

# **INSTRUCTION MANUAL**

**SC- 580, SC- 581 series**

**UHF TRUNKING / CONVENTIONAL TRANSCEIVER**

**SC- 280, SC- 281 series**

**VHF TRUNKING / CONVENTIONAL TRANSCEIVER**

## **- FCC NOTICE -**

### **SAFETY INFORMATION**

This radio is restricted to occupational use, work related operations only where the radio operator must have the knowledge to control its RF exposure conditions.

When the Push-to-Talk (PTT) button is pushed, the transceiver sends out radio frequency (RF) signals. In August 1996, the Federal Communications Commission adopted RF exposure guidelines with safety levels for hand-held wireless devices.

The device is authorized to operate at a duty factor not to exceed 50%.

### **WARNING**

To maintain compliance with the FCC's RF exposure guidelines, this transmitter and its Antenna must maintain a separation distance of at least 1 inch (2.5 centimeters) from your face and body.. Speak in a normal voice, with the antenna pointed up and away from the face at the required separation distance.

### **NOTICE**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a reasonable installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced electronics technician for help.

## CONTENTS

<b>GENERAL INFORMATION.....</b>	<b>4</b>
<b>SUPPLIED ACCESSORIES.....</b>	<b>4</b>
<b>ACCESSORY ATTACHMENTS .....</b>	<b>4</b>
<b>INSTALLING THE ANTENNA.....</b>	<b>4</b>
<b>INSTALLING / REMOVING THE BATTERY PACK.....</b>	<b>5</b>
<b>INSTALLING THE BELT CLIP .....</b>	<b>5</b>
<b>INSTALLING THE JACK COVER.....</b>	<b>5</b>
<b>BATTERY SAFETY.....</b>	<b>5</b>
<b>USING THE BATTERY PACK.....</b>	<b>6</b>
<b>INSTALLING / REMOVING THE BATTERY PACK.....</b>	<b>6</b>
<b>BATTERY LIFE INDICATOR.....</b>	<b>6</b>
<b>CONTROL AND CONNECTIONS.....</b>	<b>7</b>
<b>POWER SWITCH / VOLUME CONTROL.....</b>	<b>7</b>
<b>SYSTEM/GROUP CONTROL.....</b>	<b>7</b>
<b>TX/BUSY LED INDICATOR .....</b>	<b>7</b>
<b>LCD (Liquid Crystal Display) .....</b>	<b>7</b>
<b>H (HOME) KEY .....</b>	<b>8</b>
<b>S (SCAN) KEY .....</b>	<b>8</b>
<b>F1 KEY .....</b>	<b>8</b>
<b>F2 KEY .....</b>	<b>8</b>
<b>10 KEY (SC- 580, SC-280 full key model only).....</b>	<b>8</b>
<b>PTT SWITCH .....</b>	<b>8</b>
<b>SHIFT (shift/key lock) KEY .....</b>	<b>8</b>
<b>PROGRAMMABLE KEY FUNCTIONS.....</b>	<b>9</b>
<b>ACCESSORY JACK.....</b>	<b>9</b>
<b>BATTERY PACK.....</b>	<b>9</b>
<b>BATTERY LOCK .....</b>	<b>9</b>
<b>ADJUST THE LCD CONTRAST.....</b>	<b>9</b>
<b>BASIC OPERATION .....</b>	<b>10</b>
<b>LTR OPERATION .....</b>	<b>10</b>
<b>CONVENTIONAL OPERATION.....</b>	<b>10</b>
<b>EMERGENCY.....</b>	<b>11</b>
<b>OPTION .....</b>	<b>11</b>

## GENERAL INFORMATION

The SC-580 series and SC-280 series transceiver is a combination conventional and trunking radio.

As the trunking radio, the radio is capable of operating on up to 32 trunking system, and it can operate on E.F.Johnson LTR ® trunking protocol.

LTR® is a registered trademark of E. F. Johnson Company.

As the conventional radio, the radio is capable of operating on up to 250 channels.

Simplex (talk around) and semi-duplex operation are allowed on any system. The radio contains an automatic power control that maintains constant RF power output, and temperature compensating circuitry to maintain stable frequencies over varying temperatures.

