IR-Master

By Jürgen Frank and Michael Watzl

1 What Is IR-Master

The IR-Master package consists of two software parts and a control hardware which is plugged to the joystickport of your Amiga. With this equipment almost any device shipped with an IR remote can be controlled by your Amiga.

At first you edit a virtual IR remote with the IR-Editor. Then this project is saved to disk an launched with the IR-Runner. The number of active IR-Runners is not limited.

You can use the IR-Runner either interactively or control it via ARexx from other applications or even programm it using ARexx scripts.

There are also some optional (send-only) hardwares:

One is connected to the (internal) parallel port of the Amiga and carries up to eight IR senders. This eight channels can be selectively used by the IR-Master.

Another optional hardware is designed for the audio-port. Here, the sending of IR commands uses DMA[1] with the advantage not to block the system for a moment.

With IR-Master 3.20 a new hardware for the (internal) serial port of the Amiga is introduced.

LControl and other applications to control video cameras and players are supported directly since version 2.5 of the IR-Master. See Appendix C [Other Software], page 21.

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[1] direct memory access – does not stress the CPU

2 Installation

IR-Master requires:

req.library   This library is possibly not included to this distribution. In this case you can find this
              shared library in the aminet or other FD-software pools.

Amiga-OS 1.x
              This version of the Amiga-OS is no longer compatible to the hardware an the software
              is no longer supported.

Amiga-OS 2.x/3.x
              for the current version of IR-Master

Installation:

After a doubleclick on the installers[1] project icon, the installation of the IR-Master starts auto-
matically.

Alternatively you can follow this steps (after you have uncompressed each of the archives):

1. Copy the 'req.library' to 'LIBS:' A patch (like RTPatch) is recommended to patch the
   functions of req.library to the newer and better looking functions of reqtools.library

2. Copy the file 'InfraRed.library' to 'LIBS:'

3. Make a new drawer for the IR-Editor and the IR-Runner and copy them to this drawer.
   However, it is not important where the IR-Master and the IR-Editor are located.

   Note: The IR-Runner sould be placed into a drawer like 'c:' or 'sys:utilities'. If not your
   projects may not find the IR-Runner when you doubleclick them.

4. Copy the drawer 'data/' into the drawer where the IR-Editor can be found. The icons for the
   IR-Master's toolbox are located here. See Section 3.2.2 [Configuration], page 8.

5. If you use Amiga-OS 2.1 or better you can also copy language catalogs (english is built in).

   Copy 'catalogs/<language>' to 'LOCALE:catalogs/<language>'. At the moment, only a
   german catalog is available. Translations to other languages are welcome.

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[1] Installer (c) 1991-1993 Commodore-Amiga, Inc. All Rights reserved. Reproduced and dis-
tributed under licence from Commodore. Installer Software is provided "as-is" and subject to
change; no warranties are made. All use is at your own risk. No liability or responsibility is
assumed.

3 IR-Editor

With the IR-Editor you can construct your IR remote control.

3.1 The Menus

3.1.1 Project

Load...	Activates a filerequester. You can load a project from disk.
Save	Saves the current project to disk using the current name.
Save as...	Activates a filerequester. You can save the current project under a new name.

―――――――――

Info...	Gives you information about the usage of memory, etc.
Authors	Information about the authors of the IR-Master.

―――――――――

Save Prefs	Saves the current preferences, e.g. the position of the different windows, etc.
Hide	Closes the IR-Master screen and puts an app icon to the workbench. As much as possible memory is freed. The current project won't be lost.

―――――――――

Quit	Quits the IR-Editor.

3.1.2 Edit

Cut   The selected gadgets are deleted from the project window and copied to an internal buffer. You can use `Paste` to copy them back to the project window at any position.

Copy   The selected gadgets are copied to an internal buffer. They are not deleted from the project window. You can use `Paste` to copy them back to the project window at any position.

Note : If you already have cut/copied some gadgets to the buffer and you cut/copy again, then the previousely cut/copied gadgets are lost!

Paste   The gadgets in the interal buffer are pasted back to the project window.

Info   Gives you information about the gadgets in the internal buffer.

Flush   Flushes the internal buffer after a final request.

3.1.3 Arrange Gadgets

Note : All actions on selected gadgets relate to the **first** seletected gadget.

Align   Alings selected gadgets

      Left   by the left edge

      Top   by the top edge

Spread

      horizontally

            Spreads the selected gadgets horizontally or vertically

      Vertikal   with a user selectable distance.

