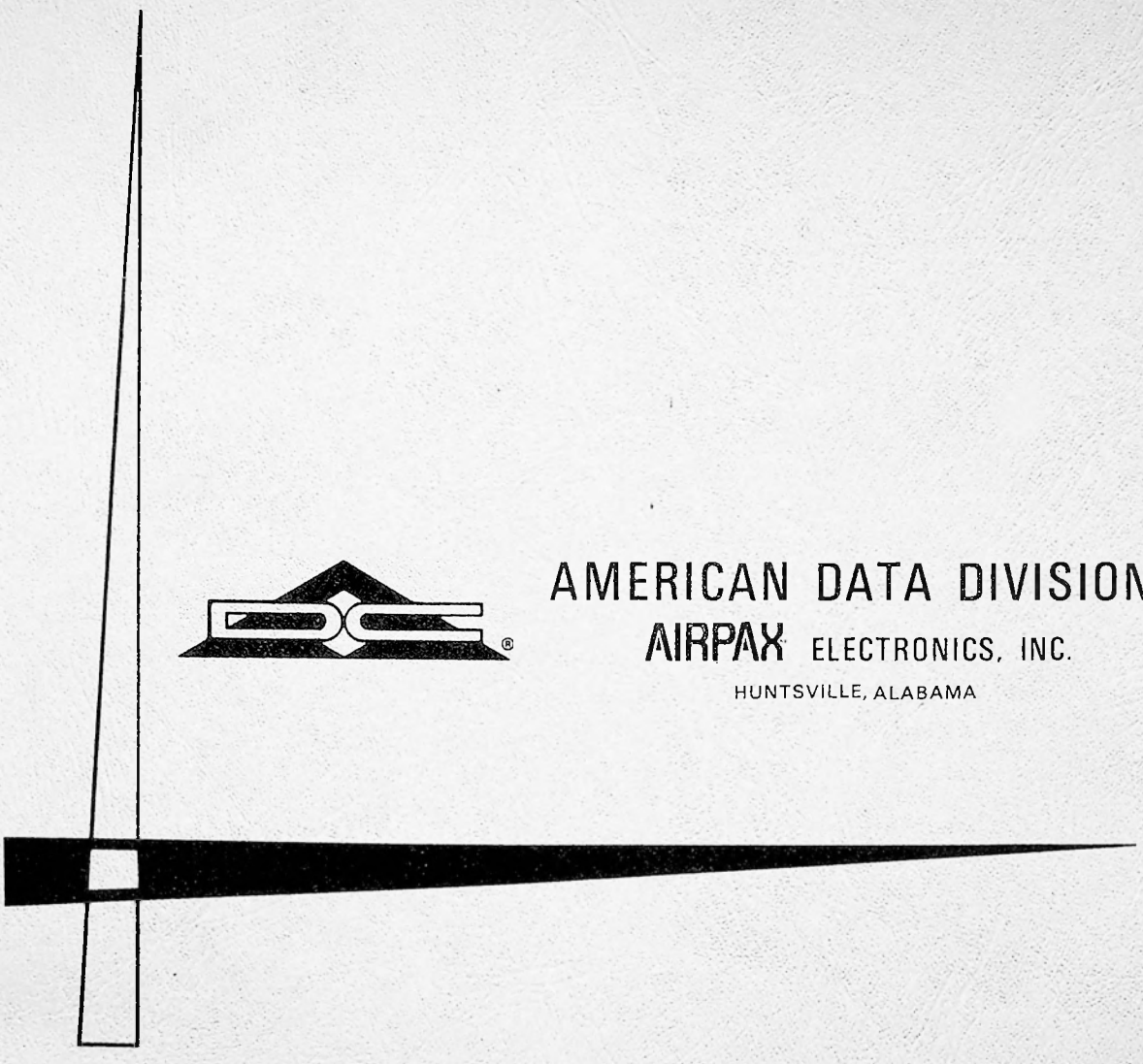


AMERICAN DATA DIVISION

AIRPAX ELECTRONICS, INC.

HUNTSVILLE, ALABAMA

401 WYNN DRIVE, N.W.
P. O. BOX 5228
HUNTSVILLE, ALABAMA 35805
PHONE (205) 837-5180

AMERICAN DATA DIVISION
AIRPAX ELECTRONICS INC

February 4, 1977

We are sending only Installation Section of a 558 Manual. Your 558 manuals are back ordered and will be coming soon.

401 WYNN DRIVE, N.W. P.O. BOX 5228 HUNTSVILLE, ALABAMA 35805 TEL. 205-837-5180

INSTALLATION

Unpacking, Damage and Shipping

Unpack the unit (s) carefully, making sure that no parts are concealed in the packing, and check against the packing list. Any variation from the specified inventory should be reported to us immediately. Write to: American Data Corporation, 401 Wynn Drive, P.O. Box 5228, Huntsville, Alabama 35805. If shipment damage is incurred, obtain a report from your express agent or trucker and mail it to the address indicated above. Do not return damaged parts until instructed to do so from American Data.

MECHANICANICAL INSTALLATION

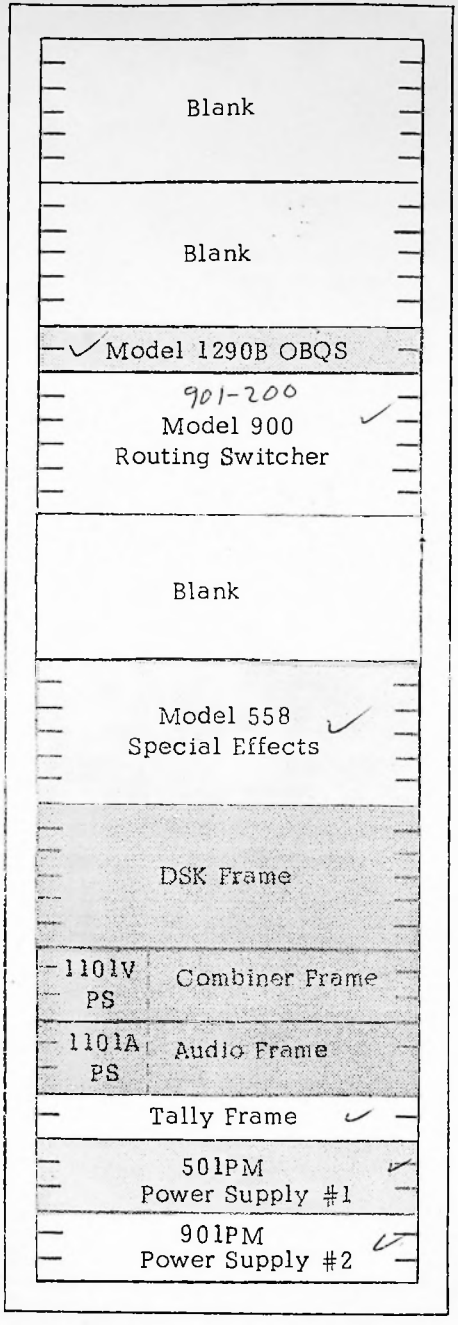
RACK MOUNT UNITS are usually supplied in the rack with the exception of power supplies. These are designed to slide into the rack as shown in Figure 1.

CONSOLE MOUNT UNITS may be mounted in panel tops up to one inch thick. Cut-out dimensions are given in Figure 2.

