LYNX AVIONICS
Fulbrook Lane, Sherbourne,
Warwick, CV35 8AR, ENGLAND
Tel: 01926 624800
Fax: 01926 624900

MICRO SYSTEM INTEGRAL HELMET G4
(ANR/VCM)

REF: E109-0 21-09-16

INSTALLATION INSTRUCTIONS

The Lynx Micro System Integral Helmet G4 has been designed specifically for use in very high-noise aviation environments where noise attenuation and microphone noise cancellation are the primary concerns.

The helmet may be connected to radio transceivers or mobile telephones using a range of interface products.

HELMET SIZE:
Lynx helmets are manufactured in a range of sizes in order to provide individuals with comfortable and securely-fitting head protection. If you are in any way concerned as to the suitability of the size of helmet supplied to you, do not hesitate to contact Lynx for advice.

VISOR:
The helmet can be used with or without a visor attached. For open-cockpit applications however, the fitting of a visor is recommended.

The visor tension may be adjusted using the supplied T20 Torx key.

When installing a new visor make sure that all of the visor attachment components are fitted in the correct order as shown below.

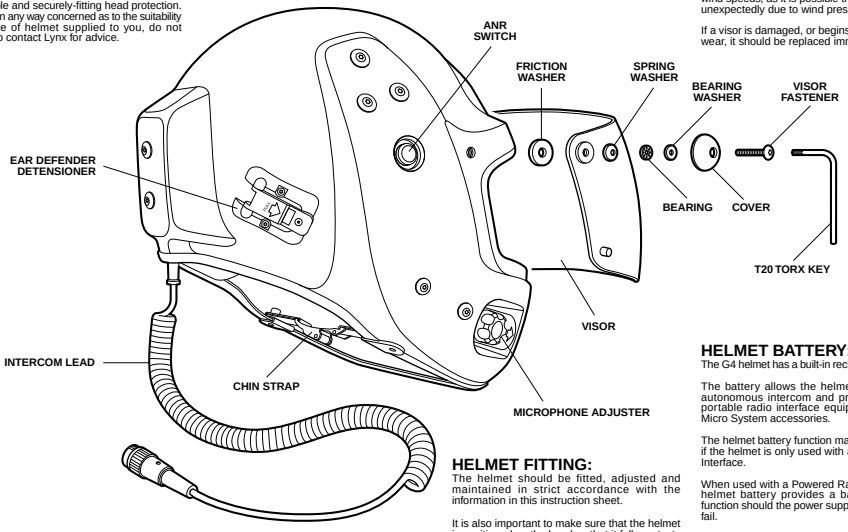
WARNING:
The visor fasteners are coated with a locking compound which is only intended to be used once. Always use new fasteners when installing a new visor.

VISOR CARE:
The visors supplied for fitting to Lynx Micro System Helmets are not guaranteed shatterproof and are only intended to protect the face and eyes from the elements and small flying objects.

The visor is manufactured from Lexan Polycarbonate and can be severely damaged by the application of paint, adhesive stickers, cleaning fluids and other solvents. Use only warm water and mild detergent to clean the visor and a soft cloth to wipe it dry.

Care should be taken when using a helmet fitted with a visor, and looking over the shoulder in high wind speeds, as it is possible that a visor may lift unexpectedly due to wind pressure.

If a visor is damaged, or begins to show signs of wear, it should be replaced immediately.



HELMET FITTING:
The helmet should be fitted, adjusted and maintained in strict accordance with the information in this instruction sheet.

It is also important to make sure that the helmet is positioned on the head so that it fully protects the forehead; do not place the helmet too far to the back of the head.

The chin strap should be adjusted to fit the helmet to each individual user. Always make sure that the chin strap is correctly adjusted and securely fastened before use.

HELMET BATTERY:
The G4 helmet has a built-in rechargeable battery.

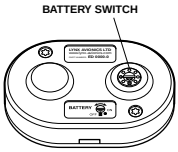
The battery allows the helmet to work as an autonomous intercom and provides power to portable radio interface equipment and other Micro System accessories.

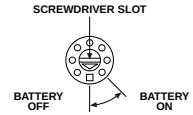
The helmet battery function may not be required if the helmet is only used with a Powered Radio Interface.

