

MONOCHROME CHROME

MADE WITH PC AND ZX-81 16KB
ZX-81 / TIMEX 1000 / TIMEX 1500 MAGAZINE
ISSUE 1, ADDRESS: YERZHYEY@INTERIA.PL, 07.2008

LET US GET STARTED!!

YERZHYEY

ANDRE***

SO - HERE IS A NEW MAGAZINE FOR ZX81 FANS. :) IT IS KINDA EXPERIMENT FOR NOW; WE DO NOT KNOW IF IT SUCCEEDS OR FAILS. THE IDEA OF MAKING IT CAME TO ME FROM ANDRE***'S FINE MAG "ZX91". HE MADE A GREAT WORK WITH EDITING IT WITH PURE ZX81 16KB AND ZX-PRINTER. BUT IT WAS 17 YEARS AGO, AND NOW ACCESS TO THINGS LIKE MENTIONED ZX-PRINTER OR PAPER FOR IT - IS STRONGLY LIMITED. THAT'S WHY WE DECIDED TO TRY EDITING THIS MAG USING PC COMP (TXT, PHOTOS) & ZX81 FOR SCREENSHOTS & GRAPHIC (FOR INSTANCE LOGO OF THIS MAG I MADE WITH MY ZX81, AND SO WAS WITH THE PICTURE ABOVE, MADE BY ANDRE HEH... :). ANYWAY ANDRE AGREED TO HELP WITH TEXTS AND I HOPE MORE PEOPLE WILL SEND THEIR ARTICLES TOO. :) YOU CAN SEND THEM TO MY EMAIL ADDRESS VISIBLE ABOVE. WE DO HOPE YOU WILL LIKE OUR MAG. :)



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BONJOUR ADVENTURERS!

HERE IS THE GOLD VERSION PEOPLE HAVE BEEN WAITING FOR! "**DUNRIC'S 8K ADVENTURE**"!
I HAVE NOT ONLY A WORKING ADAPTED VERSION,

NOW, I HAVE AN IMPROVED LESS THAN 10K VERSION THAT WORKS VERY WELL. IT IS FASTER AND HAS MORE VARIED ANSWERS TO YOUR INPUTS. THE COMBAT SECTION HAS BEEN REDONE, CODE AND PRINTING. THE **GO**, **GET** AND **DROP** ARE FASTER. THE **EXAMINE** SECTION ALLOWS MORE VARIED ANSWERS. YOU CAN ONLY **EXAMINE** THE OBJECTS POSSESSED OR PRESENTLY VISIBLE. IF YOU LEAVE THE **ROPE** ON THE

TREE, YOU DO NOT HAVE TO **USE** IT AGAIN TO **CLIMB**.



IF YOU RE-**SET** THE **ROPE** THEN YOU MUST RE-**USE** IT AGAIN TO **CLIMB**-UP. ALSO YOU CAN NOT RE-**USE** THE **LANTERN** AFTER YOU **DROP** IT BECAUSE YOU HAVE NO MORE **OIL**. SO YOU CAN NOT RE-ENTER THE **WESTERN WOODS** FROM ANY DIRECTIONS.

(ALL ACCESS TO THE **WESTERN WOODS** IS NOW IMPOSSIBLE WITHOUT THE **LANTERN**). THE **EAT** AND **DRINK** SECTIONS HAVE BEEN IMPROVED. THE LATEST VERSION IS DATED JUNE 29 AND IT IS HERE: [HTTP://TINY.PL/KS88](http://tiny.pl/ks88) © BY **ANDRE*****

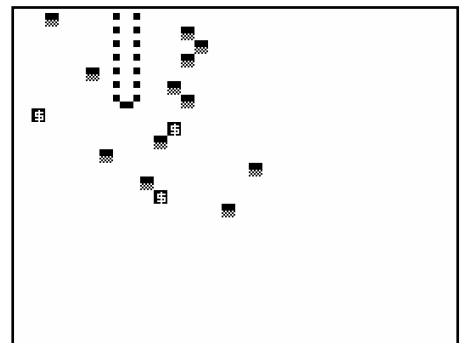
FERENGI - NEW GAME FOR ZX81

LET ME MAKE SOME AUTO-ADVERTISEMENT AT THE BEGINNING. ;) *FERENGI* IS A GAME MADE IN JUNE 2008. THERE ARE 2 VERSIONS OF IT: 2KB (FOR UNEXPANDED TIMEX 1000) AND 4KB FOR OTHER MACHINES. THE GAME IS HERE: [HTTP://TINY.PL/KKHS](http://tiny.pl/kkhs)



