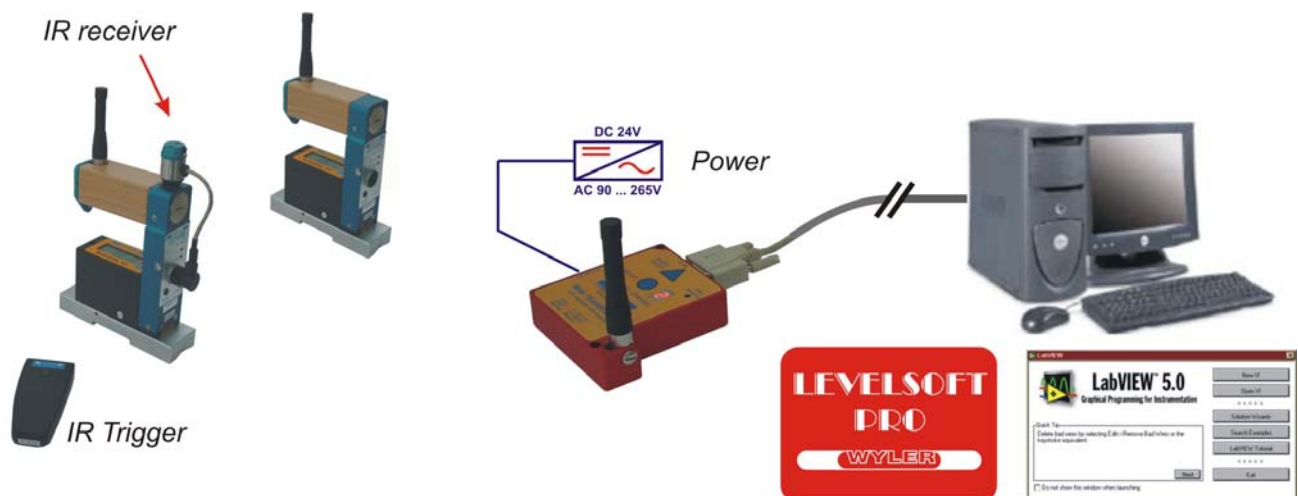


## MANUAL

# MINI T/C WITH RADIO (MINI TRANSCEIVER / CONVERTER WITH INTEGRATED RADIO MODULE)



## THE INTERFACE WITH RADIO MODULE TO THE MINILEVEL / LEVELTRONIC NT



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## Änderungen / Modifications:

Datum	Geändert durch	Beschreibung der Änderung
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## 1. INTRODUCTION

### 1.1. Description of the Interface MINI T/C with radio

The MINI T/C with radio is an ideal add-on to the existing product line of measuring instruments from WYLER AG with radio transmission. It was specifically developed for those applications where an efficient measurement process is required in combination with a PC. The Mini T/C with Radio allows the direct transmission of measuring data from one (or 2) MINILEVEL NT (respectively LEVELTRONIC NT (see comment below)) to a PC.

At the same time the handling is substantially simplified with an IR receiver that is mounted on top of one of the measuring instruments. The user does not have to aim at an IR-receiver that, depending on the set-up, could be several meters away, but can comfortably start the measurements with the "Zapper" at the instrument in front of him. He will have an optical confirmation at the IR receiver (red LED) and an acoustical feedback from the PC.

Compared to a LEVELMETER 2000 there are the following differences:

- Simple, straight forward configuration
- No display, neither of the single measurement value nor of the difference between the measuring instrument and the reference instrument => we recommend the use of MINILEVEL NT with its own display as with LEVELTRONIC NT there is a lack of information.
- It is not possible to change the address of the measuring unit.
- Availability of a PC with either Levelsoft PRO or another SW like LabVIEW is required.

### 1.2. Commissioning

**Please read this manual in detail prior to using the MINI T/C with radio the first time.**

The manual will give you an overview over all available functions and options of the T/C. This will prevent you from making mistakes and will allow you to make full use of its functionality.

### 1.3. Important notes regarding the radio transmission:

There are three different types of radio modules available:

1. Module with 433 MHz, supplied until end of 2003
2. Module with 433 MHz supplied since end of 2003, marked with a yellow label [Wireless Transmission Version 5.12a].
3. Modules with 902 MHz for the Unites States.

