MOBILE RADIO

INSTALLATION INSTRUCTIONS FOR MASTR® II

UNIVERSAL ENCODER AND DECODER CABLES

CONTENTS

DESCRIPTION

General Electric Universal Encoder and Decoder cables are used to interconnect Digital, Type 90, and Type 99 Tone equipment with the Control Unit for MASTR® II Mobile Radio. Depending on the equipment configuration, a Universal Encoder, Decoder or an Encoder/Decoder cable is required. The Encoder/Decoder cable consists of a modification kit and the Encoder and Decoder cables. These two cables are interconnected electrically via the modification kit to form the Encode/Decode Cable.

APPLICATIONS

Each Universal Encoder and Decoder cable is identified by an option number. Table 1 below identifies each cable and provides application data to assure that the correct cable is used to interconnect the tone equipment with the MASTR II control unit. It also identifies the Type 90 encoders that are not electrically compatible (B11X, B12X, & B13X) with MASTR II control units and the microphone and handset/hookswitch options that are used with the decoders.

In applications where the Digital Encoder (Secode) is used, a new prewired cable (19C320901G1) is supplied with each encoder. This cable mates with the universal encoder cable to interconnect the encoder and control unit. Digital Encoders equipped with cables other than PL 19C320901G1 must have that cable replaced.

Each cable is keyed to assure proper connections; terminal pins/connectors are identified; and all encoder cables are identified by a red band around the plug end. Figure 1 is combination Schematic and Outline Diagram containing connections data for each type cable.

INSTALLATION

Figure 1 contains the wiring diagrams and identifies the terminals and signals/voltage for each cable and wire. Always be sure to connect the cable strain relief as shown.

Universal Encoder Cable (19B219778G1)

1. Connect the Encoder cable between the vehicle systems plug P701 on the MASTR II Control Unit and the Encoder. No printed wire runs are cut.

Universal Decoder Cable (19B219910G1)

1. Refer to Maintenance Manual for Control Unit disassembly procedures to remove printed wiring board.

2. Remove printed wiring board 19D416737 and cut runs "C" and "H". Reassemble Control Unit.

INTERCONNECTING CABLES FOR MASTR II ENCODERS/DECODERS

OPTION	CABLE	PART NUMBER	INTERCONNECTS MASTR II CONTROL UNIT WITH	REMARKS
9031	UNIVERSAL ENCODER	19B219778G1	Type 90 Encoders - 4EH14B10, B11, B12 (B11M, B12M, B13M). Not compatible with 4EH14A10, A12, A14 (B11X, B12X, B13X) Digital Encoder - E14M, E15M, E16M (Not compatible with E14X, E15X, E16X)*	When converting a Secode digital encoder equipped with a bridging microphone cable (E14X, E15X, E16X) for use with a MASTR II radio, a cable 19C320901G1 is required to replace the existing bridging microphone cable.
1010	UNIVERSAL DECODER	19B219910G1	Digital Decoder Models 4EJ18A10, A11, A12 (S204, S205, S206) Type 90 Decoder Model 4EJ15A10 (T200) Type 99 Decoder Models 4EJ17A10, A11 (D22, D24)	OPTION 1010 is used with the following options: 9023 - Microphone/Hookswitch 19C320318G2 9025 - Handset/Hookswitch 19B219846G2 9028 - Noise cancelling Microphone/Hookswitch 19C320318G2
9032		19A129885G1 Kit	Equipment identified under options 9031 and 1010 above	This kit modifies options 9031 and 1010 to provide a universal Encoder/Decoder cable

* Secode encoder combinations E14X, E15X and E16X are used for applications other than MASTR II.

3. Connect Decoder Cable between the vehicle systems plug P701 on the Control Unit and the Decoder.

Universal Encoder/Decoder Cable Kit (19A129885G1)

The Universal Encoder/Decoder cable is assembled using the standard Universal Encoder and Decoder cables and Cable Kit 19A129885G1. The Encoder and Decoder cables are modified and re-assembled as directed below.

