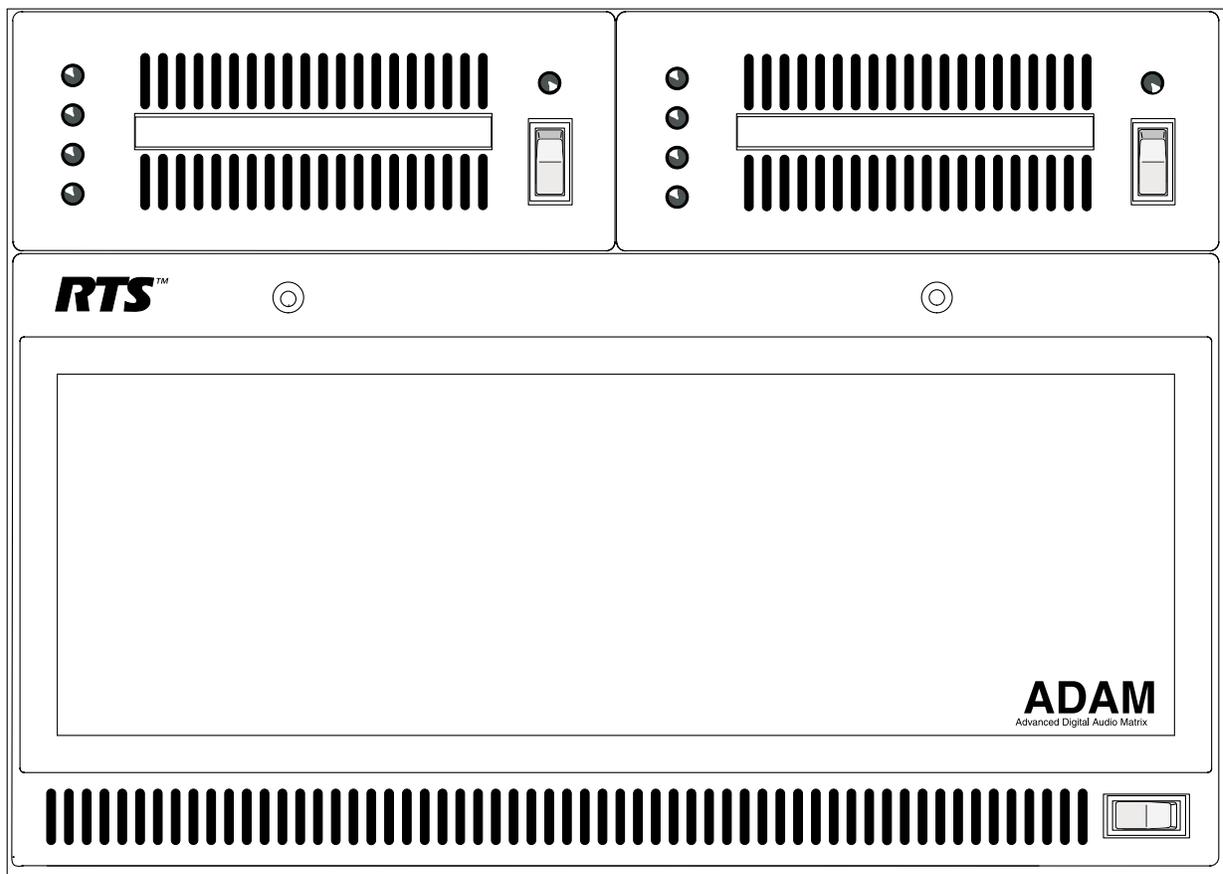


# ADAM™

## Advanced Digital Audio Matrix

### System Installation Guide



# RTS™



# Table of Contents

<b>1 Unpacking the Components .....</b>	<b>4</b>
<b>2 Mounting the Central Matrix Components .....</b>	<b>4</b>
<b>3 ADAM Circuit Cards .....</b>	<b>4</b>
<b>3.1 Front Card Access .....</b>	<b>4</b>
<b>3.2 Card Removal and Installation .....</b>	<b>4</b>
<b>3.3 Unused Back Card Slots .....</b>	<b>5</b>
<b>3.4 Master Controller Card DIP Switches .....</b>	<b>5</b>
<b>4 Power Supply Removal/Installation .....</b>	<b>5</b>
<b>5 AC Power Connection .....</b>	<b>5</b>
<b>6 ADAM Frame Power-Up .....</b>	<b>5</b>
<b>7 Circuit Card Reset and Fail Indication .....</b>	<b>5</b>
<b>8 Alarm Operation .....</b>	<b>5</b>
<b>9 Connections to the ADAM Card Frame .....</b>	<b>6</b>
<b>9.1 Configuration Computer Connection and Check .....</b>	<b>6</b>
<b>9.2 Program Assign Panel (PAP) Installation .....</b>	<b>6</b>
<b>9.2.1 General .....</b>	<b>6</b>
<b>9.2.2 Connecting a Single PAP .....</b>	<b>6</b>
<b>9.2.3 Connecting Additional PAPs .....</b>	<b>6</b>
<b>9.2.4 Programming IFB Defaults to Initialize PAPs .....</b>	<b>7</b>
<b>9.2.5 Checking PAP Operation .....</b>	<b>7</b>
<b>9.2.6 Connecting Program Sources for use by PAP's .....</b>	<b>7</b>
<b>9.3 UIO-256 Input/Output Frame .....</b>	<b>7</b>
<b>9.3.1 Connecting One UIO-256 Frame .....</b>	<b>7</b>
<b>9.3.2 Connecting Additional UIO-256 Frames .....</b>	<b>7</b>
<b>9.3.3 Programming the UIO-256 .....</b>	<b>7</b>
<b>9.4 Connecting to a TM-2000 .....</b>	<b>8</b>
<b>10 Intercom Port Connections .....</b>	<b>10</b>
<b>10.1 General Information .....</b>	<b>10</b>
<b>10.2 Logical Keypanel Numbers .....</b>	<b>10</b>
<b>10.3 General Procedure for Connecting Devices to the Intercom .....</b>	<b>10</b>
<b>10.4 KP-12 Installation Notes .....</b>	<b>10</b>
<b>10.5 KP-32 Keypanel Installation Notes .....</b>	<b>11</b>
<b>10.6 Program Source Notes .....</b>	<b>11</b>
<b>10.7 TIF-2000 Telephone Interface Installation Notes .....</b>	<b>11</b>
<b>10.8 CDP-950 Camera Delegate Panel Installation Notes .....</b>	<b>12</b>
<b>11 ADAM Drawings .....</b>	<b>24</b>

## 1 Unpacking the Components

Unpack the contents of the shipping crates and carefully inspect for damage. Notify the freight carrier immediately if any damage is noted. Check off all items as noted in the packing lists.

### SAFETY TIP

User caution when lifting the system components. A fully loaded ADAM Card Frame, for example, weighs approximately 75 lbs (34 kg).

## 2 Mounting the Central Matrix Components

Bolt the ADAM Card Frame into the front of the equipment rack. The frame has no special ventilation requirements, but make sure that the ventilation holes on the front and back are unobstructed. The rack space behind the ADAM Card Frame should be kept completely clear to allow for connections and the insertion and removal of back cards. Allow at least 3 ft. (1m) in front of the rack for insertion and removal of front cards and power supplies. Note, there is an LED fail indicator and reset switch located near the top-front of each front card. The LED indicators are only visible when the center of the card frame is at or above eye level.

Station Breakout Panels, Translations Panels, and Jackfields are usually mounted in the back of the equipment rack, and are generally arranged to allow intercom station cabling to exit the frame at the top or bottom as required.

Optional UIO-256 Frames should be mounted in the front of an equipment rack. When positioning a UIO-256, consideration should be given to the visibility of the front panel LEDs, which provide visual indication for any active inputs and outputs.

Optional Program Assign Panels should be mounted in the front of an equipment rack. Generally, a PAP should be located slightly below eye height when sitting or standing to allow for viewing of the front panel indicators and easy activation of the front panel controls.

## 3 ADAM Circuit Cards

### 3.1 Front Card Access

Loosen the two captive thumbscrews that secure the front glass door, and swing the door down.

### 3.2 Card Removal and Installation

All ADAM circuit cards can be "hot-installed", which means that you do not have to turn the power off before installing or removing a card. This permits continuous operation of the intercom system -- with no interruptions to unaffected ports -- in the event of a card failure.

