***am***       Version 1.16 ( Mon May 23 1994 )
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# *am* © [1] - a simple answering/modem/fax machine for NeXTSTEP computers

## Preface

The ZyXEL 1496 (xx) modems supports voice, fax and modem calls - this program handles incoming calls like an answering machine but if ***am*** detects a fax or a modem on the other side of the line it will handle that calls in the proper way.

- It only works on ZyXEL's with a ROM-Version above 5.00 - as far as I know.

- Starting with version 1.16, Axel Habermann <kiwi@belly.in-berlin.de> is taking care of this document, bug fixes and improvements to ***am***.

## What's new ? ( since 1.01 )

Should work now on NSfI ( NeXTSTEP for Intel Processors ) if the PC supports 38.4 kBaud
A snd->zyxel Soundconvertor ( snd2zyxel, snd3zyxel )
Improved fax-handling
Improved internal zyxel->snd Soundconvertor

## New since 1.16

Added ADPCM_3 support ( snd3zyxel, zyxel2snd recognizes ADPCM_3 ).
Bug fixes and adaptions for newer ZyXEL ROMs (up to 6.12)

## Installation

- Move the *lib_am/* in the according path ( eg. */Users/me/Library/* ).
- Append the *stuff/gettytab* at the */etc/gettytab* file, if you don't have defined a std.38400 in your gettytab.
- Patch the *config/config.h* and *config/setup.c* according to your system configuration and type make.
- Copy */etc/ttys* to */etc/ttys.orig*. Change the */etc/ttys* according the *stuff/ttys* then type (as superuser) 'kill -HUP 1' to let init reread the */etc/ttys* table. Then it will work all the time.

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[1] The `am` is <u>SLEEPWARE</u> © If you are using the program you should be so honerous to provide me - only once - a place to lay my head on for one night - in the next six months.

It is forbidden to use the source - or a part of it - in commercial products.

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# De-Installation

Copy the */etc/ttys.orig* to */etc/ttys* and type as superuser 'kill -HUP 1'.

# Users guide

You can work with your system while the program is running (e.g. while a call comes in), because the kernel will give IO-tasks a higher priority. There is a problem with the adpcm 3-bit (recording) and playing a sound with the DSP at the same time, because the sound has the same priority and the program may not get enough time to scan the input.

When a call comes in the *main_loop()* routine in the *config/setup.c* file is called and than the call will be treated as defined in the *setup.c* file.

To record a message

Get yourself to a phone - connected parallel to the modem ( Y-connector ) - and dial a "2" or another bad number to remove the dialtone from the line. Then press the Data/Voice button on the zyxel twice and listen to the welcome message. Speak your new welcome message then and - after finishing - the "*" on the phone. The only thing you have to do then is to rename the recorded message in the workspace.

If your telephone is not connected in parallel to the line you could also record the sound via the microphone of your NeXT and convert the soundfile as stated below (Converting sounds).

Remote use

Call ; listen to the welcome message, press your password and a "*" as return ( # = clear ), then you will hear all the recorded messages

Messages for friends

Same procedure as the "Remote use" except another password.

Listen to recored Sounds

If am records incoming messages with ADPCM_2 or ADPCM_3 then the sound is converted to snd-format automatically and placed in the New_Ones_Snd directory.

Reading received Faxes

Click on the Files in the *lib_am/Faxes* Directory.

Converting Sounds

Give the quoted commands in a shell:
'snd2zyxel <mysound.snd >mysound.zyxel' to convert to ADPCM_2 or
'snd3zyxel <my.snd >my.zyxel' for ADPCM_3.

'zyxel2snd <mysound.zyxel >foo.snd; sndconvert -f 1 -s 8012 -o mysound.snd foo.snd' will convert from both ADPCM formats to .snd

## Programmers guide

This is a nice feature of the **am.** The main behaviour of the answering machine can programmed in the C-language now. The *config/setup.c* file will be linked after compilation to the main program. Read the *config/setup.readme* and the *config/setup.c* file and you should know how…
After recompiling you have to kill the old am.

## Bugs

Recordings in CELP format will not be converted to ".snd" files. and vice versa.
Fax pages with graphics (long scan time per line) will be cut in pieces.

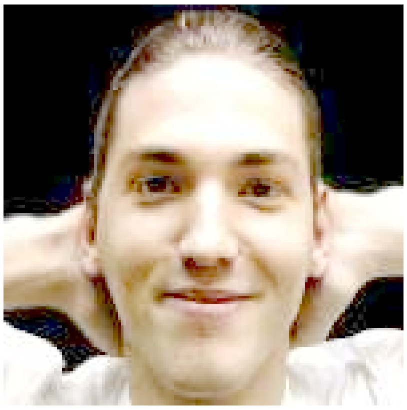
### Send BUGREPORTS !

**Mail Bug reports to kiwi@belly.in-berlin.de**
Please include the printout on the */tmp/console.log* from a version compiled with DEBUG set to level 2 !!

### THANX

| | | |
|---|---|---|
| Thomas Funke | <thf@zelator.de> | for the soundconversion routines |
| Kay Schulz | <kay@nagasena.muc.de> | for testing the Intel port |
| Christoph Merk | <merc@cis.uni-muenchen.de> | for faxing funny testpages |
| Maxtor Europe | <++49 +89 - 96 49 19> | for their automatic faxsystem |

***That's all Folks !***



Post Scriptum : The most non-touchtone phones can create touchtones after pressing the following keys.