

Installation and Operation Manual



TAMUZ LCD Video Monitors

D-24558 Henstedt-Ulzburg ~ Fon & Fax: ..49 - (0)700 - TAMUZLCD [82 689 523]

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valid for Software Release 2.0 and above*

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Table of Content

MRC Monitor Remote Control Software.....	5	Show Monitor List.....	37
MRC History.....	6	The Setup Menu.....	38
Evaluation of the software.....	6	Setup Program Menu.....	38
Version 2.0.....	6	Setup Network Menu.....	40
Version 1.6.....	6	Setup Tabs Menu.....	41
Version 1.3.....	6	Setup Anti-Sticking Timer Menu.....	42
Quick Installation Guide.....	7	The Service Menu.....	44
How to install a MRC system.....	7	Service Login Menu.....	44
Quick User Guide.....	8	First-time Login.....	44
How to use the MRC software.....	8	Normal Login Procedure.....	45
How to install MRC.....	9	Logged In User.....	46
Software Package.....	9	Service Menu New Password.....	47
PC Environment.....	9	The Help Menu.....	48
Installing the software.....	10	Help About Menu.....	48
Install the protection Dongle.....	11	Help About Menu.....	48
Building a Monitor Remote Network.....	12	MRC Hidden Mode.....	49
Network structure.....	12	Re-Open the MRC Desktop.....	49
MRC as LAN.....	12	Switch all Monitors OFF.....	49
MRC as WAN.....	14	Switch all Monitors ON.....	50
Preparing a Monitor for MRC.....	15	Shut Down the MTC Program.....	50
Setting Monitors IP Address.....	15	Using the MRC software.....	51
Default IP Address.....	15	MRC Desktop.....	51
Changing the IP address.....	16	MRC Monitor Icons.....	52
Starting MRC first-time.....	18	User definable Icons.....	53
LOG-IN.....	18	Monitor List Desktop.....	54
First-time Login.....	19	Multiple Access.....	55
Normal Login Procedure.....	20	Monitor Pull-Down Menu.....	56
Logged In User.....	20	Monitor Information.....	57
Configuration of the MRC System.....	21	Set Monitor Configuration.....	57
Setting the System IP Address.....	21	Web Interface.....	58
Prove the Systems IP Address.....	22	New Firmware.....	59
Search for Monitors.....	22	Save Monitor File System to Disk.....	60
Finding Monitors.....	23	Write Monitor File System to Monitor.....	61
Configure the Monitor.....	24	Remove a Monitor.....	62
Ping the Monitor.....	25	Select All.....	62
Monitor Information.....	26	Arrange Monitors.....	62
Definition of Rooms.....	27	Snap to Grid.....	62
Assign a new Room.....	27	Fix the Monitor Position.....	62
Rename a Room.....	27	Monitor Setting Menu.....	63
Delete a Room.....	28	The Monitor Power Switch.....	63
Moving Monitors to a Room.....	29	Switch all Monitors OFF.....	63
Move a Monitor to another Room.....	29	Switch all Monitors ON.....	63
MRC Menus.....	31	The Input Selector Bar.....	64
The File Menu.....	31	The Picture Settings Bar.....	65
New Monitor Menu.....	31	Monitor Adjustments Menu.....	66
Load Setup Menu.....	32	The Picture Adjustment Menu.....	66
Save Setup Menu.....	33	The Color Adjustment Menu.....	66
Exit Menu.....	34	The OSD Language Menu.....	66
Starting the MRC program twice.....	35	The VIDEO OPTIONS Menu.....	67
The Show Menu.....	36	The VGA OPTIONS Menu.....	67
Show OSD Menu.....	36	The Input Signal Menu.....	67
Show Monitor Icons.....	37	The Display Setup Menu.....	68
		The Zoom Menu.....	68
		The Marker Menu.....	68
		The Anti-Sticking Menu.....	69
		Anti-Sticking Timer Indicator.....	69
		How to	70
		... set a Monitor to 16:9 Mode.....	70

... to stop Anti-Sticking.....	71
... to start Anti-Sticking.....	71
... switch all Monitors OFF.....	72
... switch all Monitors ON.....	72
... identify a Broken Network Connection.....	73
Terms.....	74
Technology terms.....	74
Ethernet.....	74
Routers.....	74
Switches.....	74
Network Interface Cards.....	74
Hubs.....	74
Local Area Network (LAN).....	75
Wide Area Network (WAN).....	75
Transmission Control Protocol.....	75

MRC Monitor Remote Control Software

TAMUZ develops a remote control software to operate unlimited monitors in a system



Using the MRC software allows easy setups and control of a single or a group of TAMUZ monitors. All TAMUZ monitors of the GREY OWL, SPARROWHAWK or other models, which are equipped with an Ethernet remote port, can be used to built such a system.

The MRC software run on most MS Windows PCs, powered by Intel or AMD processors and equipped with a Windows 98 SR2, Windows XP or Windows 2000/2003 operation system.

The TAMUZ monitors of the GREY OWL series are equipped with an Ethernet port having an unique IP address. It is possible to connect this monitors to the house LAN or WAN network, but for secured and powerful functionality it is best to built an individual MRC LAN network, Therefore use a Hub or Switcher to distribute and interconnect the monitors with the PC, on which the MRC software runs.

The MRC software operates as a DHCP server and addresses the installed monitors automatically.



Note: Built a unique LAN network for MRC. Connecting the monitors to a house or WAN network decreases the power and may influence the WAN traffic.

MRC History

Evaluation of the software

Version 2.0

Following items was added to version 2.0

- Log-In procedure to allow four level of users rights
- Multiple monitor setups configured like virtual control rooms
- Monitor ON/OFF switch for saving energy or prevent image-sticking
- Anti-Sticking Timer to manage automatically ON/OFF or other anti-sticking items
- Connect monitors with foreign IP addresses to the MRC system via a router
- New configuration tool for adding or deleting monitors from the MRC system
- Controlling the marker function of the monitors

Version 1.6

Following items was added to version 1.6

- Firmware download to the monitors
- File system up- and download to the monitors

Version 1.3

Following items was added to version 1.3

- Connecting monitors from the LSM or HCM series to the MRC system

Quick Installation Guide

How to install a MRC system

The following listed steps have to be done to install a MRC system.

1. Install the MRC software on the PC
2. Install the HASP dongle software on the PC, plug in the USB dongle
3. Configure the PC's IP address to the designed IP address group for your MRC network, e.g. 163.177.123.100
4. Connect the monitors via a hub, switch or router using CAT5 cable to the PC
5. Configure all monitors to the specific IP address from the designed address group, e.g. 163.177.123.xxx
6. Start the MRC software and log-in (define the passwords for all user levels)
7. Create the ROOMS (tabs) you like to have
8. Check all recognized monitors for their setup, keep it as it is or reconfigure
9. Don't forget to log-out when the system is set and an administration level should not be the standard operation level

Quick User Guide

How to use the MRC software

When the MRC system is configured and set, start and use the MRC software as follows:

1. Power ON all connected monitors
2. Start the MRC systems PC
3. Start the MRC software with double click
4. Enter your password, related to the user level
5. Wait few seconds for recognizing all monitors (the icon will swap to an monitor icon with the test image)
6. Select the room you want to operate
7. Click one or more monitors (icon will swap to the monitor icon with real image) and toggle your choice

How to install MRC

Software Package

Retail packages of TAMUZ MRC software come as a CD-ROM. Updates are downloadable free of charge from the TAMUZ website, section download.

The software is protected by a USB port Dongle. During operation this Dongle must be present at all times. Disconnecting the protection Dongle from the USB port stops the MRX software.



Note: Each installation of TAMUZ MRC software needs the protection Dongle. present, otherwise operation stops immediately.

Open the CD-ROM case and put the CD into the drive at the PC.

PC Environment

Any standard MS Windows PC, desktop or notebook, powered by Intel or AMD processors and equipped with a Windows 98 SR2, Windows XP or Windows 2000/2003 operation system is a good base for a MRC system.

- CD-ROM drive
- free USB port
- Ethernet 10/100/1000 baseT network port
- free disk space of 10 GB
- operation monitor screen in the size of XGA (1024x768) or bigger
- 10/100/1000 baseT network hu or switcher
- CAT5 cable

Before installing MRC take care the the PC system itself works fine.

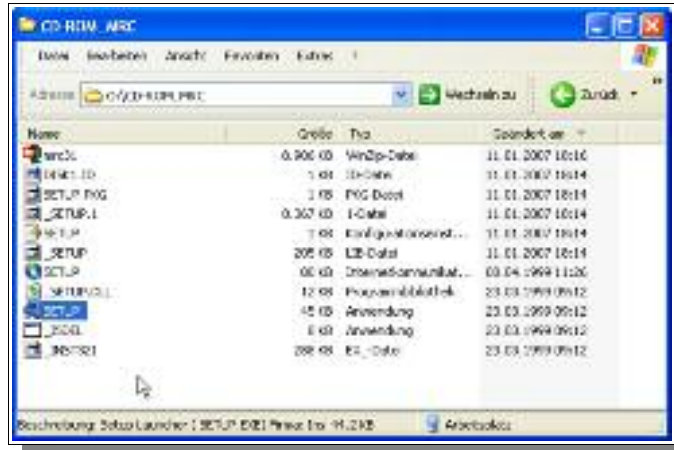


Note: Built a unique LAN network for MRC. Connecting the monitors to a house or WAN network decreases the power and may influence the WAN traffic.

Installing the software

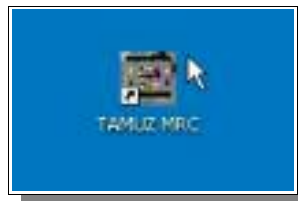
Open the CD-ROM case and put the CD into the drive at the PC. In a standard PC setup a directory window appears and show the CD-ROM content.

Select the MRC directory and click SETUP.



The Installation routine will start. Follow the instructions to select the installation directory or name.

When the installation is finished, an MRC icon becomes visible on the desktop.



Clicking the icon the MRC software starts.

If you try to start the MRC software now, a message will appear.



The protection Dongle isn't installed or present.

Install the protection Dongle

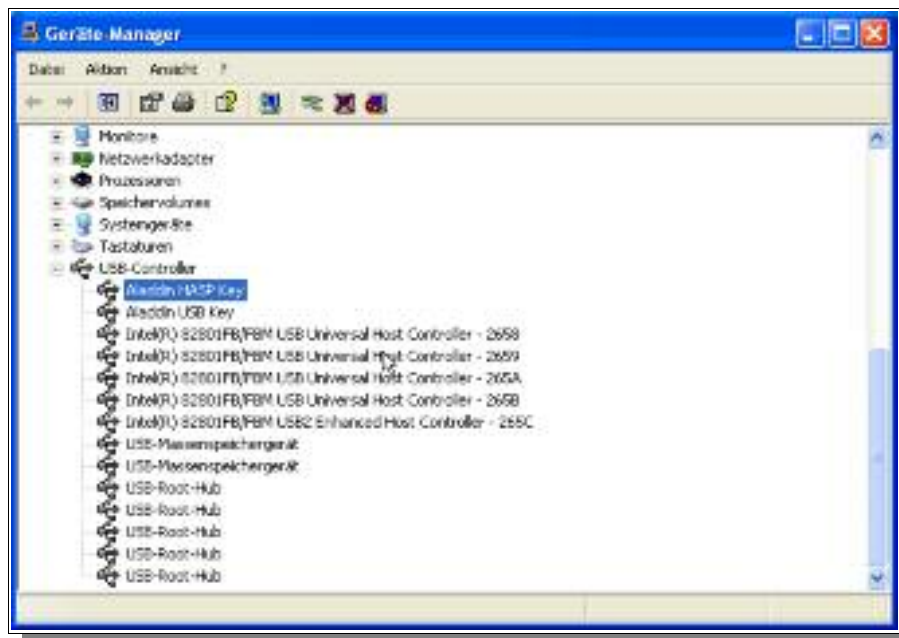
Put the protection Dongle, delivered with the software package, into one of the free USB ports.



The Windows PC, running Windows 98 SR2, Windows XP or Windows 2000/2003 OS, will recognize the new device at the USB port and starts a installation routine automatically.

If a window appears, searching for the Dongle. driver (HASP), track to the directory HASP at your harddisk where you install the MRC software.

When the driver is installed successfully, the MRC system is set completely. To proof the Dongle installation check the device manager in Windows for the „Aladdin HASP Key“.



Without this driver installed, MRC didn't operates.

Additional MRC installations needs an additional dongle.



Note: The HASP driver will be stored by the MRC installation in the directory MRC. The HASP driver will be installed automatically when the Dongle. is connected first time.

Building a Monitor Remote Network

Network structure

The common Ethernet or TCP/IP network technology allows to set up your systems in different structures. TAMUZ monitors are equipped with an Ethernet port, talking TCP/IP at 10/100 Mbit/s.

Each monitor has his own and individual MAC address and can get any IP address. Standard IP address (default) for TAMUZ monitors is 192.168.123.123. Please modify to your individual needs.

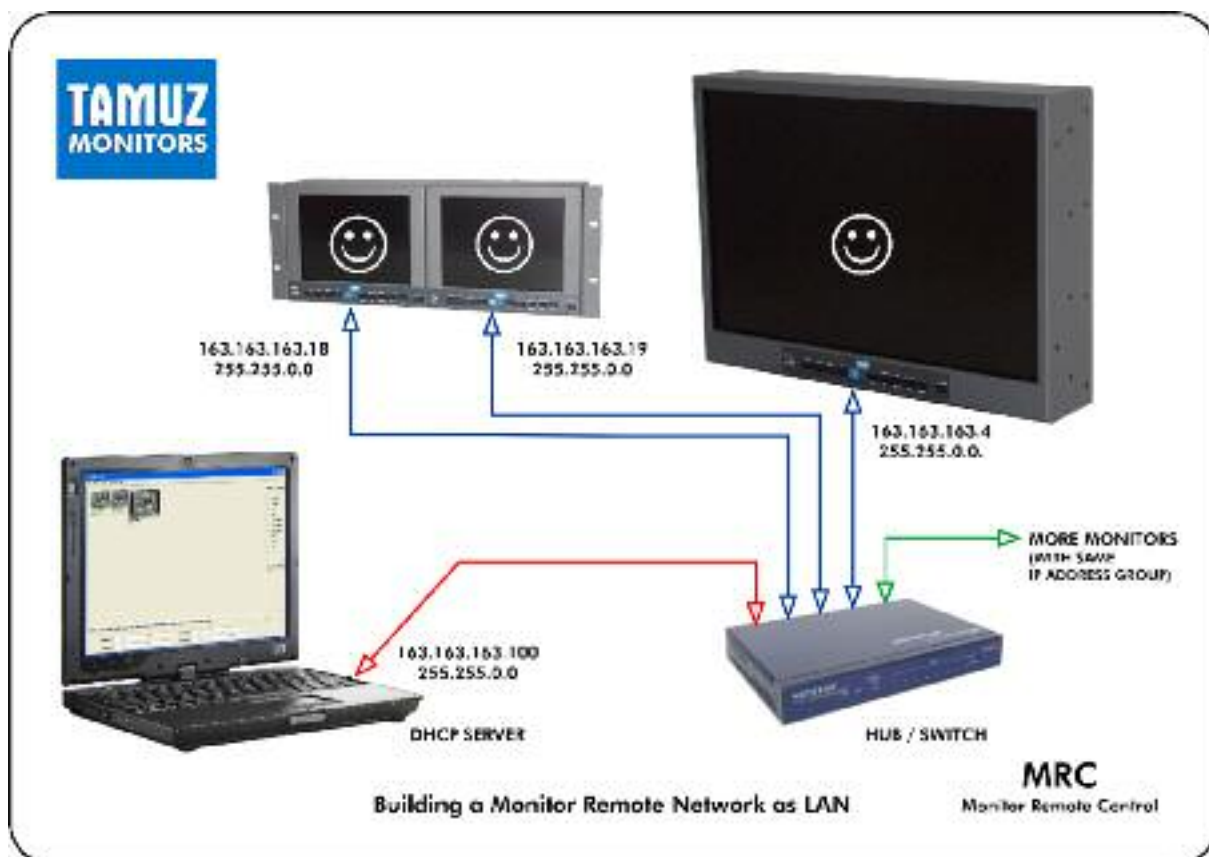
For few monitors to control its the best to built a net as a LAN (local area network). To control several monitors all over a production facility or in a broadcasting building a net as a WAN (wide area network) is best. Both systems needs different network hardware.

