

## Help for those taking equipment from a previous Multi-Tx event.



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The PC software provides much guidance. Install the latest version of MultiScore and 'Import' the current RDF (data file). The RDF changes after each event, it is important to maintain the integrity of this chain of files. It is a good idea to experiment with the software but then re-import from the current master on the shared drive before you begin setting up the event for 'real'. After your event your 'RDF' will become the new master. 'Duplicate RDF' creates dated backup copies as you progress and provides a way to transfer what you have done to others, via the shared drive.

RDFs are stored in Documents/MultiScore. You will need to use file manager to move RDF copies between this location and Downloads or the shared drive.

**Before leaving the previous event** - check all necessary equipment is present and switched off.



### Check list

- 10 Txs switched off, lids loosely held with rubber bands as shown.
- 10 Triffids switched off, lids off, retained with lid and cable lock in blue plastic bag.
- Rack of 16 Dibbers
- 12v power supply and mains lead, charging distribution box.
- Bag for use on site containing trowel and spares.
- Comms lead and PC connectable Dibber.
- Jar containing dry silica gel, indicator beads should be yellow (black means damp).

**As soon as possible** (so that any issues are discovered early, giving time to resolve).

Decide where the site will be.

Decide whether you will deploy equipment the day before event (recommended) or early on event day.

Create **Event definition**. (Yellow indicates PC step)

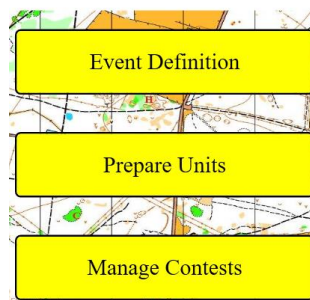
**Prepare Units - Setup Kit** Txs, Triffids and Dibbers.

Do physical Tx aerial check as below.

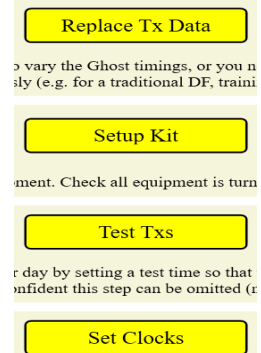
**Test Txs** – use PC to start Txs, to check programming.

**Do not Set Clocks** yet - **Turn all equipment off**.

### Multi Tx Direction Finding



### Prepare Units



**Charge batteries early** to give several days settling time before voltage checks and any necessary top ups are made.

**3 or 4 days before event** - check Tx and Triffid voltages as below, top up if required.

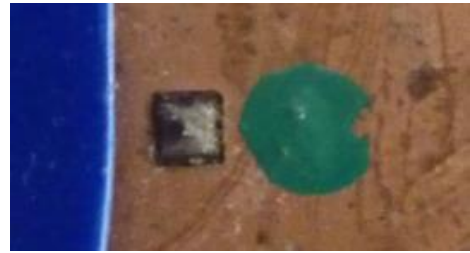
Triffid battery consumption is low, so **Set Triffid Clocks** now, add silica gel and close lids ready for use.

**Within a few hours of taking equipment to site** **Set Tx clocks**, add silica gel, fit lids. Also check Triffids are working ok by using the **Set Clocks** – **Check time**.

**Manage Contests** update competitors, **New Event**. Print two copies of start sheet.

## Aerial check

With Tx's off, check aerials using an ohm meter between the end of the wire and the tiny square pad, bottom right of the exposed PCB, marked by a green dot to the right of it. Replace any of the hooks that may have been lost, these are loosely coupled with the wire to reduce wire breakage during retrieval. Spares should be found in the bag, if not, any solid core wire may be used for replacements.



**Charging** should be done as soon as possible after the previous event to allow settling time before voltages are checked during the week leading up to your event.

Plug the charger into the distribution box. There are three 1 amp fuse protected groups so that in the event a problem you should be left with some working outputs. The charger provides a stabilised 12V which is reduced to 11.4V at each of the charging outlets by protection diodes. At this supply voltage the charge indicator LEDs should become very dim as the units reach full charge usually after 12 - 16 hours following a typical event. Note that a single unit may be charged directly from the charger BUT at the higher voltage the LED will not dim as a charge indication. If a unit has been left on accidentally, or used for experiment, then a 24 – 36 hours charge may be needed.

