

49 Engine

FIRE DEPARTMENT

OF

BALTIMORE

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RADIO FACILITIES

AND

MANUAL OF RADIO PROCEDURE

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NOVEMBER 1, 1952

FIRE DEPARTMENT
RADIO FACILITIES AND
MANUAL OF RADIO PROCEDURE

1 - RADIO FACILITIES

- 1.1 The radio facilities of the department comprise a two-way F. M. radio telephone system, including two 250-Watt base station transmitters, two control consoles, and approximately 135 two-way mobile units.
- 1.2 The No. 1 base station transmitter is located in the Penthouse of the Mathieson Building, is controlled from Fire Alarm Office, and operates on a frequency of 154.31 Mc.
- 1.3 No. 2 base station transmitter is located at the quarters of Engine Company No. 52, is also controlled from Fire Alarm Office, and also operates on a frequency of 154.31 Mc. This will be an alternate station, operating only when No. 1 transmitter is inoperative.
- 1.4 Pick-up receivers are located at both of the above locations and operate on a frequency of 154.07 Mc.
- 1.5 Two-way Mobile Units, operating on a transmitter frequency of 154.07 Mc., and a receiver frequency of 154.31 Mc. will be installed on Officers' cars, Engine Companies, Truck Companies, Hose Companies, Fire Boats, Ambulances, and most Fire Alarm Cars.
- 1.6 A tone signal is provided on Base Station Transmitters. Upon hearing this tone signal, mobile unit operators will stand-by for receipt of special transmissions.

2 - OPERATING INSTRUCTIONS - REGULATIONS

- 2.1 Department radio shall be used for the transaction of official business by authorized persons. Fire Alarm Circuits or telephones will be used, however, when their use may be more practical or effective.
- 2.2 All operations of the Fire Department radio system shall comply with the regulations of the Federal Communications Commission.
- 2.3 The Dispatcher at the control console at Headquarters shall be responsible for clearing traffic as quickly as possible, for maintaining discipline on the air, and for determining the order of priority on simultaneous transmissions.
- 2.4 All conversations shall be brief and concise and all unnecessary repetition avoided. Personal greetings or pleasantries will not be allowed. All operators will be courteous, but expressions of courtesy such as "Thanks" and "Please" are unnecessary and shall be avoided in the interest of brevity.
- 2.5 Indecent, obscene or profane language is absolutely PROHIBITED.

- 2.6 It is preferable that lengthy messages be transmitted by telephone, if such facilities are available.

3 - BASIC PRINCIPLES OF RADIO COMMUNICATION PRACTICE

- 3.1 The F.M. radio system is of such design that only one conversation may be carried on at any one time between the control point and a mobile unit. Messages must be brief, definite, comprehensive and clearly spoken.
- 3.2 Words must be pronounced carefully. Shouting or loud talking cause distorted sounds that are difficult to understand. Good reception will result if the following instructions are complied with:
- a - Keep a natural conversational rhythm.
 - b - Speak steadily at medium speed.
 - c - Do not hurry over less important words.
 - d - Speak each word with equal volume.
 - e - Speak with the lips not more than half an inch from the microphone.
- 3.3 Components of a complete message consists of five parts, viz; the contact call; the response; the message; verification of the message; the acknowledgement.
- a - Example:
 - Control: -- Headquarters to Engine 40.
 - Mobile: -- Engine 40.
 - Control: -- Correction on the address. The correct address is 4618 Liberty Heights Avenue.
 - Mobile: -- Correct address is 4618 Liberty Heights Avenue.
 - Control: -- O.K. Engine 40. Time 10:44.

4 - USE TO BE MADE OF RADIO FACILITIES

4.1 CONTROL STATION DISPATCHERS -- INSTRUCTIONS

- A - Announcement of box and silent alarms shall be announced over the radio (twice).
- B - If a definite location of an incident is known, such address shall be announced when it would aid the units responding.
- C - Location of boxes, if on first alarm, shall be announced.
- D - Box recalls shall be announced.
- E - Dispatchers will direct movements of all units when necessary, when out of their respective quarters.
- F - Dispatchers will return units to quarters if not needed at incidents,

when so notified by Commanding Officer of first company or Battalion Chief responding.

