ir-master26e

COLLABORATORS

	TITLE : ir-master26e		
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WRITTEN BY		September 19, 2022	

REVISION HISTORY

NUMBER	DATE	DESCRIPTION	NAME

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ir-master26e

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   IR-Master 2.6

   Infrared Control Device For Amiga Comuters

   (C) 1993-1994 by Juergen Frank and Michael Watzl

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

   This package is shareware - it may be freely copied as long as the
schematics are not included. If you want to use it you have to register,
See
                Registration
                .

   This package cannot be used in this form. You need the hardware, of
cource. Be sure, that nearly any devices which are controlled via
infra red may also be controlled by the IR-Master.

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1.2 ir-master26e.guide/What is IR-Master

```
                 What is IR-Master
******************
```

   The IR-Master project consists of two software components and a
control hardware, which is connected to the joystick port of your Amiga.

   At first you start edition your virtual remote control with the
IR-Editor, See
                 IR-Editor
                 . This one is saved to disk then. And you
activate the IR-Runner, See
                 IR-Runner
                 .

   Your edited remote control opens as a window on the workbench. With
this window you can interactively control your device[s], you can use
the IR-Runner's ARexx-port for programming your devices, See
                 ARexx Port
                 .
Finally you can send infra red codes from within other applications or
edit scripts which will automatically control e.g. your video recorder.

   Since version 2.5 of the IR-Master two new features were introduced:
You can directly send commands to LControl and Rapid. This allows you
to control video cameras supported with an LANC/Control-Linterface and
video recorders supported with an GSE-Rapid-interface. For more
information, please consult
                 LControl & Rapid
                 .

1.3 ir-master26e.guide/Installation

```
                 Installation
*************
```

   Requirements:

req.library
     may not be includet in this package, but can be easily found -
     it's freely distribatable and written by Colin Fox (Pyramid
     Designs) and Bruce Dawson (Cygnus Software), See
                 req.library
                 .

Kick/WB 1.x
     for the poor and old (but working!) version look at Readme13

Kick/WB 2.x/3.x
     for the fine and new (also working :-)version.

Installation:

1. Copy the req.library to your LIBS: drawer of your boot disk.

   A patch (like RTPatch from Nico Francois) is recommended to patch
   the req.library calls to the much better looking reqtools.library
   (also from Nico Francois ->thanks). See
                 Other Software
                 .

2. Create a directory for the IR-Editor and the IR-Runner and copy
   them to this directory. However, it is not needed for the two
   programs to be in a certain drawer. No assigns are needed.

   Note:

   Your IR-Runner should be placed in a directory that is in the
   workbench search path (which is declared in your startup-sequence
   right before loadwb), e.g. C: or sys:utilities. So the projects
   will surely find the default tool.

3.   If you use WB 2.1 or higher:

   Copy the languages-catalog you want to use from catalogs/<language>
   to
   LOCALE:catalogs/<language>. At the moment there is only german and
   english (built-in).

1.4 ir-master26e.guide/IR-Editor

                 IR-Editor
****

   With the IR-Editor you can create a remote control on your Amiga
screen.

                 The Menus

                 The Toolbox

                 Learning IR-Commands

                 Drag & Drop

1.5 ir-master26e.guide/The Menus

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

Project
-------

Load...
     Pops up a requester to load a saved project.

Save
     Saves the current set of gadgets.

Save as...
     Pops up a requester to save the current project.

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

Info
     Gives some information about the used memory etc.

About
     Credits...

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

Save Prefs
     Saves the current settings, like position of the toolbox, size of
     project window...

Iconify
     Closes screen, frees memory and puts an app icon onto the workbench

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

Quit
     Quits the editor.

Edit
----

Cut
     Cuts the selected Gadgets to a internal buffer. That means they
     will be deleted in the projectwindow and they can be pasted back
     anywehere.

Copy
     Copies the selected Gadgets to a internal buffer. With "paste" you
     can insert this gadgets whereever you want.

     Note: If the buffer is not empty and you cut/copy gadgets than the
     gadgets already in the buffer will be overwritten!

Paste
     Paste back gadgets in the internal buffer.

