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TC-90 OPTIONAL REMOTE CONTROL CONNECTOR SPECIFICATION

909

Table of Contents

1.0 GENERAL: 1

2.0 ELECTRICAL SPECIFICATIONS: 2
2.1 Remote control connector: 2
2.2 Analog control signals: 3
2.2.1 Iris: 3
2.2.2 Master Black (Pedestal): 3
2.2.3 Red White paint: 3
2.2.4 Blue White paint: 4
2.2.5 Red Black paint: 4
2.2.6 Blue Black paint: 4
2.3 Switch control signals: 5
2.3.1 Bars / Normal / Test: 5
2.3.2 White balance initiate: 5
2.3.3 Tally: 5
2.4 Power: 6
2.5 PGM Mike: 6

3.0 APPENDICES: . . . . . .
3.1 Appendix 1: RMT connector installation . .
3.2 Appendix 2: TC-90 circuits . . . . . .
3.3 Appendix 3: Simple RMT control panel . .

TC 90 MODS 9/21/83 HORIZONS

ARTON MC-3

PINS XLR

1-3 ENC-SIGNAL
1-2 DECODE) SIGNAL
3/4/5 DECODER OTHER

ENCODER = 1 BK } SIGNAL
3 GN }

DECODER
1 BK } SIGNAL
2 GN }
3 BR }
4 YEL } ZOOM
5 RD }

FEMALE


HARRIS CORPORATION
STUDIO PRODUCTS DIVISION

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TC-90 OPTIONAL REMOTE CONTROL CONNECTOR SPECIFICATION

1.0 GENERAL:

This specification describes the optional remote control connector of the TC-90 color camera. This connector provides access to the following functions to allow control of the TC-90 from some external device.

1. Iris
2. Master Black level (Pedestal)
3. Red White level
4. Blue White level
5. Red Black level
6. Blue Black level
7. Bars / Normal / Test selection
8. White balance initiate
9. Camera tally
10. Power

2.0 ELECTRICAL SPECIFICATIONS:

2.1 Remote control connector:

TC-90 rear panel mounted:
14 pin, Female, chassis mounting
JAE SRCB02A16-14S
Sony 1-561-040-00
Harris 612-1160-000

Connecting cable:
14 pin, Male, cable mounting
JAE SRCB6A16-14P
Sony 1-508-929-00
Harris 610-0929-000

J7-PIN	FUNCTION
1	Iris
2	Master Black level (Pedestal)
3	Red White level
4	Blue White level
5	Red Black level
6	Blue Black level
7	Bars/Nor/Test
8	White balance initiate
9	Camera tally
10	+12 vdc @ 100 mA max
11	Ground
12	-12 vdc @ 100 mA max
13	PGM mike input
14	PGM mike input

2.2 Analog control signals:

The following control lines are dc voltages provided by the external controlling device. When control is not to be asserted these lines shall be placed in a high impedance state, >100K ohms.

2.2.1 Iris: -

J7-1

CONTROL NAME	Desired		Minimum		
	Vmin	Vmax	Vmin	Vmax	Imax
Iris (Cap=0v)	0.0v	+10.0v	+0.2v	+9.6v	1.5 mA

Typical levels: 0.0v - Capped
3.6v - F5.6
8.4v - F1.4

2.2.2 Master Black (Pedestal): -

J7-2

CONTROL NAME	Desired		Minimum		
	Vmin	Vmax	Vmin	Vmax	Imax
Master Black	-5.0v	+5.0v	-4.8v	+4.8v	1.2 mA

Typical levels: +2.0v - 15 IRE black level
0.0v - 7.5
-1.0v - 2.5

2.2.3 Red White paint: -

J7-3

CONTROL NAME	Desired		Minimum		
	Vmin	Vmax	Vmin	Vmax	Imax
Red White	0.0v	+5.0v			1.2 mA

Typical levels: 2.0v - 125% of nominal level
1.5v - 110
1.25v - 100
1.0v - 90
0.5v - 60

