

JYMAG - Java Your Music And Graphics

JYMAG is a program for communicating with mobile phones.

The program's main functionality is to be a Free (as in Freedom) 'My Pictures and Sounds' Sagem mobile software replacement for Linux and not only Linux - it should run on any system, which has [Java](#) and the RxTx Java Transmission package from one of the pages:

- www.rxtx.org
- rxtx.qbang.org
- users.frii.com/jarvi/rxtx/download.html
- mfizz.com/oss/rxtx-for-java

The program allows retrieving and sending multimedia and other objects from and to a Sagem mobile phone (tested on Linux with a "Sagem MY X5-2") and performing other operations.

JYMAG can also be used with other phones and devices (modems) and serve as a general-purpose serial port terminal or a Java library for programmers.

Features:

- works with Sagem myX5-2 (probably other phones also work). Tested on Linux with a Forever USB cable containing a Prolific PL-2303 chip.
- can download:
 - ◆ lists of pictures, ringtones, addressbook entries, to-do tasks, events, animation/videos, alarms and SMS messages
 - ◆ pictures in JPG (both Sagem and non-Sagem), BMP, GIF, PNG and WBMP formats, unverified: TIFF, PICT, EPS, PS, SVG, SVG+GZIP, SVG+ZIP, WMF, CGM, PMB
 - ◆ ringtones in MIDI, AMR and WAV formats, unverified: AIFF, IMY, AAC, MP3
 - ◆ addressbook entries (vCards)
 - ◆ to-do tasks
 - ◆ events (reminders, ...)
 - ◆ animation/videos in GIF and MNG formats, unverified: WMV, MP4, MPEG
 - ◆ multiple files (of one type) with a single click
- can upload/update/send:
 - ◆ pictures in JPG, BMP, GIF, PNG and WBMP formats, unverified: EMS_GR, TIFF, PICT, AI, EPS, PS
 - ◆ ringtones in MIDI, WAV and AMR formats, unverified: IMY, ASG1, ASG2, MP3, MFI, AAC, AWB
 - ◆ addressbook entries (vCards)
 - ◆ to-do tasks
 - ◆ events (reminders, ...)
 - ◆ animation/videos in GIF and MNG formats, unverified: EMS_AN, MJPG, AVI, MP4, MPEG, 3GP, 3GP2, SG1, SG2, SSA
 - ◆ Java files: unverified: JAR, JAD, JAM
 - ◆ alarms
 - ◆ SMS messages
- can delete the following from the phone: pictures, ringtones, addressbook entries, to-do tasks, events, animation/videos, alarms and SMS messages
- can dial numbers

- written in Java, thus portable - will run under Linux and probably under Windows, Solaris, ... wherever you can install [Java](#) and RxTx
- has a Graphical User Interface (GUI)
- can detect which port your phone is connected to (actually, should detect anything that replies with an OK to an AT command, including modems)
- can detect your phone's type, firmware version (after all the ports are scanned), IMEI number and subscriber phone number
- allows to set any communication port property (data bits, stop bits, flow control, speed, parity checking)
- automatically detects downloaded file's type
- automatic reconnection if waiting time has expired
- can be used non-interactively, through a command-line interface (this still requires RxTx), run with `--help` to get the currently supported command line options
- allows manual command sending
- allows easy translation to other languages
- allows saving and loading the current configuration (port and window settings)
- allows reading the phone's capabilities (types of accepted files)
- is licensed under the GNU General Public License (GPL), version 3 "or later"
- can work as a general-purpose serial port terminal
- shows signal power

Program windows:

- [main window](#)
- [about the program](#)
- [capability window](#)
- [manual commands](#)
- [signal power window](#)

Additional pages:

- [program license](#)
- [readme](#)

Contact info

Contact me: bogdro AT users . sourceforge . net (English accepted, just say '[SOFT]' in the title).

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JYMAG - Read Me

This is the README file for JYMAG (Java Your Music and Graphics), a program for communicating with mobile phones.

JYMAG's main functionality is retrieving and sending multimedia and other objects from and to a Sagem mobile phone (tested on Linux with a "Sagem MY X5-2").

JYMAG can also be used with other phones and devices (modems) and serve as a general-purpose serial port terminal or a Java library for programmers.

Author: Bogdan Drozdowski, bogdro AT users . sourceforge . net or bogdandr AT op . pl (English accepted, just say '[SOFT]' in the title).

License: [GPLv3+](#) for the program, MIT License for the launching helper programs (jymag*.exe). See the COPYING file.

Running

Requirements:

- RxTx Java Transmission package from one of the pages:
 - ◆ www.rtx.org
 - ◆ rtx.qbang.org
 - ◆ users.frii.com/jarvi/rtx/download.html
 - ◆ mfizz.com/oss/rtx-for-java
- JRE, the [Java SE Runtime Environment](#) >= (1.)6.0
- permissions to use the serial ports
- port locking permissions may be required by RxTx. Adding the user running JYMAG to the `uucp` and `lock` user groups should be enough (on Un*x)

Using NetBeans: open the JYMAG directory as a NetBeans Project and click "Run" (or press F6).

