Mini sub-satellites
SAT2SAT
for MAF60 serie II satellite

Manual

Oct 2021

This manual is dedicated to the mini sub-satellites SAT2SAT, it is to be associated with the MAF60 serie II manual. This operating manual is only valid for products corresponding to the version described in this manual and sold from the date mentioned above. Before use, carefully read these instructions and you'll be fully satisfied with your new hardware. Always comply to the safety instructions.

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These mini satellites are intended for MAF60 series II satellites pre-equipped with the two lateral connectors (this equipment is optional, it must be requested when purchasing the satellite. Otherwise an equipment kit is available for satellites already into service) .

Note: Not compatible with the old MAF60 satellites with stainless steel panel.

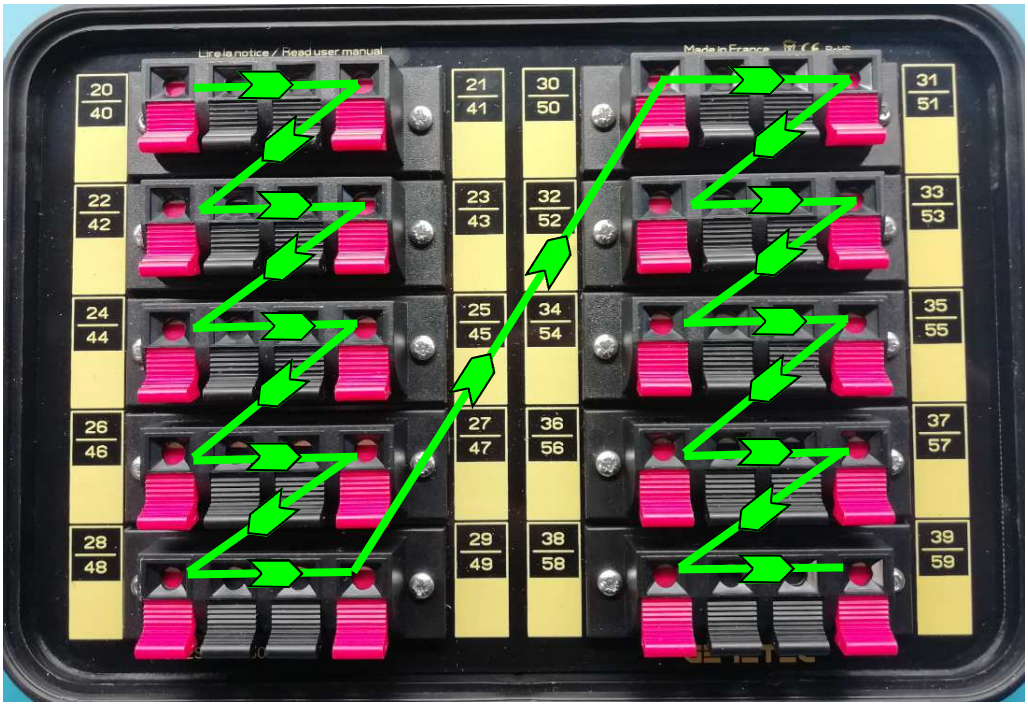
They each serve to place away twenty outputs up to 25m on either side of the main MAF60 satellite in order to geographically distribute on a 50m frontage three connection points for the lines: 20 lines on the main MAF60 satellite and 20 lines on each mini satellite SAT2SAT.

SAT2SAT mini-satellites are passive: they have no power supply, it comes from the main satellite. They only translocate the physical outputs 20 to 39 and 40 to 59 from the MAF60 satellite.
With the fact that it's possible reprogram the addressing of the outputs of the MAF60 main satellite with the free software Oxydium suite * (even if you do not have an Oxydium), you will thus be able to find on the mini-satellites SAT2SAT any output (otherwise it is also possible to firing the ways in the order you want with an Oxydium, which may be sufficient for some needs).
The ohmic test function does not change, it must still be performed from the main satellite.

** The Oxydium suite software is free to download from our website www.genetec.fr*

In order to facilitate identification, the connector of the physical outputs 20 to 39 is vertically aligned with the clamp terminals of the physical outputs 20 to 39 of the MAF60 panel and the connector of the physical outputs 40 to 59 is in vertically aligned with the clamp terminals of the physical outputs 40 to 59.
Important: Even by connecting the mini SAT2SAT satellites, the 60 outputs of the main satellite remain operational. But from the moment a way output is wired on a mini SAT2SAT satellite, this same number way output should no longer be wired to the main MAF60 satellite (and vice versa either), the system was not designed for that. Indeed, this would amount to putting them in parallel and with the limitation of current, the intensity delivered would be divided and distributed over the two loops.
Additional information on this subject can be found on the last page "Advice, comments".

If the MAF60 main satellite is set to the 1st sixty (number 0) and not re-addressed:
- for the SAT2SAT connected to the connector 20-39, take account of the written numbers at the top (20, 21 ... 39).
- for the SAT 2 SAT connected to the connector 40-59, take account of the written numbers at the below (40, 41 ... 59).
Just like with a MAF60 satellite alone, if it is set to one of the following sixty, add +60, +120 ... depending on the selection.

