

# AMPS

The Association of Motion Picture Sound

## Newsletter No. 4

September 1992

### AMPS GENERAL MEETING

Tapeless Recording & Hard Disk  
Editing

The September AMPS General Meeting will be entitled 'An Introduction to Tapeless Recording & Hard Disk Editing'. The subject will be presented by Yasmin Hashmi of Sypha, a consultancy who specialise in all aspects of hard disk and digital audio applications.

Ms Hashmi graduated with a BSc (Hons) in Electrical & Electronic Engineering and joined STC as a graduate engineer. She then joined Syco Systems as a service engineer working on Fairlight, Kurzweil and EM-U Systems products. Then followed Harman Audio where as sales engineer for NED Synclavier and Direct-To-Disk systems she was responsible for operational and technical support. She is now a consultant with Sypha specialising in digital audio and related products. Sypha also publish The Tapeless Directory, a constantly updating survey of virtually all hard disk systems available anywhere -over 80 and rising. The presentation is aimed to give the audience a firm grounding in the principles of hard disk recording and editing systems rather than covering specific systems. This will be an excellent opportunity to really understand this growing approach to handling audio.

Yasmin Hasmi is a popular lecturer and this meeting is highly recommended.

DATE: 7.30 PM, 22nd  
September 1992

Venue: Theatre 3, De Lane Lea,  
Dean Street

Welcome to this edition of the AMPS Newsletter. You may have noticed that our publications times have been rather erratic but we are now making great efforts to bring this newsletter to you on a regular basis.

To this end, the Council have been able to interest Keith Spencer-Allen (ex-Editor of Studio Sound magazine) in our Association's activities and he has agreed to help us produce a Newsletter six times a year. This will give us the opportunity to develop new ideas and generally expand this publication.

One new feature that we are trying in this issue is a Buy & Sell column. If you have equipment that you want to Sell or Buy, the columns of this Newsletter are yours free of charge. Remember this means that all AMPS members will see your ad - and it's free!

But to make this a publication that truly reflects the Association we need to know what you want to see. We need more membership participation and are looking for your suggestions, ideas, questions, observations and any items that may be of interest to the AMPS member. Our pages are open to your contributions - beautifully written or otherwise.

Help us make this a really AMPS publication.

Any communications with the AMPS Newsletter should be addressed to The Editor, AMPS Newsletter, Old Post Office Cottage, Old Post Office Road, Chevington, Suffolk IP29 5RD

This Newsletter is published by the Association of Motion Picture Sound for distribution to all members. AMPS can be contacted through Secretary, Lionel Strutt at Mayflower, 3 Audley Square, W1. Membership enquiries to Gerry Humphreys, Membership Secretary, Twickenham Film Studios, St Margarets, Twickenham, Middlesex

# Time Code Practices

On Sunday 31st May over 40 members and guests gathered at Pinewood Studios' Theatre 7 to listen to an eminent panel of speakers expounding on various aspects of Time Code. The participating speakers were Tony Harcourt, FBKSTS, Peter Bryant (IC Equipment), Nigel Woodford (Richmond Films), Anthony Faust (Atlantic Post Productions), Nigel Taylor (SynchroTech) and Tim Blackham (Future Film Developments)

After tea, coffee and biscuits, the meeting assembled in Theatre 7 and Tony Harcourt led off with an excellent illustrated lecture explaining the machine readable bar codes now available on picture negative film stocks. He was careful to point out that Keycode, as Kodak call it, it is not a time code but a barcode made up of the edge numbers which are printed on raw film stock during manufacture.

The second part of Tony Harcourt's lecture was a mini tutorial explaining Longitudinal Time Code (LTC) and Vertical Interval Time Code (VITC) which must have been of great benefit to those present who did not properly understand the difference between the two systems.

Peter Bryant followed with a brief history of the origins and development of the Aaton Time Code System now in use on Aaton and Panaflex cameras. He also revealed that Moviecam and other cameras could be fitted with Aaton-type time code.

