IR-MasterE

COLLABORATORS

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IR-MasterE

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IR-Master 3.32

InfraRed Control Device For Amiga Computers

© 1994/1995 by Jürgen Frank and Michael Watzl

The IR-Master may be freely copied as long as no profit is made. The
schematics for the hardware is not freely distributable.

Please pay attention to the contents of the file "Licence" which can
be found together with this distribution.

This package is shareware – it may be freely distributed (as long as
the schematics are not included). If you want to use it seriousely, you
have to register. See Registering.

This package is not ready to use – you will need the control
hardware. Be sure that almost any device shipped with an IR remote can
also be controlled by the IR-Master.

What Is IR-Master
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1.2   IR-MasterE.guide/What Is IR-Master

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
Other Software.

---------- Footnotes ----------

(1) direct memory access – does not stress the CPU

1.3 IR-MasterE.guide/Installation

```
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 automatically.

   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
     Configuration.

  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.

     ---------- Footnotes ----------

   (1) Installer (c) 1991-1993 Commodore-Amiga, Inc. All Rights
reserved. Reproduced and distributed 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.

1.4 IR-MasterE.guide/IR-Editor

IR-Editor
****

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

  The Menus
  The ToolBox
  Other Windows
  Learning IR
  Drag & Drop

1.5   IR-MasterE.guide/The Menus

```
The Menus
=========

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.

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.

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 Coordinates.

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.

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 IR-Code.

Show IR-Config
     Opens the IR-Config window. Here you can edit the gadget's
     configuration. See Learning IR.

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.

Hardware

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

   If you own an old hardware, you should select Old here and then

select Save Prefs in the project menu. See The Menus.

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

1.6 IR-MasterE.guide/The ToolBox

```
The Toolbox
===========
```

```
  Functions
  Configuration
```


1.7 IR-MasterE.guide/Functions

```
Functions
---------
```

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

```
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.

```
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.

```
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.

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 ARexx Port.

Gadgetfont
....

   Key: F5

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

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.

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 1-15cm.

   * 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.

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).

1.8 IR-MasterE.guide/Configuration

```
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
```


1.9 IR-MasterE.guide/Other Windows

```
Other Windows
=============


  Coordinates
  IR-Configuration
  IR-Code
```

1.10   IR-MasterE.guide/Coordinates

```
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.

1.11   IR-MasterE.guide/IR-Configuration

```
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
     Other Software.

     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
     DMA-Audio-Hardware.

     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.

Importand: 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 Hardware.

       * "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 Serial-Hardware.

       * 1..8 stands for channel 1 to channel 8 of the parallel
         hardware. See Parallelport-Hardware.

1.12 IR-MasterE.guide/IR-Code

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.

1.13 IR-MasterE.guide/Learning IR

Learning IR
===========

    To learn IR commands follow the steps like described in Functions.

If you are not successful, please check the IR-configuration first.
See IR-Configuration.

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 20cm.

* 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.

1.14 IR-MasterE.guide/Drag & Drop

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
The Menus.

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).

1.15   IR-MasterE.guide/IR-Runner

```
IR-Runner
*********
```

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

  Starting The IR-Runner
  IR-Runner Menus
  ARexx Port
  Tooltypes

1.16   IR-MasterE.guide/Starting The IR-Runner

```
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...

1.17   IR-MasterE.guide/IR-Runner Menus

```
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.
```

1.18 IR-MasterE.guide/ARexx Port

```
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.
```

1.19 IR-MasterE.guide/Tooltypes

```
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.
```

1.20 IR-MasterE.guide/Hardware

```
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 The Menus. See Tooltypes.


```
  Update old Hardware
  Tuning
  Joystickport-Hardware
  Parallelport-Hardware
  DMA-Audio-Hardware
  Serial-Hardware
```

1.21 IR-MasterE.guide/Update old Hardware

```
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 4-6m.

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/The Menus, look for "hardware" and chapter
IR-Runner/Tooltypes, look for "HARDWAREVERSION=".

1.22 IR-MasterE.guide/Tuning

```
Tuning
======
```

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

Both types of the hardware can be tuned. But before you tune your
old hardware you should think about updating it. See
Update old Hardware.


```
  Tuning the old Hardware
  Tuning the new Hardware
```


1.23 IR-MasterE.guide/Tuning the old Hardware

```
Tuning the old Hardware
-----------------------
```

There are several possible modifications:

* exchange R2 with 150Ohm; range: about 3m

* exchange R2 with 100-120Ohm; range about 4m (1)

* 2 x D1 in row, R2:100Ohm; range about 5m

* 2 x D1 in row, R2:82Ohm; range about 6m (2)

* exchange D1 with LD 273 or SFH 485 (e.g. Konrad Elec.) and R2: 75
  - 100Ohm; range: up to 10m

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 4-5m.

     ---------- Footnotes ----------

   (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!

1.24   IR-MasterE.guide/Tuning the new Hardware

Tuning the new Hardware

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

   * exchange R2 to 47Ohm; range: about 8m; low scattering/spreading

   * 2 x D1 in row and R2 = 39Ohm; range: over 10m; good
     scattering/spreading

   * 3 x D1 in row and R2 = 18Ohm; range: up to 18m; very good
     scattering/spreading

1.25   IR-MasterE.guide/Joystickport-Hardware

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.

1.26   IR-MasterE.guide/Parallelport-Hardware

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 1-2m.

1.27 IR-MasterE.guide/DMA-Audio-Hardware

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.

1.28 IR-MasterE.guide/Serial-Hardware

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).

1.29 IR-MasterE.guide/Appendix

Appendix
****

   Support & Bugreports
   Registering
   Other Software
   Tips & Tricks

IR-Master History

1.30   IR-MasterE.guide/Support & Bugreports

Support & Bugreports
****

   Support
   Bugreports

1.31   IR-MasterE.guide/Support

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.

1.32   IR-MasterE.guide/Bugreports

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).

1.33 IR-MasterE.guide/Registering

```
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
```

1.34 IR-MasterE.guide/Other Software

```
Other Software
```

****

    req.library
    RTPatch
    reqtools.library
    LControl

1.35 IR-MasterE.guide/req.library

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."

1.36 IR-MasterE.guide/RTPatch

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)

                Internet: nico@augfl.be

                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."

1.37 IR-MasterE.guide/reqtools.library

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."

1.38   IR-MasterE.guide/LControl

```
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."

    ---------- Footnotes ----------

    (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

1.39   IR-MasterE.guide/Tips & Tricks

```
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

1.40 IR-MasterE.guide/IR-Master History

```
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
```


1.41 IR-MasterE.guide/Index

```
Index
*****
```