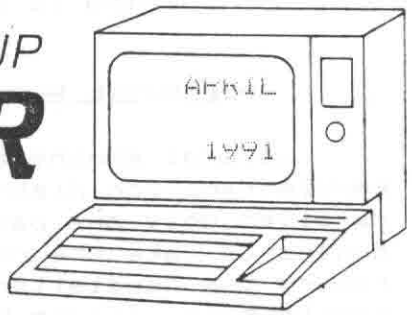
CEDAR VALLEY 99'ER USER GROUP
NEWSLETTER



CEDAR RAPIDS/MARION, IOWA

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****NEWSLETTER TOPICS****

1. Future Meeting Dates
2. Next Meeting Notes
3. Newsletter Distribution
4. Thanks
5. Minutes from the March Meeting
6. Elections
7. Postage Costs
8. The Library Blurb
9. Programming Music the Easy Way

****FUTURE MEETING DATES****

Please mark the following dates on your calendar for future meetings: APRIL 9, MAY 14, JUNE 11.

********NEXT MEETING********

The regular monthly meeting will be TUESDAY, April 9, at West Music Store in Cedar Rapids. Open discussion will start at 6:30 PM. Officers for the next year will be nominated and elected, so be sure to attend and have a voice in our leaders! After the election, Gary will do a repeat performance on his ham radio with packet transmissions.

NEWSLETTER DISTRIBUTION

Several months ago Jim Green brought in several packages of exchange newsletters for distribution amongst our members. To this date, he has received only one package back. I realize that the packages may take several months to make the rounds, because the only opportunity a member may have to return the newsletters is at a monthly meeting. If you have any outstanding newsletters, please bring them to the next meeting, so we can keep them in circulation. Our newsletter collection is a valuable resource for the club and its members. Depending upon how many come back, we may have to discontinue this method getting TI information to you, or start some sort of sign out method. This is an unpleasant thought, both for the members that may have restricted access to the materials, and for the person that would have to manage the newsletters. ---PLEASE--- bring back any outstanding newsletters.

THANKS

Our John Johnson was able to leave a message for the Chicago Users' Group to contact us about their newsletter exchange. Don Jones, a coordinator for the Chicago group, called me and explained that some areas of their newsletter distribution were not going smoothly, and acknowledged that some oversights had occurred. He assured me we would be receiving their newsletter regularly, and would try to get us the back issues we were missing. Just a few days after his call, their March newsletter arrived in the mail, so Don evidently did fix the hangup. Thanks John and Don for untangling the problem.

MINUTES FROM THE MARCH MEETING

One of my favorite pieces of writing is missing from this month's newsletter, the minutes of the previous meeting! Reason? We had no meeting, thanks to the late winter pranks of Mother Nature. As Gary mentions elsewhere, we had all kinds of BAD weather that night. I hope no one tried to get to the meeting, just to be disappointed. Our Prez had the foresight to call the West Music store to pass the word about the cancelled meeting, just in case anyone was loyal enough (foolhardy would be a better word!) to drive to the meeting.

Anyway, we should not have the same problems for a long time. Easter has come and gone, the grass is beginning to turn green again, and I have had my first vacation of the year. Thus, this issue of the NEWSLETTER will probably be later than usual. Hope we mail this in time for our local members to receive it prior to the meeting next Tuesday! Without the normal lead time on the monthly reminder, we may have a small turnout for the important elections to be held!

Look in this space next issue for the return of the Minutes of the Meeting!

ELECTIONS!

Well, due to inclement weather, our elections were postponed until our April meeting. It should come as no surprise to anyone in this area that the meeting was cancelled, because we had rain, high winds, sleet, hail, and heavy snows, all in the space of just a few hours. I was going to go over to West Music just to see how many people might venture out, but when the sheriff recommended to stay off the roads unless absolutely necessary, I decided to stay out. After just a few hours, I realized that was a wise choice. I could have probably made it to West Music, but more than likely, I would not have made it back home. We can only hope that was winter's last blast.