IDEIA: GRYX, CODE: YERZYNY
CODE IMPROVEMENTS: ANDRE***
(C) 2008

AND IT CONTAINS NOT ONLY *.P FILES BUT ALSO *.WAV FILES TO RECORD THEM ON A CASSETTE AND *.JPG IMAGES OF THE TAPE'S COVER-ART. ;) ENJOY!!!!
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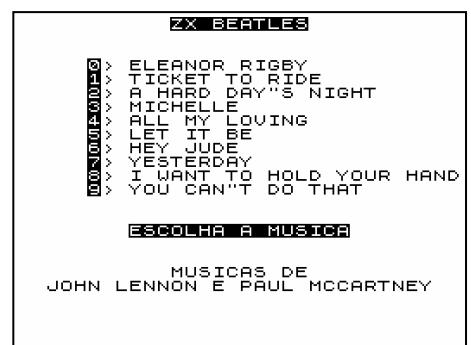


MUSIC DEMOS ON ZX-81 (!!!)

WELL, I WAS ALWAYS SAYING THAT ZX81 *HAS* SOUND. I MEAN - IT IS BUILT IN SIMILAR WAY AS ZX SPECTRUM IS. Z80 CHIP AND ULA CHIP. SO IF SPECTRUM CAN GENERATE SOUND VIA MIC' PORT, THEN ZX81 SHOULD BE ABLE TO DO THE SAME THING.

WELL, AT FIRST I THOUGHT IT SHOULD BE EASY TO CONVERT ALL ZX48K BEEPER MUSIX INTO ZX81 BUT THEN I REALIZED THAT DIFFERENCES IN THE COMPUTERS' SPEED ARE PROBABLY TOO BIG. STILL - ZX81 IS ABLE TO GENERATE MUSIC WITHOUT *ANY* ADDITIONAL DEVICES. FOR NOW I SPOTTED TWO MUSIC DEMOS FOR ZX81: **ZX BEATLES** AND **CLASSIK**

(ALIAS **ZX81 MUSIC INTERPRETER**). BOTH OF THEM ARE VERY INTERESTING AND THEY PROOVE THAT EVERY ENCYCLOPEDIA IS WRONG ABOUT ZX81'S POSSIBILITIES - THIS COMPUTER, FROM THE VERY BEGINNING, WAS ABLE TO GENERATE MUSIC.



I HOPE THEY ARE NOT THE LAST ONES MUSIC-DEMOS FOR OUR COMPUTER AND IT WOULD BE REALLY COOL IF PEOPLE MADE MORE SOUND-ENGINES AND MORE ZX81 MUSIC DEMOS. BOTH PROGRAMS ARE DOWNLOADABLE FROM SIGGI'S SERVER:

[HTTP://TINY.PL/KKGV](http://tiny.pl/kkgv)
(IT IS WORTH TO MENTION THAT **THIS SERVER HAS BEEN SET UP**

ON... ZX81 COMPUTER!!) © BY YERZ

1-KILOBYTE CORNER

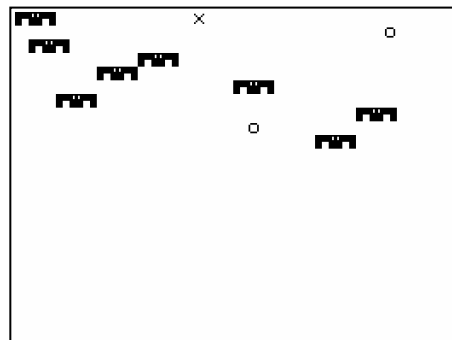
NOT EVERYBODY HAS EXPANDED ZX81. THERE STILL ARE PEOPLE WHO HAVE ONLY 1KB OF RAM ON THEIR BELOVED ZX81. THIS CORNER IS FOR SUCH GUYS. :) YOU CAN FIND HERE INTERESTING PROGRAMS FOR YOUR CONFIGURATION. THESE PROGRAMS PROVE THAT GOOD GAMES DO NOT MUST HAVE MILLIONS OF KILOBYTES. :)

"**SLALOM**" - IT IS NOT BAD GAME, 473 BYTES LONG. YOU HAVE TO ENTER ALL GATES WITH YOUR VEHICLE. THE PROG COUNTS YOUR POINTS WITH PASSED GATES. THE GAME IS A BIT TOO SLOW, IN MY HUMBLE OPINION. CONTROLS: CURSORS (LEFT/RIGHT). DOWNLOAD LINK: [HTTP://TINY.PL/K6MM](http://TINY.PL/K6MM)