ELECTRICAL INSTALLATION

CONTROL AND POWER INTERCONNECTIONS are given in Figure 3. Cables are labeled at the factory, as in Table 1. Details of each connector are given in the section of the manual dealing with the respective rack frame or panel.

TIMING AND ALL SYSTEM INTERCONNECTIONS are provided with the system. Figures 4 and 5 are diagrams of the Interconnections. Cables are labeled at the factory, as shown in Table 2.



Part of Master Control only

Part of Production Switcher only

Note: One division equals one IEEE unit (1 3/4 inches)

~~558~~ ~~Tally~~

Figure 1
MASTER CONTROL
AND PRODUCTION RACK LAYOUT

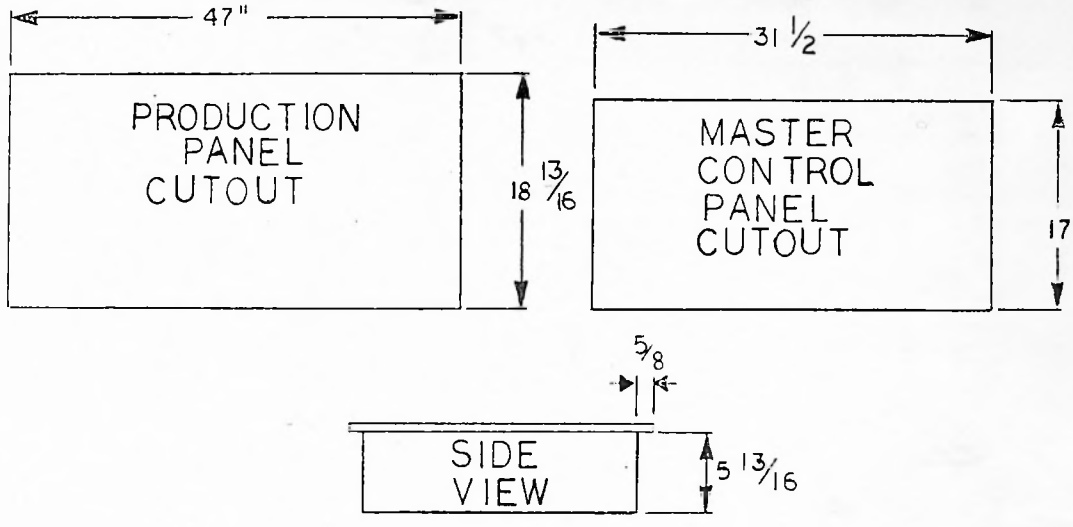


FIGURE 2 - PANEL MOUNTING DIMENSIONS

CAUTION: USE CARE WHEN INSTALLING CONTROL PANELS TO AVOID DAMAGING THEIR REAR SURFACE CONNECTIONS.

558 PRODUCTION SWITCHER CABLES

End #1	End #2	Length
Control Panel J7 50 Pin Amp M	Tally Frame J1 50 Pin Amp M	25' *
Control Panel J1 14 Pin Amp F	Power Supply J2 14 Pin Amp M	25' *
Control Panel J4 20 Pin Amp M	558 J74 20 Pin Amp M	25' *
Control Panel J3 20 Pin Amp M	558 J71 20 Pin Amp M	25' *
Control Panel J2 14 Pin Amp M	558 J72 14 Pin Amp M	25' *
558 J75 14 Pin Amp F	558 Power Supply J3 14 Pin Amp M	7'
900 Matrix Power J8 14 Pin Amp F	558 Power Supply J1 14 Pin Amp M	7'
Tally Relay J13 14 Pin Amp F	558 Power Supply J2 14 Pin Amp M	4'
Tally Relay J2 20 Pin Amp M	900 Matrix Control 20 Pin Amp F	8'
Tally Relay J3 34 Pin Amp M	OBQS Tally J2 34 Pin Amp M	8'
Control Panel J5 34 Pin Amp M	OBQS Control 34 Pin Amp M	25' *
Control Panel J6 34 Pin Amp M	OBQS-2 Control 34 Pin Amp M	25' *
Tally J4 14 Pin Amp M	OBQS-2 Tally 34 Pin Amp M	8'
Tally J6 - J10 14 Pin Amp M	Aux Bus Control 14 Pin Amp M	Opt O

* Standard lengths unless changed by Option N

Table 1

558 PRODUCTION SWITCHER CABLES

Note: All Connectors Are BNC

End #1	End #2	Length
1290 Input 0A	558 J57	5'
1290 Input 1B	900 01A	Timed
1290 Input 2B	900 02A	Timed
1290 Input 3B	900 03A	Timed
1290 Input 4B	900 04A	Timed
1290 Input 5B	900 05A	Timed
1290 Input 6B	900 06A	Timed
1290 Input 7B	900 07A	Timed
1290 Input 8B	900 08A	Timed
1290 Input 9B	900 09A	Timed
900 Input 00A	558 J23	5'
900 Input 18A	1290 Output A	Timed
900 Input 19A	558 J24	5'

Table 2

Table 2 (cont)

Note: All Connectors Are BNC

End #1	End #2	Length
900 Output 00A	558 J33	Timed
900 Output 00B	558 J41	Timed
900 Output 01A	558 J32	Timed
900 Output 02A	558 J35	Timed
900 Output 03A	558 J40	Timed
900 Output 03B	558 J52	Timed
900 Output 04A	558 J46	Timed
900 Output 04B	558 J53	Timed
558 J34	558 J66	Timed
558 J29	Tally Frame J11	5'

