

PROGRAMMING MANUAL  
FOR THE  
GX Series Radios

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## 1. Program Install

- 1) Insert the Instruction CD into the CD-ROM drive. The following screen appears inserting the CD.  
<Click “Next” to Install Gx Radio programmer.



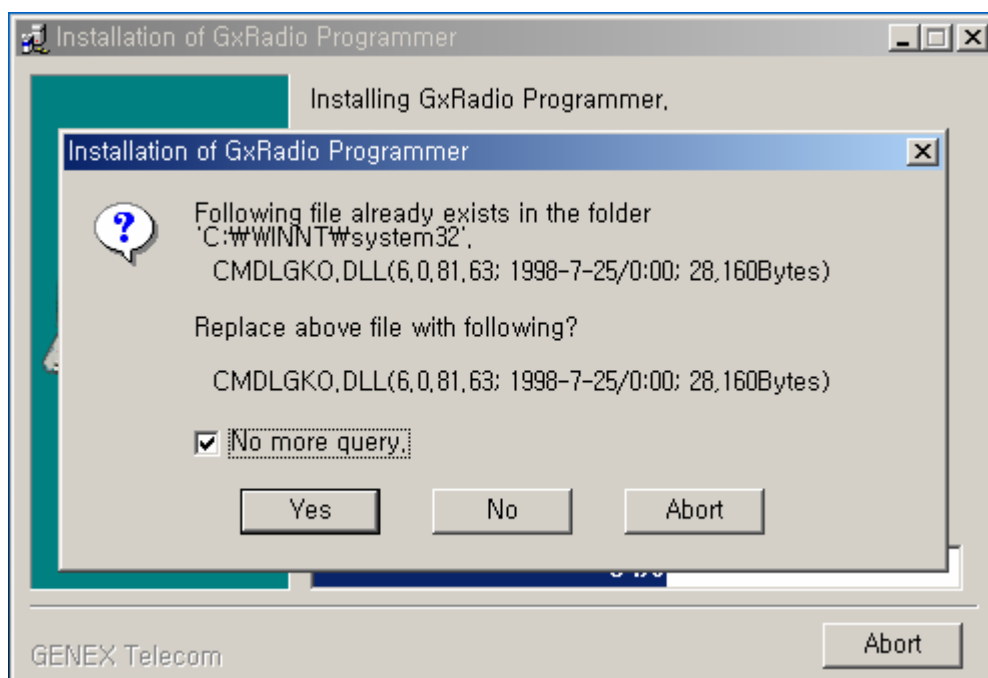
< Picture 1-1 >

- 2) Select the following to Install. <Click “Install”>



< Picture 1-2 >

- 3) If a “Replace file” message appears, click check box and click “Yes”.



< Picture 1-3 >

- 4) Click OK button in condition of checked Run application check box .



< Picture 1-4 >

5) Click Start button in windows, GX8090 automatically create in Program Menu .

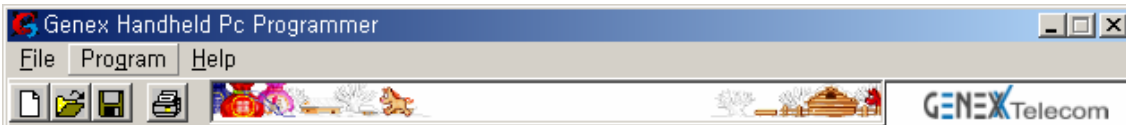






< Picture 1-5 >

## 2. Construction of GX Series PC Programmer

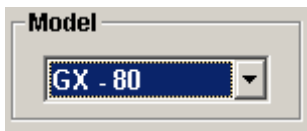
- ◆ Menu Bar, Tool Bar, Model Select, Frame Select, Port Select, Program Button
  - ◆ System Data Frame
  - ◆ Channel Data Frame
  - ◆ Two Tone Data Frame

### 1) Menu Bar, Tool Bar : Processing file and Printing Function

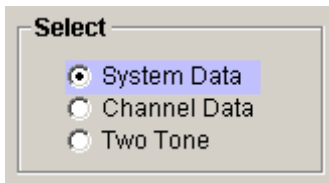


-  It can be set up to initial value from selected all mode value.
-  It can be open data file \*\*\*.dat form.
-  Save data to \*\*\*.dat form.
-  Print data from indicated form.

