

1/31/75-

Input from Roy.

Bud Gilkey - Lexington

8-445-2457

Will be here Tuesday 2/4/75 if we have parts list & or drawings of attachment parts.
(Bill of Material) Pictures

7-4826 - George Price. Bob Egerton 6291
967-0884 Greg Tolson

445-4600
45 56400 Broke
Bob ~~Stuck~~ Broake

Call to Bud Gilkey -

Left message for Bud with secretary.
We have parts list of parts - will expect him Tues. 2/4-

8-332-2882 Dell H. C

left message for Dell to return call.

Called Denny - Told him to have his guys here on Tuesday.

Dell returned call - has to be in Boca
first part of week - may not be able to be
here on Tuesday.

Call from Dennis: Try to delay until Thursday -

8:10:25 PM = Call to Gilkey.

Rochester schedule not good for that week.

2/3/75. Call to Bud Gilkey

Monday, Tues, Wed. ~~guarantee late arrival~~

Blaize 6738, Ron Shaw to be here

3/12/75 Commitment from Gilkey for report today.

phone conversations from Bud
with Gilkey failure rate 100 hrs. 5 m cycles = Sel II 2.55 calls + .25 = 2.8 calls
8m 119
200 10m 3.82 1.38
400 hrs. 60m 12c

2/4/75

Call from Gibbs & George M ; Larry Schroder

Comparison of GEORGE Code V8 PARM code for printer:
Code written 7/73

Forms 4 - 30 ; initial housekeeping.

Delay routines
Mda step

5 to

3/10/75 Bul Belkey - 8-445-~~2457~~ (2457)

Don Green 8- (3500) ac.

8-445-~~7312~~ (3158)

3/10/75 - Blayne's posture is that Corner Stone
and GEM are not in competition.

GEM power reqd for APL, BASIC
small -

Corner stone may be used for I/O control.

SS/I/O voltages $\pm 5 \pm 8.5. 10\%$.

Input from George - Atlanta's concern of Cornerstones proliferation
within one system. § 20 e

3/11/75 - Jack Quanstrom - 4770

OK to use report material for working
document.

3/11/75 8-332-6182

Will return my call:

How can we do more with what we have Taskforce.
Dell - HATAS.

Tracey - Dev

Steyer Mfg.

Gray, L MKT

Chuck Mitchell Services

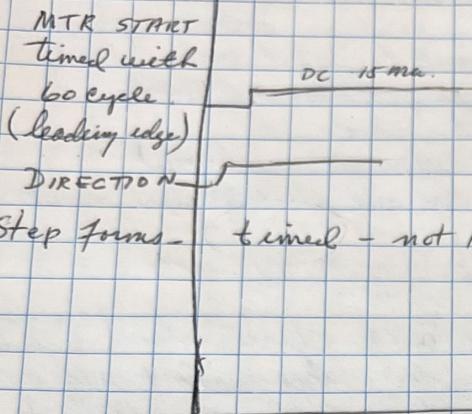
Dell moving to Boca - will work for Roger Abumayet

Suggested D.R. for Atlanta

3/12/75 Bill Mayz. 8-445-3822

Paul Friedel - \$-

From Paper

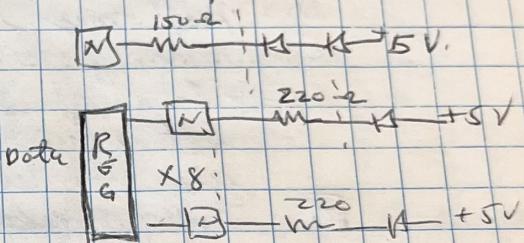


Step forms - timed - not known at this time -

From PRINTER.

120 CPS interrupt
60 CPS STATUS
left margin "
right margin "
Forms serv. (no paper)
(Forms feedback?)

MTR START & Forms Selected



Software

Registers:

Previous line count line length

Present line length

[beginning char]

[last character]

Page size

max line length (length)

line spacing 1 or 2.