### READ THIS BEFORE INSTALLING CIRCUIT CARDS!

The connector pins on the back plane inside the ADAM frame can be easily damaged by improper or hurried insertion of the circuit cards. Always use the following procedure when inserting cards.

1. Begin installation with the back card. Orient the card so that the card edge connector is toward the bottom.
2. Insert the card edges into the upper and lower card guides in the back of the ADAM frame. Push the card in all the way until the card mounting plate is flush with the ADAM frame.
3. Install mounting screws in the top and bottom of the card plate to lock it in place.
4. When installing a front card, orient the card so that the indicator LED and reset switch are at the top-front.
5. Insert the card edges into the upper and lower card guides in the front of the ADAM frame.
6. SLOWLY push the front card straight into the slot until initial resistance is felt.
7. When initial resistance is felt, apply slightly more pressure to begin engaging the connector pins.
8. Once the connector pins have started to engage, press VERY FIRMLY to completely seat the connectors. When the card is properly seated, the card mounting plate should be flush with the ADAM frame.
9. Mounting screws for the front cards are not required but are recommended for mobile installations.

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To remove a front card, press down on the lower ejector lever and up on the upper ejector lever. Once the card is released from the back plane connector, pull it straight out of the frame.

To remove a back card, first release the front card by pressing the ejector levers, then remove the back card.

### IMPORTANT

All system clock signals are derived from the Audio Input/Output Card in slot number 9, with clock backup provided by the Audio Input/Output Card in slot number 8.

Therefore, if your intercom system uses fewer than ten Audio Input/Output Cards, make sure that slots 9 and 8 are filled in any case. Also, never remove cards 9 and 8 at the same time as the intercom system will cease to operate.

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**NOTE**

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When a front or back audio card is removed, the displays on any keypanel connected to that card will display asterisks instead of the normal key assignments. After a card is reinstalled, it may take a minute or two for the keypanel displays to return to normal.

---

**3.3 Unused Back Card Slots**

To ensure proper air flow, each unused back card slot should be fitted with a card blank (part number 9000-7467-003) to cover the opening.

**3.4 Master Controller Card DIP Switches**

As shipped from the factory, all master controller card DIP switches are set to the “off” position for default operation. These settings will be satisfactory for most applications. Optional settings are summarized in Table 1, page 13. If any changes are made to the settings, make sure that both the main and backup controller cards are set the same.

**4 Power Supply Removal/Installation**

Place the power switch on the front of the power supply in the off (O) position before removal. Loosen the two captive thumbscrews on the front of the supply, then grasp the screws to pull the supply out.

To install a power supply, set the power switch on the front of the supply to the off position. Push the power supply firmly into the slot in the ADAM frame so that the connector seats, then tighten the captive screws.

**5 AC Power Connection**

1. Place the AC switches on the back panel of the ADAM frame in the off (O) position.
2. Place the power supply on/off switch on the front of each power supply in the off (O) position.
3. Connect AC power to both of the AC jacks on the back of the ADAM Frame. Connecting both of the AC jacks on the back of the ADAM Frame. Connecting both AC inputs will assure continued operations of the ADAM Frame in the event that one power supply fails. If desired, two separate AC power phases may be connected. This will protect not only against a power supply failure, but also against a loss of power to one phase.

**6 ADAM Frame Power-Up**

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**NOTE**

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For proper power supply loading, at least two front cards should be installed in the frame before turning on the power supplies.

1. Place the AC switches on the back of the ADAM Frame in the “on” position.
2. Place the ALARM OVERRIDE switch on the front panel in the on position. The alarm should sound while the power supplies are off.
3. Place the on/off switch on the front of each power supply in the “on” position. The POWER GOOD indicators and all voltage indicators should light. The fans should turn on. The alarm should shut off.
4. While the intercom system is initializing, the red LED fail indicators will be lit on all circuit cards. Allow 15 to 30 seconds for all indicators to turn off.

**7 Circuit Card Reset and Fail Indication**

Each front card is equipped with a reset button located near the top-front of the card. Directly under the reset button is the red LED fail indicator. The LED indicator remains off during normal operation. If the fail indicator turns on, first attempt to restore normal operation by momentarily pressing the reset button. Allow 15 to 30 seconds for reset. If the fail indicator does not turn off after this time, replace the affected card.

**8 Alarm Operation**

If there is a power supply fault during operation, the audible alarm will sound and one or more indicator lights on the affected power supply will turn off. To deactivate the alarm, set the ALARM OVERRIDE switch to the off position. Turn off the defective power supply, and repair or replace it as soon as possible to assure continued backup protection in the event of another power supply failure.

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**NOTE**

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The power supply alarm will also sound if a power supply is turned off. This is normal. Either turn on the power supply, or turn off the ALARM OVERRIDE switch.

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## 9 Connections to the ADAM Card Frame

An ADAM Intercom System can be setup in a variety of configurations to meet different user requirements. Several common variations are illustrated in the system drawings number ADAM-101 through ADAM-108 on pages 24 through 43.

### 9.1 Configuration Computer Connection and Check

Use an RS-232 serial cable to connect from J1 of the XCP-ADAM-MC Breakout Panel to COM1 or COM2 of the configuration PC. For cable wiring details, refer to the ADAM 807 installation drawing on page 39.

Insert the AZedit software cd into the computer, type "install" and press **ENTER**. Follow the instructions to load AZedit onto the PC. Note, the computer should have at least 2M of extended memory (4M preferable).

To run AZedit, change to the drive and directory in which you installed the software. Type AZedit, then press **ENTER**.

If the link between the computer and intercom system is functioning correctly, the current intercom system configuration should upload (even if nothing has yet been programmed) and "Mode On-line" should appear at the lower-right of the computer screen. If not, check the cable wiring and the connection between the computer and the intercom system.

#### NOTE

By default, the AZedit configuration program uses COM1 and 9600 baud for communication between the computer and intercom system. COM2 and/or 38.4k baud are selectable as options in AZedit (Options>Communications). When operating at 38.4k baud, DIP switch number 1 must be set to the "on" position on both the main and backup master controller cards in the ADAM frame. (See Table 1, page 13)

Operation at 38.4k baud will permit faster downloads and uploads, but the computer cable length should be kept under 10 ft. (3m). Note that some PCs cannot operation reliably at the higher baud rate.

### 9.2 Program Assign Panel (PAP) Installation

#### 9.2.1 General

Up to four PAPs can be connected to the intercom system. Each PAP has DIP switches to assign it as panel number 1 through 4, and to select either a low or high IFB range. As supplied, PAPs expect all program sources to be connected to sequential intercom ports of the intercom

system starting with port #1. The options and default settings for the PAP series are summarized in the following table.

Model	Default Ports for Program Input	Panel No. (Default=1)	IFB Range	
			Low (Default)	High
PAP-940	1-24	1-4	1-40	41-80
PAP-950-50	1-50	1-4	1-50	51-100
PAP-951	1-8	1-4	1-12	13-24
PAP-952	1-16	1-4	1-24	25-48

The intercom port addresses for program input, as well as the low and high ranges for IFB output, are stored in EPROM memory in the PAP. In some cases, it may be desirable to control program sources and IFB ranges other than those allowed by the defaults. In such cases, new custom EPROMs can be programmed as needed. Contact your intercom system dealer for further information.

#### 9.2.2 Connecting a Single PAP

Connect a single PAP to J3 of the Master Controller Breakout Panel as shown in the ADAM-101 through ADAM-108 interconnect diagrams. Use an RS-485 data cable wired as shown in the ADAM-809 installation drawing, page 41. Connect power to the AC mains connector.

#### 9.2.3 Connecting Additional PAPs

Connect any additional PAPs by wiring them in parallel with the first PAP. Use a punch block or similar connector system.

Change the panel number DIP switches in all but one of the PAP's. To do this, remove the covers from the PAP and locate the 8-position DIP switch block on the PMC-15 circuit board. By default, all PAP's are supplied with DIP switches #1 and #2 set for panel number 1. Reset the switches, as shown in Table 5, page 15, so that each PAP has a unique panel number.

By default, all PAP systems are supplied with the lower of two ranges of IFB's selected. For example, a PAP-952 is set by default to work with IFB numbers 1 to 24. If a second PAP-952 is connected, it can be reset to work with IFB numbers 25 to 48 if desired. To select the low or high range, set DIP switch number 3 as shown in Table 6, page 15.

