WISYCOM
VOX INFRAGILIS

MPR52-ENG User Manual

High performance

Diversity

Two channels

Camera Receiver

SN: _____

rev.09 (ref. FW 1.6)

MAIN FEATURES

- Two channels diversity receiver
- DSP analogue Output (AES3)
- Up to 790 MHz bandwidth in 470/1260 MHz range
- Next Gen Multiband front-end filtering:
    - High Q moving filter in 470-960 MHz
    - High Q moving filter in 960-1160 MHz (DME)
    - Country specific saw filters:
      USA 940-960 MHz &
      Japan 1240-1260 MHz or 806-810MHz
- Wideband and Narrowband DSP-FM operation (SW selectable):
    - Narrowband allows more 50% band efficiency
    - Narrowband allows about 3dB extra sensitivity and noise immunity
- Extreme low noise VCO with ultrafast spectrum scan for optimal quick & easy setup
- High contrast OLED display
- Automatic scan & transmitter programming through infrared
- DSP based for extreme flexibility and multi-companding operations
- Miniature design with integrated battery pack:
  - rechargeable lithium pack
  - 2 x AA batteries
- Operation and charger (lithium) thru USB connector
- Monitor & control through USB and Wisycom Manager 2.0 (computer SW):
    - This transform MPR52 in a quick and low noise portable spectrum scanner

TWO CHANNELS OPTION: Please note that the two channels, in order to protect them from potential interferences coming from having the ultra-wide band, must use frequencies included into a 30 MHz filter range.

SAFETY INSTRUCTION

- Read this safety instruction and the manual first
- Follow all instructions and information.
- Do not lose this manual.
- Do not use this apparatus under the rain or near the water.
- Do not install the apparatus near heaters or in hot environments, do not use outside the operating temperature range.
- Do not open the apparatus, only qualified service technician are enabled to operate on it. The apparatus needs servicing when it is not properly working or is damaged by liquids, moisture or other objects are fallen in the apparatus.
- Use only accessories or replacement parts authorized or specified by the manufacturer.
- Clean the apparatus only with dry cloths, do not use liquids.
- Report the serial number and the purchasing date in front of the manual. It is needed to have proper replacement parts or accessories from the manufacturer.
- When replacement parts are needed, use only replacement parts authorized from the manufacturer. Substitution with not authorized parts could result in electric shock, hazards or fire.
- Keep attention on all the labels with warnings or hazards on the apparatus.

WARNING: The apparatus is intended for professional use; anyway the manufacturer alerts the user that the headphone output power of the apparatus could exceed the level of 85 dB(A) of sound pressure level and this could be dangerous for the hearings. Do not use the headphone with high power level or for long time. Reduce the power or suspend the hearing in case of any kind of hearing problem.

BATTERIES

MPR52-ENG works with standard camera battery:

- 2xIEC-LR6 1.5 size-AA alkaline or NiMh rechargeable
- KLIC 8000 (lithium-ion, rechargeable)
- DB50 (lithium-ion, rechargeable)

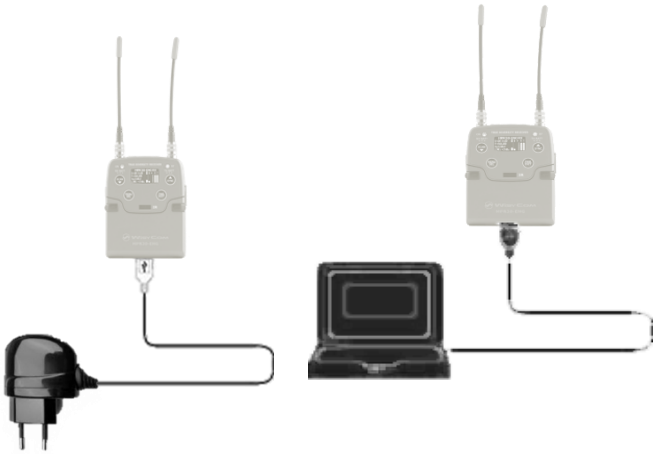
- DR9708 Duracell (lithium-ion, rechargeable)

Battery status can be checked on OLED display or looking the status of LED indicator ON.

Charging of lithium-ion rechargeable batteries can be done with

A. dedicated charger

B. thru the integrated micro-usb-B connector



C. thru ACM50 battery charger

WARNING:

We don't recommend to use the device during the batteries charging with lithium-ion rechargeable batteries inside. Don't use the receiver without batteries . The receiver powered thru micro-USB or mini-XLR connector without batteries doesn't work correctly.

WARNING: DO NOT operate the device with some new and some old batteries. Always replace ALL BATTERIES.

WARNING: Remember to remove the batteries when the device is not in use.