By hand (after unpacking):

- double-click the JYMAG\dist\JYMAG.jar file (works on MS Windows) or
- `run.bat` (on MS Windows) or
- `run.sh` (on Un*x) or
- `java -jar JYMAG/dist/JYMAG.jar` (on Un*x) or
- `java -jar JYMAG\dist\JYMAG.jar` (on MS Windows)

You can also do one of the following:

- Under Un*x: copy JYMAG/dist/JYMAG.jar and run.sh to one directory in a suitable location (like in your PATH). Running `run.sh` will be enough. The `java` binary must be in your PATH environment variable.
- Under Windows: a double click on the JAR file should be enough. If not, copy JYMAG/dist/JYMAG.jar and run.bat to one directory in a suitable location (like in your PATH). Running `run.bat` will be enough. When using the second approach, the `java.exe` binary must be in your PATH environment variable too.

Running in the default language (no translations)

Requirements:

- RxTx Java Transmission package from one of the pages:
 - ◆ www.rtx.org
 - ◆ rtx.qbang.org
 - ◆ users.frii.com/jarvi/rtx/download.html
 - ◆ mfizz.com/oss/rtx-for-java
- JRE, the [Java SE Runtime Environment](#) >= (1.)6.0
- permissions to use the serial ports
- port locking permissions may be required by RxTx. Adding the user running JYMAG to the `uucp` and `lock` user groups should be enough (on Un*x)

Using NetBeans: open the JYMAG folder as a NetBeans Project, right-click the project's root element in the project's tree on the left side of the window (the "Projects" sub-window), then click "Properties". Click "Run" in the tree and put

```
-Duser.language=en -Duser.country=US
```

in the "VM Options" field. Click OK and click "Run" (or press F6).

By hand (after unpacking):

- `run-en.bat` (on MS Windows) or
- `run-en.sh` (on Un*x) or
- `java -jar -Duser.language=en -Duser.country=US JYMAG/dist/JYMAG.jar` (on Un*x) or
- `java -jar -Duser.language=en -Duser.country=US JYMAG\dist\JYMAG.jar` (on MS Windows)

You can also do one of the following:

- Under Un*x: copy JYMAG/dist/JYMAG.jar and run-en.sh to one directory in a suitable location (like in your PATH). Running `run-en.sh` will be enough. The `java` binary must be in your PATH environment variable.

- Under Windows: copy JYMAG/dist/JYMAG.jar and run-en.bat to one directory in a suitable location (like in your PATH). Running run-en.bat will be enough. When using the second approach, the java.exe binary must be in your PATH environment variable too.

Compiling (if necessary)

Requirements for compiling:

- RxTx Java Transmission package from one of the pages:
 - ◆ www.rtx.org
 - ◆ rtx.qbang.org
 - ◆ users.frii.com/jarvi/rtx/download.html
 - ◆ mfizz.com/oss/rtx-for-java
- JDK, the [Java SE Development Kit](#) >= (1.)6.0

Compiling using NetBeans: open the JYMAG folder as a NetBeans Project and click "Build Main Project" (or press F11) if it is your main project (bold font). If it's not your main project, right-click the JYMAG project icon and click "Build".

Compiling using "ant" from NetBeans (you may need to provide the full path to "ant"):

```
cd JYMAG-X.Y
ant jar
```

Compiling by hand (you may need to provide the full path to "javac"):

- on Un*x shells try

```
cd JYMAG/src/BogDroSoft/jymag/
javac *.java
```

- on MS Windows this could work:

```
cd JYMAG\src\BogDroSoft\jymag
javac *.java
```

Usage (GUI)

Phone setup: connect it to the computer using a cable or IrDA or whatever works. Switch the transmission on in the phone, if necessary. If using a cable, select "Automatic speed" in the configuration.

No need to connect to the phone. Start by selecting the tab you're interested in (photos, ringtones, ...). Click on "Get list" to connect to the phone and get the list of elements. Select the elements you wish to download and click "Download selected". Choose the destination directory. The downloaded files will show up in selected

location.

To upload an element, simply click the "Upload" button. Getting the list isn't necessary. You can also drag&drop the files you want to upload on any of the tables (except the alarms and SMS messages).

To edit an alarm, double click the cell in the table. Keep the format unchanged.

To read an SMS message, select it in the table and choose "Download selected". A new window will appear allowing you to read the message.

To send an SMS message, click the "Upload" button. A new window will appear allowing you to type the phone number and the message body.

Usage (command line)

The following command-line (case-insensitive) options are supported:

- `--conf <file>` - read configuration from <file>
- `--databits <5, 6, 7, 8>` - sets the number of data bits (default: 8)
- `--delete-after-download` - delete the downloaded elements if downloaded successfully
- `--delete-alarm <N>` - delete the alarm number N
- `--delete-element <ID>` - delete the element (file) with the given ID
- `--delete-sms <N>` - delete the SMS message with ID=N
- `--dial-data <number>` - dials the given number for a data connection
- `--dial-voice <number>` - dials the given number for a voice connection
- `--download-all-animations` - downloads all animations/videos from the phone and exits
- `--download-all-events` - downloads all events from the phone and exits
- `--download-all-photos` - downloads all photos from the phone and exits
- `--download-all-ringtones` - downloads all ringtones from the phone and exits
- `--download-all-todo` - downloads all to-do tasks from the phone and exits
- `--download-all-vcards` - downloads all addressbook entries from the phone and exits
- `--download-all` - combines all "download" options and exits
- `--download-dir <dir>` - sets the default download directory
- `--flow <none, soft, hard, soft+hard>` - sets the flow control mode (default: none)
- `--hangup` - stops the current call, if any
- `--help` - display help
- `--lang LL_CC_VV` - select the language to use by JYMAG: "LL" is the language, "CC" is the country code, "VV" is the variant. Separate them using underscores. Only LL is required.
- `--license, --licence` - display license information
- `--list-alarms` - display the alarms in the phone
- `--list-elements` - display the elements (files) in the phone
- `--list-sms` - display the SMS messages in the phone
- `--parity <none, even, odd, space, mark>` - sets the parity mode (default: none)
- `--port <filename>` - sets the default port
- `--scan` - scans available ports for "OK" answers and exits the program
- `--send-cmd-file <file>` - sends the contents of the given file (as commands or data or mix of these)