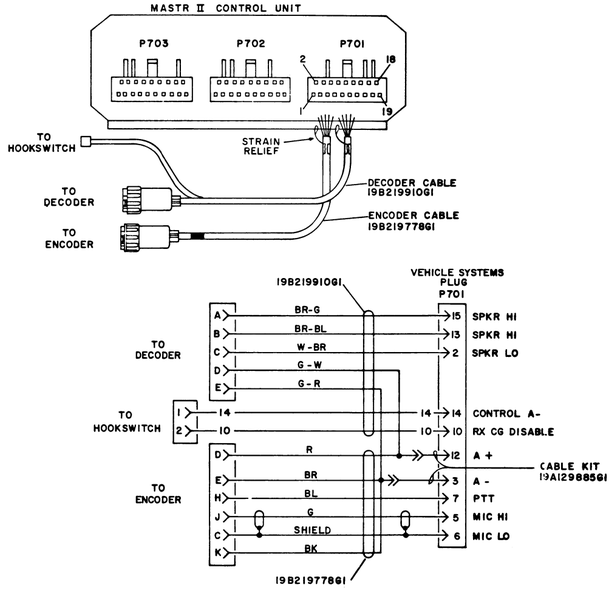
1. Remove contacts from green-white and green-red wires of Universal Decode Cable 19B219910G1.
2. Remove contacts from the red, black, and brown wires of Universal Encoder Cable 19B219778G1.
3. Cut two (2) inches from each wire identified in steps 1 and 2 above and strip 1/4 inch.
4. Refer to Universal Encoder/Decoder diagram 19C320746 and crimp wires into sleeve of Cable Kit 19A129885G1 as shown on diagram.
5. Perform a continuity check of newly assembled cable as shown below:

Check From:	To:
P701-3	"E" (on Decoder plug), and "E", "K" on Encoder plug
P701-12	"D" on both Encoder and Decoder plugs.

6. Refer to Maintenance Manual for control unit disassembly procedures to remove printed wiring board.
7. Remove printed wiring board 19D416737 and cut runs "C" and "H". Reassemble Control Unit.
8. Connect Encoder/Decoder cable between vehicle systems plug P701 and the encoder and decoder.

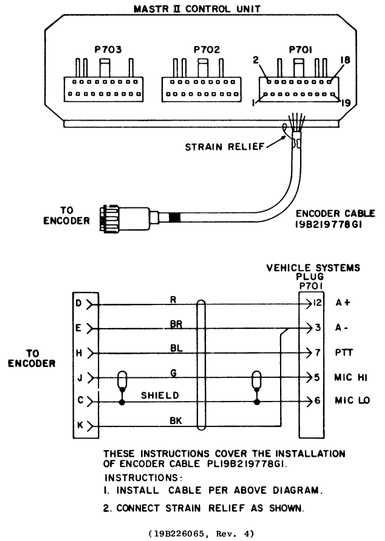
THESE INSTRUCTIONS COVER THE INSTALLATION OF DECODER CABLE PL19B219910G1, ENCODER CABLE PL19B219778G1, CABLE KIT PL19A129885G1.

1. REMOVE CONTACTS FROM 19B219910G1 GREEN WHITE AND GREEN RED WIRES AND FROM 19B219778G1 RED, BLACK AND BROWN WIRES. CUT OFF 2.00 INCHES ± .25 AND STRIP .25. CRIMP WIRES PER DIAGRAM INTO SLEEVE OF 19A129885G1 CABLE KIT.
2. ASM ENCODER AND DECODER CABLE AND CABLE KIT AS SHOWN IN DIAGRAM.
3. CONNECT STRAIN RELIEF AS SHOWN.



(19C320746, Rev. 4)

Universal Encoder/Decoder Cables 19A129885, 19B219910G1 & 19B219778G1 (Option 9032)



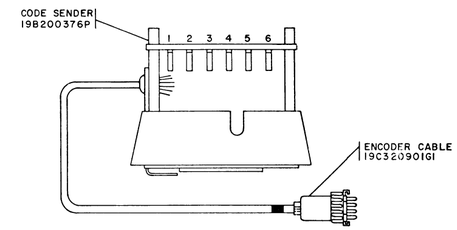
THESE INSTRUCTIONS COVER THE INSTALLATION OF ENCODER CABLE PL19B219778G1.

