LAFAYETTE
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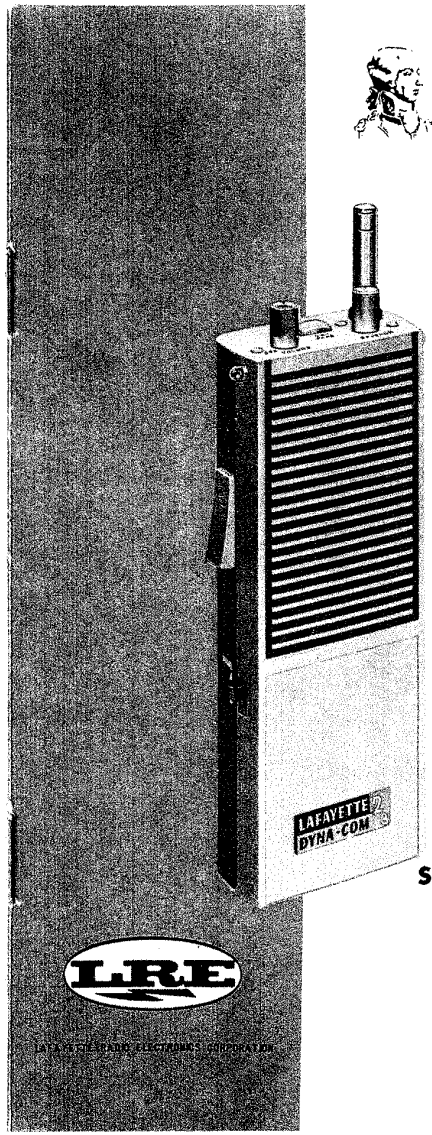


LAFAYETTE

DYNA-COM 2A

CITIZENS BAND "WALKIE TALKIE"

1.5 WATTS
3 CHANNELS

STOCK NO.99-3193L

OPERATING INSTRUCTIONS

SPECIFICATIONS

FREQUENCY RANGE	26.965 to 27.255 MC (channel 1-23)
NUMBER OF CHANNELS	3
FREQUENCY TOLERANCE	Within 0.005%
OPERATING FREQUENCY	Supplied with one set of crystals for channel 10. (27.075 MC) in position A. May be operated on any other channel by inserting crystals in position B and C sockets.
TRANSMITTER	Meets FCC reg. Part 95.
	Crystal controlled, amplitude collector modulated
POWER INPUT	1.5 Watt input to final RF power amplifier
MODULATION	High level push-pull modulator with RANGE BOOST
RECEIVER	Crystal controlled superheterodyne with RF amplifier and Noise Limiter
SENSITIVITY	50 mW or more at 1 μ V input
	1 μ V for 10 dB $\frac{S+N}{N}$ or better
BAND WIDTH	6 KC less than 6 dB
SELECTIVITY	± 10KC more than 20 dB
SQUELCH RANGE	1 μ V to 100 μ V
AGC FIGURE OF MERIT	More than 60 dB
AUDIO OUTPUT	Maximum more than 500 mW
ANTENNA	57 inch telescoping
POWER SUPPLY	12-15 volts DC
BATTERY DRAIN	Transmit time unmodulated 170 mA
	Transmit time 100% modulated 250 mA
	Receive time Squelch on 20 mA
	Receive time maximum volume 100 mA
SEMI-CONDUCTORS	2 SC F5 Transmit oscillator
	2 SC F6 Transmit final RF power amplifier
	2 SC F14 Receive RF amplifier
	2 SC F11 Mixer
	2 SC F11 Local oscillator
	2 SC F11 1st IF amplifier
	2 SC F11 2nd IF amplifier
	2 SC F11 1st Squelch amplifier
	2 SD F1 1st AF amplifier
	2 SB F1A 2nd AF amplifier
	2 SB F2, 2 SB F2 AF power amplifier/modulator
	1 S 446 Receive Detector/AGC
	1 S 446 RANGE BOOST
	1 S 446 Automatic Noise Limiter
	FV-23 P-RF meter Rectifier
	FV-23 TR1 Protector
	FV-24 Zener diode

DIMENSION	8 10/16"Hx3 3/4"Wx1 11/16"D
WEIGHT	1 lb. 13 ozs. (including 10 batteries)