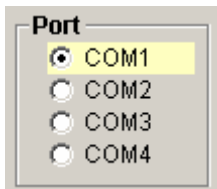
### 2) Model Select : Function of selecting Model.



### 3) Data Frame Select : Function of selecting Data Frame.



### 4) Port Select : Function of selecting Pin Serial communication port.



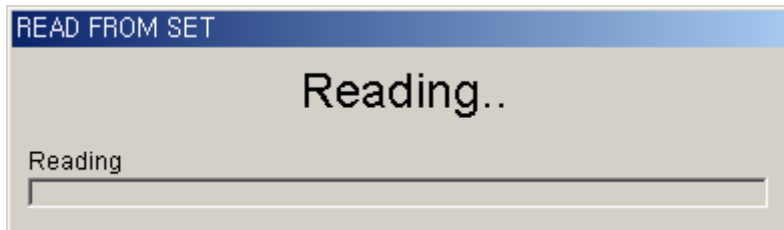
### 5) Program : Function of reading data or programming in SET.



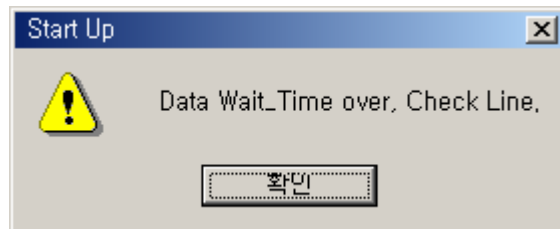
1. **Read** : Click READ button, it can be read the data from SET.

Term:

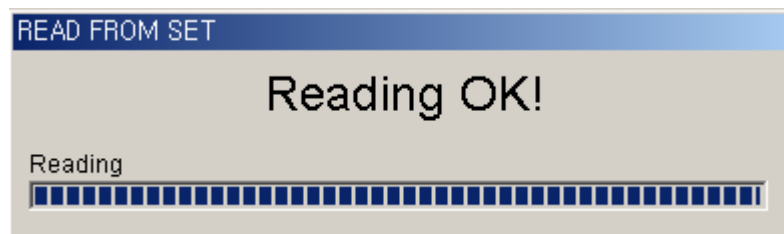
- 1> SET is turn means that press Monitor key and Scan key simultaneously. And then LED lights of SET will be turned to orange color.
- 2> Programmer cable connect between PC and Set.
- 3> Press READ button.



4> Error message will show as it below either cable does not connect or does not set PC link mode.



5> When job is done, it shows as it below and disappear..



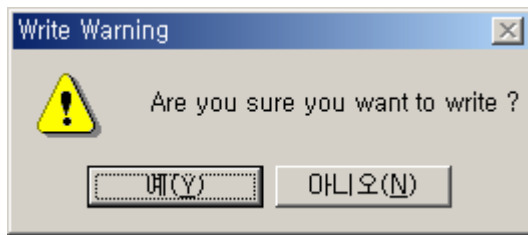
2. **Write** : You can write the data when you click the button.

Condition:

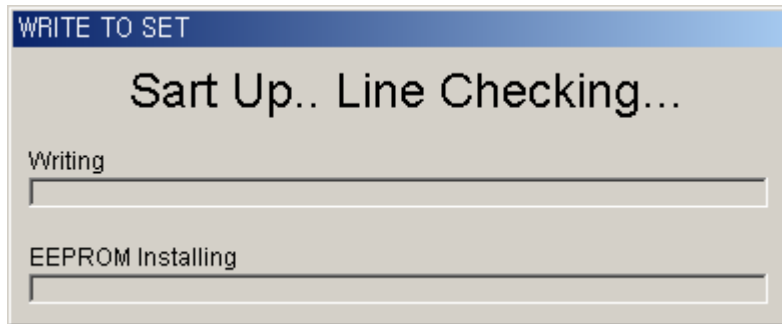
- 1> SET is turn means that press Monitor key and Scan key simultaneously. And then LED lights of SET will be turned to orange color.
- 2> Programmer cable connect between PC and Set.
- 3> Press WRITE button.



