

Flightcell®

CONNECT | COMMUNICATE

Flightcell® Pro

Multi-link communications hub



Operation Manual

For Low Impedance models (V6 Military, Non LCD)

www.flightcell.com



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Introduction

Please read these instructions before using Flightcell in an operational aircraft.

It is suggested you practice using Flightcell to familiarise yourself with using a phone with Flightcell before it is required operationally.

Before your first flight with Flightcell, we suggest you plug it into your intercom and adjust the settings. Flightcell is designed to work with most cellphone models and 9505 Iridium satellite phones but adjustment of audio volumes may be required for some phone types.

Features

Flightcell is a totally portable interface primarily but not exclusively for the connection of cellular and satellite phones to aviation headsets either in conjunction with or independent of aircraft systems. Flightcell

- can be used either in conjunction with or independent of aircraft systems;
 - can be used with most types of cellular phones (some models may require an adaptor plug);
 - can be used with the Motorola 9505 satellite phone;
 - is portable, so no certification is required;
 - enables the user to simultaneously interface cellular phones and satellite phones, receive audio input from devices such as Discman/MP3 player and non-aviation transceivers, and output audio to devices such as video cameras or cockpit voice recorders (CVRs);
 - can be powered directly from an aircraft or from its own internal rechargeable batteries;
 - has built in basic intercom that together with an optional accessory headset lead (not supplied) allows connection by a second user of the unit;
 - can output audio to recording devices such as cockpit voice recorders (CVRs) or video cameras or can inject audio into the aircraft interphone with optional adaptor leads (not supplied);
 - has LED indicators for quick identification of operating mode and battery states.
-

Limitations

Due to the large variety of available cellular phones, headsets and aircraft radio/intercom systems it is impossible to guarantee a perfect hook-up of the Flightcell. If you experience problems it could be due to one of the connected devices not operating within the ranges required.

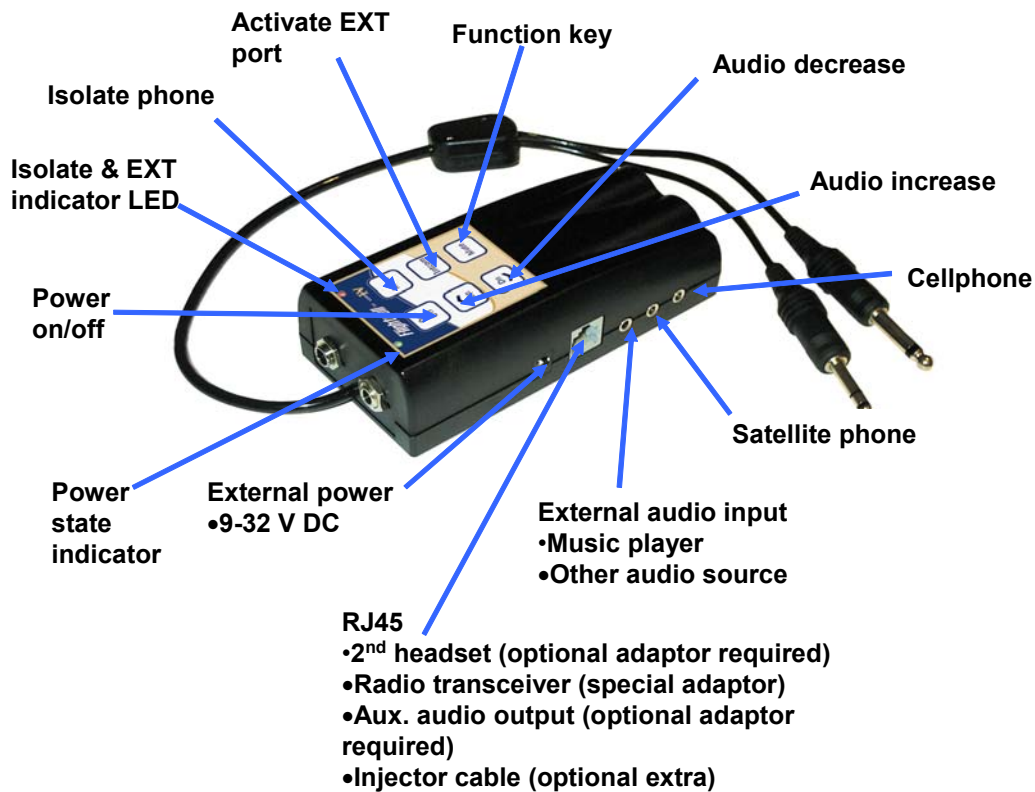
Some cellular phone operating systems create electronic interference, which is picked up by the sensitive components within the Flightcell.