- G - Dispatchers may put units in service on Independent and Communication Circuits at their discretion when notified that unit is available for service.
- H - Dispatchers will notify units that are available for service if units are to respond to incidents given out on the air.
- I - Dispatchers shall notify units at incidents when field headquarters has been established, giving identification of unit acting as field headquarters.
- J - Dispatchers shall announce the time at the conclusion of each message.
- K - Dispatchers shall give station identification at least once in every 30 minutes of transmission time.
- L - Dispatchers shall conduct tests with mobile units as indicated in section 8.

5- MOBILE OPERATORS - INSTRUCTIONS

- 5.1 Radio on apparatus is independent of the ignition switch. Radio switch must be in "off" position except when the radio is to be used to receive or transmit. Radio switch must be placed in the "on" position when leaving quarters.
- 5.2 Radio should be turned off when motor is started. If the radio is to be turned on for more than five (5) minutes, the motor must be started and run with throttle set at higher than idling speed in order that ammeter registers a charge.
- 5.3 A radio unit must be allowed a 30-second warm up before a call is made.
- 5.4 To send a message from a vehicle, listen to be sure that no other communication is in progress, place microphone to lips, then press button on microphone and announce name and number of unit, then release button and await the Dispatcher's acknowledgement. When acknowledgement is received, press button at once, promptly transmit message and release button. The call will be considered terminated when the Dispatcher acknowledges receipt of messages and announces the time.
- 5.4^a If the first call is not acknowledged within ten (10) seconds, again press button and repeat call. Not more than three (3) such calls shall be made. If the third call is not acknowledged by the Dispatcher, it is presumed that the radio is inoperative, and the message should be transmitted via a box circuit or telephone, whichever is applicable.

- 5.6 When responding to alarms, radio shall be turned on and all mobile unit operators shall be alert to check all radio transmissions as to locations or messages concerning respective unit.
- a - Upon arrival at location, radio will remain on until field headquarters has been established and Dispatcher has announced the unit so acting. Then all, excepting units of Marine Division, and field headquarters, will turn off radios.
 - b - When returning to quarters, radio shall be turned on and Dispatcher notified that unit is available for service. Mobile unit operators will be alert for alarms or messages transmitted and to which the unit is directed to respond.
 - c - Upon return to quarters, unit shall be placed in service in the usual manner.
- 5.7 Units transferring, when leaving quarters, shall turn radio on and mobile unit operator will be alert for messages transmitted and to which the unit is directed to respond.
- 5.8 Upon arrival at silent alarm incident, at least one unit will keep radio on.
- 5.9 Battalion Chief who is first to arrive at an incident shall designate a unit to act as field headquarters, notifying Dispatcher which unit is so designated.
- a - Dispatcher will be given a preliminary report, by officer in charge of conditions at incidents, and whether other units responding are required.

6 - RADIO CONTROL HEAD IN MOBILE UNITS

- 6.1 Green pilot light indicates that receiver is "on".
- 6.2 Red pilot light indicates that transmitter is "on".
- 6.3 Squelch dial is used to squelch unwanted noise and provide quiet operation of receiver. To eliminate noise, turn dial slowly clockwise until receiver is quiet. The squelch control should be moved ~~only under~~ unusual circumstances.
- 6.4 "OFF-VOLUME" dial turns receiver "on" and also controls volume.
- 6.5 An extra microphone hanger is provided on dash and can be used ~~when~~ frequent operation of transmitter is desired.

7 - GENERAL INFORMATION

7.1 For brevity and standard phraseology, code words will be used for types of messages frequently used. The following code will be used when applicable:

<u>CODE WORD</u>	<u>MEANING</u>
Acknowledge	Let me know that you have received and understood message.
Correction	An error has been made-- The correct version is _____
Available for Service	Unit is subject to call if required
O. K.	Message is understood
Repeat	Repeat your last message
Stand-by	Listen but do not transmit until directed to do so.
Relay to	Give this message to _____.

