

Lazarus MICAS portable headset

This article is approved for usage in the RP.

The Lazarus Mind Interface Computer Access System headset (usually just called a clasp or headset) contains a number of passive neural sensors and basic computational interfacing hardware surpassing that integrated into the control systems of common power-armour.

It was created by the Lazarus Consortium in YE 35 privately and entered sale in YE38 for all markets and is sold indiscriminately to be used with a multitude of different platforms.

- **Cost:** 1200 KS

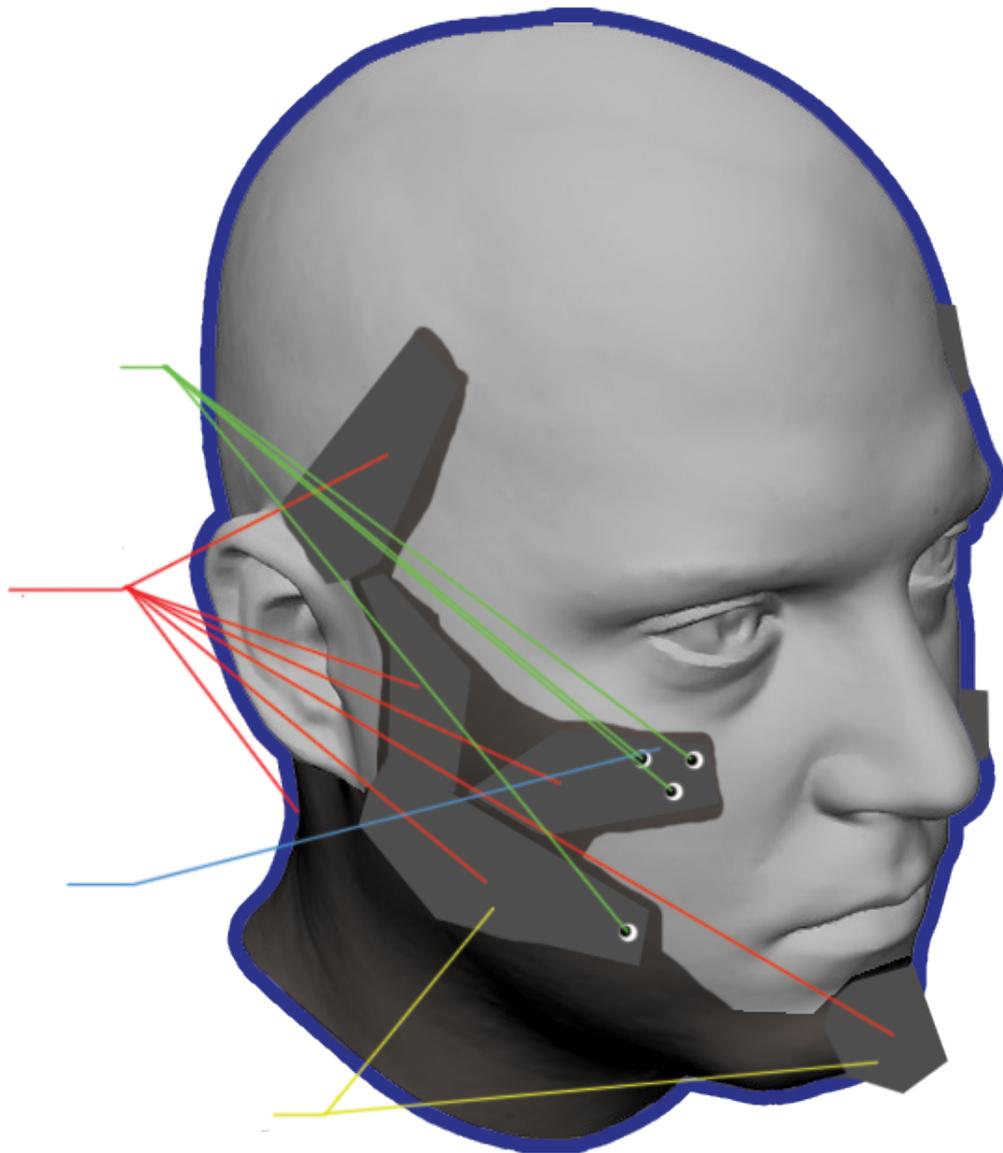
About the MICAS

Setting the MICAS apart from other neural systems is its portability, wide array of uses and its redundant sensor systems called DOMINOS (Directed Optical Mind Imaging Neural Operating System) which produce a greater accuracy than a single imaging system is able to - with 10 sensors located around the head of the user. The system is also able to very convincingly project images onto the user's retina and features cameras used to compare what the MICAS sees against what the user sees to determine the object of focus. These same sensors can also augment a user's vision.