Please check your local laws with regard to the use of Cellular Phones once airborne. Aviation laws in most countries allow the airborne use of a cellular phone provided the pilot has approved its use and has deemed it to not be detrimental to the safe operation of the aircraft.

In some states it is against local communications laws to use a cellular phone when airborne, however this is not to do with aircraft safety but with concerns over multiple triggering of land based cell phone towers. In reality this has not proven to be a significant problem. If this should happen the worst result is a dropped call.

Disclaimer: Flightcell International Ltd does not accept any liability for any injury or damage to persons or property which may or may not be a result of a Cellphone or Satphone being operated within an aircraft or any vehicle, whether operating or not.

Flightcell Map



Flightcell Operation

Your Flightcell is fitted with a membrane switch pad. Some functions are activated by pressing a single button. Others are activated by holding down one or two buttons then pressing the Up or Down buttons.

Flightcell is fitted with two LEDs to indicate power state (green) and isolate state (red).

Cables are supplied with Flightcell to connect your cellphone or satellite phone (coiled cable) and for auxiliary audio input (straight cable).





























A special adaptor is available from your Flightcell dealer to connect a second headset via the "EXT" RJ45 port.

If using the optional ICS Injector cable to feed phone audio to the ICS this cable plugs to this port.



This port also provides audio output, and can be used to connect other audio devices such as handheld transceivers.

Adaptors for some common devices may be available from your Flightcell dealer or you can make up your own adaptor using the connection information in Appendix 1.

Keypad Commands

Item	Action	Key Sequence	Remarks
Power	On	 + 	Hold down for 5 seconds - single audible beep Green LED flashes - battery power Green LED continuous - external power
	Off		Hold down for 0.5 seconds - double audible beep Headset works as if Flightcell not connected
Isolate Phone	On	 [Remember to reverse]	Isolates user's mic from phone for intercom conversation. Inputs from phone and aux audio inputs reduced 50%. ISO function will auto off after 5 minutes Continuous red LED indicates ISO activated
	Off		
Phone Receive Volume	Up	 +  → 	Make sure phone volume is at mid level (Satphone)/maximum level (Cellphone) first
	Down	 +  → 	
Phone Send Volume (mic)	Up	 +  → 	Adjust this if your called party says you sound muffled or broken
	Down	 +  → 	
Master Volume	Up		Increases all volumes
	Down		Decreases all volumes
Activate "EXT" (2nd Headset)	On		Red LED blinks; Activates 2 nd headset extension
	Off		Deactivates 2 nd headset extension Red LED off
Auxiliary Audio Input Volume	Up	 + 	Make sure CD player is at maximum volume level first
	Down	 + 	
Factory Defaults	Restore	 →  → 	Restores factory default setting; unit must be on first

LED Indicator States

LED	State	Indication
POWER 	Off	Unit Off
	On Continuous	Charging or External Power On
	Blink	Unit On (Internal Battery)
	Double Blink	Unit On (Low Battery)
	Triple Blink + Audio Tone	Unit On (Very Low Battery)
	Slow Flash	Unit on, external power connected
ISOLATE 	Off	All Isolates Off
	On	Phone Isolate On
	Blink	“EXT” Port On, Internal Intercom On
	Occult	Phone Isolate On; “EXT” Port On

Setting up Flightcell

It is important that you adjust all input volumes correctly to get the best performance. Use the yellow start card as a check list.

