

CATFIRE



Show
Checklist



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CATFire – Show Checklist

Disclaimer

This document aims to assist you in achieving a successful show by suggesting a set of pre, on-the-day and post checks you can undertake to ensure CATFire operates at its best.

This document is aimed at the professional user but many checks are also pertinent to the hobbyist too.

Contact support@trinitydigital.co.uk if you require advice.

Errors and Omissions Excepted (E&OE).

Revision history

Revision	Changes
1	First

Pre-Show On-Site

These checks should be undertaken during your site assessments.

Check to be performed	What to look out for
Obstacles	<ul style="list-style-type: none"> • Any obstructions between control and firing positions? <ul style="list-style-type: none"> ○ Walls, trees, machinery, vehicles etc. ○ Undulating ground – equipment in dips? ○ Elevation differences? Roof, on-building? • Refer to “Understanding Radio Communications” document for more advice on altering antenna positioning to get the best reception in these conditions.
Range	<ul style="list-style-type: none"> • No more than 800m between control and firing positions / 1600m span between firing positions max.
Antennas	<ul style="list-style-type: none"> • Using different antennas than supplied? • Ensure you understand their radiation pattern. • Refer to “Understanding Radio Communications”
Conflicts	<ul style="list-style-type: none"> • Other radio systems in use? • Check with site hosts and other trades what they will use. • CATFire uses 863 MHz to 870 MHz. • Potential sources: <ul style="list-style-type: none"> ○ security ○ microphones / audio ○ timecode ○ lighting / sfx / lasers ○ video ○ industrial equipment • Any heavy industrial plants / equipment that may generate significant electrical noise? • Near high voltage power lines?
Test	<ul style="list-style-type: none"> • Place the CFWFS-1 and CFCIU-1 at the intended control position. • Place CFTFU-X16 firing unit at each anticipated position. • Use intended antennas. • Perform unit scans to ensure that all units are detected. • Check radio communications quality for each firing unit. • Dwell on detail page for each firing unit: get a good sense of its communications statistics over some time.
Power	<ul style="list-style-type: none"> • Check on-site power availability if needed. • Generator? <ul style="list-style-type: none"> ○ AVR (Automatic Voltage Regulation) or “Pure sine wave” output. ○ Check continuous watts is sufficient for needs.

Pre-Show Design & Prep

Check to be performed	What to look out for
Fallout and distances	<ul style="list-style-type: none"> • Using Site Plan feature check range and fallout danger. <ul style="list-style-type: none"> ○ Obtain aerial photograph of the site (e.g. Google maps). ○ Ensure it covers a larger area especially fallout zone. ○ Set the dimensions to match real world image scale. • Place your positions onto the site. • Use graticule to check distances between positions. • Design your show, including shells etc. • Plot trajectories to observe where fallout, blinds etc. could reach.
Scripting	<ul style="list-style-type: none"> • Perform your last 'wiring up' operation. • Use pick list to pick all material from stock. • Prep material (ignite where possible), waterproof etc. • Use material position labels to mark all material/boxes to ensure correct site placement. • Print wiring labels, attach to igniters or material e.g. shell leaders. <ul style="list-style-type: none"> ○ Keep label sheets – even empty ones – as proof of completeness. • Print the wiring report in case any labels get damaged on site. • Generate the firing file for your script. • Copy it onto the firing computer. <ul style="list-style-type: none"> ○ Ensure you have a backup of the firing file on a USB stick.
Timecode	<ul style="list-style-type: none"> • Generated the timecode file. • Check Audio trade have tested it.
CFTFU-X16	<ul style="list-style-type: none"> • Use firing unit pick list: pick required firing units, pack spares. • Install batteries, pack spares. • New firing units? Join them to the intended CFCIU-1. • Pre-address the firing units. <ul style="list-style-type: none"> ○ Each has unique Unit address. ○ Firing Address (FA) set according to pick list. • Print the firing units report and addressing labels. <ul style="list-style-type: none"> ○ Fix firing address labels to each unit: ensure correct site placement.
CFCIU-1	<ul style="list-style-type: none"> • Taking spare to site? Ensure it has the same security key.
CFWFS-1	<ul style="list-style-type: none"> • Ensure the CFWFS-1 is up to date. • Ensure computer is charged. • Test load the firing file. • Perform a test run of the script. <ul style="list-style-type: none"> ○ Without a CFCIU-1 connected. ○ Load firing file. ○ Arm the system and script and fire the script using the "computer clock" or even use timecode. ○ Observe the active firing list.
Mortars	<ul style="list-style-type: none"> • Use mortar pick list: ensure you have the right number of mortars and racking. • Affix position labels for on-site placement.