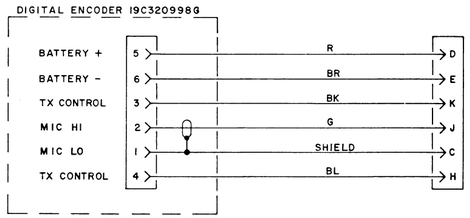
INSTRUCTIONS:

1. INSTALL CABLE PER ABOVE DIAGRAM.
2. CONNECT STRAIN RELIEF AS SHOWN.

(19B226065, Rev. 4)

Universal Encoder Cable 19B219778G1 (Option 9031)



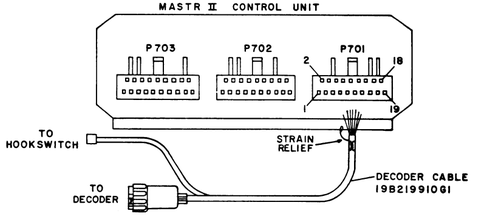


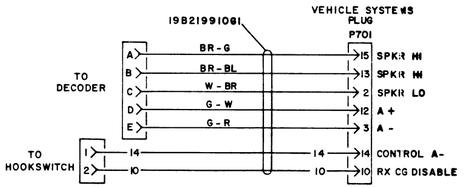
(19C320720, Rev. 3)

Digital Encoder 19C320998
(Includes Cable 19C320901G1)

THESE INSTRUCTIONS COVER THE INSTALLATION OF DECODER CABLE PL19B219910G1

1. ASM CABLE PL19B219910G1 AS SHOWN IN DIAGRAM.
2. CONNECT STRAIN RELIEF AS SHOWN.





(19C320745, Rev. 4)

Universal Decoder Cable 19B219910G1 (Option 1010)

SCHEMATIC & OUTLINE DIAGRAM

ENCODER AND DECODER INTERCONNECTION CABLES

(RC-2614B)

PARTS LIST

LBI-4706B

UNIVERSAL ENCODER AND DECODER CABLES

SYMBOL	GE PART NO.	DESCRIPTION
		EXTERNAL ENCODE CABLE 19B219778G1
	7489183P7	Connector, receptacle.
	19A116781P5	Contact, electrical: wire size No. 16-20 AWG; sim to Molex 08-50-0106.
	19A116781P6	Contact, electrical: wire size No. 22-26 AWG; sim to Molex 08-50-0108.
		EXTERNAL DECODE CABLE 19B219910G1
	7489183P7	Connector, receptacle.
	19A116781P5	Contact, electrical: wire size No. 16-20 AWG; sim to Molex 08-50-0106.
	19A116781P6	Contact, electrical: wire size No. 22-26 AWG; sim to Molex 08-50-0108.
	19B209288P12	Connector, receptacle: sim to Molex 1545R-1.
	19B209288P1	Contacts. (Used with 19B209288P12).
	19A129885G1	External Encode/Decode Cable Kit.
		SECODE ENCODERS (Includes cable 19C320901G1)
	19C320998G1	Secode Encode. 12 volt, 2805 Hz.
	19C320998G2	Secode Encode. 12 volt, 1500 Hz.
	19C320998G6	Secode Encode. 12 volt, 590 Hz.

 *COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

ORDERING SERVICE PARTS

Each component appearing on the schematic diagram is identified by a symbol number to simplify locating it in the parts list. Each component is listed by symbol number, followed by its description and GE Part Number.

Service parts may be obtained from Authorized GE Communication Equipment Service Stations or through any GE Radio Communication Equipment Sales Office. When ordering a part, be sure to give:

1. GE Part Number for component
2. Description of part
3. Model number of equipment
4. Revision letter stamped on unit

These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation or maintenance.

Should further information be desired, or should particular problems arise which are not covered sufficiently for the purchaser's purposes, contact the nearest Radio Communication Equipment Sales Office of the General Electric Company.

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