STATUS

left margin

right margin

Print Go

Forms mode

~~120 CPS~~? PREPRINT DIRECTION

60 CPS

Forms SW

PRT DIRECTION

4/16/75-

See previous page

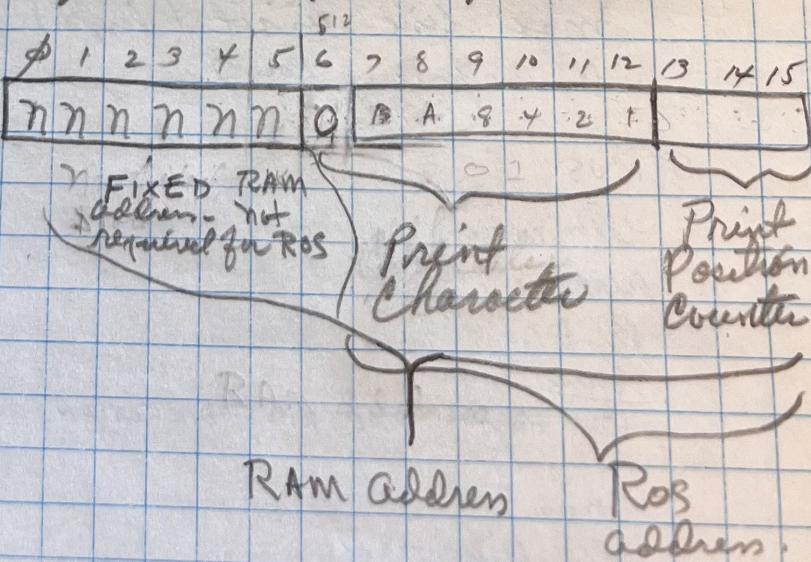
Attachment for Ray Print using Bahia attachment card.

- (1) require DC line timed with 60 CPS signal to start motor. (Print)
- (2) " pulsed line to increment paper. (Forward Only).
- (3) " 120 CPS interrupt from printer card.
- (4) " 60 CPS status. (Could be done in software)
- (5) " left / right margin, no paper and possibly paper moved status.

Mode of Operation.

- A. Print 132 characters? in both directions. (carriage size)
- B. Always use left margin for line start reference.
- C. Do look ahead for shortest move required to print next line.
- D. Need max line check for over run.
- E. Need gross level of timer for failure to move.
i.e.: if in right to left mode, must sense left margin switch within a given time. (Could use gross timer in Bahia Attachment.)
- F. Need procedure to specify number of lines per page, line length, single or double space and align paper to first line. (Initial procedural step for scamp will be "Print Enable" key of Scamp Keyboard and prompt messages).
- G. Initial attachment will always try to print a space (no data bits) character must always be loaded into the attachment buffer except for controlled printing.
- H. Character formation will be table looks up from RAM (lites ROS) for each print position.

		WIRE POSITION														
		$\phi = \text{No PRINT}$ (LOAD NO BITS)														
		8	7	6	5	4	3	2	1	0	0	0	0	0	0	0
CTR 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2																
3																
4																
5																
ϕ	Character A															
1																
2	+ so on															



4/16/75. See previous 2 pages.

Software Considerations.

Register assignment.

status bytes(s)

Messages (initialization prompting for paper alignment, etc-
error status bytes-

a) print motor did not move.

b) paper did not move.

c) (print wire check? ie (dinner voltage supply fuse)
blown)?

d) Printer not connected. (cable interlock)

INITIALIZATION:

Driver is "ENABLE PRINTER" key or scamp keyboard.

- initialize registers and status bytes.
- test for printer attached. If no, abort command.
Yes display message; PLEASE LOAD AND ALIGN
PAPER TO LINE ONE, THEN PRESS EXECUTE.