Here is our election situation: I have discussed with the current and prospective officers about serving the club. I would rather not serve as President, due to personal time restrictions. Our Vice President would be willing to serve again, but does not wish to be the President. After all, our current Vice President also serves as our librarian, an important additional function. Bruce said he would be willing to continue as Treasurer. Bill said he could continue as Secretary, and his assistant, Bob, would also be willing to serve in some capacity. Ed didn't feel he could continue to serve due to his personal time commitments. Finally, as I stated in my last column, Jim Green deserves a break from a job well done, and we should consider finding a replacement or assistant for him. He has stated the biggest help he could receive is to provide him articles and information so he can publish it. Our group has been very good about being a source of information, and not simply reprinting items from other newsletters. Some soul searching is in order, and the club needs your service to continue. As any past or current officer will tell you, none of the elected positions are difficult, and take up just a small amount of time per month.

POSTAGE COSTS

Our meager budget is mainly derived from dues, which comes out to about 20 members times $8, or $160. We are currently exchanging newsletters monthly with 30 other groups. Because some of our members receive their newsletter directly, we end up mailing out about 40 newsletter a month, at a cost of 29 cents each. A quick check reveals that in one year, our postage costs will be $139. Although we are a nonprofit group, this is an uncomfortably tight situation. I wish to recommend for discussion at our next meeting that we mail our exchange newsletters out every other month, resulting in a $14 saving per year. This doesn't sound like much, but it is a 10% savings on our largest budget item. Many other clubs have either gone to this type of distribution, or have stopped exchanging newsletters altogether. Come to the next meeting with your thoughts on this matter, or communicate with me if you can't attend.

Gary Bishop

THE LIBRARY BLURB

Trivia first of course. BBS's use the two methods for error checking. Checksum and CRC. What do these stand for and what are the odds of CRC missing an error? Here are some miscellanious items first. The 1-800-TI CARES hot line is reportedly active again but only for swapping rebuilt systems for your old ones. Mr George Clark of Pointe Claire, Quebec asked in Micropendium for copies of the program SKYSCPE. Bob Wahlstrom and I both sent him a copy. He wrote us both back and informed us that ours were the only copies he got that worked. The copy I sent was the Club's copy that came from Bob. Considering the circulation of Micropendium, I declare Bob and his sons the international program typing in champions of the world. The Cedar Rapids Library has a modem that gets you into its computer now. The number is 365-5941 and uses VT100 format but ANSI will get you a lot of information. If you have 80 column you will be OK there. But 40 column has every other line written over by their computer. It is pretty bad. If you find a way around this problem let me know please. I don't use the libary a lot or I would complain to them. VT100 is pretty standard for IBM users I believe. That is who they are going for I guess. Here are the additions to our library this month. Also please note that program Speech on disk 442 has been renamed Speecoder to avoid confusion with the new progam listed below and also because that was its original name.

Speech!	442	An article on how to use Speecoder.
Systex	442	Loads assembly file with an XB program.
XBTRK!	442	XB boot tracking program.

I hope the above explanations are sufficient. If not get ahold of me for more info. For those of you who are reading this and can not get these programs from the library, Speecoder and Speech! are on the Texaments BBS at 516/475-6463. With the advancements in speech that Speecoder produces I propose that lists of new speech words and sentences be exchanged on BBS's just like TIFS pictures etc.

A couple miscellanious items- I got lazy and stopped filling our humidifier a week ago. I immediately had trouble with bad connections on this TI machine. I also got a few shocks. Refilling the humidifier fixed both problems. The Chicago TI Club will sell their Graphics Encyclopedia by the crate at reduced prices. I told them our club was too small to need that many but promised that I would bring it up at the next meeting. So if you have any ideas about this come... This could be my last Library Blurb so to be different I have decided to submit it pretty much as I type it in. I generally go through five or six generations of an article and have the floor covered with paper when I am done. Notice a difference?