Hubs and switches distributes the communication from and to the monitors or MRC controller. All items at this net should be within the same address room.

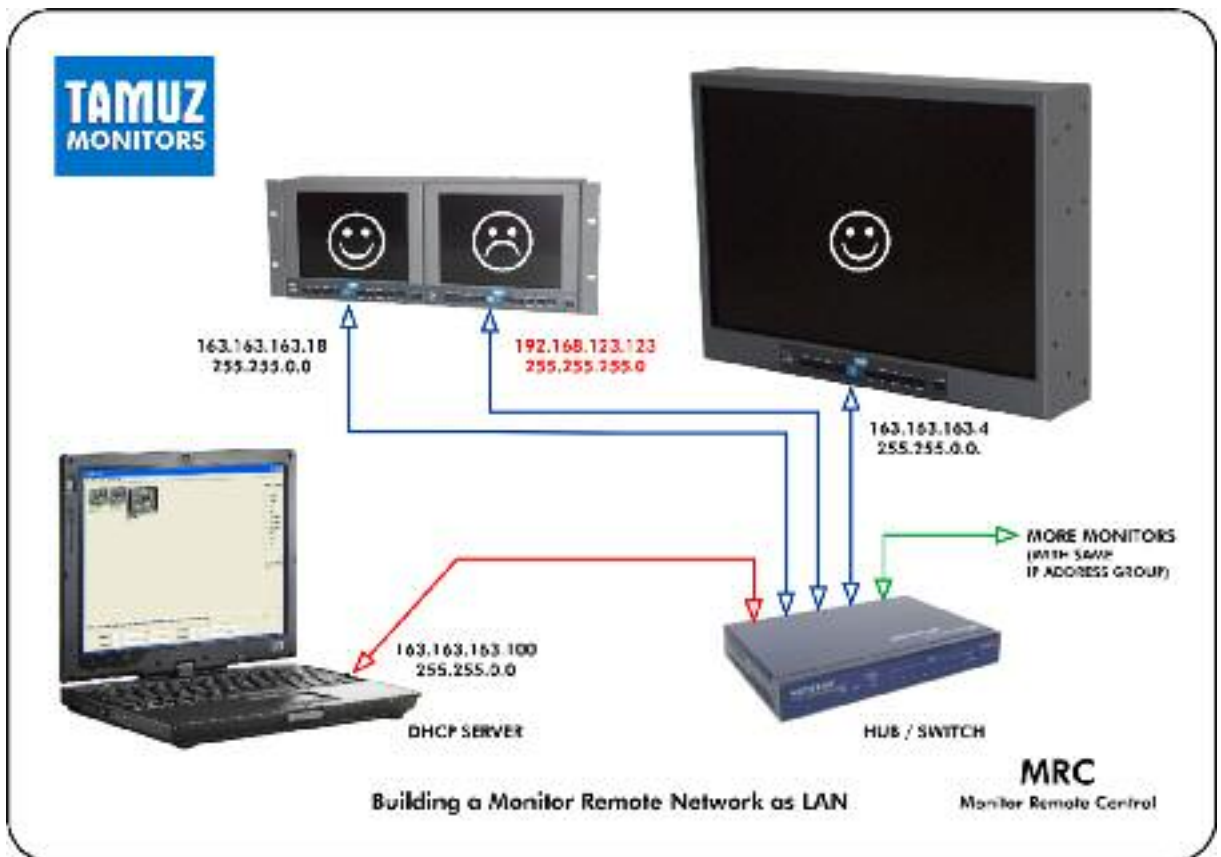
To extant to external items or connecting monitors with different IP addresses a router is necessary to manage the data transmission,

MRC as LAN

To control only few monitors in a studio, post production or broadcasting facility the MRC network should be realised as a LAN. A hub or switch distributes the data communication between the monitors and the MRC Controller.



See the example above. All items in this net uses IP address within the same address group (163.163.163.xxx), so data communication is easily possible. The PC running the MRC software operates as a DHCP server and manage the IP address configuration.



Note: In a LAN all monitors and the MRC system should use the same IP address group.

In case that one of the connected monitors have a different IP address, there is no communication to this device possible. The MRC system will not find nor will talk to the monitor.

See the example above. One monitor is off, his IP address belongs to a wrong address group.

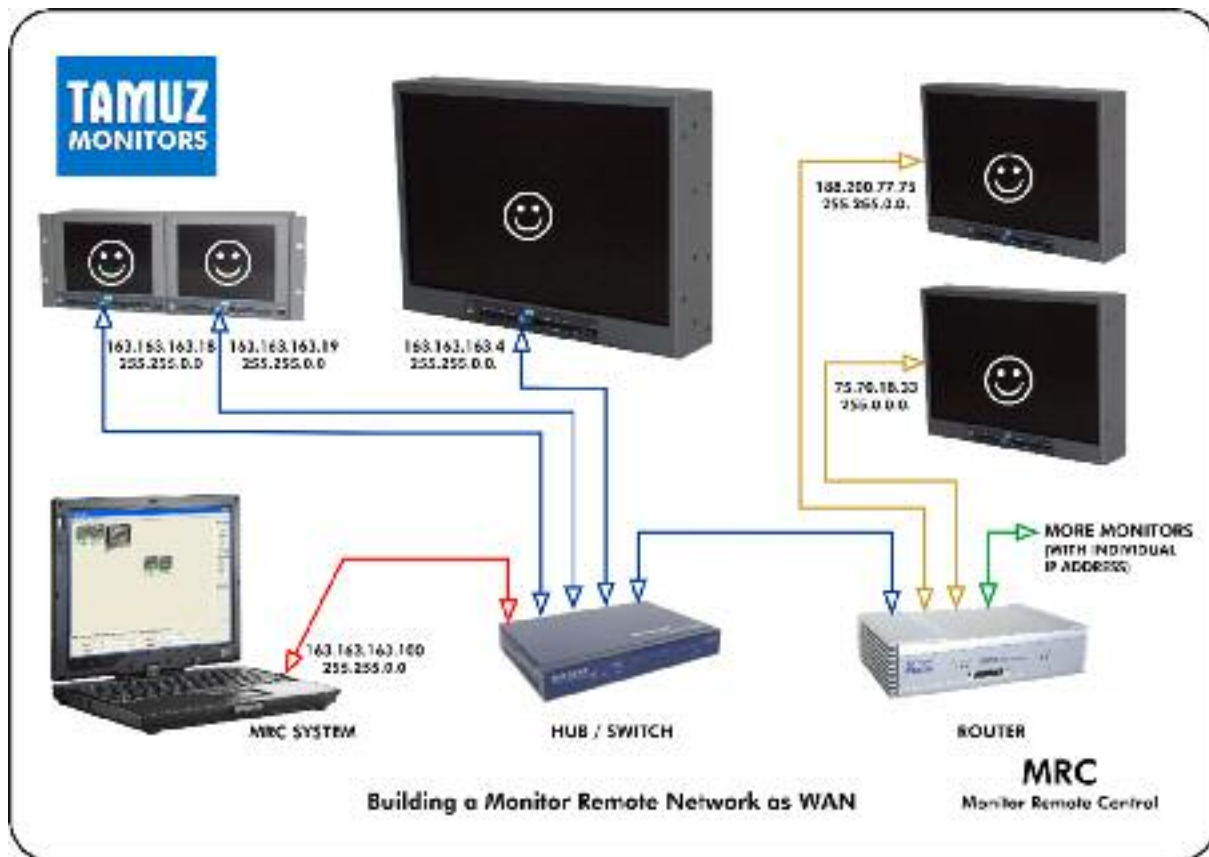
To fix this issue, set the monitors IP address to a new address belonging to the used group.



Note: If a monitor is set to a wrong IP address, the MRC system is unable to communicate with the monitor in a LAN structure.

MRC as WAN

To control a lot of monitors in a studio, post production or broadcasting facility the MRC network should be realised as a WAN. A router have to distribute the data communication between the monitors and the MRC Controller.



The example above is built as a WAN to allow communication with monitors in a different address group to the MRC controller.

THE MRC controller is connected to a hub, additional some monitors are connected to. One Ethernet line extends to a router and opens the net to other monitors. Their IP addresses will be transformed by the router, so the MRC controller can communicate with them This monitors IP addresses must be known and added to the MRC monitor list.

i **Note:** To connect monitors with different IP addresses to a MRC network a router is necessary to manage the communication.

Preparing a Monitor for MRC

Setting Monitors IP Address

Each TAMUZ monitor equipped with an Ethernet TCP/IP port has his own and individual MAC address. This address is labeled beside the RJ45 port. This MAC address identify the monitor within any network. The Ethernet port can have or get any IP address.



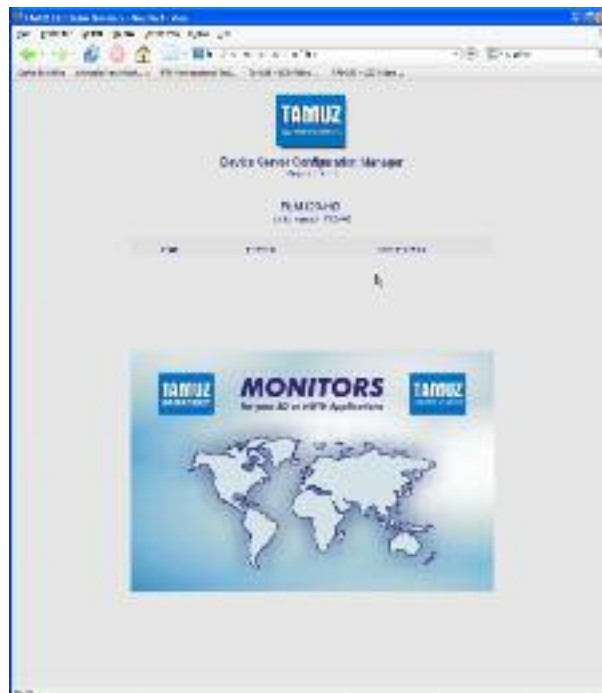
Standard IP address (factory default) for TAMUZ monitors is 192.168.123.123. Please modify to your individual needs. Double addresses in a network disturbing the communication.

Default IP Address

The default IP address for TAMUZ monitors is **192.168.123.123**.

To verify this address, connect the monitor to a PC using a twisted CAT5 cable or a hub and open a standard web browser (MS Explorer or Mozilla Firefox or Opera or Apple Safari). Type in the address 192.168.123.123, following window appears.

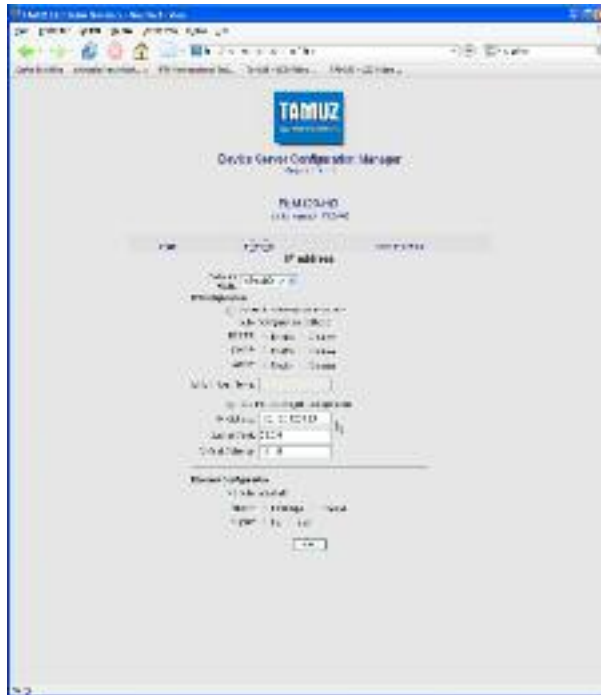
Keep in mind; your PC must have the 192.168.123.xxx IP group as his address. Do not use the automatic mode! Otherwise you would not get any communication with the monitor.



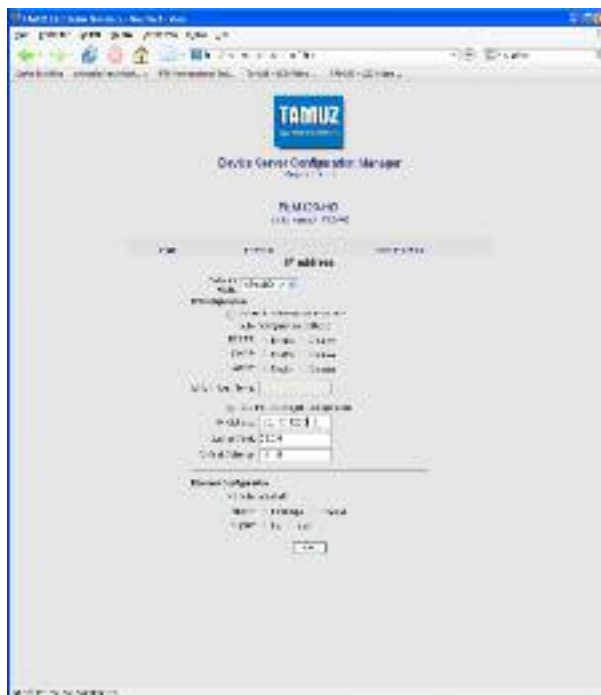
The screen shot above shows the monitor FLM 120 HD, serial number F50445, internal web site.

Changing the IP address

To change the monitor's IP address use this web browser application and click the link IP-ADDRESS.



The IP-ADDRESS page appears and you can change the IP address to an individual address for your network.



Confirm the modified IP address by clicking the button DONE and start the change process by a click on the link APPLY IP SETTING.



Note: Don't forget to confirm the new IP address by clicking the button DONE before starting the setting procedure.

The setting process will start.



When finished, a new window appears and informs you to change the address in your browser search window for a new search.



When you set the monitors IP address to a different address group, you have to modify the PC's address group too. Otherwise you would not get any communication with the monitor.

Repeat this procedure with all monitors which should become a part of the MRC network. Each connected monitor must have his individual IP address.