Info
```

Gives an information of the gadgets which are stored in the buffer.

Flush
     Clears the internal buffer.

Arrange

   Note: The reference gadget is always the first selected. That means,
if I first select a big gad and than two small gads and I select clone
size then all gadgets will be big...

Align Gadgets
     aligns the selected gadgets
    Left
          by the left edge or

    Top
          by the top edge

Spread Gadgets
    Horizontally
          pops up a requester which asks how many pixels

    Vertically
          should be placed between each of the selected gadgets in the
          selected direction...

Clone Size
     Clones the sizes of the selected gadgets.

Coordinates
     Opens/Closes the coordinates window. Only if one (!) gadget is
     selected the coordinates will be shown an can be directly edited.

Environment

Palette
     Pops up the standard palette requester.

Font
     Brings a font requester to the front. The selected font will only
     be used for the editor's screen. To change the font of the gadgets
     you have to use the font gadget in the toolbox.

Screenmode
     Pops up a screenmode requester.

On Public Screen
     Tries to close the IRMaster screen and reopen on the default
     public screen (mostly the wb).

Make Screen Public
     Tries to close the current IRMaster GUI and reopen it as a public

screen. The screen's name is "IRMaster".

Show IR-Code
     Shows the IR-Code of the current gadget (if learned). It is
     designed like an oszillator, so you can easyly decide if the last
     learn action was successful!

     Length specifies the amount of memory which is used to send this
     command. The percentage shows how much of the memory reserved for
     this command is used.

Show Configuration
     Shows the IR-configuration of the current gadet. For more
     information about the ir-configuration, See
                    Learning IR-Commands
                    .

1.6   ir-master26e.guide/The Toolbox

                    The Toolbox
===========

NewGadget
----

    shortcut   F1

    This function brings you to the "new gadget mode". You can see a
border attached to your pointer. With a mouseclick you can place the
new gadget. A new gadget is always named New and its size is 50 x 20
pixels.

Move Gadget(s)
----

    shortcut   F2

    If you have some gadgets selected and you press the move button or
the move shortcut the selected gadgets will be represented by borders
which stick to your mouse pointer. With a click you can put the gadgets
to their new position.

Attache Grafic To Gadget
----

    shortcut   F3

    For each of the selected gadget a file requester pops to the front,
asking you for an icon/brush. This image will be used as gadget
imaginary.

Attache Text to Gadget
----

shortcut   F4

Pops a text requester to the front (for each gadget). You can type
any text. The length is not checked! It doesn't have any serious
consequences if the text is to wide for the gadget – it simply looks
awful.

Learn IR data
----

shortcut   F5

With this gadget you can switch to the learn mode. The pointer will
remind you being in this mode. If you click a gadget, the Amiga is
frozen and waits for ir input to the IR-Sensor, see also

            Learning IR-Commands
               .

Kill Gadget(s)
----

shortcut   F6

Removes all selected gadgets without warning! They are unrecoverably
lost.

Size Gadge
----

shortcut   F7

Switches to the size mode. A border is drawn – the lower right
corner sticks to the pointer. After a mouseclick the gadget will be
resized and the text/grafic will be centered in the gadget.

Load Backgound Grafic
----

shortcut   F8

Pops up a requester. Here you can select any .ilbm-picture to be
used as background grafik for your remote control. This grafik's name
and path will be set in the tooltypes of the project when it is saved.

Therefore the grafic must exist when the project is run. The palette
of the picture won't be used! I'm sure you like your wb-colors more!

To clear the background again, click this gadget (or press F8) and
select cancel in the filerequester.

Change Font
----

shortcut   F9

   Pops up a font requester. The selected font will be used for all the
selected gadgets. Make sure that this font is also available to the
IR_Runner.

Test IR Data
============

   shortcut   F10

   Switches to the test mode. The pointer reminds you being in the test
mode. Note: To test ir commands, they must be learned before. To test
LControl or Rapid commands, LControl/Rapid must be running. See

              LControl & Rapid
                 .

1.7   ir-master26e.guide/Learning IR-Commands

              Learning IR-Commands
====================

   Learn ir-commands:

   * toggle to learn mode by pressing F5 or the equivalent gadget

   * click on the gadget whose function you want to learn
     ==> pointer is frozen...

   * point your remote control to the ir-sensor
     (distance ca. 1-15 cm)

   * hold the button down 'till the pointer can be moved again

   Test ir-commands

   * switch to test mode by pressing F10 or the equivalent gadget

   * hold transmitter in direction to the ir-receiver of the implement
     with a distance of 1-30 cm.

   * click on the gadget you want to test
     ==> command will be sent

   Important notes

  1. It is possible that the implement (like CD, Videorecorder, TV
     set,...) won't react on the ir-master the first time. In this case
     you have to change the parameters in the config-window, See

              The Menus
                 .

   To get to the configrequester you must:

   * click on the gadget the config should be changed

   * open the config window   All the changes (but not
wobbelcode) can be testet without learning it again.

Config menu:

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

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

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

    Unpulsed
          no carrier frequency, ca. 8%

    LControl
          Directly sends commands to LControl to control video
          cameras via LANC, See
           LControl & Rapid
            .

    Rapid
          Directly sends commands to Rapid to control video
          recorders via GSE-Rapid-Code, See
           LControl & Rapid
            .

    Command
          Executes a DOS-Command. The text is interpreted as a
          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.). Die
          ir-codes are already learded in by the IR-Master, so you
          do not have to relearn 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.

        – Send command slider        This indicates how often the ir
          command should be sent. Normally 2–5 times is enough.

        –    Wobbelcode        This is a special form of ir code. An
          implement which uses Wobbelcode (e.g. Grundig tools) 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-implements when the implement reacts the first
          time at once but the second time it does nothing or it reacts
          very late.

  2. 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.

  3. If the batteries of the remote control are weak you should use new
     batteries.

  4. In general all impements can be controlled exept Telefunken.  For
     this type of implements we offer a special hardware – simply
     contact us and describe your implement.

  5. Finally: The parameters in the config window are the most common
     but if it does not work – use trial and error. You can't damage
     your hardware by changing the parameters... believe me ;-)

  If you own a Akai, Blaupunkt, Fisher, Technics, Philips, Grundig,
Panasonic, Sony... you can learn the command set by nearly 100%.
(tested very (!) often...)

  YOU CAN ALSO USE UP TO 5 (WITH Y-ADAPTERS) IR TRANSMITTER IN YOUR
JOYSTICKPORT.
```

