Keyloader Interface Kit BKR0587

INTRODUCTION

This manual describes the steps to load encryption keys from an APCO Project 25 compatible keyloader unit into a BKR portable radio. It also describes the steps to assign default transmit keys to channels, and to select non-default keys for transmit.

You should already know how to operate the keyloader unit. Consult the keyloader instruction manual if necessary.

EQUIPMENT REQUIRED

- Keyloader Interface Cable BKR0587
- Compatible Keyloader unit
- BKR radio equipped with encryption option

KEY LOADING

1. Attach the keyloader interface cable between the radio and the keyloader unit.
2. Turn the radio and the keyloader unit on.
3. Follow instructions provided with the keyloader unit to load up to 32 DES and/or AES encryption keys into the radio.

KEY ASSIGNMENT

Use the PC programming software from BKR0733 to configure the following parameters:

Global Settings

Encryption Options tab
1. Configure the radio's Encryption Key Pick List. Enter SLN's (Storage Location Numbers) in the table that correspond to the CKR's (Common Key References) entered into the keyloader unit for each key.
2. If desired, check the box to enable the 'Clear TX-Mode Warning Beep' so the radio will issue a warning beep when it is keyed up in clear mode.

Menus/Controls tab
1. Under 'Main Menu, configure the 'TX Secure' function for channels that allow switch-selectable transmissions (see *Sec column* below). The function can be assigned to the collar switch, a top toggle switch, or to the touchpad button menu. NOTE: It is recommended that TX Secure be assigned to the collar switch as it is pre-labeled for clear and encrypted selections.)
If all channels will be locked either encrypted or clear, the TX Secure function need not be programmed.
2. If keypad selection of encryption keys is desired, assign 'Picklist-KEY' to a programmable button or add it to the 'Used' box for menu selection.
3. If emergency key zeroization is desired, assign 'Zeroize Keys' to a programmable button or add it to the 'Used' box for menu selection.

Zone/Channel Settings

Sec column – configure each channel's transmit secure mode as:
   Clr: radio always transmits in clear mode on the channel
   Enc: radio always transmits in encrypted mode on the channel
   Sw: radio transmits according to the state of the 'TX Secure' switch

Key column – assign a default key (from the Encryption Key Pick List) to be used when transmitting on the channel. Channels that are locked clear and analog channels will ignore this setting.

Key Lock column – enter an 'L' to lock the default key to the channel. Any key selected from the touchpad menu will be ignored when transmitting in secure mode on the channel (i.e. the default key will be always be used when transmitting in secure mode on the channel).

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KEY SELECTION

The radio's receiver will automatically detect both clear and secure messages, as long as the secure messages have been encrypted with one of the keys programmed in the radio.

Selecting an Encryption Key from the Pick List will assign the Key to all encrypted channels that do not have 'Key Lock' programmed. Locked key channels will continue to use the pre-programmed key.

Button Assigned Operation
1. Turn to the channel you wish to assign the Tx Encryption Key to.
2. Press the programmed button. (UKEY)
3. Use the up/down buttons to select the desired key (1-32) or select the tone using the numeric keypad. 'Default' = pre-programmed key.
4. Press the 'ENT' button to set the selection.
5. Press 'ESC' to return to normal operation.

Menu Assigned Operation
1. Press the assigned Menu button.
2. Use the up/down buttons to select 'Tx Keys'. Press the 'ENT' button.
3. Use the up/down buttons to select the desired Key (1-32) or select the tone using the numeric keypad. 'Default' = pre-programmed key.
4. Press the 'ENT' button to set the selection.
5. Hold the 'ESC' button to return to normal operation.

If a key is selected that has not been programmed, when PTT is pressed, the radio will not transmit but will beep and display '**NO KEY**'.