

6. GENERAL SAFETY RULES AND WARNINGS

The following rules and suggestions should be accurately followed in order to be compliant with most obvious safety rules, to avoid serious and permanent damage to the FIREMASTER system and to obtain always the best performance:

- 1) Avoid any water spillage or spray on the front-panel of the Remote Units RX48 (also on the TX5000 of course!). The Units are NOT COMPLETELY WATERPROOF. Dry immediately any Unit that accidentally received a spray of fresh water or rain. Disconnect and dispose any Unit wet of SEAWATER: these Units must have service as soon as possible to clean out the internal circuits.
- 2) Never clean the front panels using solvents such as: alcohol, organic solvents, acids or alkali. The panels must be cleaned using a soft cloth or paper tissue wet with a little neutral detergent (no foaming type). Avoid to scratch the surfaces!
- 3) During the show execution, protect the Remote Units RX48 the burning fallout using the aluminum covers provided with lateral slits for the cable passage. For an increased protection and to save the cover paint, special fiberglass covers can be obtained upon request from the manufacturer or the local representative.
- 4) Avoid if possible placing the Remote Units RX48 directly on the ground (in particular if it is frozen, wet or muddy). The Units should be always placed at least 50cm - 1 meter ABOVE THE GROUND using adequate supports **not flammable**: **avoid thus cardboard, plastics or wood boxes!**
- 5) Use ONLY ONE ANTENNA AT THE TIME. Using two antennas at the same time (the availability of two separate connectors could suggest to do that!), other than reducing quite to zero the transmitter efficiency, could impair permanently the transmitter circuitry.
- 6) **Never use the System Units (both the RX48 and the TX5000) without the antenna connected.**
- 7) Never use the System exposing it for long periods to extreme temperatures (above 35°C or below 0°C).
- 8) The Units must be stored in a dry place with an ambient temperature between 5°C and 30°C (maximum limits).
- 9) Avoid to charge the internal batteries for more than 24 hours (forcing the repetition of the charge cycle). The internal charge supervisor limits the charge time to 12 hours maximum.
- 10) **Switch OFF all the Units before the storage in the shelf**
- 11) Replace immediately all faulty batteries or the ones suspected to have poor performance (the cost of a battery doesn't worth a fiasco!)
- 12) Dispose the discarded batteries following the local rules for recycling this type of material.
- 13) Let always enough space around the antennas. It is a good rule to avoid the presence of large metal surfaces far less than 10 meters from the antenna.

- 14) When possible try to raise the Unit as much as possible from the ground: the propagation of the radio signals increases considerably if the antenna is placed far from the ground.
- 15) Avoid operating with large natural or artificial obstacles (houses, hills, wire mesh) between the TX5000 and the Remote Units. Always try to operate with all field Units in "line of sight" with the TX5000 transmitter.
- 16) **Avoid absolutely any contact of the metal base of the antenna and its connector with wires, metal parts or external circuits.**
- 17) **Never use the System near to or inside storage of flammable, explosive materials or products sensitive to strong electromagnetic fields.**
- 18) **Never recharge the Units inside the powders storage or inside dangerous areas. Never store or switch on the Units in presence of high concentrations of combustible dust or solvent vapors**
- 19) Never connect to the Units external devices other than the accessories of the same product line directly supplied by the manufacturer.
- 20) Never make connections or dis-connections of the squibs on the SYSTEM when the RX48 are switched ON! Always switch OFF all the Units before beginning any operation with the squibs. When the squibs are connected, always make sure that nobody could, accidentally or willingly, turn on the TX5000 Base Unit and operate on it.
- 21) Don't use testers ohmmeters or circuit testers to verify the line continuity when the wires are already connected to the binding posts of the Remote Units! Always use for this purpose the system facilities!
- 22) **Don't use absolutely any external power source in order to increase the line voltage or current.**
- 23) **Clear the fire site from the personnel when, with the mortars already loaded and squibs connected, the FIREMASTER Base Unit is switched ON and during the whole period of lines and sequences programming. Any operation concerning programming and testing must be carried-out in conditions of maximum safety for all the personnel on duty.**
- 24) Remove the safety key from the TX5000 during the squibs connection, mortars loading, etc. Prevent the improper use of the SYSTEM by personnel not qualified and at the wrong moment.
- 25) Do not use cellular phones, cordless, walky-talky, transmitters, brush motors, high-energy electric apparatus, industrial lamps with reactors, etc. near to the FIREMASTER System while operating (both in programming and in FIRE mode) and mainly when the squibs are already connected to the system.
- 26) Avoid absolutely any electric contact between the squib wires connected to the binding posts and any other external circuit or metal part. Avoid also the accidental contact with metal parts of the Unit itself. **To each binding post must be connected only two insulated wires of a single line and completely free from any other connection.**
- 27) Never connect more than 5 squibs in parallel or 10 in series to the same line. If the line connection wires are longer than 10 meters or the line be realized with small-section conductors, then the connection for each line should be limited to 3 squibs in parallel and 5 in series.

- 28) Carefully insulate all the wire joints and avoid any electric leakage (wires or joints wet!) between the wires of different lines or between the wires and the ground or metal surfaces.
- 29) **Imperatively never use the FIREMASTER SYSTEM other than for control and firing of PYROTECHNIC SHOWS.**

INOBSERVANCE OF THE ABOVE RULES, OTHER THAN PRODUCING FAULTY OPERATION, PERMANENT FAILURES TO OBJECTS OR PERSONAL INJURIES, WILL ALSO IMMEDIATELY VOID THE WARRANTY OF THE FIREMASTER SYSTEM