

AUGUST 1985 Vol. 3 No. 8

The August meeting will be held on Thursday, August 15 at Cuyahoga Falls High School at the corner of Fourth and Stow Streets in Room 413 Physic's Lab. The room will be open at 7:00 and the meeting will begin at 7:30 PM. Please remember to sign in.

This month's program will be "Advantages of Extended Basic over Basic". Rich Williams will be giving the program.

JULY WINNERS

Burt Haase	Value Pack
Dominic Sedita	Joy Stick Adapter
Bob Dresser	Joy Stick Adapter
Norm Sorkin	Cassette Package
Bernie Kunos	Shamus Game

The deadline for articles in the September newsletter is Sept. 6.

LIST OF BOARD MEMBERS AND THEIR HOME PHONE NUMBERS

President, Norm Sorkin	678-2360
Vice President,	
Librarian, Bert Haase	753-7846
V.P. Program,	
Secretary, Vicky Chrisman	784-0943
Treasurer, Betty Duncan	633-5217
Educational Director, Rich Williams	626-2423
Editor, Kathi Anderson	923-7530

This article goes with the Screen Dump article that was printed in the July newsletter.

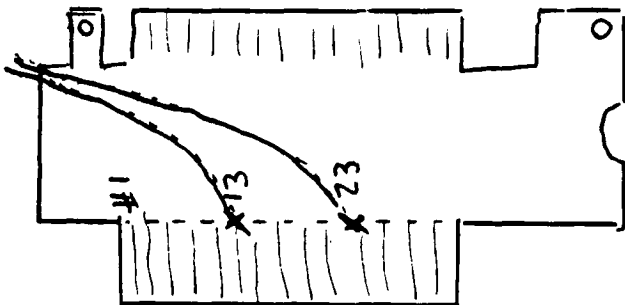
BUILDING AN INTERRUPT SWITCH

An interrupt switch is used to stop the action of a program and go to another memory location, while not changing the screen display. This is handy when you are trying to do screen dumps to a printer. In order to do this, you need an interrupt switch. One can easily be built for less than \$2.00 and installed inside your speech synthesizer box.

You will need a Subminiature Push Button Switch (Radio Shack No.275-1571), two pieces of insulated wire about 6 inches long (bell wire will do), a drill the size of the switch, a soldering iron and heat sink, and a small phillips-head screw driver.

Disassemble your speech synthesizer to get to the pc board inside. Take the outer plastic case of the synthesizer and open the door. You will need to drill a hole in the right-hand corner to mount the switch (as close to the corner as you can get). It might be best to drill it from the inside. Before mounting the switch, solder the two wires to the terminals of the switch, using a heatsink to prevent damage. Next solder the other two ends of the wires to pin 13 and 23 of the pc board. Note: When counting pins, count 1,3,5,7,etc. (SEE DIAGRAM) Replace the metal cover over the pc board and place some tape at points where the wire passes thru. Secure the switch in place and install the plastic cover.

If the computer seems to lock up when you turn it on, you have something hooked up wrong or a short. If you have any questions about this, call Cecil, Larry or myself.
-Bill Knecht



And you thought that "typewriter" was the way to spell it? Not when it's the name of this word processor! It's an easy to use, inexpensive program from-

TENEX Computer Express
P.O.Box 6578
South Bend, In 46660

The cost is \$27.95 for #11752 cassette, or \$29.95 for #11766 disk, plus \$4.75 shipping and handling for either version. I bought the cassette version before I owned a P E box, and was able to put it on disk very easily. When I ran out of memory in the middle of a very long letter, I saved the letter on disk, followed their very clear instruction manual, was able to change the program to access the memory expansion card, and go on from there! It's an excellent manual that is clearly enough written that this rank amateur computer user can read it and understand it.

I just entered the code symbol to justify the right margin. Notice how even it is now. Also another code caused the heading to be centered on this column. Margins and width can be controlled too. @T indents the first line of a paragraph, @L skips a line, @C centers a line, and @N starts a new line. About ten more codes control the printer, while edit, delete, insert, erase, begin, and cursor arrow keys make this word processor a joy to use.

You will need X BASIC, a cassette recorder, and a printer to run it. If you wish to type a letter longer than one page, you simply run off one page at a time. But the nicest thing about a word processor is the complete freedom from worry about making a boo-boo because you can go back to any section any time and edit the sucker out!