VARIANTS: **MPR52-ENG- <Freq Range>**

▪ **FREQUENCY RANGE**

B1 470-800 MHz, 940-960 MHz (for USA), 960-1160 MHz (DME)
B2 470-800 MHz, 960-1160 MHz (DME), 1240-1260 MHz (for Japan)
B3 470-800 MHz, 960-1160 MHz (DME), 806-810 MHz (for Japan)

In compliance with	USA: FC, 47 CFR 15 Subpart B
	CAN RSS-Gen/CNR-Gen

AUDIO OUTPUT

• Audio output : Electronically balanced on 5 pin mini-XLR Female connector

analogue or digital (SW selectable)

• Digital line-output : AES3 @ 48 kHz

• Audio line impedance : ≤ 200 ohm

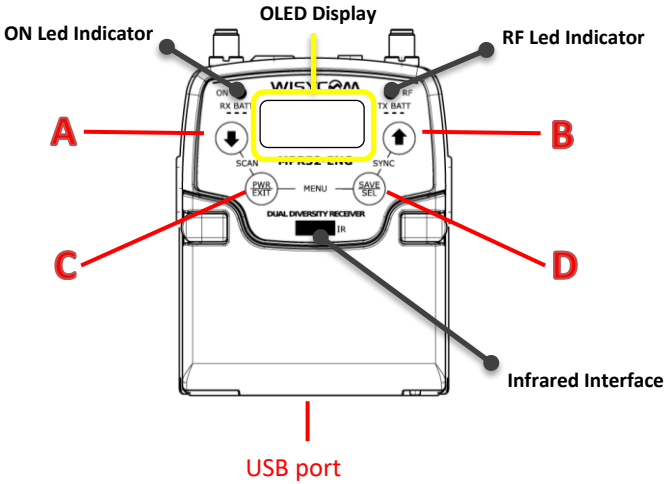
• Headphone-output : 3.5mm (TRS) stereo plug, locking (M6 x 0.5 thread) with 50mW @ 32 Ohm

NOTE [1]: RMS value, 22 Hz / 22 kHz, unweighted.

The MPR52ENG receiver complies with ETSI specifications: ETS 300 422

FRONT PANEL

MPR52-ENG allows an easy and quick configuration using buttons, RGB LED's and a high contrast **OLED Display.**



A➔ SCAN/DOWN Button

Push this button together with PWR/EXIT (C) to run the auto scan. When inside any menu use this button to scroll down.

B➔ SYNC/UP Button

Push this button together with SAVE/SEL (D) to start a synchronization with a transmitter. Note that before starting synchronization IRDA must be enabled on Wisycom transmitter. When inside any menu use this button to scroll up.

C➔ POWER/EXIT Button

Push and keep this button to power on/off the receiver. During menu navigation push this button to exit from current menu (escape function). Quickly push POWER button to turn on the display when it goes OFF. You can change the time out setting from the "Info" menu.

D➔ SAVE/SELECT Button

Push this button to navigate function menu and keep pushing to save the chosen setup. uring menu navigation push this button to move-down and select the previous item.

ON & RF Led Indicators

	ON	RF	DISPLAY*	WHEN	MEANING
power up phase	red	off	on	when the receiver is power on, during the power up phase	the receiver is not ready to use, wait the status menu on display
	red	off/on	on	when the receiver is power on, after the power up phase	an error has occurred during the boot phase. Power on again the receiver. If the led indicator ON continues to remain red, contact Wisycom repair service
	red	red	on	when the receiver is power on, during a frequency change phase (see Gr-Ch or Frequency menu)	the PLL is not locked on the select frequency, wait for lock (about 1second or less)
Tuning phase	fixed green	red	on	after the tuning phase, no transmitter is received	the receiver is ready to use, the batteries charge is good, no transmitter is synchronized with the receiver, no output audio available
	fixed green	green	on	after the tuning phase, the transmitter is received	the transmitter is correctly tuned, the bars in the status menu show the RF levels received from antenna A and B
battery status	fixed green	on/off	on	the batteries charge of the receiver is good (>25% lifetime)	the batteries charge of the receiver is good
	slow blinking green	on/off	on	the batteries charge of the receiver is low (<25% lifetime)	change or put on charge the batteries as soon as possible
	fast blinking	on/off	on	the batteries charge of the receiver is very	change or put on charge the

	green			low (<12% lifetime)	batteries immediately
	red	off	off	battery error	change the batteries
charging status	blinking blue	off	off	during batteries charging	the batteries are charging (<90% of complete charge)
	blinking green	off	off	during batteries charging	the batteries are charging (≥90% of charge reached)
	fixed green	off	off	during batteries charging	charge complete
	white	green/ red	off	device in bootloader mode**	

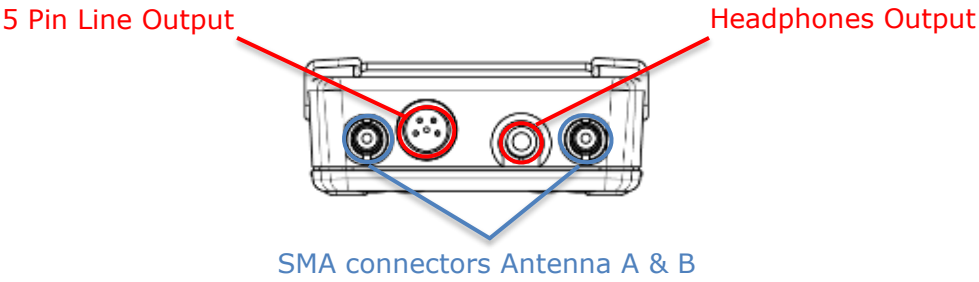
*DISPLAY indicate the state of OLED display before the OFF timeout

** to put the MPR52-ENG in boot mode: power on the device push and keep both UP and DOWN buttons for few seconds (until the led indicators light up, then release the buttons).

When a Wisycom transmitter, with PTT Mode parameter set to Normal, is received to the MPR52-ENG, the batteries status of the transmitter is received and showed from the MPR52-ENG on the OLED display (see status menu) and on the RF led indicator.

