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

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

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.

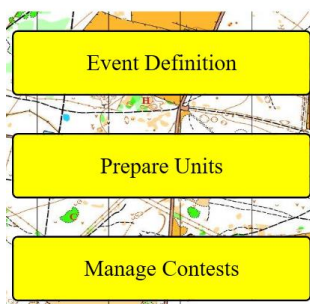Create Event definition. (Yellow indicates PC step)

Prepare Units - Setup Kit   Txs, Triffids and Dibbers.
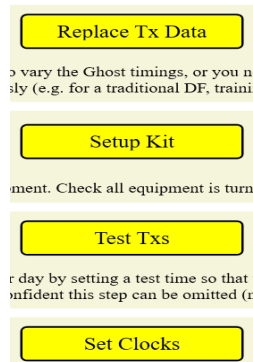
Do physical Tx aerial check as below.

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

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

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 to bottom left area, fit lids. Be careful not to touch the small button above the DIL switches – if you do the info LED will flash quickly, to correct, power off and reset clock.
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.

Connections
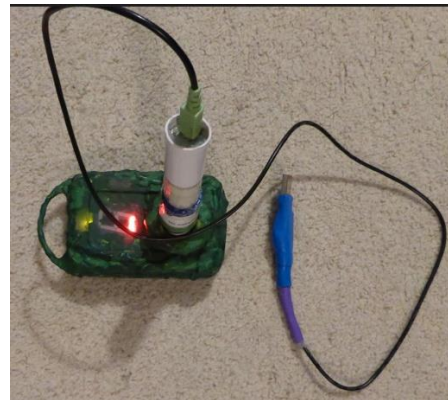
Charging Txs and triffids using power supply + loom

On the back of the Triffids, note instructions about the switch bypass green link on the red and black wires used.

Programming Tx

**Programming Triffid is done via special white Dibber.**

Programming Dibbers via Triffid P (which has links set for this operation).

The usb lead is plugged into the back of the Triffid.   Triffid P is not normally used during event.

Aerial check

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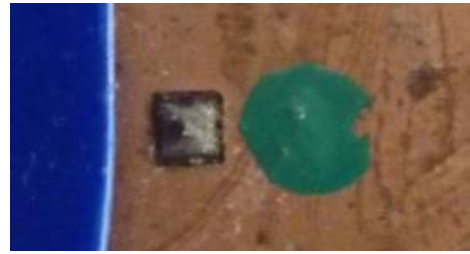
Charging should be done as soon as possible after the previous event to allow settling time before voltages are checked during the week leading up to your event.

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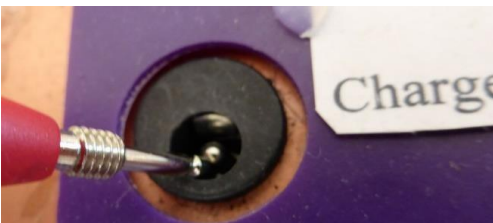
Note the negative connection at the top of the charge socket, so keep the red probe below the positive pin as you make contact with it. The negative probe can connect to any ground area, the rim of the data socket is a convenient bright point for a good contact.

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   ? (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. (See next page).

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 2nd 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 Txs securing lid with rubber band not plastic side clip. Ask people to leave their phones on.

13:25 Take picture.

13:30   Txs 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 <u>both</u> 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 Txs.

16:10 Receive Txs, 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.