When used with a Powered Radio Interface the helmet battery provides a back-up intercom function should the power supply to the interface fail.

Even when used with a Powered Radio Interface, once a helmet battery has received an initial charge it should be fully recharged using a Micro System Charger at least every two months to ensure optimum battery life.

If the helmet is only used with a Powered Radio Interface, and the battery function is not required, the helmet battery may be disabled using the Battery Switch inside the Helmet.



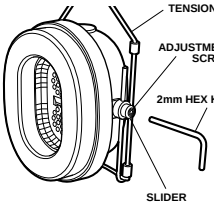


If the helmet battery is disabled when the helmet is new, the battery can be left dormant for up to ten years and can be re-enabled and charged at any time.

HELMET ADJUSTMENT:
The position of the ear defenders is adjustable to allow for variations in head shape and size.

Adjustment is made using sliders at the connection between the tensioner system and the ear defender.

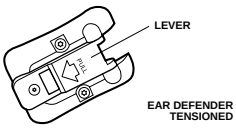
The resistance of the sliders can be set using a 2mm hexagon key so that they are adjustable in use or locked in position.



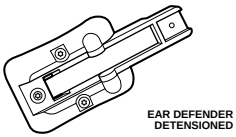
The simplest means of fitting correctly is to place the helmet on the head and then slide the ear defenders downwards until they completely cover the ears.

To obtain the best possible noise attenuation, remove as much hair as possible from beneath the ear seals and ensure that the ear defenders are a tight and comfortable fit.

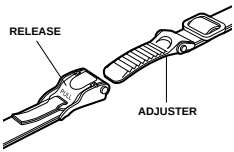
DETENSIONERS:
The helmet ear defenders are designed to seal around the ears using spring pressure. The sealing pressure may be reduced when fitting and removing the helmet using the detensioner mechanism on each the side of the helmet.



To fit the helmet, move the detensioner levers to the rear. Once the helmet is in position, move the detensioner levers forward and the ear defenders will seal around the ears. Reverse this procedure when removing the helmet.



The ear defenders may be detensioned at any time to allow normal hearing whilst wearing the helmet.



HELMET CARE:
The Micro System Helmet G4 is made to absorb some of the energy of an impact by partial destruction of its component parts. If a helmet is subject to a violent impact during use, or receives similar abuse, it should be discarded even though damage may not be apparent.

The helmet shell is manufactured from composite with plastic components and the helmet liner from Polystyrene. These substances may be severely affected by the application of paint, adhesive stickers, cleaning fluids and other solvents.

Micro System helmets should not be stored in temperatures exceeding 40°C (104°F) and they should not be left in direct sunlight for any period of time. Subjecting the helmet to temperatures above 40°C may damage the plastic component parts.

IMPORTANT READ THIS INFORMATION CAREFULLY BEFORE ATTEMPTING TO USE THIS ITEM OF EQUIPMENT

INSTALLATION INSTRUCTIONS

CHARGING:

The Nickel Metal Hydride battery built into the helmet provides for a minimum of fifty hours continuous use when fully charged.

To charge a helmet using the Micro System Charger, plug the helmet into the front of the charger then plug the charger into a wall socket. The charger will accept one or two helmets and provides a full charge in sixteen hours.

Charging lights are provided on the front of the charger which indicate when a helmet is connected and charging.

The charging lights only confirm that the charger is working and do not indicate when the helmet is fully charged.

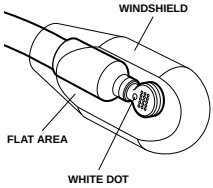
MICROPHONE:

The microphone is mounted on the end of a flexible boom arm and is protected from the elements by a foam windshield.

A flat area on the windshield indicates where the sound should enter the microphone and must always face directly towards the mouth. For best results the flat area should also be positioned as close as possible to the lips but without actually touching.

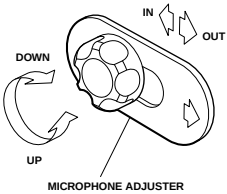
The microphone capsule itself may be rotated on the end of the microphone boom to ensure alignment with the flat area on the windshield.

For reference, the voice entry side of the microphone is marked with a white dot.



Once the boom arm has been set in position it may be adjusted using the microphone adjuster on the right hand side of the helmet.