**WIRELESS TRANSMISSION  
VERSION 5.12a**

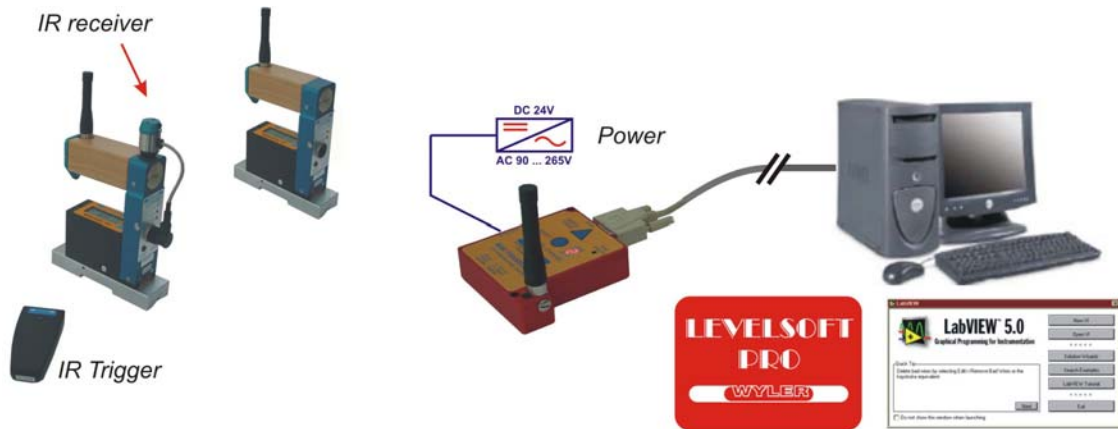
#### **Important remarks:**

- All units communicating with each other within the same measuring system have to have the same type of radio module!
- All units communicating with each other must be set to the same radio channel
- At this point in time the Mini T/C is only designed for European Radio modules and can therefore not be used in North America.

## 1.4. Possible configurations

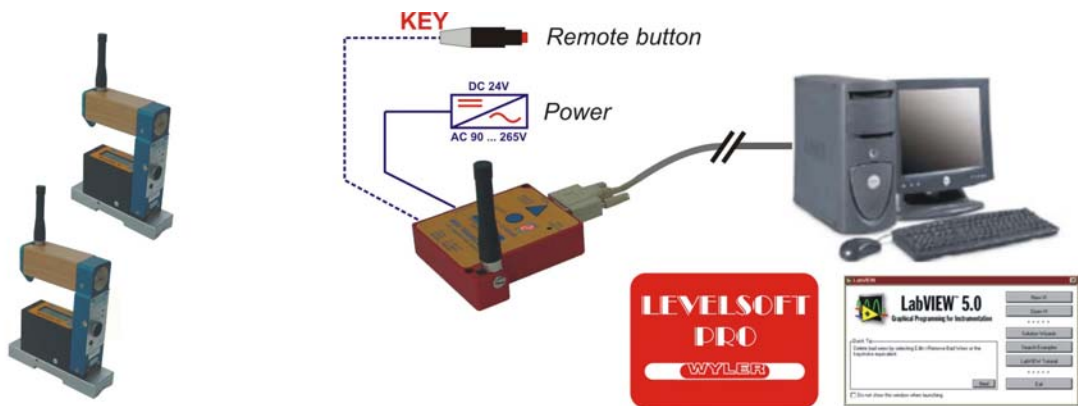
### 1.4.1. Configurations with 2 measuring instruments

#### Standard configuration



ML NT (LT NT) with radio module / reference instrument with radio module / IR receiver on one of the instruments / MINI-Transceiver with radio and PC with SW Levelsoft PRO or LabVIEW. Start of measurement with “Zapper” at IR-receiver mounted on one of the 2 instruments.