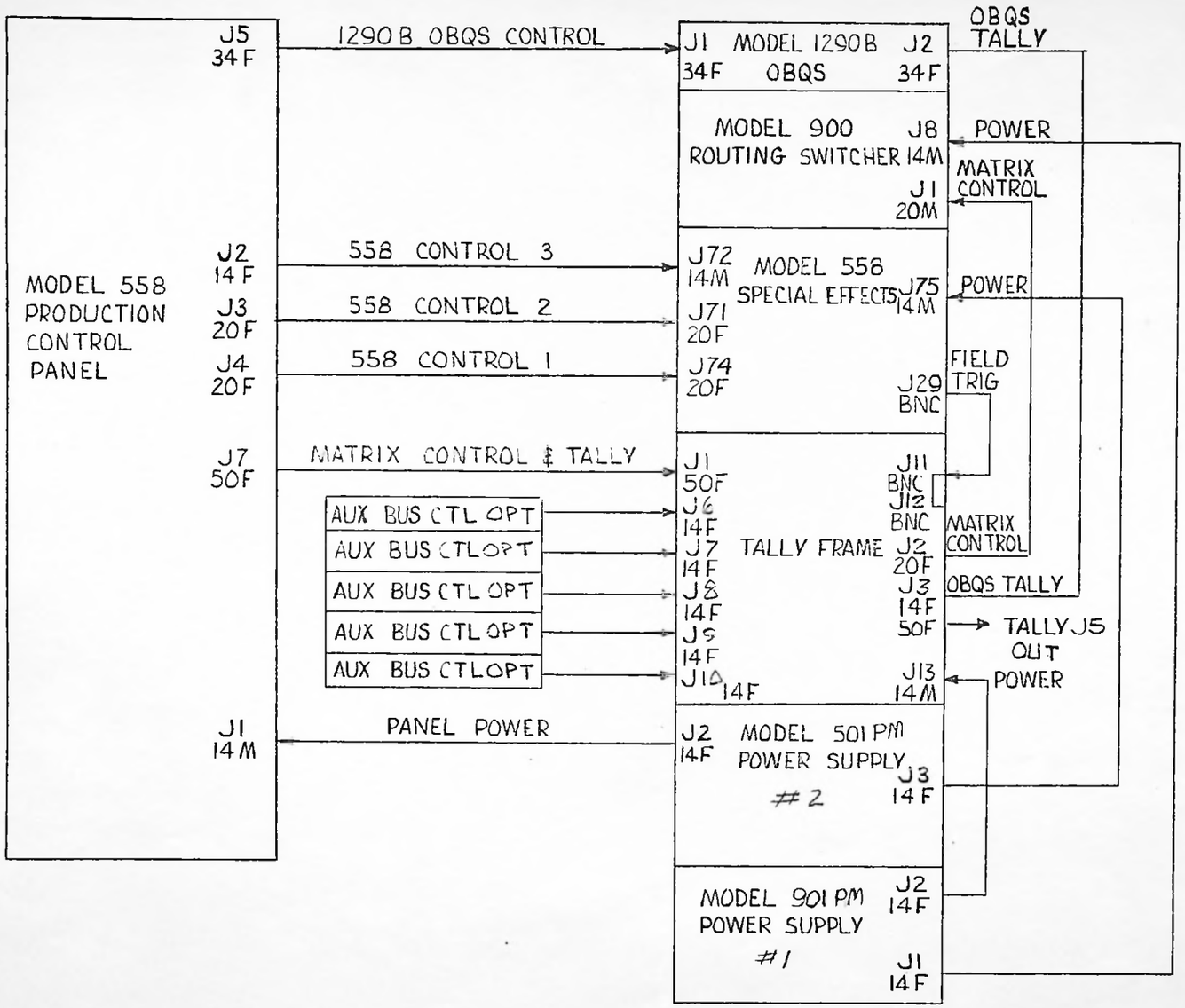


Figure 3

MODEL 558 PRODUCTION SWITCHER
CONTROL AND POWER WIRING

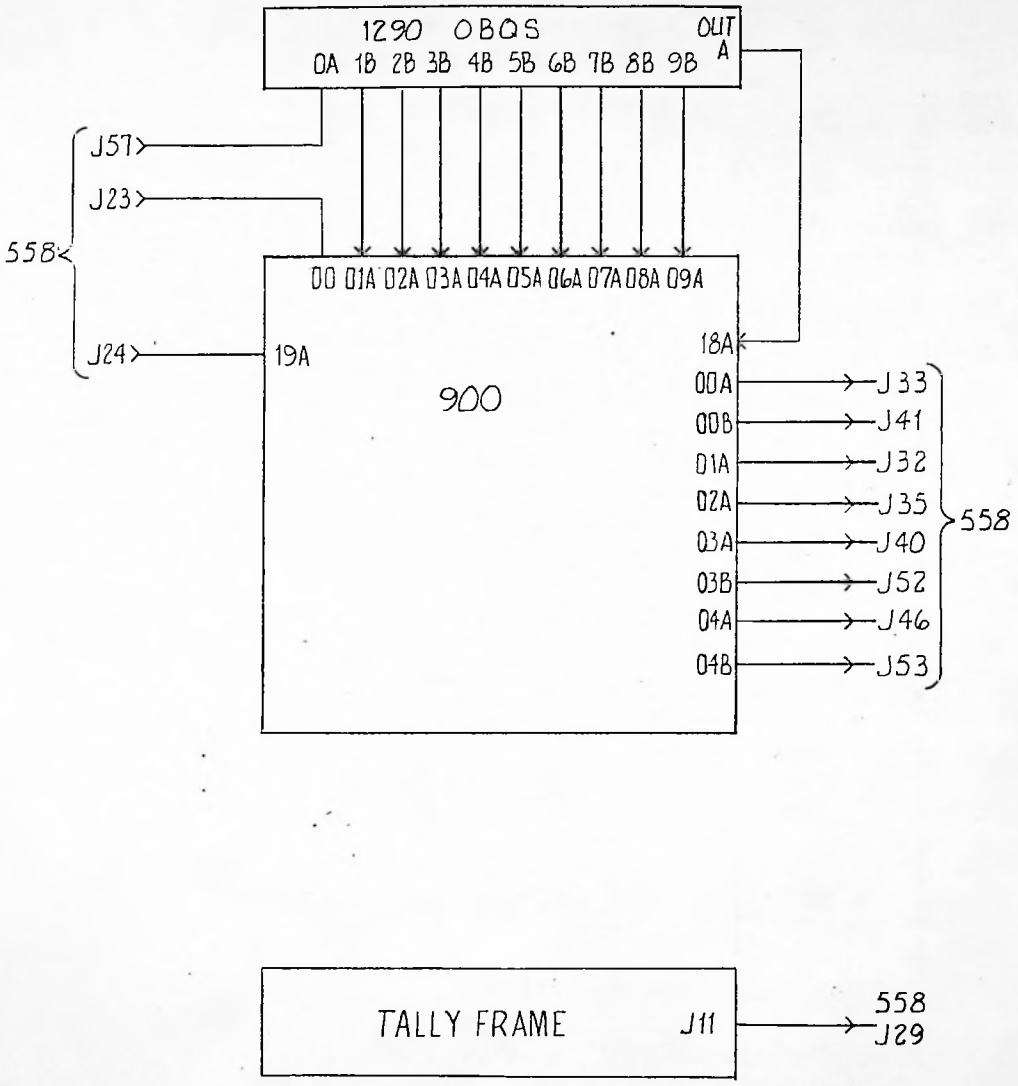
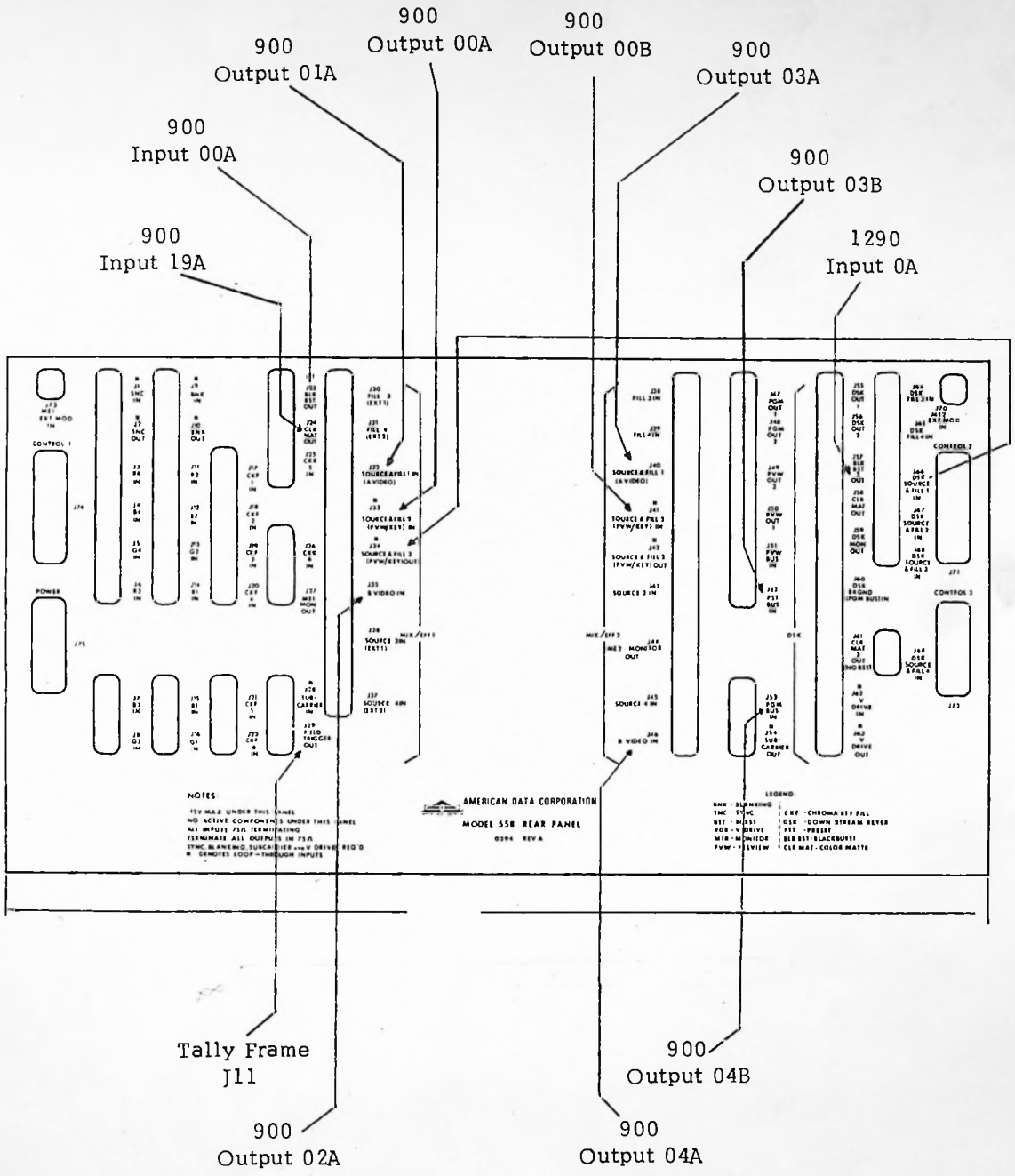