For the answer to the trivia question I am going to quote directly from the June 1987 West Penn Newsletter. "Checksum is a method of error checking whereby a 128-byte section of data is transferred at a time, and checked at both ends to make sure the sum of the hexidecimal values of all 128 characters is the same when received as when sent. CRC is a method where one block of data is transfered at a time and a polynomial calculation is made on each block before it is sent and again after it is received to see if the value is the same both times. There is only a one in 10 to the 12th power chance that it will miss an error."

EOF..J C Johnson...CR

PROGRAMMING MUSIC THE EASY WAY

by Jim Peterson

A while ago, I wrote an article about music programming in which I said that it was easy but that you almost had to know how to read music. Well, it is still easy to program, but no longer necessary to know how to read it.

Personally, I am about like the country fiddler who admitted that he could read music a little, but not enough to hurt his playing. I know just a little about reading music but that has been all I needed to know to program more than 50 songs. And, if you have ever heard my Tigercub Country or Tigercub Gospel disks, you will know that I have programmed those songs in a wide variety of styles.

Now, I have put together a few little routines to enable anyone to program music on the TI-99/4A very easily, and in many ways. You DON'T need to know how to program and you DON'T need to know how to read music!

First, key in this one-liner and save it as DSK1.SCALE,MERGE

```
100 DIM N(36):: F=110 :: FOR
 J=1 TO 36 :: N(J)=INT(F*1.0
59463094^(J-1)+.5):: NEXT J
:: N(0)=40000
```

Next, NEW to clear memory and then key in this music program, which we will use as an example to experiment with.

```
110 T=2 :: A=13 :: GOSUB 100
0 :: T=1 :: A=18 :: GOSUB 10
00 :: GOSUB 1000 :: T=3 :: G
OSUB 1000
120 T=1 :: A=20 :: GOSUB 100
0 :: A=22 :: GOSUB 1000 :: A
=23 :: GOSUB 1000 :: T=2 ::
A=27 :: GOSUB 1000 :: T=4 ::
 A=25 :: GOSUB 1000
130 T=1 :: A=30 :: GOSUB 100
0 :: A=29 :: GOSUB 1000 :: T
=5 :: A=27 :: GOSUB 1000
140 T=1 :: A=25 :: GOSUB 100
0 :: A=27 :: GOSUB 1000 :: A
=25 :: GOSUB 1000 :: A=22 ::
 GOSUB 1000 :: T=5 :: A=25 :
: GOSUB 1000 :: T=2 :: GOSUB
 1000
150 T=1 :: A=27 :: GOSUB 100
0 :: GOSUB 1000 :: T=3 :: GO
SUB 1000 :: T=1 :: A=22 :: G
OSUB 1000
160 A=25 :: GOSUB 1000 :: A=
22 :: GOSUB 1000 :: T=2 :: A
=20 :: GOSUB 1000 :: T=4 ::
A=18 :: GOSUB 1000
170 T=1 :: GOSUB 1000 :: A=2
0 :: GOSUB 1000 :: T=5 :: A=
22 :: GOSUB 1000 :: T=1 :: A
=18 :: GOSUB 1000
180 A=22 :: GOSUB 1000 :: A=
27 :: GOSUB 1000 :: T=6 :: A
=25 :: GOSUB 1000 :: T=1 ::
A=18 :: GOSUB 1000 :: A=20 :
: GOSUB 1000
190 T=6 :: A=22 :: GOSUB 100
0 :: T=2 :: A=18 :: GOSUB 10
00 :: A=20 :: GOSUB 1000 ::
T=4 :: A=18 :: GOSUB 1000 ::
 STOP
```

Save that by SAVE DSK1.SHEN just so you don't lose it, but keep it in memory, and enter MERGE DSK1.SCALE to get that one-liner back in.

