

## IWHB MANUAL

### 1. DESCRIPTION

The small panel IWHB is one component of the new ICAS IQ *wireless* system. IQ System is an intelligent radio system, which works at 868 MHz frequency band. The IQ System is created by various kind of IQ components, which provides to the customer complete and very flexible RF fire alarm system. All components of the IQ system use a special RF communication protocol. This protocol handles building small or large size, smart installations, depending directly on the user requirements.



Hush button IWHB serves as small panel, which can simply test, hush or reset the local RF system loop. The IWHB can be configured in system without  $\mu$ CU-IQ panel. RF communication is based on “P2P” topology, but for cases where is need to reach longer RF distance it is possible to switch IWHB as a message repeater. RF communication based on “STAR” topology is used in installation of IWHB in systems with  $\mu$ CU-IQ panel. This topology supports dividing local loop into zones, where is very useful to use IWHB to Hush, Test or Reset only one zone of the system loop. This topology does not support the “Message Repeater mode” of IWHB – here needs to be IQ repeater.

The Hush Button is powered with 3 lithium battery and can operate 10 years. It is equipped with 2 push buttons Hush and Test/Reset, internal siren and LED indication.

### 2. FUNCTION

After power supply on IWHB starts with reset indication, where is done initialization of the RF module and of the indication. The IWHB has to be configured according to ICAS IQ Wireless System Configuration manual first, after that the information about RF system loop is stored in internal EEPROM.

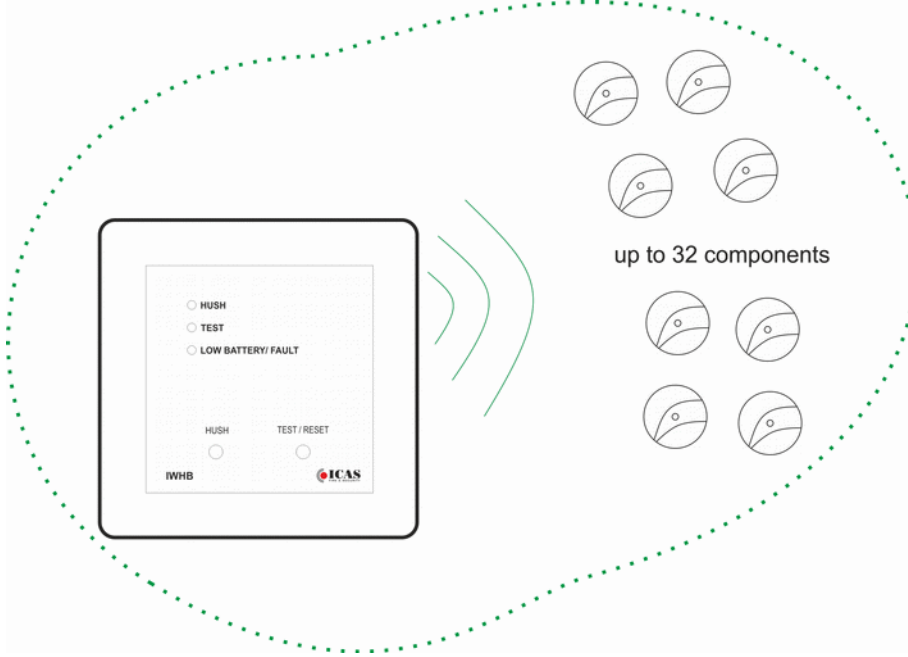
The press of the push button Hush transmits the RF message “H” and runs hush mode in ( zone )the local loop of the system. The module LED Hush starts lightning. Pressing Test/Reset transmits the RF message “R”. The LED indication is reset. The button Test/Reset transmits the message “T” and LED indication Test is blinking once per 4s. Pressing Test/Reset transmits the RF message “R” and LED indication gets dark. When the RF module detects low battery transmits the message “B” and it is indicated with Low Battery/Fault indication.