	ON	**RF**	**DISPLAY***	**WHEN**	**MEANING**
TX battery status	on	fixed green	on	the batteries charge of the transmitter is good (>25% lifetime)	the batteries charge of the transmitter is good
	on	slow blinking green	on	the batteries charge of the transmitter is low (<25% lifetime)	change or put on charge the batteries of transmitter as soon as possible
	on	fast blinking green	on	the batteries charge of the transmitter is very low (<12% lifetime)	change or put on charge the batteries of transmitter immediately

UPPER PANEL



SMA antenna Connector A and B

MPR52-ENG is supplied with a pair of antennas tuned on 232 MHz bandwidth. Depending on the working bandwidth, it can be provided with different antenna ranges.

For more details see the "Products" → "MPR52-ENG" → "Accessories" section on our website www.wisycom.com.

Headphone Output

The audio headphone output with 3.5 mm stereo jack socket lockable (TRS).
Audio level can be adjusted with a headphones menu.

Configuration: Unbalanced mono (L=R), 1/8th inch
Maximum output power: 50mW @ 32Ω, 50mW @ 16Ω

Pin Assignment: Tip = AF+ (hot), Ring = AF+ (hot), Sleeve- Gnd

Line Output

The audio LINE output balanced on:

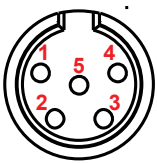
Pin 1: ground

Pin 2: output channel 1 AF+ (hot)

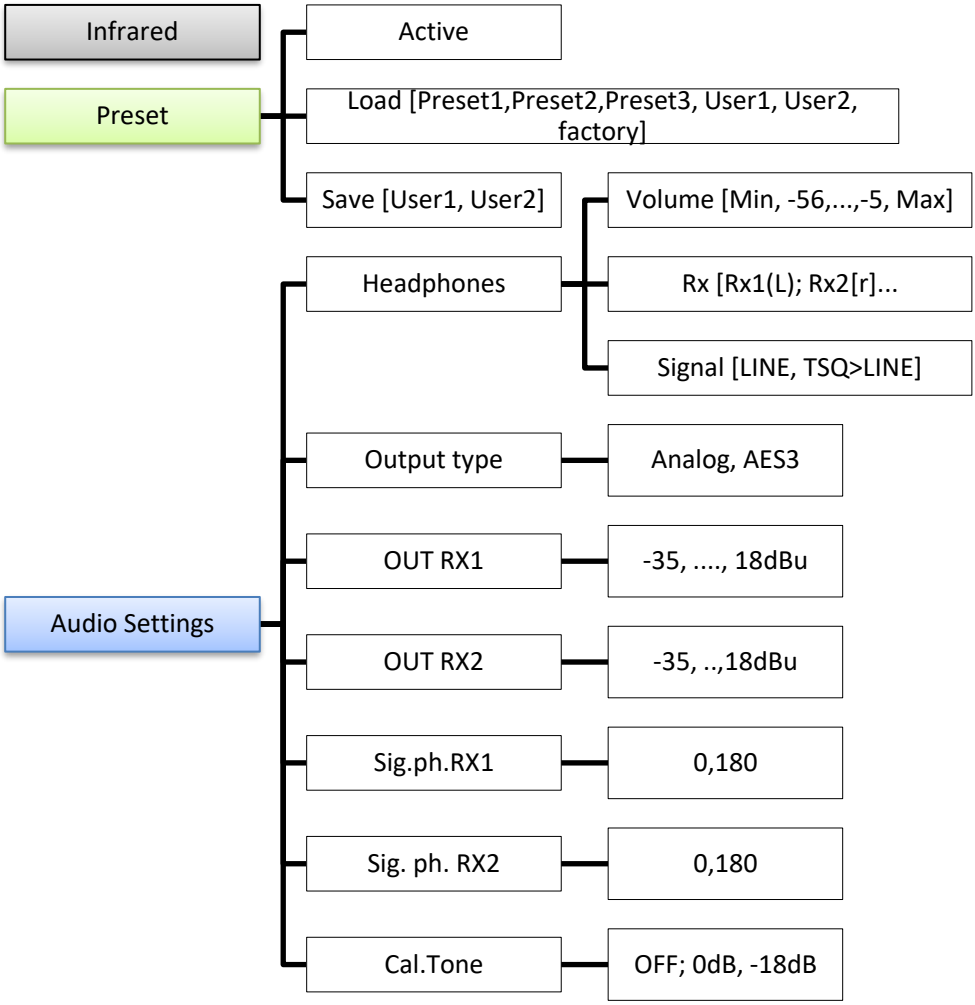
Pin 3: output channel 1 AF- (cold)