#### Note

DIP switches 4-8 in PAP systems are not used and their positions do not matter.

## 9.2.4 Programming IFB Defaults to Initialize PAPs

Before a PAP can reassign program inputs, a default configuration for each IFB must first be setup using AZedit. See "Creating an IFB" (THIS IS CHANGING TO THE AZEDIT MANUAL AND NEEDS TO BE UPDATED TO TELL WHERE IN THE MANUAL THIS IS)

Note that it is not necessary to have any program sources or output stations connected to setup the IFB's.

## 9.2.5 Checking PAP Operation

Status of a single PAP can be checked by selecting **PAP** from the Status menu in AZedit. When multiple PAP's are connected, it is only possible to verify the status of the lower-numbered PAP using the PAP status feature of AZedit. An operational check of the additional PAP can be deferred until intercom stations and program sources are connected.

Alternatively, it is possible to check PAP operation using the Force and Inhibit feature of AZedit. (See "System, Force and Inhibit" in Section 3 of the AZedit Manual) (THIS IS CHANGING TO THE AZEDIT MANUAL AND NEEDS TO BE UPDATED TO TELL WHERE IN THE MANUAL THIS IS). When you select "Force and Inhibit" from the System menu in AZedit, a port pick list appears. Select one of the IFB output ports. A "Connecting Ports" table for that port appears. As program sources are reassigned on the PAP front panel, the changes can be viewed in the table by pressing the **ENTER** key. As each new program source is connected, a check mark appears next to that port in the table.

## 9.2.6 Connecting Program Sources for use by PAP's

Program sources are connected like any other intercom audio input. See Intercom Port Connections, page 10.

## 9.3 UIO-256 Input/Output Frame

### 9.3.1 Connecting One UIO-256 Frame

1. Connect a single UIO-256 to J3 of the Master Controller Breakout Panel as shown in the ADAM-101 through ADAM-108 interconnect diagrams. Use an RS-485 data cable wired as shown in the ADAM-809 installation drawing, page 41. If a PAP is also being used, it may be wired to the same connector. Alternatively, use a punch block or other connector system.
2. Set the SW-1 DIP switches on the back of the UIO-256 to select range 1-16 as shown in Table 7, page 16. The SW-2 DIP switches are not used, and their positions do not matter.

3. Connect relay outputs to external devices using the relay outputs connector, J5. The J5 connector pin-out is shown in the Table 8, page 16.
4. Connect input devices using the opto-isolator connector, J7. The connector pin-out is shown in Table 9, page 16.
5. Connect AC power.

### 9.3.2 Connecting Additional UIO-256 Frames

1. Up to three additional UIO-256 frames may be connected in a ring configuration using the 15-pin ribbon cables provided. Connect the J4 output of the first UIO-256 to the J3 input of the second UIO-256; connect the J4 output of the second UIO-256 to the J3 input of the third UIO-256 and so forth. Connect the J4 output of the last UIO-256 back to the J3 input of the first UIO-256 to complete the ring.
2. Set the SW1 DIP switches on each UIO-256 to select a unique panel number as summarized in Table 7, page 16.
3. Connect the opto-isolator outputs and relay inputs as for the first UIO-256.

### 9.3.3 Programming the UIO-256

Each opto-isolator input is assignable in the Digital Input Assignments table of AZedit (See System, Digital Inputs Section 3 of the AZedit manual). (THIS IS CHANGING TO THE AZEDIT MANUAL AND NEEDS TO BE UPDATED TO TELL WHERE IN THE MANUAL THIS IS) The Digital Inputs Assignment table basically lets you simulate a key on a key panel at a particular intercom port, regardless of whether or not there is an actual keypanel connected to that port.

Once an input has been assigned to a key, it is then necessary to define a device to be activated by that key. This is accomplished in the keypanel edit screen for the port to which the digital input was assigned. (See "Key Panel Setup: Key Assignments and Key Restrictions" in the AZedit Manual. (THIS IS CHANGING TO THE AZEDIT MANUAL AND NEEDS TO BE UPDATED TO TELL WHERE IN THE MANUAL THIS IS)

The UIO-256 relay outputs are programmed using the relay edit screens in AZedit. See Using Relays in the AZedit User Manual. (THIS IS CHANGING TO THE AZEDIT MANUAL AND NEEDS TO BE UPDATED TO TELL WHERE IN THE MANUAL THIS IS).

## 9.4 Connecting to a TM-2000

### Trunking Connections and Setup

1. Identify the correct wiring diagram for your system. For non-redundant TM-2000 systems use example system in Figure 10. For redundant TM-2000 systems use the example system in Figure 11. Connect the trunking system components using the appropriate wiring diagram. Consult the appropriate figures as indicated in Figures 10 and 11 for specific cable wiring diagrams.

**Note:** Follow the labels as placed on the TM-2000 for the specific locations of network cards and RS-485 communication cards/port numbers. See Figure 8 for an example of card/port labeling. Figure 9 depicts how the ports are mapped to the ICP-2000 panels. Caution: On most systems Port 1 can be used for trunking. On special systems that use Video Delegate Panels (VDP), Port 1 is reserved for use with the VDP panels. Standard systems ship from the factory without VDP support, so Port 1 is safe to use for trunking.



2. Interconnect one or more intercom audio ports between the intercom systems. These ports will be used for trunking communication only. Figure 10 and 11 indicate the specific cable wiring diagrams.

**Note:** The number of trunk lines that you setup should be based on the number of persons that need to communicate with other intercom systems, and on the critical nature of their communication. On the other hand, there may be additional expense involved with running trunk lines (when using leased lines for example) and you will want to keep the number of lines to a minimum. You may be able to get by with fewer trunk lines than the number of potential users. For example: If two keypanels need to have access to another intercom system, but only one of those keypanels has a critical need, you may be able to get by with one trunk line. You can just set the trunk priorities for the two users (as described in the following paragraphs) so that the one with the critical need has a higher priority. Also keep in mind that the trunking system can create a communication path by "cascading" through a third intercom system if that system has trunk lines to the other two systems. If frequent busy signals are encountered during normal use, you may have to allocate more trunk lines. A busy signal is normally indicated by an alphanumeric key display that alternates between the normal key assignment and a double asterisk indication.

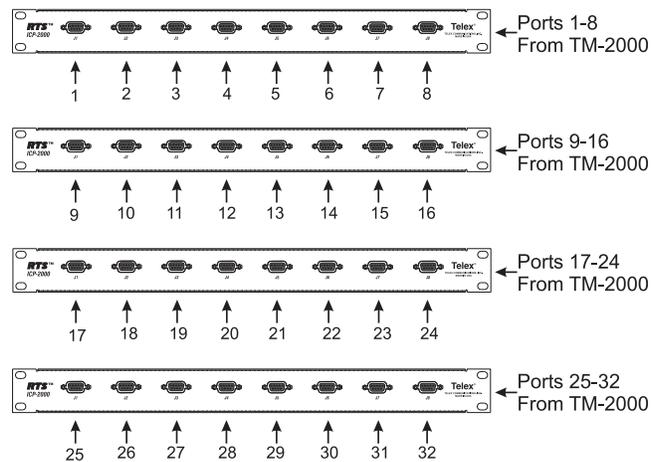
3. Within each intercom system, run the **AZedit** intercom configuration software. Do the following:

#### Enable Trunking Support

To enable trunking support place a check mark in box next to Enable Trunking Support option. This option is located under the **[Options] [Preferences]** menu item under the **Advanced** tab.

Send the changes to the frame and save the file.

Shutdown **AZedit**.



Repeat this for every intercom system that is to be trunked.

4. Once **AZedit** is restarted, click the **KP** button on the toolbar. Then select the port that you want to set as a trunking port: either enter the port number in the **"Port"** box and press Enter, or select the name of the port in the **"Alpha"** box. When the keypad setup screen for that intercom port appears, uncheck all of the **Scroll Enable** check boxes. Then, send your changes to the intercom system. For further assistance with keypad setup, click the **KP** button on the toolbar, then press the F1 key on the computer keyboard and

Also using **AZedit** within each intercom system, select which intercom ports, party lines etc. will be scrollable and assignable in other intercom systems. To make intercom ports scrollable and assignable, click the **KP** button on the toolbar, select an intercom port, then check the **Scroll Enable** check boxes as desired. (Press the F1 key to get further help with keypad setup, including additional scroll enable information.) To make other types of functions (party lines, IFBs etc.) scrollable, click the appropriate button on the **AZedit** toolbar as indicated, then select a specific destination and check its **Scroll Enable** check boxes. For further assistance setting up any of these destinations, press the F1 key while viewing the appropriate setup screen.