Nigel Taylor demonstrated with a Nagra 4S Time Code recorder how the Concert Slate and Denecke D-Code TS-1 time code clapper board worked with

picture cameras not fitted with Aaton or Arri time code device. Anthony Faust spoke enthusiastically on the desirability of time code systems and how it helps speed up post production picture and sound editing.

Nigel Taylor's talk of how his company had to help rectify problems caused by user's ignorance and confusion over time code systems rather frightened those present who as yet had little to do with the use of time code. However his presentation and description of the new Fostex PD2 portable DAT recorder with sophisticated time code facilities helped restore confidence.

By this time the meeting was overrunning so Tim Blackham who was on the panel to act as a Devil's Advocate asking 'Time Code - Do We Need It?' suggested that he not present his piece but instead to go on to questions and answers from the audience. He did however read out a sad saga of communications among people endeavouring to sort out a sound transfer problem involving timecode. It pointed out how necessary it is to know and understand what time code is, what it will do and how carefully it has to be used.

The Association's thanks are due to Graham Hartstone and Pinewood Studios for the use of Theatre 7, and to Ivan Sharrock who organised recording of the meeting.

Report by Bob Allen

Full proceedings were recorded and are available to members on request.

## Twickenham Informal Meeting (30/6/92)

Because so much was packed into the Time Code Meeting at Pinewood there was little time for general discussion, question and answers. The AMPS Council, being aware of the value of the questions and answer sessions at meetings decided that the June meeting should also be on the subject of Time Code but this time to be simply a question and answer session run on an informal basis.

Venue for the meeting was the Twickenham Studios' restaurant and sitting round the restaurant tables with the bar close at hand made for a very relaxed atmosphere.

Amongst those present were Cohn Broad (CB Electronics), Chris Braclik (Soundtrack Productions), Tim Blackham (Future Film Developments), Nigel Taylor (Synchrotech) and Richard Daniel (Mobitrack Sound Processes). They all not only answered questions but expounded on them to the great satisfaction of all present

Nigel Taylor brought along samples of Fostex DAT products and was very generous in allowing two PD2 portable recorders to be passed around amongst the members for actual hands-on button pushing.

Unfortunately the meeting was not recorded which is a shame as it would have added greatly to the value of the tapes of the Pinewood meeting.

The Association's thanks are due to Gerry Humphreys and Twickenham Studios for the use of the restaurant.

Report by Bob Allen

Members responded well to the £5.00 reduction in the annual membership fee for those paying before May. There are however quite a number who failed to take advantage of this opportunity and the Council would remind them that their subs of £30.00 are now overdue and hope that this gentle reminder will jog the memory without causing offence to those recalcitrant members.

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**SUBSCRIPTIONS**  
**SUBSCRIPTIONS**

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# A SAD SAGA

Text of a transfer tale of time code confusion read to the Time Code Practices meeting by Tim Blackham

A sound recordist (not me, thank God) made a monumental snafu by somehow recording a 40Hz rather than a 60 pilot on his Nagra deck.

How he did this on a 4S Time Code Nagra, I'm not sure...I haven't talked with him yet... especially 40Hz rather than 60Hz... although I did notice that he'd switched- off the time code at one stage. I should have made him turn it back on then but I assumed he knew what he was doing.

Whatever - the end result was the Lab calling this afternoon about having difficulty resolving and syncing to it during the transfer.

My question is 1/ can we resolve to this 40Hz, if in fact it is 40Hz? And if not, 2/ can we re-stripe a stereo Nagra with time code?

Also, as I recognise that the second option would not play back material at the speed it was recorded, can anyone advise how long a take I can expect to 'hold' without a lip-sync delay becoming unacceptable (at 24 f/s)?