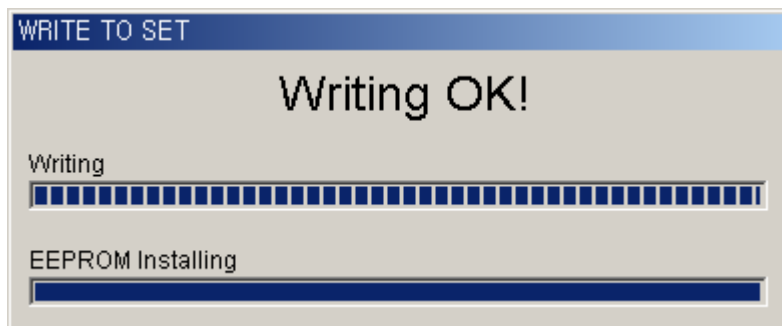
4> It will ask you a question as it below because exisitn data will be erase when you write the data set.



5> If you click “Yes”, write window will be start.



4> When write to set is done, it will show window as it below.





6) **Splash Window** : It shows PC program information.



## ◆ System Data Frame

The screenshot shows the 'Genex Handheld Pc Programmer' window. The 'Model' is set to 'GX - 90'. Under 'Select', 'System Data' is chosen. Under 'Port', 'COM1' is selected. On the right, there are buttons for 'PROGRAM', 'READ', and 'WRITE'. The 'System Data' section includes a 'Max Ch. No.' field set to 16, a checked 'Tx Delay' checkbox, and an unchecked 'Vox Level Select' checkbox. Below this are three sub-sections: 'T-O-T(Time-Out-Timer)' with 'TX Time-Out time (s)' at 180 and 'TOT Penalty time (s)' at 5; 'Power Save' with a checked 'Power Save Enable' checkbox and fields for 'Save On time (ms)' at 200, 'Save Off time (ms)' at 200, and 'Save Delay time (s)' at 5; and 'Scan' with an unchecked 'Scan Enable' checkbox, 'Scan Speed (ms)' at 100, 'Scan Delay (s)' at 5, an unchecked 'Priority Scan Enable' checkbox, 'Prio. Scan Ch. No.' at 1, and 'Look Back time (s)' at 4. The status bar at the bottom shows 'System Data', the date '2003-12-27', and the number 'NUM'.

### 1) Max Channel Number

A close-up of the 'Max Ch. No.' field, which is a numeric input box with up and down arrows, currently displaying the value '16'.

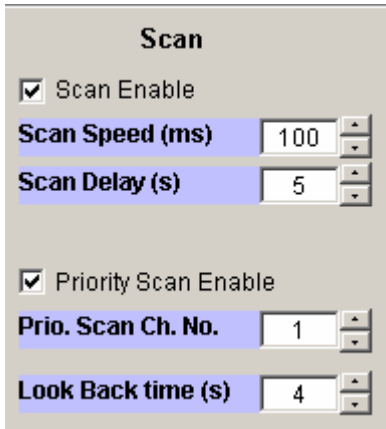
### 2) Tx Delay : End of TX, it protect squelch tail which come out turn off Tone or Code.

A close-up of the 'Tx Delay' checkbox, which is checked with a black dot.

### 3) Vox Level Select : You can select voice function(on/off) for hands free and level. (Default Level : 2)

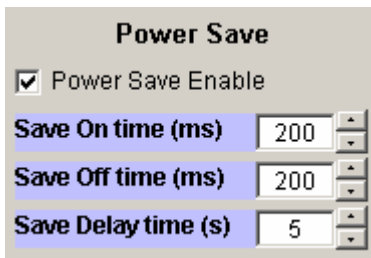
The 'Select Vox Level' dialog box is shown. It has a title bar with the Genex logo and a close button. Inside, under the 'Vox Level' heading, there are three radio button options: 'Level1' (which is selected), 'Level2', and 'Level3'. Below the dialog box, the 'Vox Level Select' checkbox in the main window is checked.

