

USING AUTOMATICALLY SYNCHRONIZED TAPE-SLIDE PROGRAMS IN SINGLE-SCREEN PRESENTATIONS

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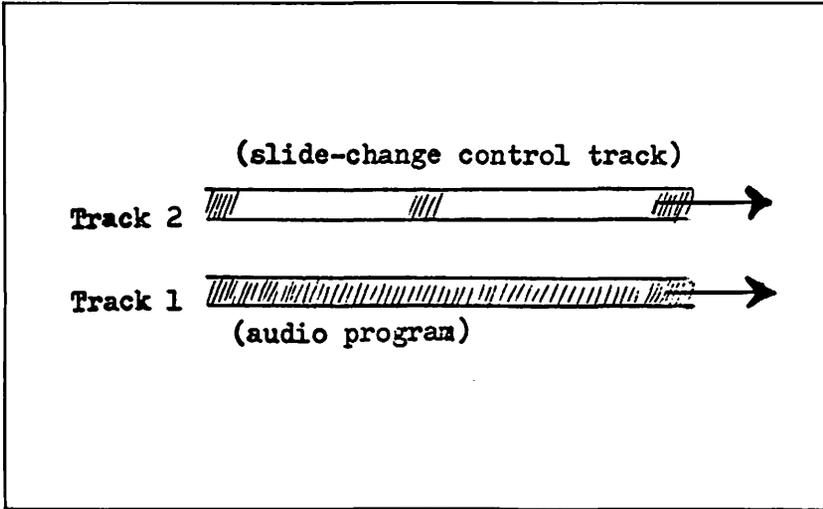
In my discussion today, I am going to discuss only single screen presentations. Two, three, or more multiple-screen presentations are certainly common today—but, I want to discuss what is possible for most teachers, considering what high school audiovisual budgets provide in the way of equipment.

How many of you here today have already used automatically synchronized tape-slide programs? How many of you have combined your own slides and tapes into a program? In the brief time I have, I hope to demonstrate 4 things to you:

1. How automatic synchronization works.
2. The importance of the new ANSI standards, and what this means to program interchangeability between machines.
3. How to prepare your own program.
4. How some rear-screen and front projection equipment works.

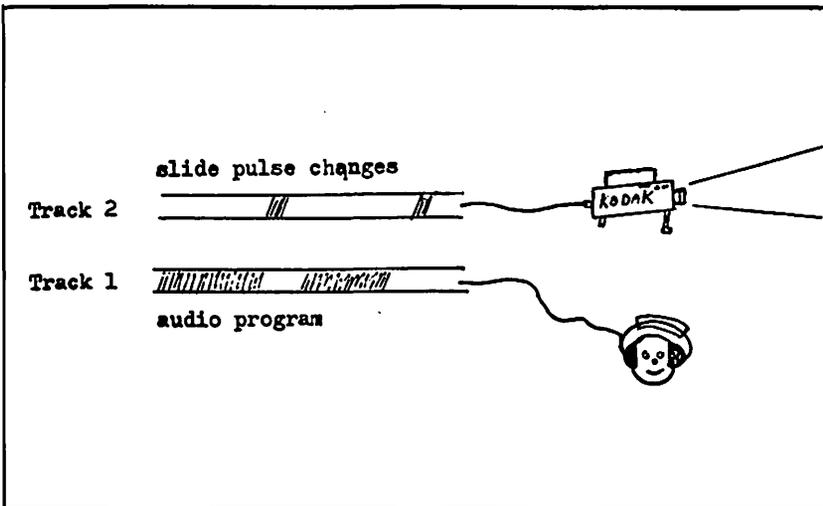
I want to be sure that everyone understands the simple principle which makes automatic synchronizing possible. Two audio tracks (1) on your recording tape are used simultaneously, as they are played on a stereo tape recorder.

Synchronized Program



(1)