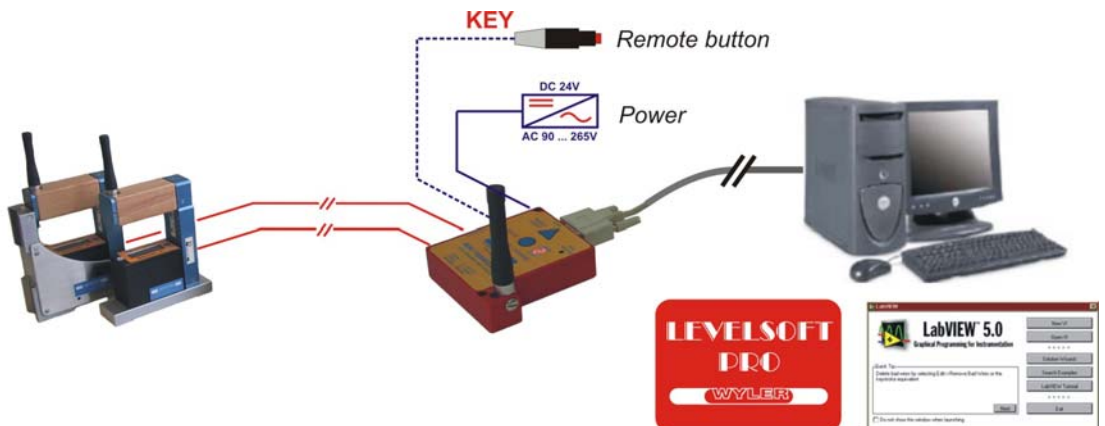
#### Standard configuration without IR receiver



ML NT (LT NT) with radio module / reference instrument with radio module / MINI-Transceiver with radio and PC with SW Levelsoft PRO or LabVIEW. Start of measurement with remote key connected to MINI T/C.

#### Option with cables only

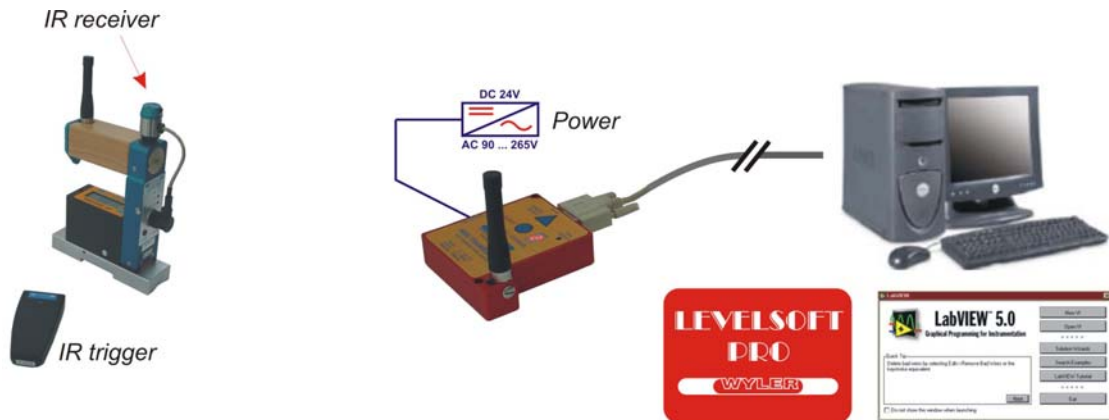
Obviously all instruments can also be connected by cables. Start of measurement by using the remote key connected to the Mini T/C. Since the Mini T/C only has 3 RS 485 connections, for this specific case a special cable is required which combines power and the key.



