English user manual

Re:control
Ethernet Interface
M202

E 2.02

REVOX

Dominating Entertainment.
Revox of Switzerland.

Contents

M202 Ethernet interface

Introduction

The M202 Ethernet Interface provides a connection between the Re:system M51/ M100 and any Ethernet interface.

Therefore the Ethernet interface enables the M51/ M100 to be integrated into a LAN. In this way, each computer that is also integrated in the LAN can access the Revox system, using the corresponding Revox control software.

iPod Touch*/ iPhones are also suitable as control devices, which enable a wireless connection with feedback. For this purpose, you need an additional *Access Point* or *WLAN Router* for the radio transmission, as shown in the Figure *Function Plan* on Page 7.

The corresponding control softwares like **M230** (PC), **M231** (WIN CE), **M232** (iPad, iPhone/ iPod Touch*), **M233** (WIN touch) or **M234** (MAC) can be found on the Revox Homepage resp. Apple store.

As well as operation through the Revox service programs, the M202 also offers the option to influence the Revox Multiroom System and/ or to let feedback messages be directed specifically into a visualisation, through the use of a primary (domestic) control system.

The programmer can get a simple access to the Revox system through a UDP protocol (Revox M-Text & M-XML protocol).

A further tool that is supported by the M202 Ethernet interface is the M233 GUI for Display panels in visualised domestic controllers.

The following page gives you an initial overview of the M-Text and M-XML protocol.

Please visit the **Download** area on the Revox website www.revox.com for further information.

* 3rd generation or higher

M-Text Protocol (UDP)

As well as understanding the Revox internal **M-Link** protocol, the M202 Ethernet interface with the software version 2.00 or higher also understands the clear text commands (**M-Text** protocol) in ASCII format.This makes it possible to integrate the Revox system in a domestic control system, e.g. with the GIRA Home Server.

As the name M-Text implies, it is a very understandable protocol, which simplifies the programming, as commands are not in an encrypted form but in English.

The following is an example of a Revox M-Text command where the function is instantly recognisable. In this case it concerns setting the volume to 15 (of 40 steps):
xx:SET:VOLUME:15

If you use M-Text commands (UDP) in addition to other Revox application like M203, M232, etc. over TCP, you should use different ports for them. TCP always will use port **5524**.
Therefore you should use for your UDP tasks the following other ports:
4032, 6536, 7728, 8728, 10308, 18042, 24022, 27944, 31286.
In this case M-Text mode has to be set to "**Forced**".

M-XML Protocol

With this protocol the display of the M-Series can be reproduced, inclusive of the complete image of lists, e.g. of the Multimedia module. Either 1:1 or as well in partitions. In addition the M-Text protocol is implemented so that it can be reproduced with the M-XML protocol.

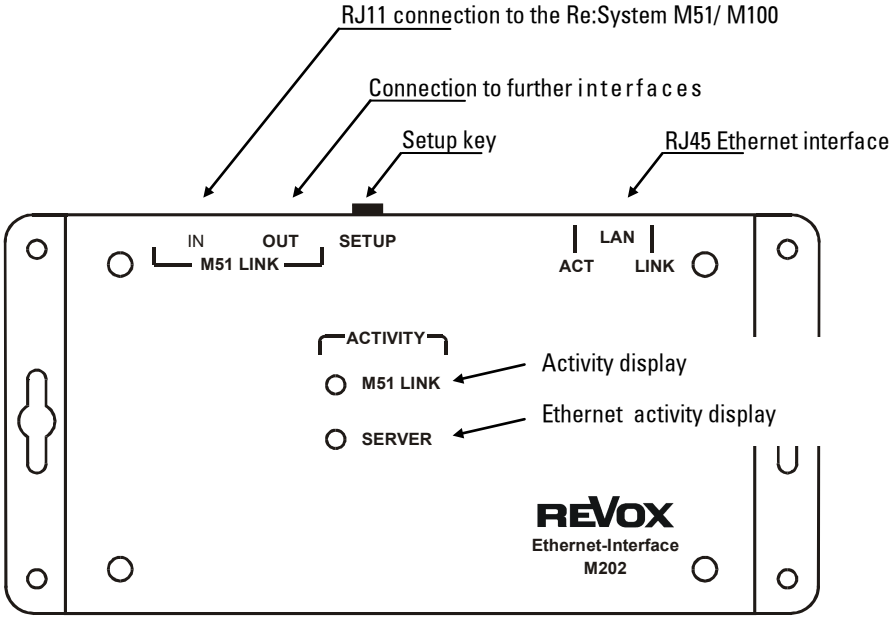
The M-XML protocol communicates with a service that we call M-Server. This service needs to be installed on a server that has to run whenever operating is required. This can be for example a Mini PC or a touch display, that is inserted in the wall and in general runs permanently.