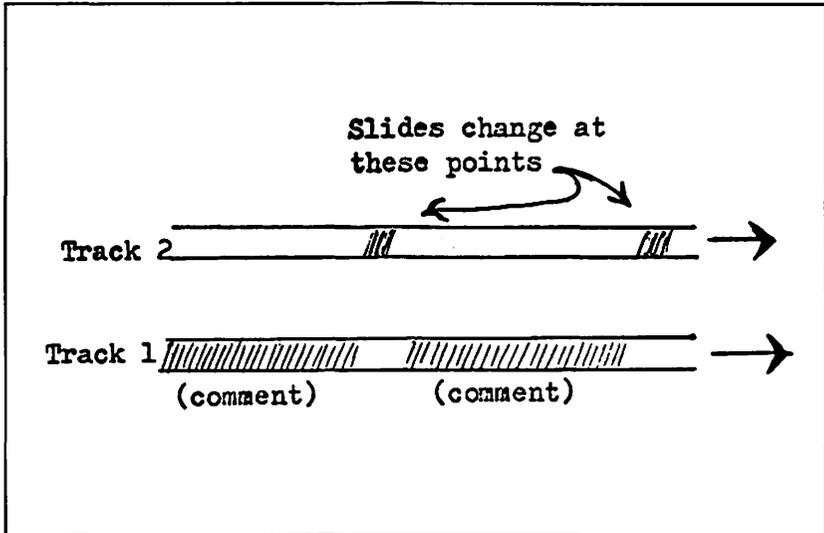
In my example, I use a cassette tape, but it could be either open reel or cassette. As the tape is played, the audio program containing the narration is routed from track 1 to a loudspeaker or headphones so you can hear what is being said. At the same (2) time, the control pulses on track 2 are silently routed to the slide projector.



(2)

Synchronized Program

You may talk as long as you wish about any slide. (3) Then, when you want the slide to change, you merely program one pulse on the control track.



(3)

In other words, on the control track you record as many pulses as you have slides to change; most of the control track is blank. Are there any questions to this point about how automatic synchronization is accomplished?

There are many reasonably priced stereo tape recorders available today that have special provisions for easily recording a pulse on the control track.

There is no problem as long as you make your program on one machine, and play back the program on that same machine. However, I believe that the thoughtful teacher will want to select equipment that is standardized, so that he or she can trade their materials with other teachers, or use their materials on several different types of rear-screen or front projection equipment.

Interchangeability between machines depends upon the specifications for the slide change pulse recorded on the control track of the tape. I want to be aware that finally, after years of discussion, (4) ANSI (American National Standards Institute) Subcommittee PH7 has recently announced a proposed industry standard for the frequency response and duration of the slide change pulse (5) on single screen projection systems.

AMERICAN
NATIONAL
STANDARDS
INSTITUTE

(4)

(Proposed)

ANSI Standard For Slide ADVANCE Pulse, on single
screen projection:

Frequency: 1,000 Hertz

Duration: \pm .45 second

(5)

Synchronized Program

This has not been formally adopted yet. Nevertheless, many new models of equipment already incorporate provisions for recording or detecting control pulses of 1,000 hertz, lasting + .45 seconds. If you purchase new synchronizing stereo tape recorders, specify one conforming with ANSI standards. Are there any questions about standization and interchangeability?

I have found that if I follow a particular systematic plan in preparing my tape/slide programs, it results in the fewest retakes. Here is the step-by-step plan I use: (6)

SEVEN STEPS TO PREPARE TAPE/SLIDE PROGRAMS:

1. **WRITE SCRIPT** for audio tape.

(6)

First, I write out completely the script for the audio narration part of the tape. This assumes that I have already decided what slides I am going to use or produce to illustrate my talk. (7)

SEVEN STEPS TO PREPARE TAPE/SLIDE PROGRAMS:

1. **WRITE SCRIPT** for audio tape.
2. A. **SELECT SLIDE CHANGE** locations.
B. Tentatively **MARK SCRIPT** for slide changes.

(7)

After the script is finished, I go back over it and select the place where each numbered slide is to change. Now, I insert in pencil a parenthesis on the script for each slide number. (8)

SEVEN STEPS TO PREPARE TAPE/SLIDE PROGRAMS:

1. WRITE SCRIPT for audio tape.
2. A. SELECT SLIDE CHANGE locations.
B. Tentatively MARK SCRIPT for slide changes.
3. RECORD only AUDIO TRACK of tape.

(8)

At this point, I am ready to record only the audio track on tape. I take my finished script and record it. (9)

SEVEN STEPS TO PREPARE TAPE/SLIDE PROGRAMS:

1. WRITE SCRIPT for audio tape.
2. A. SELECT SLIDE CHANGE locations.
B. Tentatively MARK SCRIPT for slide changes.
3. RECORD only AUDIO TRACK of tape.
4. REPLAY AUDIO for first time.

(9)

The next step is to replay the audio track and see how it sounds. It is important that you be perfectly satisfied with the audio track before you proceed any farther. Assuming that (10) the narration is satisfactory, the next thing that you do is to replay the audio track for a second time, and as the tape plays, manually change the slides at the places indicated on the script.