Clone Size Each of the selected gadgets becomes as big as the first selected gadget.

Coordinates

      Opens/closes the corrdinate-window. See Section 3.3.1 [Coordinates], page 9.

Grid on/off

      Switches on the magnetic grid. This helps you aligning the gadgets.

Adjust Grid

      You may specify the x and y values of the magnetic grid.

3.1.4 Prefs

Palette   Activates a palette for the screen colors.

Font   Activates a font requester. The selected font is used for the IR-Master windows and has no influence to the project.

Screenmode

Activated a screenmode requester. The depth of the IR-Master screen is the same as the depth of the workbench.

On Publicscreen

Closes the IR-Master screen an tries to reopen on the default public screen.

Make Screen Public

Tries to close the IR-Master screen an reopen as a public screen. The screen's name is `IRMaster.`

Show IR-Code

Opens the IR-Code window. The IR-Code (if learned) of the current gadget is displayed. See Section 3.3.3 [IR-Code], page 11.

Show IR-Config

Opens the IR-Config window. Here you can edit the gadget's configuration. See Section 3.4 [Learning IR], page 11.

Load Background...

You can select a picture to be used as a background graphic for your project. Use the menu item "Background graphic/" to center it, put it to the top-left edge of the window or to tile your window with the picture.

If you are using AmigaOS 3.0 or better, the "datatypes.library" is used to read the picture. This allows you to read picutres in any format for which a datatype is installed. The palette is automatically remapped to the screen's palette, too.

If you are using AmigaOS 2.x you can only use ILBM pictures as background graphic. The colors of the picture must be remapped manually with a paint program.

Clear Background

This removes a previously installed background picture.

Background graphic/

Centered   The picture will be centered in the project's window (default).

Top Left   The picture is placed into the top left corner of the project's window.

Tiled   The project's window is tiled with the picture.

3.1.5 Hardware

Together with version 3.0 a new joystickport hardware was introduced. The standard ir range now measures up to 5 m.

If you own an old hardware, you should select `Old` here and then select `Save Prefs` in the project menu. See Section 3.1.5 [The Menus], page 6.

Warning: Do not exeriment with this settings if you are using a new hardware. It could be overloaded!

3.2 The Toolbox

3.2.1 Functions

The functions listed below relate to the toolbox window. The functions are explained from the top to the bottom of the window.

3.2.1.1 New Gadget

Key: `F1`

This function brings you into the new-mode. A frame is sticked to the mouse pointer. This symbolizes the new gadget. If you click into the project window the new gadget will be created.

3.2.1.2 Move Gadgets

Key: `F2`

If there are some selected gadgets they can be moved by using this function. A frame or some frames is/are sticked to your mouse pointer to visualize the moving gadgets. A mouseclick into the project windows confirms the movement.

3.2.1.3 Size Gadget

Key: `F3`

This function can only be used on a single gadget. Select a gadget and activate this function. A rubberband sticks to your pointer which shows you the new size. Confirm by clicking into the project window. Text and graphics are recentered.

3.2.1.4 Gadgettext

Key: `F4`

It is simpler to name the gadgets than to use graphics. The first char must not be a '#' because this is internally uses as an escapce character for graphic-gadgets.

The gadgets can also be easily referenced by the gadgetname via the ARexx-Port. See Section 4.3 [ARexx Port], page 13.

3.2.1.5 Gadgetfont

Key: `F5`

Pops up a fontrequester. The selected font and color is used for each of the selected gadgets.

3.2.1.6 Brush/Icon as gadget image

Key: `F6`

For each selected gadget a filerequester pops up. You may select a picture or an icon (.info). The image is copied internally. Therefore it needs not exitst later.

If AmigaOS 3.0 is installed any picture formats supported by the datatypes can be loaded. If you are using Amiga OS 2.x you can only use ILBM pictures.

3.2.1.7 Learn IR-Commands

Key: `F7`

Brings you into the learn-mode. To learn IR-commands you should follow this steps:

- Change to learn-mode (`F7`) or the equivalent gadget.
- Select the gadget which should be learned. Now, the mouse is frozen and the receiver waits for the ir command.
- Aim with your IR remote to the IR receiver, distance 1-15 cm.
- Press the button on the IR remote and hold it down. After a second the IR-Editor should say whether it was successful or not.

