

Comunica "CP+" intercoms for cockpit mounting

CP+.p65

ICOM IC-A3 or IC-A22

or: MICROAIR MA-760

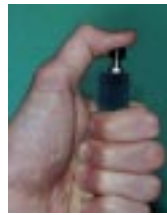
Add COMM/NAV antenna switch for IC-A22 if desired



Add extra button for remote MEMORY control

Add backlighting ON/OFF switch if desired

Add "MASTER" TWIN JACK pair if desired



PTT5 stick PTT buttons
(Or use your own ones)



"P1"

"P2"

Plugs and sockets for easy installation

Choose PTT logic by links here, eg:
"P2 does not MUTE P1 when transmitting" but:
"P1 MUTES (overrides) P2"



CABSPLIT PTT junction unit

VELCRO the CP+ unit anywhere you choose in the cockpit. (We will make your cables to suit)

12V power and radio interface cable

Radio PTTs plug



3-way MODE switch:
UP: Both intercom+radio
CENTRE: Radio only
DOWN: Local radio PTT

Main volume control

Music/GPS beep input socket

CP+/RJ intercom with radio interface

(Choose CP+/TJ for "TWIN-JACK" headsets)

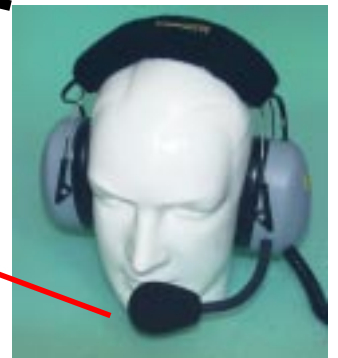


All headsets have VOLUME controls



Alternative (folding) headband style

All headsets have noise-cancelling microphones



PNA2K/RJ

The quietest Passive Noise Reduction headset

ANA2K/RJ
STD and PRO models
Active Noise Reduction headsets

Choose any mix from two Active and one Passive noise kill "RJ45" plug headsets

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Choosing your “CP+” intercom system parts

(Please refer to the typical **CP+** system layouts shown on the first page)

The **CP+** intercom/radio system is the ideal complete communication system for microlight and light aircraft of all types. It provides you with:

- Superb communication, even in the noisiest climb-out conditions
- DUAL-MODE operation, “INTERCOM” MODE, when both intercom and radio are active and “RADIO” mode, in which the intercom is suppressed for maximum quiet.
- Superb headset comfort, (with helmets too, if you wish)
- Modular choice and buildup of parts to make your individual ideal system
- Simple installation
- Extreme lightness
- Great value and 3-year warranty reliability

Choosing your **CP+** system buildup:

1. The **CP+** intercom/radio/music interface unit comes with two headset jack socket styles:

- **CP+/RJ** with “RJ45” miniature lightweight plugs. These are the ideal modern headset plugs, tougher, neater, lighter and with extra pins to feed Active Noise Reduction electronics directly from the aircraft power. Comunica make a full range of high performance Active and Passive RJ headsets, see below.

The price is £169+VAT

- **CP+/TJ** with “PJ” TWIN JACK sockets for conventional twin plug GA headsets (David Clarke etc). Choose this if you have TJ headsets already. Also if you need to use your headsets in other TWIN JACK aircraft. (We supply superb, economic, TJ headsets too, chosen by the CAA, BA pilots etc, including ANR models, but the RJ styles are best for dedicated light aircraft use.

The price is £179+VAT.

2. The Comunica family of “RJ” headsets which have been specially optimised for the small aircraft environment. There are (3) models to choose from and you can mix any of them together. They ALL have:

- Full size earcups with oil-ring and foam earseals to give maximum passive sound killing and top comfort.
- Easy-adjust bendy microphone booms.
- Panasonic PROFESSIONAL noise-cancelling microphones.
- Personal VOLUME controls.
- Completely fatigue-proof lightweight curly cords with the neat RJ45 plugs.

- **Choice of (2) headbands:**

- **Soft TERRITEX headband or:**

- **FOLDING spring headband** (the FOLDING one is slimmer, ideal for wearing under a helmet, but we suggest the TERRITEX one if no helmet):

- **Choice of (3) microphone windshields** (see **OMPMICSHBA** datasheet):

- **SMUFF**, slim breathshield for closed cockpits.
- **BMUFF**, for open aircraft up to ca 90kts.
- **UMUFF**, for the fastest open cockpit aircraft.

The (3) **RJ45 headset models** are, (prices with either headband and an **SMUFF** mic shield):

- **PNA2K/RJ**: This our high performance “**Passive Noise Reduction**” headset, without ANR electronics.
Its price is just £109+VAT.

- **ANA2K/RJ**: This our standard “**Active Noise Reduction**” headset, with electronic noise reduction units in place of left- and right-hand earphones. These quieten the low frequency noise (engine and cockpit resonance) well, making intercom chat and radio listening clearer and generally adding real luxury to your flying. The power needed for the ANR electronics is fed from the intercom plug, -no batteries!

