

## CHAPTER 10

# DIGITAL MESSAGE DEVICE SUPPORTED

*The MBC transmits and receives digital communications by use of the digital message device, which is a technological advancement for the FDC. This ability reduces the mission processing time and provides a more secure communication network.*

### 10-1. APPLICATION

All DMD-supported missions occur in response to the receipt of an FO message. The input data for the mission are supplied by digital transmission from the FO's DMD and are automatically entered into the MBC memory.

- a. To make a digital communications check, the operator performs the following:
  - (1) Presses the SELF-TEST switch. The MBC displays: **MICR SW DSP MOD**. The sequence indicator blinks, indicating another choice is available.
  - (2) Presses the SEQ switch. The MBC displays: **XMIT TEST MSG**. Selects **XMIT**. The MBC displays: **ROUTE: \*XMIT**. (Route is found in the SOI.)
  - (3) Enters the route. Selects **XMIT**. The MBC displays: **XMITING**.
- b. The MBC transmits the test message to the DMD. When the DMD accepts the message, the DMD transmits an acknowledgement (ACK). If the message is not accepted, the MBC displays: **NO RESP RETRY 1**. The operator should try to retransmit the message at least three times. If the message is still not accepted, the communication system should be repaired.

### 10-2. COMMUNICATIONS

The MBC can store a maximum of three incoming digital messages. Incoming messages are of two types: fire mission messages and information only messages. When the message indicator is lit or the audio alarm sounds and the MSG switch is pressed, the MBC displays the first line of the first message received. When a message is a fire mission, the MBC automatically assigns a mission and target number, unless three active missions have already been stored. In this case, the MBC displays: **NO AVAIL MSN** and discards the message.

- a. **Receiving Messages.** The flashing MSG indicator tells the operator that a message has been received. To view the message, he presses the—
  - (1) *MSG switch.* The MBC displays a heading to identify the type of message. If the type of message is not a fire request, such as **FO LOC**, the applicable data are automatically stored in the correct menu.
  - (2) *SEQ switch.* The MBC displays the FO and net identification.
  - (3) *SEQ switch.* The FO authentication code is displayed. The operator validates the code in the authentication table.
  - (4) *SEQ switch.* The operator reviews each line of the message.

**NOTE:** After the FDC order has been completed, the operator clears the message from the message buffer. If the message is a fire request, the mission is automatically activated. The operator must assign the mission using the WPN/AMMO switch and compute the firing data.

b. **Transmitting Messages to Observer.** When the MBC is DMD-supported, the FO must receive an MTO and shot/splash. To prepare and send an MTO, the operator presses the—

(1) *XMIT switch.* The operator selects **MTO** using the blue display key directly below the flashing cursor on MTO. The mission and target numbers entered by the MBC are displayed.

(2) *SEQ switch.* The adjusting weapon is displayed.

(3) *SEQ switch.* The operator enters the number of volleys to be fired.

(4) *SEQ switch.* The number of weapons (available for FFE) firing are displayed. The display should indicate only one weapon when adjusting.

(5) *SEQ switch.* The probable error is displayed as **PR ERR: NOT GVN** (probable error: not given).

(6) *SEQ switch.* The ADJ shell/fuze is displayed.

(7) *SEQ switch.* The shell/fuze for the first round of the FFE is displayed. (This was received in the fire request the FO sent.)

(8) *SEQ switch.* The shell/fuze for subsequent rounds of the FFE is displayed.

(9) *SEQ switch.* The operator selects the proper method of engagement: **HI** (high angle) or **DC** (danger close).

(10) *SEQ switch.* The method of control **CON: WR AF** is displayed.

(11) *SEQ switch.* The time of flight is displayed.

(12) *SEQ switch.* The angle T is displayed.

(13) *SEQ switch.* The mission number is displayed.

(14) *SEQ switch.* The FO's identification is displayed. The operator enters the appropriate route.

(15) *SEQ switch.* The operator enters the authentication code. He selects the flashing asterisk (\*) to transmit the MTO to the FO. When the message is received, the MBC displays: **ACK**.

c. **Transmitting Shot/Splash.** To transmit the shot/splash to the FO, the operator presses the—

(1) *XMIT switch.* The operator selects **CMD**. The mission and target numbers are displayed.

(2) *SEQ switch.* The type of firing information to send is displayed. The MBC defaults to **SHOT**. Splash is automatically transmitted about five seconds before the round impacts. The operator may decide to transmit only splash by changing the display from **SHOT** to **SPLASH**.

(3) *SEQ switch.* The operator selects **DIGITAL** when the MBC is DMD-supported.

**NOTE:** The operator selects **MANUAL** for the MBC to provide the operator with an audio warning when to orally transmit the splash. If manual is selected, the MBC displays: **\*SHOT**. He presses the asterisk (\*) when the round is fired. The MBC provides the operator with an audio warning when to transmit the splash. The MBC displays: **READY** when any key is pressed.

(4) *SEQ switch*. The FO identification is displayed. The operator must enter the route number.

(5) *SEQ switch*. The operator enters the authentication (COMSEC) code from the SOI to transmit SHOT.

(6) *SEQ switch*. The operator enters the authentication (COMSEC) code from the SOI to transmit SPLASH.

(7) *SEQ switch*. The MBC displays: **\*XMIT**. When the command to fire is given, the operator presses the asterisk (\*), and the shot is automatically transmitted to the FO. **XMITTING** is displayed until it is time to send the splash. The splash is momentarily displayed, and then **XMITTING**. ACK is received when the DMD accepts the message.