## 1.4.2 Configurations with one measuring instrument

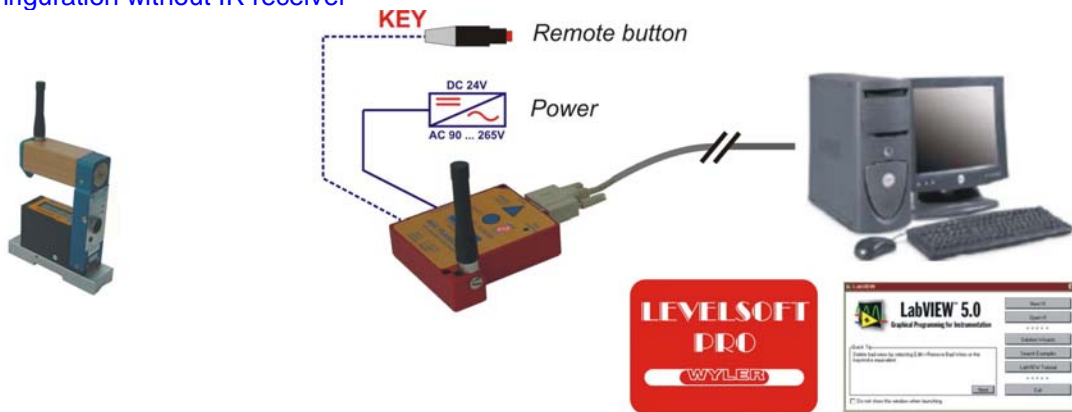
### Standard configuration

This configuration is specifically designed to measure an “absolute line” -> see special note in this manual.



ML NT with radio module / No reference instrument / IR-receiver on top of the measuring instrument / MINI-Transceiver with radio and PC with SW Levelsoft PRO. Start of measurement with the “Zapper” at the IR-receiver.

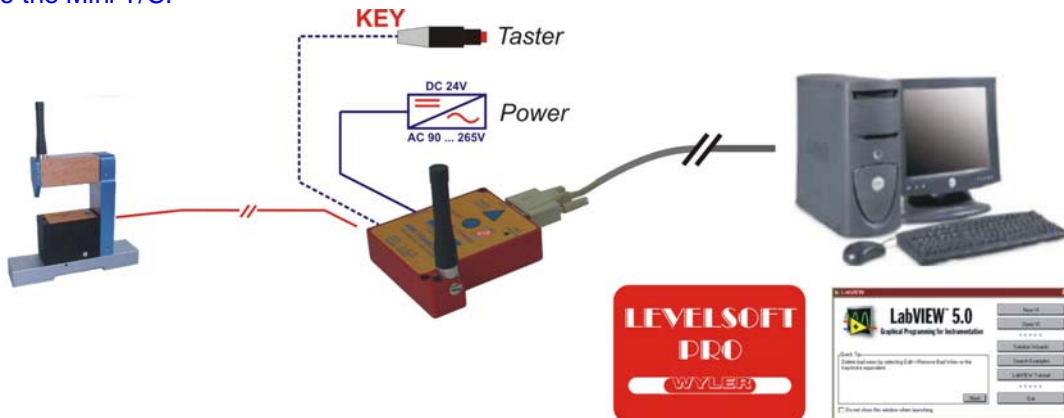
### Standard configuration without IR receiver



ML NT with radio module / no reference instrument / MINI-Transceiver with radio and PC with SW Levelsoft PRO. Start of measurement with remote key connected to the Mini T/C.

### Option with cables only

Obviously all instruments can also be connected by cables. Start of measurement by using the remote key connected to the Mini T/C.



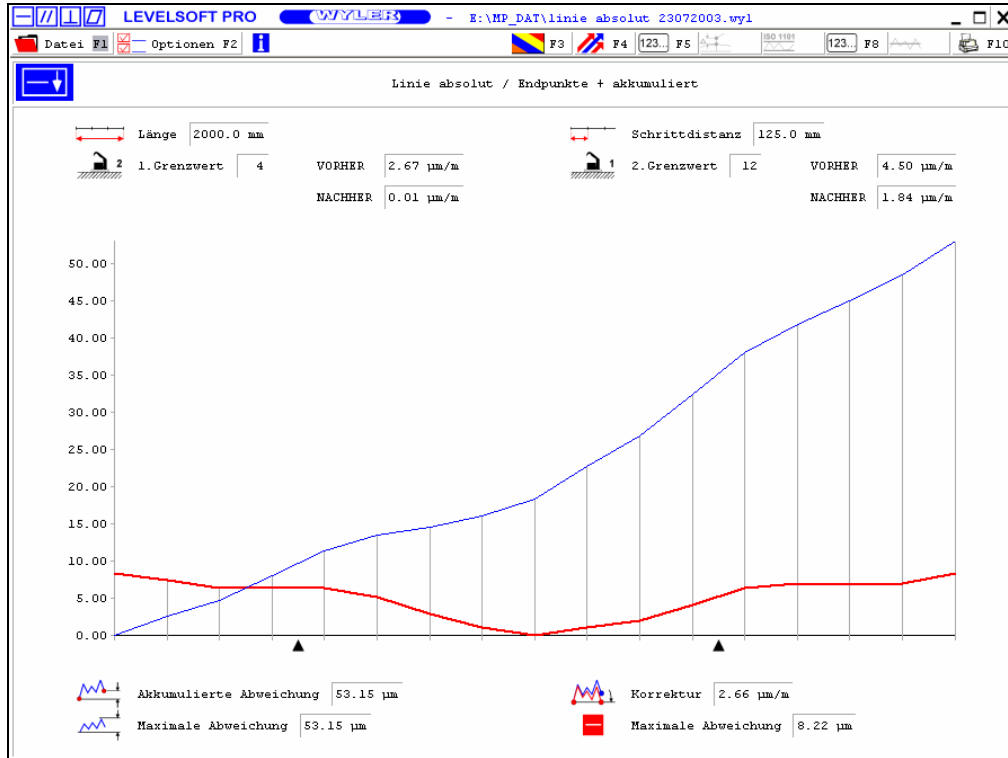
ML NT connected with cable to the Mini T/C / PC with SW Levelsoft PRO. Start of measurement with remote key at MINI T/C.

