

Red Wolf Programming With the “Daystate Powerset Programmer”

Rough Draft V1.1, Dated 20 October 2018

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“The desire for safety stands against every great and noble enterprise.”
– Tacitus

I. Disclaimer and Warnings

- A. Use the suggested instructions at your own risk as there are no guarantees or warranties – expressed or implied - for information contained herein. Moreover, anything you read here may be right, may be wrong, or may even be terribly wrong.
- B. Permanently record original gun settings before making any changes to factory settings.
- C. Save changes you make with the Programmer and then save them again just in case.
- D. Go to Youtube and review the Airguns of Arizona (AoA) tutorial entitled “Daystate Red Wolf Programmer Tutorial” BEFORE trying anything listed herein. You may also review the “Addicted to Airguns” video at <https://www.youtube.com/watch?v=MqBbDOYCju0> for sound guidance
- E. Go with AoA video information if you discover a conflict between the AoA video tutorial and suggested steps listed below.
- F. Daystate has not (unfortunately) reviewed this document for accuracy.

II. Daystate PowerSet Programmer Keyboard

- A. Descriptions of non-numeric keys on the membrane keyboard follow:

SCROLL UP – located in upper left hand corner of keyboard and will scroll through menus.

BACKSPACE – located in the top row of keys to the right of the SCROLL UP key and is used to delete data.

SCROLL DOWN – located in the top row of keys to the right of the BACKSPACE key and will scroll through menus.

ESCAPE – located at the lower left hand corner of the keyboard and allows users to quit menus.

RETURN (AKA – ENTER) - located at the lower right hand corner of the keyboard and is used to select menus.



III. Daystate PowerSet Programmer (DPP) Background Information Excerpts from “Daystate’s “PowerSet MK2 Programmer Instructions” Dated 5 December 2015”

- A. The DPP is compatible with “all” Daystate electronic guns incorporating “Gun Control Units (GCUs) except for “early Type A units” and “later Trigger Control Units (TCU)”.

Note: The “MK5 Setup Menu” is used for the Red Wolf. Contact Daystate for menu information regarding other rifles.

- B. The unit is recharged via a USB to RJ45 connection cable [the other cable provided with the unit connects the DPP to the GCU].

- C. Energize the DPP by pressing any of the keys on the left side of the membrane keypad.
- D. De-energize the unit by repeatedly selecting the ESCAPE key and selecting the RETURN key when "Turn off" is shown in the programmer display.
- E. The firmware version of code within the unit is automatically shown momentarily in the center of the screen after the unit is switched on.
- F. DPP Power Level 1 refers to the Red Wolf (RW) Hi Power setting displayed with in the screen located on the left side of the rifle. Power Level 2 refers to RE Mid Power and Power Level III refers to RW Low Power.
- G. The unit will automatically power down if not used for 15 minutes.
- H. The unit will stay powered up while charging.
- I. There is a claimed battery life of "2 days continuous operation".

Caution: Background information contained in A. through I. above may, or may not, be current as of 20 December 2018.

IV. Power up Red Wolf Air Rifle and Daystate Powerset Programmer

- A. Plug the DPP into the RW control unit, **but first** read Section I warnings one more time.
- B. Open and close the RW bolt to energize the rifle (and a red LED attached to the RW circuit will light up if successful).
- C. Select High, Medium or Low from the RW menu based upon which power setting you are going to reprogram.
- D. Press the DPP ESCAPE key to energize the DPP.
- E. Scroll down till the "MK5 Setup Menu" appears at the top of the DPP screen while "Main Menu" appears at the bottom of the display; **if** the screen heading and subheading does not appear by default.

V. Download Factory Data from Red Wolf to Daystate Powerset Programmer

Warning: You are strongly encouraged to retrieve the factory RW settings data and write it down for safekeeping. A record keeping document available to hold the download values can be found at <https://www.youtube.com/watch?v=MqBbDOYCju0>

- A. Perform steps IV.A. through IV.E. so that "MK5 Setup Menu" appears at the top of the DPP screen while "Main Menu" appears at the bottom of the display.
- B. Select the RETURN key from the lower right corner of the DPP keypad and "MK5 Power Setup 1" and "MK5 Setup Menu" should appear in the display.
- C. Scroll down till "MK5 Read/Save Data" appears in the MK5 Setup Menu display and select keyboard RETURN.

Note: The DPP will first display "Reading Data" followed by an audible acknowledgement click from the rifle. Near simultaneously rifle data will appear in the "DSP 1" screen.