The music you just keyed in is in one voice without harmony. Let's see what you can do with just one voice. Put in a line 105 D=200 and another line -

```
1000 CALL SOUND(T*D,N(A),0)
:: RETURN
```

Enter RUN, wait a second, and listen. If you didn't make any mistakes in keying in the music, you should hear a fairly pleasant single-note rendition of a beautiful old folk song.

Maybe you would prefer a higher key? Here's the neat part about starting with that formula in line 100 - besides the fact that it lets you key in frequencies in shorthand. To change key, just change that 110 in line 100 to a higher frequency number. They are listed in the "blue book" that came with your computer, but if you lost it they go upward 110, 117, 123, 131, 139, 147, 156, 165, 175, 185, 196, 208, 220.

You can also lower the key, providing you do not cause the lowest note in your music to go below frequency 110. In the piece you keyed in, the lowest note number used was 13 so you could go down 12 steps. The frequencies are not in the book, but they go 110, 104, 98, 92, 87, 82, 78, 73, 69, 65.

Want the music faster or slower? Just

change the 200 in line 105.

Now let's see what else we can do with single-note music. Try this -

```
1000 CALL SOUND(T*D,N(A),0,N
(A)*1.01,0):: RETURN
```

Has a richer sound, doesn't it? How about this?

```
1000 CALL SOUND(T*D,N(A),0,N
(A)/2,0):: RETURN
```

Or combine the two -

```
1000 CALL SOUND(T*D,N(A),0,N
(A)*1.01,0,N(A)/2,0):: RETUR
N
```

Multiplying a note by 1.01 in another voice will always give a more resonant sound, and dividing a note by two (providing its note number is not less than 13) will always be in harmony - so will multiplying by two, or by four.

How about some real deep down bass music? The TI's tone generators can only go down to frequency 110, but the noise generator can be tuned far below that. The timber of the sound is different and doesn't blend too well with the tones, so use it with caution - but it's great for a tuba solo. Try this -

```
1000 CALL SOUND(T*D,N(0),30,
N(0),30,N(A)*3.75,30,-4,0)::
RETURN
```

Want to go deeper? Try changing the 3.75 to 1.875 - too deep to even be musical, isn't it? Maybe you could improve it by raising the frequency in line 100.

Try changing the 3.75 to 7.5 - not bad, is it? So try doubling it again to 15 - oops! When you go that high you get some very sour notes!

So, go back to 7.5 and change one of those N(0) to N(A) and change the 30 following it to 0. Pretty good, so try also changing the other N(0) to N(A)*1.01 and the 30 after it to 0.

If any of those effects sound like something you might want to try in a piece of music someday, clear the memory with NEW, key it in and save it with SAVE DSK....,MERGE using a different filename for each one. Then, after you have keyed in some music, you can very quickly merge in different routines and try them. You will find that different ones go better with different songs.

The routines we have been trying all play music with a very strong beat. For a smoother effect, try this -

```
1000 FOR J=1 TO T :: CALL SO
SOUND(-2999,N(A),0):: GOSUB
1100 :: NEXT J :: RETURN
1100 FOR D=1 TO 99 :: NEXT D
 :: RETURN
```

You will notice one thing right away; with this method, a series of the same note gets run together into one long note. Later we will look at ways to get around that.

To change the tempo of the music, just change the value of 99 in line 1100.

Try this method in combination with the effects we tried previously.

Here's another one that gives a very nice effect -

```
1000 FOR J=1 TO T :: CALL SO
UND(-999,N(A),0):: GOSUB 110
0 :: CALL SOUND(-999,N(A)*1.
01,0):: GOSUB 1100 :: NEXT J
 :: RETURN
1100 FOR D=1 TO 8 :: NEXT D
:: RETURN
```

Or for a more mournful sound -

```
1000 FOR J=1 TO T*4 :: CALL
SOUND(-999,N(A),0):: CALL SO
UND(-999,N(A)*1.01,0):: NEXT
J :: RETURN
```

You can control the tempo by changing the value of 4, but not as precisely as with the previous method, and it does not work well with bass notes. Try changing the 1.01 to 1.02 - also try erasing the *1.01 and change the following 0 to 8, for a mandolin effect.

