

SPECIFICATION:

GENERAL

Frequency Control	Phase Lock Loop (PLL) Synthesized Circuit
Frequency Coverage . . . . .	.CH1 – 40 27.60125 to 27.99125 MHz.
Speaker/Microphone . . . . .	.Plug-in type dynamic 16 ohms round
Operating Voltage . . . . .	.13.2 V.D.C. Nominal (Positive or Negative ground)
Semi-conductors . . . . .	.22 Transistors, 18 Diodes 7 Integrated Circuits
External Speaker Impedance . . . . .	.4 – 16 ohms

TRANSMITTER

R.F. Output . . . . .	.4W (Hi) 0.4W (Low)
Modulation . . . . .	.F.M.
Emission Type . . . . .	.F.3
Frequency Tolerance . . . . .	.±0.002% Nominal
Output Impedance . . . . .	.50 ohms, Unbalanced

RECEIVER

Sensitivity for 20 dB S/N . . . . .	.0.7 μ V Nominal
Selectivity . . . . .	.60 dB at \pm 10 KHz.
I.F. Frequency . . . . .	.Double conversion: 1st 10.69 MHz. 2nd 455 KHz.
Image Rejection . . . . .	.70 dB Nominal
Audio Output . . . . .	.2W at 10% T.H.D.

WARNING

Before installation of your transceiver, ensure that the instructions are read carefully, as operation of the Unit in the transmit mode without a suitable aerial, may result in damage to internal electronic components.

Licencing Conditions

The Model 342 is designed to operate under Home Office rules and regulations. Operation of this unit is not permitted until you have obtained the necessary Licence to allow use on the allocated 27 MHz C.B. frequencies.

Operating Frequencies

Channel 1	27.60125 MHz	Channel 21	27.80125 MHz
Channel 2	27.61125 MHz	Channel 22	27.81125 MHz
Channel 3	27.62125 MHz	Channel 23	27.82125 MHz
Channel 4	27.63125 MHz	Channel 24	27.83125 MHz
Channel 5	27.64125 MHz	Channel 25	27.84125 MHz
Channel 6	27.65125 MHz	Channel 26	27.85125 MHz
Channel 7	27.66125 MHz	Channel 27	27.86125 MHz
Channel 8	27.67125 MHz	Channel 28	27.87125 MHz
Channel 9	27.68125 MHz	Channel 29	27.88125 MHz
Channel 10	27.69125 MHz	Channel 30	27.89125 MHz
Channel 11	27.70125 MHz	Channel 31	27.90125 MHz
Channel 12	27.71125 MHz	Channel 32	27.91125 MHz
Channel 13	27.72125 MHz	Channel 33	27.92125 MHz
Channel 14	27.73125 MHz	Channel 34	27.93125 MHz
Channel 15	27.74125 MHz	Channel 35	27.94125 MHz
Channel 16	27.75125 MHz	Channel 36	27.95125 MHz
Channel 17	27.76125 MHz	Channel 37	27.96125 MHz
Channel 18	27.77125 MHz	Channel 38	27.97125 MHz
Channel 19	27.78125 MHz	Channel 39	27.98125 MHz
Channel 20	27.79125 MHz	Channel 40	27.99125 MHz

The Licence requires that the equipment shall not be connected to an antenna other than a single element rod or wire not exceeding 1.5M in overall length.

If an antenna is mounted at a height exceeding 7 meters from ground level, the licence requires a reduction in transmitter power of 10 dB (i.e. operation with 0.4 watt output only).

General Description

The 342 is an all transistor 2-way radio transceiver suitable for mobile operation. A frequency synthesizer circuit provides 40 crystal controlled PLL transmit and receiver channels in the 27 MHz band, engineered for trouble-free performance.

Current drain on 12 volts D.C. is exceptionally low and operation over long periods is feasible even with your engine switched off.

Receiver

The receiver is a sensitive and highly selective dual conversion superheterodyne type, providing crystal controlled PLL operation on all 40 C.B. Channels. The circuit incorporates a number of features designed to provide optimum reception. A ceramic filter provides sharp selectivity and high adjacent channel rejection. As a result, transmissions on adjacent channels cause minimum interference. A variable squelch control is incorporated to silence the receiver when no signals are received.

Transmitter

The transmitter offers crystal-controlled operation on all 40 C.B. Channels; 4 watts of R.F. power is available which is the legal limit of power for the Citizens Band Service.

Operating Instructions

1. On/Off Switch and Volume Control

Clockwise rotation of the control knob will produce an audible "click" which will switch on the Unit. Further clockwise rotation will increase the audio level from the Speaker.

2. Squelch Control

Used to quiet the receiver during the absence of receive signals. For maximum receiver sensitivity, the control should be adjusted only to the point where the receiver background noise is eliminated. The squelch control should be slowly rotated in a clockwise direction to the point where the noise in the loudspeaker disappears.