- `--send-sms <number> <msg>` - send the given `<msg>` message as an SMS to the given recipient `<number>`
- `--speed <1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 230400, 460800, 500000, 576000, 921600, 1000000, 1152000, 1500000, 2000000, 2500000, 3000000, 3500000, 4000000>` - sets the port speed (default: 115200)
- `--stopbits <1, 1.5, 2>` - sets the number of stop bits (default: 1)
- `--update-alarm "DD/MM/YY, HH:MM:SS", N, "days"` - updates the given alarm in the phone. N is the alarm number. Days are comma-separated numbers (1-Monday) or 0 for all days
- `--upload <filename>` - uploads the given file to the phone and exits
- `--version, -v` - display program version

Converting ringtones

Some ringtones received from the phone may be in AMR format. You can convert those to other formats using other software, like the free "Mobile Media Converter". If it doesn't work, use the FFmpeg program attached to the "Mobile Media Converter" like this:

```
ffmpeg -i Ring.amr -ar 44100 Ring.wav
```

To convert a ringtone to a WAV format accepted by the phone, use the following command:

```
ffmpeg -i <ringtone file> -ar 8000 -t 10 -ac 1 -acodec adpcm_ima_wav <output file>.wav
```

(the number after "-t" is the ringtone duration in seconds). I've only been able to upload ringtones created with the above command. It may be possible to upload longer ringtones, in greater sampling rates, stereo, ..., but I haven't tried all that (my 30-second ringtones are rejected).

Translating

To translate the program to your language, make a copy of each *.properties file. Rename these files so they end with your language and country code, for example: AboutBox_en_GB.properties, MainWindow_de_DE.properties, RawCommunicator_pt_BR.properties

Then open each file in UTF-8 mode and translate the words AFTER the "=" in each line. When you've finished all the files, send them to me. Remember, UTF-8, not ISO-8859-*, not windows-*, not cp*.

NOTE: If you change the words before the "=", your translations won't be seen by the program.

NOTE: Alternatively, you can use the NetBeans IDE to translate. Just open the JYMAG project, right-click any of the main properties' file, choose "Add" and "Locale". Choose your language and select OK. Now right-click the chosen file and select "Open". Edit the strings in your language.

If not working

1. The phone's port doesn't show up on the list.

Not JYMAG's fault. Make sure:

- ◆ the phone connects with a serial link (not as a USB mass storage device, for example)
- ◆ you have installed a correct driver for the cable/IrDA/other devices
- ◆ the phone's port is not already in use
- ◆ you have the newest RxTx

2. Getting the list(s) fails.

Click "Scan ports". If an answer is received, the correct port should be selected in the combo box. If not, an error will show up. Try closing the program and starting it at least 3 more times. If no success, check your drivers and connection.

3. The program doesn't start and gives "class not found/java.lang.NoClassDefFoundError" messages.

Run java with its full path, like `/usr/bin/java -jar JYMAG.jar`. You can also try adding the path to RxTx to your CLASSPATH environment variable (create one if it doesn't exist). Try adding both the directory containing the RXTXcomm.jar file and the path to the file to CLASSPATH.

4. Downloaded elements are corrupted.

Mine sometimes are corrupted too. I can't help it. Some elements get downloaded correctly at the first attempt, some require a few attempts, and some require a lot of attempts. Since it works one time and doesn't work the other time, it's not JYMAG's fault. Since it works, the program is written correctly. It's the connection that is unreliable. The original program was even worse - the connection broke in the middle of transmission and you had to click "Connect" over and over again and some pictures were corrupted too. Have patience. If you know how to make this better, contact me (e-mail at the top of this file).

5. JYMAG sends a file, but the phone rejects it.

Check if your phone accepts the given file format, either by using the capabilities' button in the main window, or by sending

