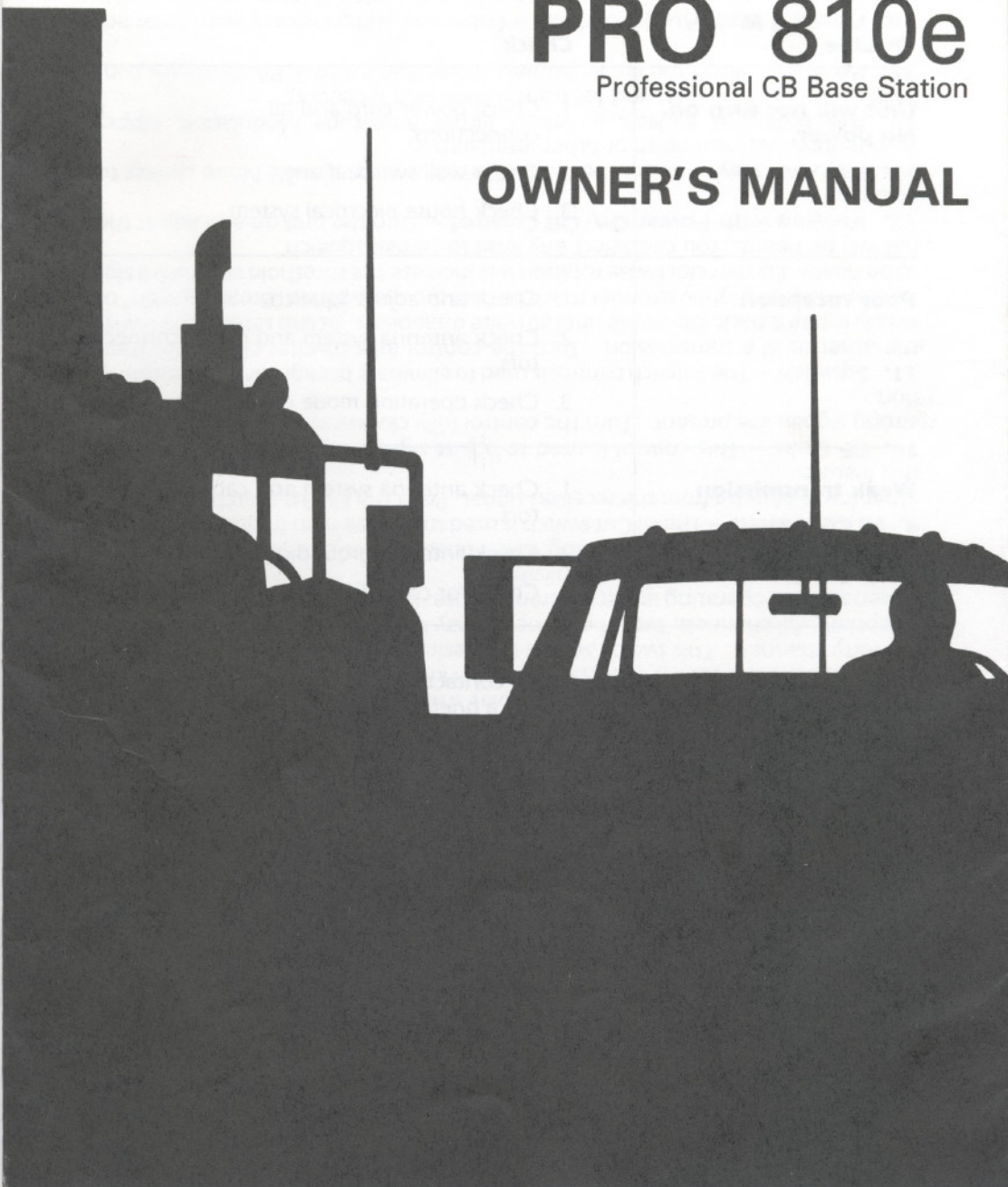


# uniden®

## PRO 810e

Professional CB Base Station

### OWNER'S MANUAL



# Welcome!

To the world of sophisticated, microprocessor controlled CB radio communications. Your Uniden PRO 810e represents the most advanced base station ever designed for use in the Citizens Band Radio Service. It will operate on any of the 40 AM, 40 USB, and 40 LSB frequencies authorized by the Department of Communications. Your PRO 810e features a superheterodyne circuit with PHASE LOCKED LOOP techniques to assure precise frequency control. This radio has been type accepted and certified by the D.O.C.