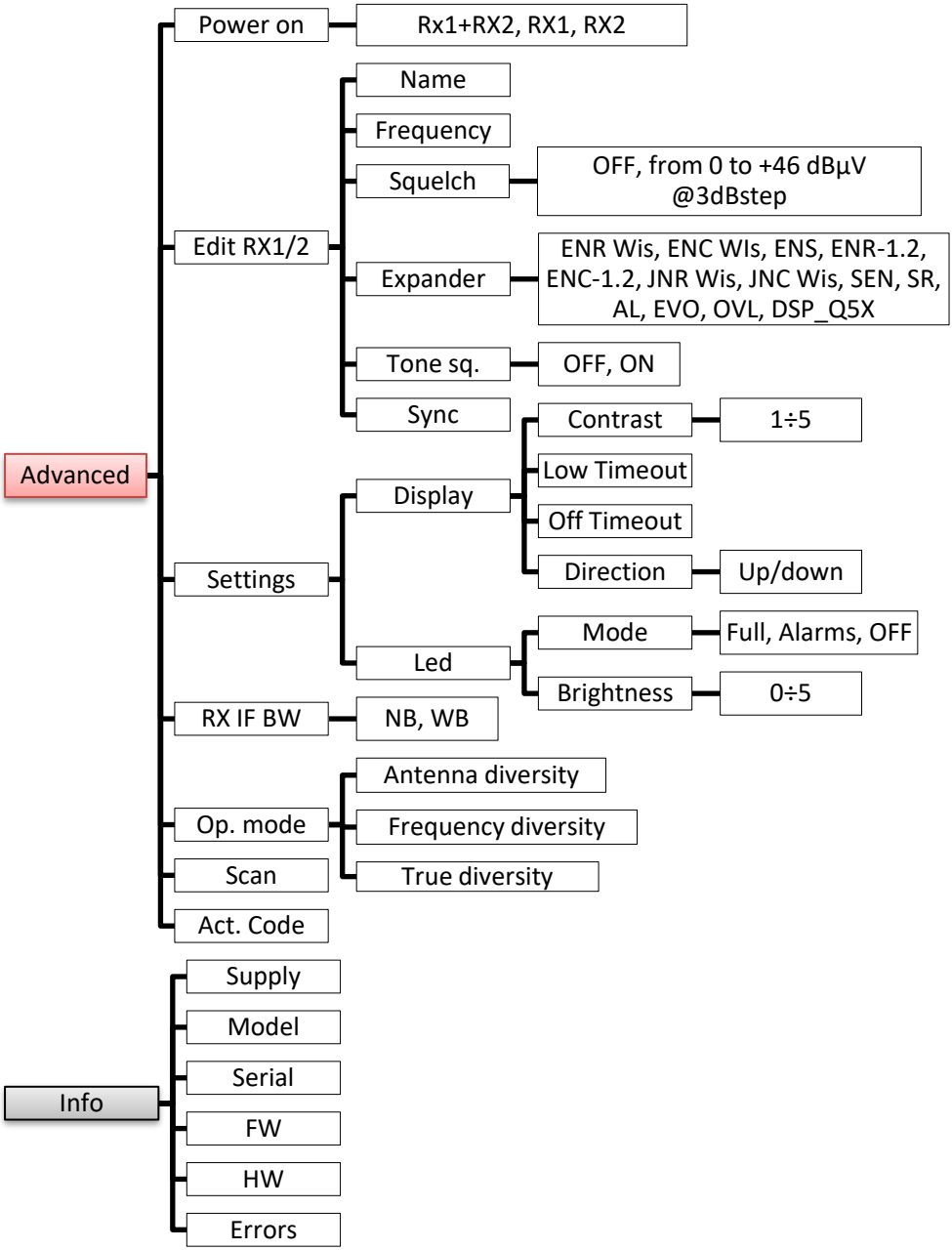
Pin 4: output channel 2 AF+ (hot)

Pin 5: output channel 2 AF- (cold)

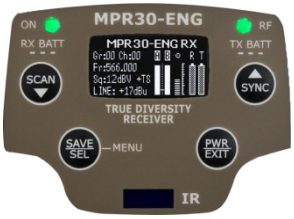


TREE MENU


Infrared
Active
Preset
Load [Preset1,Preset2,Preset3, User1, User2, factory]
Save [User1, User2]
Volume [Min, -56,...,-5, Max]
Headphones
Rx [Rx1(L); Rx2[r]...
Signal [LINE, TSQ>LINE]
Output type
Analog, AES3
OUT RX1
-35, ..., 18dBu
Audio Settings
OUT RX2
-35, ..,18dBu
Sig.ph.RX1
0,180
Sig. ph. RX2
0,180
Cal.Tone
OFF; 0dB, -18dB


Advanced
Power on
Rx1+RX2, RX1, RX2
Edit RX1/2
Name
Frequency
Squelch
OFF, from 0 to +46 dBµV @3dBstep
Expander
ENR Wis, ENC WIs, ENS, ENR-1.2, ENC-1.2, JNR Wis, JNC Wis, SEN, SR, AL, EVO, OVL, DSP_Q5X
Tone sq.
OFF, ON
Sync
Settings
Display
Contrast
1÷5
Low Timeout
Off Timeout
Direction
Up/down
Led
Mode
Full, Alarms, OFF
Brightness
0÷5
RX IF BW
NB, WB
Op. mode
Antenna diversity
Frequency diversity
True diversity
Scan
Act. Code
Info
Supply
Model
Serial
FW
HW
Errors

After the power up phase, the Status menu is showed on the OLED display. Push SELECT button to enter on the Main menu.



Using **UP/DOWN button** all menus can be accessed in sequence.

Push **SELECT button** to enter on menu, keep push **SELECT button** to save.

Push **EXIT button** to exit from menu.