1.8 ir-master26e.guide/Drag & Drop

```
            Drag & Drop
===========

  Drag & Drop is a Feature of AmigaDOS 2.04 and above which enables
```

you to drag an icon and drop it onto a special window causing a special
action. This is - of course - only possible when the applikation 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 iff-ilbm-picture onto the project/toolbox-window.
This picture will be loaded as background grafik. You can also drop a
project's icon onto the window. Then, this project will be loaded at
once.

   The file type recognition works via the file name. If the name's
suffix is .iff, .ilbm or .brush the editor assumes a picture file. If
the suffix is .irm the editor tries to load a project.

1.9   ir-master26e.guide/IR-Runner

                 IR-Runner
****

   If you have created a remote control and saved it you surely want to
use it...

                    Starting The IR-Runner

                    IR-Runner Menus

                    ARexx Port

                    Tooltypes

1.10   ir-master26e.guide/Starting The IR-Runner

Starting The IR-Runner
======================

   There are different possibilities to start a project:

  1. Shell/Cli
          1> IRRunner <project.irm> LEFT=20 TOP=20 PUBSCREEN=TERM

  2. Workbench
        * Click on IRRunner (once) + shift-doubleclick on the project's
          icon

```
        * Make sure that the IR_Runner is in the workench searchpath
          (the path set up before loadwb is called in the
          startup-sequence, e.g. C:, sys:utiltiies)

          Doubleclick the project's icon. (default tool must be
          correctly set)

        * If you doubleclick the ir-runner a filerequester will
          appear...
```

1.11   ir-master26e.guide/IR-Runner Menus

```
IR-Runner Menus
===============

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

About
     Gives you VERY important information about you, god and the
     universe.

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.
```