PL button	Party Lines
IFB button	IFBs
SL button	Special Lists
GPI Out button	General Purpose outputs
ISO button	Camera ISOs

Be sure to send your changes to the intercom system and save the file before exiting **AZedit**.

- Run the **TrunkEdit** Software and configure the trunking system. Click on the bar labeled **Intercom** on the left side of the screen and then click on the **Setup** icon. A table displaying setup information for each intercom system will be displayed. On initial setup this table will be empty. Do the following:

Enter a unique four character name for each trunked intercom system under the **Name 4** column of the setup table. You can also enter unique six and eight character names under the **Name 6** and **Name 8** columns, but these are optional.

Select the baud rate for each intercom system. The baud rate can be changed by right clicking anywhere along an intercom system's entry in the table. A pop-up menu will display. Select the correct baud rate by moving the pointer to the **Select Baud Rate** entry and clicking on the correct rate. For locally trunked systems (i.e. connected via cable only), **38.4K** should be selected. For remote trunked systems (i.e. connected via leased line, fiber, etc...), **9600** should be selected.

Select the RS-485 COM port to be used from the TM-2000 to each intercom system. The COM port can be changed by right clicking anywhere along an intercom system's entry in the table. A pop-up menu will display. Select the correct COM port by moving the pointer to the **Select COM Port** entry and clicking on the desired COM port.

Send the changes to the TM-2000 and save the file.

- Click on the bar labeled **Trunk** on the left side of the screen and then click on the Definitions icon. A table displaying trunk definitions will be displayed. On initial setup this table will be empty. Do the following:

Right click on a trunk entry under the **Icom 1** column. Select **Choose New Assignment** from the pop-up menu that appears. Select the intercom system that is desired for this end of the trunk line. Repeat the same for the **Icom 2** column in the same line except choose an intercom system different than that selected for **Icom 1**. This defines which two intercom systems (**Icom 1** and **Icom 2**) will be trunked via this entry in the table.

Right click in either the **Port** or **Alpha** entry associated with the **Icom 1** entry you just made and select the **Choose New Assignment** from the pop-up menu that appears. Select the **Port** or **Alpha** to be used for the audio trunk line from the system named in the **Icom 1** column. Do the same for the **Port** or **Alpha** entry associated with the **Icom 2** entry except select the **Port** or **Alpha** from the **Icom 2** system for the audio trunk line.

If this particular trunk line is to be cascadeable (i.e. usable to connect two other adjacent systems), then be sure to set the **Cascade** flag. To set or clear the **Cascade** flag right click on the **Cascade** entry for the trunk line and select **Set Cascade Flag** or **Clear Cascade Flag** from the pop-up menu that appears.

Repeat this procedure for each intercom system audio trunk line that will be needed. When finished send the changes to the TM-2000 and save the file.

- Run the **AZedit** software. Within each intercom system, assign keypad keys as required to communicate with destinations in other intercom systems. This is basically the same as assigning keys in the local intercom select the intercom port where you want to add a key assignment that will communicate with a remote intercom system. If you use the **Key Assignment Select** screen to assign keys, proceed as for normal key assignment, except that you should select an intercom system before selecting a scroll list. Press the F1 key on the computer keyboard to get help on keypad setup.

Be sure to send your changes to the intercom system and save the file before exiting **AZedit**.

## 10 Intercom Port Connections

### 10.1 General Information

Typically, devices are connected to individual intercom ports using Station Breakout Panels as shown in the ADAM-101 through ADAM-108 drawings. Depending on the type of breakout panels being used, the individual intercom stations will utilize either RJ-11 modular style intercom cables, or 9-pin D-sub cables. Wiring diagrams for both are shown in the ADAM-810 drawing, page 42.

Each intercom port supplies two pins for audio input, two for audio output, and two for data. All audio connections are balanced, dry lines. All audio inputs and outputs are set for unity gain by default: whatever level is applied at an input will be supplied at the output. Input and output levels may be adjusted for individual ports if required. This may be accomplished either from AZedit or from individual keypanels.

Various types of intercom stations are generally connected to the intercom ports, but other types of audio devices could also be connected. For example, a program source could be connected to the audio input for an intercom port, and in this case the audio output and data pins are not used.

The data wires for an intercom port are used to send and receive control information between the connected device and the ADAM master controller. The data wires are only used by keypanels, by the TIF 2000 Telephone Interface, and by CDP-950 Camera Delegate Panel. The type of data transmitted includes key pressed information and display information. For example, when a key is pressed on a keypanel, this information is sent on the data wires to the ADAM frame. The controller in the ADAM frame then makes the necessary talk and listen connections so that a conversation can take place. It also sends data to the device being called; for example, to display the caller's name at a keypanel, or to activate a telephone line at a TIF-2000 Telephone Interface.

### 10.2 Logical Keypanel Numbers

Even though separate data pins are provided for each intercom port, these pins do not actually represent a unique data port. Rather, groups of intercom ports share a common data port. In an ADAM intercom system, data groups consist of 8 intercom ports, and each Audio Input/Output card represents 1 data group. To distinguish between devices connected to the same data group, a "Logical Keypanel Number" is assigned to each device at the time of connection. The relationship between intercom port numbers, Audio I/O Cards and Logical Keypanel Numbers is shown in Table 2, page 15. Specific information about setting Logical Keypanel Numbers is discussed in the installation notes on the following pages.

### 10.3 General Procedure for Connecting Devices to the Intercom

The following is a suggested method for planning the intercom system and connecting devices to intercom ports:

Make a copy of the Intercom System Planning Worksheet, starting on page 17. (Or, create your own custom tables using your favorite spreadsheet or database program.)

For each device that will be connected, fill in a row in the worksheet.

Note the device type (keypanel, belt pack, TIF-2000, program source, CDP-950, etc.). Other useful information might include the device location and usage, as well as any labeling on the intercom cable.

Write down a name of up to four characters in the "AZedit Alpha" column of the worksheet. You will enter this name into the intercom system later using AZedit. Then, whenever you assign the port to an intercom key, the name will appear in the keypanel display for that key.

If the intercom system is trunked (interconnected) to another intercom system, a second name may be recorded in the "AZedit Alias" column of the worksheet, if desired. This name will also be entered using AZedit. An alias may be useful, for example, to prevent conflicts when the same alpha name is already being used in both intercom systems. When the intercom port is assigned to a keypanel key in the external intercom system, the alias name, appears in the display above that key. If you do not enter an alias name, AZedit will automatically use the alpha name as the default.

Connect devices to the intercom ports as noted in the worksheet. Refer to any installation notes included below for the type of device being connected.

Run AZedit and enter AZedit Alpha and Alias names as listed in the worksheet

Complete the intercom system configuration as described in (See "Assigning Names", in section 2 )

### 10.4 KP-12 Installation Notes

Use either FRAME connector (but not both) on the back of the keypanel to connect to an intercom port at a Station Breakout Panel.

To connect to an expansion panel, use the cable supplied with the expansion panel. Connect from the EXPANSION connector of the KP-12 to either CONTROL connector on the expansion panel. The remaining CONTROL connector may be used to connect a second expansion panel.

Plug in the AC power cords for the KP-12 and any connected expansion panels, and turn on power.

When the KP-12 is connected and turned on for the first time, the call waiting window will display "SET ADDR". Click the SELECT control (press and immediately release). "ADDR 1" should appear in the call waiting window (logical keypad address number 1). Rotate the SELECT control to display the correct logical keypad address number, then click SELECT again. After a few moments the alphanumeric displays should change from asterisks (\*\*\*\*) to dashes (-----).

When the KP-12's keypad address is initially set, it is automatically saved. Unlike KP-9x series keypads, no power-off reset is required. To change the intercom port number at a later time, see INSERT AZEDIT REDO HERE.

Refer to the *KP-12 User Manual* for complete user information.

