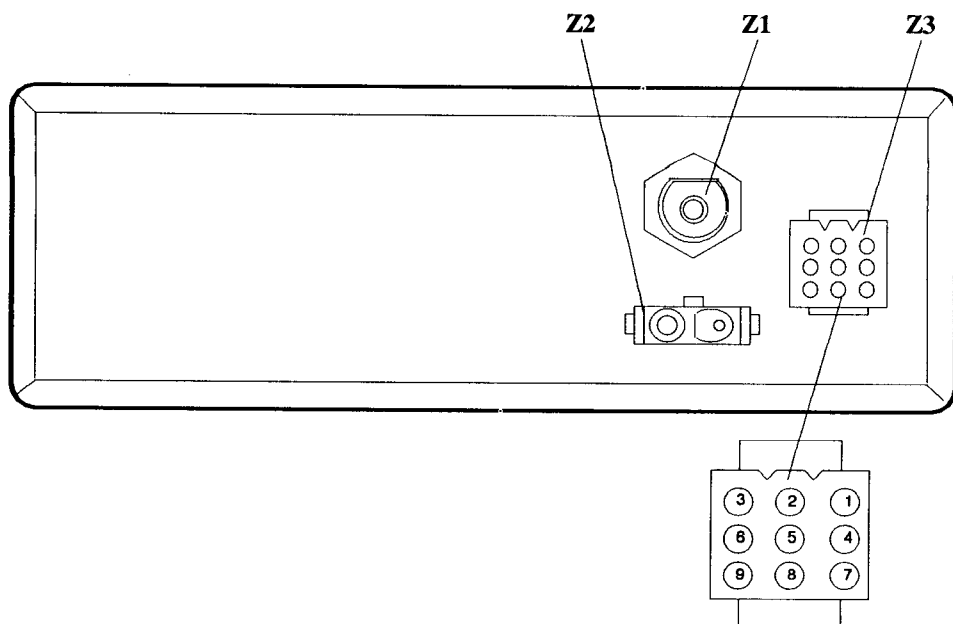
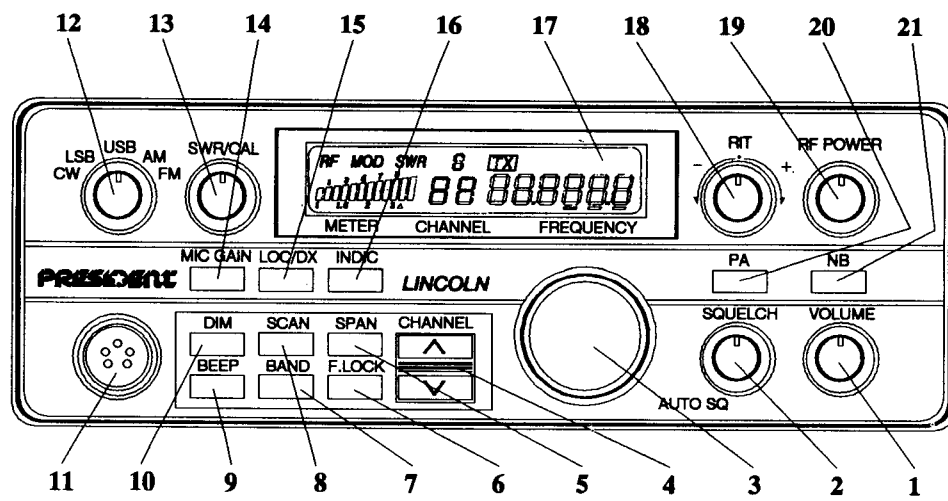


PRESIDENT[®] LINCOLN



**Mobile 200 Channel
Amateur Radio
28 - 30 MHz**



Welcome to the world of the most sophisticated microprocessor controlled Amateur radios. This entirely new generation of **President Amateur Radio** will give you the most complete access to amateur radio communication.

Introducing state-of-the-art technology for the most advanced features, this **President LINCOLN** is a new milestone in userfriendliness and prompt response to the most demanding amateur.

To assure you get most enjoyment of all the features, please read this guide thoroughly before installing and operating your **President LINCOLN**.

Your President LINCOLN At A Glance

● FRONT PANEL CONTROLS

- 1 VOLUME & ON/OFF :** Turn the transceiver on or off from this control. Set the audio volume to the desired listening level. To turn the radio off, turn completely counterclockwise to OFF.

- 2 SQUELCH & auto SQ :** In the absence of an incoming signal, background noise is always generated. The squelch control allows you to cut off this disturbing noise when the unit is in stand-by mode.