2.2.4 Blue White paint: -

J7-4

CONTROL NAME	Desired		Minimum		Imax
	Vmin	Vmax	Vmin	Vmax	
Blue White	0.0v	+5.0v			1.2 mA

Typical levels: 2.0v - 125% of nominal level
1.5v - 110
1.25v - 100
1.0v - 90
0.5v - 60

2.2.5 Red Black paint: -

J7-5

CONTROL NAME	Desired		Minimum		Imax
	Vmin	Vmax	Vmin	Vmax	
Red Black	-5.0v	+5.0v			1.2 mA

Typical levels: +1.0v - +15 IRE
0.0v - Nominal
-1.0v - -15 IRE

2.2.6 Blue Black paint: -

J7-6

CONTROL NAME	Desired		Minimum		Imax
	Vmin	Vmax	Vmin	Vmax	
Blue Black	-5.0v	+5.0v			1.2 mA

Typical levels: +1.0v - +15 IRE
0.0v - Nominal
-1.0v - -15 IRE

2.3 Switch control signals:

The following control lines are switch functions provided by the external controlling device. When control is not to be asserted these lines shall be placed in a high impedance state, >100K ohms.

2.3.1 Bars / Normal / Test: -

J7-7

Mode	Desired	Minimun	Imax
Bars	+9.0v	+8.6v	3.0 mA
Normal	0.0v	+/- 0.5v	
Test	-9.0v	-6.0v	6.0 mA

This signal must be current limited in the controlling device to protect its output driver. The TC-90 provides a switch closure to +9.0v or -9.0v when the local "BARS/NOR/TEST" switch is activated. This function is not inhibited when the remote control is activated and the switch will override any control from the external controlling device.

2.3.2 White balance initiate: -

J7-8

Mode	Desired	Vmax	Imax
Normal	open	------	<0.05 mA @ 10v
Initiate	0.0v	+1.0v	1.0 ma

The White balance input shall be driven by an open collector, or drain, capable of sinking 1mA, current limited by the TC-90. The driver must be able to withstand 10v in the off condition.

2.3.3 Tally: -

J7-9

0.0v thru 0.5v	Viewfinder "TW", tape warning
1.5v thru 3.0v	No indications
4.5v thru 6.5v	Viewfinder "RECORD" and TC-90 "TALLY"

Input impedance - Approx. 10K ohms

2.4 Power:

+/- 12 vdc power is available when the TC-90 is in the "RUN" mode, i.e., the front panel power switch is in the "ON" position. Maximum power available is 100 mA. The voltage tolerance is +/- 5%; +/- 2% stability.

J7-10	+12vdc
J7-11	Gnd
J7-12	-12vdc

2.5 PGM Mike:

J7-13	10k ohms balanced
J7-14	at -60dBm to -20dBm

3.0 APPENDICES:

3.1 Appendix 1: RMT connector installation

1. Remove the case from the TC-90 and remove the side rails that retain the P.C. boards.

2. Remove the "PGM MIC" connector from the rear of the TC-90 (see TC-90 Operator's Manual, page 3-2, figure 3-1).

    1. Disconnect the audio input from the PGM Audio board (note the lead dress from the PGM Audio board to the "PGM MIC" connector).

    2. Remove the "PGM MIC" connector by removing the two mounting screws and removing both the connector and the adapter.

3. Mount the new connector adapter plate (Harris part 829-9300-036) using two 4-40 x 5/16" flat head screws (Harris part 302-0350-000).

4. Mount the Remote Control connector (Harris part 612-1160-000) on the connector adapter plate using two 4-40 x 3/16" pan head screws (Harris part 302-0051-000).

5. Dress the audio input to the PGM Audio board and connect the audio input.

6. Dress the remaining wires around the rear of the Mother board.

7. Connect the wires from the Remote Control connector to the Mother board as shown in figure 1.

8. Add two 39.2k ohm resistors to the Video II board as shown in figure 2 (U2-16 to U3-9 and U2-16 to U3-6).

9. Add one 11k ohm resistor to the Video II board as shown in figure 2 (P1-12 to P1-2).

10. Reassemble the TC-90.