CARDO
FREECOM 1+
CARDO
FREECOM 2+

cardo
communication in motion

HIGH POWERED TECHNOLOGY

Bluetooth®

1. INTRODUCTION

Thank you for choosing the Cardo FREECOM 1+/2+ communication and entertainment system for motorcycle helmets.

If you have not yet installed the FREECOM 1+/2+ unit on your helmet, please install it as described in the Installation Guide provided in the package.

2. GETTING STARTED

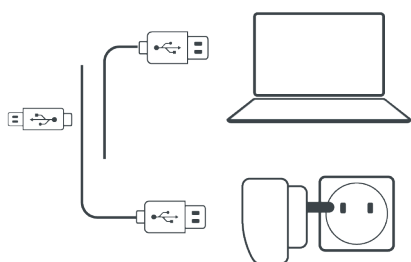### 2.1 GETTING TO KNOW YOUR FREECOM 1+/2+
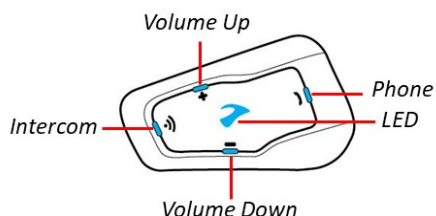
2.2 CHARGING THE FREECOM 1+/2+

> Make sure that your FREECOM 1+/2+ battery is charged for at least 4 hours before initial use.

To charge the unit:

1. Using the supplied USB cable, connect your computer or wall charger to the USB port on your FREECOM 1+/2+.

> - Charging with the wall charger is faster than via a computer USB port.
> - Charging your unit switches it off automatically. To use your unit while it is being charged, switch it on.(see Switching Your Unit On/Off on page 5).

While charging, the LED indicates the charging status as follows:

- Red LED on – charging

- Red LED off – charging complete

2.3 SWITCHING YOUR UNIT ON/OFF

To switch your FREECOM 1+/2+ on:

- Press both ⊟ and 🔊 for **1 second**.
  The speaker plays an ascending tone and a voice message greets you.

  The LED confirms your FREECOM 1+/2+ is on:

    - Normal and low battery – LED flashes blue three times.

    - Charging – LED flashes red and purple three times.

To switch your FREECOM 1+/2+ off:

- Press both ⊟ and ⑨.
  The LED flashes red three times, confirming that your unit is switching off. The speaker plays a descending tone and a voice message, "Goodbye".

2.4 USING YOUR FREECOM 1+/2+

You can operate the various features of your FREECOM 1+/2+ in the following ways:

- Press a button or combination of buttons on the unit.

- Use the Cardo Mobile App on your mobile device (once it is paired with the unit).

You can also configure your unit by connecting it to a computer with the supplied USB cable and running the **Cardo Updater** while your computer is connected to the Cardo Community website.
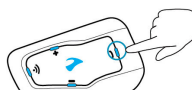
2.5 PAIRING YOUR UNIT TO BLUETOOTH DEVICES

Your FREECOM 1+/2+ has two Bluetooth channels for connection to Bluetooth devices such as mobile phones, GPS devices, and Bluetooth music players with A2DP.

To connect your unit to a Bluetooth device, you must first pair them. Once paired, they automatically recognize each other whenever they are within range.

> If you are pairing more than one device, Cardo recommends that you pair the mobile phone to channel 1, and the additional device (such as GPS, music player or additional mobile phone) to channel 2.
>
> If you are pairing the unit to more than one mobile phone, the phone paired with channel 1 is the default phone for outgoing calls.

To pair Bluetooth channel 1 to a mobile phone:

1. Enable Bluetooth on the mobile phone.

2. On the unit in standby mode, press ⑨ for **5 seconds**.
   The LED flashes red and blue.

3. On your mobile phone, search for Bluetooth devices.

4. When your FREECOM 1+/2+ appears in the list of available devices, select it.
   If prompted for a PIN or Passkey, enter 0000 (four zeros).