Yours truly,
Uan

We wish to give credit to the PUGET SOUND 99'ERS who printed this All Purpose Handy Dandy Reference sheet in their APRIL 85 Newsletter.

QUICK REFERENCE SHEET									
COLOR CODES		PATTERN IDENTIFIER				ERROR CODES			
COLOR	VALUE	CONVERSION TABLE				FIRST	COMMAND OR STATEMENT		
TRANSPARENT	1	0	0	0	0	1	OPEN		
BLACK	2	0	0	0	1	2	CLOSE		
RED	3	0	0	1	0	3	INPUT		
LT. GREEN	4	0	0	1	1	4	PRINT		
DARK BLUE	5	0	1	0	0	5	RESTORE		
LT. BLUE	6	0	1	0	1	6	OLD		
DK. RED	7	0	1	1	0	7	SAVE		
CYAN	8	0	1	1	1	8	DELETE		
RED. RED	9	1	0	0	0	9	EOF		
LT. RED	10	1	0	0	1				
DK. YELLOW	11	1	0	1	0	A	TYPE OF ERROR		
LT. YELLOW	12	1	0	1	1	B	DRIVE NOT FOUND		
DK. GREEN	13	1	1	0	0	C	DEVICE or FILE WRITE		
MAGENTA	14	1	1	0	1	D	PROTECTED		
GRAY	15	1	1	1	0	E	BAD OPEN ATTRIBUTE		
WHITE	16	1	1	1	1	F	ILLEGAL OPERATION		
							OUT OF SPACE		
							ATTEMPT TO READ PAST		
							END OF FILE		
							DEVICE ERROR or		
							HARDWARE ERROR		
							FILE ERROR - File or		
							disk does not exist		
ASCII CODES									
CODE	CODE	CODE	CODE	CODE	CODE	CODE	CODE	CODE	CODE
30	48	66	84	102	120	138	156	174	192
31	49	67	85	103	121	139	157	175	193
32	50	68	86	104	122	140	158	176	194
33	51	69	87	105	123	141	159	177	195
34	52	70	88	106	124	142	160	178	196
35	53	71	89	107	125	143	161	179	197
36	54	72	90	108	126	144	162	180	198
37	55	73	91	109	127	145	163	181	199
38	56	74	92	110	128	146	164	182	200
39	57	75	93	111	129	147	165	183	201
40	58	76	94	112	130	148	166	184	202
41	59	77	95	113	131	149	167	185	203
42	60	78	96	114	132	150	168	186	204
43	61	79	97	115	133	151	169	187	205
44	62	80	98	116	134	152	170	188	206
45	63	81	99	117	135	153	171	189	207
46	64	82	100	118	136	154	172	190	208
47	65	83	101	119	137	155	173	191	209
				120	138	156	174	192	210
				121	139	157	175	193	211
				122	140	158	176	194	212
				123	141	159	177	195	213
				124	142	160	178	196	214
				125	143	161	179	197	215
				126	144	162	180	198	216
				127	145	163	181	199	217
				128	146	164	182	200	218
				129	147	165	183	201	219
				130	148	166	184	202	220
				131	149	167	185	203	221
				132	150	168	186	204	222
				133	151	169	187	205	223
				134	152	170	188	206	224
				135	153	171	189	207	225
				136	154	172	190	208	226
				137	155	173	191	209	227
				138	156	174	192	210	228
				139	157	175	193	211	229
				140	158	176	194	212	230
				141	159	177	195	213	231
				142	160	178	196	214	232
				143	161	179	197	215	233
				144	162	180	198	216	234
				145	163	181	199	217	235
				146	164	182	200	218	236
				147	165	183	201	219	237
				148	166	184	202	220	238
				149	167	185	203	221	239
				150	168	186	204	222	240
				151	169	187	205	223	241
				152	170	188	206	224	242
				153	171	189	207	225	243
				154	172	190	208	226	244
				155	173	191	209	227	245
				156	174	192	210	228	246
				157	175	193	211	229	247
				158	176	194	212	230	248
				159	177	195	213	231	249
				160	178	196	214	232	250
				161	179	197	215	233	251
				162	180	198	216	234	252
				163	181	199	217	235	253
				164	182	200	218	236	254
				165	183	201	219	237	255
				166	184	202	220	238	256
				167	185	203	221	239	257
				168	186	204	222	240	258
				169	187	205	223	241	259
				170	188	206	224	242	260
				171	189	207	225	243	261
				172	190	208	226	244	262
				173	191	209	227	245	263
				174	192	210	228	246	264
				175	193	211	229	247	265
				176	194	212	230	248	266
				177	195	213	231	249	267
				178	196	214	232	250	268
				179	197	215	233	251	269
				180	198	216	234	252	270
				181	199	217	235	253	271
				182	200	218	236	254	272
				183	201	219	237	255	273
				184	202	220	238	256	274
				185	203	221	239	257	275
				186	204	222	240	258	276
				187	205	223	241	259	277
				188	206	224	242	260	278
				189	207	225	243	261	279
				190	208	226	244	262	280
				191	209	227	245	263	281
				192	210	228	246	264	282
				193	211	229	247	265	283
				194	212	230	248	266	284
				195	213	231	249	267	285
				196	214	232	250	268	286
				197	215	233	251	269	287
				198	216	234	252	270	288
				199	217	235	253	271	289
				200	218	236	254	272	290
				201	219	237	255	273	291
				202	220	238	256	274	292
				203	221	239	257	275	293
				204	222	240	258	276	294
				205	223	241	259	277	295
				206	224	242	260	278	296
				207	225	243	261	279	297
				208	226	244	262	280	298
				209	227	245	263	281	299
				210	228	246	264	282	300
				211	229	247	265	283	301
				212	230	248	266	284	302
				213	231	249	267	285	303
				214	232	250	268	286	304
				215	233	251	269	287	305
				216	234	252	270	288	306
				217	235	253	271	289	307
				218	236	254	272	290	308
				219	237	255	273	291	309
				220	238	256	274	292	310
				221	239	257	275	293	311
				222	240	258	276	294	312
				223	241	259	277	295	313
				224	242	260	278	296	314
				225	243	261	279	297	315
				226	244	262	280	298	316
				227	245	263	281	299	317
				228	246	264	282	300	318