4) **Scan** : Automatic scan receiving channel.



- Scan Enable : Scan Enable/Disable
- Scan Speed : Delay time for No busy channel.  
Setting 10msec between 50msec ~ 500msec.  
(Default : 100 msec)
- Scan Delay : Delay time of Busy channel. You can set 1sec delay between 1sec to 30sec. (Default : 5sec)
- Priority Scan Enable : Priority Scan Enable/Disable
- Prio. Scan Ch. No. : Priority Channel
- Look Back time : Interval time for checking Priority channel when Non Priority Channel is busy. (0.5sec ~ 10sec : Default 4sec)

5) **Power Save** : If there is no signal comes in stand by mode, it goes power saving mode which set PC program.



- Power Save Enable : Power Save Enable/Disable
- Save On time : Power Save On Time  
You can set 0.1sec delay between 0.2sec~2sec.  
(Default : 0.2sec)
- Save Off Time : Power Save Off Time  
You can set 0.1sec delay between 0.2sec~2sec.  
(Default : 0.2sec)
- Save Delay time : Need time from normal mode to power save mode.  
You can set 0.5sec delay between 0.5sec~10sec.  
(Default : 5sec)

6) **TOT ( Time Out Timer)**

**T-O-T(Time-Out-Timer)**

☒ T-O-T Enable

**TX Time-Out time (s)**

☒ T-O-T Penalty Enable

**TOT Penalty time (s)**

- TOT Enable : TOT function (On/Off)
- TX Time-Out time : Set between 10sec to 990sec.
- TOT Penalty Enable : When TX, if TOT time is exceed, it prohibit(stop) to TX within penalty time.(on/off)  
Set between 1sec to 100sec.

## ◆ Channel Data Frame

Model: GX - 90

Ver: 0 . 0

Select: ☐ System Data ☒ Channel Data ☐ Two Tone

Port: ☒ COM1 ☐ COM2 ☐ COM3 ☐ COM4

Buttons: PROGRAM, READ, WRITE

CH	Rx Freq	R-Tone	2Tone	BCL	BCLO	P-SC	SC	Tx Freq	T-Tone	PW	CS	Scr
CH 6	469.98750	None		Off	Off	Off	On	469.98750	None	L	N	Off
CH 7	430.01250	C: 67.0		Off	Off	Off	Off	430.01250	C: 67.0	L	S	Off
CH 8	450.01250	C: 71.9		Off	Off	Off	Off	450.01250	C: 71.9	L	S	Off
CH 9	469.98750	C: 67.0		Off	Off	Off	Off	469.98750	C: 67.0	L	S	Off
CH 10	430.01250	D: 023		Off	Off	Off	Off	430.01250	D: 023	L	N	Off
CH 11	450.01250	D: 023		Off	Off	Off	Off	450.01250	D: 023	L	N	Off
CH 12	469.98750	D: 023		Off	Off	Off	Off	469.98750	D: 023	L	N	Off
CH 13	430.01250	C: 67.0	S	Off	Off	Off	Off	430.01250	C: 67.0	L	S	Off
CH 14	450.01250	C: 151.4	I	Off	Off	Off	Off	450.01250	C: 151.4	L	S	Off
CH 15	469.98750	C: 250.3	G	Off	Off	Off	Off	469.98750	C: 250.3	L	S	Off
CH 16	450.01250	None		Off	Off	Off	Off	450.01250	None	L	N	S1

Status: Channel Data 2003-12-29 NUM

1) **Rx Freq** : It can be select receiving frequency.

- When you double click or press enter key, it can be state of insert as follows.
- If you click other cell and press return key or navigation key with mouse, it automatically check and input data.