The Hush Button communicates with other nodes directly (“P2P” topology) so all nodes have to be installed in RF radio range. In some installations the IWHB can be switched into “Message Repeater mode”, where repeats all system loop IQ messages which IWHB receives from other nodes. This is not possible in the system with  $\mu$ CU-IQ, where the control panel itself is repeater. In this system installation is need to use IQ repeater.

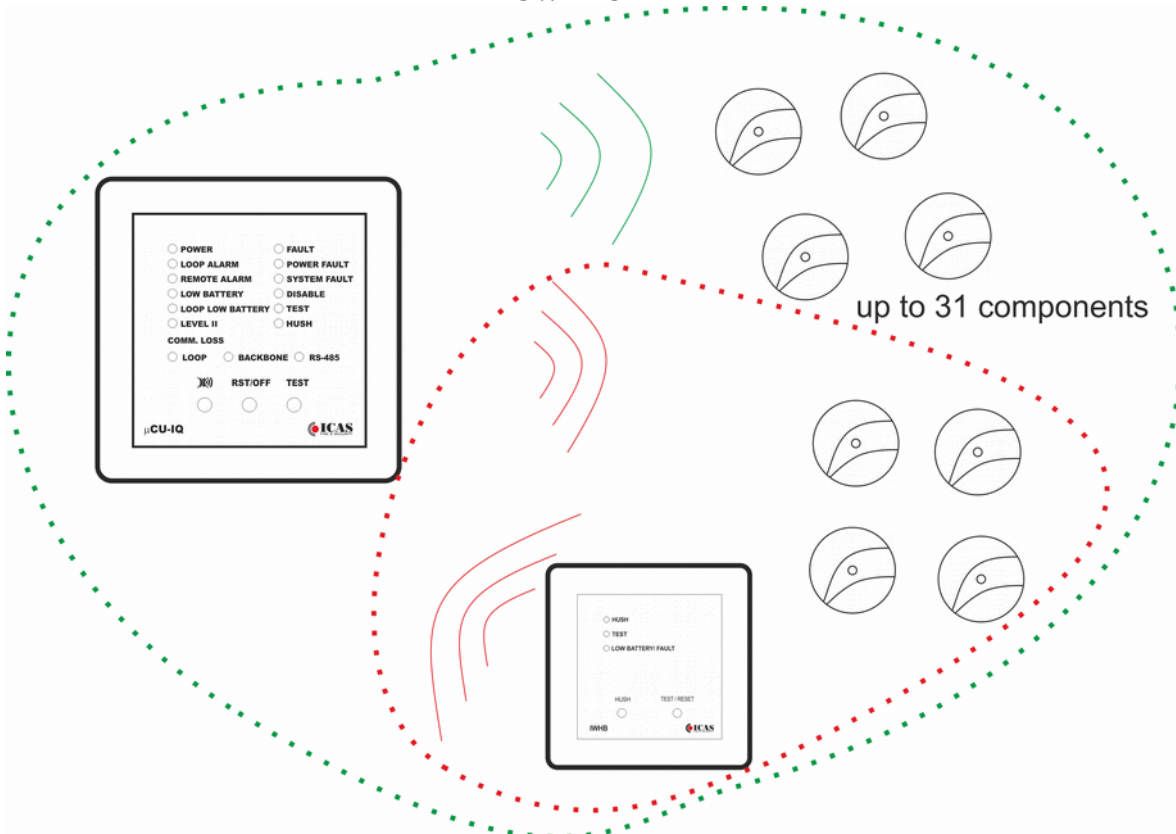
In installation of the IWHB with  $\mu$ CU-IQ, the system local loop can by divided into zones. In this case the RF messages from Hush Button serve to control only its own zone in the loop. Number of zones is not limited, but each IWHB decrements total number of nodes in local loop (for example to the loop where is used one  $\mu$ CU-IQ and one IWHB can be connected only 31 other IQ components.). It is very important to install all assigned IQ components in the  $\mu$ CU-IQ radio-range in the system with control panel  $\mu$ CU-IQ.