The **President LINCOLN** possesses an automatic squelch circuit which searches continuously for the optimum squelch setting.

Turn the **SQUELCH**-control completely counterclockwise to select this mode. To cope with the most severe circumstances, also manual squelch setting is provided by the same squelch control. Set the control to the position which eliminates background noise in absence of an incoming signal.

To preserve maximum sensitivity of the receiver, rotate only to the point where noise disappears. Only signals slightly stronger than the squelch threshold will be heard. In order to hear weak signals properly, it may be necessary to reduce squelch level by turning the control counter clockwise. At maximum setting, very strong signals only will be heard.

- 3 Frequency tuning :** Use this knob to select the desired frequency. Receiving and transmitting frequencies are tuned simultaneously. While

turning the knob, the display 17 will show the selected frequency. The frequency will change in value in accordance with the span setting selected by pushbutton 5.

- 4 Channel selector up/down :** Press once to change the frequency by one channel step. Keep depressed for fast channel number change. Frequency indication or channel number shown on display 17 will vary accordingly.

- 5 SPAN setting :** This key allows you to select the frequency step accuracy with a single touch. The frequency may be selected with either 10 kHz, 1 kHz or 100 Hz frequency span accuracy. The display indicates the selected span by underlining respectively the last 3, 2 or 1 figures of the frequency values.

- 6 Frequency LOCK :** This pushbutton locks the receiver and transmitter at the selected frequency. When the **LOCK**-key is depressed, all other channel up/down or frequency controls are inhibited. The frequency remains locked at the value displayed until the **LOCK** is released again.

- 7 BAND selector :** With this momentary key, your **President LINCOLN** allows you to select one of 4 bands indicated as a, b, c and d on the display. The four bands each have a bandwidth of 500 kHz divided into 50 channels each :

a-band : 28.0000 to 28.4999 MHz,

b-band : 28.5000 to 28.9999 MHz,

c-band : 29.0000 to 29.4999 MHz,

d-band : 29.5000 to 29.9999 MHz.

- 8 **SCAN function** : By depressing this key, an automatic scanning function is started. The frequency band selected by key 7 is fully searched and the scanner stops at each frequency where a signal is received and sets off a beep tone. To continue scanning press SCAN-button once more.
- 9 **Roger BEEP** : When this key is depressed, your **President LINCOLN** automatically transmits an audio signal each time when the mike switch is released. Your partner can therefore easily notice your transmission was terminated, cancelling the need for the verbal acknowledgement. Please note that this feature is disabled in CW-modulation mode.
- 10 **DIM Dimmer key** : This pushbutton allows to dim the backlights of the display.
- 11 **Microphone jack** : The microphone jack is conveniently installed on the front panel allowing dashboard inserted installation. The connector allows you to use a full-feature mike including press-to-talk switch and channel up/down selection.
- 12 **Modulation mode selector** : The **President LINCOLN** provides the most extensive selection of modulation methods. You can select out of five modulation patterns including FM (frequency modulation), AM (amplitude modulation), USB (upper side band modulation), LSB (lower side band modulation), as well as CW (morse coded wave).
- 13 **SWR/CAL calibration knob** : After the **President LINCOLN** is put in SWR-calibration mode (by depressing pushbutton 16 until "Δ" appears on the display), you can calibrate the standing wave ratio (SWR)-reading on the display : the LCD-segments act as SWR-meter. The SWR-value must be checked each time another antenna system or antenna cabling is taken in use. Also temporary antenna system performance degradation due to humidity, corrosion or vibration is easy to verify by a SWR-measurement. Please also refer to the SWR-procedure explained further in this manual.
- 14 **MIC GAIN microphone gain** : When you depress this button, the microphone gain is reduced by 10 dB in transmitting mode. This avoids over-modulation and distortion when bringing the mike rather close to the mouth. When this key is not depressed, the normal microphone gain allows you to speak at normal voice level with the microphone ten to twenty centimeters away from your mouth.
- 15 **LOC/DX** : When this key is depressed, the RF-gain is decreased by 30 dB. This feature is especially useful in strong signal areas arising from DX-trials. Reducing the RF-gain then optimizes reception importantly.
- 16 **INDIC display indications** : In receiving mode, the LCD-segments on the display always indicate the signal strength. In transmission mode however, the INDIC-key allows you to select which characteristic will be displayed : RF/MOD/SWR and Δ. The display marks the selected setting, just above the meter segments. When you set to "RF", the RF-power level is indicated. At "SWR"-setting, SWR-measurements are possible. When the "Δ"-mark is visible, calibration of the SWR-meter is possible. At "MOD"-setting, the display indicates the modulation proportion, i.e. the deviation in FM or percentage modulation depth in AM.
- 17 **Display** : Please refer to the display layout on the front cover.
- 18 **RIT Clarifier** : The Receiver Independent Tuner features a clarifier function within a coverage range of 1.0

kHz increase or decrease compared to the set frequency. This RIT-function is especially useful when communicating with a station suffering from TX-frequency drift. When you make contact with your interlocuter and the voice quality you receive is distorted, then always try to improve reception with the clarifier. Tune to the received frequency by turning the knob up or down until best speech quality is received.