## 10.5 KP-32 Keypad Installation Notes

- Use either FRAME connector (but not both) on the back of the keypad to connect to an intercom port at a Station Breakout Panel.
- To connect an expansion panel, use the cable supplied with the expansion panel. Connect from the EXPANSION connector of the KP-32 to either the CONTROL connector on the expansion panel. The remaining CONTROL connector may be used to connect second expansion panel.
- Plug in the external power supply, provided with KP-32, into the power connector and then into the AC power cord.

### ADDRESSING THE KP-32

In ADAM and ADAM CS (and Zeus) Intercom Systems, intercom ports are arranged in groups of eight. All ports in a group share a common data port. Each KP-32 keypad is uniquely identified on the data port by setting the rotary address switch (see *KP-32 Addressing* on page 15).

Refer to the *KP-32 Keypad User Manual* for complete User Instructions.

## 10.6 Program Source Notes

External audio program sources can be connected to intercom inputs, but all sources must be balanced and DC isolated. The audio output and data pins for the port are not used. Nominal input level is +8 dBu.

### Note

If program inputs will be assigned using a Program Assign Panel (PAP) they must be connected to specific ports of the intercom system. See Program Assign Panel Installation, page 6.

## 10.7 TIF-2000 Telephone Interface Installation Notes

### Rear Panel Dip Switch (S201)

The rear panel DIP switch contains switches to configure the most often changed options. These include: auto answer on/off, ring signal on/off, password on/off, intercom port address, and full duplex method.

### Password Required

Turning on the password required option sets the unit so that when a call is automatically answered, the user must enter a password via DTMF before the unit will allow communications. The password numeric sequence and length are determined by the settings of S203 internal DIP switch.

### Intercom Port Address

Switches 4 to 7 determine the address of the unit. The port address is expressed in binary with switch 4 being the least significant bit (LSB) and switch 7 being the most significant bit (MSB). For more information, see Table 3, page 15.

### Connections

INTERCOM - Use either of the "To Matrix" connectors (but not both) to connect to an intercom port. The intercom port that you connect to will determine the address of the unit. An LED labeled "Data" is located next to the Matrix connectors and serves as a basic indicator.

TELEPHONE AND TELEPHONE LINE - There are two telephone connections provided on the rear of the TIF-2000. Plug the telephone line into the jack labeled "To Phone Line". You may also plug a standard telephone into the jack labeled "Loop Thru".

**Note:** The standard telephone plugged into the "Loop Thru" jack is disconnected when the TIF-2000 seizes the telephone line.

POWER SUPPLY - Insert the round connector from the brick type power supply into the power connector on the rear of the TIF 2000. Turn the locking ring on the connector to secure the connection. Plug the female end of the IEC type power cord into the power supply and then plug the other end into an appropriate power outlet.

For more detailed installation instructions, see the *TIF 2000 User Manual*.

## 10.8 CDP-950 Camera Delegate Panel Installation Notes

### 10.8.1 CDP-950 General Description

The CDP-950 provides a means of quickly and easily assigning camera intercoms to any of 4 party lines. It lets camera controllers reconfigure camera party lines without having to run the AZedit configuration program. In an ADAM intercom system, up to eight camera intercoms can be controlled from the CDP-950.

### 10.8.2. CDP-950 Theory of Operation

The CDP-950 connects to the data port for an intercom group by connecting it to the data pins for any port in the group. It can either be connected along with an intercom station, or it can be connected to a port by itself. Once connected, the CDP-950 controls all 8 ports in the group. Or, it can be set to control less than 8 ports, leaving the remaining ports free to be used by other data devices.

For each port, the CDP-950 provides the equivalent of 4 keypanel keys. The keys are arranged in a column, and are labeled "PL1" through "PL4". There are 10 columns of keys, labeled "CAM1" through "CAM10", but columns 9 and 10 are not used in ADAM intercom systems.

Once the CDP-950 has been connected, and the range of intercom stations that it will control has been set, the front panel keys may be assigned like any other keypanel keys. Since the CDP-950 is primarily intended for assigning camera intercoms to various party lines, the keys are generally assigned to party lines, but they do not have to be. For example, a key could be assigned to talk to a specific person if desired. Unlike most keypanels, which typically have a separate talk and listen assignment. When a key is activated, the intercom station which is connected to the audio lines for the corresponding port can talk and/or listen to the selected destination.

During normal operation, all 4 keys for a port may be activated simultaneously if desired. However, during critical communications, it may be desirable to temporarily disable all nonessential communications. The CDP-950 has an "isolate" option which permits this. This option is selectable via an internal DIP switch. When the "isolate" option is activated, the PL4 keys function as "ISO" keys. Pressing a PL4 key will activate its talk/listen assignment, and at the same time, it will disable the PL1 through PL3 keys directly above it. When the ISO key is turned off, the previous state of the other three keys will be restored. This ISO feature is selectable using an internal DIP switch in the CDP-950.

The following procedures describe the installation and programming of the CDP-950 for use in an ADAM intercom system:

### 10.8.3 Installing the CDP-950

1. Before installing the CDP-950, remove the top cover and set the internal DIP switches.

- DIP switch #1: Normal/ISO select  
Closed: normal operation  
Open: ISO operation
- DIP switch #2: Baud rate select  
Closed: 9600 baud  
Open: 76,800 baud (do not use for ADAM)
- DIP switch #3: Not used (position does not matter)
- DIP switch #4 thru #8: Intercom range select (see Table 4, page 15 for settings.)

2. Connect the CDP-950 to the data pins for any one of the intercom ports that will be controlled. Several possible cable wiring diagrams are shown in the ADAM-811 drawing, page 43.
3. Connect belt packs, camera intercoms etc. to the audio input and output pins of each intercom port controlled by the CDP-950.

### 10.8.4 Programming the CDP-950

Run the AZedit program and assign the CDP-950 keys just as you would normal keypanel keys. **(See "Key Panel Setup and Trunking Port Allocation" in the AZedit Manual (needs to be written.)** For each intercom port, the PL1 through PL4 keys on the CDP-950 correspond to keys 12 through 15 in the AZedit key assignment table.

#### Note

When a key is activated, both the talk and listen assignment for that key will activate.

**Table 1. ADAM Master Controller Card DIP Switch Settings (S1)<sup>1</sup>**

Switch No.	Description (On=closed; Off=open)	Default Setting (On=closed; Off=open)
1	AZedit baud rate select <sup>2</sup> Off: 9600 baud On: 38.4k baud	Off
2	Keypanel Incoming message option <sup>3</sup> Off: Normal operation On: All callers displayed in Incoming Messages window	Off
3	Keypanel "busy" and "in-use" flash <sup>4</sup> Off: Enable On: Disable	Off
4	Trunk master baud rate select. <sup>5</sup> Off: 38.4k baud On: 9600k baud	Off
5	Clock Monitor <sup>7</sup>	Off
6	Not used (set to off)	Off
7	Primary / secondary ADAM card frame select. <sup>6</sup> Off: Secondary frame On: Primary frame	On
8	Test on/off Off: Normal operation On: Test mode	Off

**Notes**

1. Always set the DIP switches the same on both the main and backup controller cards.
2. The default setting of 9600 baud is compatible with the default setting for the AZedit configuration software. Alternatively, 38.4k baud will provide faster uploads and downloads, but the cable from the ADAM Frame to the PC must be kept to a length less than 10ft (3m), and some older PCs may not operate reliably at this speed.
3. Normally, when a call is received by a keypanel, the keypanel checks for a talk key assigned to the caller. If there is a talk key as signed, the display above that key will flash. If no key is assigned, the caller's name will appear in the Incoming Messages window. Some intercom systems may have many keypanels that do not have alphanumeric talk key displays. In this case, it may be preferable to have all callers names appear in the Incoming Messages window.
4. The in-use flash is indicated by a slow and continuous flashing display above a keypanel talk key. It is provided for IFB's, ISO's and trunk lines. It occurs, for example, on all keypanels that have keys assigned to a particular IFB when that IFB is in-use by any keypanel. The displays will continue to flash until the IFB is no longer in-use. Any user could activate their talk key to talk to the IFB while the display is flashing, but they may interrupt a conversation that is in progress.  
  
The busy flash is indicated by a display that alternates between the normal key assignment and a double asterisk (\*\*) when the talk key is pressed. A "busy" flash occurs when a keypanel tries to talk to an IFB or trunk line that is currently in-use by another keypanel that has a higher IFB or trunking priority. When a busy flash is indicated, the user cannot talk to the destination assigned to the talk key.  
  
