

## Operating Instructions For ICOP 20/20 WMIC & 20/20 WBASE



Items included in this package with part numbers

| No. | Quantity | Model No.   | Description         | ICOP Part No. |
|-----|----------|-------------|---------------------|---------------|
| 1   | 1        | 20/20 WBASE | BASE Transceiver    | 600-00145     |
| 2   | 1        | 2020RHT     | MIC Transceiver     | 600-00146     |
| 3   | 1        | N/A         | Rubber Duck Antenna | 600-00143     |
| 4   | 1        | N/A         | Roof Mount Antenna  | 600-00142     |
| 5   | 1        | N/A         | 12V Cable           | 082-00169     |
| 6   | 1        | N/A         | Lapel Mic           | 600-00144     |

### System description:

The ICOP 2020 wireless microphone system operates as part of ICOP's DVR (digital video recorder) system.

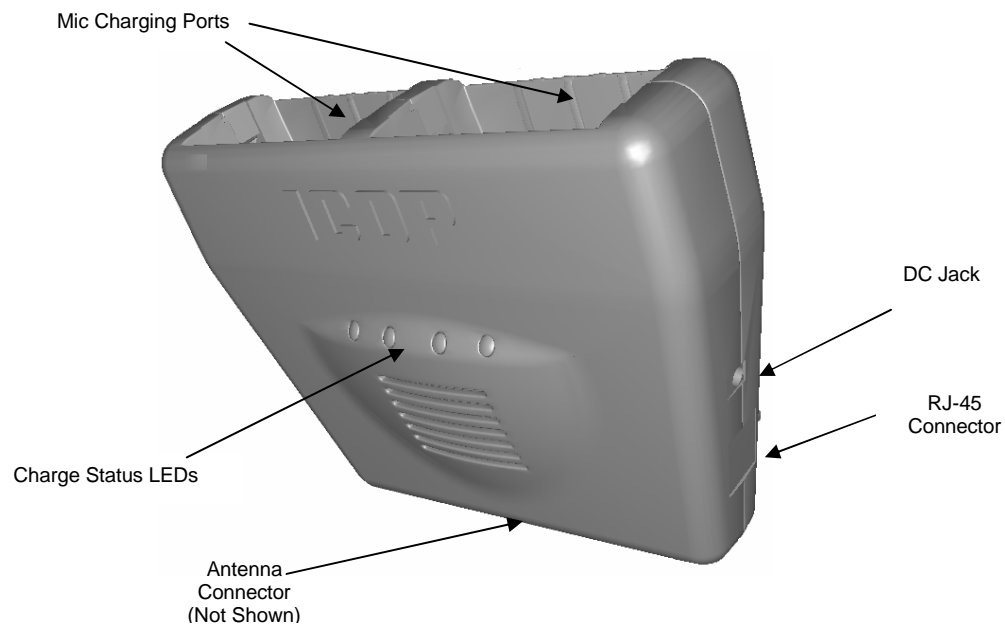
The ICOP 2020 Wireless Microphone System consists of 2 transceivers. The first transceiver, called the BASE Transceiver (2020 WBASE), is mounted inside the vehicle. The BASE Transceiver must be connected to the JBOX (junction box) to interface audio and control signals to the DVR. The BASE Transceiver consists of two receivers and one transmitter, a SMA connector for connection of one of the 2 optional antennas, an RJ-45 connector, and 2 docks for charging and syncing 2 MIC transceivers.

The second transceiver, called the MIC Transceiver (2020 WMIC), is carried by the patrolman either on his belt or lapel. The MIC Transceiver is a self-contained unit, which includes an internal microphone, external microphone/charge jack, battery charge

terminals, internal rechargeable battery, fixed antenna, and 3 buttons for Standby/Off, Help and Transmit Record On/Off.

The system operates in the 900 MHz ISM (Instrument Scientific Medical) band and is license free. The system range is 1000 feet. The ICOP 2020 Wireless Microphone System uses Frequency Hopping Spread Spectrum (FHSS) Narrow Band FM, which provides excellent privacy, security and avoidance of interference.

### **BASE Transceiver Model Number 20/20 WBASE**



#### **Operating Instructions:**

Depending on the installation, the BASE Transceiver will have power applied at all times or only when the ignition switch is on. The BASE Transceiver (20/20 WBASE) may be used with one or two MIC Transceivers.