   The phone confirms that pairing has succeeded and the LED flashes purple for 2 seconds.

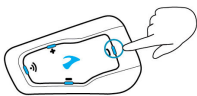**To pair Bluetooth channel 2 to another Bluetooth device:**

1. Enable Bluetooth on the device (for example, your mobile phone, GPS device, or music player).

2. On the unit in standby mode, press ⑨ for **5 seconds**. The LED flashes red and blue.

3. Tap ⑨ twice. The LED flashes red and green.

4. If you are pairing a GPS device, press [+].
   The LED flashes slower.

5. On the device you are pairing, search for Bluetooth devices.

6. When your FREECOM 1+/2+ appears in the list of available devices, select it.
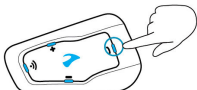   If prompted for a PIN or Passkey, enter 0000 (four zeros).

   The device confirms that pairing has succeeded and the LED flashes purple for 2 seconds.

> • If pairing is not completed within 2 minutes, the unit automatically returns to Standby.
>
> • If you have paired two different mobile phones directly to your FREECOM 1+/2+, set one as default for making calls (see Setting the Default Mobile Phone on page 16).
>
> • Not all Bluetooth mobile phones broadcast Bluetooth Stereo music (A2DP) even if the phone has an MP3 player function. Consult your mobile phone's user manual for more information.
>
> • Not all Bluetooth GPS devices allow connection to Bluetooth audio devices. Consult your GPS User Manual for more information.

To cancel the pairing process:

• Press ◑ for **2 seconds**.
   The LED stops flashing red and blue/green.

To reset all Bluetooth device pairing:

1. Press ◑ for **5 seconds**.
   The LED flashes red and blue.

2. Press ◑)) and ◑ for **2 seconds**.

   The LED flashes purple 5 times, confirming that pairing has been reset.

3. ON THE ROAD

FREECOM 1+/2+ makes it easy for you to receive phone calls and listen to music in a convenient and safe manner.

3.1 BASIC AUDIO FUNCTIONS

The basic audio functions are the same whether you are listening to music, speaking on the intercom, or having a phone conversation.

To turn the volume up:

- Tap [+].
  An increasingly louder tone is played on the speaker until you reach the maximum volume, as indicated by the maximum volume tone.

To turn the volume down:

- Tap [−].
  An increasingly quieter tone is played on the speaker until you reach the minimum volume, as indicated by the minimum volume tone.

To mute the microphone and lower the speaker volume to the minimal level:

- Simultaneously tap [+] and [−].

To unmute the microphone and raise the speaker volume to the previous level:

- Tap [+] or [−].
  An ascending tone is played on the speaker.

3.1.1 MAKING AND RECEIVING PHONE CALLS

You can use your mobile phone to make and receive phone calls while paired to your FREECOM 1+/2+.

To make a phone call:

- To dial using your mobile phone's voice dial option, simultaneously tap 🔘 and 🔊, then make your call as
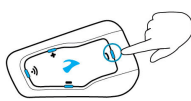
  per the instructions for your mobile device.

- To redial the last number called on your mobile device, press and hold down 🔘 for **2 seconds**.

- To dial your preset speed dial number, tap 🔘 **3 times**. (The speed dial number must be set in the Cardo
  Mobile App or community website prior to use.)

> - If you connected two mobile phones to your unit, you cannot make an additional phone call from the other phone while a phone call is already active.

To answer a call:

- Tap .

To reject a call:

- Press for **2 seconds**.

To ignore a call:

- Simultaneously tap and , or wait 30 seconds.

To end a call:

- Tap .

3.1.1.1 SWITCHING BETWEEN TWO CALLS ON TWO MOBILE PHONES

Your FREECOM 1+/2+ can toggle between two calls on two mobile phones when both mobile phones are paired to your unit.

To toggle between two calls on two mobile phones (without disconnecting either call):

- Tap twice.