Its price is just £169+VAT.

- **ANA2K/RJ/PRO**: This our most powerful “**Active Noise Reduction**” headset, reducing the low frequency background noise similarly to other’s \$1000 offerings! We supply **PRO** headsets to BAES and the CAAs nav aid calibration aircraft etc. With their maximal noise cancellation comes some extra susceptibility to cockpit pressure “drumming” (like a car window open), so these are best for well sealed cockpits. **The price is just £229+VAT.**

3. "TWIN-JACK" GA headsets for the CP+/TJ intercom. You can use any make of "TJ" headset with the CP+/TJ intercom, but sad experience shows that most Microlight, VLA and homebuild aircraft need purpose-designed headgear for the best results in the ambient noise etc.

Comunica makes just such headsets, same style as the RJ range, but with amplified mics to match David Clarke etc and TWIN JACK fatigue proof cords. They are of course exceptional when used in big GA planes:

- **PNA/GA/TJ**, the classic Passive Noise Reduction model.

The price is just £119+VAT

- **ANA/GA/TJ**, the Active Noise Reduction model designed for the CAA service (re-ordered 3 times!) and chosen by BA pilots etc, it has 30-hour talktime rechargeable batteries in the soft headband. Complete with overnight charger.

The price is just £299+VAT

4. Airband radios, for panel or cockpit mounting, we suggest a choice of (3), with a possible 4th type for absolute maximum transmit power. These are shown in datasheet **RDSOBNODIES**. As shown in the front page drawing, a single slim cable connects power and audio signals between the radio and the CP+ intercom unit, made by us to suit your chosen radio position (or trimmed by you if preferred):

- **The little ICOM IC-A3 (or IC-A22 WITH VOR NAV)**. This is usually powered from aircraft 12VDC supply, so, without its battery, is only ca 120mm high and can simply be VELCRO'ed in the best cockpit site (which may be on the instrument panel itself).

These radios have powerful receiver and channel MEMORY features, but:

- Do not have "ACTIVE-STANDBY" channel toggling.

- **Transmit at 1.5W carrier/5W peak**, which, with a good antenna, gives a line-of-sight range of over 100 miles and typical 2000' range of 25-50 miles to A/G airfield radios.

The ICOM IC-A22 incorporates a powerful VOR NAV receiver which can be a useful backup to your usual GPS. Its performance, with a "VEE" NAV antenna equals the full size NAV sets. (We have worked VORs abroad at 50 miles at 3000' in our little Piper). Comunica supplies RF relays to change over between COMM to NAV antennas.

The IC-A3, with a rubber duck but no battery or charger is £211+VAT

The IC-A22, with the additional VOR/NAV facility is £245+VAT

- **The neat MICROAIR MA-760 panel mount radio** offers:

- Small size (and panel space),

- Low weight

- Good channel MEMORY recall (by remote button if you wish)

- ACTIVE/STANDBY channel selection

- **3.8W carrier/ 12W peak transmit power**, increasing the effective range, especially at low altitudes.

Its price is £560+VAT

- **The "full size" ICOM IC-A200 is available for "export" installation (worldwide except CE)** and offers:

- 1/2 height, standard radio stack space, width and depth.

- Mounting tray and loom connection

- Big 2-channel display

- 10-channel MEMORY recall (by remote button if you wish)

- ACTIVE/STANDBY channel selection, with remote button control

- **7W carrier/ 25W peak transmit power**, increasing the effective range to match all GA aircraft.

Its price is £625+VAT

5. PTT button style and functionality. You can use your own simple "2-contact MAKE" PTT buttons or fit our neat and "clicky" **PTT5's** to your sticks, throttles etc.

For systems with 2 PTT buttons we supply the neat "**CABSPLIT**" "splitter" unit which connects both PTTs to the CP+ unit with convenient plugs and sockets and houses the logic for configuring eg: "P2 does not mute P1 when transmitting, but P1 overrides (mutes) P2" when he transmits.

PTT5's, made to your cable length needs are each £19+VAT

The CABSPLIT unit, complete with cable to CP+ unit is £24+VAT

Installing your “CP+” intercom system

(Please refer to the typical **CP+** system layouts shown on the first page)

As shown on the front page, the **CP+** intercom/radio system is very simply installed and connected.

1. First site the **CP+** unit itself, in the best position for:

- Plugging in your headsets and:
- Using the MODE switch.

eg:

- Aft on the controls housing between the seats.
- Overhead above the pilots' shoulders
- Centrally below or low down on the instrument panel

Note: *Comunica's neat **CABEXRJ45** “RJ” headset extensions can simply be plugged on to the **CP+** unit if you wish to plug-in one or both your headsets remote from the main unit.*

2. VELCRO the **CP+** unit in place (or open the lid and drill and screw it down if preferred).

3. Mount the PTT buttons (The **PTT5** buttons will even fit in a 19mm (3/4”) control column, with their threaded stems pushed through and nut fastened in, eg, Halford's comfortable bike handlebar grips.