**PB**

*I could use a bit more information about your problem, namely, are you sure 40Hz is not really 50Hz PAL? An easy way to tell is to carefully check the frame count of the time code on the audio tape. Does it roll over at 23, 24 or 29? Additionally, I'm not sure how he 'switched off the time code'. Maybe it was just in hold. I assume there is running code on the tape.*

*If it is 50Hz you can resolve to it. You can re-stripe the stereo Nagra with time code.*

*if all else fails, my suggestion would be to simply playback the tape and dub it to a second Nagra using 60Hz time code (not 29.97 TC). This is the safest way without screwing up your master any further. As far as holding sync at this point, it's a crap shoot. Typically, playing back unresolved will hold for about a minute. If it's really off, try playing back on the record machine.*

*I'd be happy to help you further if I had more information.*

*ST*

No, I'm not sure exactly what's on there, I've only heard from the Lab/Transfer facility second hand so I haven't questioned them further. You may be right, PAL would explain the 'deviation' to the lower frequency but I'd think the Lab would've sussed that one out.

As to switching it off, he had the display off (it is one of the after market T/C additions by ASC which has a readout on the top plate and a control pad on the output side., one of those rotary switches allows you to turn it to free-run, run-record etc which he switched until the display went off!

I just had a call back from the DP who's kinda dealing with this as he hired all the crew (all students) and so feels responsible. He says the Lab is now saying it's

48kHz... I don't think they know what they are doing as you think that they would recognize a PAL clock if it's not a SMPTE word itself.

So my thoughts are to resolve on the same machine, set to the same thing as it was, direct to the Magnatech (they're cutting on film). That way they'll get true speed.

Will an ordinary resolver do this, or does it need a PAL reference?

**PB**

The timebase of the SMPTE CODE on your tape is DEFINITELY 48kHz. The recording was made as you stated on a modified TC Nagra.

The modification is the so called 'Harvey Board'. It has a switch on it that allows you to choose the timebase which is always double the frame rate. Your recordist looked at the choices, saw 24fps and set the machine to generate 30 frame code at a 48kHz timebase. He or she should have set it for 30fps which would have generated 30 frame code at a 60Hz timebase.

Never mind what has done and what should have been done. The fix is relatively painless.

Get a 'Harvey Board' modified Stereo Nagra. Set the frame rate for 24fps which will give a timebase of 48Hz. Then, play back the tape. The Harvey Board mod has a resolver built-in. It will then resolve the recorded code to the same time base at which it was recorded.

Then you can either re-record onto a second machine generating 60Hz 30fps code and proceed with video syncing the dailies. Or you can transfer to 16mm mag, the dubber being referenced to a 60Hz crystal source (not the AC line), or you could go onto a digital multitrack machine and generate new code and then video sync etc etc.

The Harvey Board is a good, well thought out mod but any of us who have used it know that it does have it's quirks. The mistake that was made has been made by other before.

Frank

**OK... so it might be 48 kHz and not 50 Hz PAL. Thanks for the clarification. I'll pass it on and see what happens.**

**PB**

*Geez, Frank nailed it for you. His solution is dead on if the time code is in fact 24fps. I didn't think of 24fps TC at 48kHz. We get one in about every year or so and have to jog our brains to get all the switches right to make it work.*

*I'm not familiar with the Harvey Board but what was Harvey thinking about with 24fps? Never understood why Nagras put 24fps timecode in the 45 TC in the first place. I guess Harvey wanted to be compatible with Nagra when it comes to making mistakes. Nagra did not allow for 29.97fps NDF or 30fps DF in their early firmware.*

*Anyway, good luck. You have good advice on this forum. Don't fault the post house. We shouldn't have to 'fix it in the post'. ST*

# RADIOMICS - FREQUENCY ALLOCATION AND LICENSING

As a result of the relatively recent introduction of regulations regarding the frequency allocation and licensing of radiomics for use in the entertainment, broadcasting and independent areas of production, a working party has been set up by A.M.P.S. to look into how these regulations affect our Members. Our initial meeting produced some interim guide-lines which we felt would be of interest to Members involved on independent Productions.

The principle Broadcasting organisations and Theatres seem to be reasonably well catered for by the present regulations, but the changes taking place in our industry, with a greater emphasis on programme production moving to independent production companies, show up some deficiencies in the present system. The working party intends to address these shortcomings, but in the meantime Members are advised to make themselves aware of the regulations regarding the use of radiomics on any production, be it feature film, television or any other area that Freelance Sound Recordists may find themselves.