SOME FORMATTER TRICKS/ Jean Wilcox

Some time back, Mr. Molander very kindly gave me the information I needed for bringing a Basic or X-Basic program into the word processor, for which many thanks. The way to handle this is to list your program in a file format that can be read by TI-Writer, i.e., LIST "DSK1:program name". Then, using the Text Editor, the program can be loaded into your text buffer, either first or following a given line number of existing text. (A few rude souls nearby suggested it might be to my advantage to read the manual, and I fully intend to. Not today, of course, but sometime very soon). I did encounter a couple of small difficulties and made some gigantic messes before I figured out how to handle the situation. For one thing, if you are planning to print through the Formatter, as I generally do, the programs you draw up out of file will do some really strange things if you forget to use the transliteration commands before printing.

Looking at the screen, I assumed that what I saw was what I would get. Not so. It's easy to forget that the exponent sign for math is also the Required Space sign for text; the "at" key is handy to use for a variable name, but causes the printer to double-strike; the ampersand, the symbol for concatenation of strings, is used to underscore in word processing. A large proportion of programs will use either the exponent or the ampersand, or both, so it's a good idea to transliterate these before you attempt to print them out, unless you want to duplicate my goofs.

Here's something else that Texas Instruments never told us about the T-I Writer. Every time I think I have found all the things that will give trouble printing through the Formatter, I find another one. The newest character to add to the list is the asterisk. Assuming it is to be followed by a space or letter, (or group of spaces or letters), you can print asterisks all day long. You won't have any problems with ASB, SC, or Hello\$\$\$Stranger. But you will be confounded if you attempt to print one followed directly by a number. As an example, if you need "A\$123", what you will get will be "A3".

Part of my wasted time was spent trying to find out why the miserable thing was doing what it was doing. I finally located the one place in the manual where an asterisk is mentioned as having a function, rather than as just another character to be printed. It's on pages 111-113, listed under Alternate Input, Mail Merge Option. (How many of you send out form letters!) If you feel like getting really technical about the thing, read the part about Define Prompt, too. It's on the same group of pages. Even after finding this I still didn't immediately associate the Mail Merge with the problem I was having, since the command necessary to carry out the job in a form letter is described as "n\$", an asterisk sandwich with a number in the middle. So I just quit worrying about the why of the situation and started in working on the What To Do About It.

I must not be too swift because it took another hour of typing all sorts of strange stuff containing asterisks in odd configurations to realize that I could always get what I wanted if a space immediately follows the asterisk. In a formula it will look lop-sided, (since the space is printed, too), so, as a dedicated neat freak, I'm typing a space before and after it. It's just as easy to remember that as the other, and the results look as though it were what you had intended all along.