1290 OBQS
OUT A
0A 1B 2B 3B 4B 5B 6B 7B 8B 9B
J57
J23
558
J24
00 01A 02A 03A 04A 05A 06A 07A 08A 09A
19A
18A
900
00A
00B
01A
02A
03A
03B
04A
04B
J33
J41
J32
J35
J40
J52
J46
J53
558
TALLY FRAME
J11
558
J29

FIGURE 4



MODEL 558 - CONNECTOR LOCATION

Figure 5

PULSE

Pulse inputs required are sync, blanking, subcarrier and vertical drive. They should be connected as shown below. Connections marked with an asterisk (*) are loop-through, provided by the factory.

PULSE	TO	
	Frame	Connector
Sync	OBQS 558	Sync J1, 2*
Blanking	OBQS 558	Blanking J9, 10*
Subcarrier	OBQS 558	3.58 J28, 54*
Vertical Drive	558	J62, 63*

VIDEO

Video Sources - Timing Check, System Connection

All video inputs to the 558 system have been factory timed using the video delay module; all video sources to the system should be in time with one another to the output of the system. This section is intended to enable a technician to check timing of key source and fill video as well as matrix input timing.

NOTE: Connections marked with an asterick (*) are loop-through and all others are terminated into 75 ohm on rear panel.

Matrix Input Timing

A matrix input timing check may be accomplished by connecting a vectorscope input to the program output.

Select: Program bus to program output on the control panel.

Select: Black on the program bus.

Select: Successive inputs through the bus, observing burst phase on the vectorscope. Burst phase should not vary over $\pm .5^{\circ}$.

If black or color background are out of phase:

Adjust: Burst phase (potentiometer R1on the dual color background generator and R8 for black burst).

If the quad split is out of phase, refer to the quad split instruction manual. If studio sources are out of phase more than $\pm 1^{\circ}$, the burst phase must either be adjusted at the source out of time, or the input cable to the matrix must be trimmed. If studio sources are no more than $\pm 1^{\circ}$, subcarrier phase may be adjusted on the input card of the 900, R11.

Luminance Key Fill Video for ME1 and ME2

Select: Color source on Mix 1 B bus.

Select: ME1 on program output bus.

Establish: Burst reference on vectorscope.

Select: Self Key. Turn LUM key ON.

Ground: Test point KEY TEST on logic card for ME1.

Switch: Between key sources.

Burst phase should not vary more than $\pm.5^{o}$. Correction for burst phase must be trimmed at the input cables.

Check: Timing for luminance key fill video for ME2. Procedure is the same as for ME1.

Chroma Key Fill Video for ME1

Select: ME1 to program output.

Select: Black or any other color source on mix/effects B bus. Obtain burst reference on vectorscope.

Select: Chroma Key 1, ME1 thumbwheel. Turn CHROMA KEY ON.

Trim: Chroma Key V-0 input cable to match reference burst phase $\pm.5^{o}$.

Select: Chroma Key 2.

Trim: Chroma Key V-1 input calbe to match reference burst phase $\pm.5^{o}$.

Select: Chroma Key 3.

Trim: Chroma Key V-2 input cable to match reference burst phase $\pm.5^{o}$.

Select: Chroma Key 4,5,6.

Repeat: Preceeding steps for Chroma Key Fill Video Timing.

Chroma Key Fill Video for ME2

The adjustment procedure for ME2 is the same as for ME1 Should fill sources be equal in phase with one another, but not in phase with B bus phase, DL-3 and DL-6 on the reentry card may be programmed to correct phase error $\pm.5^{o}$.

DSK Video Burst Phase

Short: The base of Q12 with clip lead to -5.

Rotate: Key Clip full CCW.

Insert: Control set to maximum.

Select: PVW, key source and self key fill mode.

Connect: Vectorscope to DSK out.

Obtain: Reference burst phase on vectorscope.

Select: PGM input to PGM output.

Select: Color input on PGM bus.

Set: Insert control to minimum.

Burst phase should not vary more than $\pm.5^{o}$. If burst phase is greater than $\pm.5^{o}$, trim the DSK input cable from the preview bus to match key fill burst phase.

Bypass: DSK by selecting DSK out.