"**SPACE PIRATE**" DOES NOT LOOK BAD, HOWEVER IT IS KINDA DIFFICULT TO ME. IT IS BECAUSE OF PRETTY RANDOM MOVEMENT OF THE SPACESHIPS YOU HAVE TO DOCK IN, TO STEAL THEIR CARGO. :) YOU NEED A LOT OF LUCK HERE, THE GAME IS NOT BAD THOUGH. IN THIS CASE GAINED POINTS ARE COUNTED IN... POUNDS. ;) THE GAME HAS 724 BYTES. CONTROLS: CURSORS (LEFT/RIGHT). DOWNLOAD LINK: [HTTP://TINY.PL/K6MW](http://TINY.PL/K6MW)

"**CAR CRASH**" IS A COOL 630 BYTES GAME. I PLAYED THIS GAME SOME TIME, WITH PLEASURE. YOU TAKE A PART IN A CAR RACING. YOU HAVE TO AVOID OTHER PASSING CARS AS WELL AS THE ROAD'S EDGES. YOUR POINTS ARE COUNTED IN TRAVELED KILOMETERS. :) CONTROLS: CURSORS (LEFT/RIGHT). DOWNLOAD LINK: [HTTP://TINY.PL/K6MD](http://TINY.PL/K6MD)

"**MAN-EATING BUDGIES**" IS ANOTHER COOL, PRETTY FAST (IN ACTION) GAME. IT IS 579 BYTES LONG. YOU HAVE TO STEAL EGGS FROM... MAN-EATING BUDGIES OF COURSE. :) HOW MONTY-PYTHON-ISH. ;) REALLY PLAYABLE STUFF, HOWEVER IT IS NOT AN EASY GAME. CONTROLS: CURSORS (LEFT/RIGHT). DOWNLOAD LINK: [HTTP://TINY.PL/K6M6](http://TINY.PL/K6M6)



"**1KB CHESS / ZX CHESS / CHESS KING**" - I WILL TELL YOU STRAIGHT: I DO NOT PLAY CHESS SO I DO NOT KNOW HOW GOOD IS THIS GAME. HOWEVER IT IS WORTH TO EMPHASIZE THAT OTHER COMPUTERS' OWNERS CANNOT EVEN IMAGINE HOW IS IT POSSIBLE TO MAKE CHESS GAME IN 1KB!! (IN THIS CASE - 941 BYTES :)). DOWNLOAD LINK: [HTTP://TINY.PL/K6GX](http://TINY.PL/K6GX)

I THINK THAT WOULD BE ALL FOR TODAY. ENJOY YOUR UNEXPANDED ZX81! IT IS A POWERFUL MACHINE!!

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RWAP SOFTWARE - RETRO COMPUTING

I STARTED OFF LEARNING TO PROGRAM COMPUTERS ON THE ZX81 IN 1982 - LITTLE DID I REALISE THAT I WOULD STILL BE SUPPORTING THE SINCLAIR COMPUTERS 26 YEARS LATER, GROWING THE BUSINESS TO PROVIDE NEW HARDWARE AND REPLACEMENT PARTS! IN FACT OVER THE PAST FEW YEARS, I HAVE BEEN INSTRUMENTAL IN GETTING NEW REPLACEMENT KEYBOARD MEMBRANES MADE FOR BOTH: THE SINCLAIR QL, RUBBER KEY SPECTRUM AND THE ZX81 (THE LATTER WILL BE PRODUCED DURING 2008).

I AM IN TOUCH WITH VARIOUS DEVELOPERS AND ALWAYS ON THE LOOKOUT FOR NEW HARDWARE PROJECTS FOR FINANCING AND BRINGING TO MARKET IN ORDER TO REVIVE INTEREST IN THESE HUMBLE MACHINES. I HAVE CREATED A FORUM SPECIFICALLY AIMED AT THE ZX80 AND ZX81 USERS

(WWW.RWAPSERVICES.CO.UK/ZX80_ZX81/forums) AND WITHIN THE FIRST COUPLE OF MONTHS, THIS HAS ATTRACTED A LOT OF USERS AND DISCUSSION SHOWING THAT THERE IS STILL A LIVELY MARKET OUT THERE.