Those are just a few of the effects you can create with just a single-note melody - experiment and see what else you can discover.

We salute all personnel involved in DESERT SHIELD and DESERT STORM.

NASA FREQUENCIES

Edited by Henry Badon

This file was downloaded from the HAMTEXT BBS in Memphis. Call: (901)327-9334. Full duplex & 8N1. Joey (N4OMI) is the sysop.

The following are frequencies used by NASA, during a shuttle flight:

2.622	NASA BOOSTER ROCKET RECOVERY
2.678	CAPE RADIO RANGE
3.385	NASA TRACKING
5.518	TRACKING
5.810	BOOSTER RECOVERY VESSELS
6.693	NASA AIRCRAFT
6.708	AIRCRAFT
6.783	TRACKING
6.896	AIRCRAFT
6.983	TRACKING
7.461	AIRPORT
7.675	KENNEDY OPERATIONS
7.765	TRACKING

All frequencies are USB unless noted.

10.780	USAF CAPE RADIO (PRIMARY)
20.390	USAF CAPE RADIO (SECONDARY)
11.205	NASA PACIFIC OPERATIONS
11.407	NASA BOOSTER RECOVERY
13.170	AIRCRAFT
14.456	TRACKING
20.186	TRACKING (ASCENSION Is.)
20.191	TRACKING (ASCENSION Is.)
20.197	ASCENSION ISLAND (LSB)
20.393	TRACKING

To listen to real time air-to-ground conversations of the crew, and it's ground control, the following frequencies are broadcast by the Goddard Amateur Radio Club, WA3NAN SSB mode:

3860	NIGHTS 6 PM - 10 AM
7185	DAYS 8 AM - 6 PM
14295	CONTINUOUS
21390	INTERMITTENT
28650	INTERMITTENT
147.45	If close enough for FM simplex.

NOTE...D.O.D. MISSIONS ARE NOT BROADCAST. BROADCASTS BEGIN 1 Hr BEFORE THE SCHEDULED LAUNCH.

TROPICAL BANDS - BEST IN EVENINGS

2300-2500 KHZ	120 MTR BAND
3200-3400 KHZ	90 MTR BAND
3900-4000 KHZ	75 MTR BAND
4750-5100 KHZ	60 MTR BAND
5900-6250 KHZ	49 MTR BAND

MIDDLE SW BANDS CROSS-OVER (EVENINGS & DAYTIME)

7100-7500 KHZ	41 MTR BAND
9400-10000 KHZ	31 MTR BAND
11600-12000 KHZ	25 MTR BAND

INTERNATIONAL BANDS (DAYTIME)

13600-13900 KHZ	22 MTR BAND
15000-15600 KHZ	19 MTR BAND
17600-17900 KHZ	16 MTR BAND
21460-21850 KHZ	13 MTR BAND
25600-26100 KHZ	11 MTR BAND

THESE FREQUENCIES-SHIP TO SHIP

8.825.0
8.846.0
8.843.0
8.891.0
8.216.5
8.828.0
8.240.0
12.435.5
12.339.2

THESE FREQUENCIES CAN BE RECEIVED WITH EITHER A GENERAL COVERAGE RECEIVER OR A HAM TRANSCIEVER CAPABLE OF RECEIVING GENERAL BROADCAST BANDS.

For those interested in NASA and the shuttle flights, NASA has a BBS online. It is called: NASA SPACE LINK BBS (I don't know the system parameters, the phone number is (205)895-0028 in Huntsville, AL.

Have fun and good DX'ing....
Henry - WB4VDN

NEXT MEETING

TUESDAY, APRIL 9

6:30 PM --- WEST MUSIC, CR

ELECTIONS OF NEW OFFICERS

DEMO OF RAMDISK AND HAM

RADIO PACKET BY GARY

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