

MCR21 Engineering News February 2023

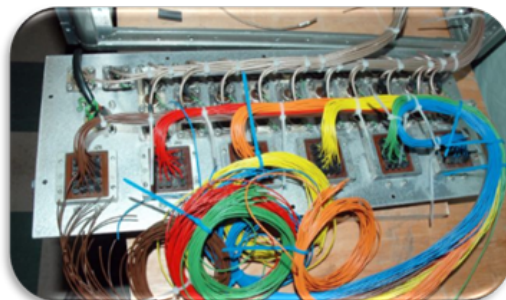


Dear Supporter

- **MCR21** is now in dry storage for the winter, good to keep it out of the weather. It shares the space with a number of busses and it's a bit of a squeeze to the extent that the only door that opens is the rear one. This makes it difficult to work on, so apart for a bit of work on the engine our efforts have been concentrated on building and restoring some of the equipment ready for installation later.

Progress reports, interior

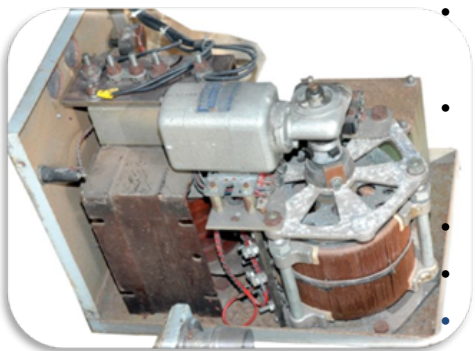
- **Vision Preview switcher** This is quite a big item to make, some 50+ relays and lots of connectors! Work is underway, most of the metalwork is done and wiring has started. It has five BBC DA white modules as the output buffers and these have been restored ready to go into the main frame. This is thought to be the first time the BBC used a preview switcher (the term matrix came later) in an OB van, one of a few "first" in the MCR19 to 28 series. By today's standards it is very small and not square (or should that be rectangular?) three rows of 16 and two of 3 inputs. Production P/V, Engineering P/V, Camera reverse viewfinder, and two commentators outputs. Each row has a Pye 20 pin control input connector and another one for the indicator outputs, 6 in all plus 32 F&E video connectors. The back panel is quite busy. I recall SIS's OB1 van that had a 1024 by 1024 matrix, that was something to worry about!
- **The Talkback Junction Box** This is a smaller, but essential item. It's main function was to distribute sound to and from the cameras. A sort of "all come good box" with transformers and relays. This is well underway and will be finished soon.
- **Tape Recorder Rack**, this is one of the larger items to be made is the and planning for it has started. This is a removable 19" bay some 16U high and it sits under the maintenance bench. It contains the two Philips record/replay amplifiers, the Philips EL3503 tape deck in a pull out drawer, the BBC ident unit type RP4/1 and in the rear the talkback junction box.



Progress reports, system wiring

- We are very pleased to have been given a quantity of good quality black 20 core cable by one of our supporters, Many thanks. This cable is ideal for the vision pre-view switcher controls and indicators.
- As MCR21 is in store no further wiring has been feasible.

Progress reports, Power systems



- **AVR's** A big push on these, all three have been finished, tested, and ready for re-installation.
- I have written a short piece for how they work and why they are needed. Hopefully it will appear in the BVWS journal.
- **Left** before work starts
- **Right** finished job!
- Most of the work on the power systems has been completed, a few EP's remaining and the battery



charging scheme.

Progress reports, engine

- We have made some progress, the fuel filter was changed and this improved the running a lot! And MCR21 drove to Firfield reasonably well.
- One of our objectives whilst "in store" was to get the carburettor, a Solex 40AIP-2, sorted out and to this end Tim has taken this job on and several faults were found so when it has been refitted we are hoping for a more reliable and possibly more economical running.
- We still plan to restore the fuel system to the original system with the mechanical lift pump which has its own filter, and is part of the history.
- Whilst the carburettor was off we took the opportunity to fix the oil leak thought to be coming from the rocker box cover. To this end it was removed and the sorry remains of the old gasket removed. The cover was cleaned and repainted and the gasket replaced with some



NOS cork strip I had, that was perfect fit for the job. As it was old we steamed it over the kettle and this softened it so it could be bent round the 90° corners.