A day or two later, Irene called to say she had information on this from the head guru, Guy-Stefan Romano. He explained that it was indeed the Mail Merge Option that was the culprit. It seems that when the TI-Writer encounters an \$, it looks for one or two numbers for the Value File needed for the form letter,

then proceeds to strip out the asterisk and the numbers following it. His solution was to print two asterisks, followed by two dummy numbers, one space, and then the figure you want printed. This works well, but you're going all the way around your elbow to get to your thumb. Why not just put a space fore and aft and carry on?

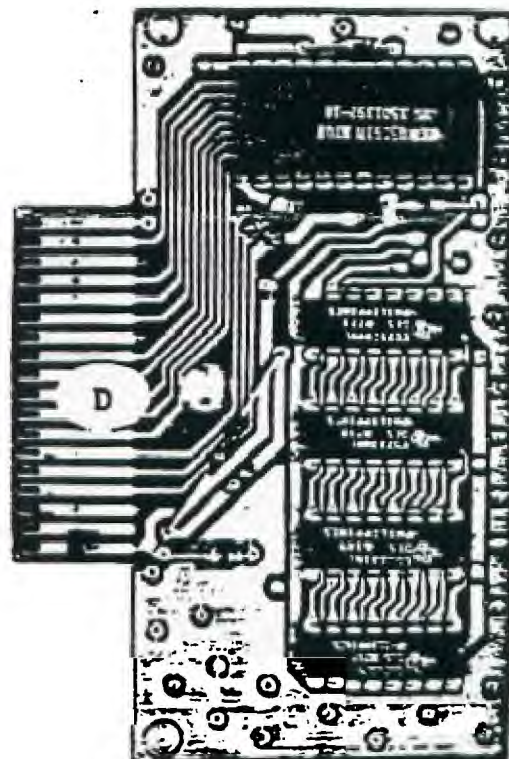
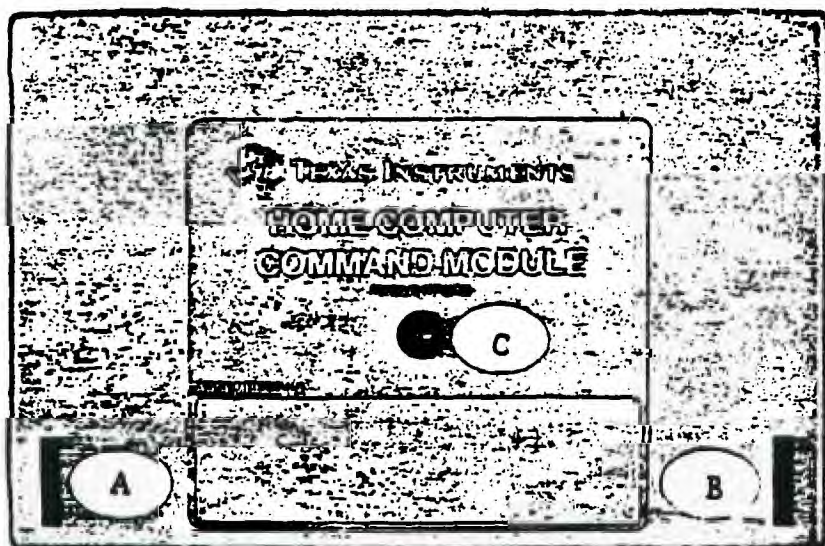
Another thing that caused me trouble also springs from my neatness fetish. When the various program lines are formatted they get drawn all up in a knot...if there's room on a line of type to print something, it will get printed, whether you want it there or not. The obvious answer to this, of course, is to add a carriage return at the end of each program line. "Enter" is supposed to do this, but for me it's undependable. If the line is short it might work, then again it might not. I found that if I enter the CR symbol by using CTRL "New Paragraph" I was in business. This causes a blank line to be inserted after each existing line, but they are easily deleted. There are probably dozens of ways, all shorter, snipier, and more efficient, to accomplish these things, but they work for me. So until I get around to reading the book, this is the way I'm going to do it.

 *CIUG:0485 CARTRIDGE CLEANING - by Ron Rutledge - 8

Dirty contacts can screw-up any electrical device and the 4A is not an exception. The only place you are fairly likely to run into this problem is in using command modules. Both the module contacts and the port itself can become dirty but cleaning the port itself is a big job as you have to disassemble the console. The good news is that cleaning the cartridge will almost always suffice and can be done quickly without any special tools or cleaners. All you need is a regular screwdriver, some sort of rag, a standard pencil eraser, and in some cases a medium phillips screwdriver.