8 - TESTS

- 8.1 Control Station Dispatchers will make routine tests as follows:
- a - Announce station identification at least once in every 30 minutes of transmission time.
 - b - Conduct tests with Fire Boats at 8 A. M. daily.
 - c - Conduct tests with various Mobile units at 9 A. M.

8.2 Immediately after 8 A. M. Alarm Circuit Test, radios of Fire Boats will be turned on and two-way test will be made by Control Station with Fire Boats in numerical order.

8.3 Immediately after 9 A. M. Communication System Test, Mobile radio units in quarters (excepting Fire Boats) will be turned on for receipt of station identification. This is a test for mobile receivers.

In addition, two-way tests will be conducted with various mobile units in the following sequence:

<u>DATE OF MONTH</u>	<u>UNITS TO BE TESTED TWO-WAY</u>
1st., 11th., 21st.	ENGINES 1, 11, 21, 31, 41, 51 TRUCKS 1, 11, 21 HOSE 1, D.C. 1, B.C. 1
2nd., 12th., 22nd.	ENGINES 2, 12, 22, 32, 42, 52 TRUCKS 2, 12, 22 HOSE 2, D.C. 2, B.C. 2
3rd., 13th., 23rd.	ENGINES 3, 13, 23, 33, 43, 53 TRUCKS 3, 13, 23 HOSE 3, B.C.3, B.C. 23

<u>DATE OF MONTH</u>	<u>UNITS TO BE TESTED TWO-WAY</u>
4th., 14th., 24th.	ENGINES 4, 14, 24, 34, 44, 54 TRUCKS 4, 14, 24; B.C. 4 and B.C. 24
5th., 15th., 25th.	ENGINES 5, 15, 25, 35, 45, 55 TRUCKS 5, 15, 25 HOSE 5, D.C. 5, B.C. 5 and B.C. 25
6th., 16th., 26th.	ENGINES 6, 26, 36, 46, 56 TRUCKS 6, 16, 26 B.C. 6
7th., 17th., 27th.	ENGINES 7, 17, 27, 37, 47, 57 TRUCKS 7, 17, 27 B.C. 7
8th., 18th., 28th.	ENGINES 8, 18, 28, 38, 58 TRUCKS 8, 18, 28 B.C. 8
9th., 19th., 29th.	ENGINES 9, 19, 29 TRUCKS 9, 19, (29) B.C. 9, C. E.
10th., 20th., 30th.	ENGINES 10, 20, 30, 40, 50 TRUCKS 10, 20 B.C. 10

NOTE: Special Tests will be made on February 28th., or 29th., and on 31st. day of other months.

9 - SAMPLE MESSAGES

9.1 The following are examples of messages that can be transmitted:

- a - Control: Headquarters to Engine 40.
Mobile: Engine 40.
Control: Respond to 884 Box, Clifton Avenue and Rosedale Street.
Mobile: Responding to 884 Box, Clifton Avenue and Rosedale Street.
Control: O.K. Engine 40. Time 6:22.

- b - Mobile: Battalion Chief 8 to Headquarters.
Control: Battalion Chief 8.
Mobile: Strike out 815 Box.
Control: Strike out 815 Box. Time 6:22.
Mobile: O.K. Headquarters.

- c - Mobile: Battalion Chief 8 to Headquarters.
Control: Battalion Chief 8.
Mobile: Strike out Second Alarm Box 815.
Control: O.K. Second Alarm Box 815. Time 6:24.
Mobile: O.K. Headquarters.