- We removed the air filter, to allow easier access to the rocker box, and it will be repainted and refitted after the carb goes back.

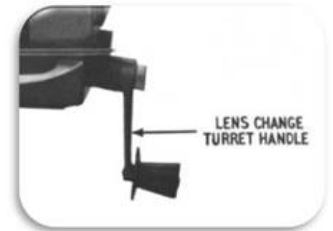


Progress reports, Camera, Pye Mk6

- No work has been done on the camera body, it is still missing a few items and some TLC needed.
- The biggest obstacle in further work are the missing handbooks and the CIRCUITS
- Some work has been done tidying up the PSU that came from the Science & Media museum. Disappointingly this was incomplete and may have been a parts donor in the past but in time would be recoverable. Fortunately we do have a second complete PSU.

Current projects:-

- Portable 19" rack for the tape recorder, rec amplifiers and tape ident unit. Big welding job
- BBC DA crate. yet to be started, metalwork & wiring. Volunteer needed
- Design and make 3 "battery regulators" to control output of the crude battery charger and protect the batteries.
- Servicing the 4 waveform monitors ready for installation.
- Servicing the two Fergusson SPG units. Complex units.
- Turret crank handle as above. Complex metalwork.
- Fitting a Pye 20 way plug to 20 way cable, one end only. To BBC standards.
- Two vision engineers control panels to be made with matrix control buttons.



To be found:-

- **Bench Lamp**. This bolts to the wall in the alcove above the work bench. A sort of machinists lamp on an adjustable arm. The original was "Meritux" brand angle poise lamp.
- **Roof extractor** fan, 240V ex-military circa. 1955-60
- Philips tape rec/play amps, 2U high, to match the deck type EL3503
- **Gresham Lion** Pulse & Bar generator BBC GE4/504.
- Pye 14" monitor type 842844
- Small chrome plated latch to match the others, from 1960s several needed.
- **Loudspeaker** The original was a Pye type 845703, It is a curious "not square" shape.
- Vintage **Papst 5 inch fan** for 115v or 230v. These heavy all metal fans were common in the 60's.
- BBC White Unit type GE4/508 405L or 625L Pluge generator 4 modules wide.
- BBC White Unit type GE1/508A, 405/625 Bar & Sawtooth generator 2 modules wide



Photos on the web!

- A Photo review of our exhibitions [Click!](#)
- Our Facebook pages [Click!](#)
- Explore our youTube Videos [Click!](#)

The Plan! The Future Volunteers needed.

- In a few weeks time MCR21 will be **back here** at base. There is still much to be done on the inside and a little on the engine and outside. Our regular "work days" are Tues & Fri afternoons and Weds from 10.30 AM. Much soldering to be done.
- We need to further expand our **web presence**, more into social media, Linked-in, a wiki page(s), Giving pages, website expansion. If you have skills in these areas, please volunteer to help. You don't need to be local for this, please contact to discuss ...
- One area I would like to expand into is **the Library!** We, I, have a very large number of TV related manuals, photographs and BBC technical documentation. This should be made available to wider research bodies. I have in mind something a bit like BBC written archives where you can book an appointment and VIEW the chosen documents. A start for this would be to create a proper searchable web listing. I would point out even at this early stage loaning books out is utterly forbidden.

- There is thought we need to set up a **better base** for MCR21 and the broader broadcasting equipment exhibits. To this end a suitable building is sought. Very difficult in this area but if we all look round something may be found.
- A few key points; Affordable or peppercorn, Secure, big door, not too far away, power, feasible from the planning point of view, reasonable access/parking. This could be a temporary home pending something better.
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Fundraising

As ever there is a need to raise funds! The ongoing costs (storage, further restoration, transport, insurance etc.) still have to be met every year, so we would welcome donations to help this ongoing work.

Once the main Heritage Funded project is complete,
and the project grant is used up we will be on our own.

We are pleased to receive donations both as cash or equipment to sell for funds.

If you would like to support us, an ideal way is to set up a modest standing order direct into our bank account,
please contact our [treasurer for bank details](#).

Or you can use our [PayPal donate button](#)

Thank you for your support



Please pass this newsletter on to
others who might be interested.

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