service directly to a number of cassette machines. The big advantage of this is that the copies are available immediately after the service. Being analogue, the problem with copying cassettes is the loss of sound quality with each generation of copying. This is not too noticeable with a real time system but with high speed copiers, it is very obvious, particularly with music. High speed cassette copiers are expensive and require regular servicing but they will copy a C90 cassette in around 3 minutes.

CDs can be duplicated on any PC or laptop that has a CD or DVD recording drive. These vary in speed, but will copy a full CD in 3-7 minutes. If you need only a few copies, this method is fine but high speed copying systems are available that will copy 1-12 CDs at the same time.

1,3 and 7 position High speed CD and DVD copiers



Taking economics into consideration, there is really no contest between CD and cassette. Costs for the recorders are comparable but a CD duplicator is at least half the price of a cassette equivalent, with the cost differential increasing with the number of copy positions. A 1:7 CD duplicator costs around £600.00. A 1:3 cassette duplicator with a 4 position slave unit giving you 7 copy positions costs almost £4000.00!

The least expensive route to digital recording and copying is to use the Gemini USB recorder assuming a PC is available to burn the CD. It is extremely simple to operate, requiring no computer knowledge to make the master recording and the cost is modest - around £160 including a memory stick.

AUDIO PROMOTIONS