

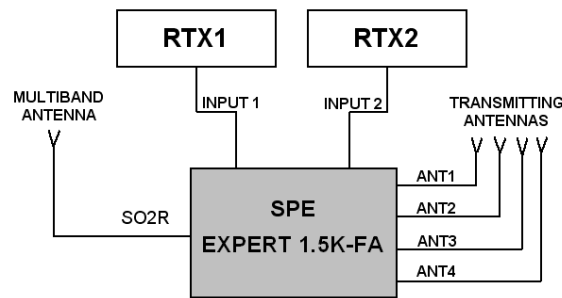
WHY BUY AN EXPERT LINEAR AMPLIFIER

SPE with its Expert solid state linear amplifiers and its remote antenna switches allows the complete automation of the station with a minimum of external wiring.

Who has never dreamed of having a completely automatic station controlled only by the tuning of the transceiver or by a click on the spot of the DX cluster in order to operate in the best way thinking only of the QSO? Having the certainty that the appropriate antenna is immediately selected, the best matching set, the correct driving power adjusted and the operating parameters selected for the best efficiency and linearity.

This result has always been the subject of the design of Expert linear amplifiers which, despite their small size and weight, provide power and performance never simultaneously present in any other amplifier in the world. Below are the most significant points:

- **BUILT IN AUTOMATIC TUNER** : Unique and unmatched performance which, due to its flexibility, is now universally adopted in all transceivers to safely match antennas at the band ends or not perfectly resonant.
The use of an automatic tuner is all the more necessary for powers greater than 100/200 watts where strong reflected powers are to be avoided.
The tuner in the Expert is immediate, it manages power up to 2 KW automatically without any operator intervention and overcomes mismatches up to 5: 1, effectively increasing the operation of your antennas.
Having an external antenna tuner would be expensive, bulky and impractical.
- **SELECTS 4/6 ANTENNAS** : Without any operator intervention.
- **INTERFACES SIMULTANEOUSLY WITH 2 TRANCEIVERS ALSO OF DIFFERENT BRANDS** : This feature allows different operating possibilities, the most immediate is to exchange two devices with maximum speed (10 msec.) even during the QSO while maintaining full operation of both.
Another possibility is the operation in SO2R (Single Operator 2 Radio), this type of operation is used during a contest to acquire a new multiplier as quickly as possible.
While with an RTX you make traffic in one band, with the other RTX you listen to another band.
If you listen to an interesting multiplier with this second transceiver, just press its PTT and magically here is the exchange, selecting the appropriate antenna already immediately matched.
Both cases are normally possible but with external connections that are often difficult to wire. In the Expert everything is contained within, the exchange between the two devices takes place simply by pressing the PTT of one of the two.



This is the general diagram of the connections, if the SO2R is not used, the multi-band antenna is not connected. If you have only one transceiver, only one input is connected. It is also possible to use, instead of the multi-band, the various station antennas as explained below.

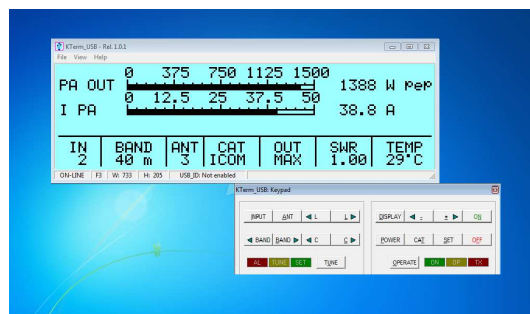
- **UNIQUE USE OF THE ALC** : In all amplifiers this connection is only used for protection by means of a hardware threshold to be made amp by amp.

The ALC connection with the EXPERT, in addition to ensuring the protection, automatically adjusts the output power of the transceiver (the maximum in "STANDBY", and the required power in "OPERATE" for the amplifier).

In the absence of this unique feature, the P out of the transceiver must be adjusted manually from time to time as happens in all amplifiers on the market, with all the problems of "overdriving" that can occur.

- **EVERY TYPE OF CAT** : The SPE amplifier has the most complete selection of protocols on the market including the entire Yaesu range. The SPE amplifier also has the BAND DATA and a very efficient internal frequency meter for transceivers without CAT (e.g. home-made). Of course, in the two available inputs, the simultaneous use of two different protocols is possible.

- **FULL REMOTE CONTROL** : The "TERM" software is provided free of charge, which allows you to control the complete front panel of the amp on your PC (keyboard and display, shoving up as fully functional) so that all the functions are always accessible.

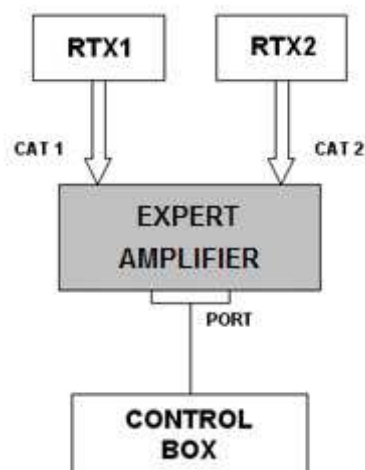


- **REMOTE DOWNLOAD** : Through the "TERM" it is also possible to download the new software releases that are released over time.

- **TWO MEMORY BANKS** : If you have two different QTHs you will certainly have two different antenna systems. It may be useful to be able to automatically remember both set-ups without having to reconfigure the antenna/s and the consequent matching each time of the ATU. The amplifier features with two different memory banks "Bank A" and "Bank B" with which it is possible to store the two different configurations. This feature is also particularly useful if you are participating in a DXpedition. The set-up of your station can remain in one of the antenna banks so that upon return there is no need to reconfigure the amplifier.