Remove the screw from "C" if there is one. Then pry the clips in slots "A" and "B" outward to pop open the cartridge. If there is a clip in "C" pry it back after "A" and "B" are loose. If it should bend off don't worry, it won't affect the performance of your module.

The module board can now be removed. Do this carefully and note how the spring-loaded "door" is assembled if there is one so that you can put it back together if it pops out. Once you have the board removed take your rag (a kleenex will work but something cloth is much better) and rub off any residue from the contacts, shown as "D". Remember to do the contacts on both sides if that particular module has them. Once the worst is removed take any soft rubber eraser and "erase" the contacts until they become dry, clean and shiny. You need to do only about the outer half of the contacts as that is more than ever gets used (you can see the scratch marks in the picture below). Once this is done simply put the cartridge back together and go. Some symptoms of dirty contacts are the console locking-up, strange errors where no occurred before, etc (my XB cartridge giving me a syntax error when there was non for example). Don't jump to clean a cartridge on your first error, it could be alot of things like static, not having the module in tight, or a number of other things. But if you find you have a continuing problem cleaning the contacts is quick and free and may correct what was wrong.



(Editor's Note: The following article is printed in the HUGgers Newsletter through the courtesy of the Indianapolis TI Exchange Center.

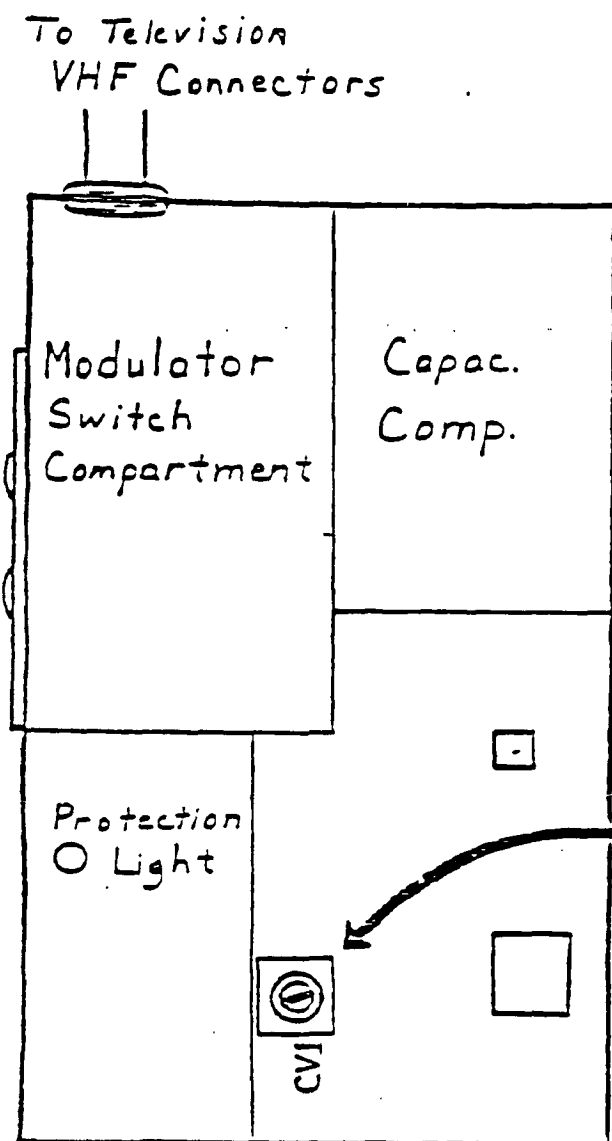
When experiencing background noise, such as humming or buzzing, with the R. F. Modulator, internal adjustment in the Modulator will usually alleviate the problem. This can be accomplished by the user by following the steps below and referencing the illustration below. This procedure is to be done while all equipment is on and operating. If you have the old version of the TI900 Video Modulator, this procedure does not apply.

(Materials required: one small, flat, thin-bladed screwdriver)

To correct the noise difficulty:

- 1) Turn the volume of the television all the way down, but do NOT turn it off
- 2) Select the Master Title Screen on the computer (FCTN =, if necessary)
- 3) Using the title screen color grid, fine tune the television to the best color picture
- 4) With the screwdriver, pry off the lid of the Modulator box by lifting under one edge of the lid near the indentation holding it on
- 5) Lift off the lid and turn the television volume up to half (50%)
- 6) Insert the blade of the screwdriver into the slot of the small box labelled CV1 (see fig.) and turn it slightly until the background noise is at a minimum (should take less than 1/8th of a turn)
- 7) After bending the Modulator lid edge back into place, put it back over the Modulator box and press it firmly into place until it snaps.