  Press the right mousbutton to cancel.

3.2.1.8 Test Gadget

Key: `F8`

Brings you into the test mode. Whenever you click on a gadget in the project window, the IR-Editor tries to send the IR command or execute the relating command (Macro, DOS, etc).

3.2.2 Configuration

The icons of the toolbox may be replaced by different icons. These icons must be saved as icons (.info) to the drawer '`data/`' in the IR-Editor's drawer.

The icons must be named as follows:

NEW	new gadget
MOVE	move gadget
SIZE	size gadget
TEXT	gadgettext
FONT	gadgetfont
GFX	gadgetgraphic

LEARN   learn IR

SEND   send IR/test gadget

3.3 Other Windows

3.3.1 Coordinates

The coordinates window is only active when one gadget is selected. Then, the gadget's position and size may be directly edited.

If you press `TAB` the first gadget in the coordinates window is activated. You do not have to use your mouse.

3.3.2 IR-Configuration

If you Change the carrier frequency or the number of repetitions of a command you do not have to relearn the ir command.

37 kHz   Carrier frequency of the ir signal is 37 kHz, matches for ca. 70% of all devices

45 kHz   Carrier frequency is 45 kHz, matches for ca. 10%

66 kHz   Carrier frequency is 66 kHz, matches for some devices

Unpulsed   no carrier frequency, ca. 8%

XArexx   Directly sends commands to LControl, PControl etc. via ARexx, See Appendix C [Other Software], page 21.

            To the right you see two gadgets. With the first one you can set the application to which you want to send an arexx command. The other gadget is used to determine which command should be sent.

            LANC   LControl - for Sony cameras (parallel)

            SLANC   SControl - for Sony-cameras (serial)

            EDIT   PControl - for Panasonic-cameras

            RAPID   RControl - for GSE-rapid-recorder

DEBUG   DControl - for testing

Command   Executes a `DOS`-Command. The text is interpreted as a command line in the shell.

Relais-Card

> The IR-Master is also able to control a relai-card (special support for the relai-card which can be accessed by Konrad Electronic, Hirschau, Germany, art-nr: 192252-55 + 174025-55).
>
> This is a 4 channel ir receiver. With this receiver you can control any devices (like lamps, motors, etc.). The ir-codes are built-in – you do not have to learn them.
>
> There are 2 number fields: The "RL:"- and "CH:"-field. The first is the bitcoded address of the relai(s) you want to activate and the second field is for the bitcoded address for the channel(s) you want to access. The "address" of the relai is 4 bit wide and the "address" of the channel is 6 bit wide. Each relai is represented by one bit (also the channels).
>
> Example:
>
> - If you want to activate the relais 2 and 3 on channel 0 you have to type the value of binary %1100 (which is 12) into the relai field and 0 into the channel field.
>
> - If you want to activate relai 1 on the channels 2,3 and 4, you have to type 1 into the relai field and the value of %11100 (which is 28) into the channel field.

DMA-Audio-Send

> If selected the ir singal is send to the (optional) hardware connected to the the audio channels of the amiga. DMA is used and therefore the pointer will not be frozen for a short moment. Please read the description of the hardware for more info, See Section 5.5 [DMA/Audio-Hardware], page 18.
>
> The polarisation (positive/negative) must be choosen correctly, too. This is best done by trying it out. If you have a two-channel audio hardware you may also select the output channel (left or right).

Macro   A macro gadget calls the functions of other gadgets.

> If you select a macro gadget the macro window pops up. There are two lists: The left one shows the macro list. The other one shows the selectable gadgets (a macro gadget can't call a macro!).
>
> If you doubleclick an entry in the right list it is copied to the macro list (the maximum number of gadgets to be called is 24). If you doubleclick an entry in the left list this entry is removed.
>
> **Important:** Non text gadgets are listed in the format #`xxx`. Where `xxx` is the gadget number. To avoid misunderstandings it is therefore not allowed to name gadgets with a beginning '#'.

Send command slider

> This indicates how often the ir command should be sent. Normally 2-5 times is enough (the lower it works the better it is).

Wobbelcode

> This is a special form of ir code. An implement which uses Wobbelcode (e.g. Grundig devices) sends `code A` the first time and the next time it sends (for the same function) `code B`. In this case you have to learn twice. To learn this type of code you must click on `Wobbelcode` in the config window and then click on learn and follow the messages in the status bar. You can recognize Wobbelcode when the device reacts the first time at once but the second time it does nothing or it reacts very late.