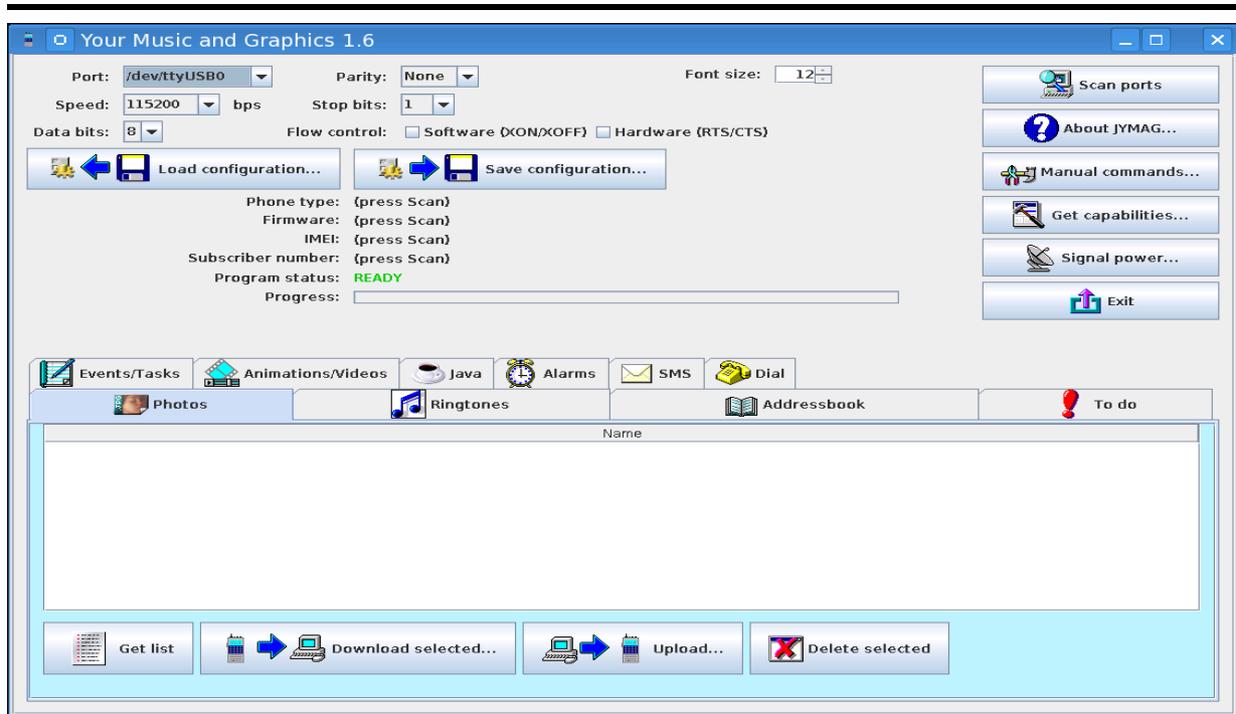
```
AT+KPSCAP="X"
```

(with the double quotes) in the "Manual commands" window. The X can be: PICTURES, SOUNDS, VTOD0, VEVENT, VCARDS, ANIMATIONS.

Reporting problems

1. Check if you have the newest versions of JYMAG.
2. Include your Java and RxTx version numbers. See if the program works with a newer/older version of Java/RxTx. If it works with an older version, but not with a new one, your problem is solved, but still tell me the problematic version numbers.
3. Include precise steps for reproducing the error, if possible. This will make finding the problem easier.
4. If the program crashed, include "jymag.log" in your report. It should be in the current JYMAG working directory.
5. If the program exited normally, but the "jymag.log" still exists after closing the program and is not empty, include it in your report.
6. Take all the information from the above steps and any additional information you can give and send it to my e-mail address (you can find it at the top of this file).

JYMAG - Main window



This is the main window of the JYMAG program. It allows you to perform many different operations. Use the font size spinner at the top of the window to adjust the font size of this window and all windows opened from this window.

On the top left side of the window you can set the communication port's parameters:

1. The Port list allows you to select which communication port to use. If you don't know which port to use, press the "Scan ports" button. When scanning is finished, the port that replied is automatically selected or you're presented with a list to choose from. In any case, you can always select another port. Choosing different ports allows you to see which port have replied with what information - this information is shown using the four labels in the middle section of the window.

If your port is not on the list, check if:

- ◆ the phone connects with a serial link (not as a USB mass storage device, for example)
- ◆ you have installed a correct driver for the cable/IrDA/other devices
- ◆ the phone's port is not already in use
- ◆ you have the newest RxTx

2. The Speed list allows you to choose the transmission speed. Set this to the value set in the phone (or other device you're connecting to) or leave the default 115200.

3. Choose the number of data bits to use: 8 (the recommended default), 7, 6 or 5.

4. Choose the parity checking: None (the recommended default), Even, Odd, Space, Mark.
5. Choose the number of stop bits: 1 (the recommended default), 1.5 or 2.
6. Choose the flow control mode: None (both checkboxes deselected - the recommended default), Software or Hardware.

Below the port's settings there are two buttons:

1. "Load configuration" allows you to load your settings from a previously-saved JYMAG configuration file.
2. "Save configuration" allows you to save your settings to a file. The following settings are saved:
 - ◆ port name
 - ◆ port speed setting
 - ◆ port data bits setting
 - ◆ port parity setting
 - ◆ port stop bits setting
 - ◆ port flow control setting
 - ◆ main window's position
 - ◆ main window's size and whether it was maximized or not
 - ◆ main window's font size
 - ◆ main window's selected tab

Below, in the middle section of the window are the following elements:

1. The phone type label - contains the phone type returned by the phone (if any) after you have pressed "Scan ports".
2. The phone's firmware version returned by the phone (if any) after you have pressed "Scan ports".
3. The phone's IMEI number returned by the phone (if any) after you have pressed "Scan ports".
4. The subscriber number of the currently-inserted SIM card returned by the phone (if any) after you have pressed "Scan ports". This is simply your phone number.
5. The program status label tells if the program is ready for your command, receiving or sending data.
6. The progress bar shows the progress of the current operation.