- Start with Flightcell plugged in but turned off, then adjust the aircraft intercom and radio volumes in the normal way.
- **Turn the Flightcell on by holding down the Function button and the Power button simultaneously for 5 seconds (green light will illuminate).**
- Plug your cellphone or satphone into the correct socket in the Flightcell using the coiled cable. This must be plugged in correctly as failure to do so will lead to feedback or failure to connect to your cell phone. The larger 3.5mm end plugs into the Flightcell, and the smaller 2.5mm end goes into the PHF socket in your phone. Please consult your phone instructions if you are unsure where to plug it in.
- Some cellphones have a built in 2.5mm personal headset socket (PHF) while others may need an adaptor to go on the bottom of the phone (Nokia, Erickson, some Qualcomm). This adaptor has a 2.5mm socket. These adaptors are available from your Flightcell supplier.
- If the phone transmit or receive volumes are too high or too low, adjust using the keypad commands as shown on page 6.

Power Supplies

Internal Power Supply

Flightcell has internal batteries which will provide up to 50 hours continuous operation on a single charge. Before using your Flightcell for the first time you will need to charge it using the AC charger provided. Flightcell is fitted with high quality NIMH batteries, as these resist memory problems associated with NiCad type batteries. It will take 5-7 full cycles for the battery to reach optimum performance.

Charging

The Green LED on the top of the switch pad will illuminate constantly to indicate the battery is charging. When fully charged the light will flash slowly. Do not leave unit on charge more than 18 hours as this can overheat the internal batteries resulting in reduced performance. The internal NIMH battery will provide up to 50 hours of use between charges depending on volume settings.

Note: Your battery may reach full charge in less than 6 hours.

Periodic Battery Maintenance

It is a good idea to cycle the battery periodically. To do this just leave the Flightcell switched on after use until flat, then recharge as normal. This should be carried out every month.

External Power Supplies

Flightcell can be powered directly from an aircraft supply and will run on any voltage from 9-32 volts. This should not exceed 32 volts. If powering the unit from the aircraft you will need to obtain a power plug to fit the unit's power socket (2.1x5mm short shaft DC centre positive plug). A cigarette lighter type cord is included.

When powered from an aircraft supply the Green LED will illuminate constantly when the unit is turned off. When the Flightcell is turned on the Green LED will flash slowly.

A tone will be heard when EXT power is turned on or off.

Using Your Flightcell

You are now good to go.

Just use your Radio and Intercom in the normal way. When a call comes in the Iridium phone will ring through the headset.

Note for cellphones: some cellphone models do not ring in the headset. If yours is one that does not ring through the headset, you may need to set your phone to "auto answer mode" (Check your phone instructions). Also a "vibralert" function may help to alert you to calls.

Answer your phone in the normal way, there is no need to switch anything on the Flightcell (please read your cellphone instructions, as your phone will sense that the headset jack is in use and there may be other ways of answering your phone). If your phone has the capability, answer calls using the phone in "auto answer" mode. To make an outgoing call, just dial out in the normal way.

External Antennas

Iridium satellite phones require an external antenna to get optimal performance.

Headsets

Military model Flightcells are designed to work with military low impedance headsets and helmets only.

Advanced Operations

ISO Button (Phone Isolate)

Your Flightcell is fitted with a phone mute switch. This stops your outgoing ICS conversation being heard by phone callers, and reduces all phone volume input to your headset by 50%. To stop your ICS conversation being transmitted over the phone, turn this Mute On (red LED steady on).

Be sure to turn mute back Off (no red LED) again.

As a failsafe measure, ISO will auto reset after 5 minutes.

Auxiliary Input

On the side of the unit is the auxiliary input socket, for connecting a Walkman/Discman/MP3 player. A connecting cable is supplied with your Flightcell.

