

Drop Off Realease Transmitter V6

User's Manual



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Release Transmitter Terminal

User's Manual

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1 Product Overview

The Release Transmitter enables you to release radio controlled VECTRONIC Drop Offs remotely, receive collar's UHF ID Tags or configure Drop Offs before deployment.

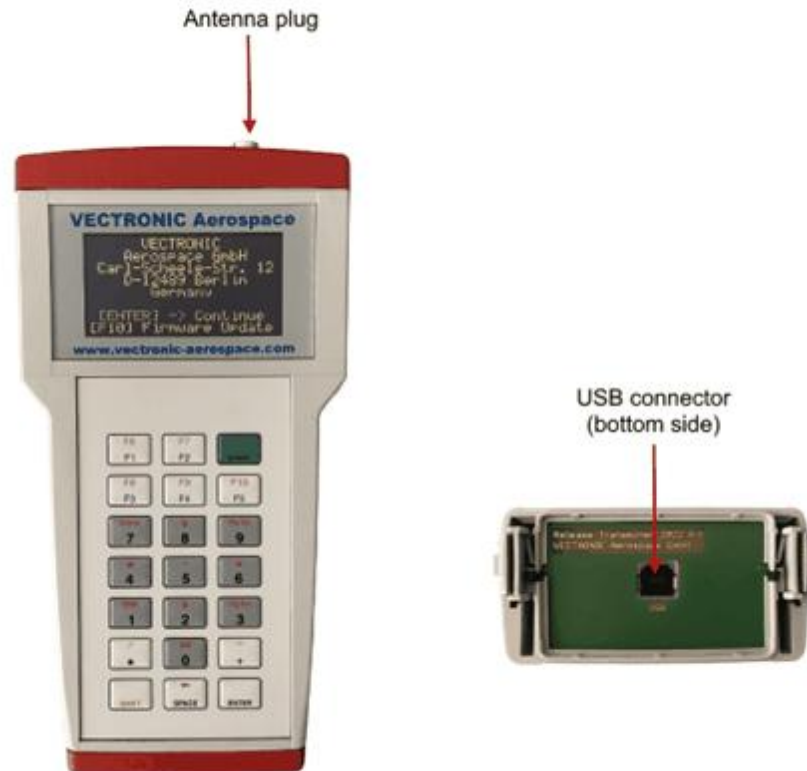


Figure 1: Release Transmitter terminal

While the Release Transmitter is connected to the PC via USB cable, the following functions are available in the Release Transmitter Manager software:

- Register Drop Off IDs for remote release
- Read Drop Off's configuration
- Modify Drop Off's release mode and release time configuration

As a stand-alone device on-site you can:

- Release radio controlled Drop Offs remotely
- Check UHF ID Tag signals from collars and proximity tags

2 Terminal Equipment

The Release Transmitter is delivered with a protection bag, USB cable and UHF YAGI antenna.



Figure 2: Protection Bag & USB cable



Figure 3: UHF YAGI antenna

To release Drop Offs remotely, an UHF Yagi antenna is required. Please do not use other antennas for Drop Off release, the terminal could be damaged by this.

Connect the antenna to the antenna plug on the top right of the terminal.

To recharge battery, register Drop Offs or load and modify Drop Off's configuration, remove the bottom cap of the terminal as shown in Figure 4 and connect it to your PC using the USB cable. In this case, the UHF YAGI antenna is not required and we recommend disconnecting the antenna.



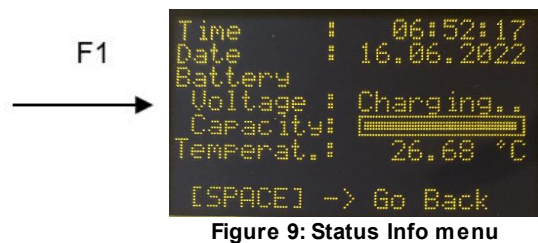
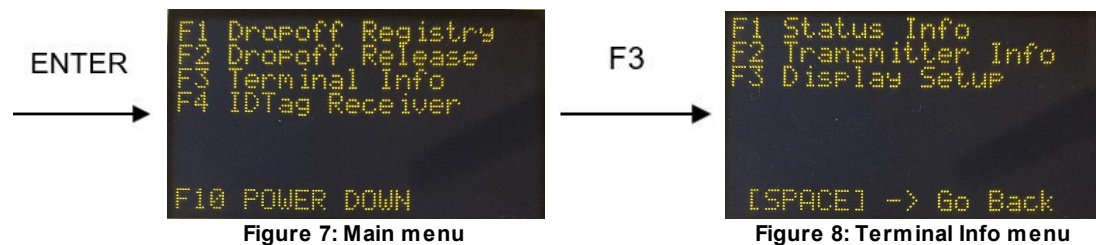
Figure 4: Bottom Cap