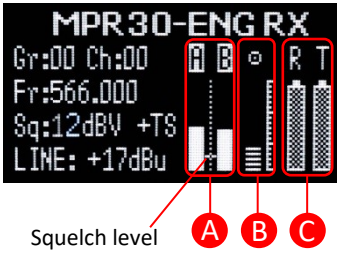
Status menu

- Model (MPR30-ENG RX)

  - Group (e.g. Gr:00) and Channel (e.g. Ch:00)

  - Frequency (e.g. Fr:566.000 MHz)

  - Squelch (e.g. Sq:12dBuV) and Tone squelch (e.g. +TS)



  - LINE/MIC Level (e.g. LINE: +17dBu)

A. RF Level Antenna A and B (range 5 ÷ 70 dBµV)
Between the two RF bars there is a dotted line where the first 3 dots indicate 6/8/10dBµV and the other 15 dots indicate the rest of the range (from 14 to 70dBµV with step of 4dBµV).
A orizzontal sign in a central row shows the setted Squelch level

C. deviation level (range of 54 dB, bar with 3dB

steps; upper level= 0dB, under level =-54dB)

the upper symbol:

indicates presence of audio output

S indicates absence of audio output (RF level < Squelch)

T indicate absence of audio output (no tone squelch detected)

NOTE: in case of absence of tone squelch and RF level < Squelch, the symbol S will be display

D. batteries level for

- R = MPR30-ENG receiver and
- T = Wisycom transmitter: when the rx is tuned with a Wisycom transmitter with PTT Mode parameter set to Disable/Normal/Muting

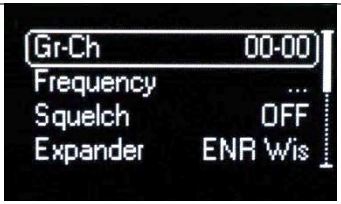
Headphones menu

Cycle through menu's with **up/down** arrow to get your desired headphones output level from ***Max*** (+6 dB) to ***min*** (-72 dB) in 1 dB step then confirm with **SEL**.

Edit RX menu

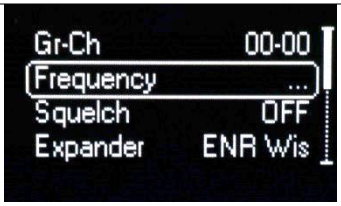
Selecting this sub-menu most of RX1 setups are configurable

Edit RX menu > Gr-Ch submenu



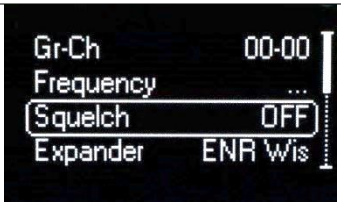
Select current group and channel. Group name and channel frequency are displayed on the right.

Edit RX menu > Frequency submenu



If the specific group/channel is not locked, then can be edited in this menu.

Edit RX menu > Squelch submenu



This menu allows to disable the RF squelch or to setup the desired squelch level in dBuV (note 0 dBuV is equal to

-107 dBm).

Edit RX menu > Expander submenu

MPR30-ENG core is a power digital audio processor that, besides an unbeatable audio quality and flexibility, can emulate most companders systems on the market. On this menu you can setup the audio companding chipset emulation.

Other setups can be loaded on request.

Companders provided by default are:

- ENR Wis : for the optimization of noise

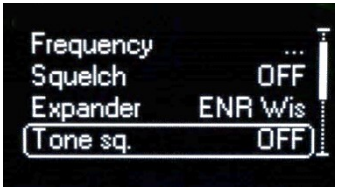
- ENC Wis : to optimize the voice

- ENR-1.2* / ENC-1.2*: to use MRP30-ENG with some type of camera (ex. Canon® C300, Canon® XF305, Sony® Pmw200, Sony® Pmw300, Sony® PmwF5, Sony® Fs7, Nikon® D600 or Nikon® D800, Canon® SD mark3...) which accept a signal with reduced dynamic. This type of expansion doesn't add artifacts to the signal and allows to have a less noisy signal. It allows to improve the quality of the audio registration (compared to the ENR/ENC

	standard) increasing the S/N ratio up to 15dB. To use these companders, it's necessary to set ENR on the transmitter and ENR 1.2 on the receiver or set ENC on the transmitter and ENC 1.2 on the receiver. ENR-1.2 it's used for the optimization of noise, ENC-1.2 it's used to optimize the voice. <u>NB: The compander of the receiver must be the same as the transmitter</u> * Available with FW version 1.6 or later and it has to be previously enabled in factory * Available with FW version 1.10 or later and it has to be previously enabled in factory Canon is a trademark of Canon Incorporated, Nikon is a trademark of Nikon Corp, Sony is a trademark of Sony Corp.

Edit RX menu > Tone sq. submenu

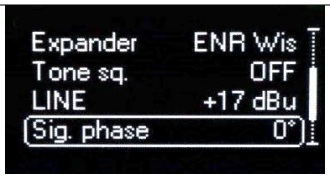
MPR30-ENG is able to detect a digital tone squelch generated by a Wisycom transmitters

	**Tone squelch ON:** when the tone squelch is enabled the audio is muted unless the correct carrier is detected. Tone squelch allows working with lower RF squelch, increasing the coverage and the robustness especially in presence of digital television carriers (DVB-T). Only when the tone squelch is enabled, in the status menu is displayed "+TS". **Tone squelch OFF:** the audio is muted if RF level<Squelch level

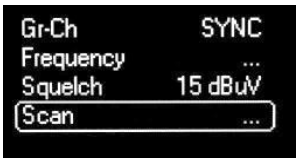
Edit RX menu >LINE submenu

	It is possible to set the nominal audio from +18dBu (peak deviation) and -35 dBu: LINE: -5 dBu ÷ +18 dBu (1 dB step) MIC: -35 dBu ÷ -12 dBu(1 dB step)

Edit RX menu > Sig. phase submenu

	To change audio phase of 0 deg or 180 deg.