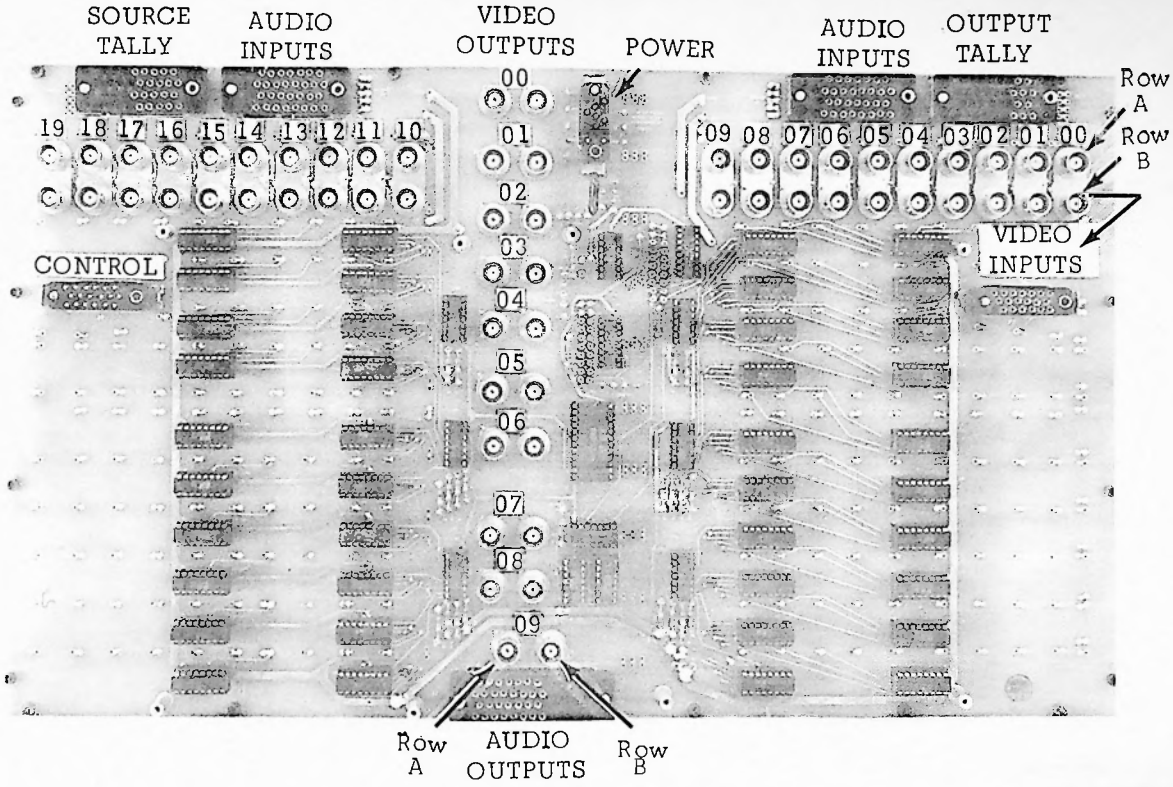
Burst phase should not change more than $\pm1^{o}$. Should burst phase be greater than $\pm1^{o}$, delay lines on the DSK should be set to match burst phase when the DSK mode is switched IN and OUT.

DSK Key Fill Video Burst Phase

Repeat the first six steps as for DSK Video Burst Phase.

Select: Each of the key sources.

Burst phase should not vary more than $\pm.5^{o}$. If burst phase is greater than $\pm.5^{o}$, subcarrier phase must be corrected by either trimming input cables or by shifting subcarrier phase at video source.



MODEL 900 - REAR PANEL

Output #	Function
00	PVW/Key
01	MEK1-A
02	MEK1-B
03	MEK2-A (Program)
04	MEK2-B (Preset)
* 05	Aux 1
* 06	Aux 2
* 07	Aux 3
* 08	Aux 4
* 09	Aux 5

* Optional

MEK-1		DELAYED BY
A Video	J32-558	Ref
B Video	J35-558	A Video ± Trim
CKV-1	J17-558	Key Proc (ME1) + 900 + Quad Split(*) ± Trim
CKV-2	J18-558	Key Proc (ME1) + 900 + Quad Split(*) ± Trim
CKV-3	J19-558	Key Proc (ME1) + 900 + Quad Split(*) ± Trim
CKV-4	J20-558	Key Proc (ME1) + 900 + Quad Split(*) ± Trim
CKV-5	J21-558	Key Proc (ME1) + 900 + Quad Split(*) ± Trim
CKV-6	J22-558	Key Proc (ME1) + 900 + Quad Split(*) ± Trim
EXT-1S	J36-558	900 Matrix + Quad Split(*) ± Trim
EXT-2S	J37-558	900 Matrix + Quad Split(*) ± Trim
EXT-1F	J30-558	900 Matrix + Quad Split(*) ± Trim
EXT-2F	J31-558	900 Matrix + Quad Split(*) ± Trim
PVW/Key	J33-558	Ref

MEK-2		DELAYED BY
A Video	J40-558	ME1 Ref ± Trim
B Video	J46-558	A Video ± Trim
PVW/Key	J41-558	Ref
EXT-1S	J43-558	900 Matrix + Quad Split(*) + ME1
EXT-2S	J45-558	900 Matrix + Quad Split(*) + ME1
EXT-1F	J38-558	900 Matrix + Quad Split(*) + ME1
EXT-2F	J39-558	900 Matrix + Quad Split(*) + ME1

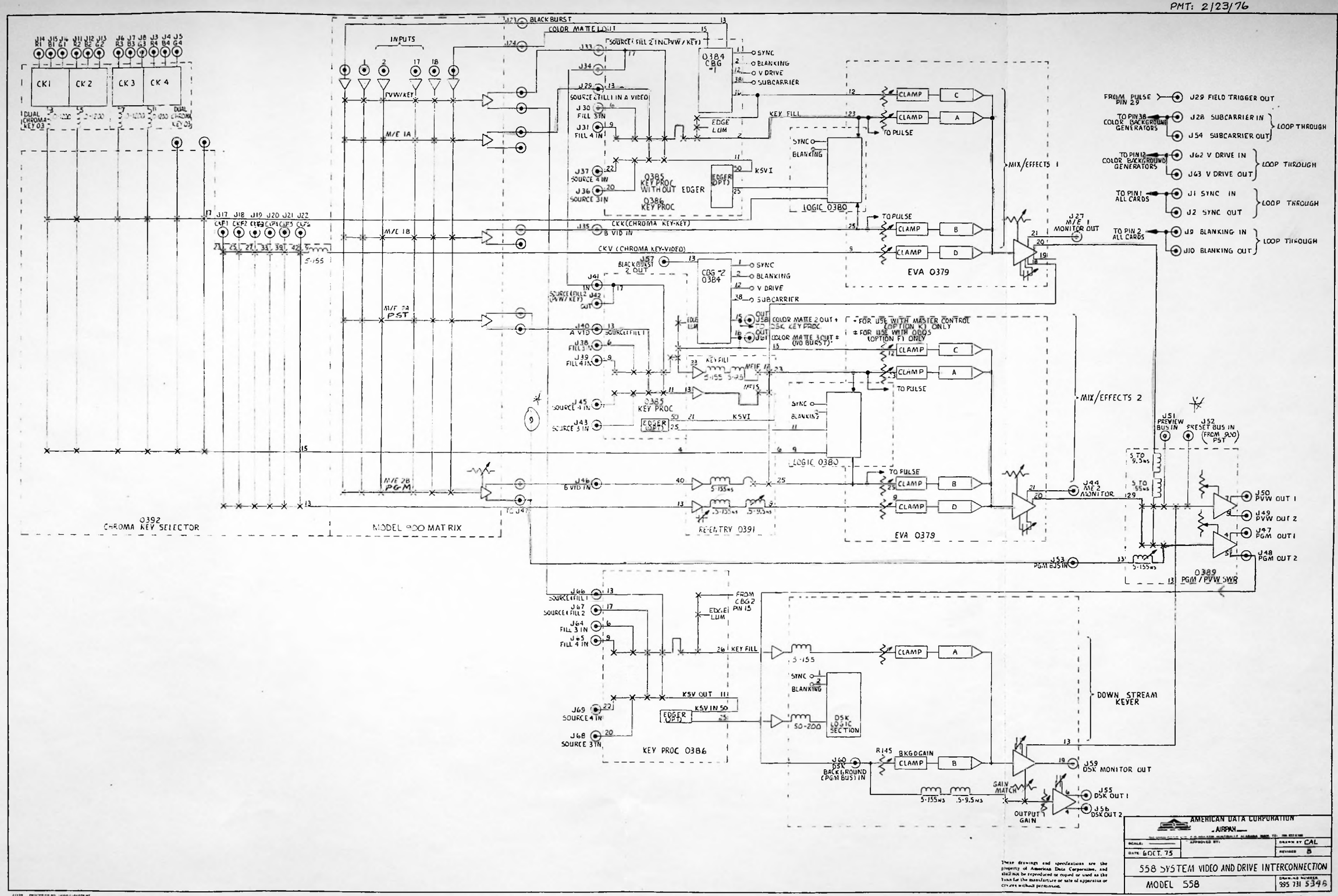
PGM/PVW	DELAYED BY
PGM Bus IN	Ref ± Trim