4. Route the PTT cables to meet at the **CABSPLIT** connection unit and fasten them with cable ties etc, well clear of control runs. (If you are connecting on to existing PTT cables, we will supply “stubs” with RJ plugs and a drawing for you).

5. Site and mount the radio in the best position, usually in or beside the panel, with its controls in easy reach of P1.

- The Microair MA-760 should be mounted in the panel in front of P1.
- The little ICOM IC-A3/22 (see front page drawing):
 - May be VELCRO'ed to the panel or a special bracket on the cockpit (or clipped on to a “top hat” mount with its belt clip).
 - May have a right-angle BNC antenna adaptor fitted, allowing neat antenna connection from behind.
 - May have its Comunica power+audio+PTT moulded interface cable fed through neatly from behind.

6. Connect the **CP+** radio interface cable:

- To the CD connector on the back of the Microair radio (we will prefabricate its loom for you, or please use Comunica drawing **MA720IFA** to wire it yourself).

If you need to cut and/or shorten the cable, reconnect its 6 cores colour-for-colour in a screw terminal block.

- To the Comunica **A3-22IFA** moulded cable loom, which has a simple screw connection terminal block marked with the cable core colours to connect to it.
- To the IC-A200 connector loom, as shown in Comunica **A200IFA** drawing.

Note: 1. *With each of the radios, the “+12V” (RED) and “COMMS GROUND” (BLACK) connection wires should be connected directly to the battery terminals by a dedicated power circuit, with a 3 Amp fuse or LOW VOLTAGE circuit breaker in the +12V line and a “COMMS ON/OFF” master switch.*

2. *Connect the fitted radio to a well sited antenna with any ground plane specified by its supplier. Try to choose an antenna site which other owners of the same plane have found to work well. Also keep the antenna co-ax run away from all other wiring and as short as possible to reduce pick-up and power loss.*

7. After checking all connections, installation security, power polarity and, if possible, antenna continuity etc:

- Plug-in the headsets
- With the radio switched OFF, power up the COMMS circuit. The **CP+** intercom will turn ON.
- Turn the headset VOLUME controls low and the CP+ Main VOLUME control to max (clockwise).
- Switch to “I'COM+RADIO” MODE and test the intercom, adjusting the headset VOLUME controls.
- Check that in “RADIO” MODE the intercom is muted.
- Check that in “PTT” position, the intercom is active again.
- If “P1 mutes P2” PTT logic has been fitted, check that P2's mic IS muted when P1's PTT is pressed.
- Switch ON the radio with LOW VOLUME set. Open the SQUELCH to listen to background noise, or listen to transmissions. Adjust the radio VOLUME control for a similar level as the intercom.
- Make check transmissions, if possible first to a colleague on an “free” channel such as 129.90MHz.

Using your “CP+” intercom system

1. Don and adjust your headsets as described in Comunica datasheet **HSETGENHBA** supplied with them. It is important that your headsets are adjusted for size and nested really nicely round the ears. Check Comunica’s datasheet **OMPMICSHBA** for styles and use of mics, mic booms and mic windshields too.
2. Normally set the **CP+** Main VOLUME control to maximum (clockwise looking at the knob).
3. Then, in “I’COM+RADIO” MODE, set the headset VOLUME controls as low as you find intercom speech just clear with maximum background noise. This minimises intercom background noise.
4. Adjust the radio VOLUME control so that received transmissions are about as loud as the intercom. (Please refer to the radio’s own handbook for its operating instructions).
5. Practice radio transmissions to and fro, if possible with a colleague with a handheld, using an “free” channel, eg 129.90MHz.
When transmitting, remember to speak as loudly (imagine its to a class of noisy kids), as you will be in aircraft noise.
Note: *Its very easy to speak too quietly at first, especially with Active Noise Reduction headsets which make everything sound quieter than it really is!*
6. Practice the radio work in all conditions, including the noisiest, on climb-out.
7. If you wish to listen to music, plug-in your CD player, Walkman etc with the 3.5mm jack cable supplied. Try both “HEADSET” and “LINE” audio outputs on the CD, aiming to adjust the music VOLUME on the player rather than the **CP+**.
8. For quietest flight (eg on long trips or when SOLO), switch to “RADIO” MODE, muting the intercom temporarily. The music and radio will both be heard most clearly then.
In “RADIO” MODE, the radio works fully for P1 and P2, both in receive and transmission.

If you have any queries or need advice, please be in touch at any time with us:

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Note: We can e-mail any drawings and datasheets you want, or post them, just ask!

Good flying and “never say SAY AGAIN again”.....

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