Edit RX menu > Scan submenu

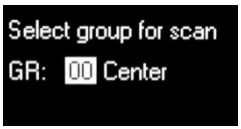
	It allows making three types of scan over a desired channel, group or frequency. MPR52-ENG manages up up to 2400 custom frequencies organized in 40 groups of 60 channels each. This extreme flexibility makes the scan function very flexible.
	This function can be called also using the dedicated SCAN button.
	"Squelch scan" indicates the threshold below which a channel is considered as free or almost free.
	"Scan BTN" is the parameter to set the rapid function called pressing SCAN button. It's possible to set Channel, Group or Frequency scan.
	"View last" allows to see the result of the last scan operation.
	"Deploy" allows to send to a MTK952 the last scan. From the transmitter it's possible to see the graphic of the last scan and choose the frequency to tune.

(*)As per Wisycom standard, **group 00** and **group 01 or 09** are special; respectively the **"center frequency"** (474,482/… MHz) and the **intergap frequency** (i.e. 470/478/486/… MHz). A scan on group 00 will reveal in few seconds the overall DVB-T occupation on the area, while a scan on

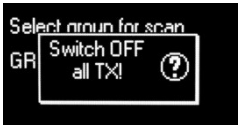
group 01 will give possible working frequency, usable also in presence of strong DVB-T signal (sort to speak working in the band-guard of 2 digital television channels).

"Scan now" menu

The following table lists the three types of scans that can be performed

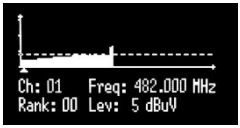


Once started a Channel scan operation the receiver asks for group to be used*. Press and hold the SEL button to select the group to scan.



Then it prompts to turn off all transmitters.

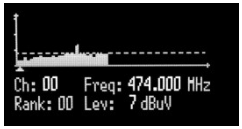
So press SEL to start the scan!



After few seconds, scan results are displayed sorted by level, making easier to pick up the best one.

The dotted line in the graph indicate the squelch threshold.

Channel



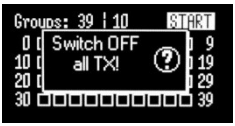
Under the graph are reported the following parameters:

- **Ch**: Channel
- **Rank**: Ranking position
- **Freq**: Frequency
- **Lev**: RF level

Pushing simultaneously UP and DOWN button, the results can be also displayed on a chart in ascending order according to the number of the channel.

After the selection of the desired channel, a screen appears with the selected frequency, channel and group and it is possible to Set or Synchronize the receiver with the transmitter. We recommend setting the frequency and then synchronize it with the transmitter.

If the scan is done on Groups, you can choose a maximum of 10 groups from among the 40 groups shown in the table (Press the SEL button to select and press it again to deselect).



In the upper left shows the number of the selected group and the number of selected groups, while in the upper right corner there is the item "START" to start the scan.

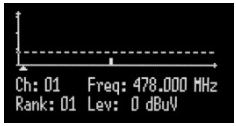
To select START, go to the box 39 and press the "UP" button or go to the box 0 and press the "DOWN" button, so press SEL to run the scansion.

Then it prompts to turn off all transmitters.

So press SEL to start the scan!

After few seconds, scan results are displayed on a histogram.

Groups



Each column of the histogram is divided into two parts by a black line. The lower part indicates the number of *free* channels (RF level **<** Squelch level - 6dBµV) in the group, while the upper one the number of channels *almost free*

(Squelch level **<** RF level **<** Squelch level - 6dBµV).

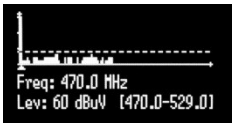
We recommend to choose the group with the highest number of free channels.

Press SEL to select the desiderate group and choose the channel as in "Channel scan"

After the selection of the desired channel, a screen appears with the selected frequency, channel and group and it is possible to Set or Synchronize the receiver with the transmitter. We recommend setting the frequency and then synchronize it with the transmitter.

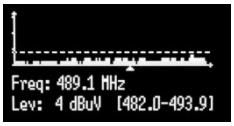
The Frequency scan allows to select a range of frequency to scan, between a maximum and a minimum value and the step with which to perform the scans. Press and hold the SEL button to confirm.

Then it prompts to turn off all transmitters.



So press SEL to start the scan!

Freq

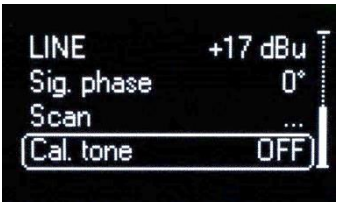


After few seconds, scan results are displayed on a chart in ascending order according to the frequency (step 1MHz). The dotted line in the graph indicate the squelch threshold.

Pushing simultaneously UP and DOWN button it's possible to zoom the graph to show all the steps of scan

After the selection of the desired frequency, a screen appears with the selected frequency and the RF level and it is possible to Set or Synchronize the receiver with the transmitter. We recommend setting the frequency and then synchronize it with the transmitter.

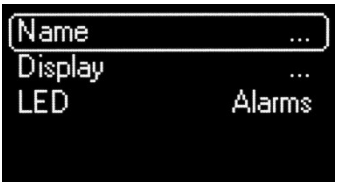
Edit RX menu > Cal.Tone submenu

	Calibration Tone function generates a 1 KHz sine audio at the audio outputs (LINE and headphone) at the level selected (-18dB or 0dB). Select the level and push SEL Button to start calibration tone function. Then push EXIT button to stop it.

Settings menu

	The *Settings* menu allows to configure main settings of the device.