At the bottom of the main window there is a panel with tabs. These tabs contain tables with the files or other elements or functionalities found in the phone:

- pictures/photographs
- ringtones/melodies/music files
- addressbook (phonebook) entries
- to-do tasks

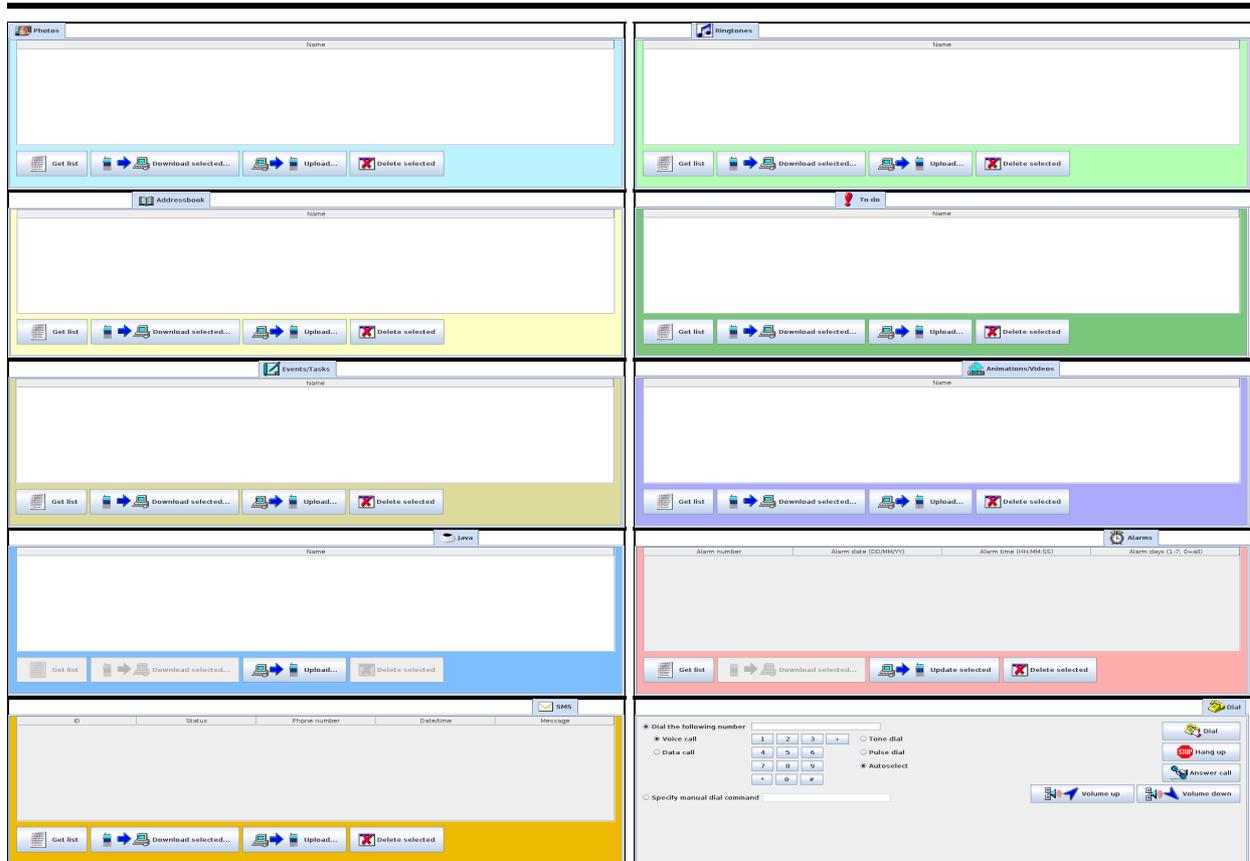
- events/tasks
- animation/videos/movies
- Java elements
- alarm clock entries
- SMS messages
- dialing numbers

More information can be found on the [tabs' page](#).

Finally, on the right side of the window you can find the following buttons:

1. "Scan ports" - press this to scan the found serial ports for replies. When scanning is finished, the port that replied is automatically selected or you're presented with a list to choose from. In any case, you can always select another port. Choosing different ports allows you to see which port have replied with what information - this information is shown using the four labels in the middle section of the window.
2. "About JYMAG" - opens the [about window](#).
3. "Manual commands" - opens the [manual commands' window](#).
4. "Get capabilities" - opens the [capabilities' window](#).
5. "Signal power" - opens the [signal power display window](#).
6. "Exit" - closes JYMAG.

JYMAG - Tabs with phone's files and dialing numbers



These tabs display the files in the phone and allow downloading, uploading and deleting the elements.

In each tab there are four buttons:

1. "Get list" - use this to get the list from the phone. The elements listed are the ones applicable for the current tab. You can get all the lists, they don't overwrite each other.
2. "Download selected" (if available) - this button will present you with a window for you to select a directory where the elements selected in the table should be downloaded to. The only exception is the SMS tab, where this button opens new windows with the messages that you have selected to view.
3. "Upload" (if available) - this button will present you with a window for you to select a file to upload to the phone (the alarms' and SMS messages' tabs are exceptions). The type of the files shown on the list is determined by the current tab. Alternatively, you can drag&drop files on the table (except the alarms and SMS messages).
4. "Delete selected" (if available) - use this to delete the elements selected in the table from the phone.