- D. Write down the DSP1 data shown on the screen, which includes everything needed except for bit pressure (High, Medium and Low) and bit voltage.
- E. Select the keyboard ESCAPE key to display the "MK5 Read/Save Data" screen.
- F. Scroll up to "Power Setup 1" screen and select the RETURN key to display.
- G. Scroll down through several screens till the "High Pressure Pt." screen is shown.
- H. Record the high pressure "bits".
- I. Scroll down to "Mid Pressure Pt." and "Low Pressure Pt." screens to access data for record keeping.

- J. Scroll down one more time from the “Low Pressure Point” screen to display the “Voltage Setting” screen so you can read and record the voltage bits value that is listed.

Note: Downloaded data is saved within the DPP even after the unit is powered off. In other words data will remain within the unit, until it is overridden by a new rifle to DPP download.

- K. Press the ESCAPE key several times until “Turn off” is displayed and select RETURN to de-energize the unit, or proceed to Section IV to change RW pellet speed.

VI. Change Red Wolf Pellet Velocity with the Daystate Powerset Programmer

- A. Perform step V.A. above.
- B. Scroll down to the “MK5 Power Setup 1” screen and select the RETURN key.
- C. Press the keyboard RETURN key again and the DPP cursor will appear in the Pulse Length value field (displayed as “3225us” for example) and start to blink.
- D. Use the keyboard backspace (left pointing) arrow to clear pulse length numerals you are going to change.
- E. Key in the new pulse length, press RETURN and wait for the DPP to beep.
- F. Scroll down to “Mid Pulse Length” and repeat steps VI.B. through VI.F.
- G. Scroll down to “Low Pulse Length” and repeat steps VI.B. through VI.F.

Caution: Users must increment or decrement High, Mid, and Low pulse lengths by an equal amount. For example, if High pulse length is increased by 100 so to must Mid and Low pulse length values be changed by the same amount. Likewise, if High Pulse length is decreased by 50, so to must Mid and Low pulse length values be changed by the same amount.

~~H. Select the ESCAPE key to display the “MK5 Powersetup 1” screen.~~

~~I. Select the SCROLL Up key several times until “MK5 Read/Save Data” text appears within the DPP display.~~

~~J. Select the RETURN key and wait for “Saving Data” followed by the DSP1 screen to appear.~~

~~Note: Step K above simultaneously uploads the new settings to the RW if the transfer was successfully accomplished. Transfer success is audibly acknowledge if the rifle makes a clicking sound.~~

~~K. Repeat Step K above just to make sure data is saved and uploaded to the rifle.~~

H. Scroll down till the screen displays “Program”.

I. Open the RW bolt.

J. Select ENTER and listen for the gun to acknowledge the new settings with the audible click of a solenoid.

- L. Select the DPP ESCAPE key until “Turn off” appears and select the ENTER key, or proceed to the DSP2 and DSP3 screens to change Mid and Lo power RW settings.

Note: Remember that the then current RW power setting must match the DSP setting to be changed with the DPP. For example, Mid should be selected within the RW before you change DSP2 settings with the DPP. Likewise, Low should be the active RW power setting before changing data within the DPP DSP3 screen.

Appendix I
Red Wolf Programming Cheat Sheet
Intended For Use Once Factory Settings Have Been Recorded

“For fools rush in where angels fear to tread”

-Alexander Pope

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1. Plug DPP into RW circuit board.
2. Energize Rifle and select the proper power setting, followed by energizing the DPP.
3. Scroll to “MK5 Setup Menu” (if it does not automatically appear) and select RETURN.
4. Select RETURN from the “MK5 Power Setup 1” screen.
5. Select RETURN from the “High Pulse Length” screen.
6. Backspace to delete old Pulse Length data.
7. Enter new High Pulse Length data, select ENTER, and wait for new data acknowledgement.
8. Repeat Step 7 for Mid Pulse length and Low Pulse Length.
- ~~9. Select ESCAPE key to display the “MK5 Powersetup 1” screen.~~
- ~~10. Scroll up to “MK5 Read/Save Data” screen and select RETURN.~~
- ~~11. Select ESCAPE once data saved acknowledgement is heard.~~
9. Scroll down to the “Program” display
10. Open the RW bolt.
11. . Select ENTER and listen for an audible gun acknowledgement.
12. Select ESCAPE until “Turn off” is displayed and select ENTER.