3 Battery charging

Before you release a radio Drop Off in the field make sure that the Release Transmitter battery is fully charged.

To charge the battery you have to connect the Release Transmitter via USB cable to the PC or a standard USB charging adapter with a minimum power of 5W. To check the charging of the battery, you can perform the following steps:

Press START and switch between menus as shown below:



Now the status of battery and capacity are displayed.

4 Terminal Information

Information about the Release Transmitter is shown in the Terminal Info menu. At first open the terminal's Main menu by pressing START → ENTER → ENTER. Afterwards press F3 to enter the Terminal Info menu where you can select different submenus.



Figure 10: Main menu

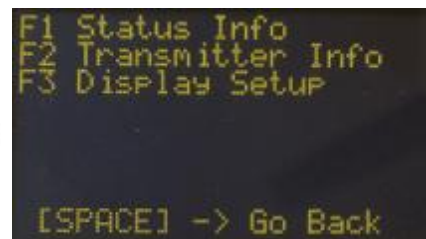
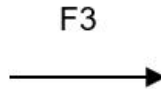


Figure 11: Terminal Info menu

4.1 F1 - Status Info menu

In this menu, the following information can be monitored:

- UTC time and date of the device
- Battery status (voltage)
- Battery capacity
- Ambient temperature



Figure 12: Status Info menu

4.2 F2 - Transmitter Info menu

In this menu, the following information can be monitored:

- Serial number of the Release Transmitter
- SW: Software version and date of release
- HW: Hardware version and date of production



Figure 13: Transmitter Info menu

4.3 F3 - Display Setup menu

In this menu, display contrast can be configured:

- Maximum contrast value is 255 (default)
- Use keypads 2 (↓) or 8 (↑) to change the contrast value
- Press F1 to apply new contrast value
- Press F2 to store selected contrast value



Figure 14: Display Setup menu

5 Set-up

To register Drop Offs for remote release or change Drop Off's configuration, you first have to load the according Drop Off Keys via the Release Transmitter Manager to your terminal.

5.1 Install Release Transmitter Manager software and drivers

The installer software of this application installs the Release Transmitter Manager and required drivers automatically. The installer is available for download on our website at:

<https://www.vectronic-aerospace.com/downloads/>

Afterwards execute the installer application.

Please note that this application only supports hardware version V6 of the Release Transmitter series. Older versions are not supported.

5.2 Connect Release Transmitter terminal

Remove the red cap on the bottom side of the Release Transmitter by pressing the two plastic clamps. Connect the terminal to the PC via the supplied USB cable. Press START to turn on the Release Transmitter and afterwards ENTER to initiate the communication.

5.3 Open Release Transmitter Manager application

The Release Transmitter Manager provides the following functionalities:

- Inspect Release Transmitter's configuration
- Register Drop Off devices
- Configure Drop Off's release mode and release time

After opening the Release Transmitter Manager software on the PC, connected Release Transmitter terminals are recognized automatically and according device information is displayed in a treeview menu on the left section of the Release

Transmitter Manager window as shown below.