### 3. APPLICATION DIAGRAM

“SIMPLE SYSTEM WITH CHOR-IQ SMOKE DETECTORS”



“SIMPLE SYSTEM WITH  $\mu$ CU-IQ, IWHB AND CHOR-IQ SMOKE DETECTORS, WHERE IWHB CONTROLS OWN ZONE”



## 4. INSTALLATION

IWHB is intended to be installed into an instrument distribution box. Install the IWHB unit at least 0.5m from fuse box or other electrical appliances. Be aware that EMC can harm the Hush Button. Remove the top cover of the IWHB carefully. Put screwdriver to the left side of cover groove and slightly lever to left side and remove the top cover. Place the IWHB hush button in vertical position into instrument distribution box. Use 2 screws to connect both sides of the IWHB to the box. Turn on the power of IWHB with connection of the jumper J1. Put the top cover of IWHB back. Now follow instructions in IQ Wireless System Configuration manual.

## 5. INDICATION

Hush (Green LED)	ON	Hush is on in the local loop (RF message "H" has been transmitted/received)
	OFF	Hush is off in the loop
TEST (Yellow LED)	Blinking	Test is on in the local loop (RF message "T" has been transmitted/received)
	OFF	Test is off
LOW BATTERY / FAULT	Blinking	Fault detected in the local loop, (Low Battery, other Fault detected )
	OFF	No fault in the local loop
HUSH → TEST → LOW BATTERY/ FAULT	Blinking	Reset of RM module, initialization and start of the RM

## 6. BUTTON FUNCTION

**Right button pressing is indicated and confirmed by beep of the siren.**

HUSH	Hush	Transmits message "H" / Hush local loop(zone) / Indication of the panel LED Hush is ON
TEST	Test	Transmits message "T" / Test local loop(zone) / Indication of the panel LED Test is ON
RESET	Reset	Transmits message "R" / Reset local loop (zone) / Indication of the panel is OFF
HUSH (Long pressure)	"Message Repeater mode" ON 5 beeps of siren	Message Repeater mode ON – LED Hush ON + Test blinking
HUSH (Long pressure)	"Message Repeater mode" OFF 10 beeps of siren	Message Repeater mode OFF – LED Hush OFF + Test blinking
HUSH (Long pressure)	Configuration mode 15 beeps of siren, then 1 short and 1 long beep of Siren	Transmits message "L" / Configuration of the loop LED TEST blinking – 1 fast and 1 slow

HUSH (Long pressure)	Delete from the loop 15 beeps of siren then → 5x 1 short and 1 long beep of Siren → 1 long beep of Siren	Transmits message “D” / delete the IWHB from the loop, Indication LED HUSH → TEST blinking
TEST / RESET (in Configuration mode)	Zone setting Long beep of Siren	Transmits message ”Z”, where number of the zone is determined count of beeps / Indication LED LOW BATTERY / FAULT flash

## 7. Technical specification

### POWER SUPPLY

Power supply:	3x 3.6V / 1,2Ah Lithium Battery
Operating voltage:	3 V
Power consumption:	<3 µA

### RF DETECTION LOOP

RF operation frequency:	868 MHz
RF modulation:	GFSK modulation
Number of nodes in local loop:	32
RF range in free space:	300m

### MECHANICAL SPECIFICATION

Plastic box material:	ABS /UL 94 V-0
Colour:	Pour White
Size:	80mm x 80mm x 30mm
Weight:	70 g
IP-Class:	IP30 ( after installation)
Temperature:	-10 to +50 °C
Humidity:	95% RH

### Appendix 2

#### ICAS IQ wireless system configuration

/ CONFIGURATION / DELETING from the Local LOOP or System LOOP/ Creating the wireless STAR loop configuration / Zone