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Dear Bob,

312-666-1954

I don't know whether you'd call my contacts "sources", but I think I know enough people to get some very useful information for Arcadian subscribers.

First off, some background info:

I'm a programmer who got interested in the Bally when IS&A advertised it in Scientific American in 1977.

I've been told that I was one of the first few people to get my hands on one. At any rate, I was very excited about the machine's potential, but was disillusioned by the heat problems which were inherent in the first machines (I "burned out" two of the units). Just after I returned the second unit, I discovered that my programming

instructor was doing the graphics for the Bally. (Yes, folks, it was the infamous Tom De Fanti and his magic Z-Grass). I know Tom well enough to drop into his "Graphics Habitat" at the university and talk intelligibly about some of his projects. I also know Nola Donato and a few of his students who are working on projects for Bally. (Tom has had the university purchase 8 Ballys and 8 Sony TV's to teach students the basics of computers and programming!)

This past August, Tom was Chairman for a Graphics seminar held jointly by the IEEE and ACM/SIGGRAPH. For three nights, Tom and his crew presented new and interesting works in various areas of computer graphics (including a few by people using Bally Arcades). In addition to the seminar, a graphics equipment expo was held

and it was there that I met some  
guys from Dave Nutting, in parti-  
cular Rickey Spiese (who developed  
FOOTBALL and, I think, CLOWNS).  
Rickey was helpful and showed me  
some tricks (like the  $\frac{1}{2}$  parts), and  
also demonstrated the graphics  
capabilities by loading a picture  
from a disk to a color monitor.  
In addition, his BALLY was connected  
to a B+W monitor, and a keyboard,  
and his commands appeared on the  
B+W, and the graphics were displayed  
on the color monitor. However, the  
whole setup was attached to a Bally  
board mounted in a frame, not  
in the case, which leads me to  
believe that some special wiring is  
needed. I intend to call Rickey soon  
and find out how this is accomplished.  
(When I asked some one from Bally

if this could be done, I was told "no".  
If Riskey can't tell me, then I'll ask  
DeFanti or one of his gang; I'm sure  
that they have the technical know-how  
to do it.

With regards to the Bally unit, I am  
greatly interested in the  $\&$  ports. I  
have found that  $\&(9) = 64$  or  $128$  will  
yield  $3/4$  of the picture frame, and, at  
the same time, graphically show the  
program.  $\&(13)$  is a very interesting  
port. If you assign values to  $\&(0)$ ,  
 $\&(1)$ ,  $\&(2)$  and  $\&(3)$ , plus values for  
FC and BC, plus type in a short  
program (three or four PRINT's will do),  
then punch in  $\&(13) = 5$ , you will  
get a neat display of stripes and other  
garbage. (If you don't type in a program,  
the TV makes a terrible buzzing noise).  
 $\&(8)$  appears to be some sort of switch -  
even values are "off" and odd values  
are "on" and cause the machine

to RESET.  $b(4)$  and  $b(5)$  have something to do with the color of the ~~g~~ background and frame, respectively, but I can't quite figure out what.

A quick way to figure out what the various  $b$  ports do is the following program:

```
10 INPUT R
20  $b(R) = KN(1) + 128$ 
30 PRINT  $KN(1) + 128$ 
40 IF  $TR(1) = 0$  GOTO 20
50 GOTO 10
```

This program allows you to choose the ~~any~~ port you want to test, displays the values as well as the results of the values, and allows you to choose a new port for testing by pulling the trigger.

(Before I forget, I saw the new PINBALL cartridge demoed at the graphics seminar and it looks pretty good. I heard one of the Dave Nutting guys say that he just sent the thing off to Bally and that it

Should be out on the market pretty soon. They also had a demo of 2-GRASS - which, unfortunately, I didn't get a chance to see. Also, while I was a student of DeFanti, I learned how to program in GRASS - 2-GRASS's daddy - using a PDP-11/45).

Anyway, to wrap this letter up (it's beginning to look like a novel), I'm glad to find out that there are other people like me who think the BALUY ARCADE/COMPUTER has a lot more potential than most people give it credit for. If I were you, I'd tell that marketing manager at Bally that he's approaching the advertising of the unit all wrong, .. he should advertise in computer magazines (BYTE, Personal Computing, etc.) and stress the following:

- 1) most people buy home computers for games; Bally offers terrific games - especially the controls
- 2) by the time people become

interested in programming, Bally  
will have the ADD-ON module  
available

- 3) The graphics capabilities have no  
competition - they are the best
- 4) The Arcade/Computer is dirt  
cheap when compared to other  
systems.

I'm looking forward to the next  
issue of the Arcadians.

Karen Nelson