CH	Rx Freq	R-Tone
CH 1		None
CH 2		None

2) **R-Tone** : It is selected CTCSS , DCS, IDCS Tone in state of receiving.

- When you double click or press enter key, it comes tone selecting window as follows.

Channel Tone Option

: No Tone

: CTCSS Tone

: DCS Tone

: IDCS Tone

- When you double click or press enter which tone you want, it comes to select each window.
- In each window, when you double click or press return key of sudden code, selected code shows at the cell.

<Select CTCSS Tone>

<Select DCS Tone>

<Select IDCS Tone>

CTCSS Select	DCS Select	IDC Select
CTCSS 67.0 [Hz]	DCS 023	IDCS 023
CTCSS 71.9 [Hz]	DCS 025	IDCS 025
CTCSS 74.4 [Hz]	DCS 026	IDCS 026
CTCSS 77.0 [Hz]	DCS 031	IDCS 031
CTCSS 79.7 [Hz]	DCS 032	IDCS 032
CTCSS 82.5 [Hz]	DCS 036	IDCS 036
CTCSS 85.4 [Hz]	DCS 043	IDCS 043
CTCSS 88.5 [Hz]	DCS 047	IDCS 047
CTCSS 91.5 [Hz]	DCS 051	IDCS 051
CTCSS 94.8 [Hz]	DCS 053	IDCS 053
CTCSS 97.4 [Hz]	DCS 054	IDCS 054
CTCSS 100.0 [Hz]	DCS 065	IDCS 065
CTCSS 103.5 [Hz]	DCS 071	IDCS 071
CTCSS 107.2 [Hz]	DCS 072	IDCS 072
CTCSS 110.9 [Hz]	DCS 073	IDCS 073
CTCSS 114.8 [Hz]	DCS 074	IDCS 074
CTCSS 118.8 [Hz]	DCS 114	IDCS 114
CTCSS 123.0 [Hz]	DCS 115	IDCS 115
CTCSS 127.3 [Hz]	DCS 116	IDCS 116

### 3) 2Tone : Selecting Two Tone

- When you double click or press enter key, it comes two tone window.



- It is indicated on Cell, when you check tone which you choose, it shows selected tone.



- It can be closed to click  button.

### 4) BCL : It is the option for inhibit transmit when occupied channel is busy.

- It can be select to double click or press enter key. The state of On is indicated yellow color.

### 5) BCLO : It is

- It can be On in BCL On.
- Correct call staus : staus that possible to listen signal after opening audio port which matching actual signal and RX data which set each channel. There are CTCSS, DCS, IDCS, and two tone in RX data.

### 6) P-SC : Priority Scan function On/Off.

### 7) SC : Scan function On/Off.

### 8) Tx Freq : Insert transmit frequency. It is same of method of receive frequency.

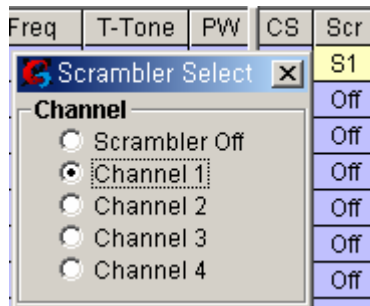
### 9) T-Tone : It can be set transmission tone. .


### 10) PW : It can be set power of transmitter. (H : high power , L : low power)

11) **CS** : It can be set Channel space. ( N/S band control )

12) **Scr** : It can be set Scrambler Option.

- when you double click or press enter key, it comes scramble channel window.
- when you choose scramble channel, it shows chose channel at the cell and it turns yellow lights on.



- It can be closed to double click scramble channel or click  button.



## ◆ Two Tone Data Frame

- Two tone use of personal call or group call.
- For use of each Tone, it can be selected each Tone from channel data.