Meanwhile, also check if the squelch level is appropriate (control 2).

- 19 **RF POWER** : This control allows you to adjust the RF-power to the most convenient level.

Turn clockwise for increasing the transmitted power.

- 20 **PA Public Address button** : An external PA-speaker can be plugged into a socket at the back of your President LINCOLN. Depressing the PA-button will activate this speaker. In order to avoid howling the PA-speaker must be turned away from your microphone.

When operating the PA- speaker at high volumes, don't keep the mike too close to this speaker.

- 21 **NB Noise blanker** : This button inserts a RF noise blanking circuit which is especially effective for suppressing impulse noise, such as noise generated by the ignition of car engines.

● REAR PANEL

Please also refer to the front page of this manual for proper installation guidance.

Z1 Antenna connector (M-type).

Z2 DC-power terminals.

Z3 Accessory connector : When using the internal speaker only, insert the plug with a shortening wire between pins 3 and 9.

Between pins 2 and 3, an external speaker can be connected.

Pins 5 and 6 allow to link a PA-speaker.

Pins 7 and 8 serve to connect morse key.

Pins 1 and 4 are not used.

Specifications

- Channels : 200.
- Bands : 4 bands of 50 channels each (bandwidth 0.5 MHz).
- Frequency range : 28 to 30 MHz.

RECEIVER

- Maximum sensitivity : AM typ 0.5 μV ; SSB typ 0.25 μV .
- Sensitivity : AM typ 0.5 μV (10 dB S/N); SSB typ 0.25 μV (10 dB S/N);
FM typ 0.5 μV (20 dB S/N).
- AGC figure of merit : 50 mV; in AM : for 10 dB variation : 80 dB;
in CW/SSB : in audio output : 80 dB.
- Adjacent channel selectivity : 70 dB.
- RF gain control range (LOC/DX) : 30 dB.
- S/N at 1 mV input : AM typ 30 dB; FM typ 35 dB.
- Squelch threshold sensitivity : typ 0.5 μV .
- Squelch max sensitivity : typ 1000 μV .
- Image rejection ratio : 65 dB.
- Clarifier range : ± 1 kHz.
- Battery drain (max audio) : typ 1 A.

TRANSCIVER

- *Modulation modes* : AM/LSB/USB/FM/CW.
- *Carrier power (AM/FM/CW)* : 10 W.
- *PEP power (SSB)* : 21 W.
- *Unwanted sideband suppression* : -45 dB.
- *Modulation frequency response* : 450 to 2500 Hz (-4 dB limits).
- *Microphone sensitivity* : 1 mV.
- *Battery drain* : max 4.5 A.

AUDIO

- *Frequency response* : at 6 dB cut-off : lower limit : typ 300 Hz; upper limit : typ 2000 Hz (AM); typ 3000 Hz (SSB); typ 1500 Hz (FM).
- *Output power* : max 4 W; typ 2.5 W for 10 % THD.
- *Speaker* : 8 Ω .

Installation

Before starting the installation of your President LINCOLN, please read through the simple steps listed below.

PLAN THE LOCATION OF THE TRANSCIVER.

1. *Select the most convenient location for operating your President LINCOLN.*
2. *Make sure that it does not interfere with the driver or passengers in the vehicle.*
3. *Use the mounting bracket supplied with the unit and fix it to a solid surface with the selftapping screws.*

A shorter, less than a full quarter wave antenna is more convenient, but efficiency is always lower.

3. *For marine applications, ensure adequate grounding and avoid electrolysis between fittings.*

PLAN THE LOCATION OF THE ANTENNA.

1. *Since you have purchased a superior quality transceiver, you will want to use an antenna which does not diminish its performance. For maximum power output, the antenna is a very important element affecting transmission distance. Only a properly matched antenna system will allow maximum power transfer. For this purpose, we recommend 50 Ω antenna impedances and transmission cable. Preferably, use the SWR-meter when installing an antenna.*
2. *For automobile installation a full quarter wave whip antenna is most efficient and still easy to install.*

CONNECT THE POWER.