Settings menu > Name submenu

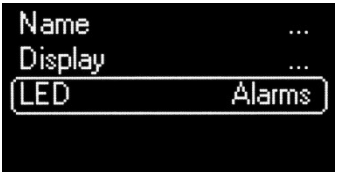
	The name menu allows to change the name of the receiver. This is the name displayed in the top of the Status display and it is the name sent to the transmitter with the sync function (for the transmitter with this advanced capability). Use the UP/DOWN buttons to change the selected character and push SEL button to switch to the next character.

Settings menu > Display submenu

	Change contrast display from 0 (min) to 5 (max).
	Low timeout sets the timeout from 5 to 60 seconds to decrease the brightness display.

	Off timeout sets the timeout from 10 to 120 seconds to turn off the display. With OFF setting the display never turns off.

Settings menu > LED submenu

	3 LED setting are available: Full: LED indicators works normally Alarm: LED indicators lights up only when an alarm happened OFF: LED indicators remain off

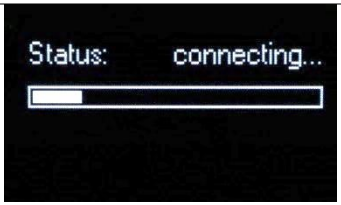
Infrared menu

	By this menu, MPR30-ENG can be connected to IRDA for setup or firmware upgrades. 

NOTE: while in this menu display is not automatically turned off.

Sync menu

	The SYNC function is useful to tune a transmitter on the same frequency of the receiver via the IR interface. Before starting the sync function tune the receiver on desired channel, manually or using the SCAN utility. After this, enable the IR interface on

	the transmitter. Now press SYNC button or enter in the Sync menu to start the SYNC function. Keep the IR window of the transmitter in front of the IR window of the receiver and, as soon as the connection is done, the receiver will send to the transmitter all the information needed. If the operation is not possible, (i.e. the frequency range of the transmitter is not compatible with the frequency of the receiver), the display will show an error message. If the transmitter has the function “NAME” enabled, when the sync function is completed it will show the same name of the synchronized receiver

* The Firmware Version recaps BL (Bootloader Version) and App (Application version).

Preset menu

	This menu allows to load/save 3 user presets or load the Factory configuration.

Preset submenu

	Select the Restore submenu and chose the presets to load: user presets (1 or 2 or 3) or Factory preset. Push and keep SEL button to load the preset.
	Select the Save submenu and chose the user presets to save (1 or 2 or 3). Push and keep SEL button to save the preset.

Alarm list

When an alarm occurs, the receiver

A. shows a message on the display and for some alarm types
B. increases the errors counter in the info menu
C. inserts the alarm type and code on the alarm list in the info menu

When the alarm is solved, the message on the display disappear, while the alarm information (counter and alarm type on the list) remains in memory (To reset the error counter and the alarms list, it is necessary to contact Wisycom.

Alarms	Message on display (A)	Alarm type (C)	Code (C)
Invalid DSP App*	Invalid DSP App		
Invalid DSP Version*	Invalid DSP Version		
DSP boot failed*	DSP boot failed		
HW init failed*	HW init failed		
Battery Low	Battery Low		
TX battery low	TX battery low		
Battery charge failed	Battery charge failed		
I2C communication error	I2C communication error	I2C access failed	04
Device ID copy1 invalid Memory recovered	Device ID copy1 invalid Memory recovered	Device ID copy 1	87
Device ID copy2 invalid Memory recovered	Device ID copy2 invalid Memory recovered	Device ID copy 2	88
RF copy1 invalid Memory recovered	RF copy1 invalid Memory recovered	RF mem copy 1	89
RF copy2 invalid Memory recovered	RF copy2 invalid Memory recovered	RF mem copy 2	8A
PLL unlocked	-	PLL unlocked	84
CH mem header	-	CH mem header	85
Param mem header	-	Param mem header	86

*During the power on phase, the firmware in the receiver checks DSP and hardware integrity. If the alarm occurs, the receiver is blocked.

Troubleshooting

Alarms	Alarm description	throubleshooting
Invalid DSP App	Error during the power on phase: invalid DSP application	- send to repair at Wisycom Repair Centre
Invalid DSP Version	Error during the power on phase: invalid DSP version	- send to repair at Wisycom Repair Centre
DSP boot failed	Error during the power on phase: invalid DSP bootloader	- send to repair at Wisycom Repair Centre
HW init failed	Error during the hardware initialization phase	- send to repair at Wisycom Repair Centre
Battery Low	Low batteries level	- change batteries - recharge the batteries
TX battery low	Low batteries level on the transmitter	-change transmitter batteries -recharge transmitter batteries
Battery charge failed	Error during batteries charger (damage batteries or wrong batteries)	- change batteries
I2C communication error	Communication error on bus I2C	- send to repair at Wisycom Repair Centre
Device ID copy1 invalid Memory recovered	Error during the initialization phase. The CRC-16 check of device data (copy 1) detects error.	- no (the receiver automatically replace the corrupt copy1 with copy2)
Device ID copy2 invalid Memory recovered	Error during the initialization phase. The CRC-16 check of device data (copy 2) detects error.	- no (the receiver automatically replace the corrupt copy2 with copy1)
RF copy1 invalid Memory recovered	Error during the initialization phase. The CRC-16 check of RF data (copy 1) detects error.	- no (the receiver automatically replace the corrupt copy1 with copy2)
RF copy2 invalid Memory recovered	Error during the initialization phase. The CRC-16 check of RF data (copy 2) detects error.	- no (the receiver automatically replace the corrupt copy2 with copy1)
PLL unlocked	Error during frequency tuning	- send to repair at Wisycom Repair Centre
CH mem header	During the initialization phase, the CRC-16 check of RF data (copy1 and copy2) detects error	- send to repair at Wisycom Repair Centre
Param mem header	During the initialization phase, the CRC-16 check of device data (copy1 and copy2) detects error	check in the info menu the Serial take on the 'UNCAL' vale. In this case send the receiver to the Wisycom Repair Centre for recalibration.