While some people may find the in-use and busy indications helpful, the option to disable them is provided because some may object to the alternating display.
5. 38.4k baud is the normal data rate for communication with a local trunk mast. 9600 baud may be selected when the intercom system is connected to a remote trunk master over some form of long-distance connection (modems, partial T1, etc.). However, expect large response delays when using 9600 baud. If this is not acceptable, other methods of connection using additional equipment may be required.
6. The primary frame is the one which is connected to the system configuration computer, trunk master, UIO-256's, PAP's, etc. When a single ADAM frame is used alone, it must be set as the primary frame. When several ADAM frames are interconnected using bus expanders, one of the frames must be set as the primary frame, and all other frames must be set as secondary frames.
7. Set to "On" only for Altera chip versions 4.1 and higher. Provides enhanced error correction for the bus clock. Leave in "Off" position for Altera versions below 4.1.

**Table 2. Relationship between Audio Input/Output Cards, Intercom Ports, and Logical Keypanel Numbers**

Logical Keypanel Number	Intercom Port Numbers, Grouped by Audio I/O Card Number																
	AIO 1	AIO 2	AIO 3	AIO 4	AIO 5	AIO 6	AIO 7	AIO 8	AIO 9	AIO 10	AIO 11	AIO 12	AIO 13	AIO 14	AIO 15	AIO 16	AIO 17
1	1	9	17	25	33	41	49	57	65	73	81	89	97	105	113	121	129
2	2	10	18	26	34	42	50	58	66	74	82	90	98	106	114	122	130
3	3	11	19	27	35	43	51	59	67	75	83	91	99	107	115	123	131
4	4	12	20	28	36	44	52	60	68	76	84	92	100	108	116	124	132
5	5	13	21	29	37	45	53	61	69	77	85	93	101	109	117	125	133
6	6	14	22	30	38	46	54	62	70	78	86	94	102	110	118	126	134
7	7	15	23	31	39	47	55	63	71	79	87	95	103	111	119	127	135
8	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136

\* The cards in slots 8 and 9 provide the main and backup system clock signals. These slots must be filled for proper operation.

Logical Keypanel Number	Address DIP Switch Settings			
	SW4	SW5	SW6	SW7
1	Down	Up	Up	Up
2	Up	Down	Up	Up
3	Down	Down	Up	Up
4	Up	Up	Down	Up
5	Down	Up	Down	Up
6	Up	Down	Down	Up
7	Down	Down	Down	Up
8	Up	Up	Up	Down
9	Down	Up	Up	Down
10	Up	Down	Up	Down

Note: The Shaded area is for CS9xxx system addresses only!

**Table 3. Address DIP Switch Settings for KP-95/96/97/98 Keypanels and the TIF951/TIF2000 Telephone Interface**

Ports Controlled	DIP Switch Number				
	4	5	6	7	8
#1 only	Open	Closed	Closed	Closed	Closed
#1 & #2	Closed	Open	Closed	Closed	Closed
#1 - #3	Open	Open	Closed	Closed	Closed
#1 - #4	Closed	Closed	Open	Closed	Closed
#1 - #5	Open	Closed	Open	Closed	Closed
#1 - #6	Closed	Open	Open	Closed	Closed
#1 - #7	Open	Open	Open	Closed	Closed
#1 - #8	Closed	Closed	Closed	Open	Closed
#2 - #8	Closed	Open	Closed	Closed	Open
#3 - #8	Open	Open	Closed	Closed	Open
#4 - #8	Closed	Closed	Open	Closed	Open
#5 - #8	Open	Closed	Open	Closed	Open
#6 - #8	Closed	Open	Open	Closed	Open
#7 - #8	Open	Open	Open	Closed	Open
#8 only	Closed	Closed	Closed	Open	Open

\* #1 refers to the lowest-numbered port on any given Audio Input/Output Card; #8 refers to the highest.

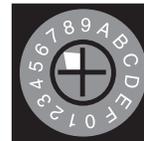
**Table 4. CDP-950 Intercom Range Selection**

### KP-32 Addressing

A rotary switch is used to indicate the logical port address the key panel is to use when communicating with the Matrix. The switch is read continuously through polling by the matrix. If the port address is changed, the new address is effective immediately.

**NOTE:** The Address port, by default, is shipped with an invalid address to ensure that there are no conflicts with existing keypanels. It is important to set the address port for the KP-32 keypanel for it to function properly.

☞ In Zeus, ADAM CS, and ADAM intercom systems, intercom ports are arranged in groups of 8. Within each group, each WKP-1 keypanel is uniquely identified by its Address switch setting.



The Address switch has a white pointer which points to the current switch setting. Determine the proper setting as follows:

Panel Number	Switch #1	Switch #2
1 *	Open	Open
2	Closed	Open
3	Open	Closed
4	Closed	Closed

\* Default

**Table 5. Program Assign Panel DIP switch Settings for Panel Number.**

IFB Range	Switch #3
Low Range *	Open
High Range	Closed

\*Default

**Table 6. Program Assign Panel DIP switch Settings for IFB.**

**Table 7. UIO-256 DIP Switch SW1 Settings for Input/Output Range**

IO Range	Dip Switch Settings							
	1	2	3	4	5	6	7	8
1-16*	Open	Open	Open	Open	Open	Open	Open	Closed
17-32	Open	Open	Open	Closed	Open	Open	Open	Closed
33-48	Open	Open	Open	Open	Closed	Open	Open	Closed
49-64	Open	Open	Open	Closed	Closed	Open	Open	Closed
* Default								

**Table 8. UIO-256 Relay Outputs Connector (J5)**

Relay Output Numbers*	PIN Numbers		
	NC Contact	Common	NO Contact
1/17/33/49	38	13	40
2/18/34/50	39	14	15
3/19/35/51	41	16	43
4/20/36/52	42	17	18
5/21/37/53	44	19	46
6/22/38/54	45	20	21
7/23/39/55	47	22	49
8/24/40/56	48	23	24
9/25/41/57	26	1	28
10/26/42/58	27	2	3
11/27/43/59	29	4	31
12/28/44/60	30	5	6
13/29/45/61	32	7	34
14/30/46/62	33	8	9
15/31/47/63	35	10	37
16/32/48/64	36	11	12

\* Dependent on UIO-256 DIP Switch SW1 Settings for Input/Output Range as summarized in Table 7.

The relay contacts are rated for 0.5A at 120 VAC; 1A at 24 VDC; 0.3A at 60VDC

**Table 9. UIO-256 Opto-isolated Inputs Connector (J7)**

Input Numbers*	Pin Numbers	
	DC Control Input "-"	DCControl Input "+" (5 to 30VDC)
1/17/33/49/	9	34
2/18/34/50	10	35
3/19/35/51	11	36
4/20/36/52	12	37
5/21/37/53	13	38
6/22/38/54	14	39
7/23/39/55	15	40
8/24/40/56	16	41
9/25/41/57	1	26
10/26/42/58	2	27
11/27/43/59	3	28
12/28/44/60	4	29
13/29/45/61	5	30
14/30/46/62	6	31
15/31/47/63	7	32
16/32/48/64	8	33

Dependent on UIO-256 DIP Switch SW1 Settings for Input/Output Range as summarized in Table 7.

Inputs will sink 100mA max at a maximum input voltage of +18 VDC

For operation from an external DC voltage source, connect the external control voltage to the "+" pin, and connect the external common to the "-" pin.

The UIO-256 also has an internal 18 VDC source, which is available at pins 18 to 22. Ground is available at pins 24 and 25. To use the internal 18 VDC source, ground the "-" pin for the desired control input, then use an external switch to connect from the 18 VDC internal source to the "+" input pin.