To adjust the input volume from an auxiliary device plugged to the Flightcell, hold down the function button while simultaneously pushing the up or down buttons.

The EXT Button

This function is only used in conjunction with the optional extra second user headset jack or ICS Injector cable

Optional Extras

The following accessories are available to expand the versatility of your Flightcell interface and use the RJ45 EXT connect port.

Second User Headset Jack Nato (U174/U plug)

Allows a second headset to be used, second user can access all functions. Allows simple intercom to operate between 2 connected headsets. This adaptor is plugged into the RJ45 EXT port. Operating the EXT button will turn this headset on, which is indicated by a flashing Red LED.

ICS Injector Cable (U174/U plug)

Allows all audio received by the Flightcell from the phone to be distributed into the ICS by plugging the injector cable into a spare ICS position. This adaptor is plugged into the RJ45 EXT port. Operating the EXT button will turn this injector on, which is indicated by a flashing Red LED.

Additional Non Aviation Transceiver Connector

Allows for the connection of an additional radio transceiver without the need for permanent installation. This adaptor is plugged into the RJ45 EXT port

These are not supplied by Flightcell and must be made to order.

Auxiliary Audio Output Adaptor

This optional adaptor is available from Flightcell if you wish to record audio from your Flightcell to a video camera or recorder.

Limited Warranty

Your unit is warranted for 24 months from date of sale.

The warranty is void if any labels are removed or if it is determined that more than 32 volts or reverse polarity has been put into the charge socket.

Please contact Flightcell International Ltd to obtain a Returned Materials Authorisation (RMA) prior to shipping any products for repair. This form may also be obtained from our website (www.flightcell.com)

Trouble Shooting

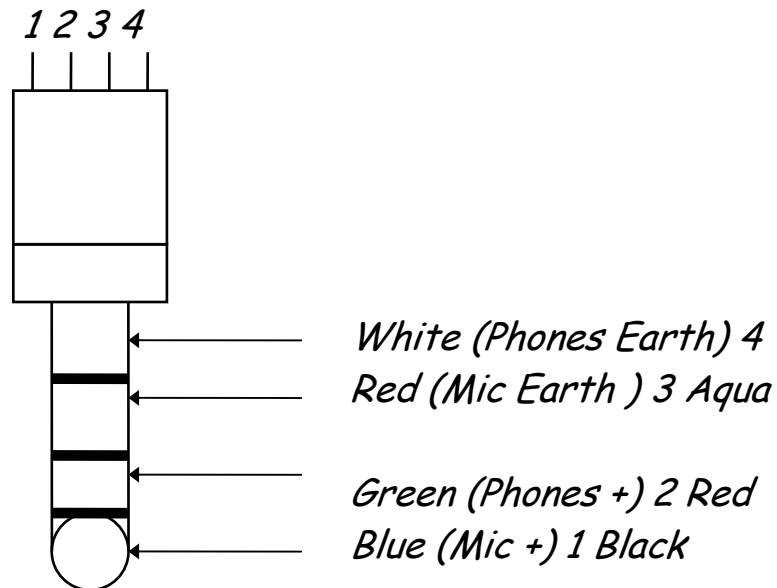
Press and hold in order: **Func + ISO + EXT to restore factory defaults.** When this is pressed, you should hear a number of beeps.

Appendix 1: Connections

RJ45 Pins	FCV6LI
Pin	Function
1	Data Out
2	Data In
3	Phones +
4	Phones -
5	ICS Feed +
6	ICS Feed -
7	Mic -
8	Mic +

Pin 1 is nearest the charger input; Pin 8 is nearest the aux input

Flightcell V6 Military Plug Wiring Diagram- FCV6LI



1. Pin 1 = Microphone Positive (Red)
2. Pin 2 = Headphones Positive (White)
3. Pin 3 = Microphone Earth (Green)
4. Pin 4 = Headphone Earth (Black)

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