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Transport	<ul style="list-style-type: none">• Use weights report.<ul style="list-style-type: none">○ Net explosive weight is within regulations.○ Total weight is within vehicle or license weight limits.
Audio	<ul style="list-style-type: none">• CFWFS-1 is supplying audio? Test audio feed to amps and at intended volume.• Take spare audio cable with you – these commonly get damaged.
Timecode	<ul style="list-style-type: none">• Use intended mixing desk to check signal is stable with intended timecode audio files.<ul style="list-style-type: none">○ Liaise with audio trade as necessary for testing○ Test run the script refer to previous “CFWFS-1”

On-The-Day

These checks should be undertaken during site set up.

Check to be performed	What to look out for
Place kit	<ul style="list-style-type: none"> • Place all firing units and equipment (mortar racks etc.). • Connect the antennas finger tight only to their CFTFU-X16 firing unit. • DO NOT connect igniters at this stage. • Turn on firing units, check self test results. Ensure ARM locked.
Radio check	<ul style="list-style-type: none"> • Set up the firing computer with CFCIU-1. • Load the CFWFS-1. • Scan units: ensure all detected. <ul style="list-style-type: none"> ○ Load firing file / testing screen / check units against expectations.
Batteries	<ul style="list-style-type: none"> • Perform a load test, ensure the batteries are showing good.
Standby	<ul style="list-style-type: none"> • Disconnect the CFCIU-1. <ul style="list-style-type: none"> ○ Prevents firing unit battery drain.
Connect Igniters	<ul style="list-style-type: none"> • Power off the firing unit. • Following the wiring up labels, connect the igniters to the cue terminals. Observe that the Firing Address (FA) matches the unit.
On-Unit Continuity	<ul style="list-style-type: none"> • Make colleagues aware you are performing a continuity test. • Stand well clear. • Power on. • Use the continuity test feature of the unit to check connections. • If any issues found, correct and repeat. • Power down.
Script check	<ul style="list-style-type: none"> • Power on all firing units. • Make colleagues aware you are performing a continuity test. • Connect the CFCIU-1 to the firing computer. • Load the CFWFS-1 App. • Scan all units. • Open the firing file. • Go to testing page. • Check all firing units expected are present. • Perform a continuity check on all units. • Ensure all cues expected in the script are present. • Close the app. • Disconnect the CFCIU-1. • Power down the firing units.
Standby	<ul style="list-style-type: none"> • Once setup is complete you can keep the firing units switched on. • You must keep the CFCIU-1 disconnected and ARM-Locked. <ul style="list-style-type: none"> ○ Prevents firing unit battery drain.
Timecode	<ul style="list-style-type: none"> • Connect CFTIU-1. • Check timecode signal. • When timecode signal is stopped the time will turn ORANGE (backup mode) and will continue to run, this is expected and of no concern. <ul style="list-style-type: none"> ○ You may prefer to power cycle the CFTIU-1 and restart the App to clear this.

Pre-Showtime

These steps should be undertaken a short while before showtime.

Check to be performed	What to look out for
Firing units	<ul style="list-style-type: none"> • Power on all firing units. • ARM Unlock firing units.
Audio	<ul style="list-style-type: none"> • Ensure any audio system is on and connected.
CFWFS-1	<ul style="list-style-type: none"> • Connect CFCIU-1. • Load CFWFS-1 App. • Open the firing file. • Scan all units. <ul style="list-style-type: none"> ○ Note: Units in standby? Wait 30 seconds to wake up / re-scan. • Go to testing page check all firing units expected are present.
Timecode	<ul style="list-style-type: none"> • Ensure timecode feed cable is CONNECTED to the CFTIU-1 • NOTE: A timecode that is running on ORANGE is in backup mode from timecode being previously received. This will not affect normal starting of your show. • If timecode is running in BLACK there is a live timecode feed coming in – arming your script will begin firing from the timecode position received. Caution!

Showtime

Fire your show.