IR-Channel

> Normally you should always set this to "JOY" ("M" in earlier versions). If you want to use the parallel or serial port hardware you may wish to modifiy this. See Chapter 5 [Hardware], page 16.
>
> - "JOY" (earlier: "M") means joystick port. If selected, it means when clicking on the relating gadget the ir data is sent to the joy-hardware.
>
> - "SER" means serial hardware. The IR data is then sent to the hardware connected to the serial port. See Section 5.6 [Serial-Hardware], page 18.
>
> - 1..8 stands for channel 1 to channel 8 of the parallel hardware. See Section 5.4 [Parallelport-Hardware], page 18.

3.3.3 IR-Code

The IR-Code window is a great helper in ir learning. The learned ir command is displayed like in a little oszilloscope. The length shows you how much memory is needed to send this command. The percentage shows how much of the internal memory reserved for this command is used.

3.4 Learning IR

To learn IR commands follow the steps like described in Section 3.2.1.8 [Functions], page 8.

If you are not successful, please check the IR-configuration first. See Section 3.3.2 [IR-Configuration], page 9.

If you are still not successful take a look at this trobleshooting list:

- The learning of ir commands depends on the distance between remote control and ir sensor. After a faulty try you should attempt it again with different distances between 1 and 20 cm.
- If the batteries of the remote control are weak you should use new batteries.
- In general all impements can be controlled exept Telefunken. Some Telefunken devices need a special hardware. If you own such a device and you want to control it with the IR-Master please contatct the authors.
- The standard IR configuration is the most common but if it does not work - use trial and error. You can't damage your hardware or your device by changing the parameters.

Note 1: If you own a Akai, Blaupunkt, Fisher, Technics, Philips, Grundig, Panasonic, Sony... you can be sure that the IR-Master will work. These devices are tested very (!) often.

Note 2: You can use up to 5 joystickport hardwares at once (connected with Y-adapters).

Note 3: If you own a IR-Slave hardware (version 1.30 and better) you can use it for ir learning, too. The results are even better.

3.5 Drag & Drop

Drag & Drop is a feature of Amiga-OS 2.04 and better which enables you to drag an icon and drop it onto a special window causing a special action. This is only possible when the application has windows opened on the workbench. To open your ir-editor on the workbench, See Section 3.1.5 [The Menus], page 6.

This feature is implemented in the following way:

You can drag an project or picture onto the project/toolbox-window.

The IR-Editor checks if the dropped file is a project. In this case the project will be loaded at once.

If it is not a project the IR-Editor assumes a picture. This will be loaded as background grafik (AmigaOS3.0: uses datatypes, remappes images, AmigaOS 2.x: only ILBM allowed, remapping must be done manually).

4 IR-Runner

The IR-Runner is used to start finished projects. Multiple IR-Runners may be in use at once.

4.1 Starting The IR-Runner

There are different possibilities to start a project:

1. Shell/Cli

   ```
   1> IR-Runner <project.irm> LEFT=20 TOP=20 PUBSCREEN=TERM
   ```

2. Workbench

   - Click on IRRunner (once) + shift-doubleclick on the project's icon
   - Doubleclick the project's icon. (default tool must be correctly set) Make sure that the IR-Runner can be found by the project. If doubleclicking an project causes an error you should copy the IR-Runner to 'C:' or 'sys:utiltiies'.
   - If you doubleclick the ir-runner a filerequester will appear...

4.2 IR-Runner Menus

Each remote control has its own gui and its own menu:

About   Gives you some information who did it.

Hide   Closes the gui. The ARexx port will still be available.

Fix Position
            Saves the current IR-Runner window position to the project's icon (as tooltypes).

Quit   Quits this remote control.

4.3 ARexx Port

The IR-Runner has it's own ARexx port. The port name depends on the project's name:

Project name: `CD_Player.irm` ↦ port name: `CD_Player_rexx`

Now the commands:

IR_Send   The IR_Send command needs one parameter:

- Either the gadget number (the number shown in the editor when the gadget is selected)
- or: the gadget's text (if it is no grafic!) Therefore you must specify a `$` followed by the gadget text.