To disconnect the current call and switch to the other call:

- Tap .

3.1.2 STREAMING MUSIC

You can stream music from your paired device to your FREECOM 1+/2+.

To start music streaming from your paired device:

- Tap .

To stop music streaming:

- Press for **2 seconds**.

To skip to the next track (while streaming):

- Tap .

To skip back to the previous track (while streaming):

- Tap twice.

3.1.2.1 SWITCHING MUSIC SOURCES

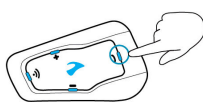If two music (A2DP) audio sources are paired, FREECOM 1+/2+ uses the audio source from which you last played music.

To switch to the other audio source:

1. Stop music (A2DP) playback from the current device (see Streaming Music on page 9).
2. Play music (A2DP) from the other device.

FREECOM 1+/2+ automatically remembers your last played device.

3.2 LISTENING TO FM RADIO

The FREECOM 1+/2+ is equipped with a built-in FM radio.

To turn on the FM radio:

- Tap ⏻ twice.

> When you switch on your FM radio, the station that was playing when you last switched off resumes playing.

To turn the FM radio off:

- Press ⏻ for **2 seconds**.

To skip to the next station:

- Tap ⏻.

To skip back to the previous station:

- Tap ⏻ **twice.**

To scan for and select a station:

1. Simultaneously tap ⏻ and ➕.
   The FM radio plays each station that it finds for several seconds.

2. When you hear a station you want to select, tap ⏻.

To store a scanned station in the active preset:

- Tap ⏻ within 20 seconds of stopping the scan.

4. RIDING WITH OTHERS

4.1 BLUETOOTH INTERCOM

To connect your unit to another unit with a Bluetooth intercom, such as a Cardo Bluetooth unit or other Bluetooth-enabled devices, you must first pair their channels. Once paired, the units automatically recognize each other whenever they are in range:

For FREECOM 1+: Rider-To-Passenger only.

For FREECOM 2+: Line of sight up to 500 m / 1,600 ft subject to terrain.

> - Pairing a channel replaces any existing paired unit on that channel with the new unit.
> - If you purchased the FREECOM 1+/2+ DUO, the retail package contains two pre-paired units.
> - The Intercom range with other models is limited to the distance of the unit with the shorter range.

To set up a Bluetooth intercom connection:

1. Confirm your unit is in Standby mode (LED flashes blue slowly).
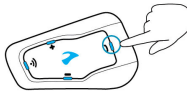
2. To initiate 2-way pairing:

   - On your unit, press 🔊 for **5 seconds** to enter pairing mode.

     The LED flashes red.
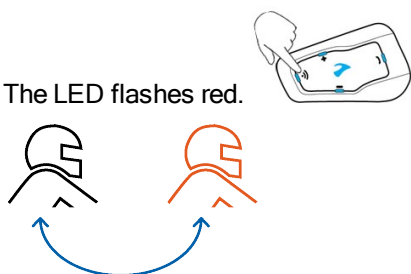
> Bluetooth intercom pairing needs to be initiated on the other device.

> If pairing is not completed within 2 minutes, the unit automatically returns to Standby mode.

To pair a non-Cardo Bluetooth intercom unit:

1. Confirm your unit is in Standby mode (LED flashes blue slowly).

2. To initiate 2-way pairing:

   - On your unit, press 🔊 for **5 seconds**.
     The LED flashes red.
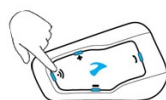
   - Tap 🔘 to activate the Cardo gateway.
     The LED flashes red and blue.

> Mobile phone pairing needs to be initiated on the other device.

If pairing is not completed within 2 minutes, the unit automatically returns to Standby mode.

To cancel the pairing process:

On your unit, press for **2 seconds**.
The LED stops flashing.

4.2 STARTING/ENDING INTERCOM CALLS

You can initiate Bluetooth intercom calls with other riders, including non-Cardo riders.