Software – setting up

Event Definition

Current Base File Selected   1_13-30_16-00_G1_v4_Default.xml

Event Name	Chris-G1-243	Event Number will be added at save
Event Date	14/07/2024	Example 09/10/22
Location	Pipers Vale, Ipswich	
Event Number	243 Event Type Multi	
Organiser	Chris I Phone Number 078028▉▉▉▉	Automatically added if possible
Callsign	G6PDE/P	
Start Time	13:30 Close Time 16:00	

Test transmissions before the event and the difficulty setting

The settings currently stored in this event definition are shown below, if necessary, press buttons to change. If in doubt, press and choose the values labelled as 'Normal'

Test Phases   One test phase on day 14 starting at 11:00 and ending at 13:10

Difficulty   Level 5 - Mix of beginners and experts (Normal)

New Event   Save & Close   Cancel

Prepare Units - Setup Kit

Transmitter   Event ID **A**   Event No 243   Event Day 14   1960   Update All

Connect   Connect when changing unit

Defaults Recovery   Event No   Event Day   Callsign   Test Phases   Difficulty

Check Tx switches are both off
Connect Tx - Press Connect when ready
Connecting - Please wait
Ready

Clear Display   View Details   Test Phase 1 - Freq 1960 Day 2 Start 11:00 End 11:59
Test Phase 2 - Freq 1960 Day 3 Start 12:00 End 13:10
Start Time 13:30   Close

Prepare Units - Setup Kit

Transmitter   Event ID **A**   Event No 243   Event Day 14   1960   Update All

Connect   Connect when changing unit

Defaults Recovery   Event No   Event Day   Callsign   Test Phases   Difficulty

Check Tx switches are both off
Connect Tx - Press Connect when ready
Connecting - Please wait
Ready
Transmitter updated

Clear Display   View Details   Normal Test Phase - Freq 1960 Day 14 Start 11:00 End 13:10
Start Time 13:30   Close

Above Transmitter chosen top left.   TxA plugged in.   Connect clicked. Red warns of data that needs changing. Click 'Update All', success is indicated by green blocks, if this doesn't occur check connections and try again.

The process is repeated with similar screens for all Txs, Triffids and Dibbers, a total of 36 items, allow time!

Transmitters Testing

Connect and Set Time   Event ID **?**

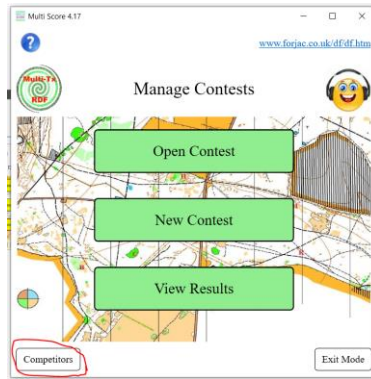All Txs must be started before the time shown below reaches 11:00

14/07/2024 10:56:31

Txs Set - A B C F G H K L M ?

Physical test that all Txs will come on. The Txs have their clocks set to just before the event test is due. Using a receiver, you can then check programming and that all Txs are working. The ? is the Ghost, last to be plugged in my test. All Txs were then heard running through the test sequence on 1960 kHz at 11:00 am. Txs were then switched off and not turned on again until deployment day, using the 'Set Clocks' option which uses real time, as read from your PC (don't forget to sync your PC's clock with the internet).
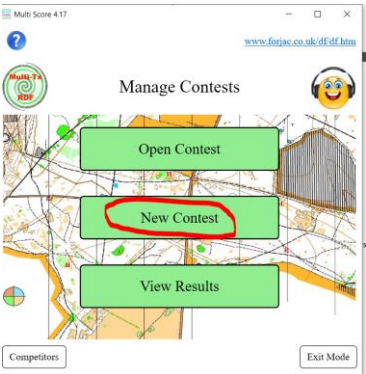
Software – The Contest.

Edit competitors.

Print 'Start Sheet'

With a witness tap to allocate Jokers.   Invite each competitor to view their Joker in secret 😊!
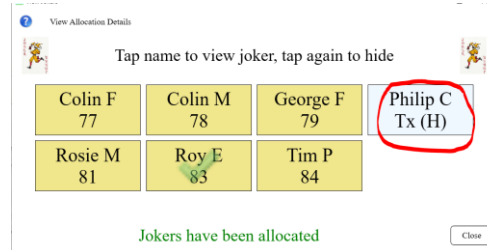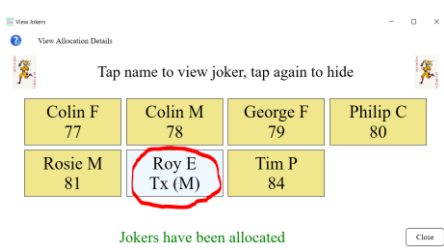
The green ticks indicate competitor has been shown Joker.