ACCESSORIES

Included with DYNA-COM-2A

1	shoulder strap
10	99-6258 1.5 volt battery cells
1	transmit crystal channel 10
1	receive crystal channel 10
1	instruction manual

Optional

External power supply DYNA-PACK 99-3101

1	low impedance dynamic earphone

DESCRIPTION

The LAFAYETTE DYNA-COM-2A is a compact hand held 3 channels transceiver designed to operate with an input of 1.5 watts to the final RF power stage. It is intended for use in class D Citizens Radio Service under conditions prescribed in Part 95 of the FCC Rules and Regulations.

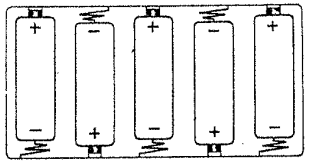
This requires a simple licensing procedure and permits operation on channel 1 through 23. Houses in a light metal case, the DYNA-COM-2A comprises a miniature transistorized transmitter and receiver . . . . both crystal controlled for precise dependable operation. The multi stage transmitter is equipped with RANGE BOOST circuttry for greater "talk power".

The sensitive superheterodyne receiver with RF amplifier includes many features . . . . . an efficient Squelch control circuit which quiets the receiver when a signal is not being received, Automatic Gain Control to prevent overloading on strong signals and maintain uniform sound output and Automatic Noise Limiter to reject electrical noise from being heard in the speaker.

BATTERY INSTALLATION

Remove the transceiver from its leather case. Using a coin as a screw driver, turn the large rear cover holding screw in a counter clockwise direction and remove the cover. Install 10 " AA " size penlight cells per instructions in battery holder compartment as shown Fig. 1.

Fig.1. Position of ordinary zinc carbon, alkaline or nickel cadmium cells.



IMPORTANT: Chemical action of weak or exhausted batteries may cause possible damage to battery holder contacts or compartment.

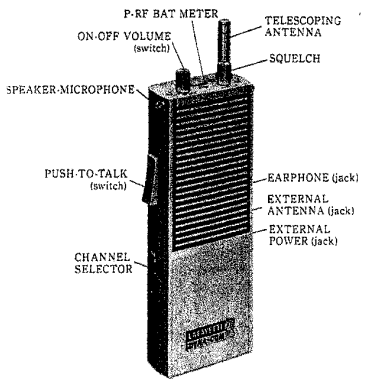
Therefore do not leave weak or exhausted batteries in the holder, especially if transceiver is not used or stored for a long period of time.

Only one layer of cells is shown. Position cells in the other side of the holder in the same way.

OPERATING INSTRUCTIONS

GENERAL OPERATION

1. Place the CHANNEL SELECTOR in position A. (unit is supplied with one set of crystals installed in position A. Crystals for other channels may be installed in position B and C.)
2. Extend the telescoping antenna to its full length.
3. Turn the SQUELCH control knob fully counter-clockwise.
4. Turn the SW-VOL knob clockwise. A slight mechanical click will be heard at which time power is turned on. In the absence of a signal, a hissing (background) sound will be heard, increasing in intensity as the VOLUME control is advanced.
5. To transmit, hold the transceiver approximately 6 to 8 inches from your lips and fully depress the PUSH-TO-TALK switch.
   Speak clearly and in a normal tone of voice toward the SPEAKER-MICROPHONE. When you have completed your message, release, pressure on PUSH-TO-TALK switch. The unit is now in receive mode and volume of incoming signal may be adjusted by varying position of the VOLUME control.
6. The VOLUME control adjusts the level of the incoming signal only and does not affect the strength or modulation of transmission.
   When one unit is transmitting, it is not possible for this unit to receive at the same time. Therefore, do not attempt to talk until the station has finished transmitting.
   Various distances between lips and SPEAKER MICROPHONE should be tried to determine which gives you best results. It is not necessary to shout.
   Always extend antenna to full length for best receiving as well as transmitting range.



   Keep antenna away from any metallic or other object that might absorb or reflect the radio frequency energy.
7. If transceiver has been used in the rain, wipe the antenna thoroughly before collapsing same. To prevent bending the slim top section of the antenna, collapse the larger diameter lower sections first, then the remainder, with the slim top section pushed in by pressing on the tip of the index finger.
8. To turn unit off, rotate SW-VOL knob counter-clockwise, until the power switch click to the OFF position.

