



A Professional Journal Exclusively for the Heath/Zenith Z-100 Computer

Z-100 LifeLine Web Site: https://z100lifeline.swvagts.com

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HOWGOZIT

One last winter storm in March and spring now brings on all the gardening chores, removing all the downed tree branches (this year has seemed to be particularly windy), pruning, and planting has kept me busy.

With this issue we get to continue our Z-100's 40th birthday challenge with phase three, our LifeLine Crossword Puzzle. I hope you have been working on phases one (The LifeLine Trivia Quiz) and phase two (The LifeLine Word Find Puzzle), because the end of the contest is coming fast. Let's make all entries in by May 31st, so I can get another issue out in June - with all the answers and the announcement of the winners. Remember, there is \$20.00 up for grabs.

While I was doing some spring cleaning, I was backing up my LifeLine work, and I found a few finished articles that never got published. So, I'll include one here and I'll have to postpone the other two for next time...

This Insert article describes another piece of reasonably priced test equipment for our tool box. Another kit, the DS0150 Oscilloscope is a bigger brother to the DS0138 (discussed in an earlier issue), but with a professional looking case included.

It is another inexpensive, low-speed miniature oscilloscope with a 2.4", 262K color LCD display. Based on the ARM Cortex-M3 processor, it was developed by JYE Tech, China. It is sold as a full kit, or a partial kit with all the surface mounted parts already installed on the boards, leaving just a few parts remaining.

Like the earlier DS0138, it was designed as a training oscilloscope. The DS0150 contains only the basic oscilloscope functions with no fancy

features. Simplicity in structure and easiness in assembly and operation are the main highlights of the design.

However, do not sell it short. This unit appears to fit the bill perfectly for a small, inexpensive addition to a mobile electronics tool box.

The article also presents an excellent user's manual, with a full explanation of the various features, specifically created for beginners.

This article had actually been finished and was meant for publishing back in issue #134, but I got sidetracked by the Gotek Floppy Disk Emulator articles and had forgotten about it. I guess better late than never is the phrase of the day.

And speaking of Gotek, as you might recall in my Gotek exploits that I complained that the Rotary Encoder was not acting as it should. Sometimes it would not respond, other times it skipped entries. Well, Charles Hett studied the problem and has found a solution that you may want to know about. Please read his article, "Gotek Rotary Encoder Fix", in this issue.

Thank you, Charles, for another great article. I'm glad that you found the solution.

'Z-100 LifeLine' Website Articles

Over the past several weeks, I have been working hard to find a better, easier means of listing articles on my Website and then updating them. It was amazing how much dated information was contained in these - most had not been updated since they were originally published!

But my first problem was with Joomla! Joomla! would prefer that all articles be placed as separate pages on the Website, which is no easy

task. Its advantages, however, are several:

- I can create links to other articles.
- Pictures can have links to larger versions to give you a better view of details.
- Future changes are easier to do on the fly.
- All the articles have the same look & feel.
- Navigation between articles (or pages) on the website are easy.

But the disadvantages are also numerous:

- Joomla! gives a list of articles (pages) in the order they are created, and when the numbers increase, it is difficult to locate the one I need.
- Each article in Joomla! takes longer to create, with special features and formatting that relies on a special editor.
- Joomla! has updates to load nearly every time that I need to make a change, but worse, it relies on the PHP programming language, which has its own changes that come out periodically, AND the editor that I use is JCE and this editor has changes that occur as often as Joomla!.

All these changes do not give an air of stability. JCE (the editor) has already had a bug in one version that would not let me make changes to the website copy in my computer for two weeks! The next version finally fixed that problem.

So I worry constantly that one of these changes (made by anyone at a whim, it seems) will make the website unusable for some period of time or cause me to lose it entirely. And the backups that I create with every change appear to be very complicated to restore.

Thankfully, I have not needed to look into those procedures yet, but it appears that it would involve the same procedures as creating a new website on a new host. Why does everything need to be so complicated?

So, in the event of a problem, I have to keep a copy of the text for each Joomla! article in a documents folder on my computer anyway. This copy does not include pictures or images. If I lose a Joomla! article, I would have to re-create the article, from scratch. And when I change the article, I also need to remember to save the text file again.

None of this seemed to be very efficient, and I spend more time updating Joomla! than I would like.

Shortly after establishing the Website for the fourth time (because of my learning errors), I found that I COULD display .PDF files very easily. Just place the .PDF article in a folder called articles and create a link to the .PDF file. And the file could contain pictures and save all the formatting.

My early .PDF files were created by simply combining scanned pages of previously published articles together. You could NOT highlight and copy individual paragraphs, and to print these, you had to print the entire document!

My newest .PDF files are created within WordPerfect, with paragraphs, phrases, or lines that can easily be highlighted and copied and even printed without difficulty. I can even use hyperlinks (once I figure that out)!

This also permitted me to create the article with WordPerfect in my computer, save the file in .PDF format, upload the file to the Website, and NEVER have to worry if it disappears again!