The M-Server communicates then with the M202 Ethernet interface.

Assembly

The M202 interface can be fixed in two different ways. The first option is to use four screws at the outer fixing holes. This option would be advantageous for a permanent installation.

If you want a flexible installation option, Revox recommends the use of the two slotted holes on the sides.



Please note

The M202 Ethernet interface always logs on to the M51/ M100 automatically with the slot address **15**.

You can get an overview of the logged-on modules in the ***SETUP*** menu in the ***Version*** sub-menu.

Connection

Connection:
M202 with Re:system M51/ M100

Connector: ***M51 LINK IN***

The M202 Ethernet interface is connected with the **M51 LINK** socket on the back of the M51 with the telephone cable supplied.

If, for some reason, you want to use a different cable, you should use only a **non-crossed**, 4-core telephone cable with an RJ11 plug (6P4C Modular).

Max. cable length: **100 m**
Max. cable resistance: **0.1 Ω/m**

Connection:
M202 with external interfaces

Socket: ***M51 LINK OUT***

The Ethernet interface is designed for the connection of further external interfaces with **M51-LINK**. This could be the **M201** Infrared interface, a **M200** Domotic interface or a **M203** RS232 interface.

Please use only a **non-crossed**, 4-core telephone cable with an RJ11 plug (6P4C Modular) for this connection.

Max. cable length: **100 m**
Max. cable resistance: **0.1 Ω/m**

Connection:
M202 with Ethernet

Socket: ***LAN***

The M202 Ethernet Interface provides a connection between the M51 and any Ethernet interface

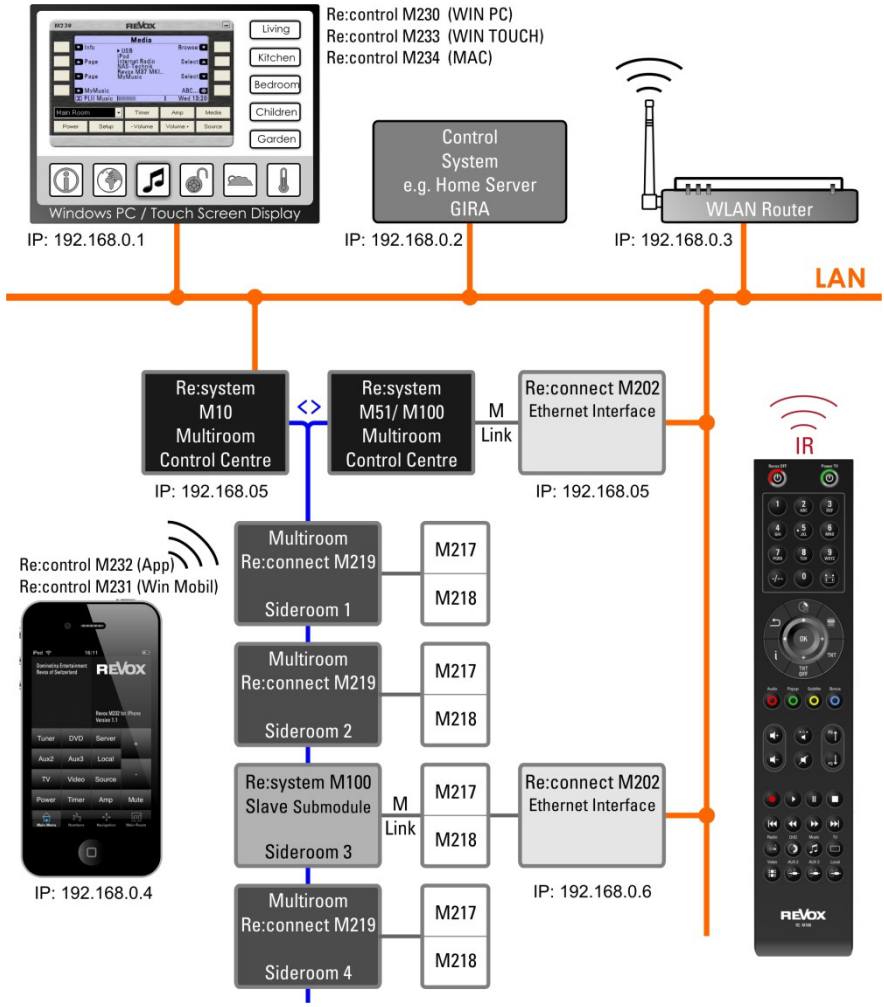
Point-to-Point
A **Crossover cable** is used if the M202 is connected directly to a PC.