## WARNING

UNIDEN DOES NOT REPRESENT THE UNIT TO HAVE BEEN WATERPROOFED. TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



**CAUTION**  
RISK OF ELECTRIC SHOCK  
DO NOT OPEN



**CAUTION:** TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

# Installation

Select a location that is convenient for operation and allows adequate air circulation around the unit. Do not place anything directly on top of the radio cabinet which would block the cooling vents. Avoid areas of high heat. Do not place the unit on top of radiator vents or in direct sunlight. Do not place the unit in high moisture environments such as bathrooms.

## Antenna

Since the maximum allowable power output of the transceiver is limited by the D.O.C., the antenna is a very important factor affecting transmission distance. It is for this reason that we strongly recommend that you install only a quality antenna in your new CB radio system. You have purchased a superior quality transceiver. Don't diminish its performance by installing an inferior antenna.

Only a properly matched antenna system will allow maximum power transfer from the 50-ohm transmission line to the radiating element. We recommend that you use an SWR meter when installing your antenna. Set your PRO 810e to channel 20 and make adjustments to the antenna until the meter shows SWR = 1. Your Uniden dealer is qualified to assist you in the selection of the proper antenna to meet your application requirements.

The PRO 810e may be used with any type of 50 ohm base station antenna. A ground plane vertical antenna will provide the most uniform horizontal coverage. This type of antenna is best suited for communication with a mobile unit. For point to point operation where both stations are fixed, a directional beam will usually increase communication range since this type of antenna concentrates transmitted energy in one direction. The beam antenna also allows the receiver to "listen" in only one direction thus reducing interfering signals.

Antenna height is an important factor when maximum range is desired. Keep the antenna clear of surrounding structures and foliage. D.O.C. regulations may limit antenna height above an existing structure.

Connect the male connector (PL-259) of the coaxial cable from the antenna to the female connector on the back of the unit.

# Controls and Functions

**1. Microphone** — The operational mode of the CB is controlled by the push-to-talk switch on the mic. Press the switch to activate the transmitter and disable the receiver. Release the switch to enable the receiver and disable the transmitter. When transmitting, hold the mic about 2 inches from your mouth and speak clearly in a normal voice. The mic included with the PRO 810e is a detachable, low impedance, dynamic type.

**2. Mic Gain** — Adjust the microphone sensitivity for crisp, clear audio transmission.

**3. CH 9** — A single key gives instant access to the emergency channel 9.

**4. Illuminated S/RF Meter** — An accurate analog meter displays the signal strength of both the transmitter and receiver.

**5. TX & RX LEDs** — The TX LED lights when transmitting and the RX LED lights when receiving.

**6. Channel Display** — A large LED display shows the channel currently in use.

**7. Channel Selector** — An oversize channel knob makes it easy to select any of the forty channels. This switch selects the desired channel for transmission and reception. All channels, except channel 9, may be used for communications between stations operating under different license. Channel 9 has been reserved by the D.O.C. for emergency communications.

**8. Clarifier** — Used for fine tuning when operating in USB or LSB modes.

**9. Hi Cut Switch** — The Hi Cut switch is used to remove high frequency hiss and other forms of noise from the received signal. Press the Hi Cut switch to activate this feature.

**10. RF Gain** — This control is used to adjust signal reception in areas where strong signals are present. Turn the control fully clockwise for maximum reception.