**Intercom System Planning Worksheet, sheet 1 of 6**

<b>Intercom Port No.</b>	<b>ADAM Audio I/O Card No.</b>	<b>Logical Keypanel Number*</b>	<b>AZedit Alpha</b>	<b>AZedit Alias</b>	<b>Description</b> (Device type, locaton, user, etc.)
1	1	1			
2	1	2			
3	1	3			
4	1	4			
5	1	5			
6	1	6			
7	1	7			
8	1	8			
9	2	1			
10	2	2			
11	2	3			
12	2	4			
13	2	5			
14	2	6			
15	2	7			
16	2	8			
17	3	1			
18	3	2			
19	3	3			
20	3	4			
21	3	5			
22	3	6			
23	3	7			
24	3	8			

**Intercom System Planning Worksheet, sheet 2 of 6**

Intercom Port No.	ADAM Audio I/O Card No.	Logical Keypanel Number*	AZedit Alpha	AZedit Alias	Description (Device type, locaton, user, etc.)
25	4	1			
26	4	2			
27	4	3			
28	4	4			
29	4	5			
30	4	6			
31	4	7			
32	4	8			
33	5	1			
34	5	2			
35	5	3			
36	5	4			
37	5	5			
38	5	6			
39	5	7			
40	5	8			
41	6	1			
42	6	2			
43	6	3			
44	6	4			
45	6	5			
46	6	6			
47	6	7			
48	6	8			

**Intercom System Planning Worksheet, sheet 3 of 6**

Intercom Port No.	ADAM Audio I/O Card No.	Logical Keypanel Number*	AZedit Alpha	AZedit Alias	Description (Device type, locaton, user, etc.)
49	7	1			
50	7	2			
51	7	3			
52	7	4			
53	7	5			
54	7	6			
55	7	7			
56	7	8			
57	8	1			
58	8	2			
59	8	3			
60	8	4			
61	8	5			
62	8	6			
63	8	7			
64	8	8			
65	9	1			
66	9	2			
67	9	3			
68	9	4			
69	9	5			
70	9	6			
71	9	7			
72	9	8			

**Intercom System Planning Worksheet, sheet 4 of 6**

Intercom Port No.	ADAM Audio I/O Card No.	Logical Keypanel Number*	AZedit Alpha	AZedit Alias	Description (Device type, locaton, user, etc.)
73	10	1			
74	10	2			
75	10	3			
76	10	4			
77	10	5			
78	10	6			
79	10	7			
80	10	8			
81	11	1			
82	11	2			
83	11	3			
84	11	4			
85	11	5			
86	11	6			
87	11	7			
88	11	8			
89	12	1			
90	12	2			
91	12	3			
92	12	4			
93	12	5			
94	12	6			
95	12	7			
96	12	8			

**Intercom System Planning Worksheet, sheet 5 or 6**

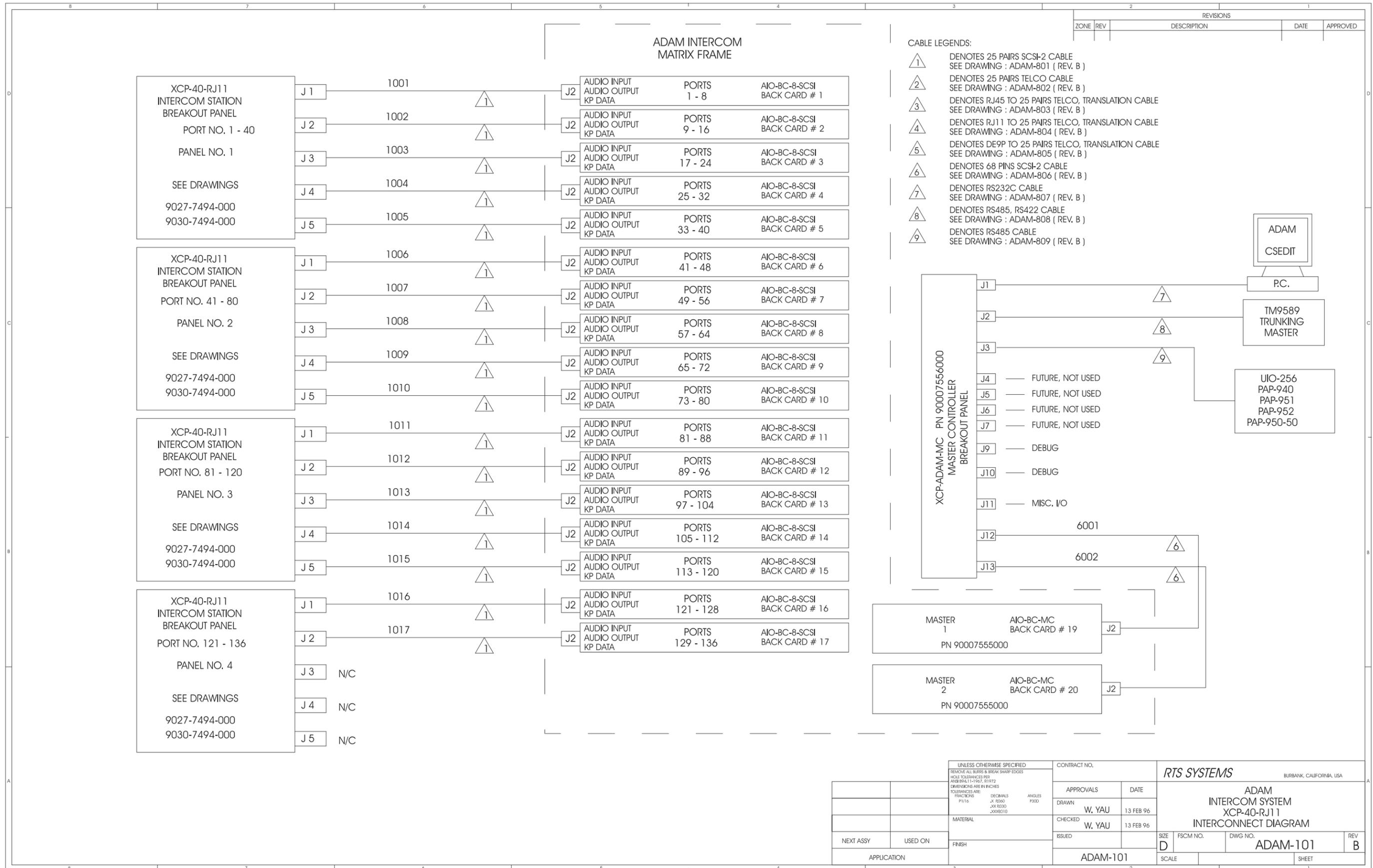
Intercom Port No.	ADAM Audio I/O Card No.	Logical Keypanel Number*	AZedit Alpha	AZedit Alias	Description (Device type, locaton, user, etc.)
97	13	1			
98	13	2			
99	13	3			
100	13	4			
101	13	5			
102	13	6			
103	13	7			
104	13	8			
105	14	1			
106	14	2			
107	14	3			
108	14	4			
109	14	5			
110	14	6			
111	14	7			
112	14	8			
113	15	1			
114	15	2			
115	15	3			
116	15	4			
117	15	5			
118	15	6			
119	15	7			
120	15	8			