DSK		DELAYED BY
PVW/Key	(**) J66-558	MEK-1 + MEK-2 + PGM/PVW Swr
EXT-1	J67-558	MEK-1 + MEK-2 + PGM/PVW Swr + 900 + Quad Split(*)
EXT-2S	J68-558	MEK-1 + MEK-2 + PGM/PVW Swr + 900 + Quad Split(*)
EXT-2F	J64-558	MEK-1 + MEK-2 + PGM/PVW Swr + 900 + Quad Split(*)
EXT-3S	J69-558	MEK-1 + MEK-2 + PGM/PVW Swr + 900 + Quad Split(*)
EXT-3F	J65-558	MEK-1 + MEK-2 + PGM/PVW Swr + 900 + Quad Split(*)

(*) Optional Equipment
(**) PVW/Key Loop From ME2 J42

UNIT		FT OF COAX	NSEC	° @ 3.58	° @ 4.43
A Video	MEK-1	4	6.2	8	9.5
B Video	MEK-1	4	6.2	8	9.5
CKV-0	MEK-1	50	77.5	100	119.7
CKV-1	MEK-1	50	77.5	100	119.7
CKV-2	MEK-1	50	77.5	100	119.7
CKV-3	MEK-1	50	77.5	100	119.7
CKV-4	MEK-1	50	77.5	100	119.7
CKV-5	MEK-1	50	77.5	100	119.7
EXT-1S	MEK-1	47	73	94	112
EXT-1F	MEK-1	47	73	94	112
EXT-2S	MEK-1	47	73	94	112
EXT-2F	MEK-1	47	73	94	112
PVW/Key	MEK-1	4	6.2	8	9.5
A Video	MEK-2	5	7.75	10	11.9
B Video	MEK-2	5	7.75	10	11.9
PVW/Key	MEK-2	5	7.75	10	11.9
EXT-1S	MEK-2	47	73	94	112
EXT-1F	MEK-2	47	73	94	112
EXT-2S	MEK-2	47	73	94	112
EXT-2F	MEK-2	47	73	94	112
PGM Bus IN		4	6.2	8	9.5
PVW Bus IN		4	6.2	8	9.5
PVW/Key	DSK	60	93	120	143
EXT-1	DSK	100	155	200	239
EXT-2S	DSK	100	155	200	239
EXT-2F	DSK	100	155	200	239
EXT-3S	DSK	100	155	200	239
EXT-3F	DSK	100	155	200	239
Delayed Matrix Inputs		18	27	36	43
Quad Split Output		2	3.1	4	4.7
Quad Split Input Loop Delays		16	24.8	32	38

PMT: 2/23/76


INPUTS
BLACK BURST
COLOR MATTE 1 OUT
SOURCE FILL 2 IN (PVW/KEY)
0384 CBG
SYNC
BLANKING
V DRIVE
SUBCARRIER
PVW/KEY
M/E 1A
SOURCE 2 FILL IN A VIDEO
FILL 3 IN
FILL 4 IN
SOURCE 4 IN
SOURCE 3 IN
0385 KEY PROC WITH OUT EDGER
0386 KEY PROC
EDGER (OPT)
KEY FILL
EDGE LUM
KSVI
SYNC
BLANKING
LOGIC 0380
CLAMP
TO PULSE
MIX/EFFECTS 1
EVA 0379
M/E 1B
CKV (CHROMA KEY-KEY)
B VID IN
CKV (CHROMA KEY-VIDEO)
CKF1 CKF2 CKF3 CKF4 CKF5 CKF6
J27 M/E 1 MONITOR OUT
FROM PULSE PIN 29
J29 FIELD TRIGGER OUT
TO PIN 38 COLOR BACKGROUND GENERATORS
J28 SUBCARRIER IN
J54 SUBCARRIER OUT
LOOP THROUGH
TO PIN 12 COLOR BACKGROUND GENERATORS
J62 V DRIVE IN
J63 V DRIVE OUT
TO PIN 1 ALL CARDS
J1 SYNC IN
J2 SYNC OUT
TO PIN 2 ALL CARDS
J9 BLANKING IN
J10 BLANKING OUT
M/E 2A PST
CDG 2 0384
SOURCE 4 IN
SOURCE 3 IN
0385 KEY PROC
EDGER (OPT)
KSVI
COLOR MATTE 2 OUT ± (SK KEY PROC)
COLOR MATTE 3 OUT ± (W/O BURST)
* FOR USE WITH MASTER CONTROL (OPTION K1 ONLY)
± FOR USE WITH ODDS (OPTION F1 ONLY)
MIX/EFFECTS 2
J51 PREVIEW BUS IN
J52 PRESET BUS IN (FROM 9x0 PST)
M/E 2B PGM
J46 B VID IN
RE-ENTRY 0391
J44 M/E 2 MONITOR
J53 PGM BUS IN
0389 PGM / PVW SWR
J50 PVW OUT 1
J49 PVW OUT 2
J47 PGM OUT 1
J48 PGM OUT 2
0392 CHROMA KEY SELECTOR
MODEL 500 MATRIX
TO J47
SOURCE 1 FILL 1
SOURCE 2 FILL 2
FILL 3 IN
FILL 4 IN
SOURCE 4 IN
SOURCE 3 IN
KEY PROC 0386
FROM CBG 2 PIN 15
KSV OUT
KSV IN
DSK LOGIC SECTION
DOWN STREAM KEYER
R145 BKGD GAIN
J60 DSK BACKGROUND (PGM BUS) IN
J59 DSK MONITOR OUT
GAIN MATCH
OUTPUT GAIN
J55 DSK OUT 1
J56 DSK OUT 2
AMERICAN DATA CORPORATION
AIRPAX
SCALE:
APPROVED BY:
DRAWN BY CAL
DATE OCT. 75
REVISED B
558 SYSTEM VIDEO AND DRIVE INTERCONNECTION
MODEL 558
DRAWING NUMBER 995 731 5348
These drawings and specifications are the property of American Data Corporation, and shall not be reproduced or copied or used as the basis for the manufacture or sale of apparatus or circuits without permission.

SYSTEM LEVEL ADJUSTMENT PROCEDURE

Matrix Level Adjustment

Connect: The Color Background Generator to the oscilloscope A channel.

Adjust: Chroma to 0% and Luminance to 100% = 1 volt p-p ± 5 %.

Connect: Loop from oscilloscope A channel to 900 matrix input 20.

Select: COLOR input to PVW-Key, ME1-A, ME1-B, ME2-A and ME2-B.

Connect: Oscilloscope B channel to PVW-Key output amplifier.

Subtract: B channel from A channel of the oscilloscope.

Adjust: Output amplifier GAIN until the channel B input equals the channel A input of the oscilloscope within 2 IEEE Divisions.

Repeat: The last three steps (Connect/Subtract/Adjust) for the ME1-A, ME1-B, ME2-A and ME2-B output amplifiers.