**11. Squelch** — The Squelch control is used to eliminate background noise during the absence of a transmission. Turn the control fully counter clockwise, then slowly rotate it back, clockwise until all noise disappears. At this setting any transmission must be slightly stronger than the background noise to "Break Squelch" or to be heard. Further clockwise rotation will increase the threshold at which a signal will be heard. You can select any level to "Break Squelch"

**12. Volume with Power On/Off Control** — Turn the unit on and adjust the volume.

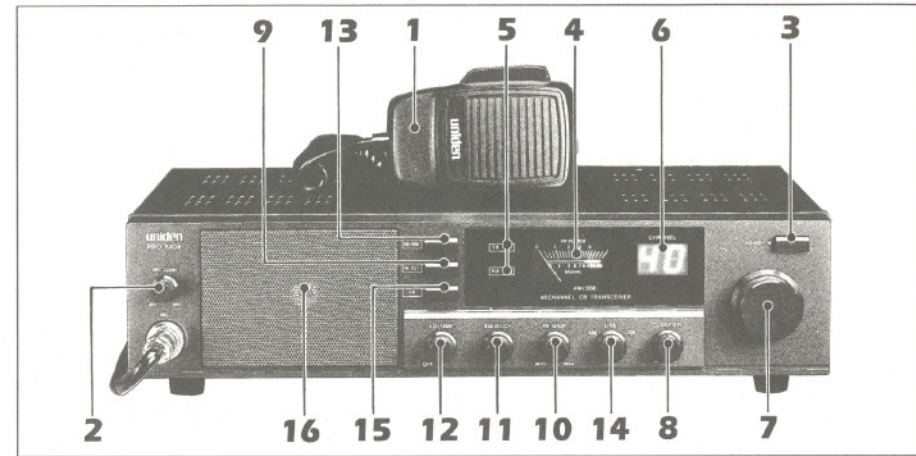
**13. NB/ANL Key** — Select the Noise Blanker and Automatic Noise Limiter to help reduce electrical noise or other interference.

**14. AM/USB/LSB Switch** — Selects either Amplitude Modulation, Upper Sideband, or Lower Sideband for transmission and reception.

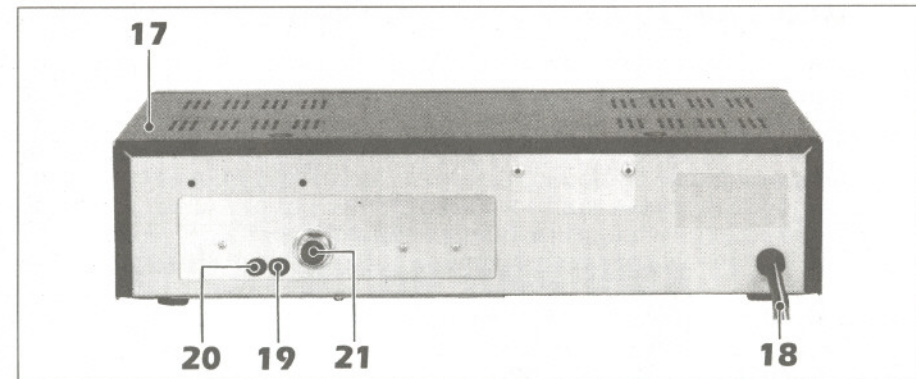
**15. PA Key** — Select the Public Address mode if an external PA speaker is connected.

**16. Power 7 Watt Audio Output** — Enhanced audio circuitry with Tone adjustment and a booming 7 watt audio output provide CB reception like you've never heard it before.

**17. Rugged Metal Cabinet** — A professional quality metal housing insures years of dependable use.



Pro 810e Front View



Pro 810e Rear View

**18. AC Power Cord** — Connect to any 240 V house hold AC outlet.

**19. PA Speaker** — An external 8 ohm 7-watt speaker must be connected to the "PA SP" jack located on the back of the unit. The speaker must be directed away from the mic to prevent feedback.

