Here's May!

Every now and then we like to mention
that all our cassettes are guaranteed - if
you are unable to load either of the two
copies of any program, just return the tape
to us and we'll replace it (please, return
it within a month or so of receiving it).
This first paragraph is a great place to put
shorty announcements like this.

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*                                                                          *
*     Level              Title                      Turns Count            *
*                                                                          *
*                                               CTR-41        CTR-80       *
*                                                                          *
*     *********     Cityscape Cover            13 & 197       8 & 116      *
*         **        Coin Toss                  50 & 228      30 & 134      *
*         **        Draw Instructions          90 & 259      53 & 152      *
*         **        Draw                      138 & 299      81 & 177      *
*     *********     Sinewave                  166 & 321      98 & 195      *
*                                                                          *
*                                                                          *
*     *********     Cityscape Cover            13 &  51       8 &  30      *
*       **  **      Coin Toss                  89 & 114      53 &  67      *
*       **  **      Sketcher                  139 & 190      82 & 112      *
*       **  **      Dungeons Instructions     238 & 272     140 & 160      *
*       **  **      Dungeons & Dragons        305 &(348)    180 &(205)     *
*     *********     Sinewave                  413 & 429     243 & 253      *
*                                                                          *
* The second copy of Dungeons & Dragons is recorded on the Lvl I side.  *
*                                                                          *
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The Cityscape cover is an interesting motion-pattern sequence. It is
somehow reminiscent of a city. To Pablo Picasso, maybe.

"Coin Toss" is a coin tossing program which demonstrates that
probability is a funny thing. A "true" coin is just as likely to come up
heads as it is to come up tails, so one could reason that after a large
number of tosses, the "heads count" and the "tails count" will be equal.
Not so. If you toss a true coin twice, you're just as likely to get two
heads or two tails as you are to get one each. If you make six tosses,
the chance of coming out equal in the heads/tails department is about
31%. To be sure, it's the most probable outcome, but it's still not too
likely. If you were a Las Vegas casino owner, you could make money (in
the long run) with the following game:

1) Customer places bet and tosses true coin six times.
2) If there was an equal number of heads and tails, casino pays
   customer twice the bet.
3) If there was an unequal number, casino takes customer's bet.

The payoff to the casino is about 5%. If 100 bets of $1 each are
made, the casino gets about $5.

"Draw" (level I) and "Sketcher" (level II) are a pair of graphics
packages. "Sketcher" allows you to draw circles, boxes and lines by

specifying their sizes and such rather than actually drawing them. It also lets you insert text and save the drawings on tape.

"Sinewave" is a plotting program. It lets you select two garden variety sine waves of different frequencies and plot the result of their addition (that is, if at a given instant one sinewave is "at" 3, and the other is "at" -1, their sum is 2 at that instant). It turns out that any waveform (no matter how complex) can be generated by the addition of sine waves of various amplitudes and frequencies. The reverse is also true. Any waveform, for instance that of a spoken word, can be broken down into a bunch of sine waves, and a list can be made of their amplitudes and frequencies.

There is a very real and practical application for this branch of knowlege, folks. If a spoken word's waveform can be broken down into a list of sinewaves by a computer (a TRS-80 can do it), that same computer can continue to listen and break down all incoming words into lists of sinewaves. This means that the computer can "listen" to human speech by using each list as a spoken word. The whole field is relatively new, and the problems yet to be solved are numerous and difficult, but a computer which recognizes when it's being yelled at and what names it's being called is a very powerful (and valuable) computer. The TRS-80 "VOXBOX" is a good example of what is now possible.

For those of you who want to get into this field, the process of breaking a waveform down into a bunch of sinewaves is known as the "Fourier Transform". This beastie is the Waterloo of many an engineering student, myself included. (Note to Dr. Gray, whose EE130A class wiped me out and who is now a CLOAD subscriber: I wasn't much of a student anyway - at the time I was more interested in getting my homebrew computer to work than I was in studying.)

The last program this month is "Dungeons & Dragons". It is a 16K program, so the instructions are separate. To keep you from having to copy them down with a quill pen and parchment, here is a rundown:

When you RUN the program, you are assigned several attributes such as dexterity, strength and richness (in gold pieces). Dexterity is your level of skill at fighting, 10 being a normal level. Strength is how much strength you have left (if it goes to 0, you're dead). Eating elven cakes increases your strength, but be careful. "Eat cakes" doesn't work, it's "eat cake", and you eat the cake that is in your hand, not the cake that may be present in the room. "A.C." stands for armor class (table below). At the beginning of the game, you get to buy weapons with your gold pieces (table below).