3. Channel Selector Scan Control

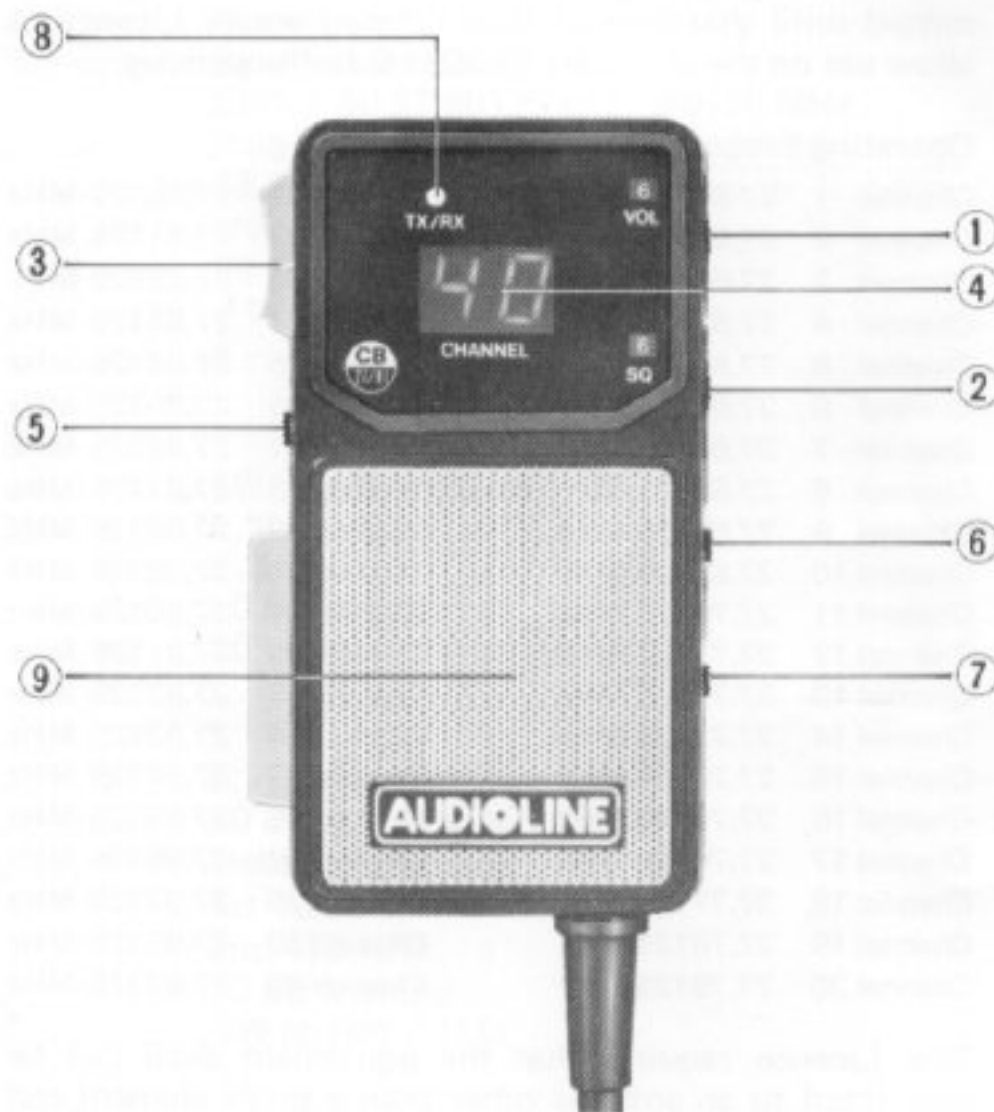
This switch selects one of the 40 channels for transmit and receive operation. Press the upper side of the rocker switch to increase the channel number. Press the lower side of the rocker switch to decrease the channel number.

4. Channel Indicator

The digital L.E.D. display indicates the channel selected by the Scan Selector Switch.

5. Channel Lock Switch

After selecting the required channel using the channel selector scan switch, the channel lock switch should be switched up. This will disable the channel selector scan switch, thus preventing accidental channel shift whilst using the microphone.



6. Power 4W/0.4W Switch

With the switch in the 4W position (pushed up), the R.F. output power will be 4 watts. With the switch in the 0.4W position (down), the R.F. output power will be reduced to 0.4 watts. This is a reduction in output power of 10 dB.

7. Tone Hi/Low Switch

With the switch in the low position (down), the treble frequencies are attenuated for reception.

8. T X /R X Indicator

The L.E.D. indicates the mode of operation. In the receive mode, the L.E.D. indicator will display green. In the transmit mode, the indicator will display red.

9. Microphone/Speaker

When transmitting, push the P.T.T. (Push to talk) Switch and speak in a normal voice with the microphone 5 – 10 cm (2" – 4") in front of your lips.

When the P.T.T. button is released, the transceiver returns to the receive mode, the microphone then acts as a loudspeaker.

Note: DO NOT operate the P.T.T. switch unless a suitable antenna is connected, otherwise damage may occur to the transmitter.

10. Power Socket

The transceiver can be connected to a 12 volt system positive or negative ground. Most cars use negative ground, but it is easy to verify which one of the battery poles is connected to chassis.

11. Aerial Connector

Connect a suitable aerial to the connector shown. The aerial and its feeder cable should be of 50 ohms impedance.

DO NOT OPERATE THE TRANSCEIVER IN THE TRANSMIT MODE WITHOUT A SUITABLE AERIAL CONNECTED. FAILURE TO COMPLY WITH THIS WARNING, WILL RESULT IN DAMAGE OCCURRING TO THE TRANSISTOR CIRCUITRY WITHIN THE TRANSCEIVER.