Distribution with Router
A **Patch cable** (1:1) is used of the two devices are connected over a router.

You will find an overview of a possible Ethernet network on the next page. The defined IP addresses are only examples and must be modified to meet the needs of the particular installation.

DHCP is not supported by the M202. This means that all the necessary settings for a fault-free integration of the M202 in an Ethernet system must be made manually. You will find details about this in the Chapter *Setup page 8*.

Functional plan



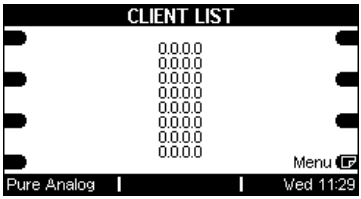
The IP-addresses shown above are only example addresses.

Setup

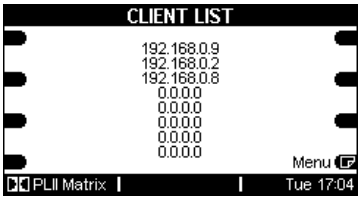
CLIENT LIST

The CLIENT *LIST* shows all devices that are currently accessing the M51. Up to 10 clients can have parallel access.

If no client is logged on, four zeros appear in the corresponding line.



In the example below, three clients are accessing the M51 trough the M202. The IP address of each client is shown.

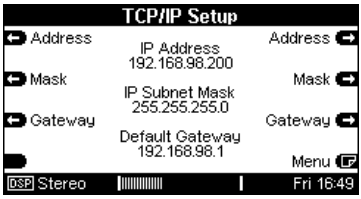


Using the **menu** softkey, you can toggle between the **CLIENT LIST** menu page and the two **TCP/IP** pages.

The Access Point required for the radio transmission does not appear with its IP address in the CLIENT LIST.

TCP/IP Settings

The following basic settings for Ethernet access are made on the two TCP/IP pages.



Settings are entered by selecting the corresponding address block with the softkeys, which is then shown in square brackets, e.g. 192.**[**168**]**.0.6.
Your manual additionally draws your attention to this fact in the individual chapters with the following symbol: **[]**

Now the required address can be set by using the rotary knob on the M51 respectively the touch slider of the M100.

The new address must be confirmed with the **Apply** softkey, otherwise the previous setting is retained.

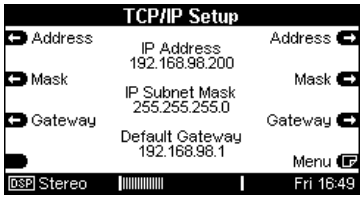
Note M51

During input, the red lamp (**Jog**) next to the M51 rotary knob appears at the same time as the square brackets [...].

Page ① TCP/IP

IP Address [ ]

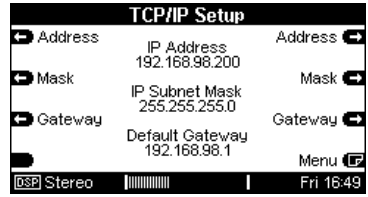
The 4 blocks of the IP address that the M202 should have are set using the two **Address** softkeys.



In a network of DHCP-enabled LAN Clients, you must always ensure that these are not given the M202's IP.

IP Subnet Mask [ ]

The 4 blocks of the IP Subnet that the M202 should have are set using the two **Mask** softkeys.

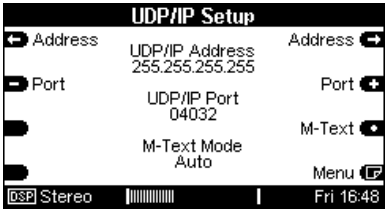


Default Gateway [ ]

The 4 blocks of the **Default Gateway** that defines the external access in the Internet are set using the two **Gateway** softkeys. If such a data exchange is required outside the LAN, the Default Gateway must be configured in compliance with the local requirements.

Page ② TCP/IP

The second page in the UDP/IP setup is responsible for all the UDP settings. Here, all the relevant settings for the UDP address and port are made, as well as the selection of the M-Text modes.