FOR MORE DETAILS, CONTACT US VIA THE WEBSITE:
WWW.RWAPSOFTWARE.CO.UK © RICH MELLOR

SQUEEZING A DRAGON INTO 16KB AND ZX-81

USED TO BE AN ADVENTURE GAME WAS WRITTEN TO LET THE PLAYER ESCAPE HIS OR HER MUNDANE WORLD OF DRAB ECONOMICS, DULL MIND GAMES AND OTHER TRIALS AND TRIBULATIONS OF LIFE. WHEN THE FIRST ADVENTURES ROLLED OFF THE SO-CALLED "ASSEMBLY LINES" IN THE LATE 1970S, SUCH AS THOSE BY SCOTT ADAMS, THE AVERAGE USER COULD PLUG THE ADVENTURE GAME IN AND ESCAPE INTO A WORLD OF FANTASY, WHERE HOBBITS, DRAGONS AND OTHER ASSORTED BEINGS LAY IN WAIT, GOLD AND GLORY ASIDE.

AS FOR THIS AUTHOR, I HAVE PLAYED A NUMBER OF ADVENTURE GAMES IN THAT MOLD, THE PURE 'FANTASY' REALM OF A DUNGEONS & DRAGONS-STYLE QUEST. AND NOW I HAVE SPENT THE PAST DECADE AND A HALF WRITING THEM, WITH OVER 38 TO MY CREDIT (AND COUNTING).

THE LATEST RELEASE IS A PORT OF 8K ADVENTURE TO THE ZX SPECTRUM AND ZX-81, RESPECTIVELY. KNOWING THAT I LACKED THE GENERAL EXPERTISE TO CONVERT BOTH VERSIONS, I "FARMED" OUT THAT TASK TO VARIOUS PROGRAMMERS ON THE FORUMS, HOPING THAT THEY MIGHT BE ABLE TO DO WHAT I COULD NOT: SQUEEZE 8K ADVENTURE INTO SPECTRUM-LAND.

"GUS" OVER AT THE SINCLAIR ZX80 / ZX81 FORUMS WAS MORE THAN HAPPY TO DO THIS, SPENDING A MONTH GETTING THE GAME JUST RIGHT. ON JULY 1ST, HE RELEASED THE FINAL VERSION IN WORKING ORDER. "ANDRE" WROTE A MUCH MORE COMPACT VERSION OF HIS OWN, BUT AS OF "PRESS TIME" IT WAS NOT YET AVAILABLE. BUT I AWAIT HIS WITH ANTICIPATION.

A FEW ANECDOTES FROM THE CONVERSION PROCESS OF BOTH VERSIONS: THE PLAYER COULD ATTACK ANY MONSTER FROM ANY ROOM HE OR SHE LIKED, SORT OF LIKE ENTERING "THE TWILIGHT ZONE" OF ADVENTURE GAMING. THIS BUG WAS FIXED IN BOTH VERSIONS. ANOTHER PROBLEM STEMMED FROM THE WORD WRAP ROUTINE, GETTING LINES TO FIT AS MUCH AS POSSIBLE ON THE 32 CHARACTER SCREEN LIMIT. "GUS" HAD THE WORD WRAP ROUTINE DOWN BY LATE JUNE, AND THE GAME WAS WORKING FINE ENOUGH TO BE RELEASED A FEW DAYS LATER.

ON THE ZX SPECTRUM, 8K ADVENTURE USED COLORED TEXT JUST LIKE IN THE ORIGINAL COMMODORE 64 VERSION. THE MOVEMENT WAS ALSO FAST AND FURI-

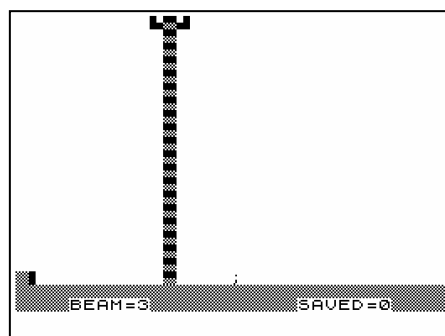
OUS, ALLOWING THE PLAYER THE FREEDOM TO ROAM THE LAND LIKE A DRAGON SLAYING "NEO." 8K ADVENTURE HAD A MINIMAL APPROACH TO ITEMS, WITH ONLY THE MOST ESSENTIAL INCLUDED IN THE GAME. AN INVENTORY LIMIT WAS ALSO SET, MAKING CREATIVE USE OF THE DROP COMMAND IN SPECIFIC ROOMS MANDATORY.