ME1 Level Adjustment

Repeat: The first four steps (Connect/Adjust/Connect/Select) of the Matrix Level Adjustment procedure.

Connect: The oscilloscope to the ME1 monitor output.

Position: The fader handles to A.

Adjust: A CHANNEL VIDEO GAIN, EVA-1, until the oscilloscope B channel input equals the A channel input.

Position: The fader handles to B.

Adjust: B CHANNEL VIDEO GAIN, EVA-1, until the oscilloscope B channel input equals the A channel input.

Connect: The Color Background Generator to Chroma Key 1 fill input.

Select: CK-1 to ME1 on the control panel.

Select: Black input to ME1-A, ME1-B, ME2-A, ME2-B.

Turn: CHROMA KEY ON

Adjust: CHROMA KEY GAIN and CLIP controls to key the Color Background Generator fully to the output.

Adjust: D CHANNEL VIDEO GAIN, EVA-1, until the oscilloscope B channel input equals the A channel input.

Connect: The Color Background Generator to input 20 (900 Matrix).

Select: CBG input to ME1-A, ME1-B, ME2-A, ME2-B.

Turn: CHROMA KEY OFF.

ME2 Level Adjustment

Repeat: The first four steps (Connect/Adjust/Connect/Select) of the Matrix Level Adjustment.

Connect: The oscilloscope to ME2 monitor output.

Position: Fader handles to A.

Select: ME1 Reentry to ME2-A and -B buses.

Adjust: A CHANNEL VIDEO GAIN, EVA-2, until the oscilloscope B channel input equals the A channel input.

Position: The fader handles to B.

Adjust: B CHANNEL VIDEO GAIN, EVA-2, until the oscilloscope B channel input equals the A channel input.

Position: The fader handles to A.

Select: Color to ME2-A and -B buses.

Adjust: The A-Video delay amplifier GAIN R28 (ME2 Reentry Card) until the B input equals the A input of the oscilloscope.

Position: The fader handles to B.

Adjust: The Program Output Amplifier (900 Matrix) until the oscilloscope B input equals the A input.

Connect: The oscilloscope to the preview output.

Select: The ME1 input to the preview output.

Adjust: The PREVIEW OUTPUT GAIN until the B input equals the A input of the oscilloscope.

Select: The preview input to the preview output.

Adjust: The Preview Output Amplifier (900 Matrix) until the B input equals the A input of the oscilloscope.

DSK Level Adjustment

Repeat: The first four steps (Connect/Adjust/Connect/Select) of the Matrix Level Adjustment.

Connect: The oscilloscope to the downstream keyer output.

Select: The program input to the program output.

Select: DSK mode OUT.

Adjust: DSK output gain R189 until the B input equals the A input of the oscilloscope.

Select: DSK mode IN.

Adjust: DSK GAIN R136 until the B input equals the A input of the oscilloscope.

Adjust: The ME2-B video output amplifier (900 Matrix) until the B input equals the A input of the oscilloscope.

Select: The black input to ME1-A, ME1-B, ME2-A and ME2-B.

Connect: The Color Background Generator to Chroma Key 0 fill input.

Select: Chroma Key 0 to ME2 on control panel.

Turn: CHROMA KEY ON.

Adjust: Chroma Key GAIN and CLIP controls to key the Color Background Generator fully to the ME2 output.

Adjust: D CHANNEL VIDEO GAIN (ME2 EVA) until the oscilloscope B channel input equals the A channel input.

Connect: The Color Background Generator to input 20 (900 Matrix).

Select: The color input to ME1-A, ME1-B, ME2-A, ME2-B.

Turn: CHROMA KEY OFF.

Program/Preview Card Level Adjustment

Repeat: The first four steps (Connect/Adjust/Connect/Select) of the Matrix Level Adjustment.

Connect: The oscilloscope to the program output.

Select: The ME1 input to the program output.

Adjust: The program output level (PGM/PVW Card) until the B input equals the A input of the oscilloscope.

Select: The ME2 input to the program output.

Adjust: The ME2 output level R138 (ME2 EVA) until the oscilloscope B input equals the A input.

Select: The program input to the program output.

TALLY

The Tally Relay Card should be programmed for chroma key tallies using the following procedure:

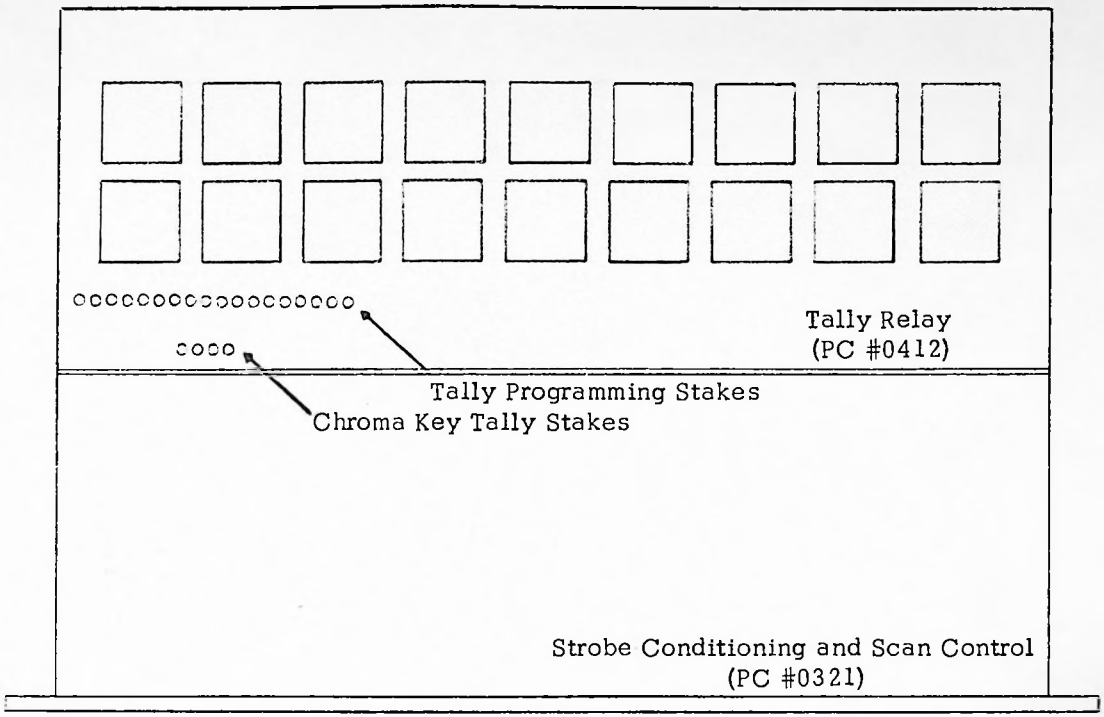
1. Identify the chroma key inputs by in-house designation.

2. Cross reference the designations with those on the switcher buses. Start counting from the left using black as number zero.

3. Connect jumper wires between the CK Tally stakes and the appropriate Tally Programming stakes on the tally relay card.