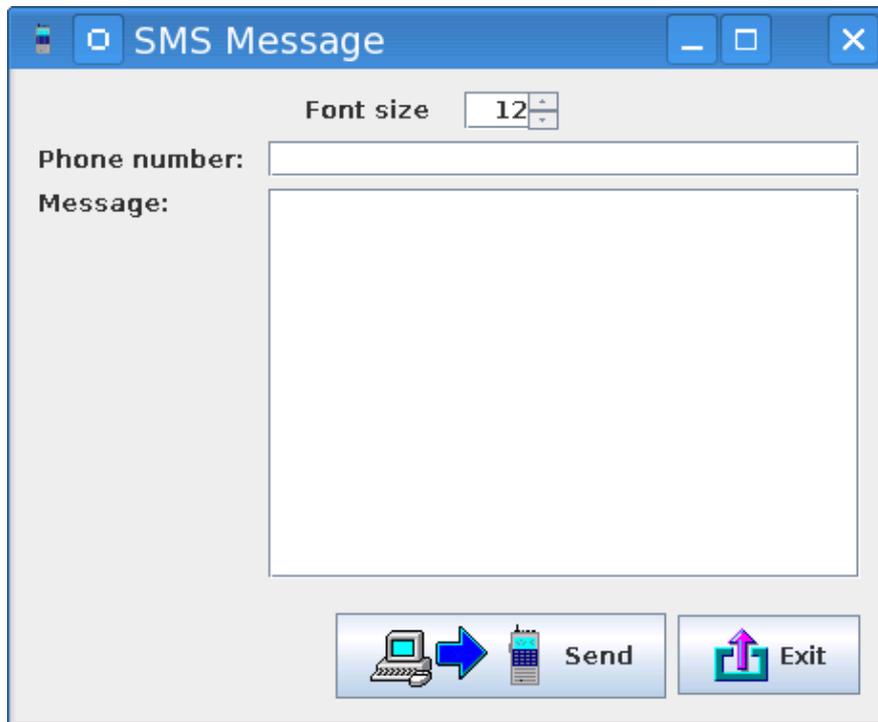
The tabs with alarms and SMS messages are exceptional. On the alarms' tab the buttons have the following functionality:

1. "Get list" - use this to get the list of the alarms from the phone. The list has four columns:
 - ◆ "Alarm number" - the alarm's identification in the phone
 - ◆ "Alarm date" - the date on which the alarm will work (DD/MM/YY format)
 - ◆ "Alarm time" - the time of day at which the alarm will work (HH:MM:SS format)
 - ◆ "Alarm days" - the days of the week on which the alarm will work (any number of digits 1 to 7, separated by commas, 1 is Monday, 0 means all days)You can edit the elements in the table (by double-clicking), but keep the format, otherwise something may break.
2. "Download selected" is disabled, because you can't download an alarm from the phone.
3. "Update selected" - this button will cause the selected alarms to be updated in the phone (usually after updating them in the table).
4. "Delete selected" will cause the information about the selected alarms to be removed from the phone. This will not cause the number of rows to change, because the number of alarms is constant (even if they're not used).

On the SMS tab the buttons have the following functionality:

1. "Get list" - use this to get the list of the SMS messages from the phone. The list has five columns:
 - ◆ "ID" - the phone identification number of the given message
 - ◆ "Status" - the status of the message. REC means received, STO means stored, UNSENT means not sent
 - ◆ "Phone number" - the phone number of the sender of the given received message
 - ◆ "Date/time" - the date and time the message was received
 - ◆ "Message" - the body of the message
2. "Download selected" will cause new windows to show up. These windows will allow you to read the whole message easily.
3. "Upload" - this button will cause a new window to show up where you can enter the recipient's number and the message body and send the message (see below).
4. "Delete selected" will cause the messages currently selected in the table to be deleted from the phone.

The window for sending SMS messages looks like this:

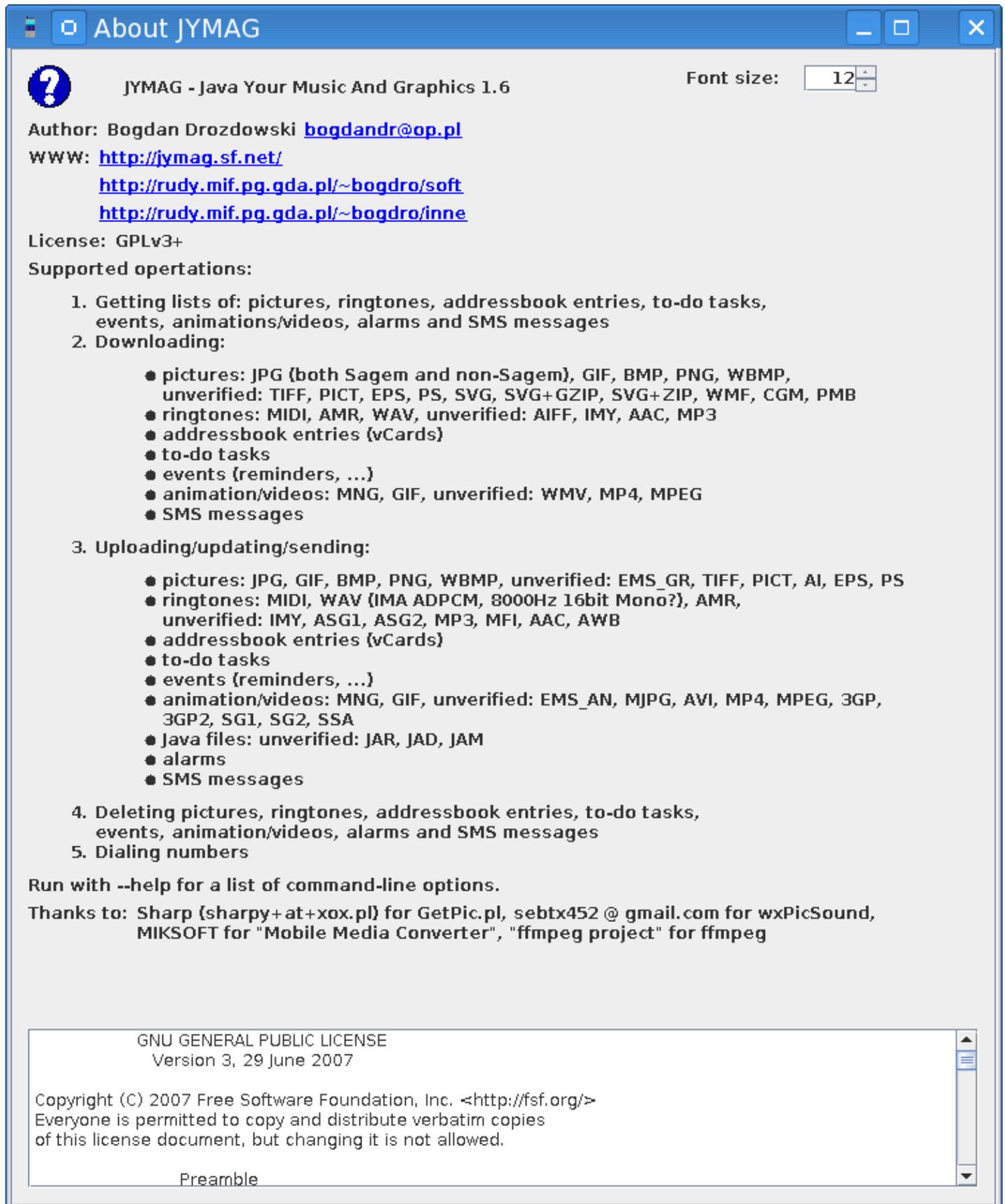


1. Enter the recipient's phone number
2. Enter the body of the message
3. Press "Send" to send the message
4. Press "Exit" to close the window
5. Use the font size spinner to adjust the font size of this window

On the dialing tab the following elements are present:

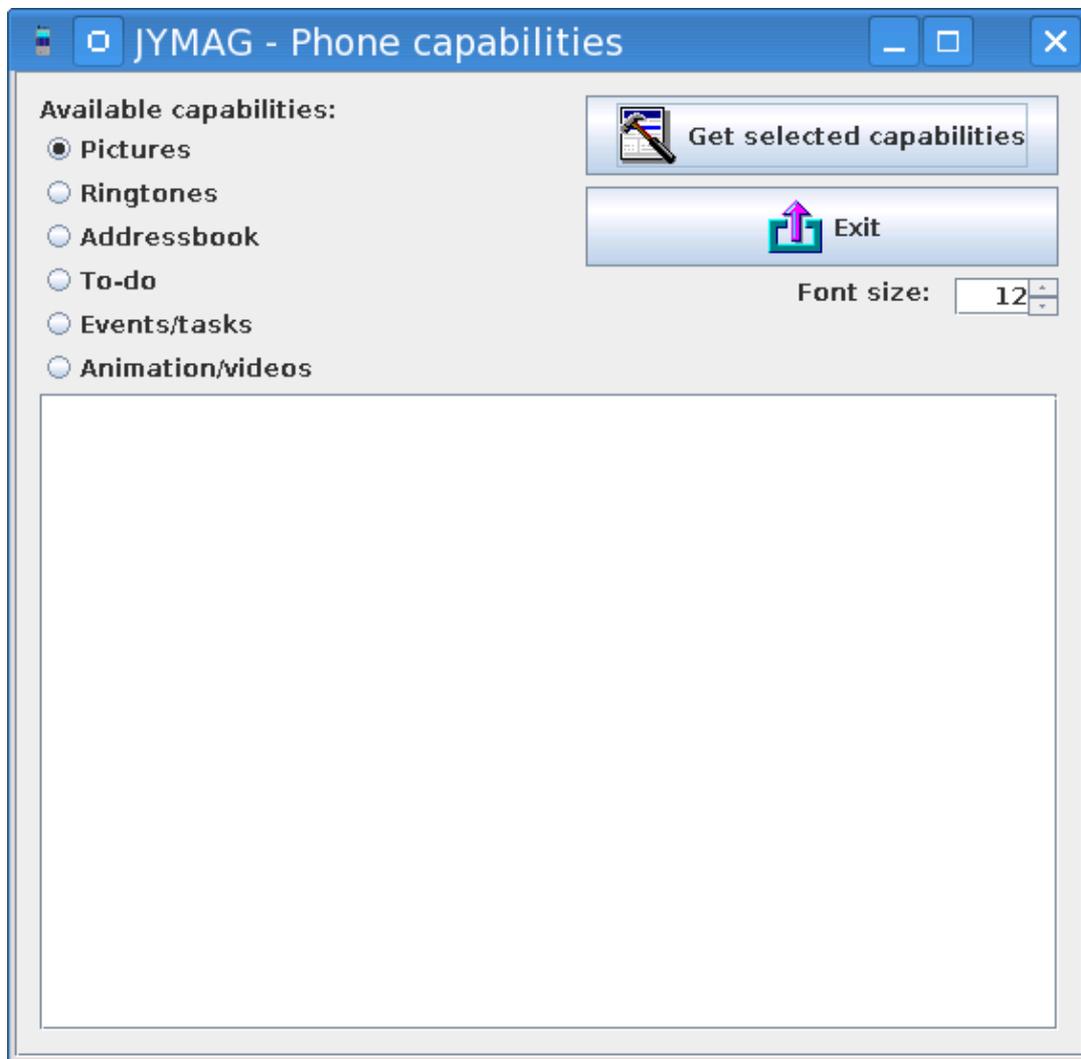
1. number dialing/manual command radio buttons - use them to either automatically create the command that dials the given number or to provide the dialing command manually
2. digit buttons - use them to enter the number you wish to dial (number dialing only)
3. voice call/data call radio buttons - use them to choose the transmission type (number dialing only)
4. tone dial/pulse dial/automatic method selection radio buttons - use them to choose the dialing method (number dialing only)
5. the "Dial" button - this button will cause the selected number to be dialied (number dialing) or the manual command to be sent to the device (manual dialing command)
6. the "Hang up" button - this button will cause any current connections to be stopped
7. the "Answer call" button - this button will cause answering any incoming connection
8. the "Volume up" and "Volume down" buttons - allow changing the loudspeaker volume