Note: Each monitor which should be controlled by the MRC system must get first an individual IP address. Best is to address them within one group, e.g. 163.177.123.xxx!

Starting MRC first-time

When MRC is started first-time, the PC and the software has to be configured.

The MRC software appears with its logo and an empty MRC window and a superimposed LOG IN window.



The MRC logo disappears after few seconds. To proceed LOG-IN is necessary.

LOG-IN

When MRC is started first-time, the user have to log-in to get access to the setup tools and features.

There are four levels of user rights.

User	Level	Rights
Operator	low	Selecting monitors to switch ON / OFF
Advanced User	mid	Above plus selecting monitors and toggle functions and features
Supervisor	high	Above plus configure and setting the MRC program
Maintenance	all	Above plus Firmware and Software Updates

A first installation of MRC didn't have any password set in any of the four user levels. Best is to configure your company passwords first before using the MRC system.



Note: When MRC is installed first time, no password is set for any of the user levels. Configure the passwords first to secure your MRC system installation.

Select the type of user and type in your password.

First-time Login

If you log-in first time ever, the following window appears on the MRC desktop.

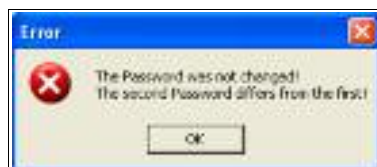


Type in your individual password (min 5 characters, case sensitive) and confirm with OK. Thereafter a new window appears to confirm the password.

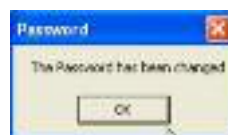


Retype your password and confirm with OK.

In case of miss-typing this message appears.



If the confirmation log-in was correct, this message appears.



Now the formerly hidden features are assessable.



Note: When MRC is installed first time, no password is set for any of the user levels. Configure the passwords first to secure your MRC system installation.

Repeat this procedure for all user levels.



Note: If you lost or have forgotten the passwords, call TAMUZ service for help.

Normal Login Procedure

When the password was already assigned, the following window appears on the MRC desktop.



Type in your individual password (min 5 characters, case sensitive) and confirm with OK.

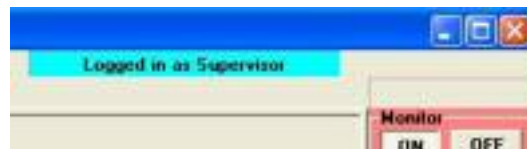
In case of miss-typing this message appears.



Regarding to the selected user level hidden features are assessable.

Logged In User

The MRC program always indicates the logged in user level in upper area of the window.



The currently logged in user level is SUPERVISOR.



Note: The *ADVANCED USER* level is for authorized operation only! Take care about your password.



Note: The *SUPERVISOR* level is for authorized operation only! Take care about your password.



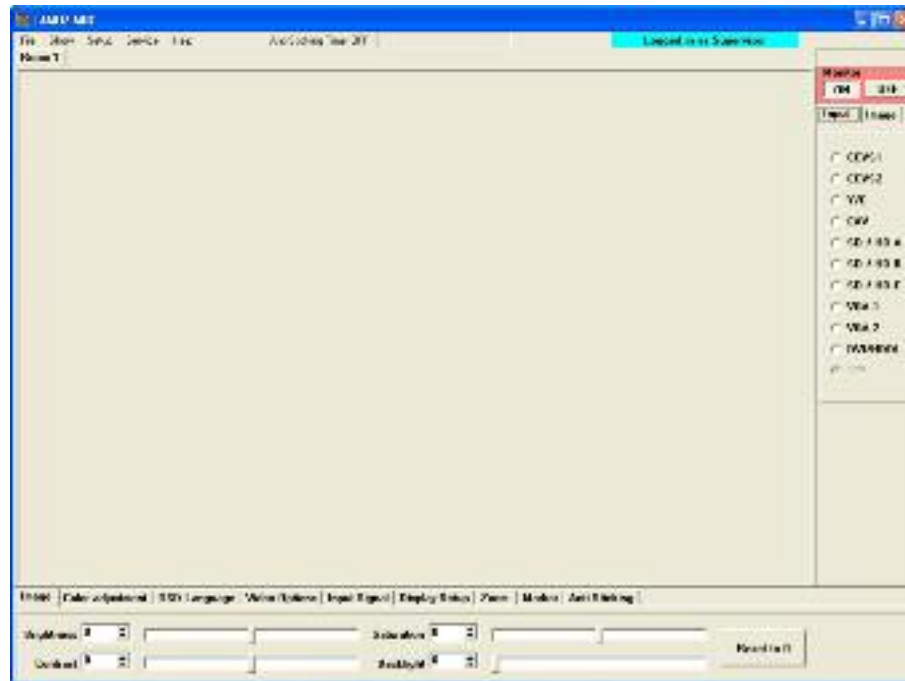
Note: The *MAINTENANCE* level is for authorized operation only! Take care about your password.



Note: If you lost your password, contact TAMUZ service for help.

Configuration of the MRC System

When the MRC system is started first time, no monitor pops up automatically in the MRC desktop, cause the IP addresses are not set correctly.



Close the MRC software and check the IP address of the PC system next.

Setting the System IP Address

Open the setup for the installed Ethernet card and set the IP address to fixed individual address, like 163.177.123.100, the subnet mask has to be 255.255.0.0.

The selected IP address for the MRC system should fit to the addresses given to the monitors.



Best is to set the standard gateway to address 163.177.123.101.



Note: Set the IP address to an individual address! Don't use the automatic function for your MRC PC system.

Close and save this setup window. Start MRC again.

Prove the Systems IP Address

After setup the MRC systems IP address and starting MRC as SUPERVISOR again, open the menu SETUP – NETWORK.



The window above appears and shows the selected IP address and the name of the PC system.

In case that the PC system is equipped with more than one network card or port, all available IP addresses are selectable in the pull-down menu NEW IP.

The item IP ADDRESS shows the current valid IP address of the system.



Note: Make sure that the systems IP address is set correctly!

Search for Monitors

To set MRC to an automatic search for monitors, enable the item LAN SEARCH FOR MONITORS. Therefor open the menu SETUP – NETWORK.



The window above appears and select LAN SCAN FOR MONITORS and confirm with OK.

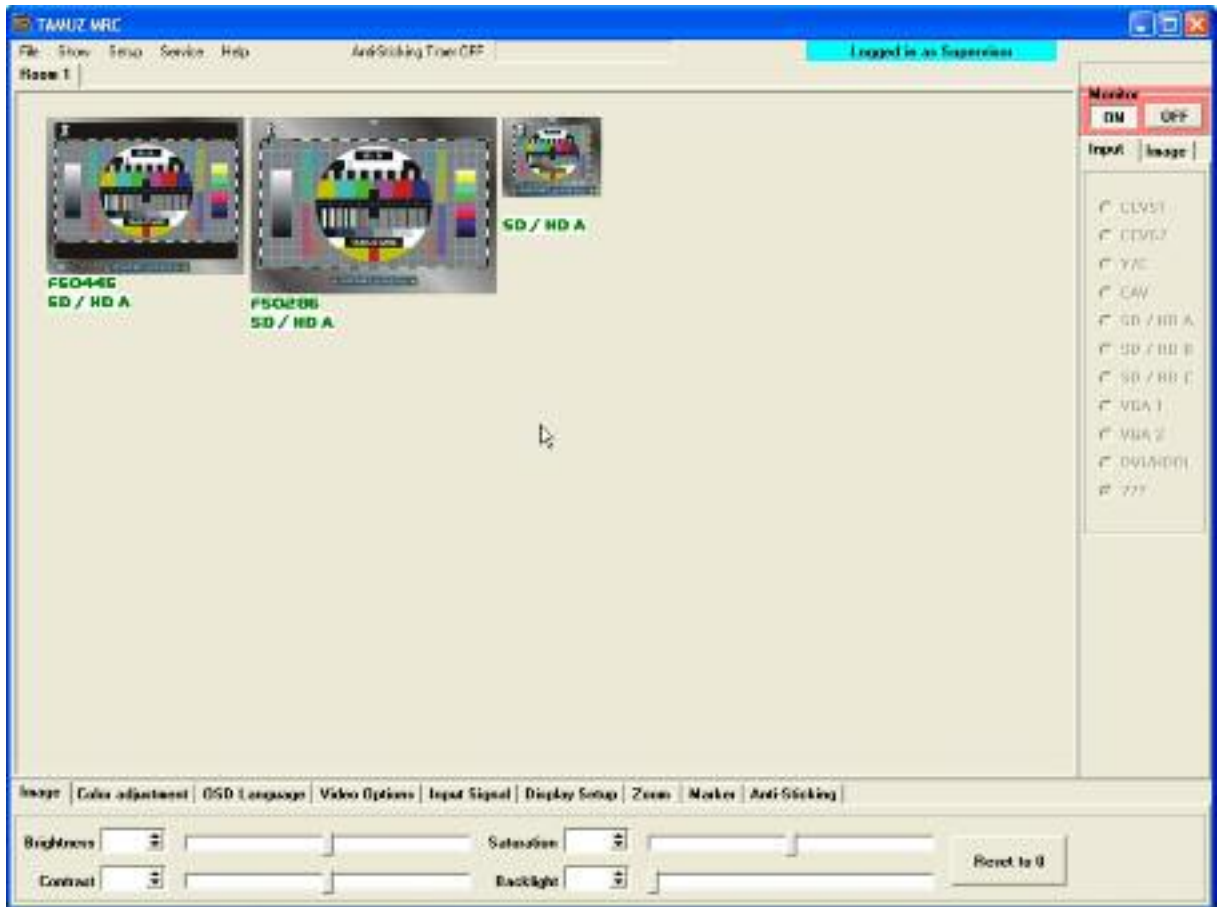
The scan will start and MRC desktop shows some recognized monitors.



Note: The LAN scan will find all monitors with in the selected IP address group. Monitors with an IP address not belonging to this group will not be found.

Finding Monitors

The MRC desktop shows a set of three monitors, recognized, but may be not correct set for operation, like the small right one.



The both monitors icons arranged on the left represents the monitor serial number F50286 and F50445. MRC recognizes their name and equipped input modules automatically.

The monitor name can be changed from automatically attached serial number to an individual name.

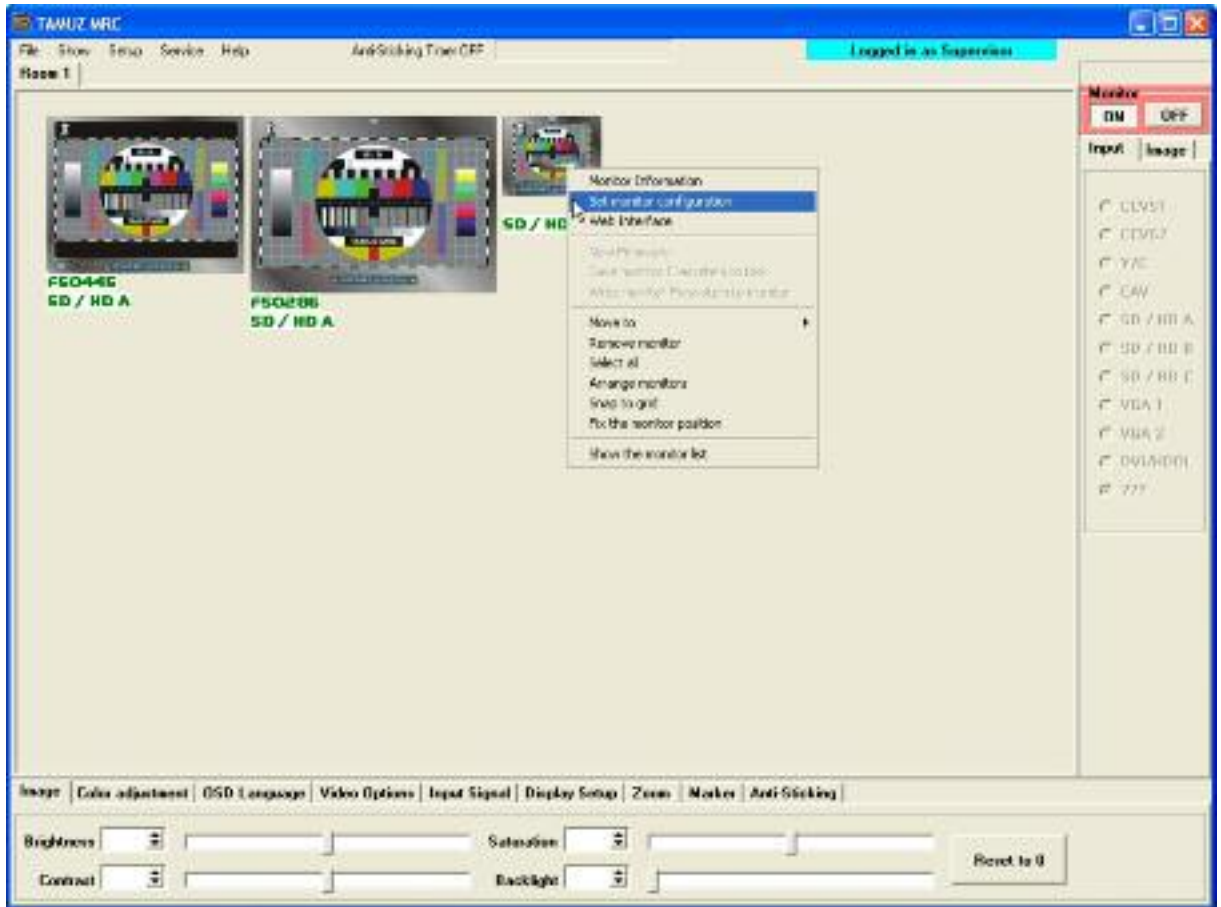
The monitor icon on the right represents a monitor which contains an elder firmware. Check and correct the monitor setup by open the menu SHOW – MONITOR INFORMATION.



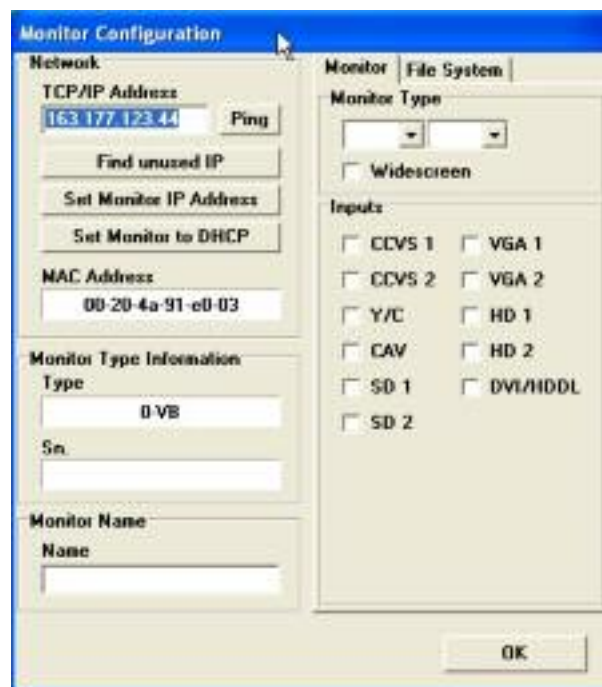
Note: From TAMUZ monitor firmware version 5.068, all monitors will be recognized with their own individual serial number and model type. A monitor with earlier firmware didn't support this feature.

