Video Fundamentals 15 Wire, Labelling & MCR21 Brian Summers G8GQS

In this 15th monograph, I would like to tackle a different subject this time, about wiring.

Once you get more than a few wires going from A to B it become increasingly difficult to sort them out and make changes etc, along the lines of; well were does this one go then?

The solution to this is obvious but often not implemented till you have forgotten and then it is too late. I know this is a statement that is easy to say, but it must be written down as you go along. In the long run it will save you time, much better than tugging at a wire in the vain hope you can see the other end move.

Professionally the “wiring schedule or run list” is prepared at the design stage and it provides the build instructions and a permanent record for future repair/modification work. Other benefits are calculations for the length of cable, number of connectors, cable markers to order. It is a great time saver, and prevention of cost overruns to get this correct.

The basic information needed is;- cable number, from equipment connector, to equipment, cable type, cable function. This can be expanded as needed.

For my video installation at home I make notes on paper and transfer to a spreadsheet for tidiness and printing out.

How to mark the cables? I re-use a lot of existing cables cutting off one end and savaging the cable markers then replacing them in the new order. Then I re-make the cut end to the correct length using crimp connectors, this is quite quick with practice. It makes it all much neater. Sometimes I use sticky label number strips. Search for “Cable Markers”. Failing all this the backstop is white PVC insulating tape and a felt tip marker.

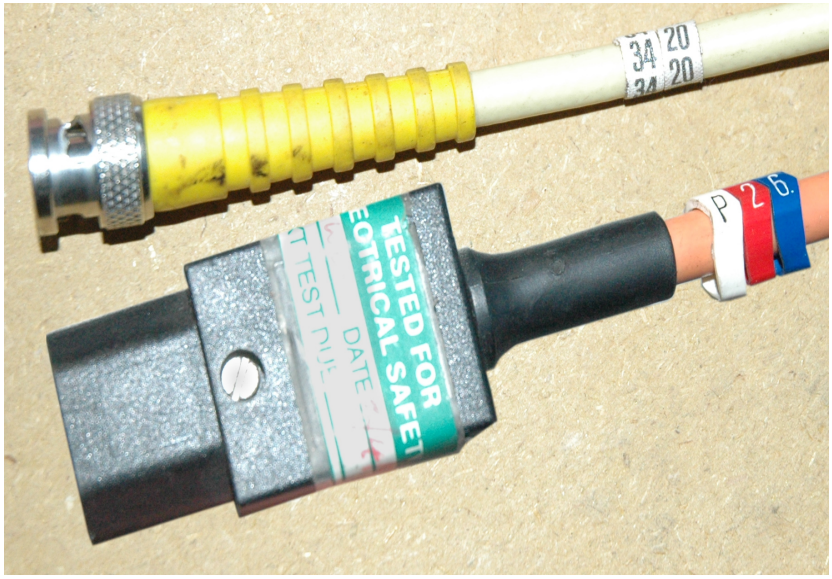
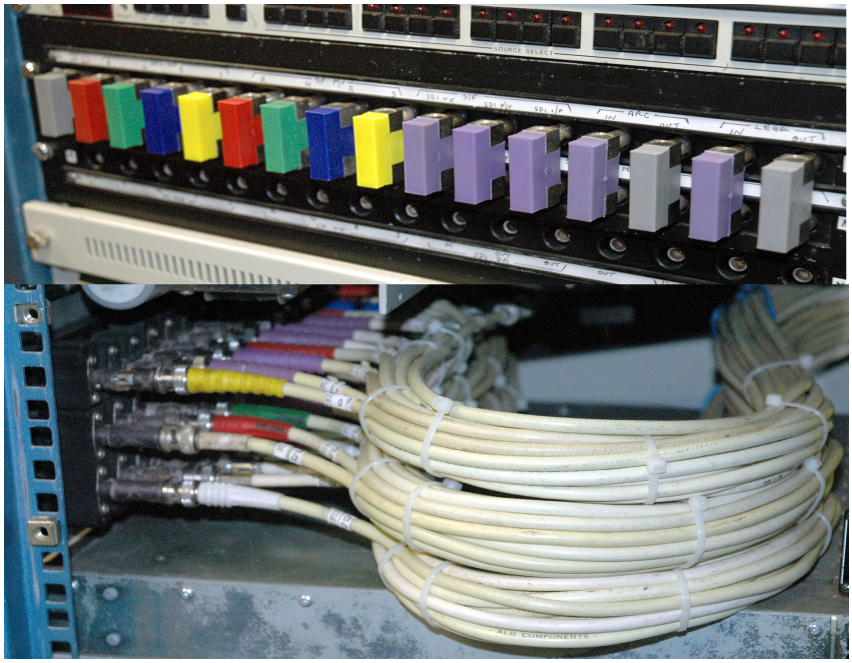


