



## Advanced Training Systems

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# PTX-200 TRANSMITTER

## General Information

The transmitter operates at 902-928 MHz spread spectrum frequency hopping. The RF output power is 4 mW. The operating range is up to 150 meters when the target is in line of sight. For indoor and urban training operations the range may be reduced depending on the type of obstructions encountered.

A standard 9-volt alkaline battery provides power. When the unit is off (the display is blank) it draws about 20 micro amps from the battery. If the transmitter will not be used for a month or more remove the battery. The battery life will depend on how the transmitter is used. If you send one command to the targets every 30 seconds you will get at least 40 hours of operating time from the battery. Under normal operating conditions, typical meantime between battery failure is about 3-4 weeks.



Please refer to the above illustration when reading the following operating instructions.

## Turning the Transmitter On or Off

When the display is blank, pressing any key will turn the unit on. There is no need to be concerned about which key to press because the key that turns it on will be ignored. There is no way to manually turn the unit off. It turns itself off after about 100 seconds without pressing a button. When it has turned itself off, it will turn on in the same state as when it turned off.

## The Menu System

Many of the menu items in the PTX-200 are intended for use with programmable targets like the PT-61 and PT-66. When used with a wireless IO Box many menu items will not be usable. The unusable menu items are not covered in this document, but the menu tree pages will show them.

To enter the menu system the display should read "TARGET \_ RUN" on the bottom line. If there is something else displayed, press **EXIT** as many times as it takes to get to that message. Press **MENU** and the opening menu will be displayed. There will be an arrow to the left of one line. That arrow can be moved to other lines by using the up or down arrow keys. When the arrow points to the desired selection, pressing **ENTER** will take you to that item. If you are setting up a target unit and the arrow is pointing to a line with an item you wish to change, pressing the **LEFT ARROW** key will decrement that item and pressing the **RIGHT ARROW** key will increment that item. Once the item you are changing is set as desired, pressing **ENTER** will execute the change. The **EXIT** key backs up to the previous display.

## Number Entry

Target numbers and serial numbers are entered with the number keys on the keypad. Most other numbers are changed using the left or right arrow keys. When entering target numbers or serial numbers there is no need to enter the leading zeros. When target numbers or serial numbers are displayed, the leading zeros are not displayed.

If you make an error in entering a target number or serial number, correct it by typing over it. For example, if you intend to enter target number 2 but you press 5 instead, type 002 to correct it.

# TARGET CONTROL

## 9 Button Mode

If you have 9 or fewer target units, you may want to use the 9 button mode to control the targets. You can select this mode from the opening menu. When in this mode, pressing buttons **1-9** will cause the target with that target number to change state. If the target is up, it will go down and if the target is down it will go up.

## Run Mode

In run mode the display should read "TARGET \_ RUN" on the bottom line. If there is something else displayed, press **EXIT** as many times as it takes to get to that message. To operate a specific target, enter that target number or press **ALL** if you want all targets to respond, then with the green buttons at the bottom of the keypad choose the desired face. If you do not have a twister (or bi-directional) target arm, the **FRND (Friend); EDGE** or **FOE** function keys will bring the target up and the **DOWN** function key will bring the target down.

To use target groups, (You must assign targets to groups to use this feature. See "Groups", under "Target Set Up" on page 11.), press the **RIGHT** or **LEFT ARROW** key and the word "**TARGET**" will be replaced by "**GROUP**". Enter the group number with the number key, then choose the face. All targets with that group number will respond to the command.

## Hold Mode (Programs)

When you are in run mode, pressing the **RUN/HOLD** key will put the transmitter in hold mode. Notice the \* in the left column and the "RUN" is replaced with "HOLD" to indicate hold mode. Hold mode is different from run mode in that the commands do not go to the target as they are entered. The commands are stored in memory and sent when the **RUN/HOLD** key is pressed again. This allows you to enter simple programs from the keypad. For programs of more than 125 commands you must create them on a computer using special software and download them to the transmitter. You can enter target and group commands as in run mode and there are two additional commands, "PAUSE" and "DELAY". Use the left and right arrows to display these commands. Pause stops commands from being sent to the target until you press enter. Press **ENTER** when "PAUSE" is displayed to store a pause command. Delay allows you to stop commands from being sent to the target for a fixed length of time. When "DELAY" is displayed, enter 1-240 seconds and press **ENTER**. A program cannot begin with a PAUSE or DELAY, only with TARGET or GROUP.

## Saving Programs

Programs are created in hold mode as described above. You may run the program before saving it or save it as soon as you enter it. The **EXIT** key will delete the commands to allow you to create a new program. When the commands are displayed press **MENU** and select "PROGRAMS" and "SAVE". You can save up to 125 commands in each program and 10 programs can be saved. The programs are saved in nonvolatile memory so they will remain saved even when the battery is replaced. There are menu selections for recalling and deleting programs. You can overwrite an old program without deleting it first. When a program is recalled pressing **RUN/HOLD** will execute it.

## Editing Programs

Only programs created from the keypad can be edited. Computer generated programs must be edited with a computer. To begin editing you first need to have a program on the display. To display a program, either enter one as in **Hold Mode** above or RECALL a program. The program you are editing must have been originally created from the keypad.

Once the program is displayed, pressing the up arrow gets you into edit mode. The bottom line of the display will show "\_<--DEL INS-->". The up and down arrows will move the pointer in the far left column up and down to select the line you desire. Delete and Insert are the only actions you can take. The left arrow deletes the selected line and the right arrow inserts a line above (earlier in time) the selected line. Pressing the right arrow inserts a blank line. You must enter a new command as in **Hold Mode** above.

## Computer Generated Programs

Programs with up to 10,000 commands can be created with optional Universal Target Controller software and an optional Programming Cable (part number 8000-0646). The transmitter must be prepared to receive data from the computer. The following menu entries prepare the transmitter:

```
MENU>PC COMM/SCORES>PC CONNECTION
```

The display will prompt you to press enter when ready, you may do so either before or after the cable is connected to the computer. The display should read:

```
SERIAL  
COMMUNICATION
```

```
EXIT CANCELS
```

Do not leave it in this mode for long periods of time because it does draw power from the battery. Press **EXIT** as many times as it takes to get the display to read "TARGET \_ RUN" on the bottom line to increase battery life.