

3-22 CONTROL OF THE DX-4 FROM THE 40-4

Since the DX-4 is designed to provide switchable encode-decode processing, the encode-decode switching is automatically done according to the condition of the OUTPUT SELECT buttons and FUNCTION SELECT buttons and by whether the 40-4 is in record mode or reproduce mode.

3-23 ENCODE MODE

There are 3 ways to set the DX-4 to encode mode.

1. When the INPUT button of the OUTPUT SELECT buttons is depressed all channels of the DX-4 will change to the encode mode.
2. When the NORM button of the OUTPUT SELECT buttons is depressed and any one or more FUNCTION SELECT button(s) is depressed. Only the channel(s) designated by the FUNCTION SELECT buttons can go to encode mode.
3. When the 40-4 is set to record mode, only the channel(s) designated for recording mode will go to encode mode.

3-24 DECODE MODE

When none of the FUNCTION SELECT buttons are depressed and INPUT button of the OUTPUT SELECT buttons is not depressed, the DX-4 will go to the decode mode.

As previously mentioned, the DX-4 goes to encode mode when the INPUT monitor is selected, during which time the signal from the INPUT jacks of the 40-4 is sent to the OUTPUT jacks of the 40-4.

While the DX-4 is in decode mode when the deck is in reproduce mode, during this time the playback signal from the tape will be sent to the OUTPUT Jacks of the 40-4.

1. U22-6 is a 2-input NOR gate and when either NORM or INPUT button of the OUTPUT SELECT buttons is depressed, output pin #6 of U22-6 will go to a HIGH logic level.
2. U21-2 is an inverter and it reverses a high logic level from U22-6 into a low logic level which is sent out to output pin #2 of U21-2.
3. U27-3 is a 2-input NOR gate and when either NORM or INPUT button of the OUTPUT SELECT buttons is depressed or when the deck is set in record mode output pin #3 of U27-3 will become a high logic level.
4. U26-6 is an Open Collector type inverter and when the output from U27-3 is a high logic level the signal at output pin #6 of U26-6 will go to a low logic level. This low logic level causes +5V supply current of 40-4 to flow through R23 in the DX-4 into the LED included in the Photo-coupler IC-4.
5. When current flows into the LED in the Photo-coupler in the DX-4, Q1 will go to the ON state. This causes the potential on the make (normally open) contacts of the FUNCTION SELECT buttons and those of the OUTPUT SELECT buttons to go to about 0V in the DX-4.
6. With the conditions of item 5, when any one or more of the FUNCTION SELECT buttons is depressed the associated encode-decode converting terminal (N) on the dbx AMP PCB ASSY will go to approx. 0V and this will cause the designated channel to go to the encode mode.
7. When the INPUT button of the OUTPUT SELECT buttons on the 40-4 is depressed with the conditions stated in item 5, the encode-decode converting terminal on all of the dbx AMP PCB ASSY will go to 0V approx and thus all channels will go to encode mode.