**20. External Speaker** — The "EXT. SP." jack is used for remote receiver monitoring. The external speaker should have an 8 ohm impedance and be rated at least 7 watts. When an external speaker is connected, the internal speaker is disabled.

**21. Antenna Connector** — This female connector permits connection of the transmission line cable male connector (PL-259) to the transceiver.

# Operation

## Connecting the Power

Plug the power cord into any 240 V AC outlet. Make sure the cord is not kinked or tightly wound.

## To Receive

1. Be sure that the power source, antenna and microphone are properly connected.
2. Turn the unit on by rotating the Volume control clockwise.
3. Set the channel selector switch to the desired channel.
4. Set the Volume control to a comfortable listening level.
5. Listen to the background noise from the speaker. Turn the Squelch control clockwise until the noise disappears (no signal should be present). Leave the control at this setting. The squelch is now properly set. The receiver will remain quiet until a signal is actually received. Do not advance the control too far, or some weaker signals will not be heard.
6. When a transmission is heard with annoying high frequency distortion, activate the Hi Cut feature to eliminate this. If the transmission has interference try activating the ANL and/or the NB key.

## To Transmit

1. Select the desired channel and operating mode for transmission.
2. If the channel is clear, depress the push-to-talk switch on the side of the microphone and speak in a normal voice.

**CAUTION:** The transceiver Voltage Standing Wave Ratio (V.S.W.R.) measurement must be performed prior to the use of the transmitter. A "V.S.W.R." ratio in excess of 2:1 may damage the transmitter. Please check your SWR reading frequently with an SWR meter.

## Preventative Maintenance

At six to twelve month intervals, the following system checks should be made:

1. Check the Standing Wave Ratio (V.S.W.R.)
2. Inspect all electrical connections
3. Inspect antenna coaxial cable for wear

# Troubleshooting

If your PRO 810e is not performing up to your expectations, please try these simple steps:

Trouble	Check
<b>Unit will not turn on. No power.</b>	<ol style="list-style-type: none"><li>1. Check power cord and all connections.</li><li>2. Check wall switch if any.</li><li>3. Check house electrical system.</li></ol>
<b>Poor reception</b>	<ol style="list-style-type: none"><li>1. Check and adjust Squelch.</li><li>2. Check antenna system and cable, connectors.</li><li>3. Check operation mode of the radio.</li></ol>
<b>Weak transmission</b>	<ol style="list-style-type: none"><li>1. Check antenna system and cable, connectors.</li><li>2. Check antenna grounding.</li><li>3. Check for corrosion on connectors.</li></ol>

If you determine that service is necessary contact your local dealer or pack the unit in its original carton. Send it along with a brief, concise description of the problem, your name, address, phone number, and a copy of the original purchase receipt to the address listed in the warranty.

## SERVICING YOUR CB

Technical information, diagrams and charts will be provided upon request. We highly recommend that you consult a qualified radiotelephone technician for service and alignment of this radio. When ordering parts, it is important to specify the correct model number and serial number of this radio.

Please refer to the WARNING information on the first page of this manual.

# Specifications

Channels:	40 AM, 40 USB, 40 LSB
Frequency Range:	26.965 to 27.405 MHz
Frequency Control:	Phase Locked Loop (PLL) synthesizer
Frequency Tolerance:	$\pm 0.005\%$
Operating Temp.:	$-30^{\circ}\text{C}$ to $+50^{\circ}\text{C}$
Microphone:	Plug in type: dynamic
Input Voltage:	240V AC 50 Hz
Current Drain:	TX: full mod., 400 mA RX: with max audio output, 200 mA
Size:	14 3/8" W x 8 7/8" D x 3 3/4"H
Weight:	3 lb. 2 oz.
Antenna Connector:	UHF, SO-239
Analog Meter:	Indicates relative RF output and received signal strength