This method does have its disadvantages:

- I can not seem to find a way to link to other articles on the Website that might be relevant.
- I can not create a link to larger versions of pictures to show greater detail.

I'm sure that there must be a way to do either or both of these, but the solutions are presently eluding me.

So, I have spent hours updating articles for the Website, deleting some of the old Joomla! articles, and creating a new page for the Website, '**LifeLine Articles**':

This page provides access to many updated "Z-100 LifeLine" articles, broken into several categories. You just click on the link provided to read or print the article.

Present article categories include:

- Clocks & Real Time Clocks
- Gotek Floppy Disk Emulator Articles
- Hardware Articles
- IDE Controller Articles
- Index to "Z-100 LifeLine" and "REMark" & "Sextant" Magazines
- Modification Articles
- Repair Articles
- Software Articles
- Z-DOS V4 Command Articles
- Z-100 Video and Monitor Articles
- Articles Unrelated to the "Z-100 LifeLine" or the Z-100 Series Computer

More will be added as time permits.

This new system is working well on my computer and I just completed the changes to the Website. This is a major change, so please bear with me as I get it working correctly. Also let me know if I missed anything or if some links are not working. Email me at:

z100lifeline@swvagts.com

Z-100 40th Birthday Challenge

The Z-100 series computer is celebrating 40 years young! To celebrate, we began a three-phase challenge, with the first two phases presented in the last issue. This contest is open to anyone for a chance to win \$20.00 off their next "Z-100 LifeLine" purchase.

The first phase required you to research the Z-100 LifeLine website to answer several trivia questions. It was meant to remind you of many, probably long forgotten, aspects of Zenith and Heathkit computing and would also provide you a ready reference to assist in the other two phases of the challenge.

Phase two asked you to complete a **LifeLine Word Find Puzzle**. Unlike most word search puzzles, there was **no** list of words provided to search for, and alphanumeric characters were permitted, but the words to be found were from the trivia that you compiled in the first phase.

Extra words may have been found, but they would not count for or against you. I simply asked that you send me an email containing a list of the words that you found, which Myra and I could quickly compare with our list. The owner of the word list that most closely matches ours, will receive a discount of \$10.00 towards their next purchase at "Z-100 LifeLine".

In the event of a tie, I will throw the names in a hat and my wife, Myra, will pull the winner. The winner, with all the solutions, will be published in the next LifeLine, due in June.

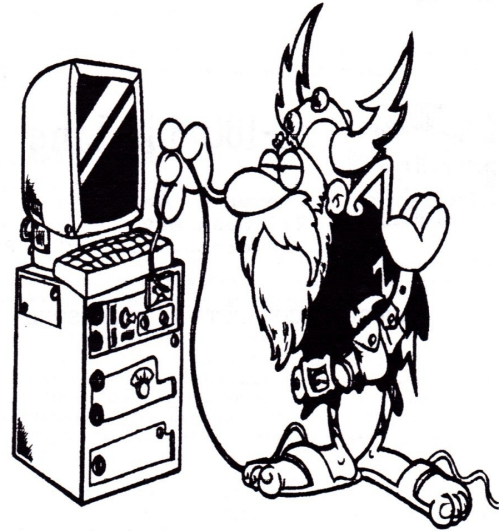
This issue contains the phase three challenge, to complete the **LifeLine Crossword Puzzle**. This puzzle also includes important numbers and names associated with Heathkit Computers and Z-100 LifeLine Trivia.

Obviously, since it is created by me, it is not like the usual crossword. It contains several alphanumeric characters, and some of the answers will need to be answered **reversed**. The clues are simple, of course, but for those who failed to complete phase one, it could be a bit more challenging.

You must mail or email a copy of this back to me before the end of the contest, now set for May 31, 2022.

Again, the crossword puzzle that most closely matches mine will receive a discount of \$10.00 towards their next purchase at "Z-100 LifeLine". So, even if you cannot complete the puzzle, it may still be the winner. As earlier, in the event of a tie, Myra will pull the winner.

So, on to **Phase Three...**



Forty years old and still ticking!

Closing

Just a reminder, I am out of spare Z-100 Life-Line IDE Controller boards! If you were one of those sitting on the fence, I am indeed sorry, but I had put out many reminders that I was running low.

I have not heard from anyone regarding needing additional boards made, so this is the last time that I'll mention them. However, I'll continue to look into alternative large storage ideas.

Covid restrictions have finally been lifted, but I feel that this is a bit premature. Please stay safe and take no unnecessary chances. Keep your families safe and get vaccinated as soon as you can.