1. *Most cars and trucks use a negative grounding system. It can be identified by the minus "-" battery terminal being connected to the motor block or chassis. Make sure a 12 Volt battery is used. Connect the red DC-power cord from the radio to the positive "+" battery terminal.*
Next, connect the black lead to the vehicle frame or chassis, or to the negative terminal of the battery.
2. *It may be desirable to connect the power leads to the ignition switch terminal so that the radio is automatically turned off when the ignition key is turned off. When in doubt, contact your car dealer for specific information about your vehicle.*

Getting In The Air

When power source, antenna and microphone are properly connected, proceed first with a Voltage Standing Wave Ratio (VSWR) measurement.

SWR PROCEDURE.

For SWR calibration and measurement, please refer to the operation instructions for the SWR/CAL control 13 :

1. Set the unit to calibration mode by depressing the INDIC-switch 16 and wait for the "Δ"-sign to appear on the display.
2. Set the unit to AM or FM-mode with control 12 and search for a free channel. Set the **President LINCOLN** somewhere halfway its effective bandwidth or halfway your preferred band. Make adjustments to the antenna until the SWR-reading is as close as possible to 1. Contact your dealer to assist you in the selection of a proper antenna meeting your specific requirements.
3. Activate transmission mode by depressing the talkswitch on your microphone.
4. The LCD-segment meter shall be increased or decreased until the level reaches the triangle calibration point. Use SWR/CAL-control 13.
5. Operate the INDIC-switch once again until "SWR" appears on the display.
6. Read the SWR-value from the LCD-meter. This value should ideally be equal to 1. A SWR-ratio in excess of 2 may however damage a transmitter end stage. Therefore, never start operating your transceiver before reducing the SWR below a value of 2. Moreover, the closer you get the SWR to 1, the more power is emitted in the air and the further you extend the range of your **President LINCOLN**.
7. For optimizing the SWR, try adjusting the length extension screws on your antenna. Fix the antenna at a point where you get SWR closest to a value of 1.
8. Antenna characteristics may be instable owing to vibration, humidity penetra-

tion in the antenna, etc.

*Use the meter on your **President LINCOLN** to check the SWR-value regularly.*

OPERATING PROCEDURE TO RECEIVE.

1. Turn the unit on by turning the **VOLUME** control 1 clockwise and set the volume temporarily about one third on the volume range.
2. Select a frequency band by depressing **BAND**-button 7, and set a channel with **CHANNEL**-selector 4 or frequency tuning knob 3.
3. Set the volume to a comfortable level.
4. Listen to the background noise from the loudspeaker. Turn the **SQUELCH**-control 2 until the noise disappears. No signal (only noise) must be audible at this moment !
*When the **SQUELCH** is properly set, the receiver will remain quiet until a signal is actually received. Do not advance the control too far, or some weak signals will not be heard.*

OPERATING PROCEDURE TO TRANSMIT.

1. Select the desired channel for transmission with **CHANNEL** selector 4 or tune to the desired frequency with knob 3.
2. If the selected channel is clear, depress the push-to-talk switch on the side of the microphone and speak in a normal voice.
3. All other features of your **President LINCOLN** can be further activated. To make the best use of them, please read the description for each front panel control.

Trouble Shooting Guide

If your President LINCOLN is not performing up to your expectations, please try the simple steps listed below. If you still cannot get satisfactory results after reading this manual, please contact your dealer.

PROBLEM 1 : THE UNIT DOES NOT WORK. THE DISPLAY DOES NOT COME ON. NO POWER.

Solution :

1. Check the on/off **VOLUME**-switch to make sure it is on and set to reasonably high volume.
2. Check power cord connections.
3. Check if the power is not controlled by a switch (e.g. ignition key in car).
4. Check the power cord fuse or any other fuse in front of it.
5. Check further on the vehicle electrical system.

PROBLEM 2 : POOR RECEPTION.

Solution :

1. Check and adjust **SQUELCH**.
2. Check the antenna system, cable and connectors.
3. Check the position of the **LOC/DX**-switch 15.
4. If no reception, check whether the accessory connector on the terminal **Z3** of the rear panel is inserted.
5. Read once more through the operation mode.

PROBLEM 3 : WEAK TRANSMISSION. LOW RANGE.

Solution :

1. Check **SWR** value if reasonably close to 1 and below a value of 2.
2. Check antenna system, cable and connectors.
3. Check for corrosion on connectors.
4. Check antenna grounding.

Notes

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Notes

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