Illustration 1: Cables with wrap labels and plastic numbers

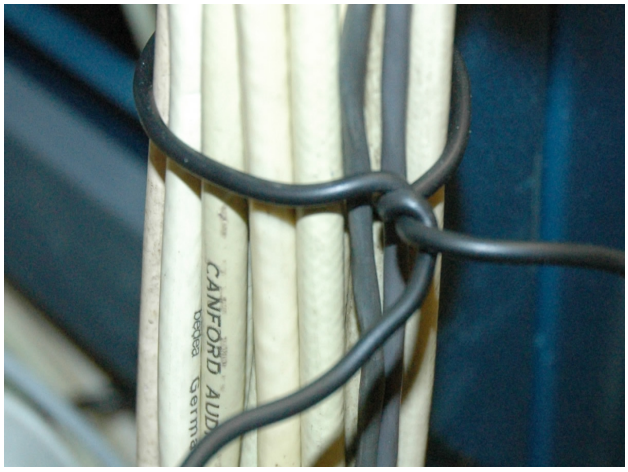
Some thought and advance planning needs to go into how the cables are laid out or “loomed”. In the photo the cables to the jackfield are in a big “U” shape, one group for each row of jacks. This enables the jackfield to be drawn forwards from the equipment bay for maintenance or modification. It is not easy to get them organised and looking nice, my effort as in the picture falls a long way short of a professional wireman's work.



Cable loom behind video jackfield

It is easier to start the wiring on the floor not in the equipment bay, get the cables combed out into shape and tie wrapped, then move it to the bay to continue on to the destination.

I find using offcuts of 1.5mm domestic as temporary (permanent?) fastenings, adding the tywrap when (if) finished.



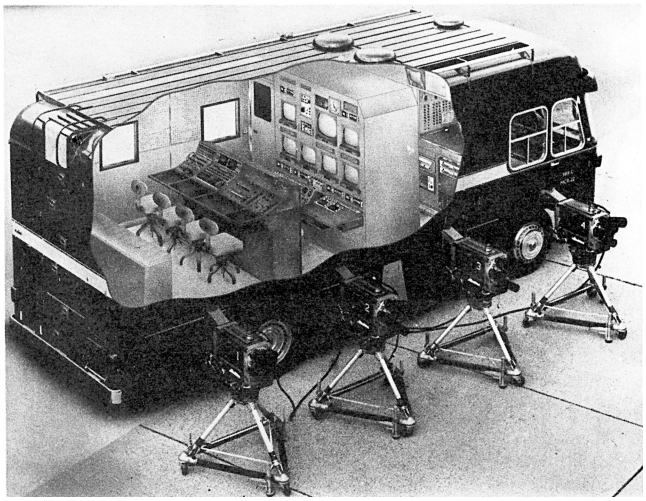
Temporary cable tie

One reason for choosing this subject is the project to restore the outside broadcast van BBC MCR21. This has featured at many BATC events going back as far as the 1980 convention as reported in CQ-TV112. This has concentrated my thoughts around the wiring schedule or run list that will need to be created for this job.

MCR21 BBC Mobile Control Room No.21

Now is the time for it to enter a new phase in it's long history. Originally built by Pye in 1963 to an exacting BBC specification. It has been through many changes and upgrades, but now it is 55 years old. It predates, Micros, IC's, PAL colour, CCD's, Plumbicons, indeed it is much closer the the birth of electronic television than it is to today.

The plan is to go back to it's original 1963 condition to give it it's correct place in history. To carry out this restoration we have set up a charitable trust, the BTTT, to own MCR21 and ensure it's future.



Cutaway view of MCR21 with 4 cameras

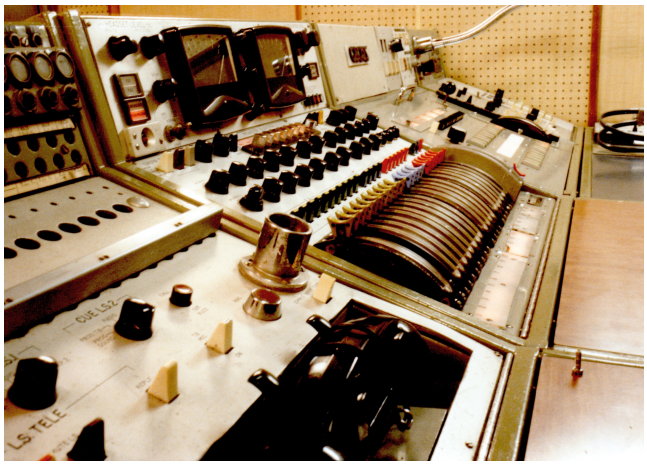
There will be many elements to the MCR21 Project. The restoration of the oldest and most original surviving television outside broadcast unit will be the centre-piece of the Project.

MCR21 will be restored to its near original state, painted in its original livery of dark green with a grey stripe and the BBC crest on the side. The unit will carry its original equipment and two Pye Mk VI Image Orthicon cameras.

We are going to make it available at public displays, meeting, and at museums. There will also be information about MCR21 on display and on the Broadcast Television Technology Trust's website. The website will carry much more information about the technology and the people who worked behind the cameras. While the displays will be as entertaining as possible education will play a big part. The aim is to encourage people, particularly young people, to take an interest in broadcast television technology.

As you can imagine there is much to be done, not least the wiring!, but we are fortunate to have the support of Industry, The Heritage Lottery Fund, The National Media Museum, The BBC, and CTV OBs. to name a few.

We will need much help from volunteers, if you would like to join with us in this important project, or have information/equipment that would be useful, or wish to sponsor us, please get in touch.



MCR21's production control desk

BTTT = Broadcast Technology Trust

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CAT18 OB lecture

www.mcr21.org.uk

www.tvcameramuseum.org

Video = https://vimeo.com/275057027