Configure the Monitor

To configure the not automatically recognized monitor, open the menu SET MONITOR CONFIGURATION by a right-click on the selected monitor icon.



This opens the menu MONITOR CONFIGURATION to setup this monitor.



When this setup is done first-time, some detected data in this menu must not be set correct.

Select the correct monitor type within the pull-down menus. Next type in the name for your monitor and select the available input modules.

The screenshot shows the 'Monitor Configuration' dialog box with two tabs: 'Network' and 'Monitor'. The 'Network' tab is selected, displaying the following fields and buttons:

- Network:**
 - TCP/IP Address: 163.177.123.44 (with a 'Ping' button next to it)
 - Find unused IP (button)
 - Set Monitor IP Address (button)
 - Set Monitor to DHCP (button)
 - MAC Address: 00-20-4a-91-e0-03
- Monitor Type Information:**
 - Type: 0-VB
 - Sn: (empty field)
 - Monitor Name: Control Monitor

The 'Monitor' tab is also visible, showing:

- Monitor Type:** FLM 123 (with dropdown arrows)
- Widescreen
- Inputs:**
 - CCVS 1, VGA 1
 - CCVS 2, VGA 2
 - Y/C, HD 1
 - CAV, HD 2
 - SD 1, DVI/HDDL
 - SD 2

An 'OK' button is located at the bottom right of the dialog.

Confirm by clicking OK.

The field serial number is not accessible. It will be filled automatically only.

This procedure has to be done for each monitor in the MRC network, which isn't recognized automatically or the user wants to rename the monitor.

Ping the Monitor

For testing the network configuration or connectivity, the function PING can be used.

This screenshot is identical to the previous one, but the 'Ping' button next to the TCP/IP Address field is highlighted with a mouse cursor. Additionally, the 'Monitor Type Information' section now shows:

- Type: FLM123W HD/DVI
- Sn: (empty field)
- Monitor Name: Control Monitor

The 'OK' button remains at the bottom right.

Clicking the button PING, a test command will be sent to the monitor and a returned answer is shown in a small response window PARAMETER.



Here the answer was OK within a response time of 1 ms or less.

Other features and function of this menu will be described in the section Maintenance.

Monitor Information

To get detailed information about a monitor and his firmware, open the menu MONITOR INFORMATION by a right-click on the selected monitor icon.



This windows shows all relevant information about the monitor, his loaded firmware and revision, equipped LCD panel, IP and MAC address, name and serial number.



Note: The Monitor Information window is for information only.

Definition of Rooms

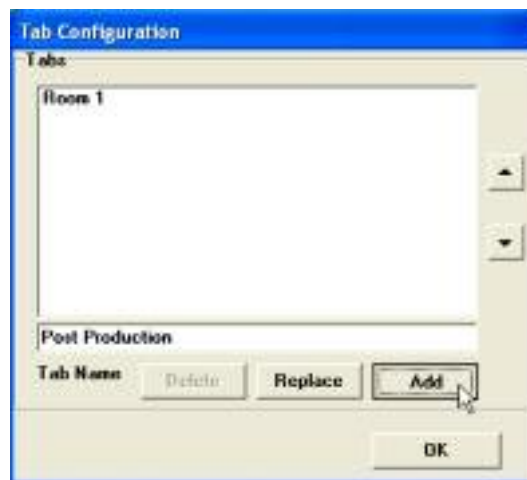
The MRC desktop is designed to be split in unlimited ROOMS. Each ROOM is a group of monitors, for example arranged like physical installation in the post production suite or control room itself.

This ROOM layout must not follow the physically installations. The feature helps to organize an easy operation of a smaller or bigger number of monitors.

Assign a new Room

During first installation of MRC or adding new monitors, this monitors will be put in a desktop called "lost monitors". From here or any other room monitors can be moved anywhere to create an individual layout.

To create a new room, open the menu SETUP – TABS. Following menu appears.

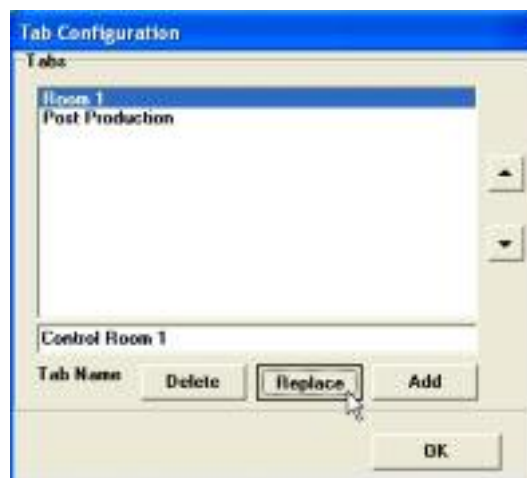


Add a new room by typing in the name and confirm by ADD. Close the menu by click on OK.

The position in the ranking is selectable with the arrow keys on the right side. High-light one of the name and change the ranking by clicking on the up or down keys.

Rename a Room

Existing rooms can be renamed. To rename a room, open the menu SETUP – TABS. Following menu appears.



Rename the room by typing in the new name and confirm by REPLACE. Close the menu by click on OK.

Delete a Room

Existing rooms can be deleted. To delete a room, open the menu SETUP – TABS. Following menu appears.



Select the room to delete by high-lighting his name in the list and confirm by DELETE. Close the menu by click on OK.

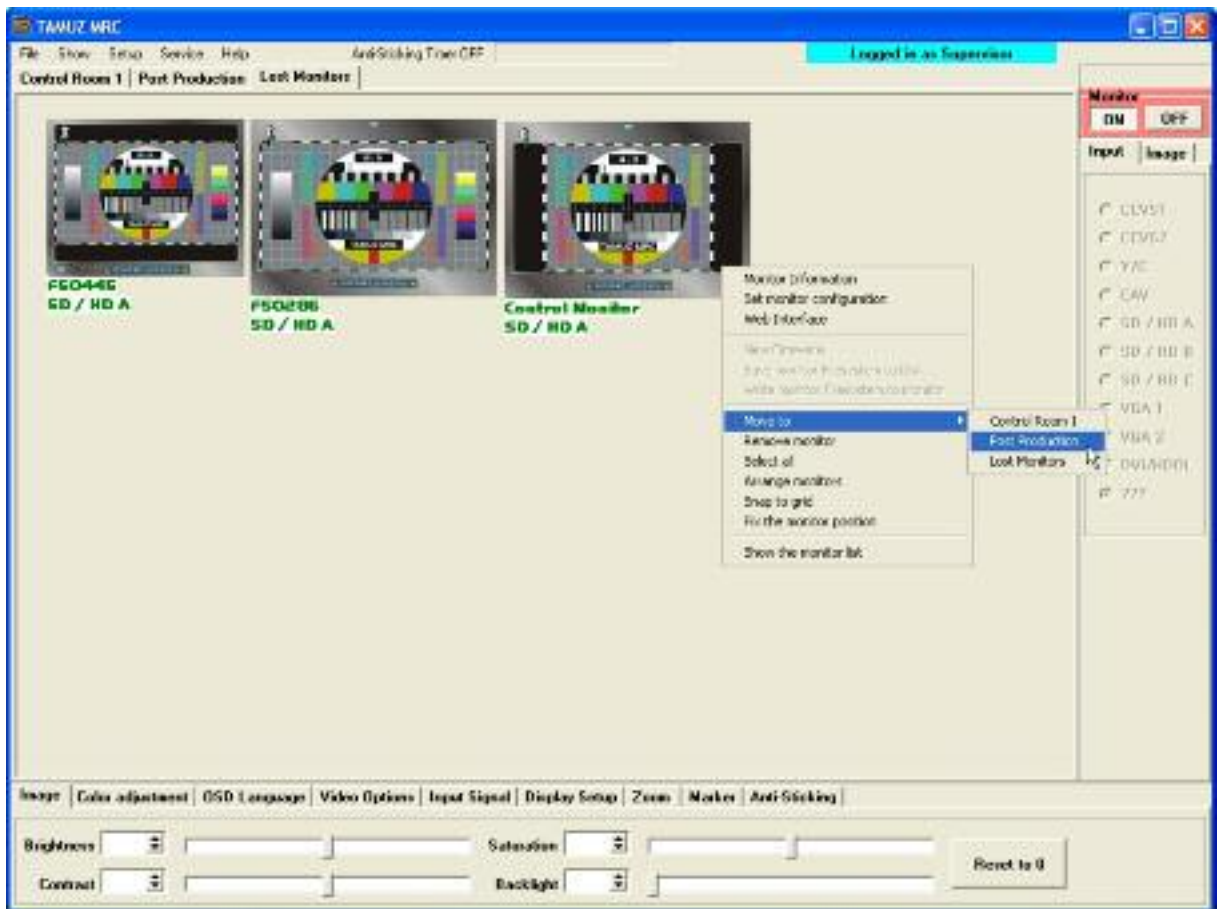
All monitors which was formerly set to the deleted room wouldn't be lost. The MRC system creates automatically a new room, named "lost monitors". Here the user will find back all monitors from deleted rooms.



Note: Monitors from a deleted room are not lost. MRC save their setup in a "lost Monitors" room.

Moving Monitors to a Room

All monitors can be moved from one room to another.



To move a monitor, click with right mouse button on the monitor you want to move and a pull-down menu opens. Select the item MOVE TO and a menu window with the list of available rooms appears. Follows intuitive this typical Windows program function.

The move function is limited to singularly icons only. When more icons should be arranged to other rooms, it has to be done one icon after the other.



Note: All monitors can be simply moved by mouse click from on room to another (under SUPERVISOR and MAINTENANCE rights only). One icon only, not a selected group of icons is movable.

Move a Monitor to another Room

To move a monitor, click with right mouse button on the monitor you want to move and a pull-down menu opens. Select the item MOVE TO and a menu window with the list of available rooms appears.

Select the new room by drawing the cursor to the name of the desired room. The name will be highlighted. Confirm by mouse left click. The monitor icon disappears from the current room.

Open the other room by clicking on his tab at the MRC desktop. The moved monitor will be found here in the upper left position for reconfiguring his place on the desktop. In case that the upper left position was occupied by another monitor icon, the moved monitor icon will be placed an the end of that row to the right.



Room "CONTROL ROOM 1" with 3 monitors



Room "POST PRODUCTION" with one monitor



Moving monitor "F50445" to room "POST PRODUCTION"



Room "POST PRODUCTION" show now two monitors

The move function is limited to SUPERVISOR and MAINTENANCE user rights.



Note: All monitors can be simply moved by mouse click from on room to another (under SUPERVISOR and MAINTENANCE rights only). One icon only, not a selected group of icons is movable.

MRC Menus

The MRC software is structured in several menu sections to make operation simple and easy to learn.



The File Menu

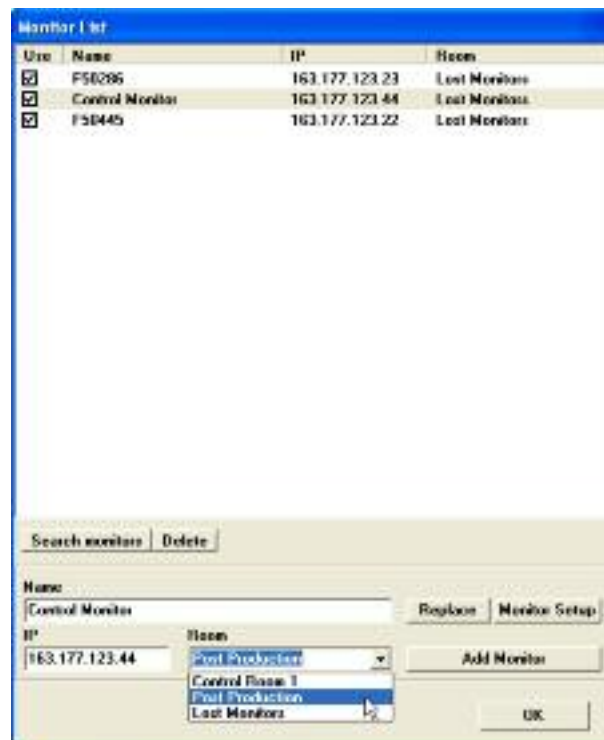
The menu FILE allows to store and save informations. Additional here is the way to exit the program.

New Monitor Menu

To add a new monitor to the MRC system open the menu NEW MONITOR.



Following menu appears when NEW MONITOR is selected.



This window contains a list of detected monitors.

Clicking the button SEARCH MONITORS the MRC network will be searched for more monitors. The button DELETE cancels the communication connection to the selected monitors.

In the lower area of this menu window a monitor can be searched directly by typing in his IP address and confirming with ADD MONITOR.

The button MONITOR SETUP opens the menu MONITOR CONFIGURATION.

For details see chapter Monitor Configuration

Load Setup Menu

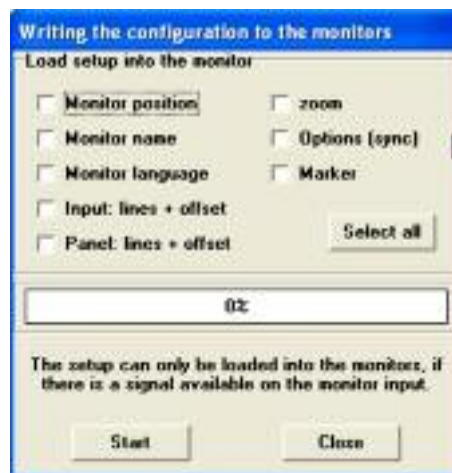
To load a formerly setup open the menu LOAD SETUP and select the stored configuration file.



A windows opens to select a setup file.



Select the configuration you want to load and confirm by clicking OPEN. Next the configuration window opens. Tick the functions you want to load and confirm with START.



MRC will load the stored configuration and send this setup to the monitors.



Note: Loading setups will be accepted when a video signal is present only.

Save Setup Menu

To save a personal setup open the menu SAVE SETUP and store the configuration file.



A windows opens to select or create a setup file.



Set the name for the configuration you want to save and confirm by clicking SAVE.



The time for reading information from the monitor depends of the LAN traffic and the amount of data. It may take some seconds to some minutes.



Note: Saving setups will be accepted when a video signal is present only.

Exit Menu

To close the program open the menu EXIT.



The MRC program will switch to the hidden mode and disappears from the desktop. The MRC icon in the lower right edge (Windows tray) indicates that the program is still active.



To shut down, click the MRC icon and following pull-down menu appears.



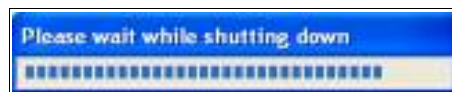
Select SHUT DOWN and confirm with a mouse click.



The MRC program will shut down. Before proceeding a confirmation window appears to be confirmed by clicking OK.



During shut down all data and all settings will be saved automatically



This saved information will be used for the next start of the program MRC.



Note: When shutting down, please wait and didn't disturb the automatically save procedure!

Starting the MRC program twice

It is not allowed to run the MRC software more than once simultaneously. If you start the program when one session is active, an error message appears.