In brief, the situation currently in operation allows for anyone to use five VHF deregulated channels, subject to maximum power outputs, with no licence requirement.

Channel:	Wideband:	Narrowband:
	max.power 2mW e.r.p.	max.power 5mW e.r.p.
00	173.8 MHz	174.6 MHz
01	174.1	174.675
02	174.5	174.770
	174.8*	174.885*
03	175.00	175.020
(*not advised due to inter-mod.with other 4 channels)		

The following Channels are available for mobile use by Independent Programme makers and similar users. Output power is limited to 10 mW for hand-held transmitters and transmitters used with mixers etc. Maximum output for bodyworn transmitters is 50 mW.

Channel:	Frequency:
ML1	191.9 MHz
ML8	200.3
ML2	208.3
ML3	216.1

A licence is required for each channel, which is taken out by either the Rental House, who can then provide the user with a free Permit, or by the "Owner-driver". The current licence fee is £100 per channel per annum, and permits operation throughout the U.K.

You may, however, have any number of radiomics on the same frequency for a single Channel licence fee.

There are also eight U.H.F. channels, but from 1.7.91 they have been subject to geographical restrictions, which drastically limits their use for Freelance Sound Recordists.

One other Channel: VO: 199.700 MHz is available with a power output of 1 Watt e.r.p.. It is usable only on a specific site basis and licences are issued for periods up to seven days. Use is restricted to U.K. mainland only, with a reduction in power to 100mW if used in the S.E. of England to the east of a line between Sheerness and Bexhill. The fee for this licence is £39 per seven day period.

Of interest to anyone working on a location for long enough period are the Channels allocated for Fixed-Sites such as Theatres, conference centres, studios, Film Studios (each stage is considered as a fixed-site!) and factory units which are now increasingly used as "studios" for standing sets on TV series. These are again power limited to a maximum of 10 mW or 50mW if bodyworn, and are as follows:

Channel:	Frequency:
00	173.8MHz
01	174.1
02	174.5
	174.8*
03	175.00
TA	176.4
TB	177.0

(\* not advised, due to inter-modulation with other channels.)

Use is at any designated fixed-site in the U.K. and a licence fee of £130.00 per annum covers all seven channels!

Some members may have equipment which is currently on the same channels as those allocated to the BBC, ITV, ILR, ITN and TV-AM, but these can only be legally used if working under contract to the appropriate organisation, and having first cleared it with that organisations office of the Broadcasters Joint Frequency Management Group (JFMG).

Further information, together with licence application forms, can be obtained from ASP Frequency Management Ltd. who are the agents for the Radio-communications Agency, the Executive Agency of the Department of Trade and Industry.

We have learned that the Radio-communications Agency has the intention to pursue the enforcement side, and indeed checks have already been made at Rental Houses, with the probability of spot checks at locations etc.

Remember, the unauthorised use of equipment which requires a licence is illegal and would mean the immediate termination of use with all that implies in inconvenience to the shoot, and the embarrassment of the radiomic owner, plus upon conviction a fine of up to £2000.00 and/or three months imprisonment and forfeiture of equipment.

We would like to draw your attention to the August 1991 edition of "Line Up" the Journal of the Institute of Broadcast Sound, which carries a very interesting article on this matter.

ASP Frequency Management Ltd.  
Edgcott House  
Lawn Hill  
Edgcott  
Aylesbury  
Bucks. HP18 0QW

Tel: 0296 770458

Brian Simmons

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## CTS at 21

CTS Studios are this year celebrating 21 years at Wembley. As a small tribute we have listed just some of the impressive scoring completed there during that time.