NOW THAT BOTH ADVENTURES HAVE BEEN BUG FIXED AND TESTED, IT IS MY PLEASURE TO RELEASE THEM TO THE ZX COMMUNITY. IT JUST GOES TO SHOW HOW COOPERATION AND TEAM WORK CAN GO A LONG WAY TO MAKING SUCH AN ADVENTURE POSSIBLE. NOW PUT ON YOUR ARMOR AND GRAB YOUR SWORD...AN ADVENTURE AWAITS!

© PAUL <DUNRIC@YAHOO.COM>

EDIT: THIS VERSION OF THE GAME IS HERE:
[HTTP://TINY.PL/KUJC](http://tiny.pl/kujc)

RETROBEAMER 2 - A NEW GAME.



ONE OF THE REALLY COOL ZX81 GAMES MADE THIS YEAR IS "RETRO BEAMER 2" BY JENS AND ANDRE***. IT IS AN ARCADE GAME ABOUT SAU-ING PEOPLE BY BEAMING THEM INTO YOUR SPACE-SHIP. :) YOU HAVE ONLY 3 BEAMS FOR ONE RESCUED GUY. IF YOU SUCCEED -



YOU GET NEW 3 BEAMS. IF YOU DON'T RESCUE ONE SINGLE MAN - YOU END THE GAME. THAT IS A REALLY COOL PROG HOWEVER IT IS NOT EASY. :) CONTROLS: CURSORS (5,8 AND 0 FOR FIRE). DOWNLOAD LINK: [HTTP://TINY.PL/K669](http://tiny.pl/k669) ENJOY THE GAME! :)

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THE MAKING OF BALLBLASTER.

FOR ME THERE'S NOTHING QUITE LIKE THE THRILL OF **SPEED**. NOT FASTER-THAN-AVERAGE-**BASIC** SPEED, THOUGH THERE'S NOTHING WRONG WITH THAT, I MEAN REAL 5000**PC** SPEED. F1 SPEED. WHICH IS RELATIVE, OF COURSE ;) WHEN IT'S A ZX81 WE'RE TALKING ABOUT THEN CRAMMING AS MANY INSTRUCTION EXECUTIONS INTO THE TINY SLICE OF PROCESSOR TIME THAT YOU HAVE IS THE MAIN THING. NO, STRIKE THAT. IT'S THE **ONLY** THING! THERE'S SOME INTERESTING TECHNIQUES IN USE IN **BB**. NOT INTERESTING REZURRECTION/25TH ANNI INTERESTING, BUT WHO KNOWS, MAYBE THEY CAN BE PUT TO GOOD USE ELSEWHERE...

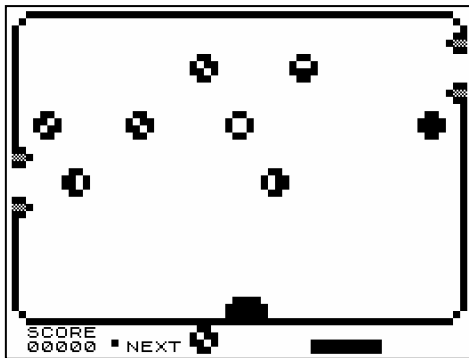
I DEVELOP ON THE **PC** WITH A CROSS ASSEMBLER CALLED **TASM**. NOT THE BORLAND ONE - THE TELE-MARK ONE. IT ENABLES ME TO QUICKLY EDIT AND ASSEMBLE THE CODE TO A RAW BINARY FILE WHICH IS CUNNINGLY STRUCTURED TO MAKE IT LOOK LIKE A REGULAR **2** FILE. THIS CAN THEN BE DROPPED INTO **30** OR INDEED ANY OF YOUR FAVOURITE EMULATORS! WHEN THE PROGRAM RUNS THE FIRST THING THAT IT DOES IS DRAW THE MAIN SCREEN. THIS AND THE OTHER FULL-SCREEN GRAPHICS ARE STORED IN A COMPRESSED FORMAT KNOWN AS **RLC**. THIS IS A RELATIVELY POOR COMPRESSION METHOD COMMONLY

USED FOR BITMAP DATA. IT ENCODES RUNS OF DIFFERENT OR SIMILAR BYTES AS PACKETS. IT'S VERY DUMB, BUT EASY TO UNDERSTAND AND CODE. THE SCREENS ARE DRAWN IN THE **ZXPAINTYONE** PACKAGE AND EXPORTED TO A FILE. THIS IS RUN THROUGH AN ENCODER TO GENERATE THE **RLB** DATA WHICH IS THEN CUT 'N' PASTED INTO THE CODE. I'M HAPPY FOR ANYONE TO HAVE ANY OF THE TOOLS I'VE MADE. I COULD EVEN HACK JUST THE **RLB** ROUTINES INTO A **REM** FOR YOU. JUST ASK.