Before you can restart the MRC software, the first session has to be closed.



Note: *It's not allowed to run the MRC software more than once!*

The Show Menu

The menu SHOW visualize information's on or about the connected monitors.

Show OSD Menu

This menu opens the OSD MENU on the selected monitor.



The following window appears on the MRC desktop to control the selected monitor remotely. Additionally the OSD appears on the monitor screen.



The function in the menu window are listed below.

Button	Function	Comment
MENU	opens the OSD menu	The OSD menu navigates the monitor menu
UP	toggles in top direction	To select a menu step in the up direction
DOWN	toggles in bottom direction	To select a menu step in the down direction
MINUS	toggles in left direction	To select a menu step in the left direction
PLUS	toggles in right direction	To select a menu step in the right direction
SERVICE MENU	opens the OSD menu	The Service Menu informs about the monitor
CLOSE	closes the OSD menu	To exit the OSD menu



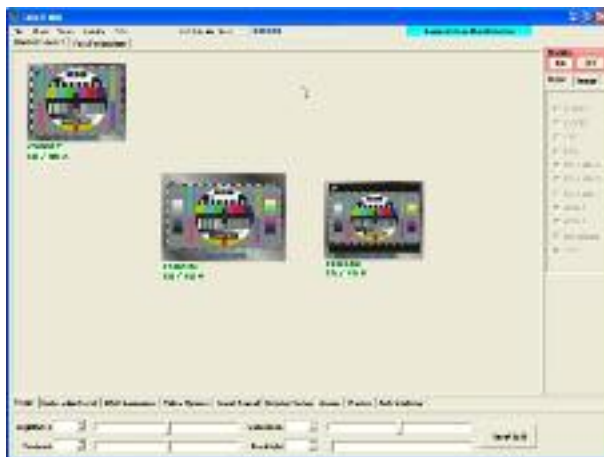
Note: Using the OSD menu, a individual operation of the selected monitor is possible.

Show Monitor Icons

This item selects the MRC desktop to display all monitors as icons.



The desktop shows all monitors as their icons.



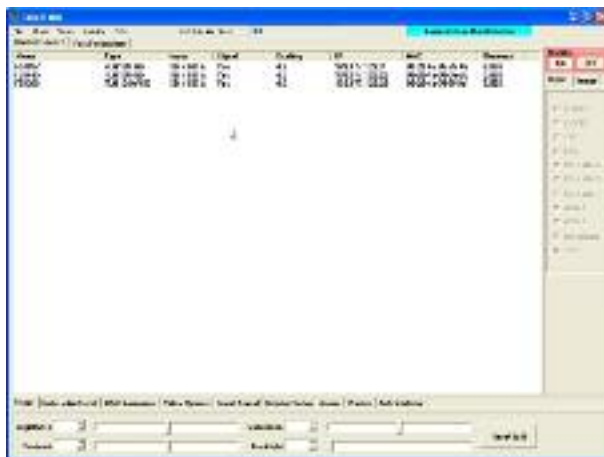
This item has a toggle function with the counterpart MONITOR LIST.

Show Monitor List

This item selects the MRC desktop to display all monitors as a list.



The desktop shows all monitors as a list.



This item has a toggle function with the counterpart MONITOR ICONS.

The Setup Menu

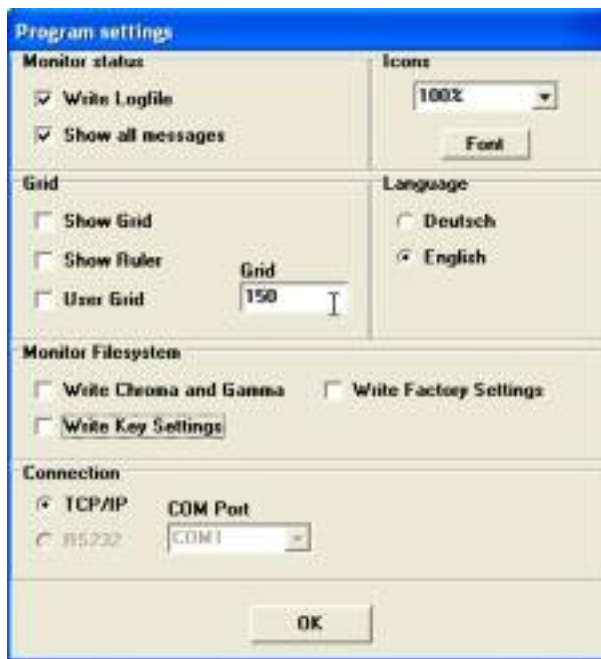
The menu SETUP allows the configuration of the MRC program and the LAN network.

Setup Program Menu

This menu opens the SETUP PROGRAM menu to configure the MRC program itself.



The following window appears on the MRC desktop.



Within this window all selections for an individual look-and-feel can be done. Click the items you want to enable and confirm with OK.

The function in the menu window MONITOR STATUS are listed below.

Button	Function	Comment
Write Logfile	Logs all actions in a file	Default setup
Show all messages	Prompts all messages when something happens	High traffic in the MRC LAN

The function in the menu window GRID are listed below.

Button	Function	Comment
Show grid	Enables a grid in the MRC desktop	Default setup
Show rulers	Enables the X and y ruler to pan or roll the desktop	Default setup
User grid	Enables a user defined grid raster,	adjustable in mm

The function in the menu window MONITOR FILE SYSTEM are listed below.

Button	Function	Comment
Write Chroma and Gamma	Enables download of specific settings	Reload factory default
Write Factory Settings	Enables download of specific settings	Reload factory default

Setup Network Menu

This menu opens the SETUP NETWORK menu to configure the LAN network for MRC.



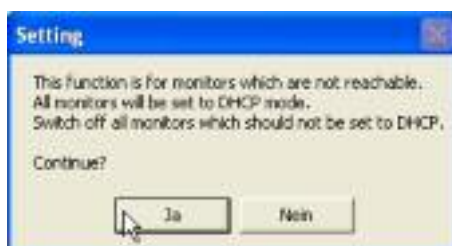
The following window appears on the MRC desktop.



The function in the menu window NETWORK SETUP are listed below.

Button	Function	Comment
Host Name	Displays the name of the MRC PC system	
New IP Address	Shows the list of available IP address of the MRC PC system	
IP Address	Shows the current IP address of the MRC PC system	
LAN scan for monitors	Enables automatic scanning for monitors. Detects monitors with or outside the MRC systems IP address group	Did not detect other LAN items, like printers, etc.
Start DHCP Server	Enables the DHCP server of the MRC system	Default setting
DHCP Address Pool	Selects the configurable IP addresses	Max 254 are possible
SET TO DHCP	Starts assigning IP addresses	Opens a message window

When you click on SET TO DHCP this message appears.



In the case you confirm by clicking YES, all connected monitors will do a reset in their IP address to factory default. Next all connected monitors gets a randomly assigned IP address from the DHCP server.

This helps to re-connect a non-assessable monitor to the MRC system. But it deletes the your formerly IP address settings and structure



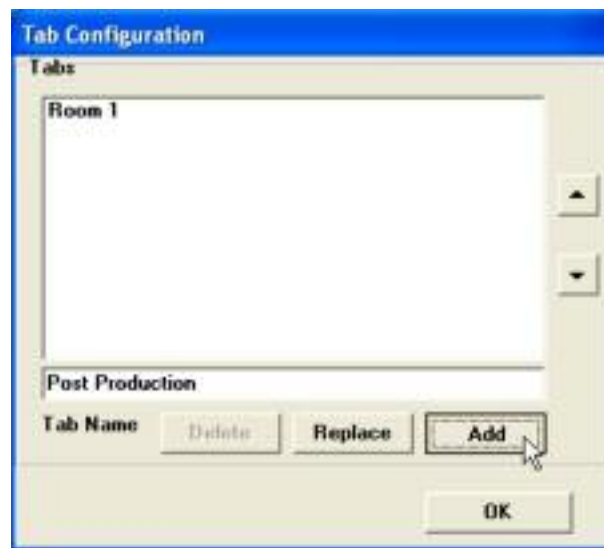
Note: Power down all monitors which should not get a new IP address by the DHCP server!

Setup Tabs Menu

This item opens the TABS menu to configure the MRC desktop as one or more rooms.



The following window appears on the MRC desktop.



The function in the menu window TABS are listed below.

Button	Function	Comment
Tabs	Displays the list of designed rooms	Sort the position with the arrow keys
Tab Name	Shows a selected or new name	Empty is default
Delete	Deletes the selected Tab from the system	All assigned monitors will be moved to "lost monitors"
Replace	Replaces the selected Tab name with the new one	All assigned monitors will be moved to "lost monitors"
Add	Adds the new Tab name to the list	Empty is default

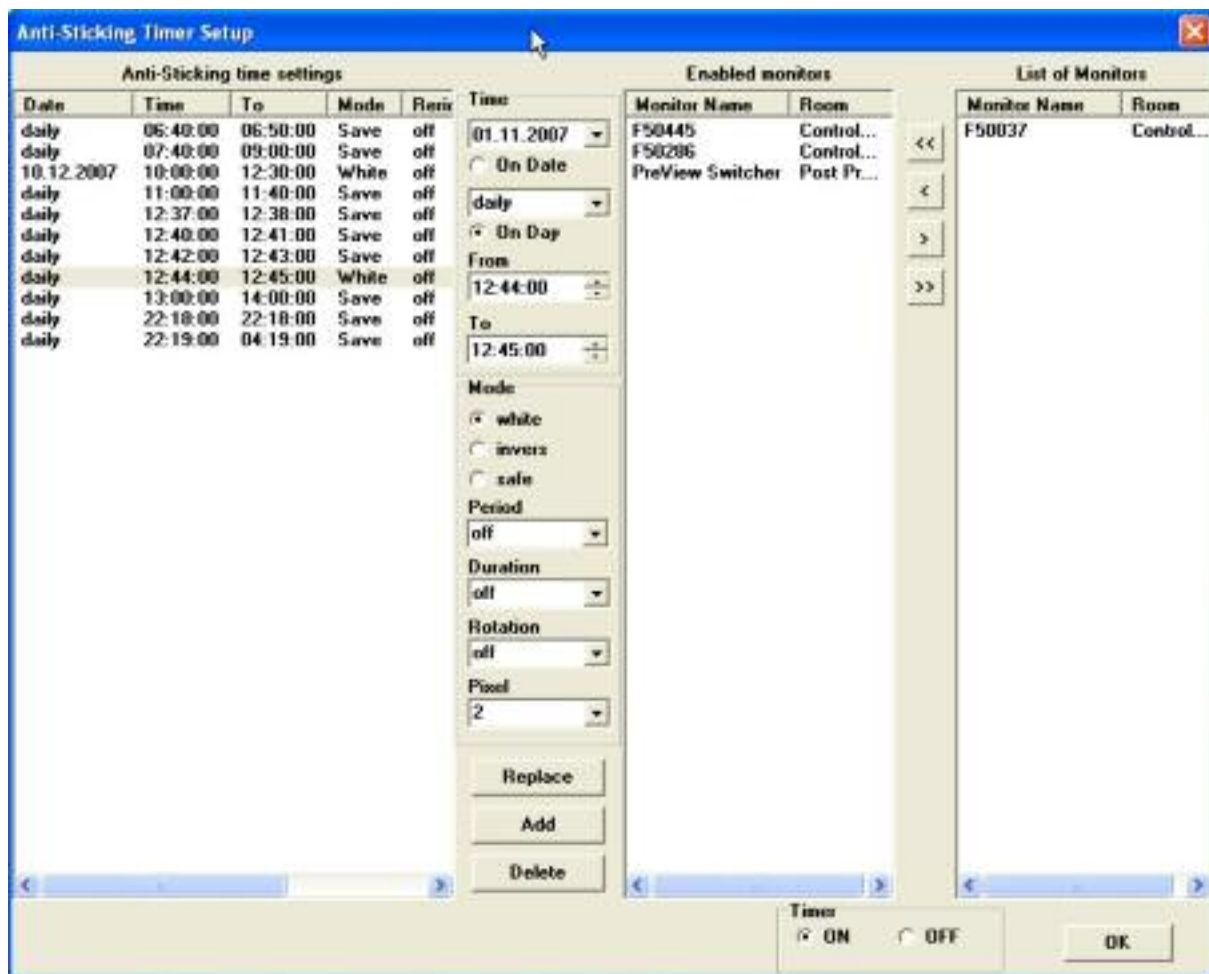
Close this window with the button OK.

Setup Anti-Sticking Timer Menu

This item opens the ANTI-STICKING TIMER menu to configure the timer controlled Anti-Sticking feature for the monitors.



The following window appears on the MRC desktop.



The function in the menu window ANTI-STICKING TIMER SETUP are listed below.

<i>Button</i>	<i>Function</i>	<i>Comment</i>
<i>Anti-Sticking time settings</i>	<i>Displays the list of designed events</i>	<i>Sort the position by a click on the headline items</i>
<i>Enabled Monitors</i>	<i>Displays the list of enable monitors for a selected events</i>	<i>Sort the position by a click on the headline items</i>
<i>List of Monitors</i>	<i>Displays the list of available monitors</i>	<i>Sort the position by a click on the headline items</i>
<i>Time</i>	<i>Set the time for an event by date, start and end times</i>	
<i>Mode</i>	<i>Select and set the mode of the anti-sticking feature for the monitors</i>	<i>All features off is default</i>
<i>Replace</i>	<i>Overwrites a set of data for an event</i>	<i>Helpful tool to copy events</i>
<i>Add</i>	<i>Writes a new set of data for an event</i>	<i>Creating new events</i>
<i>Delete</i>	<i>Deletes a set of data from the list</i>	
<i>Timer</i>	<i>Enables the timer function</i>	<i>Switch the time ON / OFF</i>

Close this window with the button OK.



Note: The ANTI-STICKING TIMER is an useful tool to organize an automatic power saving or anti-sticking for all connected monitors. It operates a single monitor or a collection of monitors or all of them.

The Service Menu

The menu item SERVICE allows the configuration of passwords for the MRC program.



Service Login Menu

Within the TAMUZ MRC software, starting from release 2.0, user rights are configurable. There are four levels of user rights.

User	Level	Rights
Operator	low	Selecting monitors to switch ON / OFF
Advanced User	mid	Above plus selecting monitors and toggle functions and features
Supervisor	high	Above plus configure and setting the MRC program
Maintenance	all	Above plus Firmware and Software Updates

A first installation of MRC didn't have any password set in any of the four user levels. Best is to configure your company passwords first before using the MRC system.



Note: When MRC is installed first time, no password is set for any of the user levels. Configure the passwords first to secure your MRC system installation.

Select the type of user and type in your password.

First-time Login

If you log-in first time ever, the following window appears on the MRC desktop.



Type in your individual password (min 5 characters, case sensitive) and confirm with OK. Thereafter a new window appears to confirm the password.



Retype your password and confirm with OK.

In case of miss-typing this message appears.



If the confirmation log-in was correct, this message appears.



Now the formerly hidden features are assessable.



Note: When MRC is installed first time, no password is set for any of the user levels. Configure the passwords first to secure your MRC system installation.

Repeat this procedure for all user levels.



Note: If you lost or have forgotten the passwords, call TAMUZ service for help.