**Note:** Changes or modifications not expressly approved by Datron could void the User's authority to operate this equipment.

## SUPPLIED ACCESSORIES

The following accessories

Flexible antenna	.....	1
Battery pack	.....	1
Belt clip	.....	1
Jack cover with screws	.....	1

## ACCESSORY ATTACHMENTS

### INSTALLING THE ANTENNA

Connect the supplied flexible antenna to the antenna connector.

**Caution:** Transmitting without the Antenna may damage the transceiver.

Do not hold by the antenna when carrying the transceiver.

## **INSTALLING / REMOVING THE BATTERY PACK**

1. Turn of the power off.
2. Remove the battery pack from the transceiver;  
Pull the battery lock button and slide down the battery pack.
3. To insert the battery pack, slide up the battery pack.

## **INSTALLING THE BELT CLIP**

If necessary, attach the belt clip using the two supplied screws.

## **INSTALLING THE JACK COVER**

If you are not using the optional microphone and speaker, attach the jack cover.

## **BATTERY SAFETY**

### **DANGER:**

- Do not disassemble or reconstruct battery!
- Do not short battery pack terminals!
- Do not incinerate or apply heat to the battery!
- Do not use or leave the battery near fires, stoves, or other heat generators!
- Do not immerse the battery in water or get it wet by other means!
- Do not charge the battery near fires or under direct sunlight!
- Do not pierce the battery with any object, strike it with an instrument, or step on it!
- Do not jar or throw the battery!
- Do not use the battery pack if it is damaged in any way!
- Do not solder directly on to the battery!
- Do not reverse the battery polarity!
- Do not reverse charge or reverse connect the battery!
- Do not touch a ruptured and leaking battery!

**WARNING:** The battery pack should be charged only with exclusive charger. The use of any other charger may cause injury and permanent damage to the battery.

Do not charge the battery for longer than the specified time!

Do not place the battery pack into a microwave or high pressure container!

Keep ruptured and leaking battery packs away from fire!

Follow charging instructions provided with the charger.

Do not use an abnormal battery!

Do not use the transceiver while it is in the charger!

Keep the battery contacts clean.

Do not charge the battery when the ambient temperature is less than +50 degrees Fahrenheit / +10 degrees Celsius or above +104 degrees Fahrenheit / +40 degrees Celsius.

## **USING THE BATTERY PACK**

Charge the battery pack before using it.

To keep the battery discharge at a minimum, remove the battery pack from the transceiver when it is not in use.

Store the battery pack in a cool place to maximize storage life. Since batteries are subject to self discharge, avoid high storage temperatures; this will cause large self-discharge rates.

After extended storage, a full recharge is recommended.

## **INSTALLING / REMOVING THE BATTERY PACK**

1. Turn of the power off.

2. Remove the battery pack from the transceiver;

    Pull the battery lock button and slide down the battery pack.

3. To insert the battery pack, slide up the battery pack.

## **BATTERY LIFE INDICATOR**

Battery life is indicated by the battery icon in the LCD. The transceiver must be recharged when the low battery life indicator (battery empty mark) is still displayed.

The transceiver will be unavailable when the low battery life warning is displayed "No Battery".

## **CONTROL AND CONNECTIONS**

### **POWER SWITCH / VOLUME CONTROL**

Turns the transceiver on and off, and adjusts the volume.

### **SYSTEM/GROUP CONTROL**

In the conventional and LTR® trunking system, it selects either F (functional position) or one of 15 Systems/Groups.

### **TX/BUSY LED INDICATOR**

Lights red during transmission, green during reception or when busy.

### **LCD (Liquid Crystal Display)**

Indicates Monitor mode, System and Group number, alphanumeric description, in-range, scan memory, telephone interconnect, phone numbers, key lock and remaining battery life.

### **H (HOME) KEY**

In the conventional and LTR® trunking system, it returns the radio working system to the programmed HOME system and group.

This key also activates the DTMF “A” tone during transmission.

### **S (SCAN) KEY**

Pressing this key for longer than 2 seconds changes the radio operation between the conventional / LTR® trunking system.

In the conventional and LTR® trunking system, when the SYSTEM/GROUP control is set to the “F” position, the S (scan) key initiates scanning and is used for storing channels in scan memory.