Armor Class

9 - no armor
8 - a shield only
7 - leather armor
6 - leather armor w/shield
5 - chain mail armor
4 - chain mail armor w/shield
3 - plate mail armor
2 - plate mail armor w/shield

Weapon & price

fist............Free
dagger..............4
sword..............10
mace...............11
battle axe........13
Morning Star......15
two handed sword..20

After you have bought all the weapons that you can, you wander through the caverns in three different modes - travel, command and combat

(you are informed which mode you are in). In travel mode, your choices are N,S,E,W,U and D (for North, South, East, West, Up and Down respectively). In command mode, your choices include take (object), score, say (word), eat (object), clue, fill (object), light (object), and so forth. To change from command mode to travel mode, press <enter>. There are several choices which are undocumented, especially those usable in the dragon's lair. Part of the challenge is to find out what they are. In combat mode, your choices are A,B,S and P. A is an average attack, and B is an all-out maximum effort attack (for which you are penalized one strength point). Enter the letter, then your choice of weapons. Since combat is active and things often get exciting, you may abbreviate your weapons choice to the first three letters (i.e. bat for battle axe). The S and P choices in the combat mode refer to stand up and pray, respectively. Here's a list of the choices:

Travel Mode	Command Mode	Combat Mode
N north	<enter> travel mode	A average fight
S south	TAKE object	B all-out fight
E east	SCORE	S stand up
W west	SAY word	P pray
U up	EAT object	
D down	CLUE	
	FILL object	
	LIGHT object	
	(plus several secret choices)	

LISTing the program would normally be a good way to find out what the secret choices are, except that the programmer (Peter Trefonas) has arranged for those lines to be invisible.

And, saving up the worst for last, us folks here at CLOAD are about to do what has become a rather common act lately, known as Raising Our Prices. The effective date is some time away - probably towards the end of summer - so this actually amounts to nothing more than an announcement of intent. We haven't had any price bumps for two years, so the inflation adjustment should theoretically be about 34% upward. Our costs, however, haven't gone up that much so our prices won't either. Here's the rundown:

	Now	Will be	% increase in 2 years
1 year subscriptions	$36.00	$42.00	17%
1 yr sub (overseas surface)	$38.00	-	
1 yr sub (overseas airmail)	$48.00	$50.00	4%
Single issues (CA add 6%)	$ 3.50	$ 4.00	14%
Single issues (overseas)	$ 4.50	$ 5.00	11%

Overseas subscriptions will no longer be shipped as surface mail. We have had too much trouble with proverbial slow boats to China (no, we don't send any subscriptions to China - yet).

Because we are not too avaricious (or bright), we will honor subscription renewals at the old price even if your subscription will not be up until the prices are raised. Likewise, all orders for back issues will be honored at the old price through this summer (there is a list in this issue). Come one, come all...

NEXT MONTH!!

Ralph

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       ANTHOLOGIES - "BEST OF CLOAD"

These include hardcopy listings and commentary on each
program as well as a cassette tape.
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              Best of CLOAD, Volume I  ($ 10.00)
              from our first six months of trying

B  Yield       Corporate bond calculator - computes
               bond yield-to-call and yield-to-maturity
B  Sandcastle  A civil engineering problem - build a
               sand castle that doesn't fall down
B  Knight      Knight's tour - the old chess problem
B  Pool        One pocket variety
B  Y=mX+b      Linear regression
B  Break       Break a window - exercise your timing
B  Pinball     A "Breakout" type game
B  Jukebox     TRS-80 Tunes - injects musical hash into
               any nearby AM radio.


              Best of CLOAD. Volume II ($ 15.00)
              from our second six months.

B  Seekers     (cover program)
B  Artillery   Target practice
B  Ohm's Law   Tutorial - teaches Ohm's law and generates
               practice questions.
B  Four Color  Generates maps at random - then has you
               designate colors (four maximum).
I  Road Rally  Race around the "U" shaped track - the cars
               have poor brakes and have a tendency to
               crash into the walls.
II Star Wars   Rocket down the trench, dodge the laser banks
               and enemy tie fighters, drop the charge and
               get out - fast.
II Sketch      Use screen as a sketchpad, save up to ten
               images in memory
II States      Draws map of U.S. and quizzes on state, its
               capitol, etc.

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              BACK ISSUES ($3.50 each)

Not mentioned, but present in every issue (both level
I and II), is our "Cover" program. This is where we
publish various submissions of graphic artwork.
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              October 78
II Star Wars   Fly your Tie Fighter down the trench
B  Graphic     Draw & save screen graphics
B  Chase Inst  Instructions for:
B  Chase       Escape the killer robots
B  Passbook    Keep track of savings, interest, etc.
B  Machin      Demonstration of screen character set

              November 78
B  Art Inst    Snide comments from our Editor
B  Art         Artillery - aim and fire a cannon
B  Ohm         Learn Ohm's Law - includes examples made
               up at random by the computer
B  C & M       Cat & mouse - two players, computer acts
               as referee
II Crush       Crushman - the old "hangman" word game
               with new graphics

              December 78
B  4 Color     Creates maps for you to color - only
               four colors allowed
I  States Quiz Test your knowledge of the (US) states
II States      Graphic version of the above
B  Reaction    Great for parties
I  Sketch      Draw & animate up to ten frames of
               screen graphics
II Jukebox      TRS-80 tunes - plays through radio

              January 79
B  Road Rally  Two speed race - the race cars have poor
               brakes, so beware!
B  Nym         Beat the computer
B  Esp Test    Are you psychic, or merely insane?