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SEVEN STEPS TO PREPARE TAPE/SLIDE PROGRAMS:

1. **WRITE SCRIPT** for audio tape.
2. **A. SELECT SLIDE CHANGE** locations.
B. Tentatively MARK SCRIPT for slide changes.
3. **RECORD** only **AUDIO TRACK** of tape.
4. **REPLAY AUDIO** for first time.
5. **Replay Audio** for second time, and **MANUALLY CHANGE SLIDES** as indicated in the script; verify timing.

(10)

You look for 2 things on this trial run: 1. Do the pictures really complement what I'm saying? 2. Do the slides appear with proper timing? (11)

SEVEN STEPS TO PREPARE TAPE/SLIDE PROGRAMS:

1. **WRITE SCRIPT** for audio tape.
2. **A. SELECT SLIDE CHANGE** locations.
B. Tentatively MARK SCRIPT for slide changes.
3. **RECORD** only **AUDIO TRACK** of tape.
4. **REPLAY AUDIO** for first time.
5. **Replay Audio** for second time, and **MANUALLY CHANGE SLIDES** as indicated in the script; verify timing.
6. **Replay Audio** for third time, and simultaneously **RECORD SLIDE CHANGE PULSES ON CONTROL TRACK!**

(11)

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My next step is to replay the audio track again a third time and simultaneously record the slide change pulses on the 2nd track of the tape, at the places indicated on my script. (12)

SEVEN STEPS TO PREPARE TAPE/SLIDE PROGRAMS:

1. WRITE SCRIPT for audio tape.
2. A. SELECT SLIDE CHANGE locations.
B. Tentatively MARK SCRIPT for slide changes.
3. RECORD only AUDIO TRACK of tape.
4. REPLAY AUDIO for first time.
5. Replay Audio for second time, and MANUALLY CHANGE SLIDES as indicated in the script; verify timing.
6. Replay Audio for third time, and simultaneously RECORD SLIDE CHANGE PULSES ON CONTROL TRACK!
7. Replay Whole tape a fourth time, VERIFY PROJECTOR PERFORMANCE.

(12)

The last step is to replay the whole tape (both tracks) and verify that the finished tape operates the slide projector just as desired.

Since the control track is recorded separately at a different time than the audio narration track, this means that you can change the timing of slide changes later if you wish to modify a presentation.

In the time remaining, I want to demonstrate 3 different pieces of equipment which you might find interesting if you plan to make synchronized programs. I have brought commercial brochures for each machine discussed, which you may take if you desire.

We have been showing slides up to now using a 3M Wollensak Model 2548 cassette recorder with a Kodak Carousel slide projector.

The second piece of equipment is this rear-screen unit made by Singer-Graflex, called the Caramate. It is about 1 foot square and

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includes a Kodak Carousel licensed projector on top, a cassette recorder on the side, and a 9" rear-screen projector for daylight viewing, in the front. It is Model 8805, a playback-only unit.

One especially important feature of this Caramate is that the lens and mirror system which Singer employs to achieve rear-screen projection is such that slides in Carousel trays are interchangeable with front projection projectors. You may not be aware that many other systems require you to turn the slides differently in the tray for rear-screen use.

This is unacceptable for any media center where slides may be borrowed by a teacher one day for front projection in a classroom, and the next day by a student using a rear-screen projector in a booth. So the position of slides in the Carousel tray is another type of compatibility or interchangeability which teachers should consider when selecting their projection equipment.

This Caramate is meant to be used by one person in a booth, and not for large group presentations like this. But, this will give you an idea of how it works.

I have selected one other recorder because it has a new feature; the ability to retain synchronization even if you go back on the audio tape for review. Most machines manufactured to date will maintain synchronization only if played straight through.

To demonstrate this claim, I have merely photographed 10 numbers, and recorded these numbers on the tape; hence, there can be no question whether they remain in synchronization.

The unit is a Telex Cassette Recorder, Model 990. It claims "Synch" retention only when rewound at a moderately slow speed. However, for review of foreign language tapes, this would be adequate for cases where you wanted to go back to review just the last sentence or so.

In conclusion, I'd like to stress two points. The real significance of the equipment I've shown you today is that now you can easily use slides which you have taken yourself, and make them part of original instructional materials. Students react very favorably to original teacher efforts. The second point is that cassette tapes and 35MM slides protected in locked Carousel slide trays are reasonably trouble-free, so that you can really put them into the hands of individual students to use during their study periods. You really can loan them out as a package to students as well as to teachers. And, after all, getting media off the shelf and into the learner's hands is what it's all about, isn't it?