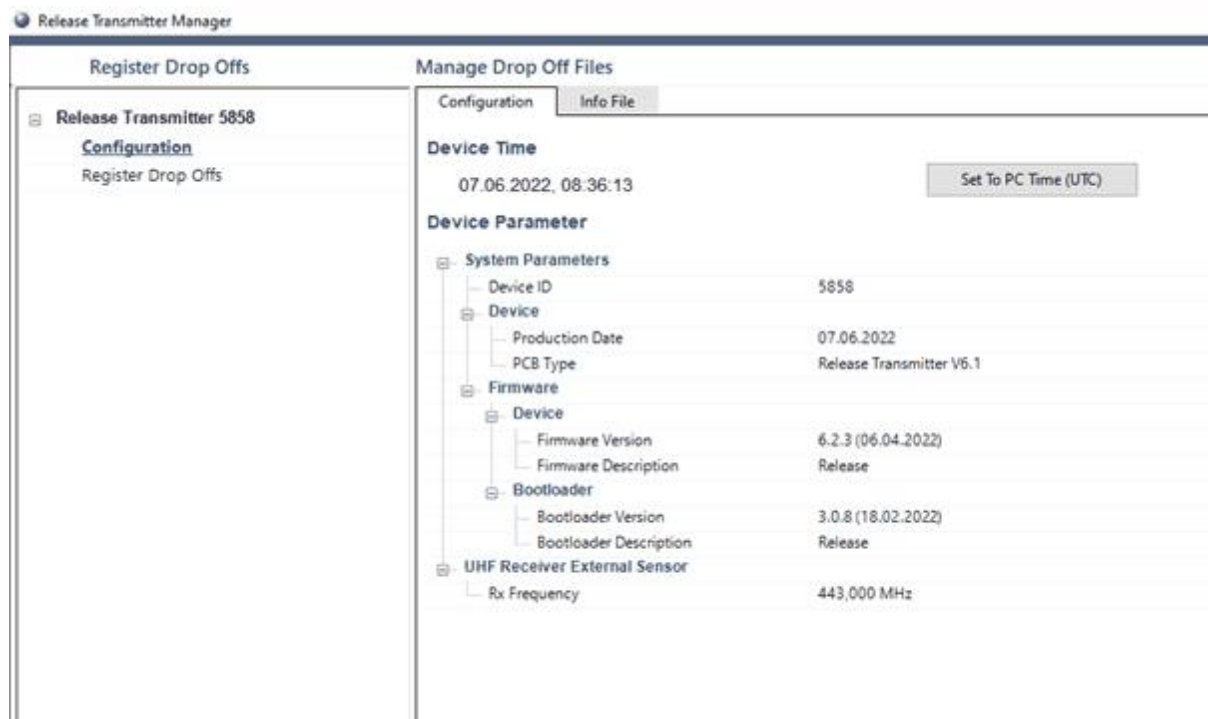


Figure 15: Release Transmitter Manager with connected Release Transmitter

By selecting 'Configuration' in the treeview menu, the current configuration of the connected Release Transmitter is displayed in the Configuration tab on the right side of the window. There the terminals device time can be adjusted and set to UTC time by clicking 'Set To PC Time (UTC)' as shown in Figure 15. This is required in case the UTC Time is not set correctly.

Furthermore an info text file with this configuration details can be stored by selecting the Info File tab and 'Save as Textfile' afterwards.

6 Drop Off Registry

In order to communicate with a Drop Off, the device has to be registered on the Release Transmitter. For this, the associated Drop Off registration key is needed. All supported devices from VECTRONIC Aerospace GmbH are shipped with the corresponding key files with .key extension.

At first, upload the Drop Off key files to the Release Transmitter Manager software. Click the 'Manage Drop Off Files' tab in the upper left section as shown in Figure 16.