- **CONTROL OF TUNABLE ANTENNAS** : The use of tunable antennas (SteppIR, Ultrabeam) is now popular. These antennas vary the physical dimensions of the elements in accordance with the working frequency to always ensure perfect resonance. The Expert, through the "PORT" connects to the antenna control box, allowing an automatic control at the very moment in which the tuning of the transceiver is operated.

A single connection gives a considerable simplification of the station wiring, in fact two transceivers can be used simultaneously even with different CATs without changing the connection because it is the amplifier that adapts the protocols.



- **SETTING UP RECEIVING ANTENNAS** : In some cases it may be useful to transmit with one antenna and receive with another one more suitable for the purpose. A unique feature allows the Expert to have a very flexible management of the available antennas. Each antenna can be selected a) with RTX function as default, b) the same antenna, at the same time as the previous case, can be set as RX only in other bands, c) exclusively as RX (e.g. Beverage).

- **QSK (FULL BREAK-IN)** : Each Expert also allows operations in QSK (FULL BREAK-IN) due to the perfect control carried out on the RX / TX switching relays which avoids any possibility of "Hot Switching". Very fast and silent switching relays are used with golden contacts with excellent mechanical performance

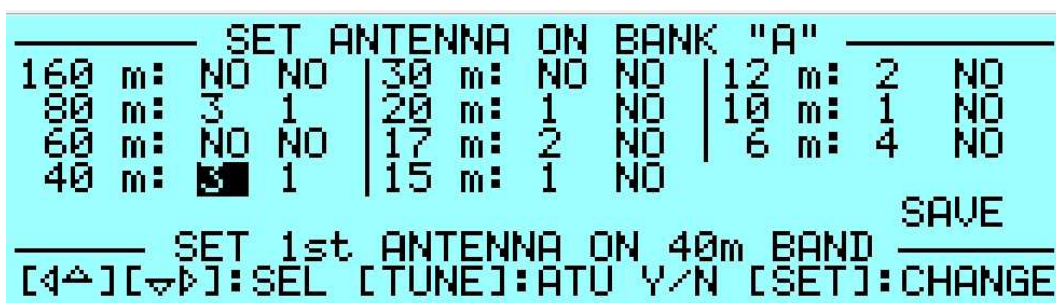
- **REDUCED WEIGHT AND DIMENSIONS, AND CARRY BAG** : The Expert 1.3K-FA and 1.5K-FA, although powerful, are small and light and adapt to every possible electrical network,

which is why they are the most used amplifiers in DXpeditions. The power supply is switching with a PFC (Power Factor Correction) which takes into account not only instantaneous load requests but also the momentary conditions of the mains itself. To enable easy transport, a carry bag of the right size to be accepted in the cabin of an aircraft is provided.

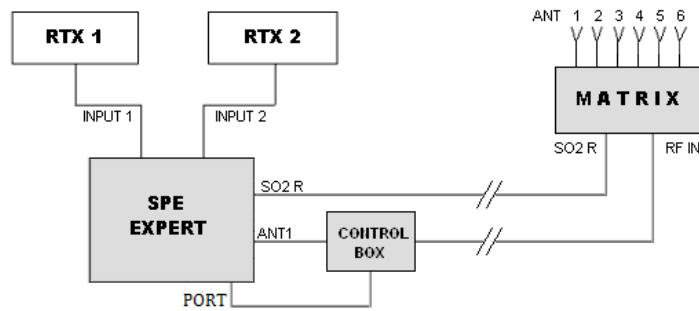
- **FULL POWER EVEN ON 6 METERS** : Unlike many competitors, a particularly accurate design allows full power even on the 6 meters band.
- **CONTROL OF THE STATION VIA INTERNAL SET-UP** : An internal configuration software allows you to change the operation of the station immediately without having to intervene on the hardware, if this is suitably wired.



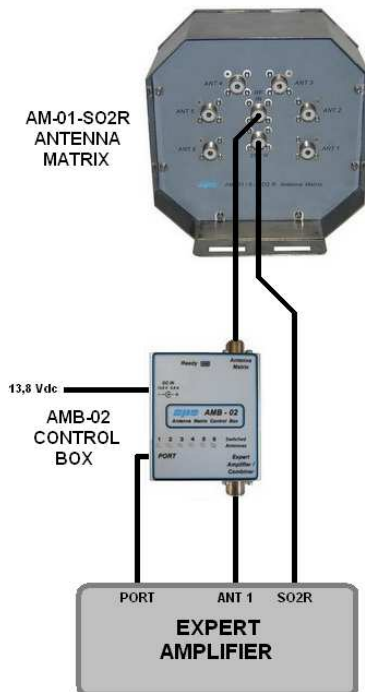
- **A REMOTE SWITCH ALSO FOR SO2R** : To achieve a completely automatic station, SPE has designed the "Remote Antenna Matrix AM-01/6" system with which it is possible to remotely manage up to 6 antennas with a single coaxial cable. No other cable is needed because, in addition to the RF, DC power is sent via the cable for the remote matrix and command data. The remote matrix is controlled by the Control Box AMB-02 directly connected to the amplifier, no other software setting is required in addition to the one already set in the classic case in which all the cables are connected to the amplifier.



With the Remote Antenna Matrix AM-01/6 system it is also possible to automatically manage SO2R operations as shown in the following diagram:



Below is the configuration that demonstrates how simple the connections are.



This unit is not simply a "remote antenna switch" for 6 antennas for S02R use, it also has the ability to become a 1 x 6 matrix, perfect for simply remotng up to 6 antennas.

The external casing is made of stainless steel and is perfectly watertight, it can be fixed to a pole or a wall.

- **UNBEATABLE PERFORMANCE / COST RATIO** : If you decide to buy a new amplifier, you should evaluate all these performance features and the price you are going to pay.

More complete information can be found by referring to the user manuals on this site.