THERE IS NO MAIN LOOP IN THE GAME. ONCE ALL THE DATA IS INITIALISED EXECUTION CONTINUALLY PASSES FROM ONE ROUTINE TO ANOTHER. THERE IS A LINKED LIST OF STRUCTURES WHICH CONTAIN PRIVATE DATA, A POINTER TO THE NEXT DATA STRUCTURE IN THE LIST AND A POINTER TO THE NEXT INSTRUCTION TO BE EXECUTED. WHEN ONE ROUTINE DECIDES TO PASS ON CONTROL IT STORES THE ADDRESS OF ITS NEXT INSTRUCTION IN THE DATA AND JUMPS TO THE EXECUTION ADDRESS WHICH IS STORED IN THE NEXT DATA BLOCK IN THE LIST. PHEW!

THIS MEANS THAT EVERY FUNCTION IN THE GAME THINKS ITS RUNNING ALL ON ITS OWN. IT YIELDS EXECUTION TO THE NEXT FUNCTION AND WHEN CONTROL RETURNS IT'S CARRYING ON FROM WHERE IT LEFT OFF. FUNCTIONS CAN DECIDE TO STOP RUNNING AND WHEN THIS HAPPENS THEY SIMPLY UNLINK THEIR DATA BLOCK FROM THE LIST. SIMILARLY WHEN A NEW PROCESS NEEDS TO RUN A DATA BLOCK IS ALLOCATED AND LINKED INTO THE LIST AT AN APPROPRIATE PLACE.

THIS MAGIC IS KNOWN AS CO-OPERATIVE MULTITASKING. I'VE SEEN IT USED EVERYWHERE FROM ENTERPRISE SCALE NETWORKING ENVIRONMENTS LIKE NETWORKWARE DOWN TO GAMEBOY GAMES. IT'S ALSO HOW MOST OF WILLIAMS' EARLY GAMES WORK. INCLUDING DEFENDER.



SO THE PROCESSOR IS MERRILY JUMPING AROUND FROM FUNCTION TO FUNCTION, NEW ONES ARE BEING ADDED, AND SOME ARE DYING. MOST OF THE *GAME* OBJECTS LISTEN OUT FOR A SET OF SIGNALS WHICH CONTROL THEIR LIFE SPAN.

THERE'S A *TIMEOUT* SIGNAL WHICH IS FIRED BY THE TIMER, A COUNT OF LIVE TARGETS WHICH TRIGGERS THE NEXT LEVEL OBJECT WHEN IT HITS ZERO, AND A FEW

MORE. THIS IS A SIMPLE BUT TRICKSY WAY TO SYNCHRONIZE OBJECTS.

THE BEST TRICK IN THE GAME THOUGH IS THE USE OF THE **TY** REGISTER. NORMALLY YOU CAN'T CHANGE THE VALUE OF THIS REGISTER BECAUSE THE ZX81 WILL CRASH AS THE DISPLAY INTERRUPT USES IT. I MAKE THE **TY** REGISTER TO POINT TO THE CURRENTLY ACTIVE DATA BLOCK IN THE LIST. THE CODE THAT IS RUNNING CAN THEN USE IT TO ACCESS ITS DATA EASILY. IN ORDER TO DO THIS I MAKE COPIES OF THE VALUES THAT THE DISPLAY ROUTINE EXPECTS INSIDE THE DATA BLOCKS. TRICKY HUH! THIS WAY I CAN USE **TY** AND NOT SWEAT. I MIGHT ADOPT **NOVA** FOR MY NEXT EFFORT BUT WITHOUT THE PROMISE OF A TS1000 KIT THERE'S GOING TO HAVE TO BE A DISTINCT LACK OF PROJECTS ON THE HORIZON BE-

FORE I GET MY Z80 GLOVES ON AGAIN!
I HOPE YOU'VE FOUND THIS INTERESTING. I'D LOVE
TO WRITE MORE AND WHO KNOWS IF THERE'S ANY IN-
TEREST I MIGHT DO SO. THE CODE FOR THE GAME IS
DISTRIBUTED WITH IT ALONGSIDE INSTRUCTIONS FOR
HOW TO BUILD IT. THE CODE IS VERY WELL DOCU-
MENTED AND IF YOU'RE EVER BORED ON A WET AF-
TERNOON, THINK ON AND TAKE A LOOK.
EIGHTYONELY YOURS, CHARLIE. **AKA** SIR MORRIS.
" " COMBAT PLEASE! " "

EDIT: THE GAME (HOWEVER NON-FINISHED YET, BUT
IN THIS VERSION PUBLISHED FOR PEOPLE) IS HERE:
[HTTP://TINY.PL/KUJ2](http://tiny.pl/kuj2)

USING *.P FILES WITH ZX81.