To start or end communication with a rider or passenger:

● *Rider 1* : Tap .

4.2.1 RECEIVING BLUETOOTH INTERCOM CALLS

If another paired unit calls you via Bluetooth intercom, the call begins instantly.
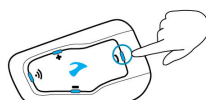
4.3 RESETTING BLUETOOTH INTERCOM PAIRING

Resetting Bluetooth intercom pairing also resets all Bluetooth device pairing.

To reset Bluetooth intercom pairing:

1. Press for **5 seconds**. The LED flashes red.

2. Press and for **2 seconds**.
   The LED flashes purple 5 times slowly, confirming that pairing has been reset.
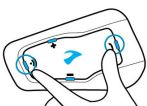
4.4 SHARING MUSIC AND RADIO

You can share music and FM radio with a passenger or other rider. Music sharing is more suitable for rider/passenger combinations, whereas FM radio is also intended for rider/rider combinations.

- Music and radio can be shared with only one passenger/rider.
- Bluetooth intercom calls are disabled when sharing music.
- FM radio sharing opens a Bluetooth intercom call automatically.
- If you paired your unit to two mobile phones, music will be shared from the mobile phone through which you last played music.
- When sharing FM radio, either passenger/rider can change station while the Bluetooth intercom call remains open.
- When you stop sharing FM radio, the Bluetooth intercom call remains open and the FM radio continues to play independently on each passenger/rider's unit.
- When you stop sharing music, the music continues to play on your unit only.

To start/stop sharing:

- While playing music (A2DP) or the FM radio on your unit, press ⊟ for **2 seconds**.
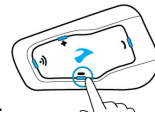
5. TROUBLESHOOTING

5.1 SOFT RESET
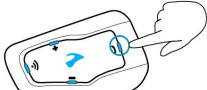
If your FREECOM 1+/2+ stops responding, reset it in one of these ways:

- Turning it off and then on again (see Getting Started on page 5).
- Using the supplied USB cable, connect your unit to the computer or wall charger for 30 seconds.

5.2 RESET PAIRING

> The options below delete all paired units or devices.

To reset mobile device pairing:

1. While in standby mode, press 🌙 for **5 seconds**.
   The LED flashes red and blue.

2. Press 🔊 and 🌙 for **2 seconds**.
   The LED flashes purple 5 times slowly, confirming that pairing has been reset.

To reset intercom pairing:

1. While in standby mode, press 🔊 for **5 seconds**.
   The LED flashes red

2. Press 🔊 and 🌙 for **2 seconds**.
   The LED flashes purple 5 times slowly, confirming that pairing has been reset.

5.3 RESET TO FACTORY SETTINGS

> This option deletes all paired units, devices and all configuration settings.

To perform a factory reset through the unit:

1. Check that your FREECOM 1+/2+ is in Standby mode (see FREECOM 1+/2+ LED Indications on page 18).

2. Simultaneously press 🔊 + ⊞ + ⊟ for **5 seconds**.
   The LED flashes purple 5 times slowly, confirming that pairing has been reset.

6. PERSONALIZING YOUR DEVICE

Get the most out of your FREECOM 1+/2+ by changing the settings and customizing your unit according to your own personal preferences, using either of the following methods:

- Cardo Mobile App on iOS or Android devices.
- Cardo Community on Windows / Mac - minimum requirements - Windows® 7 / Mac OS X 10.8
- Unit buttons.

> Cardo recommends you customize your settings before going out on the road. You can adjust any of these settings as required after experiencing them under road conditions.