The Man With Golden Gun  
Murder On The Orient Express  
Return Of The Pink Panther  
The Omen  
A Bridge Too Far  
The Spy Who Loved Me  
Revenge Of The Pink Panther  
The Eagle Has Landed  
The 39 Steps  
Death On The Nile  
The Long Good Friday  
Quadrophenia  
The Elephant Man  
Flash Gordon  
Superman 2  
The French Lieutenant's Woman  
For Your Eyes Only  
Ghandi  
Heat & Dust  
Octopussy  
The Meaning Of Life  
Superman 3  
A Passage To India  
A View To A Kill  
Mad Max 3  
The Mission

Living Daylights  
Superman 4  
Batman  
Full Metal Jacket  
A Fish Called Wanda  
The Fisher King  
Who Framed Roger Rabbit  
Robin Hood  
K2  
Wuthering Heights  
The Naked Lunch

## FOR SALE

\* Two AKG C451E microphones with CK8 capsules  
\* Rycote Windshield for AKG C451E/CK8 with hi-wind cover, unused  
\* Rycote 816 Wind Jammer, unused

Reasonable offers for any or all items considered. Contact Bob Allen on (0284) 850332

This space is available free of charge to AMPS members who have equipment that they wish to sell or buy. Send details to The Editor (see page one).

## Film Gauges & Sound Tracks

The BKSTS have published a new edition of the full colour wall chart 'Film Gauges & Sound Tracks' which now includes Optical Digital Formats. The chart is available only from the BKSTS London office (071 242 8400) priced as follows: -

BKSTS Members £13.00 each (overseas £15.00 each airmail)  
Non-Members £15.00 each (overseas £17.00 each airmail)

Membership rates are also applicable to AMPS members who are not members of BKSTS

## Sweat Shirts

You've joined the Association, read the Newsletter, now wear the sweat shirt. High quality AMPS sweat shirts are back again. Available in red, black, dark blue, light blue, light grey or white, they all feature a discrete AMPS logo on the front. Sizes are Large and Extra Large and at £15.80 each they represent excellent value. Call (0284) 850332

# IMAX

## Cancelled Visit

The Council were disappointed that the visit to the National Museum of Photography, Film & Television in Bradford to see the IMAX presentation had to be cancelled through lack of support.

After discussion at the June Council meeting it was concluded that the probable reasons for the failure were that the notification time of the event was too short; the Summer is not a good time; and there being too little publicity and information about IMAX

The Council still consider the trip to be a good idea and it is hoped to re-organise it for the late Autumn or early next year. It will also be offered to other societies such as BKSTS and the Editor's and Camera Technician's Guilds