From the shell this could look like this:
```
1> rx "address 'CD_Player_rexx' IR_Send 3"
```
or in a rexx script:
```
/* cd player -> play */

address 'CD_Player_rexx'
IR_Send '$Play'    /* assuming that the gadget's text is 'Play' */

exit
```

IR_Move   With the IR_Move command you can move the window (if opened). This command needs two arguments, the x and y coordinate of the new window position.

Example:
```
IR_Move 100 120
```

IR_Quit   Quits the application.

IR_Disappear

Closes the gui without closing the rexx port. It acts like selecting hide from the menu/clicking hide in commodities exchange. No arguments are needed.

IR_Appear

Opens the gui (if cosed) and (if cosed) reopens the rexx port. No args.

IR_Disable

Acts like IR_Disappear but the rexx port is closed, too. More memory is freed again. No args.

IR_Enable   Reopens (if closed) the rexx port and reopens (if closed) the gui. No args.

IR_Gadgets

Returns in `Result` a string containing all the titles of the gadgets in this project. The gadget titles are seperated by a space. Gadget with graphics are listed like #xxx, text gadgets like `"<name>"`.

IR_WAIT x

Waits (without cpu stress) x/50 seconds.

4.4 Tooltypes

The IR-Runner recognizes the following tooltypes, when given in the project icon:

CX_POPKEY="string"

        Here you can specify a hotkey - with this shortcut, you can activate this IR-Runner project

        Example: `CX_POPKEY=lalt f10` If you hold `left-alt` and press `f10`, this IR-Runner project wil be activatet.

CX_POPUP=YES|NO

        If you specify `NO`, no window will be opened when starting this project. You can control this project only via ARexx and Commodities-Exchange. However you can open the project's window by ARexx/Cx.

LEFT=xxx

        Here you can specify the default left coordinate of the window. This tooltype is automatically generated when selecting `fix position` in the menu.

TOP=yyy   The default top coordinate of the window.

BACKGROUND=name

        Here the background graphic's path and name is specified.

BACKGROUNDMODE=CENTERED|TOPLEFT|TILED

        CENTERED

                The picture will be centered in the window.

        TOPLEFT

                The background graphic is placed to the top-left edge of the project's window.

        TILED   The project's window is tiled with the picture

PUBSCREEN=name

        name is the title of a public screen on which the IR-Runner should open its gui.

HARDWAREVERSION=

        If you own a hardware which is designed for an IR-Master version lower than 3.0 you should set this value to 0. Otherwise it should be set to 1. However, this tooltype is set by the IR-Editor automatically.

5 Hardware

With the version 3.0 of the IR-Master a new hardware is introduced. The new hardware is more powerful than the old one. To remain compatible to the old hardware you can select the hardwaretype in the IR-Editor and the IR-Runner.

Use the menus in the IR-Editor and the tooltypes in the IR-Runner to select the old hardware. See Section 3.1.5 [The Menus], page 6. See Section 4.4 [Tooltypes], page 15.

5.1 Update old Hardware

To update your old hardware (turn IR-Master-1.0/2.61-hardware into a IR-Master3.0-hardware) you must exchange T1 into a BC 560 or BC 559.

Alternatively you can also rebuilt everything corresponing to the new hardware schematics.

After you updated the hardware it will have a range of 4-6 m.

Attention: Do not use an old hardware and a new hardware at one time! When you updated the hardware you **must** use IR-Master 3.0 to avoid overloading the new hardware.

See chapter IR-Editor/Section 3.1.5 [The Menus], page 6, look for "hardware" and chapter IR-Runner/Section 4.4 [Tooltypes], page 15, look for "HARDWAREVERSION=".

5.2 Tuning

The normal range of the IR-Master 1.0 to 2.61 hardware is ca. 1-2 m. The new one reaches already 4-6 m.

Both types of the hardware can be tuned. But before you tune your old hardware you should think about updating it. See Section 5.1 [Update old Hardware], page 16.

5.2.1 Tuning the old Hardware

There are several possible modifications:

- exchange R2 with 150 Ohm; range: about 3 m
- exchange R2 with 100-120 Ohm; range about 4 m[1]
- 2 x D1 in row, R2:100 Ohm; range about 5 m
- 2 x D1 in row, R2:82 Ohm; range about 6 m[2]
- exchange D1 with LD 273 or SFH 485 (e.g. Konrad Elec.) and R2: 75 - 100 Ohm; range: up to 10 m

Note: Before you tune your old hardware you should better think about making a new hardware out of your old hardware. The new hardware has a range of 4-5 m.