The microphone adjuster allows the microphone to be moved out of the way during fitting and removal of the helmet and provides fine adjustment in use.



VOICE CONTROLLED MICROPHONE:

The G4 helmet incorporates a digital Voice Controlled Microphone (VCM).

The VCM electronics monitor the helmet and disable the microphone when no voice signal is present. The microphone is re-enabled instantly when the VCM system detects speech.

Radio transmissions are not affected by the VCM function and the helmet microphone will transmit over the radio under all circumstances.

The VCM system uses digital technology to differentiate between speech and background noise/wind noise and adjusts automatically to changes in noise level.

The VCM function can be switched on or off using a selector switch on the left-hand side of the helmet. When the VCM function is switched off, the helmet microphone remains active continuously.

When the VCM is switched on (or the helmet is powered-up with the VCM switched on) the helmet intercom is disabled for three seconds while the system initialises and establishes a background noise reference level.

The VCM system will set more quickly if you do not talk into the microphone during the three second initialisation period.

The VCM system will not work unless the microphone is correctly positioned as close as possible to the lips.

If the G4 helmet is connected to another headset or helmet as part of an intercom, the VCM system will not provide a significant reduction in noise unless the second headset or helmet also has the VCM function.

ACTIVE NOISE REDUCTION:

The G4 helmet incorporates digital Active Noise Reduction (ANR).

The digital ANR electronics monitor the level of background noise inside the ear-cups and generate an equal volume of anti-noise which is opposite in phase; this effectively reduces the amount of low frequency background noise inside the ear-cups.

The ANR function can be switched on or off using a selector switch on the right hand side of the helmet. When the ANR function is switched off, the helmet works as a normal Passive Noise Reduction (PNR) helmet.

Depending on the application, it may be desirable to switch between ANR and PNR.

ANR:

When the ANR function is enabled, the helmet's electronics provide additional noise cancelling and the sound quality is optimised for voice communications and radio reception.

PNR:

When the ANR function is disabled, the helmet electronics provide sound with a wider frequency response which is more suitable for listening to music.

WARNING:

The Lynx Micro System Helmet is only intended for aviation use and is not approved for any other application.

INITIAL CHARGE:

When charging a new helmet for the first time, leave the helmet on charge for at least twenty four hours. This conditions the battery correctly and prolongs battery life.

OPTIMUM CHARGING:

During normal use, a helmet will only become partially discharged each day; however, the helmet should be recharged after each use and stored in a fully charged condition.

Helmets that are recharged, and stored in this way, are much less likely to run flat during subsequent use.

The helmet batteries do not suffer from memory effect and it is not necessary to completely discharge a helmet before recharging.

Each helmet is designed to accept a full recharge at least one thousand times and, if correctly maintained, will provide many years of reliable service.

WARNING:

The helmet will self-discharge over a three month period even if it is not used.

Once a helmet battery has received an initial charge, never store the helmet with the battery completely discharged as this will damage the batteries.

AUTOMATIC POWER MANAGEMENT:

The G4 helmet incorporates digital power management.

The power management system monitors the helmet electronics and puts the helmet into a low power mode when no activity is detected for ten minutes.

A fully charged helmet will take more than five hundred hours to discharge in the low power mode which helps to conserve battery power and protect the battery.

While the helmet is in the low power mode any microphone, intercom or radio activity instantly returns the helmet to normal operation.

VOLUME ADJUSTMENT:

The helmet is fitted with a volume control which allows the speaker output to be adjusted.

Correct setting of the volume control is important in order to minimise the amount of extraneous background noise reaching the ears and to compensate for differences in individual hearing sensitivity.

To obtain the best noise cancelling performance from the helmet microphone, the helmet volume should be progressively reduced until almost all of the background noise is cancelled.

During normal use, and providing that the microphone is positioned correctly, it should not be necessary to set the volume control at more than half volume.

IMPORTANT READ THIS INFORMATION CAREFULLY BEFORE ATTEMPTING TO USE THIS ITEM OF EQUIPMENT

MICRO SYSTEM HELMET G4

PACKING LIST

QTY	DESCRIPTION	CHECK
1	2mm Hexagon Key	
1	T20 Torx Key	
1	Integral Helmet Visor	