The screenshot shows the 'Genex Handheld Pc Programmer' software window. The 'Model' dropdown is set to 'GX - 90'. The 'Select' section has three radio buttons: 'System Data', 'Channel Data', and 'Two Tone' (which is selected). The 'Port' section has four radio buttons: 'COM1' (selected), 'COM2', 'COM3', and 'COM4'. On the right, there are buttons for 'PROGRAM', 'READ', and 'WRITE'. The main area is titled 'Two Tone' and contains three columns: 'Super Group Tone', 'Group Tone', and 'Individual Tone'. Each column has a table with fields for 'Tone 1 Freq. (Hz)', 'Freq. Margin (+/- %)', 'Tone 1 Duration (ms)', 'Gap Time (ms)', a 'Tone 2 Disable' checkbox, 'Tone 2 Freq. (Hz)', 'Freq. Margin (+/- %)', and 'Tone 2 Duration (ms)'. The values are: Tone 1 Freq. 300.0, Freq. Margin 1.5, Tone 1 Duration 200, Gap Time 200, Tone 2 Freq. 300.0, Freq. Margin 1.5, and Tone 2 Duration 200. At the bottom, there is a status bar with 'Two Tone Data', the date '2003-12-27', and the text 'NUM'.

### 1) Super Group Tone

- **Tone 1 Freq. (Hz)** : It is Tone 1 Frequency and it can be set from 300Hz to 3KHz.
- **Freq Margin** : It is set margin of Tone 1 Frequency from 0.5% to 10%.  
(basic value : 1.5%)
- **Tone 1 Duration** : It is mean time of Tone 1 and it can be set from 100msec to 10000msec. It can be set unit of 10msec.
- **Gap Time** : It is set time from Tone 1 to Tone 2.  
It can be set 0 or from 200msec to 10000msec.
- **Tone 2 Disable** : It can be On/Off set of Tone 2.
- **Tone 2 Freq. (Hz)** : It is Tone 2 Frequency and it can be set from 300Hz to 3KHz.
- **Freq Margin** : It can be set margin of Tone 2 Frequency from 0.5% to 10%.  
(basic value: 1.5%)
- **Tone 2 Duration** : It is the generation time of Tone 2 and it can be set from 100msec to 10000msec. And it can be set unit of 10msec.

### 2) Group Tone

- **Tone 1 Freq. (Hz)** : It is Tone 1 Frequency and it can be set from 300Hz to 3KHz.

- **Freq Margin** : It is set margin of Tone 1 Frequency from 0.5% to 10%.  
(basic value : 1.5%)
- **Tone 1 Duration** : It is mean time of Tone 1 and it can be set from 100msec to 10000msec. It can be set unit of 10msec.
- **Gap Time** : It is set time from Tone 1 to Tone 2.  
It can be set 0 or from 200msec to 10000msec.
- **Tone 2 Disable** : It can be On/Off set of Tone 2.
- **Tone 2 Freq. (Hz)** : It is Tone 2 Frequency and it can be set from 300Hz to 3KHz.
- **Freq Margin** : It can be set margin of Tone 2 Frequency from 0.5% to 10%.  
(basic value: 1.5%)
- **Tone 2 Duration** : It is the generation time of Tone 2 and it can be set from 100msec to 10000msec. And it can be set unit of 10msec.

### 3) Individual Group Tone

- **Tone 1 Freq. (Hz)** : It is Tone 1 Frequency and it can be set from 300Hz to 3KHz.
- **Freq Margin** : It is set margin of Tone 1 Frequency from 0.5% to 10%.  
(basic value : 1.5%)
- **Tone 1 Duration** : It is mean time of Tone 1 and it can be set from 100msec to 10000msec. It can be set unit of 10msec.
- **Gap Time** : It is set time from Tone 1 to Tone 2.  
It can be set 0 or from 200msec to 10000msec.
- **Tone 2 Disable** : It can be On/Off set of Tone 2.
- **Tone 2 Freq. (Hz)** : It is Tone 2 Frequency and it can be set from 300Hz to 3KHz.
- **Freq Margin** : It can be set margin of Tone 2 Frequency from 0.5% to 10%.  
(basic value: 1.5%)
- **Tone 2 Duration** : It is the generation time of Tone 2 and it can be set from 100msec to 10000msec. And it can be set unit of 10msec.