Note regarding the measurement of an “ABSOLUTE LINE”.

Example for such a measurement:

You would like to measure the absolute inclination of an object in order to bring it afterwards into an absolute horizontal position.

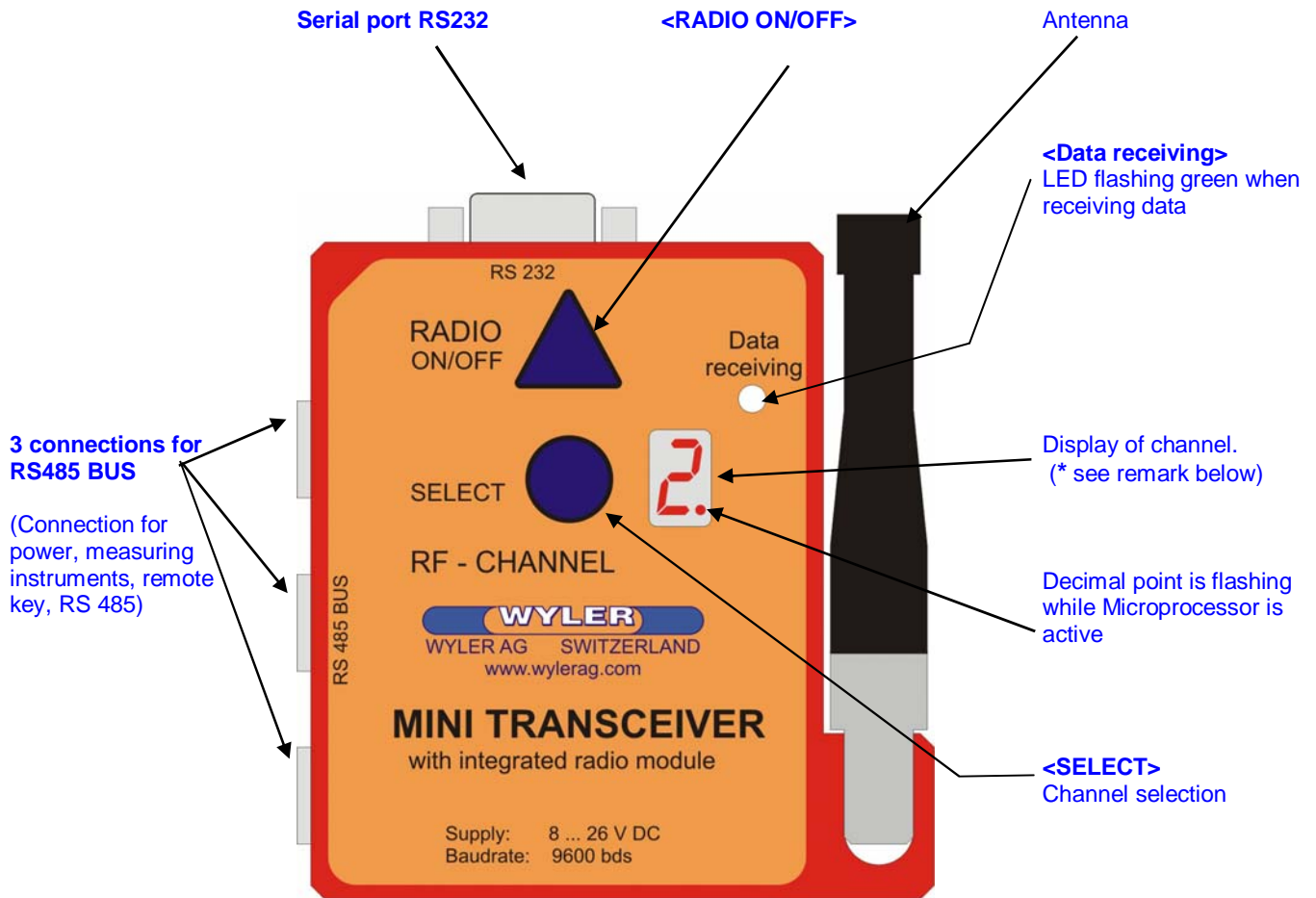
To achieve this you have to measure the inclination of a line over the whole object with absolute values (absolute in reference to earth gravity). Afterwards the object is adjusted according to the method of adjusting the end points.