5.2.2 Tuning the new Hardware

The new hardware (IR-Master 3.0) already has a range of 4-6 m. If this is not enough for your needs you can modify your hardware in the following ways:

- exchange R2 to 47 Ohm; range: about 8 m; low scattering/spreading
- 2 x D1 in row and R2 = 39 Ohm; range: over 10 m; good scattering/spreading
- 3 x D1 in row and R2 = 18 Ohm; range: up to 18 m; very good scattering/spreading

5.3 Joystickport-Hardware

With the hardware connected to the joystickport ir-commands can be learned and sended. This hardware is obligatory, because the other hardwares are send-only.

If you own a IR-Slave, you can use this hardware for learning, too. The results are even better.

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[1] This tuning needs special care for the hardware! The hardware must only be plugged in when a IR-Runner/IR-Editor is running. Otherwise the hardware will be **destroyed** after a while.

[2] This hardware needs the same care as tuning 2!

5.4 Parallelport-Hardware

The hardware for the parallelport is "send-only". It has up to 8 senders. For each gadget/ir command you can select which senders should be activated when you click it.

Now it is possible to control two or more devices of the same type. You can for example control device 1 via the sender 1 of the parallelport-hardware and the device 2 via the joystickport-hardware.

Note that the range of the parallel port hardware is only about 1-2 m.

5.5 DMA/Audio-Hardware

The DMA/audio-hardware uses DMA when sending. The Amiga's multitasking need not to be stopped for a moment (like it must be done for the other hardwares).

It uses the left audio channel for sending. The Amigas serial port supplies the neccessary voltage and the audio signals, too. Therefore the serial port is used for this hardware.

Beginning with version 3.1 a 2 channel hardware is supported. You may now select The left or right channel for sending.

For experts it should be no problem to built a hardware which will be connected to the left audio channel with an external power supply. The serial port remains free, then.

5.6 Serial-Hardware

The serial hardware is connected to the serial port. Despite of the DMA/Audio-hardware it really uses the internal serial port for sending the ir-data (DTR).

Appendix A Support & Bugreports

A.1 Support

You can send a disk + enough stamps to the following adresses to get the newest version of
IR-Master:

```
        Michael Watzl              or      Juergen Frank
        Konradstr. 11                      Wittelsbacherweg 7
        86609 Donauwoerth                  86609 Donauwoerth
        Tel: +49 906 5834                  Tel: +49 906 1057

        Germany                            Germany
```

If you own a modem you can download the most recent versions of IR-Master, LControl etc.
in the Amiga Box Sinning (ABS) (+49 8435 920021). You will find the archives in the board
'IR-Master'.

The new version will be immediately sent back.

A.2 Bugreports

Make sure, that the bugreport descibes the bug AND your configuration as well as possible.

If possible describe the very exact way how to produce the mentioned bug. Bugs are so much
easier to find if you can reproduce them...

Bugreports and suggestions to the IR-Master are welcome and can also be sendt by e-mail to
Michael Watzl (indy@abs.gun.de).

Appendix B Registration

```
     NAME:         ----------------------------------------

     STREET:       ----------------------------------------

     ZIP/CITY:     -------  -------------------------------

     COUNTRY:      ----------------------------------------

     PHONE:        ------------

I want to become registered user of the IRMaster. Therefore I

     o enclose a cheque/money order
          foreign countries: drawn on a german bank
          europe           : euro cheque

     o enclose cash

Please send me:
     o newest version of this package + hardware schematics      $15
     o newset version of this package + constr. kit + schematics $25
     o newest version of this package + compl. hardware (+ docs) $40

     ----- optional hardware ------------

     sender modules for the parallel port (incl. one sender)

     constr. kit:
         o sender modules for the parallel port (incl. 1 sender)  on request
         o __ x additional sender (up to 7 additional ones)       on request
         o sender module for the serial port                      on request

     ready to use:
         o sender module for the parallel port (incl. 1 sender)   on request
         o __ x additional sender (up to 8 additional ones)       on request
         o sender module for the serial port                      on request

     ------------------------------------

     The complete order will make _____ $.


     -------------------              --------------------------
        date, locality                          sign
```

Appendix C Other Software

C.1 req.library

Taken from "req.doc" (description on req.library):

"The req.library is a run time re-entrant library that is designed to make it easier for programmers to use powerful, easy to use requesters for communicating with users. The requester library includes such functions as a color requester, file requester, message display requester and many functions to make the creation of gadgets for your own custom requesters easier.