MOST OF OUR READERS KNOW IT ALREADY BUT THERE
ARE ALSO SOME NEW USERS OF ZX81. THIS ARTICLE
IS FOR THEM. EMULATORS ARE NOT A GOOD WAY TO
ASSOCIATE WITH OUR COMPUTER (OR WITH ANY OTHER
8-BIT MACHINE). FOR USING PROGRAMS MENTIONED
TODAY WITH REAL ZX81 YOU HAVE TO CONVERT EMU-
LATOR FILES: *.P INTO **PAU** OR **RAW** SOUND FORMAT.
THEN YOU WILL BE ABLE TO LOAD THE PROGRAMS
INTO YOUR ZX81 VIA OUT-PUT OF YOUR **PC**'S SOUND-
CARD (SUPPOSEDLY WITH HELP OF ANY HI-FI AMPLI-
FIER, TO BOOST THE SIGNAL). THERE ARE SEVERAL
CONVERTORS DOING THAT. ONE OF THEM IS **P2RAW**
INCLUDED IN "ZX-TOOLS". DOWNLOAD LINK:

[HTTP://TINY.PL/2H3D](http://tiny.pl/2h3d)

YOU WILL HAVE TO USE THE PROG IN **DOS** MODE (IN
PROMPT LINE, FOR EXAMPLE:
C:/P2RAW.EXE AUTUMN.P AUTUMN.RAW). NOW YOU
HAVE A **RAW** AUDIO-SAMPLE. WHAT TO DO NEXT? OPEN
THE **RAW** FILE (IN COOL**EDIT** OR SOUND**FORGE**, OR
OTHER SAMPLE-EDITORS) AS:

SAMPLE RATE: 22050

CHANNELS: MONO

RESOLUTION: 8 BIT

THEN YOU CAN LOAD IT INTO THE ZX81 VIA **PC**'S
SOUND-CARD OR SAVE THE **RAW** AS WINDOWS PCM **PAU**
FILE AND BURN IT ON A **CDR**. ANOTHER WAY IS TO
CONVERT IT INTO AN **MP3** FILE TO LOAD PROGS FROM
AN MP3-PLAYER INTO ZX81. OF COURSE YOU CAN
ALSO RECORD IT SIMPLY ON A CASSETTE. :) ENJOY!

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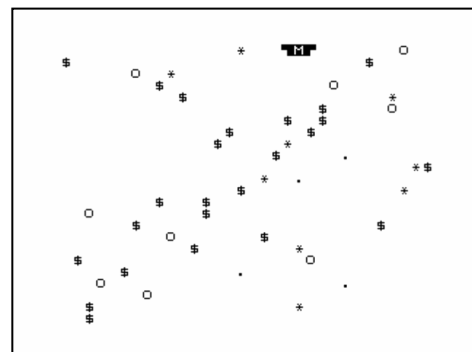
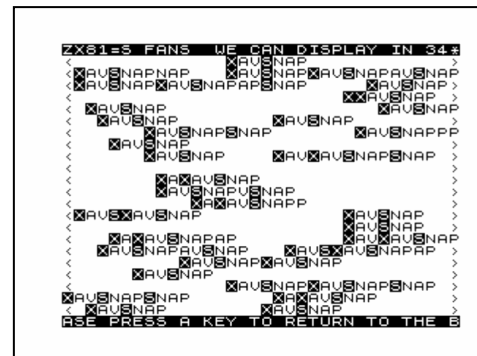
HIGHER TEXT-RESOLUTION ON ZX81!

AS YOU SURELY KNOW, ZX81 CAN DISPLAY (IN TEXT
RESOLUTION) 32*24 CHARACTERS.
BUT **XAVSNAP** PUBLISHED LATELY A
VERY INTERESTING DEMONSTRATION
PROGRAM THAT DISPLAYS - IN A
SOFTWARE WAY ONLY (!!) - HIGHER
TEXT RESOLUTION: **34*24!** :)

THE DEMO SHOWS
THE NEW RESOLU-
TION ITSELF AND
ALSO ITS USAGE
IN ARCADE GAMES
OR TEXT-
ADVENTURES.