When all competitors know their Jokers, closing the screen reveals Jokers – don't do this while competitors can see.

On the main contest screen 'Save' data – if it has already been saved the 'Save' button may be grey.

After any changes always save. You can create generations of files or just overwrite the original.

After event processing

Wake up laptop which should be showing the Contest Control screen, if not navigate to it.
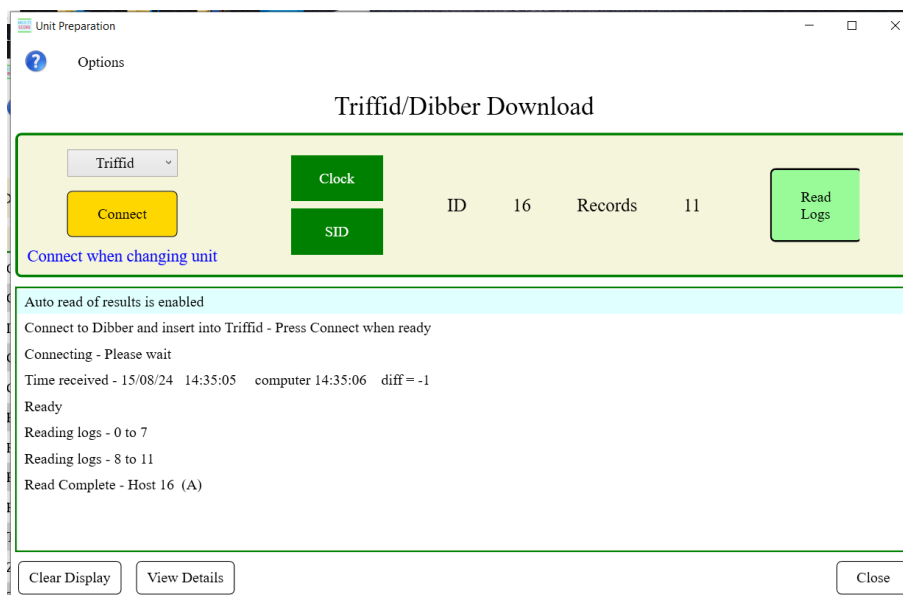
Plug in the PC cable to the special PC connected Dibber, as you did when setting up the Triffids.

As Txs, Triffids and Dibbers are returned, arrange Triffids in order close to the laptop for downloading data.

On the main Contest Control screen:

Tim1	86	91	A	0	0	0	0	0	0	0	0	0	0	0
Z1-TimesOnly	87	0		0	0	0	0	0	0	0	0	0	0	0
Z2-TimesOnly	88	0		0	0	0	0	0	0	0	0	0	0	0

Add Competitor	Delete Competitor		View Jokers	Download Unit	Calculate Results	Save	Close

Click on the 'Download Unit' button.

Above note that Auto read of results is enabled, all you have to do is click connect as each Triffid has the special Dibber inserted, you do not have click the 'Read Logs' button.

Important
Log entries are read in blocks of 8, with delays, there may be several lines for each Triffid.
Make sure you keep the Dibber inserted until you see Read Complete.
If a Triffid is not being read correctly vary the position of Dibber in the Triffid's mouth, different depths and angles of insertion. Also try rotating / removing / replacing the 3.5 mm jack on the PC to Dibber lead.

After all Triffids have been read, click close.
A report will be generated with any issues highlighted.
When this is closed the main contest screen will appear BUT the scores shown are not yet fully processed.

To apply handicaps and sort order press the 'Calculate Results' button.
Before announcing results check that they appear reasonable, if necessary confirming with competitors how many Txs they have found.