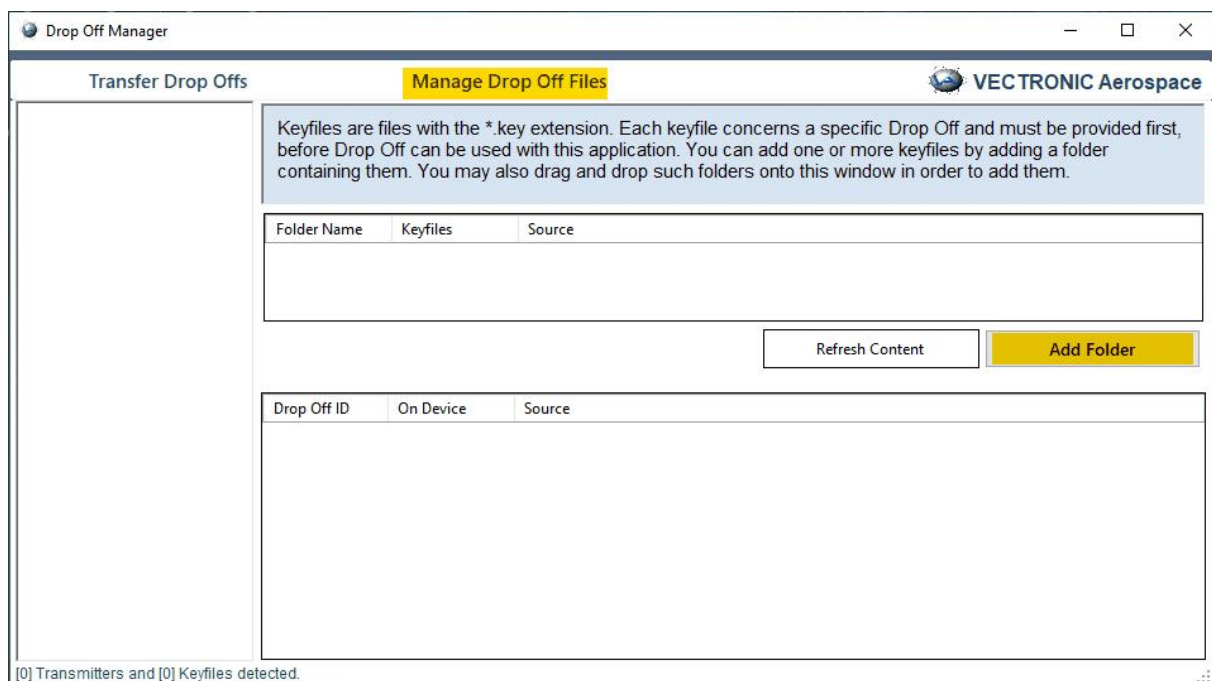


Figure 16: Manage Drop Off key files

Afterwards click 'Add Folder' and then select the path to the folder in which your key files are located. You can also drag and drop the folder on the application window.

Note: Any windows directory can be added to the application. The folder may contain no key files and can also contain other files or subfolders. When detecting key files from added folders, key files stored in subdirectories will be not detected. In this case, the subdirectory must be added as well.

By adding a folder, the software attempts to detect all containing key files. Changes of the folder content during runtime of the application can be updated by clicking the 'Refresh Content' button.

The detected and uploaded Drop Off key files are displayed in the lower half of the window in the Drop Off ID list as shown in the following Figure 17.