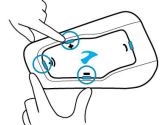| Object	Default Value	Description	Cardo Mobile App (iOS/Android)	Cardo Community
AGC sensitivity (Off/Low/Medium/High)	Medium	AGC automatically adjusts speaker volume according to ambient noise and riding speed. For example, when set to Low, higher ambient noise will cause the volume increase to kick in at a higher level.	✓	✓
Audio priority (A2DP/Bluetooth intercom)	Bluetooth intercom	Priority of audio source playing through speakers. Either music is not interrupted by an intercom call, or vice-versa.	✓	✓
Background Audio Level	N/A	Sets the background audio volume when parallel audio streaming is on (see Parallel audio streaming in Bluetooth intercom (Enable/Disable) below).	✓	✗
Bluetooth friendly name	FREECOM 1+/2+	Sets the name that appears on your phone while pairing and in the Cardo app.	✓	✓
Download the latest firmware upgrade	N/A	Stay up-to-date by downloading software updates whenever a new version is available.	✗	✓
FM Band	According to Your Region	If you are in Japan, select **Japan**. Otherwise, select **Worldwide**.	✓	✓
Language	According to Your Region	Voice announcements language (see Spoken Status Announcements below).	✓	✓
Mobile priority	Mobile 1	If you paired your unit to two mobile phones, you must set one of them as the default phone for outgoing calls.	✓	✗
Parallel audio streaming in Bluetooth intercom (Enable/Disable)	Disable	You can hear two audio sources simultaneously. For example, hear GPS while listening to music. Note: Parallel audio streaming may not work properly with some iOS devices (i.e., music player or GPS navigator) due to connected device limitations.	✓	✓
RDS (Enable/Disable)	Disable	Radio Data System allows the radio to automatically retune to the strongest frequency available for the FM station you are listening to when the signal becomes too weak.	✓	✓

Object	Default Value	Description	Cardo Mobile App (iOS/Android)	Cardo Community
Set speed dial numbers	Empty	Pre-set phone numbers for automatic dialing.	✓	✓
Set the 6 FM radio presets	107.5	Pre-set FM radio stations.	✓	✓
Spoken Status Announcements (Enable/Disable)	Enable	Voice announcements inform you to whom or to what device you are connected.	✓	✓

> AGC performance may vary based on environmental conditions, including riding speed, helmet type, and ambient noise.

6.1 SETTING THE DEFAULT MOBILE PHONE

If you paired your unit to two mobile phones, you must set one of them as the default phone for outgoing calls.

> If you do not set a default phone, the phone that you first paired with your unit is automatically set as the default phone.

To set the default phone:

- During a mobile call, press ◐ for **5 seconds**.
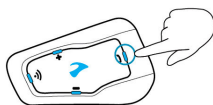
6.2 USING PARALLEL AUDIO STREAMING

With parallel audio streaming, you can hear GPS instructions during a mobile or Bluetooth intercom call, or while listening to other audio sources, such as music or FM radio.

> Parallel audio streaming may not work properly with some iOS devices (i.e., music player or GPS navigator) due to connected device limitations.

Your FREECOM 1+/2+ sets the various audio sources to either foreground (volume remains the same) or background (volume reduced) as described in the following table:

Mobile Phone 1/2	GPS	Intercom	Music	FM Radio
Foreground	Foreground			
Foreground[1]		Foreground[1]		
	Foreground	Foreground		
	Foreground		Background	
	Foreground			Background
		Foreground	Background	
		Foreground		Background
		Foreground		Background
			Foreground [2]	
				Foreground [3]

[1]If you add an intercom call to a mobile phone call creating a conference call, the volume for both audio sources is the same.

[2]If you play music only, the music volume is not reduced.

[3]If you play the FM radio only, the FM radio volume is not reduced.

> In some cases, parallel audio streaming may not work properly due to connected device limitations (music player or GPS navigator).

> You cannot use music sharing for voice audio during parallel audio streaming.

You can configure parallel audio streaming via the Cardo app or the Cardo Community.

6.3 AUDIO SOURCE PRIORITIES

If Parallel Audio Streaming is disabled, FREECOM 1+/2+ manages the audio sources you hear through the speakers according to the following audio source priorities.