JYMAG - About Box



This window shows the program's name, version, author, capabilities and license.

JYMAG - Capabilities' window

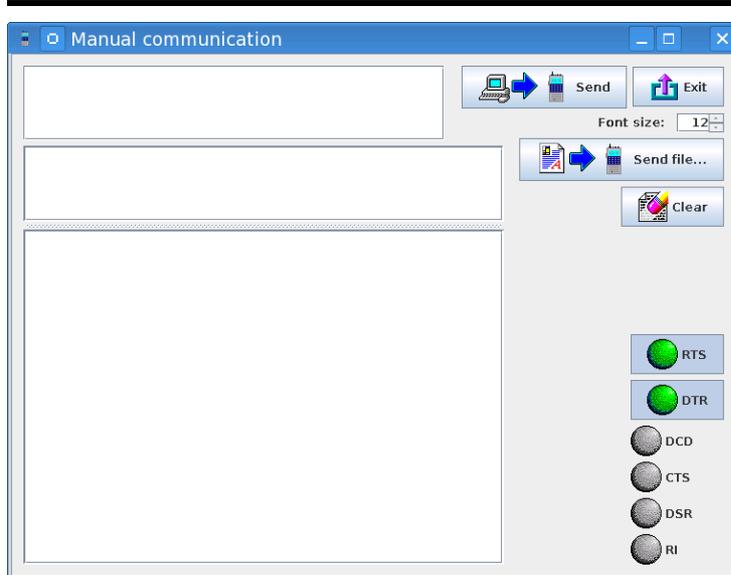


This window allows checking the phone's capabilities.

The port and its settings are the ones set in the main window.

1. Choose the capabilities you want to check in the upper-left side of the window
2. Press "Get selected capabilities"
3. The selected phone capabilities show up in the text area below
4. Press "Exit" to close the window
5. Use the font size spinner to adjust the font size of this window

JYMAG - Manual commands' window



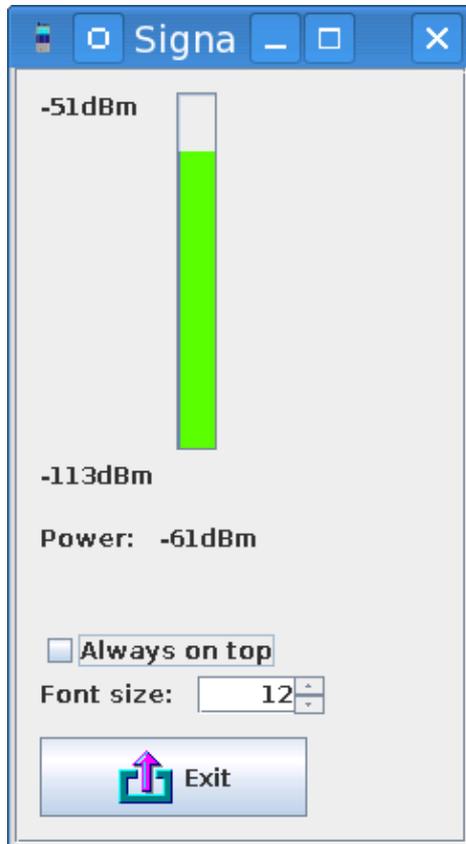
This window allows you to send your own commands to the phone. This can be helpful if you want to check what a given command does or if you want to use a command that isn't supported by JYMAG.

This window can also serve as a general-purpose serial port terminal allowing you to send commands to any device, not just supported phones.

The port and its settings are the ones set in the main window.

1. Type your command in the top text area.
2. Press "Send" to send the command to the device. While waiting for the answer, the command area and the "Send" button are disabled.
3. The sent commands appear in the middle text area.
4. The device's replies appear in the bottom area.
5. Press "Exit" to close the window.
6. Press "Clear" to clear the answers' area.
7. Use the font size spinner to adjust the font size of this window.
8. Use the "Send file" button to send a file to the device.
9. Use the "RTS" and "DTR" push-buttons to control the state of the port's control signal lines.
10. The circles show the current state of the given control signal line (green - enabled, grey - disabled).

JYMAG - Signal power window



This window allows checking the phone's detected signal power (mobile operator's signal at your location).

The port and its settings are the ones set in the main window.

1. The power bar shows the current level graphically
2. The power label shows the numeric value of the signal power
3. Press "Exit" to close the window
4. Use the font size spinner to adjust the font size of this window
5. The "Always on top" checkbox allows you to make the window always visible

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Version 3, 29 June 2007

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