- ENTER NUMBER OF LINES PER PAGE; EXECUTE.
- ENTER MAX CHAR PER LINE; EXECUTE.
- ENTER 1 FOR SINGLE OR 2 FOR DOUBLE SPACE;
EXECUTE.

MESSAGE : PRINTER is READY.

NOTE: Consider graphics -
need different paper movement-
ie., 2 or 3 steps per space.

Also ability to print all dots

from EF,

4/16/75. Continued from previous 3 pages.

Software MACROS

① INITIALIZATION (see previous page)

Registers

Status

Prompting

② LINE ANALYSIS

- a) Previous line length } ^(SPW?) NOTE
- b) Next line length }
- c) Preprint Position move.

required only when away from left margin.

Print head will be driven 21
Character beyond line when, and
Print mode to negate need for
Pre-Print Position & equal lines.
(Right to Left only)

→ When going right to left will
Always continue to left margin
regardless of character count.

TRACKING

Print Position, Print, or Form operation.

Print direction

Machine status

Line overrun

Print motor timeout - no left or right margin working time.

→ paper did not move (?)

Line count and page overflow routine.

Character count.

Print position and

space count.

END ROUTINE

SAVE LINE LENGTH JUST PRINTED.

SET NEXT PRINT DIRECTION

UPDATE STATUS AND ERROR BYTES

SAVE PRESENT CHAR POSITION

MISC HOUSEKEEPING

RETURN TO APL SUPERVISOR.

4/16/75 Continued from previous 4 pages.

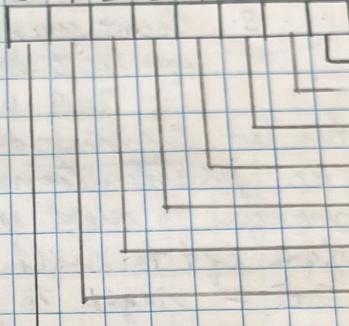
Register assignment and SAVE area -

LEVEL 2

0	IAR
1	LINK
2	STATUS BYTE(S)
3	ERROR BYTE
4	
5	
6	
7	OVERFLOW VALUE LINE COUNT
8	CHAR COUNT
9	PRINT POSITION CNT
A	SAVED LINE LENGTH
B	
C	R→L CHAR COUNT
D	L→R CHAR COUNT
E	
F	RESERVED

INTERNAL STATUS BYTE

0 1 2 3 4 5 6 7



LEFT MARGIN
Right margin

PRINT MODE

FORMS MODE

PRE PRINT MOVE
(TO RIGHT ONLY)

60 CPS

PRT DIRECTION
I = L→R

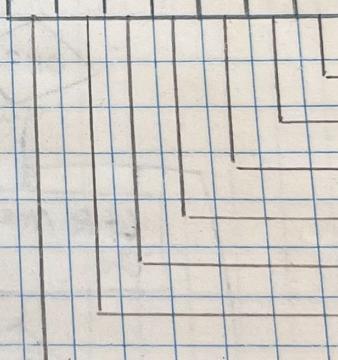
PRE PRT DIRECTION
I = L→R

LEVEL 0

0	IAR
1	LINK
2	R
3	
4	
5	RESERVED
6	
7	
8	
9	
A	
B	
C	
D	
E	
F	RESERVED

ERROR BYTE

0 1 2 3 4 5 6 7



PRT HEAD DID NOT MOVE OR SLOW

PAPER DID NOT MOVE OR SLOW

PRINT DISCONNECTED

PRINT WIRE (FUSE BLOWN)

Loc 32 HW

PRESENT LINE LENGTH

33

PREVIOUS LINE LENGTH

34

MAX LINE LENGTH

35

DELAY ROUTINE VALUE

36

Low Byte $\oplus \phi = \phi$ Single Line $= \text{LINES}$

36

HIGH BYTE = MAX LINES / P

37

STATUS BYTE | HIGH BYTE = IN