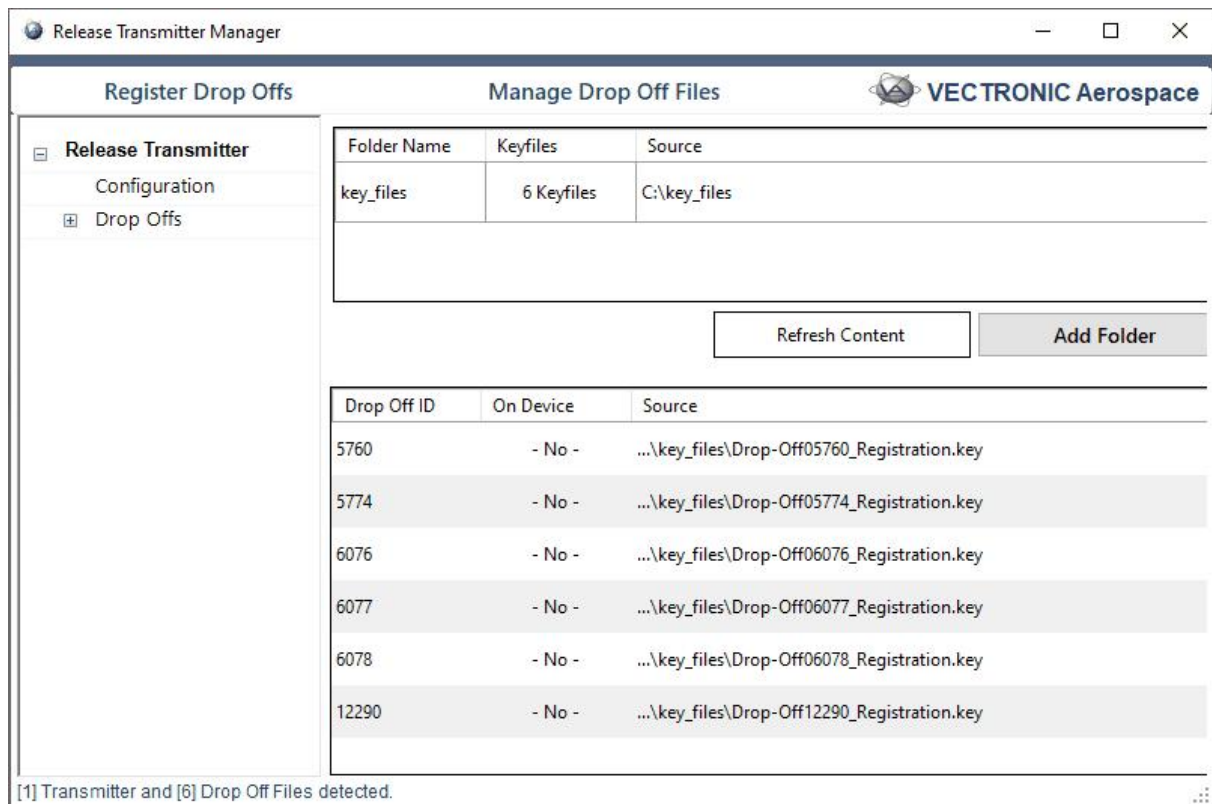


Figure 17-: Upload Drop Off key files

If a Drop Off entry is not shown, the according key file is possibly not valid or there are permanent issues from the operating system to access the folder.

Added folders can be removed by right clicking the uploaded folder and selecting 'remove'.

Next step is to register the Drop Offs on the Release Transmitter. Select the 'Register Drop Offs' tab in the upper left section of the Release Transmitter Manager window. The opening frame shows the Drop Off registry consisting of two separated tables, see Figure 18.

The left table shows all available Drop Off IDs uploaded to the Release Transmitter Manager. The right table shows a drop-down box where each connected Release Transmitter can be selected and a list of all Drop Offs currently registered on that device.

Adding and removing Drop Offs to the transmitter is achieved by selecting the desired devices with the mouse and then clicking the arrow buttons in the middle section in the window. Double-clicks and right-clicks are enabled as an alternative method as well. As

shown in Figure 18 in the right table, when you add or remove Drop Off IDs, these IDs are marked by green or red arrows as long as the changes are not applied to the transmitter.