Req.library was written by Colin Fox (of Pyramyd Designs) and Bruce Dawson (of CygnusSoft Software). Req.library is a freely distributable library that may be used in commercial products without paying any royalties. We encourage you to use the requester library in all of your programs, to make them easier to write, and to use.

Req.library is not public domain. The requester library and all documentation and example programs are all copyright 1989."

C.2 RTPatch

Taken from RTPatch.doc:

"The programs and files in this distribution are freely distributable, but are also copyright (c) Nico François. They may be freely distributed as long as no more than a nominal fee is charged to cover time and copying costs.

No commercial usage is permitted without written permission from the author. Everything in this distribution must be kept together, in original unmodified form. The above is generally known as freeware.

If you have suggestions or remarks about this program, or if you find any bugs, please let me know.

```
          Contacting the author:

     Fido:      2:292/603.10 (Nico Francois)

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     Mail:      Nico François
                Corbielaan 13
                B-3060 Bertem
                BELGIUM
```

If you can please use e-mail. That way you'll stand a much better chance of getting a reply quickly."

C.3 reqtools.library

Taken from reqtools-distribution's readme file:

"reqtools.library is a standard Amiga shared, runtime library. The purpose of ReqTools is to make it a lot quicker and easier to build standard requesters into your programs. ReqTools is designed with Commodore's style guidelines in mind, all requesters have the look-and-feel of AmigaDOS Release 2.

If you use ReqTools in your programs you do not have to worry about requesters too much. You'll have a lot more time to concentrate on the really important stuff your program does.

The library has been inspired by req.library (by Colin Fox & Bruce Dawson) and Commodore's own asl.library. You will find it shares a lot of the features with these two libraries, while it has some additional ones as well. While asl.library was great in look-and-feel I felt it lacked quite a bit in the power department. This power _is_ mostly available in req.library, but this doesn't fit in too well with AmigaDOS Release 2. So the idea for a new requester library was born.

I tried to make all requesters in ReqTools very powerful, easy to use and with a very nice new-look 3D interface. Efficiency was also considered very important. The 2.0 version of the library is about 38K large. I'm sure you will agree this is not too much considering what ReqTools offers.

ReqTools features the following requesters: a query requester, a string requester, a number requester, a file requester, a font requester, a palette requester and new in release 2.0 of ReqTools a volume requester and a screen mode requester."

C.4 LControl

Taken from the documentation of LControl

"LControl is a program to control video cameras via a special control hardware. The cameras must have a `control-L` or `LANC` interface (Sony kompatible[1]).

The hardware is very easy to construct. Schematics, construction kit or the complete hardware will be sendt to you after registering[2].

The control hardware is connected to the parralel port[3]. Two cameras can be connected to the hardware. You can switch between the two cameras via the software.

LControl is a commodity and it has an arexx port. Therefore LControl can work in the background and your camera can be "programmed" via arexx."

---

[1] A different hard-/software for `5-Pin-Edit`-players is almost finished.

[2] This registering relates to LControl and is not part of the IR-Master

[3] There is also a hardware for the serial port almost finished

Appendix D Tips & Tricks

Hotkeys for Gadgets

Hotkeys are not directly supported by the IR-Master but it is still possible and not too difficult.

You can either implement hotkeys via the ToolManager (by Stefan Becker) or FKey (part of Amiga-OS, suitable for this with Amiga-OS 3.0 or better).

Example:

The gadget "Power" of the project "CDPlayer.irm" should be activated when the user hits `F1`.

Toolmanager:

1. Create new program object with the prefs program
2. type "F1" in the string gadget labeled "hotkey"
3. type `rx "address 'CDPlayer_rexx' IR_Send $Power"` in the string gadget labeled command or so
4. give the object a nice name
5. save the preferences

FKey:

1. start FKey
2. Select "New key"
3. Enter "F1" into the string gadget
4. Choose "Run Command" on gadget "Command"
5. type `rx "address 'CDPlayer_rexx' IR_Send $Power"` as command parameters
6. choose save in the menu and hide fkey