Check to be performed	What to look out for
Arm	<ul style="list-style-type: none"> • Insert the key into the CFCIU-1 and CFTIU-1 and unlock them. Wait 5 seconds for activation. • Enable the system arm button. • Click the system arm button. • The system will program the firing units and the system will go armed. • Manual commands may now be fired at any time – even during script firing: use the manual command panel or pin board.
Script	<ul style="list-style-type: none"> • Enable the script arming button. • Click the script arm button. • Select the clock source and options and click OK.
Computer clock firing	<ul style="list-style-type: none"> • The script will fire to the computers clock. The computer will also play any audio in your script, as may be feeding to your audio amplifier too.
Timecode	<ul style="list-style-type: none"> • Start the timecode signal. • The firing clock will begin and follow the timecode signal. • If timecode is lost: <ul style="list-style-type: none"> ○ Firing may be configured to continue with ORANGE backup running time. ○ Firing may pause on timecode loss / resume on timecode return. • Permanent timecode loss and show is paused? <ul style="list-style-type: none"> ○ Click resume to manually pick up at the ORANGE backup time. ○ Timecode will pick up from the live signal if it later returns.
Safety	<ul style="list-style-type: none"> • Site conditions/weather: Adjust safety groups as necessary. • Disarm everything: Click the System disarm button. • Click the script pause button – even if timecode is running. <ul style="list-style-type: none"> ○ Manual firing still possible. ○ Resuming with a running timecode feed? Firing will pick up from the incoming time! • Pause timecode. <ul style="list-style-type: none"> ○ Option to pause on timecode loss should have been selected. ○ Script firing will resume on timecode return. ○ Press resume button to resume manually: show will pick up from backup time being reported in ORANGE. • Click Script disarm to stop script firing. System still armed - manual firing can still occur. • Refer to CFWFS-1 documentation for timecode behaviour.
Semi-auto	<ul style="list-style-type: none"> • If a pause point is hit the Resume button will become enabled. Observe the pause reason, resume when correct to do so. • NOTE: manual firing can occur even when the script is paused. • If timecode is running when a pause point is reached, resuming will pick up from the timecode signal! • Refer to CFWFS-1 documentation for timecode behaviour.

Post-Show

These checks should be undertaken when the show is completed.

Check to be performed	Detail
Disarmed	<ul style="list-style-type: none"> Disarm the system from the firing page. Return to the testing page and scan the unit status for all units: ensure all units are reporting disarmed.
Timecode	<ul style="list-style-type: none"> Disconnect any timecode feed.
CFWFS-1	<ul style="list-style-type: none"> Close down the CFWFS-1 firing computer and disconnect equipment.
CFTFU-X16	<ul style="list-style-type: none"> After cool down approach site with caution: turn off all firing units. Disconnect antenna to avoid damage during this rough handling period. Disconnect igniter wires.
Wash	<ul style="list-style-type: none"> At HQ, use hose with soft spray to wash CFTFU-X16 to remove debris. Cloth or air dry.
Inspect	<ul style="list-style-type: none"> Examine each unit for damage, pay extra attention to the antenna and its port. Ensure you have all keys and antennas.
Show correctness	<ul style="list-style-type: none"> Consider using the CFWFS-1 to download the diagnostic log from the unit. Speak with support@trinitydigital.co.uk and get the log assessed if required.
Storage	<ul style="list-style-type: none"> Stored for a lengthy time without use (e.g. more than one month) consider removing the batteries. At this time you should also loosely fit the lid back onto the unit, consider placing some drying crystals inside the unit during long term storage.
Maintenance inspection	<ul style="list-style-type: none"> Periodic inspection and minor maintenance may be required. Typically post season before longer term storage. Examine all binding posts for faults and ensure they are tight. Ensure seals are not dirty, split or fraying. Check lid seal too. Ensure the key switch lock nut is tight. Ensure the umbilical power cord connecting the power board to the control board of the CFTFU-X16 is in-tact, no signs of cable damage. Ensure the wires are fully seated and tightened. <ul style="list-style-type: none"> Do not apply undue pressure onto the circuit board. Ensure the antenna port is in-tact and not loose, use long nose pliers to tighten the securing nut on the top of the CFTFU-X16 as necessary. Examine the battery holders to ensure that the clamps are not broken. Check battery holder contacts for sign of corrosion (especially if you experience leaking batteries).

NOTES