bcc	title		prefix/class—number.revision
	Model 30 Trivia		M30T/M-18.1

checked	authors	approval date	revision date 8/20/70
checked	Henry Thompson	classification Manual	
approved *Mel*		distribution Company Private	pages 13

ABSTRACT and CONTENTS

This manual describes all trivia connected with the
Model 30.

TABLE OF CONTENTS

Print Procedure.

1. Hit POWER ON.

2. Hit RESET on TD Ø81.

3. Mount and ready tape on TD Ø8Ø.

4. Place Tape to Printer Utility deck (360P-UT-Ø52) face down, 9 edge inwards in card reader.

5. Hit START and END-OF-FILE of card reader.

6. Hit CARRIAGE RESTORE and START on printer.

7. Set LOAD UNIT switches on CPU to Ø14, and press LOAD. Cards should start reading, and soon printing should commence.

8. When printing is finished, remove printed paper from back of printer, return cards to cabinet, hit RESET and LOAD-REWIND on TD Ø8Ø.

9. Hit UNLOAD on Ø8Ø when tape has stopped moving.

10. Dismount tape and hit RESET on Ø8Ø.

11. Hit POWER OFF.

If program ever stops in the middle of printing, correct any obvious problems (such as printer out of paper, not READY, etc.) Then follow this procedure.

1. Set DATA switches on CPU to F5.

2. Set MAIN STORAGE ADDRESS swtiches to ØØØ5.

3. Hit INTERRUPT.

4. Hit STOP.

5. Hit STORE.

6. Hit START.

7. Hit INTERRUPT.

If still no go, check printer and TD Ø8Ø READY, then try
again from step 4. If this fails several times, set
data switches to F4 and repeat from step 4 several times.
If still no go, give up and go home.

Miscellaneous Techniques

A. Mounting and dismounting tapes

   I. Mounting Procedure: The critical factor in mounting
      tapes is that the tape reel be facing in the right
      direction. The reel to be mounted goes on the left-
      hand side of the drive, front side out, so that if
      you pull on the free end of the tape, the reel
      moves clockwise. (see Fig. 1 page 5)

      1. Place the reel on the empty hub as described
         above, first making sure that the latch in the
         end of the hub is open.

      2. Close the latch, securing the reel in place.

      3. Holding down the reel release button, unwind
         several feet of tape and feed it through the
         capstans as shown in the drawing. It should
         run straight across from one large roller to
         the other.

      4. Slide the tape around the left-hand edge of the
         take-up reel and let the end fall onto the reel.
         The end of the tape should not at this point
         hang down beyond the hub of the take-up reel.
         (If necessary, pull some of the tape back through
         the capstans by holding down the reel release
         button and winding the feeder reel by hand.)

      5. Holding down the reel release button with one hand
         and holding the tape in the take-up reel with

one finger, slowly turn the take-up reel about 3/4 of a turn, until the end of the tape is caught under the incoming tape from the capstans.

6. Remove the finger which is holding the tape, and wind the tape forward onto the take-up reel until the reflective foil marker (this signals the beginning of the tape) appears on the top side of the tape as it runs through the capstans.

7. Wind the tape a few more turns, moving the reflective marker onto the take-up reel. The tape is now mounted.

8. To ready tape hit LOAD REWIND and START. READY light should light, if not dismount and try again from beginning.

II. Dismounting Procedure: First unload the tape by hitting RESET, LOAD-REWIND and, after the tape stops, UNLOAD. To dismount the tape after it has been rewound and un-loaded, simply hold down the reel release button and wind the tape back onto the feeder reel by hand. Release the hub latch and remove the tape.