**Note** – at time of writing, only Triffids C, F, L & 1 have had the LED circuits modified to act as voltage indicators but the dimming of these can indicate for the group. If in doubt check with meter or software as below.

In all cases **SUPPORT SOCKETS** as you pull the plugs out as they are a tight fit.

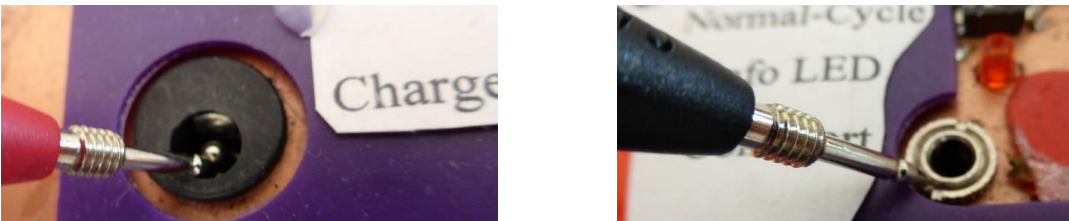
Also take care that the tips of the charging plugs don't touch the PCBs - the wooden 'spare' plug board helps prevent this.

## Voltage checks

Check Tx voltages to see which need a top up using a meter.

If tested after a week has passed since the first charge and they are still reading close to 9.6v then they need no more charging. If any are around 9.0v charge for another 8 hours. If any are 8.5v or less suspect a cell failure. Immediately after a charge you may get high readings approaching 10v even if the battery is not fully charged – hence the need for charging early to allow a settling period.

To measure Tx voltages using a meter without using a special lead:



Note the negative connection at the top of the charge socket, so keep the red probe below the positive pin as you make contact with it. The negative probe can connect to any ground area, the rim of the data socket is a convenient bright point for a good contact.

The Triffid voltages are checked using the software during 'Setup Kit' --'Set Clocks'. If any show red, charge for another 12 hours. If you use a meter to check the Triffids the 'settled voltage' is approximately 8.2 .

## Event Day

**Arrive in time for the test transmissions**, as chosen in the event definition.

Test transmissions are **all on 1960 KHz**.

Sequence A B C F G H K L M 1 (Ghost)

If all are heard ask Roy to switch on the blocking Tx – this is more powerful than any other on site and transmits continuously preventing competitors from taking early bearings.

If there is a problem ask Roy to prepare a spare Tx while you check closer to the problem Tx, if it can be heard when closer, all is fine, if not advise Roy by phone who will start the spare and arrange to meet you at a convenient location.

**12:55 Generate Jokers** on laptop with a witness that the laptop has generated these.

**13:00 Obtain signatures** on one of the printed start sheets and **give out Dibbers and Jokers**.

Make sure all know your phone number and you know theirs.

Copy the Jokers people receive from PC to the 2<sup>nd</sup> start sheet, carry this with you during the afternoon.

Knowledge of phone numbers and who has which Joker allow you to help if problems arise.

**13:06 Test transmissions cease**, remind Roy to switch off blocking Tx.

**13:15 Event briefing**

**Sample info to give competitors** – maps, dangers, no go areas etc. The lock code is 196. Leave Triffids running but switch off Tx's securing lid with rubber band not plastic side clip. Ask people to leave their phones on.

**13:25 Take picture.**

**13:30 Tx's begin.**

**13:35 Release competitors.** Help beginner(s) if necessary. Take photos if you have time.

**14:30 Move to area where the Ghost is hidden** so you have some transmissions to find it before it falls silent at 15:00.

Do not allow anyone to dib it after 15:00.

**Do not turn Ghost Tx off, leave both Tx and Triffid on, no need to remove either lid.**

At the car park deploy Tx with aerial erected, the Tx will come on at 16:01 as car park Tx 1900 kHz.

**16:00 Monitor frequencies** for Tx's.

**16:10 Receive Tx's, Triffids and Dibbers** from competitors, arrange in order for checking all in.

**16:20 Read Triffid data into laptop..**

**16:30 Announce results** – award Multi-Star to winner.

**16:40 Hero points and discards.**