Normal Login Procedure

When the password was already assigned, the following window appears on the MRC desktop.



Type in your individual password (min 5 characters, case sensitive) and confirm with OK.

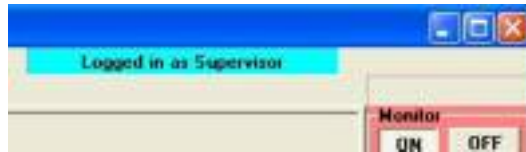
In case of miss-typing this message appears.



Regarding to the selected user level hidden features are assessable.

Logged In User

The MRC program always indicates the logged in user level in upper area of the window.



The currently logged in user level is SUPERVISOR.

Rights	Operator	Advanced User	Supervisor	Maintenance
Monitor ON / OFF	YES	YES	YES	YES
Input Selection	NO	YES	YES	YES
Image Settings	NO	YES	YES	YES
Function Settings	NO	YES	YES	YES
Desktop Setup	NO	NO	YES	YES
Program Setup	NO	NO	YES	YES
Monitor Setup	NO	NO	YES	YES
Network Setup	NO	NO	YES	YES
Firmware Update	NO	NO	NO	YES

The user "OPERATOR" have only the right to switch monitors ON or OFF.



Note: The *ADVANCED USER* level is for authorized operation only! Take care about your password.



Note: The *SUPERVISOR* level is for authorized operation only! Take care about your password.



Note: The *MAINTENANCE* level is for authorized operation only! Take care about your password.



Note: If you lost your password, contact TAMUZ service for help.

Service Menu New Password

This menu opens the SERVICE NEW PASSWORD menu to change the password.



The following window appears on the MRC desktop.



Type in your individual password (min 5 characters, case sensitive) and confirm with OK. Thereafter a new window appears to confirm the password.



Retype your password and confirm with OK.

In case of miss-typing this message appears.



If the confirmation log-in was correct, this message appears.



Now the formerly hidden features are assessable.

The Help Menu

The menu item HELP opens the MRC manual and informa about the software.



Note: The MRC operation manual is stored on your CD-ROM or in the MRC directory as a Adobe Acrobat (pdf) file. You need to have Adobe Acrobat or similar software installed.

Help About Menu

This menu opens the ABOUT menu to inform about the MRC software release and manufacturer.



The following window appears on the MRC desktop.



Close the information window with a click on OK.

Help About Menu

This menu opens the HELP menu to start the PDF reader at the MRC PC system.



When a PDF reader is available, this manual will become open.



Note: Check you PC system for an installed PDF reader software.

MRC Hidden Mode

To switch the program to the hidden mode click the OFF icon at the upper right corner of the program window.



The MRC program will switch to the hidden mode and disappears from the desktop. The MRC icon in the lower right edge (Windows tray) indicates that the program is still active.

All automatic functions, like Anti-Sticking Timer, will operate as same as the MRC program window is visible at the desktop.



Some few functions are selectable when clicking the MRC icon at the windows tray.

Re-Open the MRC Desktop

To re-open the MRC desktop click the MRC icon at the windows tray.



Select the from the pull-down menu the item OPEN and confirm by a mouse click.



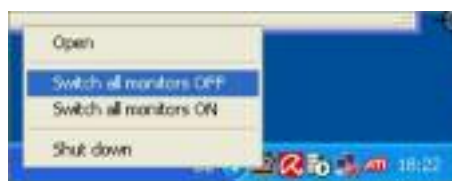
The MRC window will appears again on the PC desktop,

Switch all Monitors OFF

To switch all active monitors connected to the MRC system click the MRC icon at the windows tray.



Select the from the pull-down menu the item SWITCH ALL MONITORS OFF and confirm by a mouse click.



Just with the mouse click all monitors, no matter what room, will be switched OFF.

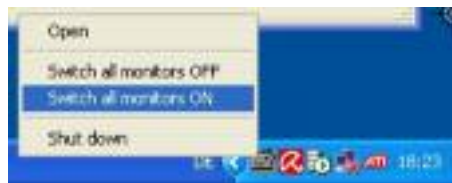
This function can be used to control the whole house at once.

Switch all Monitors ON

To switch all active monitors connected to the MRC system click the MRC icon at the windows tray.



Select the from the pull-down menu the item SWITCH ALL MONITORS ON and confirm by a mouse click.



Just with the mouse click all monitors, no matter what room, will be switched ON.

This function can be used to control the whole house at once.

Shut Down the MTC Program

To shut down, click the MRC icon and following pull-down menu appears.



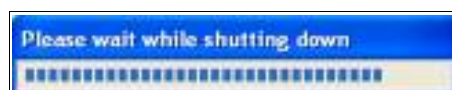
Select SHUT DOWN and confirm with a mouse click.



The MRC program will shut down. Before proceeding a confirmation window appears to be confirmed by clicking OK.



During shut down all data and all settings will be saved automatically



This saved information will be used for the next start of the program MRC.



Note: When shutting down, please wait and didn't disturb the automatically save procedure!

Using the MRC software

Using the TAMUZ MRC software in conjunction with TAMUZ GREY OWL or SPARROWHAWK monitors most of the monitor setups and features are remotely controllable.

MRC Desktop

When the software is running, all recognized monitors are visible on the MRC desktop as an icon.



The screen shot above shows three monitors, all in a different status.

The upper left monitor is a standard monitor, TAMUZ FLM 120 HD, with no input signal at the selected input, indicated by the black font color.

The right monitor, TAMUZ FLM 120 HD, is accessible and selected by mouse click, input A selected and video present, working in 16:9 mode at color temperature 6500 K with Gamma 2.2 selected. The selected status is indicated by the image icon. If you click on another monitor, the monitor becomes deselected and the icon swaps to the default, showing a test picture. See chapter MRC Monitor Icons.





The monitor at the middle, TAMUZ FLM 124W HD, is accessible, but not selected. It has video and input A present.

The menu bar on the right contains all selectable features for input and picture settings, Details see chapter Monitor Input and Picture Settings.

The menu bar at the bottom contains all the different features to set the image brightness or OSD language or video option. Details see chapter Monitor Adjustment features.

MRC Monitor Icons

The MRC software uses different icons to visualize the status of the monitors.

<i>Icon NOT assessable</i>	<i>Icon assessable</i>	<i>Icon selected</i>
 <p data-bbox="416 568 517 618">NAME SD / HD A</p>	 <p data-bbox="821 568 922 618">NAME SD / HD A</p>	 <p data-bbox="1227 568 1327 618">NAME SD / HD A</p>
<p data-bbox="272 631 665 734"><i>This icon indicates a monitor which was formerly a member of the controllable group of monitors, now disconnected or power off,</i></p>	<p data-bbox="678 631 1067 703"><i>This icon indicates a monitor which is assessable, but not selected for remote operation.</i></p> <p data-bbox="694 719 1051 743"><i>Video at input A is present. 4:3 mode</i></p>	<p data-bbox="1099 631 1460 680"><i>This icon indicates that this monitor is selected for remote operation.</i></p> <p data-bbox="1099 696 1460 721"><i>Video at input A is present. 4:3 mode</i></p>
 <p data-bbox="437 990 501 1039">NAME OFF</p>	 <p data-bbox="821 990 922 1039">NAME SD / HD A</p>	 <p data-bbox="1227 990 1327 1039">NAME SD / HD A</p>
<p data-bbox="272 1052 665 1133"><i>This icon indicates a monitor which runs in a SAFE mode or power off, controlled by the Anti-Sticking Timer</i></p>	<p data-bbox="678 1052 1067 1133"><i>This icon indicates a monitor which is assessable, but not selected for remote operation.</i></p> <p data-bbox="694 1149 1051 1173"><i>Video at input A is present. 16:9 mode</i></p>	<p data-bbox="1099 1052 1460 1111"><i>This icon indicates that this monitor is selected for remote operation.</i></p> <p data-bbox="1099 1126 1460 1151"><i>Video at input A is present. 16:9 mode</i></p>

To operate a single monitor click the icon with the mouse. The monitor becomes active for remote operation.

To operate all or some monitors, draw a rectangle over more than one monitor, or click each of them by holding the CONTROL key on your keyboard. The selected group of monitors becomes active for remote operation.



Note: The monitor icon didn't show the current video. The test and sport picture are symbols only.

User definable Icons

All used icons are stored in an own directory as a BMP graphic file.



If you want to use your own designed icons copy this files in the directory BMP. Secure that the size and the file indication follows the MRC rules.

Five icons for each monitor are requested.

The file names must be written like MONSSS(W)-xxnn.bmp.

Where SSS is the size of the monitor. The “W” indicates a wide screen monitor and xx (16 / 43) the 16:9 or 4:3 image mode. The index nn is ag, ek or nr for selected, available or not-active.

The size for the icons should be in relation to the specific monitor. All icons should be between 60 x 60 up to 300 x 200 pixels.

Image	Name	Stays for Monitor	Function
	<i>MON108-nr.bmp</i>	<i>FLM 108</i>	<i>Monitor is detected, but not active</i>
	<i>MON108-43ek.bmp</i>	<i>FLM 108</i>	<i>Monitor is detected, active, but not selected for remote, status 4:3</i>
	<i>MON108-43ag.bmp</i>	<i>FLM 108</i>	<i>Monitor is detected, active and selected for remote, status 4:3</i>
	<i>MON108-16ek.bmp</i>	<i>FLM 108</i>	<i>Monitor is detected, active, but not selected for remote, status 16:9</i>
	<i>MON108-16ag.bmp</i>	<i>FLM 108</i>	<i>Monitor is detected, active and selected for remote, status 16:9</i>

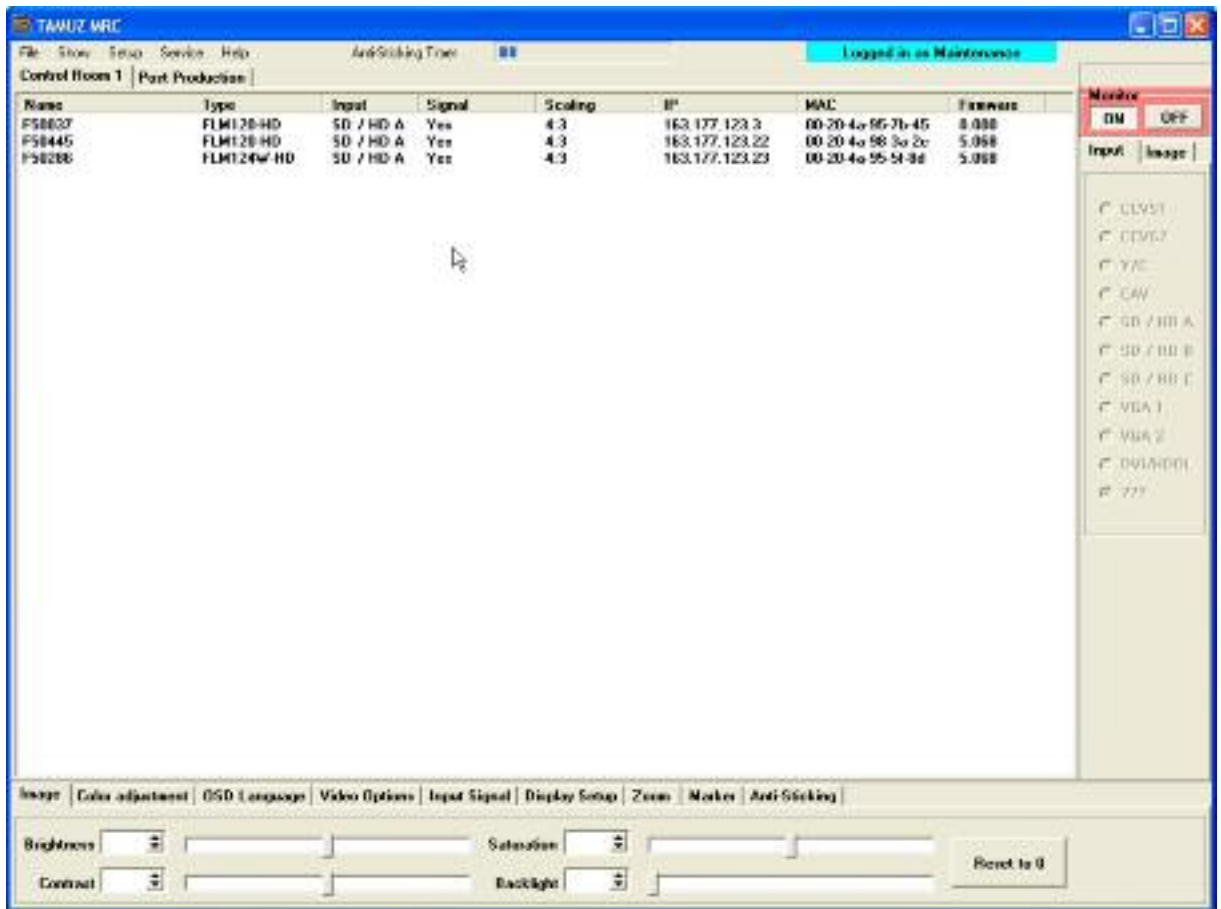


Note: Create your own icons if you want to change the layout of the MRC desktop.

Monitor List Desktop

This menu swaps the MRC desktop to the list mode.

The following window appears on the MRC desktop to visualize the selected monitor status.



Within this window all monitors at this room are listed for information about their IP address, name and so on.

The function in the menu window are listed below.

Item	Function	Comment
Name	Monitor's name	Assigned by the user in menu CONFIGURATION
Type	Monitor's type	Assigned by the user in menu CONFIGURATION
Input	Active Monitor Input	Displays the active input at the monitor
Signal	Signal present	Displays if a signal is present
Scaling	Active Scaling	Displays the active scaling for that input
IP	Monitor's IP address	Assigned by the MRC DHCP server
MAC	Monitor's MAC address	Individual address of the IP port
Firmware	Software revision number	Indicate the installed release of monitor firmware



Note: This menu is for information only! No assignment is possible here!

Multiple Access

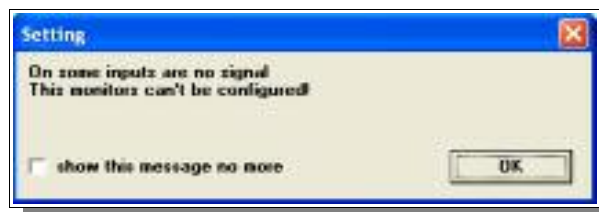
Some MRC functions are possible to operate a group of monitors. So you can for example set the aspect ratio for all monitors to 16:9 or 4:3 with a simple mouse click.



Use the mouse and draw a rectangle around the selected monitors or click them separately by holding down the SHIFT key.

The other way to select all monitors is to use the SELECT ALL item in the monitors pull-down menu.

In case that one of the selected monitors didn't have a video signal present, this message appears.



Confirm by clicking OK. The selected function will not happen at the related monitors.

Monitor Pull-Down Menu

To operate monitor related functions, like configure the setup or remove the monitor from the MRC desktop, activate the specific monitor icon and do a right-click with the mouse.

A pull-down menu appears.



Some of the menu steps are hidden as default. To get access it is necessary to enter the administrator password in the menu SERVICE – LOGIN.

The function in the pull-down menu are listed below.