This key also activates the DTMF “B” tone during transmission.

### **F1 KEY**

In the conventional and LTR® trunking system, when the SYSTEM/GROUP control is set to the “F” position, pressing this key decreases the Group number, or decreases the System number in the shift mode.

This key also activates the DTMF “C” tone during transmission.

### **F2 KEY**

In the conventional and LTR® trunking system, when the SYSTEM/GROUP control is set to the “F” position, pressing this key increases the Group number, or increases the System number in the shift mode.

This key also activates the DTMF “D” tone during transmission.

### **10 KEY (SC- 580, SC-280 full key model only)**

Press the keys on the 10 keypad to make DTMF calls or to activate programmable functions.

### **PTT SWITCH**

Enables transmit mode.

### **SHIFT (shift/key lock) KEY**

Enables or disables the SHIFT mode. Pressing this key for the longer than 2seconds will enable or disable keypad operation.

## PROGRAMMABLE KEY FUNCTIONS

The following key functions can be programmed by your dealer. Each function can be programmed to any key. Refer to your dealer for programming and operating instructions.

Programmable key

Key function	AUX	SHIFT+AUX	H	SHIFT+H	S	SHIFT+S
A/D	-	-	-	O	-	O
TA	-	-	-	O	-	O
TRANSPEND	-	-	-	O	-	O
PHONE	O	O	-	O	-	O
MONITOR	O	O	-	O	-	O
H/L	O	O	-	O	-	O
NET	O	O	-	O	-	O
OPTION	-	O	-	O	-	O

O: can be programmed, -: can not be programmed.

## ACCESSORY JACK

Interface for connecting an external speaker and microphone.

## BATTERY PACK

Provides DC power supply to the transceiver.

## BATTERY LOCK

To detach the battery pack, turn off the power, slide the lock lever to open, and slide down the battery pack and remove.

## ADJUST THE LCD CONTRAST

The LCD contrast can be adjusted.

1. Turn off power, off.
2. Hold down the SHIFT key and turn the power on.  
(After releasing the SHIFT key, it will be displayed "CONTRAST".)
3. To adjust the contrast, hold down the PTT switch and turn the volume knob.
4. Release the PTT switch, and turn the power off.

## **BASIC OPERATION**

1. Turn the power switch / volume control clockwise to switch the transceiver on.  
Turn the Power switch / volume control counterclockwise to switch the transceiver off.
2. Rotate the power switch / volume control to adjust the volume.  
Clockwise increase the volume.  
Counter clockwise decrease the volume.

## **LTR OPERATION**

Push the key, or rotate System / Group control to select the desired system channel and talk group.

**Note:** Systems, groups and their functions are programmed by your dealer.

**RECEIVING** : When a call is received, the transceiver will automatically change to correct group and you will hear the call.

**TRANSMITTING** : Press and hold the PTT switch and speaking into the microphone.  
Release the PTT switch to receive.

## **CONVENTIONAL OPERATION**

Push the key, or rotate System / Group control to select the desired system channel and talk group.

**Note:** Systems, groups and their functions are programmed by your dealer.

**RECEIVING** : When you hear the caller's voice, adjust the volume.

**TRANSMITTING** : Press the programmable **Monitor** key. Check the channel.  
If Channel is busy, wait until it becomes free.  
Press and hold the PTT switch and speaking into the microphone.  
Release the PTT switch to receive.

## EMERGENCY

When **\*(Orange)** key is pushed more than 1.5sec, the DTMF emergency signal is automatically transmitted.

**Note:** An emergency functions are programmed by your dealer.

To exit emergency mode, press and hold **\*(Orange)** key again or turn off the power switch.

## OPTION

When the programmed key is pushed, the Option function can be used.

Function on : “ ” appears on the display.

Function off : “ ” disappears on the display.

When the optional board (Scrambler unit or Man Down unit) is installed, the Option function can be used.

-Scrambler -

The voice scrambler function provides private communication between stations.

-Man Down-

The man down function transmits emergency signal after the man down is activated for a period exceeding the specified time.

**Note:** Option function is programmed by your dealer. Ask your dealer for Option board details.