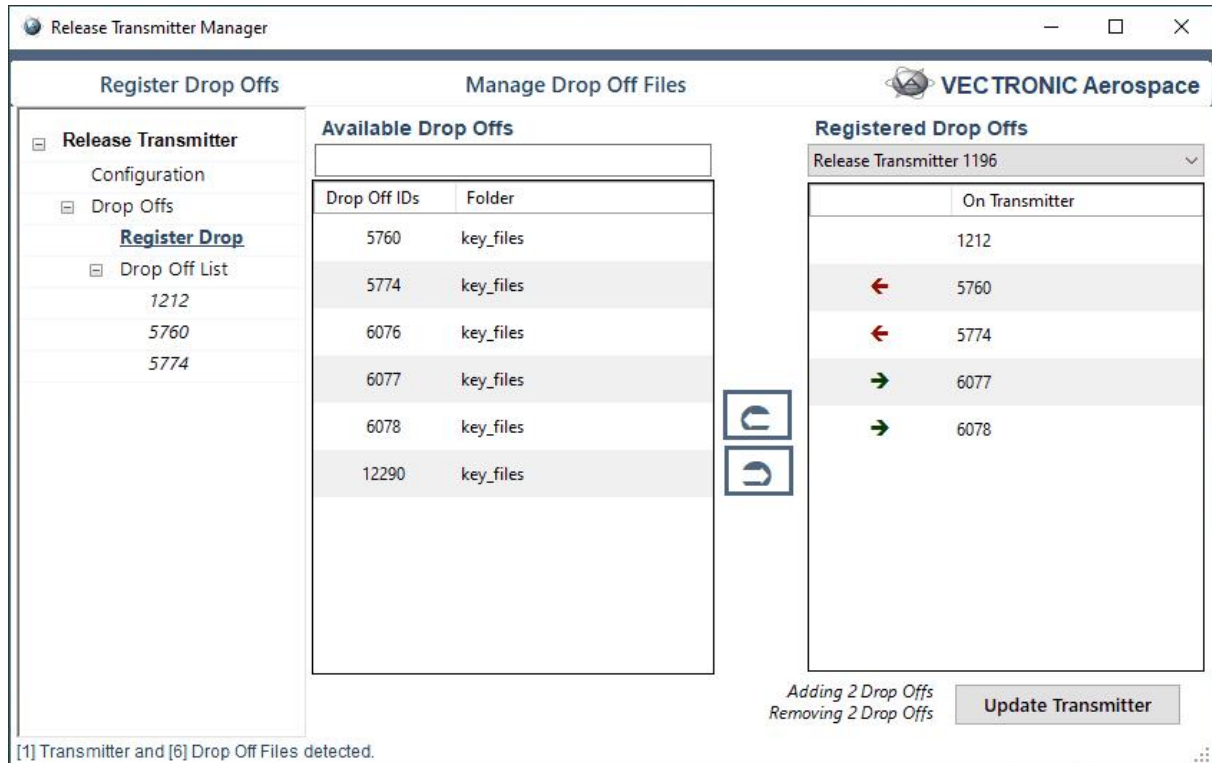


Figure 18: Drop Off registry

The changes are confirmed by clicking the "Update Transmitter" button.

After applying the changes those arrows will disappear and an updated Drop Off List with the registered IDs will be displayed in the right table as well as in the treeview menu on the left side of the window.

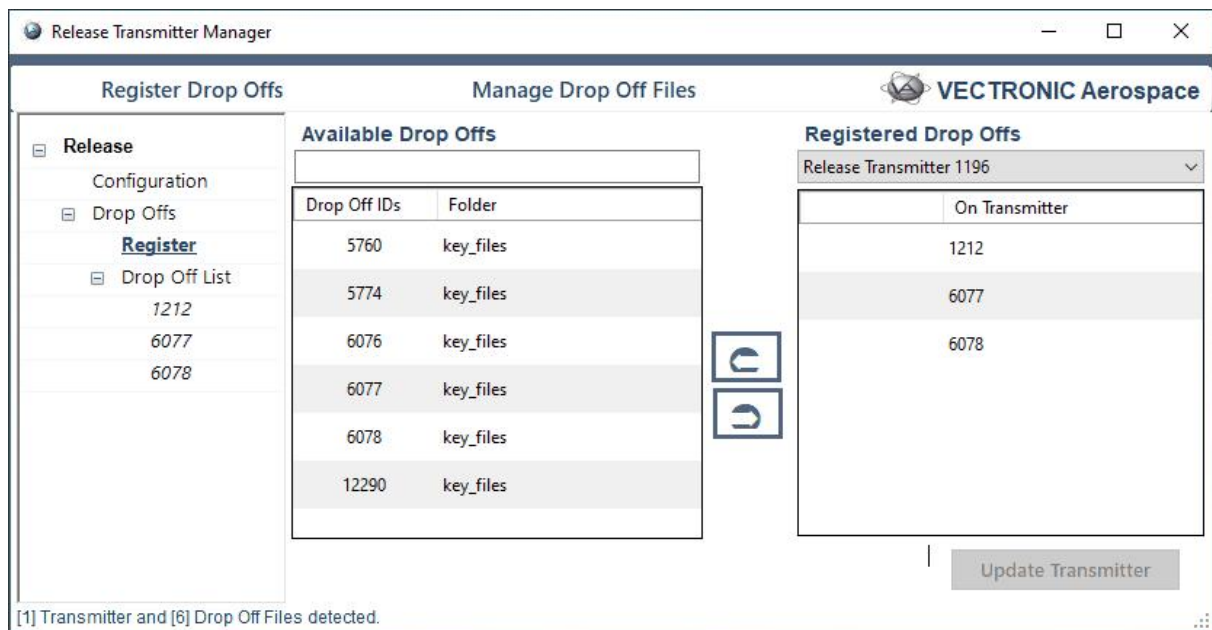


Figure 19: Updated Drop Off registry

The registered Drop Off IDs can be double checked on the Release Transmitter via pressing F1 button in the Release Transmitter's Main menu.