Important Rules

I. Always hold down reel release button while turning either tape reel.

II. Always hit RESET on the drive to close the window before turning power off.

hub latches

feeder reel →

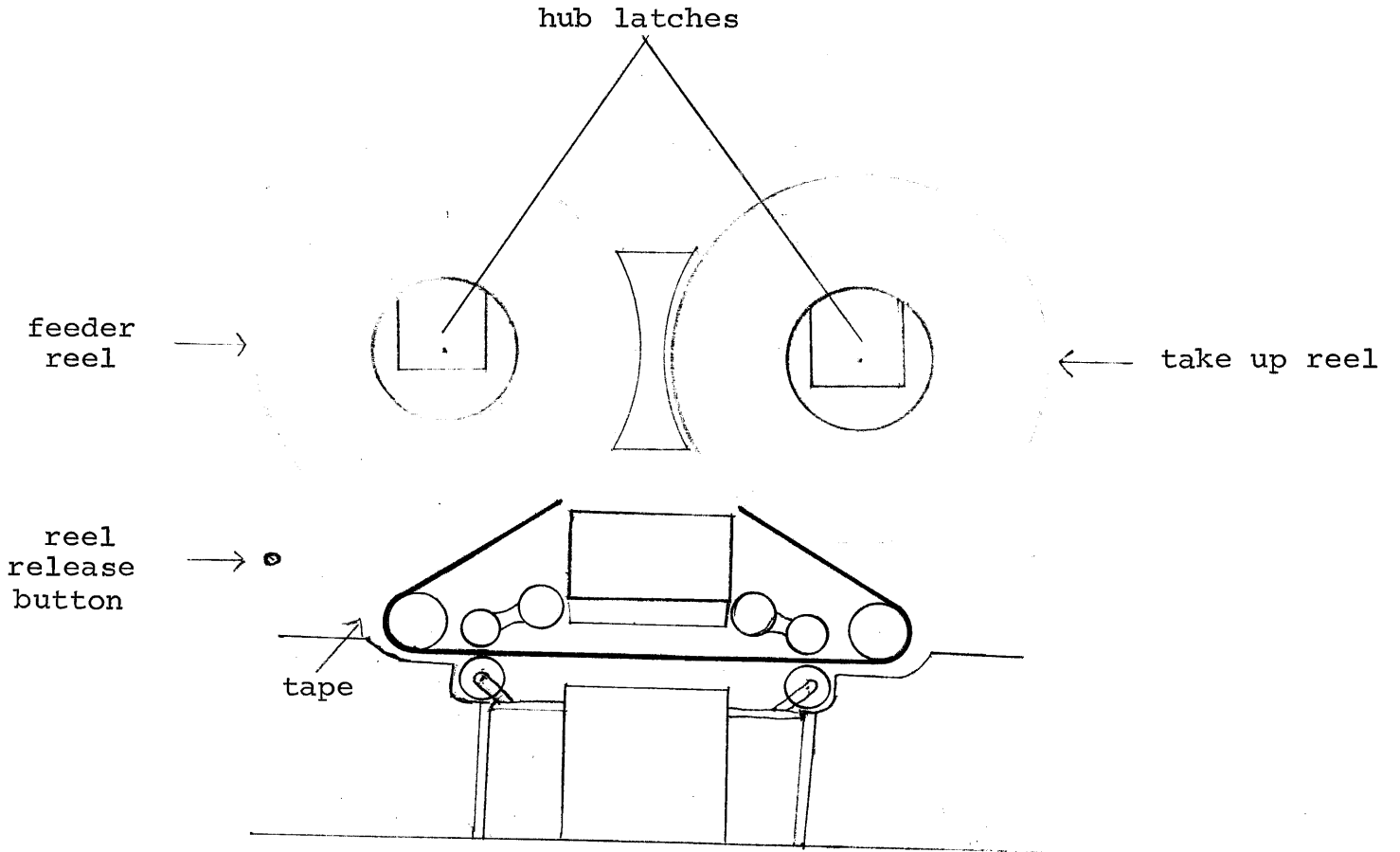← take up reel

reel release button →

tape

Figure 1. Tape drive

B. Card Reader Problems: When cards stop reading and the

READY light goes out and the FEED CHECK light goes

on, a card jam has occurred. There are actually two

kinds of jams; feed failure and internal jams. In

either case the following procedure should be followed:

NOTE: After hitting START on the card reader, always

hit EOF.

1. Remove already read cards from stacker.

2. Remove unread cards from hopper.

3. Hit and hold down NPRO for several cycles of the

reader.

4. If a card comes into the stacker and FEED CHECK

turns out, go to step 6.

5. You have a bad jam. Follow procedure described

under hardware troubles.

6. You have a feed failure. Replace the top card of

the unread cards by duplicating it on the key punch.

Place the card which came out when you pressed NPRO

on the front of the unread cards, place cards in

reader, and hit START.

Read checks occur when a mispunched card is read. READ

CHECK lights up and READY turns out. The card in error

is the last card in the stacker.