- d - Mobile: Battalion Chief 8 to Headquarters.
Control: Battalion Chief 8.
Mobile: Send two ambulances to 815 Box.
Control: O.K. Two ambulances to 815 Box. Time 6:26.
Mobile: O.K. Headquarters.
- e - Mobile: Battalion Chief 8 to Headquarters.
Control: Battalion Chief 8.
Mobile: Send Engine No. 1 to 815 Box.
Control: O.K. Engine No. 1 to 815 Box. Time 6:30.
Mobile: O.K. Headquarters.
- f - Mobile: Battalion Chief 8 to Headquarters.
Control: Battalion Chief 8.
Mobile: Send nearest Engine Company to 815 Box.
Control: O.K. Will send Engine Company to 815 Box. Time 6:35.
Mobile: O.K. Headquarters.
- g - Mobile: Engine 33 to Headquarters.
Control: Engine 33.
Mobile: Notify Utilities of manhole fire at Pratt and Central.
Control: O.K. Manhole fire Pratt and Central. Will notify.
Time 7:27.
Mobile: O.K. Headquarters.
- h - Mobile: Ambulance 3 to Headquarters.
Control: Ambulance 3.
Mobile: Notify St. Joseph's Hospital to alert accident room.
Control: O.K. Will notify St. Joseph's. Time 8:52.
Mobile: O.K. Headquarters.
- i - Mobile: Engine 33 to Headquarters.
Control: Engine 33.
Mobile: Have automobile fire at 815 Box -- Engine 33 will handle.
Return other units.
Control: O.K.--will return other units. Time 9:20.
Mobile: O.K. Headquarters.
- j - Control: Units responding to 815 Box return to quarters.
Time 9:21.

(NOTE: Units returning will report themselves by radio as being available for service. Recalls to be transmitted over Fire Alarm Box Circuits.)

MANUAL OF RADIO PROCEDURE - ADDITIONS

Section 4.1

F - Dispatchers will return units to quarters if not needed at incidents when so notified by Commanding Officer of first company or Battalion Chief responding, or upon notification by Battalion Chief to return units due to false alarm.

Section 9.1

J - Control: Units responding to 815 Box return to quarters. Engine 33 will handle.

(Or): Units responding to 815 Box return to quarters. False Alarm.

Mobile (B.C.) Put Battalion Chief 8 in service.

Control: O.K., Battalion Chief 8 in service. Come in Engine 19.

Mobile (E-19) Engine 19 available for service.

Control: Engine 19 available. Come in Engine 31.

Mobile (E-31) Engine 31 available for service.

Control: Engine 31 available. Come in Truck 5.

Mobile (T-5) Truck 5 available for service.

Control: Truck 5 available. Time 9.21.

Note: Control will contact each unit in order of assignment response.

January 12, 1954.

MANUAL OF RADIO PROCEEDURE - ADDITION

Section 2.7

Mobile radio transmitters are not to be used within fifty (50) feet of any area where electric dynamite caps are known to be stored or in use.

April 8, 1954.

MANUAL OF RADIO PROCEDURE - REVISED

Section 4.1

F - Dispatchers will return units to quarters if not needed at incidents when so notified by Commanding Officer of first company or Battalion Chief responding. First unit arriving at location of incident and there is no evidence of fire, and a false alarm is suspected, they will immediately notify dispatcher by radio.

Mobile (E-19) To Headquarters.

Control: Engine No. 19.

Mobile (E-19) Signal 30 Box 815.

Control: All companies responding Box 815 - Signal 30.

Procedure after Signal 30 for companies concerned:

Companies will continue responding to Box but comply with all traffic regulations and not under emergency conditions.

Battalion Chief will be responsible for returning units to quarters after investigation, and satisfied that same is a false alarm.

Section 9.1

J - - Control: Units responding to 815 Box return to quarters. Engine 33 will handle.

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Mobile (B.C.) Put Battalion Chief 8 in service.

Control: O.K., Battalion Chief 8 in service. Come in Engine 19.

Mobile (E-19) Engine 19 available for service.

Control: Engine 19 available. Come in Engine 31.

Mobile (E-31) Engine 31 available for service.

Control: Engine 31 available. Come in Truck 5.

Mobile (T-5) Truck 5 available for service.

Control: Truck 5 available. Time 9.21.

Note: - Control will contact each unit in order of assignment response.

Revised:
February 10, 1956.

BALTIMORE CITY FIRE DEPARTMENT

September 5, 1958.

DEPARTMENTAL ORDER NO. 6-58.

Subject: Radio Procedure.

Information: Mobile Units desiring to transmit messages of an URGENT nature to Headquarters, may use the word "URGENT" following their proper identification.

Example:

"BATTALION CHIEF NO. 4 TO HEADQUARTERS -
URGENT".

Radio Dispatchers will give priority to calls of this nature.

By order,

MICHAEL H. LOTZ,

Chief of Fire Department.