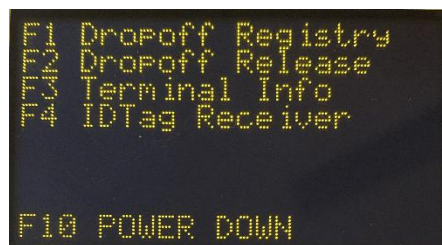


Figure 20: Main menu

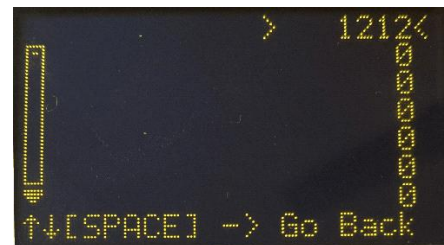


Figure 21: Drop Off list

7 Drop Off Configuration

Drop Offs, which are registered to a connected Release Transmitter can be configured by selecting one of the IDs in the Drop Off list on the left side as shown in Figure 22.

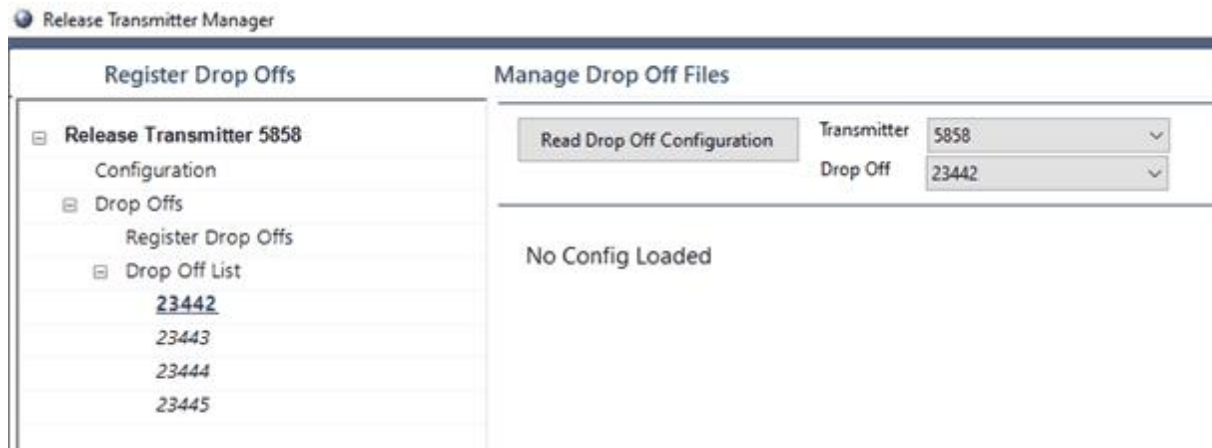


Figure 22-: Drop Off selection

7.1 Read Drop Off configuration

Loading configuration is achieved by clicking 'Read Drop Off Configuration'. This will open a connection window prompting the user to attach the magnet to the Drop Off and detach it again afterwards, see Figure 23.

Note: User is required to attach the magnet at least one second and then detach it to initiate the communication. The Drop Off is always shipped with attached magnet to deactivate the Drop Off timer.



Figure 23: Drop Off connection

Once the configuration has been loaded from the Drop Off, the device information is presented as shown in Figure 24. Information could be saved as text file by selecting the Info File tab and and 'Save as Textfile' afterwards.

The screenshot displays the 'Drop Off Configuration' interface. At the top, there is a 'Read Drop Off Configuration' button and two dropdown menus for 'Transmitter' (5858) and 'Drop Off' (23442). Below this is a tabbed interface with 'Configuration' and 'Info File' tabs. The 'Info File' tab is active, showing 'Release Settings' with 'Time Mode' set to 'Absolute', a 'Date (UTC)' of '07.06.2024', and a time of '07:58:52'. There are buttons for 'Clear Changes', 'Write Configuration', and 'Set To PC Time (UTC)'. The 'Device Time' section shows the current time as '11.11.2044, 22:22:58'. The 'Device Parameter' section is expanded, showing a tree view of system parameters including Device ID, Device production date, PCB Type, Firmware version and description, Bootloader version and description, and Drop Off release time mode and absolute release time.