Item	Function
Monitor Information	Opens the MONITOR INFORMATION window
Set Monitor Configuration	Opens the MONITOR CONFIGURATION window
Web Interface	Opens the systems WEB BROWSER to access the monitor
New Firmware	Opens the firmware upload function
Save Monitor File System to Disk	Opens the download function
Write Monitor File System to Monitor	Opens the upload function
Move to	Opens the list of available ROOMS to move the monitor to
Remove Monitor	Deletes the monitor form the MRC
Select All	Select all monitor icons active for remote operation
Arrange Monitors	Arranges all monitor icons in an automatic order
Snap to Grid	Arrange all monitor icons snapped to the grid
Fix the Monitor Position	Enables sticking the monitor icon at the desired position
Show the Monitor List	Swaps the desktop to the monitor list display

Monitor Information

Selecting the menu item MONITOR INFORMATION this window appears.



Monitor	Monitor information
TCP/IP Address 163 . 177 . 123 . 22	Display 291
MAC Address 00-20-4a-98-3a-2c	Software 5.068
Monitor Name F50445	Date 25.10.2007
Monitor Type FLM120-HD	Clock 74.01
Sn. F50445	Panel H 76.96
	Panel V 63.10

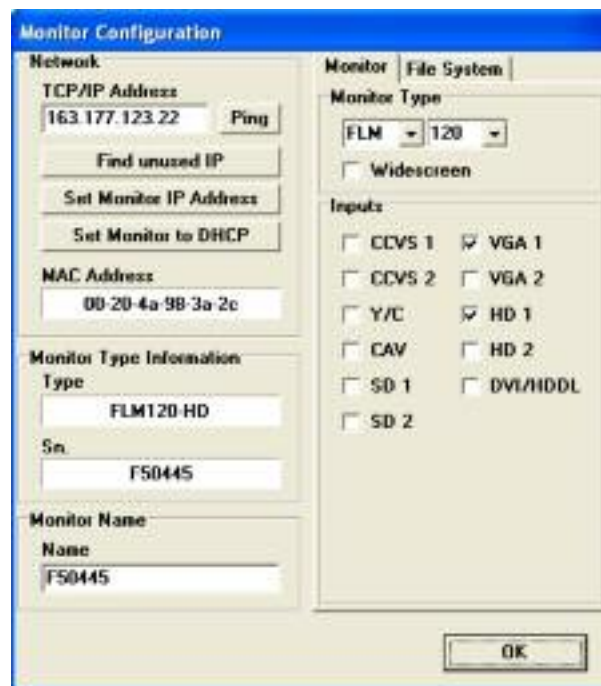
OK

Within the MONITOR INFORMATION all relevant information's are shown. On the left the IP and MAC address, the monitors name, type and serial number. On the right hand side internal firmware and panel data.

Set Monitor Configuration

This menu item is accessible by SUPERVISOR and MAINTENANCE users only.

Open the function SET MONITOR CONFIGURATION to setup the configuration for this monitor.



Network	Monitor	File System
TCP/IP Address 163.177.123.22 <input type="button" value="Ping"/>	Monitor Type FLM - 120 -	
<input type="button" value="Find unused IP"/>	<input type="checkbox"/> Widescreen	
<input type="button" value="Set Monitor IP Address"/>	Inputs:	
<input type="button" value="Set Monitor to DHCP"/>	<input type="checkbox"/> CCVS 1 <input checked="" type="checkbox"/> VGA 1	
MAC Address 00-20-4a-98-3a-2c	<input type="checkbox"/> CCVS 2 <input type="checkbox"/> VGA 2	
Monitor Type Information	<input type="checkbox"/> Y/C <input checked="" type="checkbox"/> HD 1	
Type FLM120-HD	<input type="checkbox"/> CAV <input type="checkbox"/> HD 2	
Sn. F50445	<input type="checkbox"/> SD 1 <input type="checkbox"/> DVI/HDDL	
Monitor Name Name F50445	<input type="checkbox"/> SD 2	

OK

Check or set for the correct monitor type within this pull-down menus and save them by clicking the button OK. This information will be stored within the monitor itself.

The monitor name will be saved in the MRC database and helps to identify the monitor on the MRC screen.



Note: MRC remembers the setup only when the monitor information is written to the monitor.

Web Interface

This menu item is accessible by SUPERVISOR and MAINTENANCE users only.

Opens the systems web browser to access the monitor via the the web browser.



Within this web page you can check or configure the monitors IP address.

New Firmware

This menu item is accessible by MAINTENANCE users only.

To start an upload of a monitor firmware from disk to monitor, open the function NEW FIRMWARE.

This windows opens to select the firmware file.



Select the correct firmware file and start with the button OPEN. Next this window appears.



The service OSD pops up at the monitor screen itself and signalize the upload progress.

During data transfer this message window opens.



MRC will save the stored configuration on the systems disk.



Note: Transferring huge data volume from or to the monitor may take some times and blocks the network with this traffic for other actions.



Note: Uploading firmware may take several minutes, regarding to selected transmission speed and the file size. Don't interrupted the upload process!

Save Monitor File System to Disk

This menu item is accessible by MAINTENANCE users only.

To start a download of the monitors file system from monitor to disk, open the function SAVE MONITORS FILE SYSTEM TO DISK.

This windows opens to select a setup file.



During data transfer this message window opens.



MRC will save the stored configuration on the systems disk.



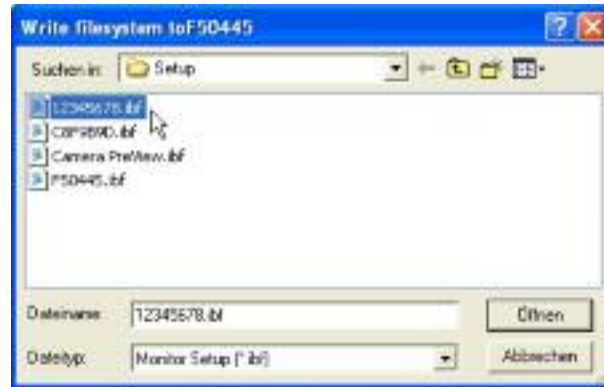
Note: Transferring huge data volume from or to the monitor may take some times and blocks the network with this traffic for other actions.

Write Monitor File System to Monitor

This menu item is accessible by MAINTENANCE users only.

To start an upload of a monitor file system from disk to monitor, open the function WRITE MONITORS FILE SYSTEM TO MONITOR.

This windows opens to select or create a setup file.



Select the name of the new configuration you want to upload and confirm by clicking OPEN.



The time for writing information to the monitor depends of the LAN traffic and the amount of data.



Note: Saving setups will be accepted when a video signal is present only.

Remove a Monitor

This menu item is accessible by SUPERVISOR and MAINTENANCE users only.

When a monitor should be removed from the MRC desktop, open the function REMOVE MONITOR.

This message window appears.



To remove answer and confirm with YES. Otherwise answer NO.

The monitor will be removed from the MRC system.

In case that MRC is set to the mode SCAN FOR MONITORS and the deleted monitor IP address isn't changed to a different group or the monitor is stripped off from the system network, the deleted monitor will pop up again after a few seconds.

Select All

The pull-down menu SELECT ALL is a simple and easy method to select all monitors for operation. When clicking this item all monitors in the current room will become active.

Arrange Monitors

The pull-down menu ARRANGE MONITORS is a simple and easy method to reconfigure the monitor icons on the desktop. All icons will be arranged in ranking of their names from upper left to lower right.

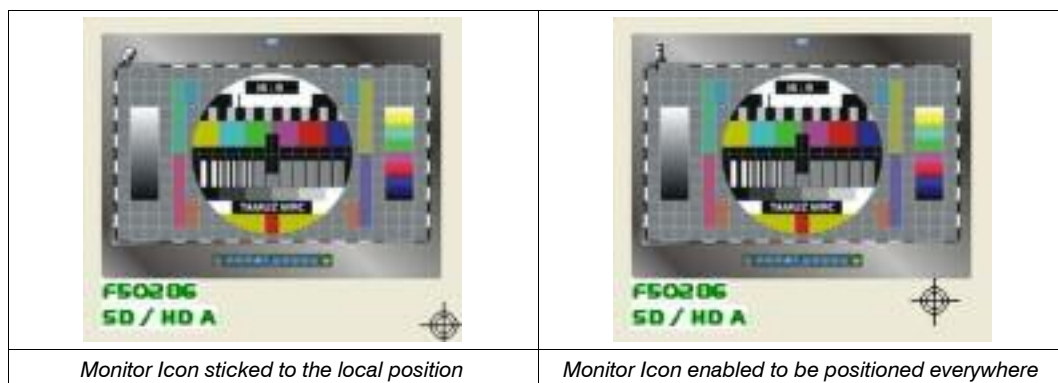
Snap to Grid

The pull-down menu SNAP TO GRID is a simple and easy method to reconfigure the monitor icons on the desktop. All icons will be arranged in ranking of their last position but snap to the grid to be shown in a straight order.

Fix the Monitor Position

This menu item is accessible by SUPERVISOR and MAINTENANCE users only.

The pull-down menu FIX THE MONITOR POSITION helps to organize the layout of the MRC desktop. A selected monitor icon will be stuck at the desired position, when the function is enabled. A little symbol in the upper left corner shows the status.



Note: Monitor Icons can be stuck to their position at the MRC desktop.

Monitor Setting Menu

The Monitor Power Switch

On the right hand side of the MRC desktop the POWER SWITCH is placed.



Using this POWER SWITCH the monitor or a group of monitors can be switched off. This power switch operates a little different as the power function at the MRC icon in the windows tray.

Regarding to the monitors model, the internal electronic will switch off the power supply. The power indication LED at the monitor will be OFF.

The monitors is not totally off. Some electronic is still alive to allow remote POWER ON.

Switch all Monitors OFF

To switch all active monitors connected to the MRC system click the MRC icon at the windows tray.



Select the from the pull-down menu the item SWITCH ALL MONITORS OFF and confirm by a mouse click.



Just with the mouse click all monitors, no matter what room, will be switched OFF.

This function can be used to control the whole house at once.

Switch all Monitors ON

To switch all active monitors connected to the MRC system click the MRC icon at the windows tray.



Select the from the pull-down menu the item SWITCH ALL MONITORS ON and confirm by a mouse click.



Just with the mouse click all monitors, no matter what room, will be switched ON.

This function can be used to control the whole house at once.

The Input Selector Bar

This menu item is accessible by ADVANCED USER, SUPERVISOR and MAINTENANCE users only.

On the right hand side of the MRC desktop the INPUT select bar is placed.



Selector between INPUT and PICTURE

Enables the CCVS 1 Input

Enables the CCVS 2 Input

Enables the SD / HD Input A

Enables the SD / HD Input B

Enables the SD / HD Input C

Enables the VGA 1 Input

Each input is selectable by a simple mouse click.

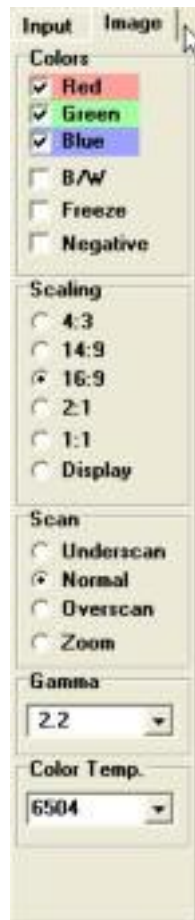


Note: All selected or adjusted values are stored in the monitor itself. The monitor will restart with this setup after power on.

The Picture Settings Bar

This menu item is accessible by ADVANCED USER, SUPERVISOR and MAINTENANCE users only.

On the right hand side of the MRC desktop the PICTURE function bar is placed.



Selector between INPUT and PICTURE

*Enables the RED video channel
Enables the GREEN video channel
Enables the BLUE video channel*

*Enables the B/W function
Enables the FREEZE function
Enables the NEGATIVE function*

*Set the Aspect Ratio to 4:3
Set the Aspect Ratio to 14:9
Set the Aspect Ratio to 16:9
Set the Aspect Ratio to 2:1
Set the Aspect Ratio to 1:1
Set the Aspect Ratio to DISPLAY*

*Set the Scanning parameters to UNDERSCAN
Set the Scanning parameters to NORMAL (active video)
Set the Scanning parameters to OVERSCAN
Set the Scanning parameters to ZOOM*

Set the GAMMA function to a selected value

Set the COLOR TEMPERATURE function to a selected value

Each picture function is selectable by a simple mouse click.



Note: All selected or adjusted values are stored in the monitor itself. The monitor will restart with this setup after power on.

Monitor Adjustments Menu

The menu bar at the bottom contains all the different features to set the image brightness or OSD language or video option.

This menu items are accessible by ADVANCED USER, SUPERVISOR and MAINTENANCE users only.

The Picture Adjustment Menu

On the bottom of the MRC desktop the IMAGE adjustment menu is placed.



Item	Value	Comment
Brightness	0	Slider to adjust the value between -127 to +127
Contrast	0	Slider to adjust the value between -127 to +127
Saturation	0	Slider to adjust the value between -127 to +127
Backlight	0	Slider to adjust the value between 0 to +127
Reset to "0"		Resets all values to the default 0

Click to the slider and draw to the wanted value.



Note: All selected or adjusted values are stored in the monitor itself. The monitor will restart with this setup after power on.

The Color Adjustment Menu

On the bottom of the MRC desktop the COLOR adjustment menu is placed.



Item	Value	Comment
Red	23	Slider to adjust the value between -127 to +127
Blue	-48	Slider to adjust the value between -127 to +127
Green	28	Slider to adjust the value between -127 to +127
White		Pull-down menu to select the knee point for the color adjustment
Reset all to Zero		Reset all values to the default 0

Click to the pull-down menu or buttons, or click to the slider and draw to the wanted value.



Note: All selected or adjusted values are stored in the monitor itself. The monitor will restart with this setup after power on.

The OSD Language Menu

On the bottom of the MRC desktop the OSD language menu is placed.



Item	Value	Comment
Deutsch		German monitor OSD language
English		Englisch monitor OSD language

Click to the pull-down menu or radio-buttons to select the wanted value.



Note: All selected or adjusted values are stored in the monitor itself. The monitor will restart with this setup after power on.

The VIDEO OPTIONS Menu

On the bottom of the MRC desktop the VIDEO OPTIONS adjustment menu is placed.

This menu item varies regarding to the selected input or equipped input module.



Item	Module	Comment
PAL	CCVS	Pull-down menu to select the video format
AUTO	CCVS	Enables the format detection automatically
WSS	CCVS	Enables the WSS controlled detection for aspect ratio
RGB	CAV	Enables the Component (CAV) format RGB
YUV	CAV	Enables the Component (CAV) format YUV
HD Output	HD SDI	Selects the mode for the HD SDI output
Format	HD SDI	Selects the video format for the HD SDI module
Patterns	HD SDI	Selects the Test Pattern when the HD output is set to TEST
Cable	HD SDI	Selects the mode for the cable equalizer at the HD SDI module
Rate Select	HD SDI	Selects the clock rate at the HD SDI module
CRC off	HD SDI	Enables the CRC detection at the HD SDI module

Click to the pull-down menu or radio-buttons to select the wanted value.