## TRANSMITTER

Power Output:	Maximum Legal Output Power
Freq. Response:	450 — 2500 Hz
Output Impedance:	50 ohms, unbalanced

## RECEIVER

Sensitivity:	0.5 $\mu\text{V}$ for 10dB; (S + N)/N typical
Selectivity:	6dB @ 4.2KHz, 60dB @ 7KHz typical
Image Rejection:	80 dB typical
I.F. Frequency:	Single Conversion Superheterodyne 10.695 MHz
RF Gain Control:	Adjustable for optimum reception
Automatic Gain:	(AGC): less than 10dB change in audio output for inputs from 10 to 50.000 microvolts RF type
Noise Blanker:	Adjustable; threshold less than 1 $\mu\text{V}$
Squelch:	Adjustable; threshold less than 1 $\mu\text{V}$
Audio Output Power:	7 watts max. into 8 ohms
Freq. Response:	250 to 2500 Hz
Distortion:	less than 10% at 3 watts, @ 1000Hz
Internal Speaker:	16 ohms, 7 watts oval
External Speaker:	(not supplied) 8 ohms
PA System:	7 watts in external 8 ohm speaker

# Channel Frequencies

1	26.965	21	27.215
2	26.975	22	27.225
3	26.985	23	27.255
4	27.005	24	27.235
5	27.015	25	27.245
6	27.025	26	27.265
7	27.035	27	27.275
8	27.055	28	27.285
9	27.065	29	27.295
10	27.075	30	27.305
11	27.085	31	27.315
12	27.105	32	27.325
13	27.115	33	27.335
14	27.125	34	27.345
15	27.135	35	27.355
16	27.155	36	27.365
17	27.165	37	27.375
18	27.175	38	27.385
19	27.185	39	27.395
20	27.205	40	27.405

**NOTE:** This radio has been designed to operate in the 11 meter Citizens Radio Service. It uses a frequency synthesizing circuit with Phase Locked Loop (PLL) techniques to provide crystal controlled transmit and receive operation on all 40 channels. The PLL circuitry assures ultraprecise frequency control. It is designed to meet the Department of Communications requirements applicable to equipment operating in the Citizens Band Radio Service, and is not to be used for any other purpose.



# Warranty

**WARRANTOR:** Uniden Australia Pty. Ltd. ("UNIDEN").

**ELEMENTS OF WARRANTY:** Uniden warrants, for the duration of this warranty, UNIDEN CB Product (hereinafter referred to as the Product) to be free from defects in materials and craftsmanship with only the limitations or exclusions set out below.

**WARRANTY DURATION:** This warranty shall terminate and be of no further effect one (1) year after the date of the original purchase of the Product or at the time the Product is (A) damaged or not maintained as reasonable and necessary, (B) modified, (C) improperly installed, (D) repaired by someone other than warrantor for a defect or malfunction covered by this warranty, (E) used in a manner or purpose for which the Product was not intended, or (F) sold by the original purchaser.

**STATEMENT OF REMEDY:** In the event that the Product does not conform to this warranty at any time while this warranty is in effect, warrantor will repair the defect and return it to you without charge for parts, service, or any other cost incurred by warrantor or its representatives in connection with the performance of this warranty. THIS WARRANTY DOES NOT COVER OR PROVIDE FOR THE REIMBURSEMENT OF PAYMENT OF INCIDENTAL OR CONSEQUENTIAL DAMAGES. Some states do not allow this exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

**PROCEDURE FOR OBTAINING PERFORMANCE OF WARRANTY:** In the event that the Product does not conform to this warranty, the Product should be shipped or delivered, freight prepaid, to warrantor at Uniden Australia Pty. Ltd. 345 Princes Highway, Rockdale, N.S.W. 2216 with evidence of original purchase.

**uniden**<sup>®</sup>

CUSTOMER SERVICE

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