SQUELCH CONTROL

The SQUELCH control is used to quiet the receiver when a signal is not being received thus eliminating annoying back ground noise. With the SQUELCH control maximum counter-clockwise and the VOLUME control on fully, background noise will be heard in the speaker.

As the SQUELCH control is advanced, the noise in the speaker is quieted, or cut off. The receiver will now be quiet until a station "calls-in" and the received signal "breaks through" the SQUELCH and is heard.

As the SQUELCH control is turned further clockwise it takes a stronger signal to break through.

Normally the SQUELCH knob should be advanced just to the point where background noise is cut off.

As the units move apart and signals become weaker, it may be necessary to readjust the SQUELCH control.

To achieve maximum possible range, and when signals are extremely weak the SQUELCH control should be set fully counterclockwise.

RANGE-BOOST

Special circuitry increases the modulation density in the sidebands and increases the average audio in your signal, permitting it to be heard under conditions which might otherwise make its reception impossible. It is not necessary to should or raise your voice since this will not increase the range of your transmission in any way.

EXTERNAL ANTENNA

The DYNA-COM-2A is equipped with a jack EXT. ANT for connecting of an external 50 ohms antenna. Such an arrangement will increase the operating range considerably, especially if the antenna is a full length antenna designed for base or mobile use.

EXT.PWR JACK

The EXT. PWR jack can be used for connecting an external battery source of 15 volts DC or AC adaptor.

When this jack is used, the internal battery function of the unit is automatically disconnected when the plug is inserted.

EARPHONE OPERATION

For private listening or if the surrounding noise level is high, an earphone may be used. Inserting phone cord plug of same into E. PHONE jack disables the speaker when the PUSH-TO-TALK switch is in the listen position.

BATTERY/P-RF INDICATOR

The BATTERY INDICATOR indicates battery voltage when the unit is turned on. When indicator is in green area, battery voltage is normal.

Yellow indicates voltage is on the border line and if rechargeable batteries are used, they should be recharged.

Red indicates battery voltage is low and batteries should be replaced or recharged.

In transmit mode the meter will indicate RF power in the antenna circuit. Always operate unit with antenna fully extended.

FREQUENCY OPERATION

The CHANNEL SELECTOR enables you to choose one of three frequencies. As mentioned previously, one set of crystals for channel 10 operation is supplied, installed in position A crystal sockets.

To add the second and third channels, refer to LAFAYETTE catalog.

Specify stock numbers for the receive and transmit crystals as well as the channel (1-23) desired.

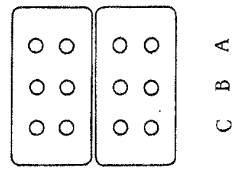
To install crystals, remove the rear cover of the transceiver and insert the transmit crystal into the dual pin socket marked T-B and T-C.

Insert the receive crystals into the dual pin socket marked R-B and R-C.

The crystals installed in position A are also of the plug in type and may be replaced with those of any other channels.

Before installing rear cover, make sure that the receive and transmit crystals are in the correct sockets.

If reversed, the unit will not receive or transmit on either the same or correct channel.



CRYSTAL POSITION

CRYSTAL FREQUENCY CHART

CHANNEL NO.	FREQ.(MC) TRANSMIT CRYSTAL	FREQ.(MC) RECEIVE CRSYTAL	CHANNEL NO.	FREQ.(MC) TRANSMIT CRYSTAL	FREQ.(MC) RECEIVE CRYSTAL
1	26.965	26.510	13	27.115	26.660
2	26.975	26.520	14	27.125	26.670
3	26.985	26.530	15	27.135	26.680
4	27.005	26.550	16	27.155	26.700
5	27.015	26.560	17	27.165	26.710
6	27.025	26.570	18	27.175	26.720
7	27.035	26.580	19	27.185	26.730
8	27.055	26.600	20	27.205	26.750
9	27.065	26.610	21	27.215	26.760
10	27.075	26.620	22	27.225	26.770
11	27.085	26.630	23	27.255	26.800
12	27.105	26.650	—	—	—

Although receive crystals are 0.455 MC lower than transmit crystals, the receiver and transmitter both tune to the channel frequency shown in column "FREQ (MC) TRANSMIT CRYSTAL."