To synchronize or resynchronize the BASE Transceiver to one or two MIC Transceivers, place the MIC Transceiver unit(s) into the BASE Chargers. Synchronization shall occur automatically with any MIC transceiver(s) that are docked in the BASE.

When the MIC is inserted into the BASE charger, the MIC shall turn on if it is not already on. If the MIC is already in the BASE when the BASE is powered on, the MIC shall turn on. If 5 minutes passes with no activity, the MIC shall go to stop mode.

If a record session is active when a MIC is placed in the BASE, one of the following conditions will apply:

1. If the inserted MIC is the only MIC currently synced to that BASE, the MIC shall stop transmitting audio and shall transmit a data packet with the security code and the turn off command to the BASE unit to stop recording.
2. If the inserted MIC is one of two MICs currently synced to that BASE and it is in an active record session, the MIC shall stop transmitting audio and shall transmit a data packet with the security code and the turn off command to the BASE unit to stop recording. The BASE shall stop the record session with that MIC, but not the other MIC if it is also active.
3. If the inserted MIC is not one that is currently synced to that BASE, sync with that MIC shall be held off until the record session is ended either by manually turning off the record session or by inserting the one or both active MICs into the BASE.

#### General Specifications:

|                             |               |
|-----------------------------|---------------|
| Operating Frequency Range   | 902 – 928 MHz |
| Operating Voltage           | 9 to 15 VDC   |
| Frequency Hopping Sequences | 32,768        |
| Frequencies per Sequence    | 16            |
| Audio Output                | 250 mV RMS    |
| Range                       | 1000 ft       |

#### FCC Information:

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 UNDESIRE OPERATION.

An FCC license is not required for operation of this device.

The ICOP Digital 20/20-WBASE must be installed by a qualified professional using one of the two antennas supplied with the product:

|                     |                   |
|---------------------|-------------------|
| Rubber Duck Antenna | ICOP PN 600-00143 |
| Roof Mount Antenna  | ICOP PN 600-00142 |

Unauthorized modifications to this equipment could void the user's authority to operate this equipment.

## 20/20 WMIC



### Operating instructions:

The MIC Transceiver has a 550 mA hour rechargeable battery pack accessible by removing the belt clip and battery compartment cover . Prior to the first use the battery should be charged for 12 to 15 hours. The MIC Transceiver can be charged through its charge terminals located on the bottom of the unit while placed in the BASE Charger (20/20 WBASE).

To synchronize or resynchronize the BASE Transceiver to one or two MIC Transceivers, place the MIC Transceiver unit(s) into the BASE Chargers. Synchronization shall occur automatically with any MIC transceiver(s) that are docked in the BASE.

When the MIC is inserted into the BASE charger, the MIC shall turn on if it is not already on. If the MIC is already in the BASE when the BASE is powered on, the MIC shall turn on. If 5 minutes passes with no activity, the MIC shall go to stop mode.

If a record session is active when a MIC is placed in the BASE, one of the following conditions will apply:

4. If the inserted MIC is the only MIC currently synced to that BASE, the MIC shall stop transmitting audio and shall transmit a data packet with the security code and the turn off command to the BASE unit to stop recording.
5. If the inserted MIC is one of two MICs currently synced to that BASE and it is in an active record session, the MIC shall stop transmitting audio and shall transmit a data packet with the security code and the turn off command to the BASE unit to stop recording. The BASE shall stop the record session with that MIC, but not the other MIC if it is also active.
6. If the inserted MIC is not one that is currently synced to that BASE, sync with that MIC shall be held off until the record session is ended either by manually turning off the record session or by inserting the one or both active MICs into the BASE.

#### Buttons and Modes of Operation

The MIC Transceiver Wireless Microphone can be switched between three modes of operation:

##### 1) TRANSMIT Mode

In TRANSMIT mode the Wireless Microphone is fully operational and is transmitting and receiving continuously. Audio transmitted from the microphone can be recorded on the DVR. To select TRANSMIT mode, push the record (REC) button on the MIC Transceiver. Transmit mode can also be selected from the DVR. The MIC Transceiver will indicate that it is transmitting audio by lighting the Green LED indicator. The MIC Transceiver will indicate that it has moved out of range of the BASE Transceiver by turning off the Green LED and lighting the Yellow LED indicator.