The new settings are confirmed with the **Apply** softkey. Otherwise the previous setting is retained.

UDP/IP Address [ ]

UDP/IP address:
Here you can enter the target address, if the UDP packet should only be sent to one specific recipient.

Using the setting 255.255.255.255 the data packet is sent in Broad-cast mode to all who have opened the UDP/IP port defined below, e.g. 04032.

UDP/IP Port [ ]

In order to ensure data security, not all ports are available but only those listed below. These have been defined by Revox.

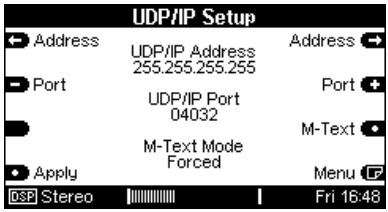
Open ports:
- TCP/IP via Telnet Port 23
  (for testing purposes)

- TCP/IP via Port 5524

- **UDP/IP for M-Text commands via Ports 4032, 5524, 6536, 7728, 8728, 10308, 18042, 24022, 27944, 31286**

M-Text Mode

The selection of the M-Text mode is only relevant if an UDP port is used as a port.
If, on the other hand, the TCP/IP port 5524 is used, the M-Text mode setting is irrelevant.



M-Text Mode: Forced

The setting **Forced** should be used if M-Link protocols (M203, M232, M233) via TCP port 5524 are used **and** M-Text commands via UDP are sent over other ports, e.g. port 10308.

M-Text Mode: Auto

The Ethernet interface identifies automatically which protocol is present and automatically switches the mode and retains this until the next packet is received in a different mode. The mode check that is made in the Auto setting however, makes the data exchange slower.

Important

So switching is automatically recognized, a CR (carriage return) must be sent before any M-text command.

The new settings are confirmed with the **Apply** softkey. Otherwise the previous setting is retained.

Personal Ethernet settings

	Setting 1	Setting 2
IP Address	_ _ _ . _ _ _ . _ _ _ . _ _ _	_ _ _ . _ _ _ . _ _ _ . _ _ _
Subnet Mask	_ _ _ . _ _ _ . _ _ _ . _ _ _	_ _ _ . _ _ _ . _ _ _ . _ _ _
Default Gateway	_ _ _ . _ _ _ . _ _ _ . _ _ _	_ _ _ . _ _ _ . _ _ _ . _ _ _
UDP/IP Address	_ _ _ . _ _ _ . _ _ _ . _ _ _	_ _ _ . _ _ _ . _ _ _ . _ _ _
UDP/IP Port	_ _ _ _ _	_ _ _ _ _
M-Text Mode	Auto ☐ Forced ☐	Auto ☐ Forced ☐

Technical data

Dimensions: 140 x 65 x 40 mm (WxHxD)
Weight: 250 g
Max. cable lengths: 100m* (M202- M51)

* max. cable resistance:0.1 Ω/m

Errors and technical modifications excepted.
Description: Version 2.02

Scope of delivery

- M202 Ethernet Interface
- M-Link cable (2 m)
- Operating instructions

Disposing of your old devices

Your product has been manufactured from high-quality materials and components that can be recycled. If this symbol of a crossed-out, wheeled rubbish container is on the product, this means that it is covered by the EU Directive 2002/96/EG.

Please find the location of your nearest recycling point for electrical and electronic devices.

Please follow local regulations and do not dispose of the device with your domestic refuse. The correct disposal of your old device helps to avoid negative impacts on the environment and on personal health.

Guarantee

The guarantee period is 24 months from the date of purchase.

Your dealer should be your first contact if you need service.
If he can't give you the help you need, return the Ethernet Interface carriage free and without any accessories to your national Sales Office. Please supply a complete description of the problem and a full return postal address.

Kontakt/ Contact

Deutschland / Germany
Revox GmbH
Am Krebsgraben 15, D 78048 VS-Villingen
tel +49 7721 8704 0, fax +49 7721 8704 29
info@revox.de
www.revox.de

Schweiz / Switzerland
Revox (Schweiz) AG
Wehntalerstrasse 190, CH 8105 Regensdorf
tel +41 44 871 66 11, fax +41 44 871 66 19
info@revox.ch
www.revox.ch

Österreich / Austria
Revox Austria GmbH
Josef-Pirchl-Strasse 38, AT 6370 Kitzbühel
tel +43 535 666 299, fax +43 535 666 299 4
info@revox.at
www.revox.at

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