1.12   ir-master26e.guide/ARexx Port

```
ARexx Port
==========

   The IR-Runner has it's own rexx 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.

1.13 ir-master26e.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 grafik is specified.

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

1.14 ir-master26e.guide/Hardwaretuning

Hardwaretuning
****

    The normal range of the IR-Master is ca. 1-2 m. In the most cases
this is enough. For those people who need more:

    * exchange R2 with 150 Ohm ==> ca 3 m

    * exchange R2 with 100-120 Ohm ==> ca 4 m *)

    * 2 * D1 in row, R2:100 Ohm ==> ca 5 m

    * 2 * D1 in row, R2:82 Ohm ==> ca 6 m *)

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

    Important

    The configurations which are marked with a '*' must only be plugged
in when the port is initialized, that means when IR-Editor/IR-Runner is
already started. IF NOT, THE IR-SENDER WILL BE DAMAGED AFTER A WHILE.

    Now have fun.....

1.15   ir-master26e.guide/Appendix

```
              Appendix
********
```


              Support & Bugreports

              Registration

              Other Software

              IR-Master History

1.16   ir-master26e.guide/Support & Bugreports

```
              Support & Bugreports
*******************
```


              Support

              Bugreports

1.17   ir-master26e.guide/Support

```
Support
=======

   New revisions of the IR-Master can always be found in:

    Jesolo, BBS of AFR (Amiga Freunde Ries)
    +49-906-28851 (8N1 - 2400-19200)
    24H online, Tel: +49 906 28851

   look in /PD_Pool/PD-Anwendungen/ANW-Sonstiges

   Or send a disk + stamps to

        Michael Watzl              or       Juergen Frank
        Konradstr. 11                       Wittelsbacherweg 7
        86609 Donauwoerth                   86609 Donauwoerth
        Tel: +49 906 5834                   Tel: +49 906 1057
        Fax: +49 906 28851
        Germany                             Germany

   The new version will be immediately sent back.
```

1.18   ir-master26e.guide/Bugreports

```
Bugreports
==========

   Please send bugreports or suggestions to the same addresses or via
EMail:

   Z-Netz:

    SYSOP@JESOLO.zer              for Michael Watzl
or  HACKER@JESOLO.zer              for Juergen Frank

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

1.19   ir-master26e.guide/Registration

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Registration
************

     REGISTRATION FORM


          COMPANY:     _____
          NAME:        _____
          STREET:      _____
          CITY:        _____
          POSTALCODE:  _____
          COUNTRY:     _____
          TELEPHONE:   _____


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

        o enclose a cheque (if from foreign countries - drawn on a german bank)

        o transfer payment to Michael Watzl:
           Raiffeisen-Volksbank Donauwoerth eG
           86609 Donauwoerth
           Acc.: 4185455   Bank Code: 722 901 00
          for payment reference use: "IRMASTER REGISTRATION"


    Please send me:

        o newest version of this package + documents for the hardware
          for the price of: $15 / DM 25

        o newset version of this package + hardware pieces (incl. docs)
          for the price of: $25 / DM 40

        o newest version of this package + complete hardware (incl. docs)
```

```
              for the price of: $40 / DM 60
```

```
        _____                    _____
              date, locality                                    sign
```

1.20 ir-master26e.guide/Other Software

```
                 Other Software
**************
```

```
                 req.library

                 RTPatch

                 reqtools.library

                 LControl & Rapid
```

1.21 ir-master26e.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."

1.22   ir-master26e.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."

1.23   ir-master26e.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."

1.24 ir-master26e.guide/LControl & Rapid

```
LControl & Rapid
================
```

   LControl and Rapid are other programs by Juergen Frank and Michael
Watzl.

```
LControl
     Lcontrol is a program which allows you to control a video camera
     (supportet with a LANC/Control-L interface). The control hardware
     is rather simple to construct. The hardware is connected to the
     parallel port of the Amiga.

     LControl has an ARexx port and is a commodity.

Rapid
     If you own a video recorder which is supplied with an GSE-Rapid
     interface than you can use your Amiga and Rapid to control it! At
     the momemt rapid is not yet finished (it is still in the
     ß-phase). If you want to know more about the Rapid-project contact
     the authors.

     Rapid uses the serial port.
```

1.25 ir-master26e.guide/IR-Master History

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IR-Master History
=================

     V1.0        First Released Version  (version for OS 1.3)

     V2.0        Big rewirte for 2.x/3.x
                 Many features added:
```

```
                        - arrangement funtions
                        - environment menu
                        - font support for gadgets


    V2.01       Bugs fixed:
                        - OS3.0 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 bug removed:
                        - 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-Editor
                        - 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

    TODO:

        - arexx-script generator
```

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*****


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