##### 2) HELP Mode

In HELP mode the Wireless Microphone is fully operational and is transmitting and receiving continuously. In addition, a signal is activated to the DVR to indicate that the user has pressed the HELP button. To select HELP mode, push the HELP button on the front of the MIC Transceiver. The LEDs will continuously repeats the pattern green/red/yellow/red separated by longer periods of green or yellow range status indication.

After every 7<sup>th</sup> repetition of the green/red/yellow/red pattern, the red LED quickly blinks 1 or 2 times to indicate a low battery during the green or yellow range status indication.

|             |              |
|-------------|--------------|
| Battery 25% | 1 Red Blink  |
| Battery 50% | 2 Red Blinks |

##### 3) On-STANDBY Mode

In STANDBY mode, the transmitter is turned off and the unit can only receive. Select STANDBY mode by pushing the record button on the MIC Transceiver while in TRANSMIT mode or HELP mode. STANDBY cannot be selected from the in-dash unit. The green LED blinks ON every 6 seconds to indicate RHT is able to transmit and receive communications. The red LED blinks 1 or 2 times every 6 seconds to indicate a low battery condition.

|             |              |
|-------------|--------------|
| Battery 25% | 1 Red Blink  |
| Battery 50% | 2 Red Blinks |

##### 4) OFF

When OFF, the MIC Transceiver cannot transmit or receive. The MIC Transceiver can be turned OFF by pressing and holding the power button for 1 second until the green

LED goes off. The green LED will turn ON for the duration of the Power Button, press up to 1 second. If held for 1 second when the RHT is in the OFF mode, the RHT will enter the Standby mode.

#### 5) CHARGE Mode

The MIC Transceiver will be in CHARGE mode while docked in the BASE.

The MIC Transceiver LED indicators may be turned OFF by the user for those conditions where the bright light emitted from them is undesirable. The LEDs will always default to ON when the unit is powered on. The ON/OFF state of the LEDs can not be changed when the MIC Transceiver is OFF or connected to a charger.

The initial factory setting is for the LED indicators to be ON.

If the LEDs are ON, two quick presses of the HELP button within 2 seconds will turn the LEDs OFF.

If the LEDs are OFF, two quick presses of the HELP button within 2 seconds will turn the LEDs ON.

Pressing REC, PWR or activating the HELP function with the LEDs OFF will temporarily override the disable to allow confirmation that the communications link status has changed.

Placing the MIC Transceiver into the charge mode will turn the LEDs ON.

The MIC Transceiver audible alert may be turned OFF by the user for those conditions where the noise might be undesirable.

The audible alert shall default from the factory to ON. The ON/OFF state of the audible alert may be toggled via 4 quick presses of the HELP button within 3 seconds. The setting will then be retained until it is again changed or the battery is either removed or allowed to completely discharge.

#### Battery Replacement:

The MIC Transceiver is equipped with a 550mAh NiMH battery pack that should supply 2-3 years of use. When the battery reaches the end of its life it should be replaced with the exact ICOP replacement part. Contact the ICOP Service Department to obtain a replacement battery.

#### General specifications

|                             |                |
|-----------------------------|----------------|
| Operating Frequency Range   | 902 – 928 MHz  |
| Operating Voltage           | 3.3 to 4.5 VDC |
| Frequency Hopping Sequences | 32,768         |
| Frequencies per Sequence    | 16             |
| Range                       | 1000 ft        |

#### FCC Information:

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An FCC license is not required for operation of this device.

Unauthorized modifications to this equipment could void the user's authority to operate this equipment.

## Warranty

ICOP Digital, Inc will, without charge, repair or replace, at its option, defective components of the 20/20 Wireless Microphone system upon delivery to the ICOP Factory Service department, accompanied by proof of the date of purchase, such as a duplicated copy of sales receipt.

You must pay any initial shipping charges required to ship the product for warranty service, but the return charges will be at ICOP Digital's expense, if the product is repaired or replaced under warranty. This warranty gives you specific legal rights, and you may also have other rights which may vary from state to state.

Exclusions: This limited warranty does not apply: 1) To any product damaged by accident; 2) In the event of misuse or abuse of the product or as result of unauthorized alterations or repairs; 3) If the serial number has been altered, defaced, or removed; 4) If the owner of the product resides outside the U.S.A.

All implied warranties, including warranties of merchantability and fitness for a particular purpose are limited in duration to the length of this warranty. ICOP Digital, Inc shall not be liable for any incidental, consequential or other damages; including, without limitation, damages resulting from loss of use or cost of installation.

Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.