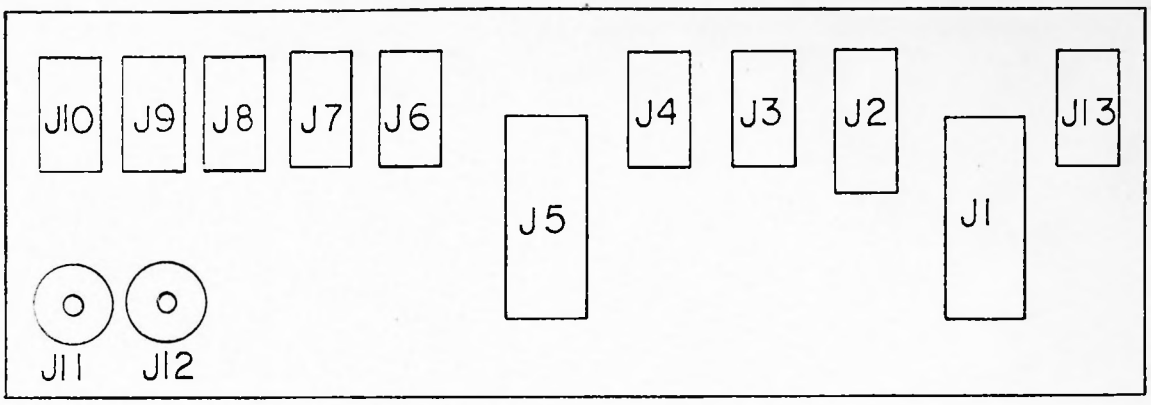
Example:

Chroma Key 1 is Cam 1	Cam 1 is IN 4	Connect CK Tally 1 to Programming Stake #4
Chroma Key 2 is Cam 2	Cam 2 is IN 5	Connect CK Tally 2 to Programming Stake #5
Chroma Key 3 is Film 1	Film 1 is IN 8	Connect CK Tally 3 to Programming Stake #8
Chroma Key 4 is Film 2	Film 2 is IN 9	Connect CK Tally 4 to Programming Stake #9



TOP VIEW
558 TALLY FRAME COMPONENT LOCATION

Quad Split tallies can be programmed in a similar manner using the wires from the rear panel quad tally connectors. To enable the quad split tallies, connect the tally enables to the tally programming stakes corresponding to the primary switcher quad split inputs.



CUSTOMER VIEW

Tally outputs are available as eighteen uncommitted relay closures, one for each primary video input. These are brought out on J5, as shown in its wiring list.

558 TALLY FRAME

J3 Quad 1 Tally and J4 Quad 2 Tally
14 Pin Amp Female

FUNCTION	FROM	TO		COLOR
Quad 1 Tally 1	J3 - A	Tally PGM Stake 1		Brn
Quad 1 Tally 2	J3 - B	Tally PGM Stake 2		Orn
Quad 1 Tally 3	J3 - C	Tally PGM Stake 3	Connect to	Vio
Quad 1 Tally 4	J3 - D	Tally PGM Stake 4	appropriate	Gry
Quad 1 Tally 5	J3 - E	Tally PGM Stake 5	stake per system	Wht/Blk
Quad 1 Tally 6	J3 - F	Tally PGM Stake 6	input connection	Wht/Brn
Quad 1 Tally 7	J3 - H	Tally PGM Stake 7		Wht/Red
Quad 1 Tally 8	J3 - J	Tally PGM Stake 8		Wht/Orn
Quad 1 Tally 9	J3 - K	Tally PGM Stake 9		Wht/Yel
Quad 1 Tally 10	J3 - L	Tally PGM Stake 10		Wht/Grn
Quad 1 Enable	J3 - M	Tally PGM Stake 17		Wht/Blu
GND	J3 - N	Ground		Blk
Quad 2 Tally 1	J4 - A	Tally PGM Stake 1		Brn
Quad 2 Tally 2	J4 - B	Tally PGM Stake 2		Orn
Quad 2 Tally 3	J4 - C	Tally PGM Stake 3	Connect to	Vio
Quad 2 Tally 4	J4 - D	Tally PGM Stake 4	appropriate	Gry
Quad 2 Tally 5	J4 - E	Tally PGM Stake 5	stake per system	Wht/Blk
Quad 2 Tally 6	J4 - F	Tally PGM Stake 6	input connection	Wht/Brn
Quad 2 Tally 7	J4 - H	Tally PGM Stake 7		Wht/Red
Quad 2 Tally 8	J4 - J	Tally PGM Stake 8		Wht/Orn
Quad 2 Tally 9	J4 - K	Tally PGM Stake 9		Wht/Yel
Quad 2 Tally 10	J4 - L	Tally PGM Stake 10		Wht/Grn
Quad 2 Enable	J4 - M	Tally PGM Stake 18		Wht/Blu
GND	J4 - N	Ground		Blk

558 TALLY FRAME

J5 Tally Output
50 Pin Amp Female

FUNCTION			TO
Tally Relay #	1	Com	J5-A
	1	NO	B
	2	Com	C
	2	NO	D
	3	Com	E
	3	NO	F
	4	Com	H
	4	NO	J
	5	Com	K
	5	NO	L
	6	Com	M
	6	NO	N
	7	Com	P
	7	NO	R
	8	Com	S
	8	NO	T
	9	Com	U
	9	NO	V
	10	Com	W
	10	NO	X
	11	Com	Y
	11	NO	Z
	12	Com	a
	12	NO	b
	13	Com	c
	13	NO	d
	14	Com	e
	14	NO	f
	15	Com	h
	15	NO	j
	16	Com	k
	16	NO	m
	17	Com	n
	17	NO	p
	18	Com	r
Tally Relay #	18	NO	s

558 System Phase Set-up Procedure 3/83

1. Select 146 color bars on all 5 busses. Compare the phases of the switcher inputs at the output of the 900 matrix (00-PVW, 01-ME/1A, 02-ME/1B, 03-ME/2A, 04-ME/2B) to insure they are coincident - no adjustment is readily available.

2. Observe the ME/1 monitor output on a vectorscope and determine if any phase shift exists between ME/1A and ME/1B. (Mix between the two). If a phase shift is present, correct it by adjusting the length of the cable between the 02 output of the 900 matrix and the ME/1B input of the 558. (B video in). There is approximately 2^{o} of delay per foot of 9231 video cable.

3. Place both faders at the "A" limit.

   Re-enter bars from ME/1A into ME/2A and select ME/2 on the output switcher. Monitor at the SCR output of the routing switcher (match monitor bus). Use this output for the system phase reference. (This is the longest path through the system).

4. Both faders at the "A" limit.

   To time the ME/1 output to the system phase reference, switch between ME/1 and ME/2 on the output switcher. Remove any phase shift by adjusting the appropriate taps on the ME/1 delay line(s) DL_1 and DL_3 on the PGM/PVW switcher card.

5. Both faders at the "A" limit.

   To time ME/2A to the system phase reference, switch between 146 bars on ME/2A direct and ME/1A re-entered into ME/2A while observing ME/2 on the output switcher. Remove any phase shift by adjusting the appropriate taps on delay line DL_7 on the ME/2 RE card.

6. Place the ME/2 fader at the "B" limit.

   To time ME/2B to the system phase reference, switch between 146 bars on ME/2B direct and ME/1A re-entered into ME/2B while observing ME/2 on the output switcher. Remove any phase error by adjusting the appropriate taps on delay line DL_2 on the ME/2 RE card.

7. Place both faders in the "A" limit.

   Re-enter ME/1A into ME/2A and select ME/2 on the output switcher. (This is still the system reference). To time the PGM bus to the system reference, switch between PGM and ME/2 on the output switcher. Remove any phase error by adjusting the appropriate taps on the PGM delay line DL_2 on the PGM/PVW switcher card.

8. Re-check steps 2-7.