Priority	Audio Source
Higher Priority ↑ **Lower Priority**	Mobile phone, GPS device instructions Intercom or Music[1] Music or Intercom[2] FM Radio

[1]When audio priority is set to Intercom, you cannot hear navigation app or SMS messages from your phone during an ongoing intercom call.

[2]When audio priority is set to A2DP (music), the intercom is disabled while listening to music (via A2DP). A rider/passenger calling you by intercom hears a sound indicating you are not available.

> If you pair your unit to two mobile phones (see Setting the Default Mobile Phone on page 16), music is shared from the mobile phone through which you last played music.

APPENDIX A. FREECOM 1+/2+ LED INDICATIONS

Your FREECOM 1+/2+ operates in various modes. Each mode consists of a group of features currently available for your use. For example, when FREECOM 1+/2+ plays music, it will be in music playing mode, enabling features related to playing music such as skipping to the next and previous tracks.

Events are considered to occur whenever you operate a feature and when FREECOM 1+/2+ responds. For example, turning on music is an event.

The device's current mode is indicated by the unit LEDs. You also hear voice announcements on your unit for mode changes and events.

The following table shows LED indications for modes and events according to the current battery state.

LED	Flashing	Battery State	Mode or Event
Blue	For 2 seconds	Normal	• Rider B connected • Set voice control to enabled
Blue	Fast (three times)	Normal Low Battery Charging	• Power on
Blue	Fast (repeating fast)	Normal, Low Battery Charging	• Pairing intercom rider B
Blue	Slow (repeated at 3-second intervals)	Normal	• Standby
Blue	Slow twice (repeated at 3-second intervals)	Normal	• Incoming/outgoing call (intercom or mobile) • Audio active (intercom, FM, A2DP, GPS)
Purple	For 2 seconds	Normal Low Battery Charging	• Mobile pairing successful • Mobile connected
Purple	Slow (5 times)	Normal Low Battery	• Reset pairing
Purple/Red	Purple twice slowly, then red	Charging	• Incoming/outgoing call (intercom or mobile) • Audio active (intercom, FM, A2DP, GPS)
Purple/Red	Slow purple and red (repeating)	Charging	• Standby
Red	Slow twice (repeated at 3-second intervals)	Low Battery	• Incoming/outgoing call (intercom or mobile) • Audio active (intercom, FM, A2DP, GPS)
Red	Fast (repeated at 3-second intervals)	Low Battery	• Standby
Red	Fast (repeating fast)	Normal Low Battery Charging	• Pairing intercom rider A
Red	Fast (3 times)	Normal Low Battery Charging	• Power off
Red	For 2 seconds	Normal Low Battery Charging	• Rider A connected • Set voice control to disabled
Red	Remains on	Charging	• Off
Red/Blue	Alternating fast	Normal Low Battery Charging	• Pairing Mobile 1
Red/Blue	Alternating slow	Normal Low Battery	• Pairing GPS 1

LED	Flashing	Battery State	Mode or Event
Red/Green	Alternating fast	Normal Low Battery Charging	• Pairing Mobile 2
Red/Green	Alternating slow	Normal, Low Battery	• Pairing GPS 2
Yellow	For 2 seconds	Normal Low Battery Charging	• Intercom call attempted without microphone or audio kit connected

7. GLOSSARY

Term/Abbreviation	Description
A2DP	Advanced Audio Distribution Profile (for music). A protocol for playing music over Bluetooth.
AGC sensitivity	AGC (Automatic Gain Control) automatically adjusts speaker volume and microphone sensitivity according to ambient noise and riding speed.
Device	Mobile phone, GPS or music player.
Language	Voice announcements and voice commands language.
Unit	Cardo or non-Cardo Bluetooth Communication system.
Voice control	Voice activation (by saying a word or phrase) of certain features for hands-free operation.
Voice control sensitivity	Adjusts your microphone sensitivity for voice activation while you are riding.

Check out an excellent selection of motorcycle communication products we offer on our website.