BATTERY REPLACEMENT

When battery replacement becomes necessary, any of the batteries listed may be used.

MFR'S NO	STANDARD DRY CELL	ALKALINE CELL	MERCURY CELL	NICKEL CADMIUM CELL
LAFAYETTE STOCK NO	99-6258	32-4886	33-1450	32-4740
JIS	UM3,UM3A	.....	.....	
EVEREADY	915	E-91	E-9, E 502	
BURGESS	Z	AL9	HG 9	
RCA	VS 034	VS 1334	VS 313	
RAY-O-VAC	7R or 7LP	.....	15M	
MALLORY	M-15F	MN-1500	ZM-9,DM-9N	

MERCURY CELLS have opposite polarity to standard or alkaline cells and MUST BE INSERTED IN THE BATTERY HOLDER IN THE OPPOSITE DIRECTION TO THAT OUTLINED IN THE HOLDER.

LICENSING REQUIREMENTS

You are not allowed to transmit unless you are licensed by the FCC either as an individual licensee or operating as an additional station under the license of a station that has been granted permission by the FCC for additional stations. Please refer to FCC Rules and Regulations Parts 95 section 95.87 also FCC Form 505 Item 8. Fill out TRANSMITTER IDENTIFICATION CARD, Form 452-C and attach same to the inside of rear cover.

SERVICE AND MAINTENANCE

If trouble is experienced with this unit, please check the following:

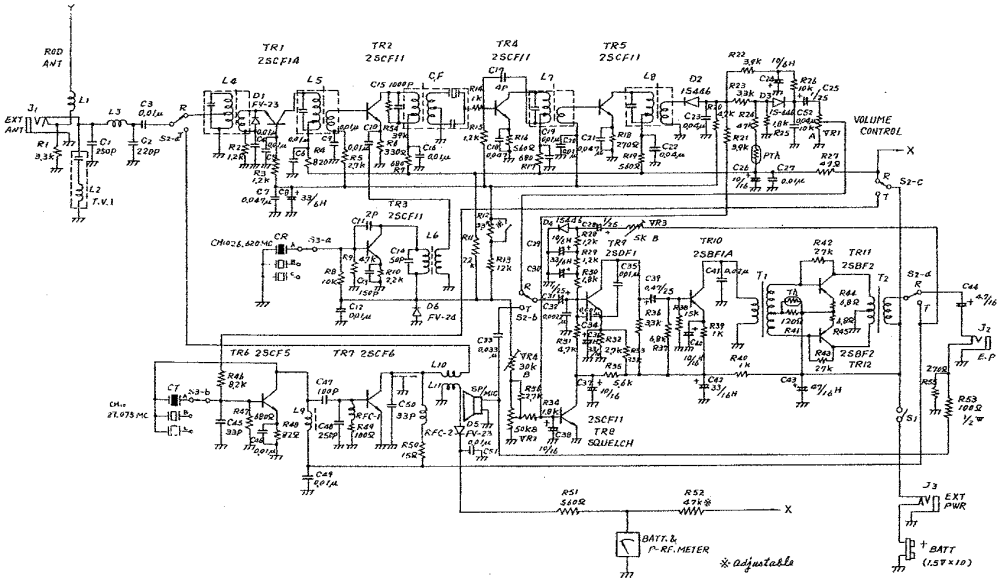
(1) Test the battery for weak or discharged condition.
Replace battery cells if necessary. Make sure that battery cells are correctly inserted with regard to polarity.

(2) If transmission is intermittent or no transmission, make sure that you are depressing PUSH-TO-TALK switch fully.

(3) Make sure that crystals are firmly seated in the correct T and R sockets.

(4) If checks above fail to disclose the trouble, do not attempt repairs or adjustments yourself.
The unit should be serviced only by a qualified radio technician.
Whenever possible, we recommend that you return a defective unit to the store from which it was purchased.

SCHEMATIC DIAGRAM DYNA-COM 2A



COMPONENT PARTS LAYOUT