Appendix E IR-Master History

```
V1.0

          First Released Version  (version for Amiga-OS 1.3)


V2.0

          Big rewirte for Amiga-OS 2.x/3.x
          Many features added:
              - arrangement funtions
              - environment menu
              - font support for gadgets


V2.01

          Bugs fixed:
              - Amiga-OS 3.0 menu new look added
              - several little bugs removed
          Using asl requesters in stead of req requesters
          req.library is only used for GetString();


V2.02

          Bug fixed:
              - Coords used system default font in stead of topaz 8
          Features added:
              - Screen can be made public


V2.05

          Some minor bugfixes...
          Features added:
              - locale is supported + german cataloges added
              - can open on a public screen


V2.06

          IR_Runner features added:
              - Now supports fixing window position
          IR_Runner bugs removed:
              - No more gurus when sending IR commands


V2.07

          IR_Runner
              - Big stack bug removed!
          IR_Editor
              - minor bug in "project-changed" removed


V2.07+

          Docs: Harware tuning infos added
```

```
V2.08
                IR-Editor
                    - IR-Code window added
                    - Brushs can be used for gadget imaginary
                IR-Runner
                    - Arexxport improved

V2.09
                IR-Editor
                    - Background gfx now supported!!!
                    - IR-Config window redone

V2.1b
                IR-Editor
                    - new icons in toolbox :-)
                    - bugs in asm-code removed
                IR-Runner
                    - better handling of multiple runners
                    - tooltype handling improved

V2.11
                IR-Editorinfos added inf
                    - Drag & Drop added
                    - better tooltype handling
                IR-Runner
                    - Bug in Filerequester removed
                    - Arexx-port improved
                      See Doc: IR_Send for importand changes!
                    - better tooltype handling

V2.2
                IR-Editor
                    - Cut/Copy/Paste added

                Docs:
                    - DVI/TeX-Documentation added (only german so far)

V2.21
                IR-Editor
                    - Bug in wobbelcode learn removed
                IR-Runner
                    - Bug in wobbelcode send removed

V2.22
                IR-Editor
                    - PubScreen Name is now "IRMaster"
```

```
        V2.50
                     IR-Editor/IR-Runner
                        - New Gadgettypes:
                            > Direkt LCOntrol and Rapid support
                            > DOS/ARexx-Kommands on Gadgets
                     IR-Editor
                        - Bugs in "Paste" removed
                     IR-Runner
                        - Enforcerhits detected and traced down...


        V2.60
                     IR-Editor/IR-Runner
                        - New Gadgettype: Relais-Card
                          This type has a already lernd in systemcode to control
                          the Relais-Card by Conrad-Electronics [for more, read the
                          Docs]
                        - Bug removed: If you use different Fonts in the IR-Editor
                          & Runner, the display now won't get confused.
        V2.61
                     Minor Bugfixes in the Config-Window


        V3.00
                     IR-Editor/IR-Runner
                        - Supports now special hardware for the
                          parallel and serial port
                        - Raster in IR-Editor
                        - Faster signal repetition when holding down a
                          button in the runner
                        - several bugfixes
                        - changed hardware !!!! improves overall performance
                          new ir-range: 5-6m!


        V3.10
                     IR-Editor
                        - better handling of gadgets (stay selected...)
                     IR-Editor/IR-Runner
                        - supports now colored text gadgets
                        - audio-hardware supports left and right channel
                          (like the parallel hardware)


        V3.11
                     IR-Editor and IR-Runner
                        - bugfix in DMA-send routine removed
                        - minor bugfixes in InfraRed.library
                          (current version: 35.5)
```

```
V3.20
                IR-Editor and IR-Runner
                   - new hardware introduced: serial send
                     (uses the internal serial port)
                   - changes made to DMA-Send
                     (old remotes must be reconfigured!)
                   - changes to LControl and Rapid support
                     => please check manual for more info


V3.30
                IR-Editor
                   - toolbox icons are now user configurable
                   - minor bugfixes

                IR-Editor and IR-Runner
                   - new gadgettype: macro
                     one gadget can call other gadgets in this project

V3.31
                IR-Editor and IR-Runner
                   - added some background gfx options
                     (top-left, center, tile)

V3.32           IR-Editor
                   - removed Enforcer-Hits from V3.31
                   - removed little bug in ilbm-reader
                   - listviews were too big for macrowindow (OS2.x)
                IR-Editor and IR-Runner
                   - added datatype-support for background and
                     gadget-pictures (OS3.0 required)
                   - bug removed in load-module: big (!) graphics
                     lead to a system crash

V3.33           IR-Runner
                   - new AREXX-command: IR_WAIT
```

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