

OPERATING INSTRUCTIONS: “Exercise Tapes, Ron 2.0” program for the 1401 *(Revised 2019-05-20 JG)*

1. The “Exercise Tapes, Ron 2.0” program will exercise from 1 to 4 tapes simultaneously. This program is an alternative to demonstrating the tapes by running them from the TAU panel inside the 1401. This program is an update to Ron Williams’ original “Wear Out Tapes” program, adding checks for end-of-reel (so the tapes don’t run off the reel), and adding optional printing of statistics.
2. Make sure the tape drives you want are loaded and ready. Be sure all reels have write-protect rings in (Tape Drive front-panel “WRITE PROTECT” lamp should be off). On the tape drives, be sure the tape drive select numbers are set to “1”, “2”, “3” and/or “4”. (When you run from the TAU panel, you usually set them all to “1”). Don’t set any two drives to the same number.
3. Be sure the Tape Select dial on the 1401 front panel is set to “N”. This dial is just below the RUN/ALTER/etc. dial on the front panel. (When you run from the TAU panel, you usually set this to “1”)
4. Load the “Exercise Tapes, Ron 2.0” program deck on the 1402 Card Reader.
 - 4.1. Don’t panic that not too much happens at first. The program halts, with the 1401 front panel red STOP button on (Program Halt). This is to allow you to fool with Sense Switches, to control program operation
 - 4.2. Set the 1401 Sense Switches to control operation:
 - 4.2.1. Sense Switch A is not used by the program. It is recommended that you leave Sense Switch A on (up) for normal Last-Card-in-1402-Reader for other programs.
 - 4.2.2. Turn Sense Switch B on (up) to use Tape 1. Off (down) to ignore this tape.
 - 4.2.3. Turn Sense Switch C on (up) to use Tape 2. Off (down) to ignore this tape.
 - 4.2.4. Turn Sense Switch D on (up) to use Tape 3. Off (down) to ignore this tape.
 - 4.2.5. Turn Sense Switch E on (up) to use Tape 4. Off (down) to ignore this tape.
 - 4.2.6. Turn Sense Switch F on (up) to print optional statistics (and be sure to ready the 1403 Printer). If SS F is on, at end-of-reel the program prints for each tape how many records were written and how many write errors occurred. Turn SS F off (down) to disable printing statistics. Since each record is 1000 bytes long, the record count shows how much data actually fits on the tape. The write-error count shows how dirty our tapes actually are. When a write error occurs, the program uses typical error recovery (backspace, skip and blank tape, write again) to bypass the bad spot.
 - 4.2.7. Turn Sense Switch G off (down). During operation, you can turn Sense Switch G on (up) to cause an early end-of-reel. All the tapes rewind, and the program returns to the original

HALT. You can change Sense Switch options and press START on the 1401 front panel to resume operations.

5. On the 1401 front panel, press the green START button to begin operation. The tapes you have selected should begin to spin.
 - 5.1. The program writes ten (10) one thousand (1000) character blocks to the first tape, then the next tape, etc.
 - 5.2. When any tape senses the end-of-reel reflective spot, the program writes an end-of-data Tape Mark on all the tapes, all the tapes rewind, and the program begins another cycle, without halting. Since these tapes have end-of-tape marks, they could be read back by later programs.
6. At any time, you can press the STOP button on the 1401 front panel to pause program operation. Press START on the 1401 front panel to resume operation. For example you might do this if you want to leave the tapes part way down the reel and restart later during the demo. Or, you could run other programs, and then reload the "Exercise Tapes, Ron 2.0" again later to begin from mid-tape.
7. NOISE: You might find yourself pressing the green START button on the 1401 front panel when using this program. This may also start the noisy 1402 Card Reader motor going again. You can stop the motor by briefly opening the 1402 reader gate, or tapping one of the 1402 Stacker Full sensors.
8. After you're finished with "Exercise Tapes, Ron 2.0", be sure to turn on Sense Switch A for normal operations ("Last Card" on the 1402 Reader). If you're polite, turn Sense Switches B-G off.