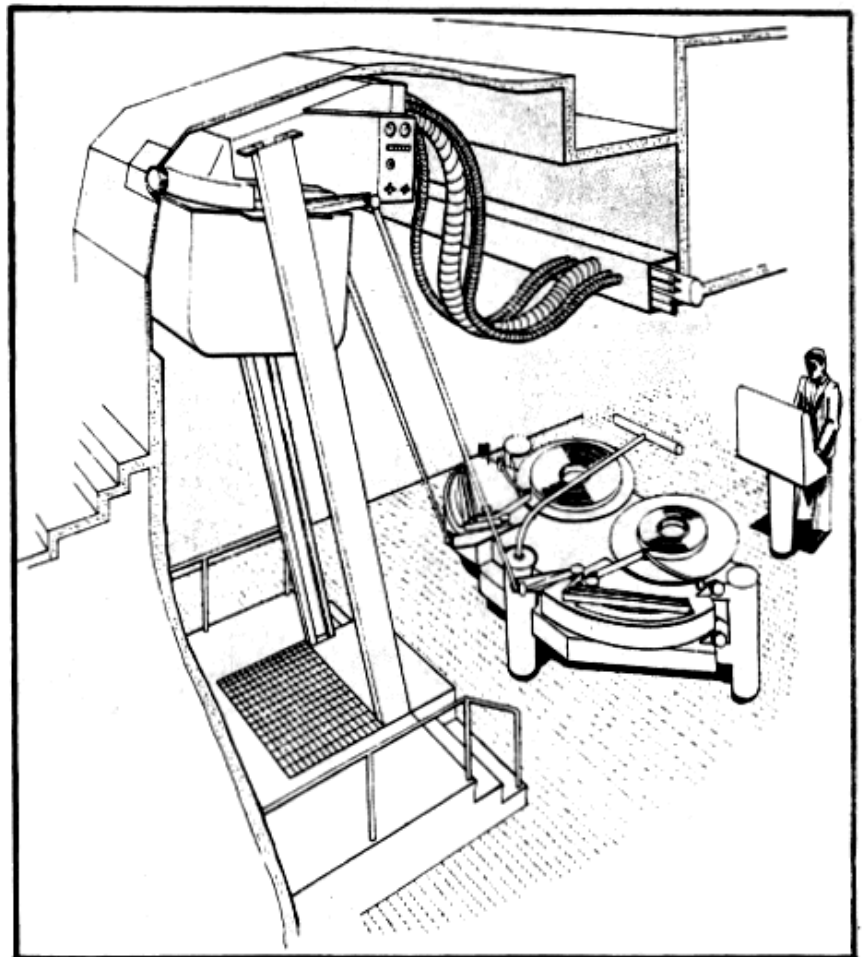
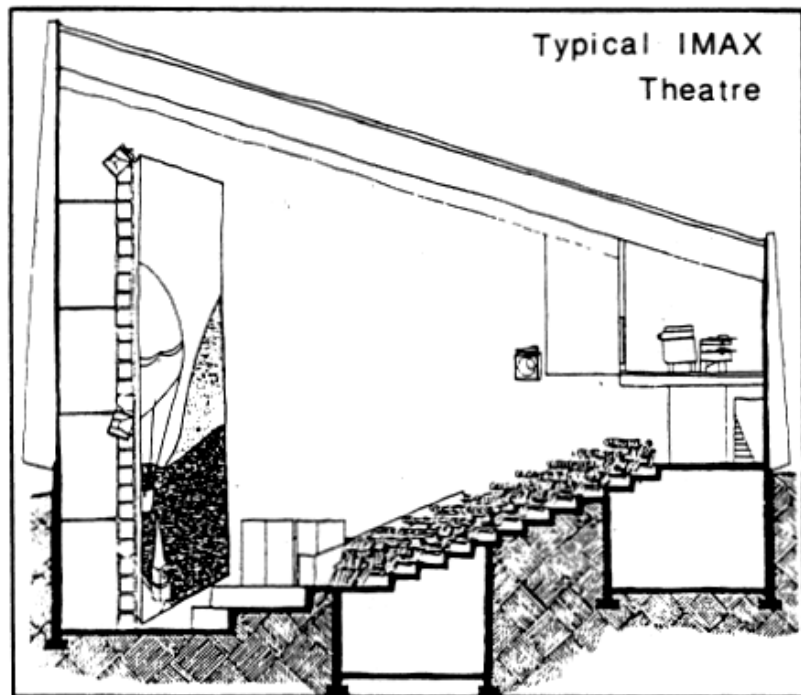
## About IMAX

The IMAX system was first seen at EXPO '70 in Japan and gives a giant screen experience with only a single projector.

Using 70mm film with a 15 sprocket hole frame travelling horizontally the resultant film image is 10 times larger than 35mm. The required 24f/s intermittent motion is achieved by means of a 'rolling loop' system developed by Australian Ron Jones. At 52ft 4in by 64ft 8ins, IMAX is Britain's largest cinema screen and can only be seen in the UK at the National Museum of Photography, Film & Television in Bradford.

To accompany 'the vast brilliant images' that 'sweep you into another world' as the publicity handout claims, multi-channel sound is distributed Screen Left, Screen Centre, Centre Top, Screen Right, Auditorium Left, Right and Rear. These are all from discrete 6 track magnetic sound recorder interlocked with the IMAX projector. It's really worth a visit. Along with the museum's collections and exhibits, it makes a great day out.

By Bob Allen



## RECORDINGS OF MEETINGS

Cassette tapes of the general meetings that have been recorded are available on request to paid-up members who were unable to attend. Tapes available so far include:

- STEREO SOUND FOR CINEMA & TV: General forum
- DOLBY SYSTEMS: John Iles/ Tim Partridge
- TIME CODE PRACTICES :Panel of speakers
- KEYCODE : Tony Harcourt, FBKSTS. Kodak

For details call (0284) 850332