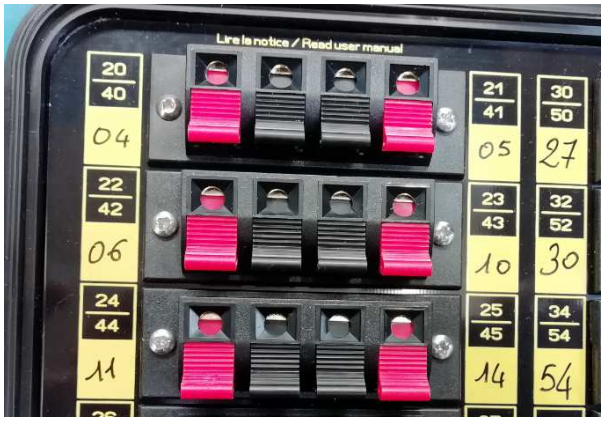


The two mini SAT2SAT satellites are identical, only their connections to one or the other connector will determine which physical output block they will correspond to.

Note: due to the dimensions of the box, the outputs do not use horizontal numbering.

A space under the standard numbering is dedicated to note with a marker the new assignments of the outputs, for example in the case of specific addressing, or of another sixty.

Do not use acetone to clean handwritten assignments, use only a little alcohol on a soft cloth. Make sure beforehand that your marker can be erased with alcohol.



To connect the SAT2SAT plug to the MAF60 main satellite, remove the protective cap from the connector by turning 1/4 turn to the left, put the SAT2SAT plug in correctly positioning the key, and lock by turning 1 / 4 turn the plug ring to the right. It is not necessary to connect the two SAT2SAT if only one is needed.

ADVICE, OBSERVATIONS :

- If a way output is wired on a mini SAT2SAT satellite, this same number way output should no longer be wired to the main MAF60 satellite (and vice versa either), the system was not designed for that . Indeed, this would amount to putting them in parallel and because of the limitation of current, the intensity delivered would be divided and distributed over the 2 loops.
Nevertheless, and subject to preliminary tests with your igniters, it can be tolerated to be able to do it if, and only if, there is only on the same output assignment at a time as only one igniter on the main satellite MAF60 and only one on the SAT2SAT mini satellite. Note however in this particular case that if an igniter (especially the one on the main MAF60 satellite) short-circuits itself during the firing, it will inhibit the ignition of the other igniter (the one at the end of the line on the SAT2SAT, because it will absorb all the energy directly from the source). Another detail, always in the event of repeated igniters on the same output, the MAF60 satellite will make its measurement on the equivalent resistance of the two loops in // and give an indication according to this average (if one of the two igniters is cut, the MAF60 LED will still light up because it will measure the other one).
- The mini satellites are only an additional option for externalyzing a part of the outputs from the main MAF60 satellite, as such they cannot present all the possibilities offered by real MAF60 satellites. Their primary purpose is to extend the front of the main satellite on both sides, save wiring time and save two-wire cable. It will not be possible to fire two different lines perfectly simultaneously on the two mini satellites, it is nevertheless possible to approach visually by firing the two different lines at 1 / 10th of a second (for example to have two shots almost simultaneously on the two mini satellites).
- Before use, to familiarise yourself with your SAT2SAT, make simulations and tests. Be sure you're able to control all functions.
- In case of rain, protect the satellite (for example with a transparent plastic sheet).
- Do not use solvents (acetone, methylated spirits, white spirit, etc.) to clean your firing sysrtem, but only water or a product to wash the windows on a soft cloth.
- If in proximity of the fireworks area, remember to protect the system and the cable from eventual incandescent falls. Protect the system against fire, chocks, blasts, rain, water, hot sun exposure...
- Do not let metallic objects (keys, wires, etc.) free in the case in order to avoid any risk of damage or short-circuit.
- Never inject voltage directly into the output terminal blocks (for example in the event to force firing directly by battery. Always disconnect the line beforehand).
- Do not route the wires of the lines along potential sources of noise (mains or lighting power supplies, radio systems, motors, etc.)

Features :
Dimensions mini satellite box SAT2SAT : 23x17.5x5 cm
Weight : 5,6kg (with cable)
Connectic : IP68 Souriau
Cable : multicore 12x0.25mm2, length : 25m
Electric resistance of cable : 3.7 ohms (go and back)

SAFETY :

Never work on fireworks items when the system is in operation. Switch the devices off completely during installation or in the event of an intervention.
ABSOLUTELY NO STAFF IN THE HAZARDOUS AREA WHEN POWERING ON THE SYSTEM.
THE FIRING MANAGER MUST ENSURE THAT THESE INSTRUCTIONS ARE OBSERVED.
The control post must be sufficiently away from the firing area, even during tests.
The devices must be placed at a sufficient safety distance from the fireworks items to allow a secure intervention. Switch off the firing mode key and completely switch off the MAF60SII satellites when installing the fireworks items or in the event of an intervention.
Comply to the usual safety and common sense guidelines of the profession.