

VOBJ – Verify Object Programs -- Operating Instructions

The VOBJ program is intended to help find and document errors in our CHM IBM 1401 Demo object decks. In the past sometimes certain decks would not run correctly, but we were not sure why. Typical problems introduced by bad card handling were: (1) certain cards missing; (2) certain extraneous cards accidentally inserted; (3) certain cards out of sequence; (4) multiple copies of certain cards; (5) character errors introduced when duplicating damaged cards on the Key punch, or (6) using an old version of a Demo Deck. VOBJ helps identify all these problems.

1. Starting VOBJ

1.1. Load the VOBJ application. It will HALT, with 1401 front panel red STOP indicator lit, and “111” displayed in the A and B registers. Your first action should be to load a Known-Good Deck (next step).

2. Load a Known-Good Deck

2.1. VOBJ should already be at a HALT 111.

2.2. Turn Sense Switch B off (down), to indicate that you are loading a Known-Good Deck. Sense Switches C through G should be OFF.

2.3. Ready the 1403 Printer.

2.4. Place a Known-Good Object Deck in the 1402 Reader. OK, sometimes “known-good” is optimistic.

2.5. Press START. VOBJ will read the input deck and check sequence numbers. It lists the cards on the printer as they are read. Object decks produced by ROPE (that is, most of our demo decks) have sequence numbers in columns 72-75, beginning at “0001” and incrementing by one. VOBJ will check its internal card count against the punched card sequence numbers, and display any sequence errors. A few Demo Programs (example: Ron’s Exercise Tape program) were hand-assembled, and do not have sequence numbers. For such decks you can ignore the sequence error messages, and instead eyeball the printed cards to decide whether they are in sequence.

2.6. VOBJ saves the entire Known-Good Deck in memory, for later comparison against Suspect Decks. VOBJ saves the deck even if there are sequence errors.

2.7. After reading the entire input deck, VOBJ returns to the HALT 111. At this point, you can either sequence check another Known-Good Deck (repeat this step) or proceed to the next step to verify a Suspect Deck.

3. Verify a Suspect Deck

3.1. After loading a Known-Good Deck into memory (previous step), use this procedure to verify that a Suspect Deck exactly matches the Known-Good Deck. VOBJ should already be at a HALT 111.

- 3.2. Turn Sense Switch B on (up), to indicate that you are loading a Suspect Deck.
- 3.3. Ready the 1403 Printer.
- 3.4. Place the Suspect Object Deck in the 1402 Reader.
- 3.5. Press START. VOBJ reads the Suspect Deck, lists it on the 1403 Printer, compares each card to the Known-Good Deck saved in storage, and prints error messages if it finds any mis-matches.
- 3.6. After reading the entire Suspect Deck, VOBJ returns to the HALT 111. Check the printer listing to see whether VOBJ flagged any mis-matches between the Known-Good Deck and the Suspect Deck.
- 3.7. At this point, you can either (1) leave Sense Switch B on, and verify another Suspect Deck (repeat this step); or (2) turn Sense Switch B off, and load another Known-Good Deck (previous step).

4. Limitations

- 4.1. VOBJ stores the entire Known-Good deck in 1401 memory, which limits the deck size to 175 cards. As it happens, most of our demo decks are below this limit (BigPrint, Powers-Of-Two, Lincoln, etc.). If you do have a larger deck, divide it into segments of not more than 175 cards each.
- 4.2. VOBJ does not do any intelligent content-checking to verify that the data in a Known-Good Deck looks like an object deck is supposed to. You can eyeball the printouts of cards to see if you think they're OK.