              February 79
B  Corp Notes  Instructions for:
B  Corporation Run an industry - be a capitalist and
               put old John D. to shame
B  Powers      Of concentration
I  32 Char     Large letters (lvl I)
II Disassemble Converts machine code into mnemonic code

              March 79
B  Jungle ins. Escape the natives...of New York
B  Jungle      or wash windows in the concrete jungle
B  Worm        Rid'em Wormboy! Steer an ever-growing
               worm around the screen
I  Billboard   Graphic Signs - useful for window
               advertising
II Messages    Similar to above but level II

              April 79
B  April Fool  April Fool!
B  UFO         Zap the invaders
B  Dice ins.   Introducing...
B  Dice        The cheating TRS-80
II Scramble    Rearrange the letters of a word
II Hustle      White out the screen

              May 79
B  Hunt & Peck Like "Concentration"
B  Photo Inst. Instructions for
B  Photo       Camera class - a tutorial on the use of
               "f" stops and shutter speeds
B  Voice       Creates voiceprints - also handy to look
               at cassette saves
II Labyrinth   Walk through a maze - computer maps the
               journey from the traveler's viewpoint
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              June 79
I  Foot. Inst  Instructions for:
I  Football    You're the quarterback
II Fullback    Similar to above
I  Cartesian   Graph equations in the Cartesian coordi-
               nate system
II Grapher     Polar and Cartesian graphing routine
B  Recorder    Figure tape counter - CTR-41 to CTR-80
II Cartoon     A space age twist on an age old problem,
               animated
II Savedata    Save & sort data set up in memory as a
               string array

              July 79
B  Fuel        Conservation computation
B  Motorcycle  Jump over the barrels
B  How Far     Computes how far, and in which direction
               any two points on earth lie
II Bounce      Guide a bouncing ball into a goal
II Psycho      Pattern generator
I  Polar       Draws polar graphs

              August 79
B  Grand Prix  Steer winding road
B  Coefficient Find the coefficients of 2nd, 3rd or 4th
               order equations
B  Aero        A quickie aerodynamics course
II Hobbit      Fantasy adventure

              September 79
B  Binary tree A Gaussian distribution generator
B  Calendar    For any year
I  Mummy       Mummy's Tomb adventure
II Starbase    for you Trekkers
II Poke        Memory changer

              October 79
B  Constel     Star plot & quiz
B  PhoneWrd    Telephone number mnemonics - helps make
               up words from telephone numbers
I  Space Skeet Target practice
II Germ War    Conway's LIFE, with death thrown in, too
II Save        Save BASIC programs as SYSTEM programs

              November 79
B  Budget      Compute your past expenditures
I  CryptArith  Arithmetic - switch letters with numbers
I  Chimera     "Space invader" type game
II Defend      Same as above - except real time
II PsychoLogic DIFFICULT math game
II Mail list   Mail list program with internal sort,
               search, print, etc. - cassette based

              December 79
I  Space War   Yet Another Zapp-em-on-the-rise
I  Kaliedo     Pattern generator program
II Signboard   Large, moving letters - good for
               advertising
II Morse       Teaches Morse Code
II Blockade    Try to blockade your opponent
II Tape Test   Certify your own cassettes

              January 80
B  Stars       Dodge the stars in your spaceship
B  Two Dates   Calendar calculator - works with number
               of days, number of weeks or specific
               dates.
I  Who's On    Deductive logic - which ballplayer is
               on first - generates new problems at
               random
II HiCalc      Four function calculator - 1500 places
II Midway      Carnival type game
II RAM Test    16K, 32K or 48K RAM test program

              February 80
B  Kalah       The old African board game
B  Dissertat'n Program generates Dissertation suitable
               for submission for Ph.D.
B  Coefficcn   Computes coeffecients of polynomial
               equations by Cramer's rule
II Election    Educational simulation of U.S. Presidential
               election - set up as game where you enter
               race against 1980 candidates and slug it
               out from primaries to November.
II Monitor     Similar to Radio Shack T-bug, but written
               in level II BASIC

              March 80
B  Stockpage   Tutorial program - explains the meaning of
               the entries on the newspaper stock page,
               then quizzes by making up problems where
               you supply the missing value.
B  YahtZ-80    The old dice game, now on a computer.
II Nerves      You race a rat through a maze.  Score is
               dependent on how much time, how many
               crashes, etc.
II Level III   Makes level II BASIC more kinder to you -
               it gives more specific error messages and
               lets you store whole words under shifted
               letter keys.

              April 80
B  Craps       Old dice game from a programmers viewpoint.
               Draws a flowchart on the screen and shows
               the progress of decisions for each roll.
B  Distance    Distance from earth to various celestial
               bodies.  Input speed, destination and how
               long you've been traveling, and it shows
               (graphically) how far you've gone.
I  HiQue       The old peg jumping game
II Typing      Learn and practice typing.  Can also be
               used as a tachistoscope.
II Syzygy      Two player wormball.  Surround your oppo-
               nent with your worm.  Obstacles can be de-
               fined, and up to five missles can be used
               by each player.
II Change      System program - converts level II system
               format into level I system format (works
               from 4200H to 4FFFH).
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