

A RAPID PROCEDURE FOR GENERATING RANDOM REINFORCEMENT INTERVALS ON VI AND VR TAPES¹

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A random sequence of punched holes in VI or VR tapes can be generated as follows. Unpunched tapes of known length are prepared in advance. Then, for a given length of tape, the desired number of reinforcement holes is determined. Finally, the holes are punched into the tapes at intervals read from a table of random numbers, until all the holes have been punched.

For example, a VI-1 min tape is desired, and the unpunched tape takes 30 min for one revolution. Thirty holes must be punched into the tape to yield a VI 1 min. With a wax pencil, mark a starting point on the tape. Then, measure off lengths in centimeters by reading two-digit numbers from a table of random numbers. Each new length begins where the preceding one ends. Continue measuring and marking along the tape until 30 intervals have been marked. This will require, for a tape of moderate length, circling the tape several times. The resulting intervals

will be randomly spaced, within the limits of the tape length.

The procedure is the same for VR intervals, except that the length of the tape is specified in terms of the number of responses, rather than the amount of time, needed to complete one revolution. For example, if 500 responses move the tape through one revolution, and if a VR 50 is required, 10 holes will be punched into the tape.

Restrictions on the randomness of intervals can always be imposed after the initial set of intervals has been marked off. For example, if the tape appears to have too many, or too few, closely-spaced intervals, appropriate modifications can be made before punching. However, by using a tape of moderate length, such that several circlings of the tape are needed before all the required intervals are marked off, spacing of intervals fairly satisfactory for most purposes appears to result. The method does not, of course, produce precisely random intervals; nor are precisely random intervals always desired. The great virtue of the method is its speed.

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