MICAS also uses bone induction speakers, vibrating the user's skull to silently play sound and relies upon [subvocalization](#) sensors for silent communication as well as a standard microphone system.

In terms of physical layout, the MICAS is a high-tech rubber-like mold following the user's jawline - with 'blocks' extending over their cheek-bones and temples. The unit is slipped over the user's head (moving hair as necessary) until comfortable. The system comes as a flexible extrusion which seals at the rear magnetically and is designed to be built into helmets and other systems.

Plugs along the back and interior of the clasp allow it to lock against a specially modified pilot-suit or bodysuit as single seamless unit.



Interface components

Although designed to be worn with conventional clothing, its construction contains very few proprietary components (all of which are user-serviceable) and as such, can be integrated with most pilot-helmets or even as implants if a user so desires it.

Directed Optical Mind Imaging Neural Operating System (DOMINOS)

Using a conjunction of Electromagnetic resonance & optical imaging systems, the primary interface uses

special cameras which use higher wavelengths of light to see direct neural action inside the brain, as well as detecting brainwaves over the brain itself and issuing electrical response through them. this results in a passive high speed read/write system of a higher reliability and speed than conventional neural imaging systems as it uses multiple units working redundantly for different areas of the brain, rather than a single system alone.

Software

- [Mixed Self Optimizing Neural Operational system \(MONOS\)](#)
- [duos](#)

Retinal Imaging System

A series of tiny high precision lasers directly overlay images into the user's sight in three dimensions. This mechanism is more rugged and less cumbersome than using a fragile screen overlay system. Eye-position information is provided by the focus recognition system and is used as a cursor.

- See [retinal_imaging_system](#)

Sensor & Communications package

A simple ballbearing sized set of spherical microcameras are included with the MICAS to image the environment from a user's perspective, including a set which see directly aside and behind the user (information which can be conveyed through an altered or dynamic focal length). An array of basic sensors (including compass, accelerometers, gyroscopes and air pressure sensors) are also included, as well as a simple wireless antennae and control system for use as a radio, or to be paired wirelessly with other devices.

Focus recognition system

The Retinal Imaging System and wideband camera system are cross-referenced to determine what the user is looking at whether real, augmented or virtual. The focus information can this information to aid the functionality software.

Silent Communications

Sound is supplied to the user without speakers by vibrating parts of the users skull in very controlled frequency, stimulating the inner parts of the ear. The sound is very rich and three dimensional but cannot be heard by anyone but the user. The users own ears themselves, remain uncovered.

Similarly, subvocalization (the muscle actions autonomously following thinking out loud) can also be recorded and recognized as a form of communication. These can be used to drive commands, for audio

communication or via a synthetic vocal system which masks a user's real voice with no lip movements which has been described as "intimidating".

OOC notes

In simple terms, MICAS is a fancy face-rig that lets a person with no cybernetic augmentation control computers and machines. Its mainly geared at the operation of heavy equipment like frames and fighters, supplementing and in many cases replacing hand-held controls. Its portable nature means that provided a pilot is reasonably in range, they can manipulate and control a unit after disembarking. Multiple units can also be controlled but the workload is much greater and the finesse of control drops dramatically - handing off instructions to the computer of the unit commanded - shifting from a first person experience of combat into a third person experience and finally out into a real time strategy assessment as the scope of combat shifts.

In this way, its ideal for commanding weapons-pods, drones and other equipment.

The device literally beams imagery into the pilot's eyes but can also over-lay what they're actually seeing with an augmented reality interface adding information to real objects. Paired with a good pocket computer or AI system, MICAS can with proper training allow a person to interface with systems as if at an advanced console or computer while on the move - though this is distracting and potentially dangerous in fire-fights or situations that require total focus.

The device can also act as a kind of multi-spectrum night-vision goggles and can pass silent communication between users - ideal in covert situations or when voice authorization is needed to OK something.

While small enough to fit under a helmet, MICAS is conspicuous and very difficult to conceal.

— *Osaka/Osakanone* 2016/04/03 18:07

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