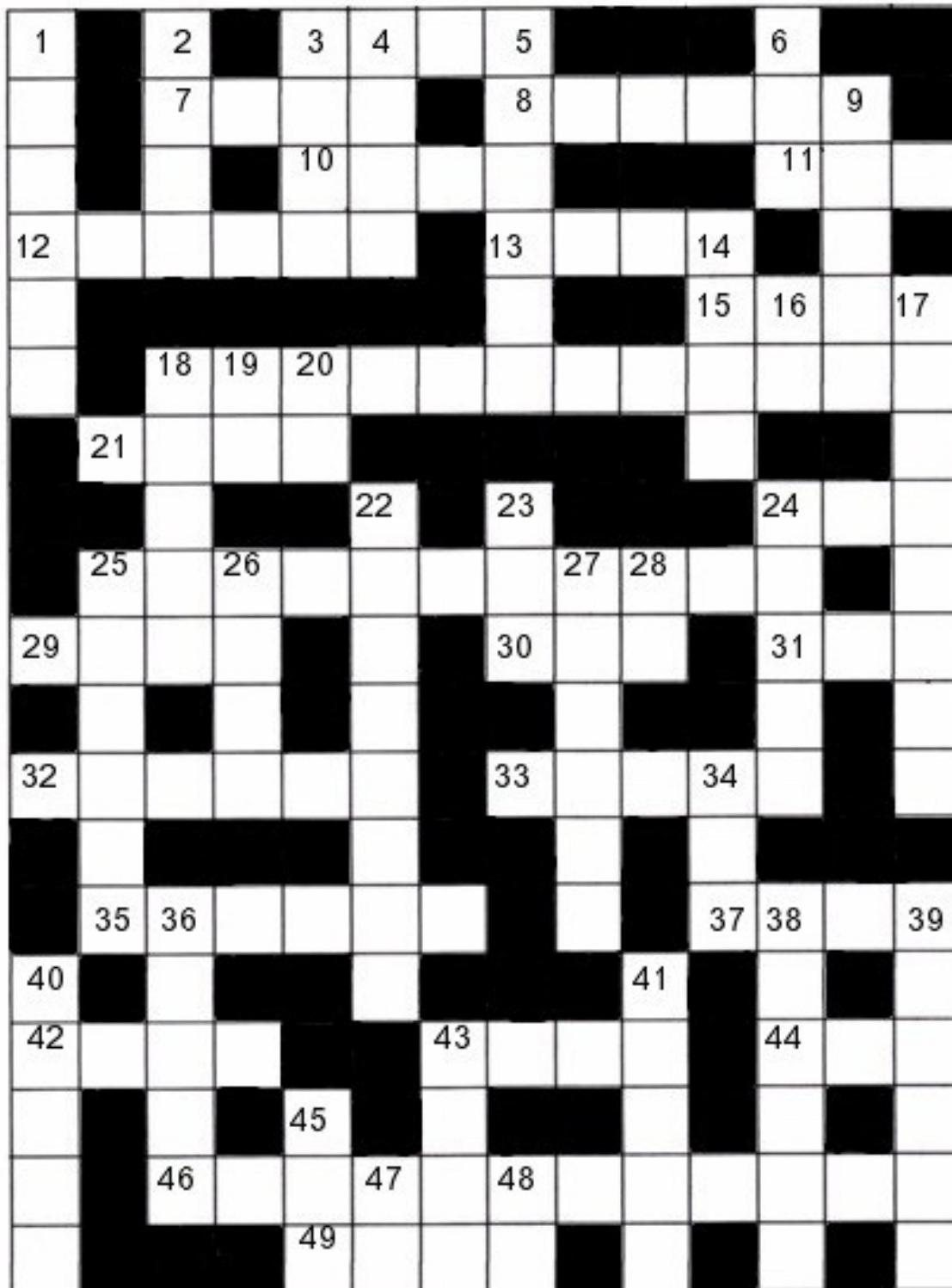
We hope you find the puzzles challenging and fun, and look forward to your entries.

'Til next time,
happy computing!

Cheers!!!



The Z-100 LifeLine Crossword Puzzle for 2022:



Z-100 LifeLine CrossWord 2022 Clues**ACROSS**

3. Zenith disk-based test utility
7. Shell
8. PC-emulator board
10. Operating sys.
11. Drawing application
12. Lower legs
13. Unit of length
15. Opposite of dispair; reversed
18. Newsletter
21. Before H-100
24. Pimple
25. Z-207 floppy controller chg
29. Romantic
30. Night before
31. Tree
32. Diagnostic equipment; reversed
33. Latest mtr-rom
35. Lines per screen command; reversed
37. TTL part, for example
42. Pertaining to flying
43. Part of a disk drive
44. Computer memory
46. PC emulator hardware
49. Glove

DOWN

1. User's group magazine
2. Z-100 timepiece
3. Small freshwater fish
4. Mischievous folk
5. PC emulator board
6. PC emulation software utility
9. Printer manufacturer
14. To give aid
16. Ratio of a circle
17. Popular electronic kit manufacturer
18. Z-100 memory upgrade
19. Two digit #
20. Half of 19 down
22. Odd Z-100 input device?
23. I could use one now!
24. Latest Z-100 OS
25. LifeLine software guru
26. Breads
27. Keyboard type
28. Pronoun
34. Audio device
36. Desktop utility
38. First editor of 18 across
39. Z-100 non-native status
40. Latest editor of 18 across
41. Latest LifeLine circuitboard
43. LifeLine hardware guru
45. Computer memory
47. Musical tone
48. CPU tech