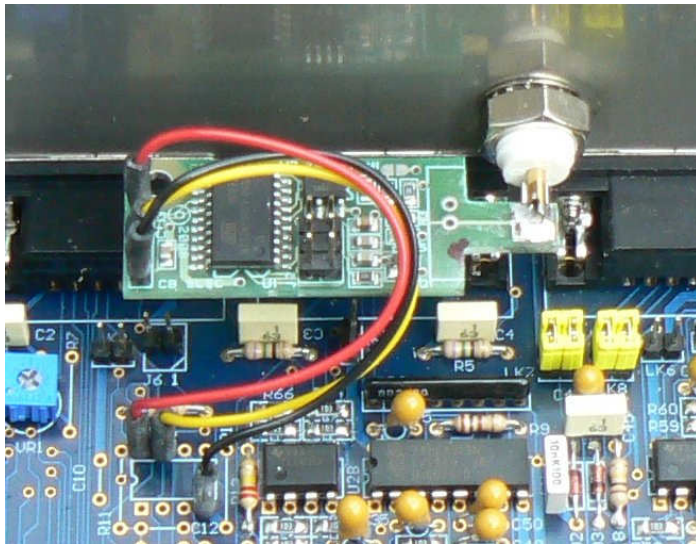




Bi-Level/Tri-level Sync Conversion Kit

The Tri-Level Sync Card is designed to be retro-fitted into the SR, MR and RM-6 series of CB Synchronisers. It is designed to operate both on normal and Tri-Level Syncs and generates a Frame-Rate Square Wave Output.

Fitting to SR /MR Series



The card should be mounted directly on the BNC connector as shown in the photograph.

Open up the Unit and disconnect the wires from the BNC socket to the PCB as these will not be required.

Remove the Processor Card, unscrew the D-Lock posts on the rear of the Unit and the three supports at the front of the card.

Fit the Tri-Level Sync Card to the BNC Socket keeping it about 2mm

from being inserted fully home, such that the Component side connects to the signal (Centre pin). Unscrew the Nut and rotate as necessary so that both sides can be soldered before re-fitting back into socket.

To fit the new card first Remove U2 (8 pin LM1881)

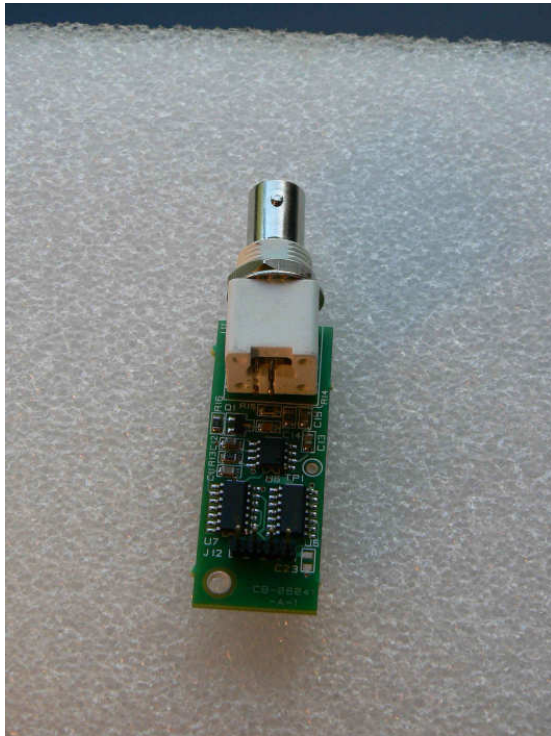
Connect the three wires to the Processor card as follows:-

1. Red (pin 1) on T/L Sync card to U2 pin 8 (+5V).
2. Black (pin 4) on T/L Sync card to U2 pin 4 (0V).
3. Yellow (pin 3) on T/L Sync card to U2 pin 7 (Frame)

Check that pin 3 of the T/L V card connects to U13 pin 2 (40 pin SC26C92), and to U27 (18 pin 16C54 'G7') pin 13.

When powered and connected to Tri-Level or Normal Video Syncs the T/L Sync output should be a frame rate square wave.

Refit Card and re-assemble Unit.



RM-6 Units

Open the Unit, removing both to and bottom.

Remove BNC J18 from main card.

Fit the new PCB mounting BNC supplied to the T/L Sync PCB. File a matching flat on the underside of the plastic threads, Fit The T/L Sync card to the rear panel with the trackside uppermost.

First Remove U25 (8 pin LM1881)

With T/L Sync card in position, connect up as follows:-

1. Red (pin1) to U25 pin 8 (+5V)
2. Black (pin 4) to U25 pin 4 (0V)
3. Blue (pin 3) to U25 pin 7 (Frame)

Check that Pin 3 on T/L Sync board is connected to U22 pin13 and U20 pin 2

Connect the two BNC signal pins so as to be able to loop through the video, Connect wire from J19 (already Linked) to the BNC Input to the T/L Sync card.

Apply Tri-Level Syncs to each of the BNC's in turn and confirm that a Square wave appears on U22 pin 13, before re-assembly.

Fitting Tri-Level cards to Existing CB Rack Units

Old Power Supply Cards (CB86094)

Some units have been modified by fitting a small sync separator card check which you have.

If no Sync Separator Card is fitted

On Trackside cut track to U12 pin 9.

Cut track also from Q1 Base to Edge Connector pin 5b visible between Edge connector and VR2 Trackside.

Enlarge the LH mounting hole of the Edge Connector to 3.2mm.

On the Tri-Level Sync Card to be fitted, Enlarge the top LH Hole adjacent to where its BNC Connector would be fitted to 3.2mm, and solder a wire to the Signal side of the BNC about 10cm in length.

Using appropriate mounting screws and Pillars Mount the Card above the LH Side of the Edge Connector and connect the wires to the main Card as follows :-

BNC Signal Wire to Edge Connector pin 5b (Video Input).

Red Wire to U12 Pin 16, (+ 5V).

Black wire to U12 pin 8, (0V).

Yellow Wire to U12 Pin 9 (Frame Output)

If a Sync Separator Card is already fitted and needs upgrading to Tri-Level

The mounting and connections are identical, the Video Input being taken from Edge Connector Pin 5b to the signal side of the BNC Connection.

New Power Supply Cards (CB-9706)

On the PSU Card remove Components C1, C2, C3, and also R1 and R2. Taking care not to damage tracks carefully remove U3, by cutting pins 1-4 and tilting upwards to break off connections 5-8. With this removed clean out the holes belonging to U3 Pins 4, 7 & 8.

Mount the Tri-Level Card as described above connecting as follows: -

Red wire to U3 Pin 8, (+5v)

Black wire to U3 pin 4, (0V)

Yellow wire to U3 Pin 7, (Frame O/P)

Video Input is taken from Edge Connector pin 5b to BNC Signal side on Tri-Level board.

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