1. Remove the card in error from the stacker.

2. Remove the deck from the stacker.

3. Remove the deck from the hopper.

4. Hit and hold down NPRO for several cycles.

5. Place the ejected card on the front of the unread deck.

6. Correct the card in error and place it in front of the ejected card.

7. Place this deck in the reader and hit START.

Maintenance and Billing

A. IBM Customer Engineers, P.M. and hardware troubles

Once a week a C.E. will show up to do P.M. (Preventive

Maintenance) on the machine. This procedure, which

takes 2 - 3 hours, should insure that no hardware

problems occur. If a hardware problem does develop

the following procedure should be followed:

1. Try to get in touch with Henry Thompson .

2. Fill out a console description sheet, several

    of which are stuck in the maintenance log on

    top of the CPU. Try to include some idea of

    what you think the machine was supposed to be

    doing when it failed.

3. If a. You could not reach Henry Thompson

    and b. You are convinced it is a hardware

            problem

    and c. You need it fixed as soon as possible

    then call and report the trouble to IBM. They

    will send a C.E. out to fix it. The phone number is

    834-3024. The dispatcher will answer; describe

    the problem and ask for help. Our usual C.E. is

    Mr. Swindell, ask for him, but anyone will do.

    In case of difficulty ("well we'll try to get to it

    early next week," etc.) call 834-7070 and ask for

Dan Janda (our Systems Engineer) or Bill Moore (our

Salesman) and raise hell until something happens.

B. Billing.

At the end of each month a billing sheet called a
Billing Time Authorization or BTA arrives at the
accounting office. It should be filled out as indi-
cated with the meter readings on the individual hard-
ware pieces. All but the first carbon of the month's
sheets in the maintenance log should be torn out and
attached to the BTA. The BTA should be signed by
Henry Thompson, and the first two copies, along with
two copies of the log should be sent to IBM at the
address on the BTA. The other copy of the BTA and
the log should be sent to Jim Wolf, Controller.

NOTE: The figures on this sheet are of great
importance if the average usage of any of the
equipment is greater than 2 shifts per day, so
they should be recorded carefully.

Assembly Procedure for M3Ø Resident

Communications Program

1. Mount and ready scratch tapes on units Ø8Ø and Ø81

2. Place following decks in reader:

    a. Assembler Phase I

    b. M3Ø source deck

3. Hit START and EOF on reader.

4. Ready Printer.

5. Set LOAD UNIT switches to Ø14 and hit LOAD.

6. When reader is finished*, put the following in it:

    a. Assembler Phase II deck

    b. Clear core card

    c. Absolute Loader deck

7. Hit START and EOF on reader.

8. Eject page on printer, and ready printer.

9. Hit LOAD.

10. Reader may pause in the middle of the deck, that's all
    right, its waiting for tape to rewind.

11. When printing is finished** rewind and ready unit Ø81.

12. Hit LOAD.

13. Pause briefly and hit LOAD.

14. M3Ø is now running and should be in its normal happy
    state: WAIT light on, MSD, A, B registers Ø, ALU OUTPUT
    99. To save core see next section.

 *   Printer says 1EI

 ** Printer says 2EI

To Make an IPL Dump Tape

1. Get the ITP core in the state you want dumped. Be sure that location 4 contains the first instruction you want executed after a load from this tape, since the IPL bootstrap paper tape transfers control to 4.

2. Rewind tape unit Ø81 (the right unit). To do this, hit

    RESET

    LOAD REWIND

    START

    on the tape unit. Then hit LOAD on the 360, after checking that the LOAD UNIT switches are set to Ø81. This gets a clean copy of IPL into the 360.

3. Mount the new tape on unit Ø81. Rewind it. Be sure the write ring is in.

4. Set the LOAD UNIT switches on the 360 to Ø14

5. Put the deck containing the program to create an IPL tape in the reader. This deck consists of

    3 cards labeled HEX LOADER

    19 cards labeled CREATE IPL TAPE

    Hit END OF FILE and START on the reader. If the reader jams, see page 6.

6. Hit LOAD on the 360. You have now written the 360 part of IPL on the tape.

7. Rewind unit Ø81. Put Ø81 back into the LOAD UNIT switches on the 360 and hit LOAD.

8. Check that unit Ø8Ø (the left tape unit) is ready.

9. Say to IPL

    #INIT.

    #D^CUMP.

10. Rewind unit Ø81 and hit load on 360. You are now done.