If a problem not listed in the above table occurs or if the problem cannot solved with the proposed troubleshooting, please contact support service at support@wisycom.com or sales@wisycom.com.

TECHNICAL DATA

• Frequency ranges	:	470÷ 800 MHz and 960 ÷ 1160 MHz (DME) MPR52 B1 → option 940 ÷ 960 MHz MPR52 B2 → option 1240 ÷ 1260 MHz MPR52 B3 → option 806 ÷ 810 MHz
• Switchable channels	:	2400 user programmable frequencies, organized in 40 groups of 60 channels.
• Switching-window	:	up 790 MHz.
• Frequencies	:	microprocessor controlled frequency synthesizer circuit, with 5 kHz minimum step. The frequencies can be easily PC reprogrammed with the optional UPKmini Programming Kit or micro-USB
• Frequency error	:	< ± 2.5 ppm, in the rated temperature range.
• Temperature range	:	-10 ÷ +50 °C.
• Modulation	:	FM mono, wideband or narrowband IFB (SW selectable)
• Max deviation	:	±54 kHz (wideband), ± 40 kHz (narrowband)
• Antenna input imp.	:	50 ohm sma type (SWR < 1:2; typ. 1:1.4).
• Sensitivity	:	→ 2 µV (6 dBµV), for SND/N > 58 dB; → 5 µV (14 dBµV), for SND/N > 98 dB. in the whole switching-window [1].
• Amplitude response	:	< 0.5 dB (for RF input signal:6 dBµV ÷ 100 dBµV).
• Adjacent chan. Sel.	:	> 80 dB typical (for channel spacing ≥ 400 kHz)
• Spurious emissions	:	< 2 nW (typical = 0.1 pW).
• Noise Reduction	:	ENR / ENR-1.2 (Wisycom Extended-NR) , noise optimized ENC / ENC-1.2 (Wisycom Extended-NC), voice optimized & with reduced pre-emphasis ENS (for live application) ⇒ Others, compatible with most systems, thru an internal DSP emulation of SA572, SA575 and Rms envelope compander chip set, fully user programmable
• AF bandwidth	:	30 Hz ÷ 20 kHz (wideband), 30 Hz ÷ 15 kHz (narrowband)
• Frequency response	:	± 0.5 dB in the 30 Hz ÷ 19 kHz range (wideband), : ± 0.5 dB in the 30 Hz ÷ 13 kHz (narrowband)
• Distortion	:	0.3 % typical.
• SND/D ratio (Anal.)	:	100 dB typical [1]
• SND/D ratio (AES3)	:	> 125 dB typical
• Powering	:	- 2 x IEC-LR6 1.5V size-AA alkaline or NiMh rechargeable - C3-V3 battery pack - KLIC 8000 or CR-V3R lithium (i.e. DR9708 duracell)
• Battery life	:	approx. 5 hours with MPRLBP Lithium-ion battery pack CS-KLIC8000 type (double receiver configuration) approx. 7 hours with MPRLBP Lithium-ion battery pack CS-KLIC8000 type (single receiver configuration)
• Weight	:	100 g approx. without batteries

ITALY ONLY

Obblighi di informazione agli utilizzatori

Modello di informazioni agli utenti dei prodotti di tipo "professionale"

INFORMAZIONE AGLI UTENTI

Ai sensi dell'art. 13 del Decreto Legislativo 25 luglio 2005, n. 151 "Attuazione delle Direttive 2002/95/CE, 2002/96/CE e 2003/108/CE, relative alla riduzione dell'uso di sostanze pericolose nelle apparecchiature elettriche ed elettroniche, nonché allo smaltimento dei rifiuti"

Il simbolo del cassonetto barrato riportato sull'apparecchiatura o sulla sua confezione indica che il prodotto alla fine della propria vita utile deve essere raccolto separatamente dagli altri rifiuti.

La raccolta differenziata della presente apparecchiatura giunta a fine vita e' organizzata e gestita dal produttore. L'utente che vorrà disfarsi della presente apparecchiatura dovrà quindi contattare il produttore e seguire il sistema che questo ha adottato per consentire la raccolta separata dell'apparecchiatura giunta a fine vita.

L'adeguata raccolta differenziata per l'avvio successivo dell'apparecchiatura dismessa al riciclaggio, al trattamento e allo smaltimento ambientalmente compatibile contribuisce ad evitare possibili effetti negativi sull'ambiente e sulla salute e favorisce il reimpiego e/o riciclo dei materiali di cui è composta l'apparecchiatura.

Lo smaltimento abusivo del prodotto da parte del detentore comporta l'applicazione delle sanzioni amministrative previste dalla normativa vigente.

FCC Conformity

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

EU DECLARATION OF CONFORMITY

This product meets the Essential Requirements of all relevant European directives and is eligible for CE marking.
The CE Declaration of Conformity can be obtained from:
wisycom.com/products/d/MPR52-ENG

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