THE PROG AND ITS SOURCES ARE
HERE: [HTTP://TINY.PL/2XRJ](http://tiny.pl/2xrj)
ENJOY! :)

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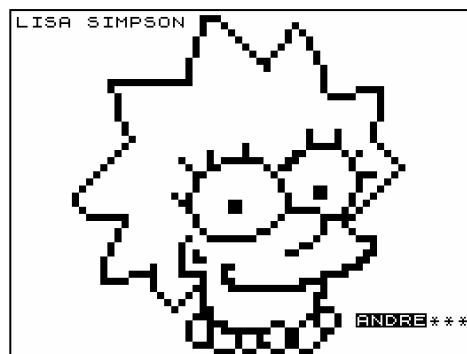


BONJOUR **ZX81/TS1000** FANS,

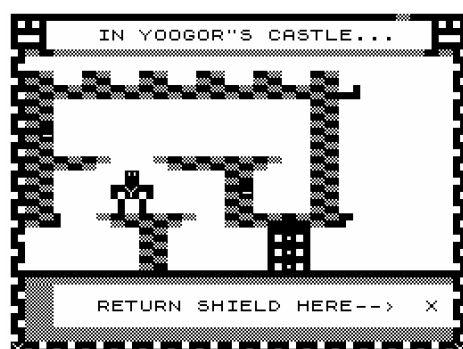
IT IS A PLEASURE FOR ME TO PARTICIPATE AT THE **MONOCHROME** MAGAZINE. I HAVE BEEN AN UNCONDITIONAL FAN FOR 26 YEARS NOW. THERE ARE TWO MAIN REASON WHY I ENJOY CREATING PROGRAMS ON A ZX81:

1) THE CHALLENGE IN CREATING GRAPHICS TO LOOK AS CLOSE AS POSSIBLE TO REALITY WITHIN THE LIMITS OF THE ZX81. I CAN SPEND HOURS, DAYS EVEN WEEKS, TRYING DIFFERENT COMBINATIONS OF CHARACTERS TO COME UP WITH THE BEST GRAPHIC THE ZX81 CAN PRODUCE.

REMEMBER THE CHALLENGE WHICH WILL BRING YOU THE MOST REWARD WHEN YOU FINALLY COME UP WITH A SUCCESSFUL RESULT. I AM PARTICULARLY PROUD OF THE SERIES "**DIPIC**". A SERIES THAT KEEPS GROWING WITH MORE AND MORE NEW GRAPHICS.



2) THE CHALLENGE TO CREATE, WITH THE ZX81 BASIC, A SCREEN ANIMATION THAT WILL PERFORM FAST. TO ATTAIN THAT I HAD TO WORK LONG HOURS TESTING AND TIMING DIFFERENT WAYS TO WRITE PROGRAMS LINES. I COMPARED TWO DIFFERENT WRITING TO FIND OUT WHICH ONE GIVES ME THE FASTEST RESULTS.



IT WAS TEDIOUS, I ADMIT, BUT HOW REWARDING AT THE END WHEN YOU CAN SEE THE RESULTS ON SCREEN. NOW I HAVE QUITE A COLLECTION OF TIPS AND TRICKS TO MAKE ANY PROGRAM TO RUN FASTER. BUT I AM STILL LOOKING FOR NEWER AND BETTER METHODS OF PROGRAMMING TO IMPROVE FURTHER MORE THE SPEED OF OUR GREAT **ZX81/TS1000**.

IF YOU MADE OR WILL MAKE A PROGRAM AND YOU WOULD LIKE TO SEE IT RUN FASTER, SEND ME A COPY AND I WILL GLADLY SPEED IT UP FOR YOU.

HAVE FUN, ANDRE***

<http://www.zx-team.de/andre>

<http://zx81.ordi5.free.fr/andre>

SO THIS WAS THE FIRST ISSUE ;)

WELL, I HOPE YOU LIKE THE MAG. I ALSO HOPE IT WILL DEVELOP AND MORE PEOPLE WILL WRITE ARTICLES. :) MANY THANKS FOR TEXTS YOU GUYS SENT ME UNTIL NOW. MANY THANKS TO GUYS WHO "SUBSCRIBED" THE MAGAZINE (WELL, IT IS FOR FREE ACTUALLY). ;) SEE YA NEXT TIME THEN!! © BY YERZ

ZX-81 IS LIKE THE TARDIS: MAYBE IT IS SMALL ON THE OUTSIDE, BUT ON THE INSIDE - IT'S GREAT!!!!