Note: All selected or adjusted values are stored in the monitor itself. The monitor will restart with this setup after power on.

The VGA OPTIONS Menu

On the bottom of the MRC desktop the VGA OPTIONS adjustment menu is placed.



Item	Value	Comment
Auto Sync Detect		Enables automatic sync detection
HV Sync		Enables HV sync detection
Composite Sync		Enables composite sync detection
Sync-on-green		Enables sync-on-green detection

Click to the pull-down menu or radio-buttons to select the wanted value.



Note: All selected or adjusted values are stored in the monitor itself. The monitor will restart with this setup after power on.

The Input Signal Menu

On the bottom of the MRC desktop the INPUT SIGNAL adjustment menu is placed.



Item	Value	Comment
Pixel	720	Shows the number of displayed input signal pixels

Lines	576	Shows the number of displayed input signal lines
x-Position	0	Shows the horizontal position of the input signal
y-Position	-15	Shows the vertical position of the input signal

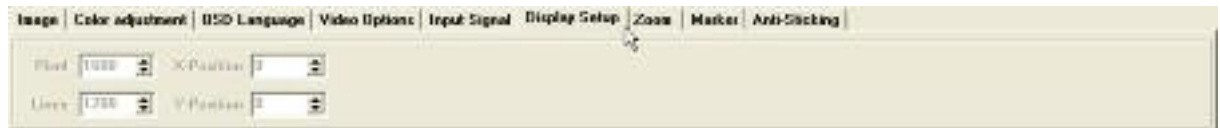
Click to the value boxes to select the wanted value.



Note: All selected or adjusted values are stored in the monitor itself. The monitor will restart with this setup after power on.

The Display Setup Menu

On the bottom of the MRC desktop the DISPLAY SETUP adjustment menu is placed.



Item	Value	Comment
Pixel	640	Shows the number of panel pixels used by the monitor
Lines	480	Shows the number of panel lines used by the monitor
x-Position	0	Shows the horizontal position of the monitor
y-Position	0	Shows the vertical position of the monitor

Click to the value boxes to select the wanted value.



Note: All selected or adjusted values are stored in the monitor itself. The monitor will restart with this setup after power on.

The Zoom Menu

On the bottom of the MRC desktop the ZOOM adjustment menu is placed.



Item	Value	Comment
x-Factor	2.0	Shows the Scaling Factor in horizontal direction
y-Factor	2.0	Shows the Scaling Factor in vertical direction
x-Position	0	Shows the horizontal position of the monitor
y-Position	0	Shows the vertical position of the monitor
Reset Aspect Ratio		Resets all Aspect Ratio settings to 0

Click to the value boxes to select the wanted value.



Note: All selected or adjusted values are stored in the monitor itself. The monitor will restart with this setup after power on.

The Marker Menu

On the bottom of the MRC desktop the MARKER adjustment menu is placed.

This menu item is accesible at monitors with firmware version 5.63 and later.



Item	Value	Comment
Marker On	<input checked="" type="checkbox"/>	Enables the MARKER function

Center
Safe Area
Safe Title
4:3 SD
Academy
Cine Scope

Enables the marker Center
Enables the marker Safe Area
Enables the marker Safe Title
Enables the marker 4:3 SD
Enables the marker Academy
Enables the marker Cine Scope

Click to the value boxes to select the wanted value.



Note: All selected or adjusted values are stored in the monitor itself. The monitor will restart with this setup after power on.

The Anti-Sticking Menu

On the bottom of the MRC desktop the ANTI-STICKING adjustment menu is placed.

This menu item is accesible at monitors equipped with firmware version 5.63 and later.



Item	Value	Comment
Anti Sticking		Enables the ANTI-STICKING function
Invert		Enables the Anti-Sticking mode Invert
White		Enables the Anti-Sticking mode White
Period		Sets the time for the periodic revolving
Duration		Sets the time for duration of the modified image
Rotation		Enables the Anti-Sticking mode Pixel Rotation
Pixel		Sets the number of pixel to shift
Anti-Sticking Off		Disables the Anti-Sticking function
Reset Anti-Sticking		Reset all Anti-Sticking to default value OFF

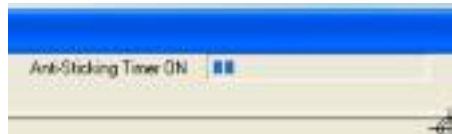
Click to the value boxes to select the wanted value.



Note: All selected or adjusted values are stored in the monitor itself. The monitor will restart with this setup after power on.

Anti-Sticking Timer Indicator

The top line of the MRC window shows an indicator of the Anti-Sticking timer.

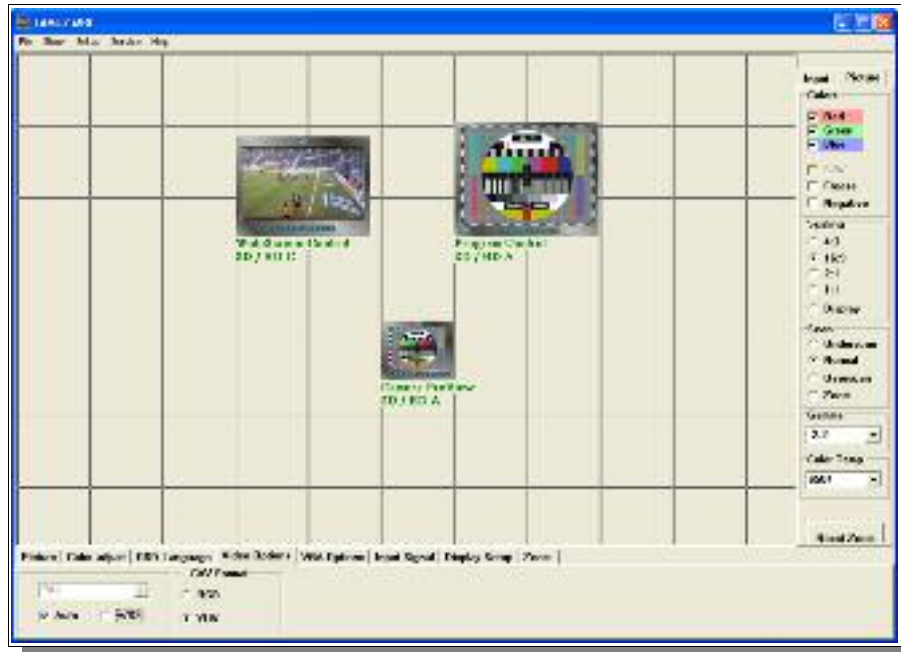


The moving bar indicates that the timer is active.

How to ...

... set a Monitor to 16:9 Mode

To set a monitor to 16:9 mode, activate the monitor by clicking the icon and select the widescreen mode on the image feature bar on the right hand side.



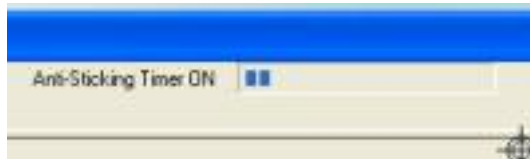
In some cases this can be done automatically by activating the WSS detection in the menu VIDEO OPTIONS. Tick the switch WSS and the monitor will follow the WSS information embedded in the video.



Note: All selected or adjusted values are stored in the monitor itself. The monitor will restart with this setup after power on.

... to stop Anti-Sticking

To disable all active monitors connected to the MRC system from the Anti-Sticking mode click the ANTI-STICKING icon at the programs head.



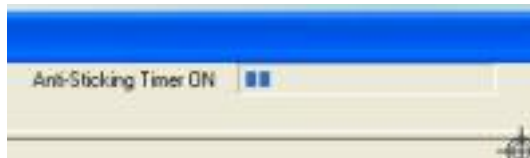
Select the from the pull-down menu the item ANTI-STICKING OFF and confirm by a mouse click.



Just with this mouse click all monitors, no matter what room, will disable the anti-sticking feature and releases a restart of the monitors.

... to start Anti-Sticking

To enable all active monitors connected to the MRC system to do the Anti-Sticking mode click the ANTI-STICKING icon at the programs head.



Select the from the pull-down menu the item ANTI-STICKING ON and confirm by a mouse click.



Just with this mouse click all monitors, no matter what room, will enable the anti-sticking feature.



Note: The ANTI-STICKING timer operates all monitors simultaneously.

... switch all Monitors OFF

To switch all active monitors connected to the MRC system click the MRC icon at the windows tray.



Select the from the pull-down menu the item SWITCH ALL MONITORS OFF and confirm by a mouse click.



Just with the mouse click all monitors, no matter what room, will be switched OFF.

This function can be used to control the whole house at once.



Note: The try icon power switch operates all monitors at the MRC system simultaneously.

... switch all Monitors ON

To switch all active monitors connected to the MRC system click the MRC icon at the windows tray.



Select the from the pull-down menu the item SWITCH ALL MONITORS ON and confirm by a mouse click.



Just with the mouse click all monitors, no matter what room, will be switched ON.

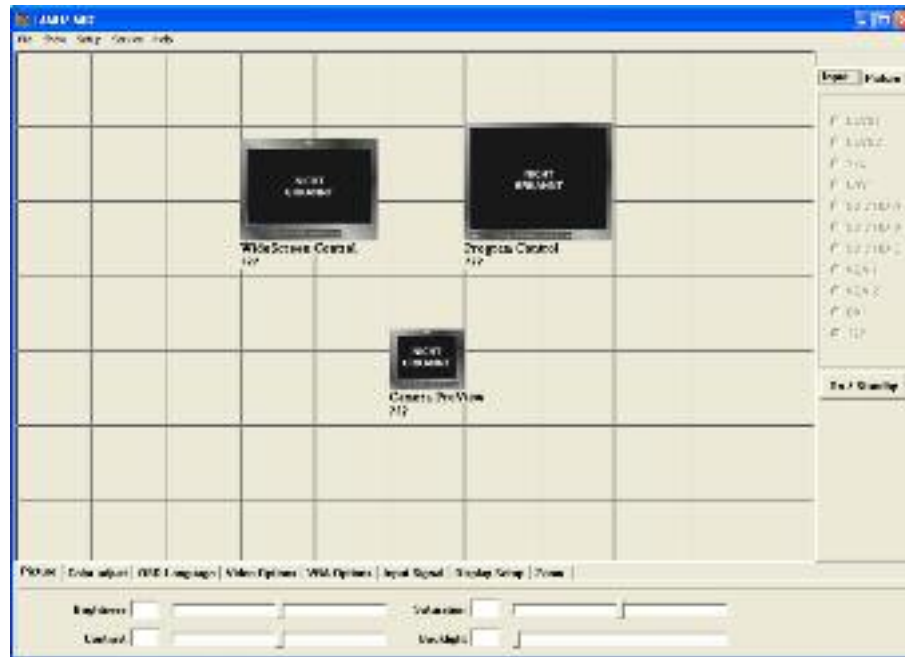
This function can be used to control the whole house at once.



Note: The try icon power switch operates all monitors at the MRC system simultaneously.

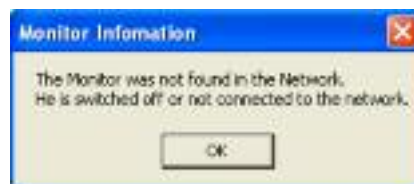
... identify a Broken Network Connection

In the case that the monitor LAN has a power breakdown, or all monitors are switched off, all icons on the MRC desktop swaps to the NOT ACCESSABLE (NICHT ERKANNT) icon.



The system refresh automatically when the LAN is back or when monitors are powered again.

If you click on one of these non-accessible icons, following message appears.



Terms

Technology terms

From Wikipedia, the free encyclopedia

Ethernet

Ethernet is a family of frame-based computer networking technologies for local area networks (LANs). The name comes from the physical concept of the ether. It defines a number of wiring and signaling standards for the physical layer, through means of network access at the Media Access Control (MAC)/Data Link Layer, and a common addressing format.

Ethernet is standardized as IEEE 802.3. The combination of the twisted pair versions of Ethernet for connecting end systems to the network, along with the fiber optic versions for site backbones, is the most widespread wired LAN technology. It has been in use from the 1990s to the present, largely replacing competing LAN standards such as token ring, FDDI, and ARCNET. In recent years, Wi-Fi, the wireless LAN standardized by IEEE 802.11, is prevalent in home and small office networks and augmenting Ethernet in larger installations.

Routers

Routers are the networking device that forward data packets along networks by using headers and forwarding tables to determine the best path to forward the packets. Routers work at the network layer of the TCP/IP model or layer 3 of the OSI model. Routers also provide interconnectivity between like and unlike media (RFC 1812) This is accomplished by examining the Header of a data packet, and making a decision on the next hop to which it should be sent (RFC 1812) They use preconfigured static routes, status of their hardware interfaces, and routing protocols to select the best route between any two subnets. A router is connected to at least two networks, commonly two LANs or WANs or a LAN and its ISP's network. Some DSL and cable modems, for home use, have been integrated with routers to allow multiple home computers to access the Internet.

Switches

Switches are a marketing term that encompasses routers and bridges, as well as devices that may distribute traffic on load or by application content (e.g., a Web URL identifier). Switches may operate at one or more OSI layers, including physical, data link, network, or transport (i.e., end-to-end). A device that operates simultaneously at more than one of these layers is called a multilayer switch.

Overemphasizing the ill-defined term "switch" often leads to confusion when first trying to understand networking. Many experienced network designers and operators recommend starting with the logic of devices dealing with only one protocol level, not all of which are covered by OSI. Multilayer device selection is an advanced topic that may lead to selecting particular implementations, but multilayer switching is simply not a real-world design concept.

Network Interface Cards

A network card, network adapter or NIC (network interface card) is a piece of computer hardware designed to allow computers to communicate over a computer network. It provides physical access to a networking medium and often provides a low-level addressing system through the use of MAC addresses. It allows users to connect to each other either by using cables or wirelessly.

Hubs

A hub contains multiple ports. When a packet arrives at one port, it is copied to all the ports of the hub. When the packets are copied, the destination address in the frame does not change to a broad-

cast address. It does this in a rudimentary way, it simply copies the data to all of the Nodes connected to the hub.

Local Area Network (LAN)

A network covering a small geographic area, like a home, office, or building. Current LANs are most likely to be based on Ethernet technology. For example, a library will have a wired or wireless LAN for users to interconnect local devices (e.g., printers and servers) connect to the internet. All of the PCs in the library are connected by category 5 (Cat5) cable, running the IEEE 802.3 protocol through a system of interconnection devices and eventually connect to the internet. The cables to the servers are on Cat 5e enhanced cable, which will support IEEE 802.3 at 1 Gbit/s.

Wide Area Network (WAN)

A WAN is a data communications network that covers a relatively broad geographic area (i.e. one city to another and one country to another country) and that often uses transmission facilities provided by common carriers, such as telephone companies. WAN technologies generally function at the lower three layers of the OSI reference model: the physical layer, the data link layer, and the network layer.

Transmission Control Protocol

The Transmission Control Protocol (TCP) is one of the core protocols of the Internet protocol suite. TCP provides reliable, in-order delivery of a stream of bytes, making it suitable for applications like file transfer and e-mail. It is so important in the Internet protocol suite that sometimes the entire suite is referred to as "the TCP/IP protocol suite."