Section	Parameter	Value
Release Settings	Time Mode	Absolute
	Date (UTC)	07.06.2024
Device Time	Current Time	11.11.2044, 22:22:58
	Time Mode	07:58:52
Device Parameter	System Parameters	
	Device ID	23442
	Device	
	Production Date	13.01.2022
	PCB Type	DropOff UHF V2.5
	Firmware	
	Device	
	Firmware Version	1.1.6 (23.10.2019)
	Firmware Description	Release
	Bootloader	
Bootloader Version	1.0.9 (16.02.2021)	
Bootloader Description	Release	
Drop Off		
Release Time		
Release Time Mode	No Timer	
Absolute Release Time	07.02.2136, 06:28:15	

Figure 24: Drop Off read configuration

7.2 Update UTC Time

User can update the UTC time by clicking 'Set To PC Time (UTC)'.

7.3 Set Release Time

Drop Offs can be configured with any of these two time modes.

- *Absolute Time Mode:*

The Drop Off releases exactly at the specified date and time. Please note that all dates of the Drop Off refer to the Coordinated Universal Time (UTC) which may be different to the local time.

- *Relative Time mode:*

The Drop Off will be released after a specified time interval which can be provided using weeks, days, hours, minutes and seconds.

Note: The Relative time resets whenever a magnet is applied to the device.

Consequently, restarting the relative time does not require the use of this application and can be performed in the field.

7.4 Write Configuration

Writing the changed settings is achieved by clicking 'Write Configuration'. A connection window will open prompting the user to attach and detach magnet as shown in Figure 23. User is required to attach the magnet at least one second and then detach it again in order to initiate the communication and write the configuration.

8 Radio Drop Off Release

The main feature of the Release Transmitter is to release a radio controlled Drop Off on demand. The maximum range for this is 500 m. If possible, release the Drop Off while you can see the animal.

Note: Prior to preparing the Drop Off release, make sure the transmitter's battery is fully charged and the voltage is about 4 Volt. Otherwise there might not be enough power to reach the Drop Off ideally.

Note: Connect the UHF YAGI antenna to the device. A wrong or missing antenna can damage the device as the amplified signal discharges internally.

Note: It is possible that the animal will be startled when the collar is released and drops down. Avoid triggering the Drop Off if the animal is in a situation where it could get hurt by erratic movements (e.g on a cliff edge).

To release a Drop Off, switch on the transmitter, jump to the Main menu and follow the steps shown below. In the 'Drop Off Release' menu (see Figure 26) the desired Drop Off ID can be selected by pressing keypad 2 (↓) or 8 (↑).



Figure 25: Main menu



Figure 26: Drop Off Release menu



Figure 27: Drop Off Fire menu



Figure 28: Confirm Fire menu



Figure 29: Fire command transmission

The Transmitter now sends the release command to the Drop Off for 40 seconds. If you want to abort the transmission in this stage, press the START button on the keypad. However, it is possible that the Drop Off has already received the release command. In this case it is no longer possible to abort the Drop Off release.

After the Drop Off receives the release command, it takes approximately 1 minute to completely release the collar. In rare cases, this process can also take longer, e.g. if the Drop Off is soiled which affects the mechanical release.

Note: There will be no confirmation from the Drop Off whether the signal was received and the Drop Off was triggered. You can resend the release command in case you are uncertain.

9 UHF ID Tag Receiver

The Release Transmitter can be used to check if VECTRONIC UHF ID Tags are in range. To do this, switch on the Release Transmitter and jump to the Main menu. Then press F4 to start receiving IDs which are in vicinity. ID Tags and their mortality state will be shown in the display. If more than one ID Tag is in range, the IDs will be shown alternately. Press SPACE to stop receiving UHF ID Tags and go back. Press F5 to pause receiving IDs, e.g. for checking the state of a certain ID.



Figure 30: Main menu

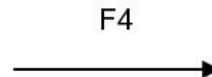


Figure 31: ID Tag receiver

10 Power Down

The Release Transmitter switches off automatically 15 min. after the last button is pressed. Before the device switches off, a countdown menu will be displayed for 5 min. If there is still no button pressed, the device will shut down.

Note: The device doesn't switch off automatically while connected to a PC via USB cable.

You can switch off the device manually by following the next steps:

- Go to the main menu
- Press F10 (hold SHIFT and press F5)
- After pressing F10 the device switches off and all functions are disabled



Figure 32: Main menu