The system is now ready for optimum usage.



Insert
Screwdriver
Blade and
Turn gently
(No more than
1/8th turn)

This article comes to us from
HUG newsletter, 7/85 issue.

TI-WRITER TIP OR LOOK BEFORE YOU PRINT

There are a number of things in TI-WRITER that have caused some minor irritation with some of its users. One of these was the small capital letters instead of true lower case. This problem was solved with the updated files provided to the user groups as a last act of kindness to the groups after the TI 99/4A was discontinued. It sure looks much better on the screen now. One of the other minor irritations was the form feed after you letter or document finished printing. This is just the procedure that you have been looking for.

To get rid of the form feed and in the same process get a good look at what the final product would have looked in print, follow the following steps. You will wonder why you had not been told this before.

To begin with, type your document just as you have in the past with any and all of the control codes that you like. You can use the transliterate commands just as you have in the past, nothing is different at this point.

Now save the text in the usual manner. At this point you may wish to run the spell checker program by Dragonslayer. Remember to save each step as a different file. (change the file name) Now load the corrected spelling file into the editor and do any reformatting that you need to do. This should also be saved as a separate file. (If you lose a file you can always retrieve the one behind it.)

Now for the best part. Load the latest file into the formatter for printing. Now when the prompt for the printer file appears do not press enter. Instead erase the file name and put DSK1.(new file name). Now press enter. The program will print the file to the disk drive in the same manner as it would to the printer. When it is done you will have the printed file on the floppy disk.

Now go back to the editor and load this printed file. The file will appear on the screen in the final form. Now you can see any errors in the format and correct them without wasting any paper! You can make minor changes so long as you do not try to reformat with control Z. To prevent any mishaps shut off the word wrap with control O.

After you have made your changes and you are satisfied with the looks of the text you can prepare it for printing. You must print from the EDITOR as the final step. All you have to do is remove the line feeds and print from the EDITOR using PIO or RS232 without the as you see it on the screen. Make sure you have removed the line feed symbols from the text and the LF command from the file name. Have fun.

R. MILLS

This article comes to us from
BYTEMONGER newsletter, 7/85 issue.

FUZZY LOGIC

By Don MacClellan

In a recent article in Readers Digest the authors comment on an article by Andrew Pollack which appeared in the New York Times about an obscure branch of mathematics called "Fuzzy Logic" which is now gaining considerable interest in Commercial Computer Software Development. 'If computers are ever to have 'common sense', they must think in a 'fuzzy way', some scientists now feel. Fuzziness is an essential part of human thinking', says Lotfi A. Zadeh, a professor of computer science at the University of California at Berkeley.

Proponents say that until the computer can handle concepts like 'usually' or 'slightly' or 'a little bit' that it cannot emulate human thought: for instance, you wouldn't say to someone backing a car 'turn left 37 degrees' - you say 'cut hard left'.

The first, and obvious, commercial application of fuzzy logic has been in process control such as chemical plants or petroleum refineries which are much too complex to model on a computer. Rather, people monitor the process using rules of thumb - but with fuzzy logic, computers can take over. The only example I can think of which might illustrate the concept is in Balthorp's 'FORCE ONE' which appeared in HOM-VIBS where the tracking velocity of the gunsight increases and decreases as the keys are held down. In order to change direction, the reverse key is used to decelerate to a stop before accelerating in the opposite direction. While this may not be a good example of fuzzy logic, you may want to try to write equations for some of these: lots, many, somewhat, significant, hard-to-starboard, sharp-right, easy on the mustard and the list is infinite.

Most of the work on 'fuzzy logic' is being done in the Far East in China and Japan, however enough United States and Canadian scientists have become interested to form an organization known as 'The North American Fuzzy Information Processing Society'. This may be an opportunity for many of us who normally would not be in a position to do so to make a scientific contribution since most of us do 'think fuzzy'. If you are like me, I get fuzzy thoughts just trying to imagine and write an equation to produce fuzzy thoughts: BUT !! - try your hand at writing some non-quantitative programming language and if you are good enough - you can 'get published' right here.

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