You find more information about the measurement of absolute lines in the manual for the software „Levelsoft PRO“

**This manual is focussing on the functionality of the MINI T/C with radio and the handling of it in connection with the MINILEVEL und LEVELTRONIC „NT“. Please refer to the separate manual for more details on the software Levelsoft PRO.**

## 2. COMMISSIONING / Overview over functions, push-buttons and display



- **Power ON**  
The unit is switching itself on (including the radio module) as soon as power is connected
- **ON / OFF of the radio module in the MINI T/C with Radio**  
If the radio module is not needed a short touch on the button <RADIO ON/OFF> ▲ will switch off (respectively switch on again) the radio module in the T/C.
- **Channel selection for the radio**  
By pressing the button <SELECT> ● the channel can be selected and adapted to the channel of the measuring instrument. Channel 1 ... 6 can be chosen.
- **Data receiving**  
As soon as data is received from the measuring unit the green LED will flash

### \*IMPORTANT REMARK:

the display has several functions:

- During start up the display will show the SW version. The numbers are shown in a sequential manner
- Indication of errors: E followed by a number is shown in the display.
  - „E1“ ... no radio module connected or radio module is defective => contact your local WYLER agent => see point 5 “repair of measuring instruments”
  - „E2“ ... error in the radio communication => check configuration (is radio module at the measuring instrument switched on? are all units on the same channel?)
  - „E3“ ... similar to E2 => check configuration

### 3. TECHNICAL DATA

- Dimensions
  - Length 102.5mm
  - Width 93.5mm
  - Height (Antenna horizontal) 27mm
  - Height (Antenna vertical) 102mm
- Power supply
  - Voltage 8 ... 26 V DC
  - Communication baud rate 9600bps
- Current consumption
  - With radio module off 10mA
  - Radio module on stand by 50mA
  - Radio module sending / receiving 62mA

### 4. MAINTENANCE

#### 4.1. General

The MINI T/C with radio does not require any special maintenance other than normal cleaning

### 5. REPAIR OF MEASURING INSTRUMENTS

The standard procedure for the repair of a measuring instrument is to send it to your local WYLER agent. He will then take care of the administrative process of sending the unit to WYLER AG.

#### Express Repair Service, ERS

For those customers who cannot afford to be without their measuring instrument for several weeks WYLER AG has implemented an „Express Repair Service“. With this process the turn-around time can be substantially reduced.

The key points of this ERS look as follows:

- Customer informs the local WYLER agent who will instruct the customer on the procedure.
- Customer accepts repair costs of up to 65% of the value of a new instrument
- Product is then sent by TNT to WYLER AG
- These ERS product get TOP PRIORITY treatment within the repair department at WYLER AG
- Instrument is returned again by TNT to the customer
- Invoicing through local agent

Please make use of this very efficient repair service to get your instrument back in the shortest possible time!  
Contact your local WYLER agent for details.

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