**Intercom Planning Worksheet, sheet 6 of 6**

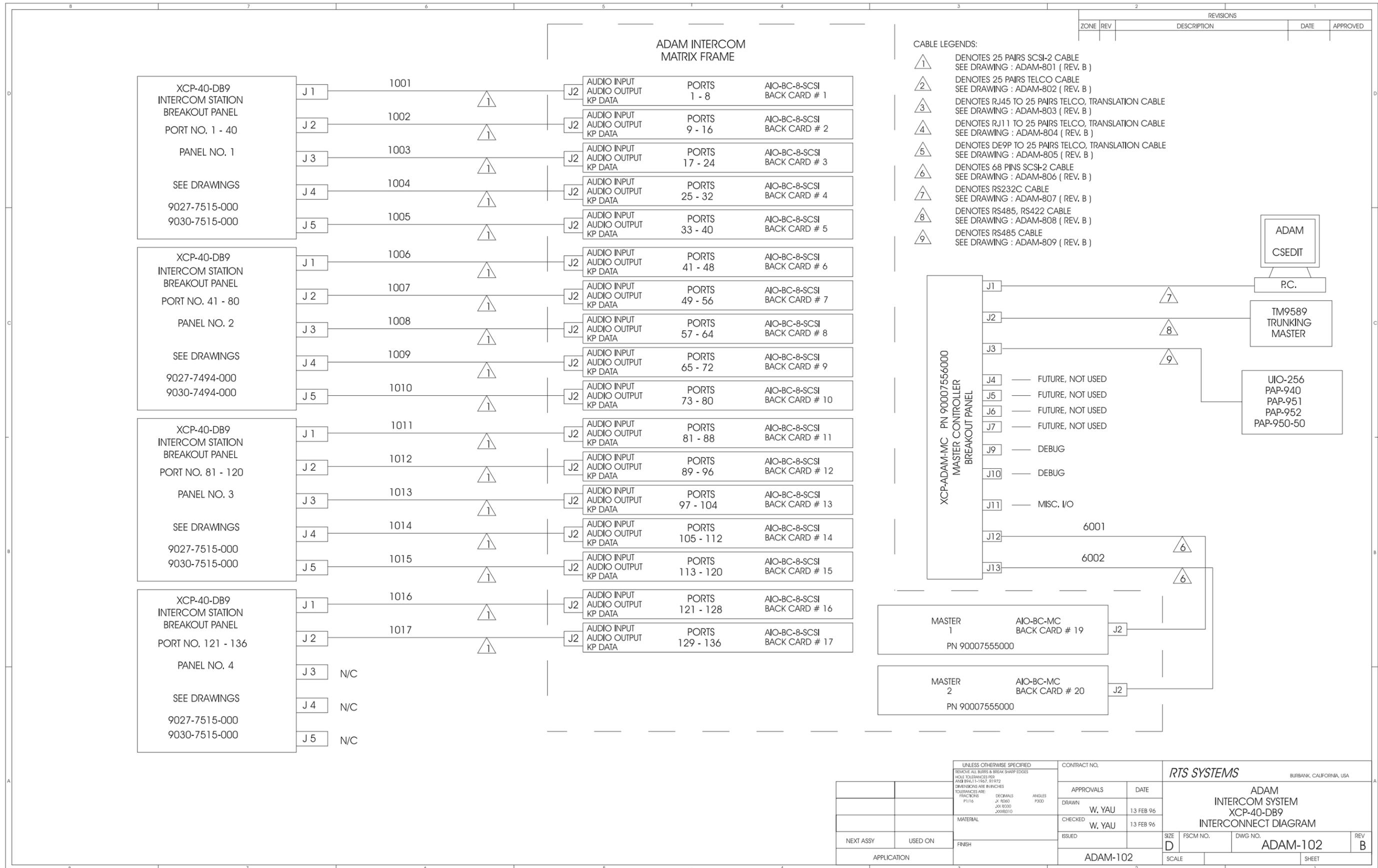
Intercom Port No.	ADAM Audio I/O Card No.	Logical Keypanel Number*	AZedit Alpha	AZedit Alias	Description (Device type, locaton, user, etc.)
121	16	1			
122	16	2			
123	16	3			
124	16	4			
125	16	5			
126	16	6			
127	16	7			
128	16	8			
129	17	1			
130	17	2			
131	17	3			
132	17	4			
133	17	5			
134	17	6			
135	17	7			
136	17	8			

# 11 ADAM Drawings

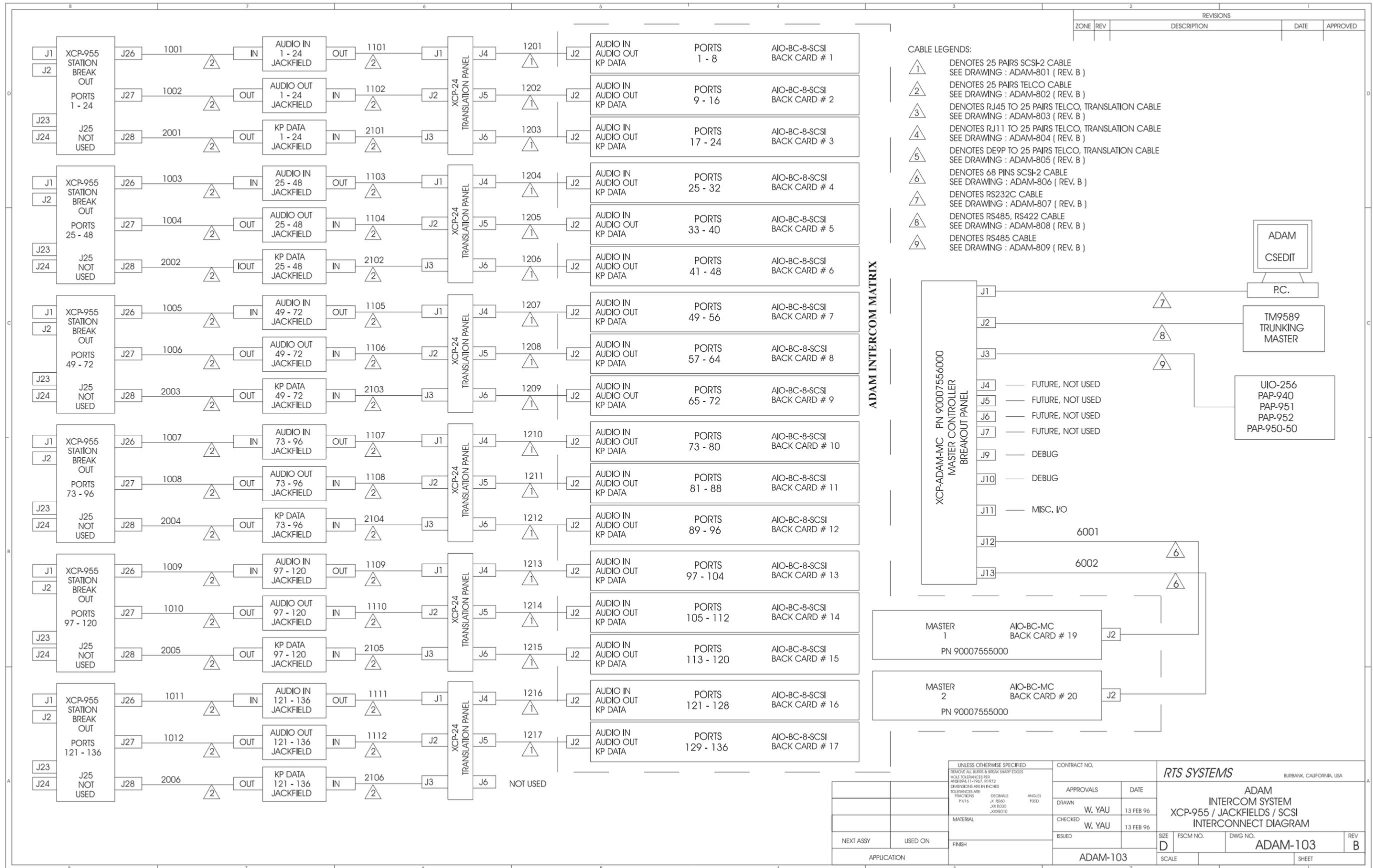
1. ADAM Intercom System XCP-40-RJ11 Interconnect Diagram .....	24
2. ADAM Intercom System XCP-40-DB9 Interconnect Diagram .....	25
3. ADAM Intercom System XCP-955/Jackfields/SCSI Interconnect Diagram .....	26
4. ADAM Intercom System XCP-955/Jackfields/RJ Interconnect Diagram .....	27
5. ADAM Intercom System XCP-955/Jackfields/SCSI Interconnect Diagram .....	28
6. ADAM Intercom System XCP-955/Jackfields/RJ Interconnect Diagram .....	29
7. ADAM Intercom System XCP-954-48/Jackfields/SCSI Interconnect Diagram .....	30
8. ADAM Intercom System XCP-954-48/Jackfields/RJ Interconnect Diagram .....	31
9. ADAM Intercom System Matrix Frame Layout .....	32
10. ADAM Intercom System Input/Output/Data 50 Pins SCSI-2 Cable .....	33
11. ADAM Intercom System Audio Input/Output 25 Pairs Telco Cable .....	34
12. ADAM Intercom System Audio Input/Output 25 Pairs To RJ45 Cable .....	35
13. ADAM Intercom Matrix RJ11 to 50 Pins Telco Translation Cable .....	36
14. ADAM Intercom Matrix DB9 to 50 Pins Telco Translation Cable .....	37
15. ADAM Intercom System Master Controller 68 Pins SCSI-2 Cable .....	38
16. ADAM Intercom System AZedit to PC RS-232-C Cable .....	39
17. ADAM Intercom System Matrix to Trunk Master RS-485/RS232C Cable .....	40
18. ADAM Intercom System UIO-256 and PAP Cables .....	41
19. ADAM Intercom System Intercom Station Cables .....	42
20. ADAM Intercom System CDP-950 Cables .....	43

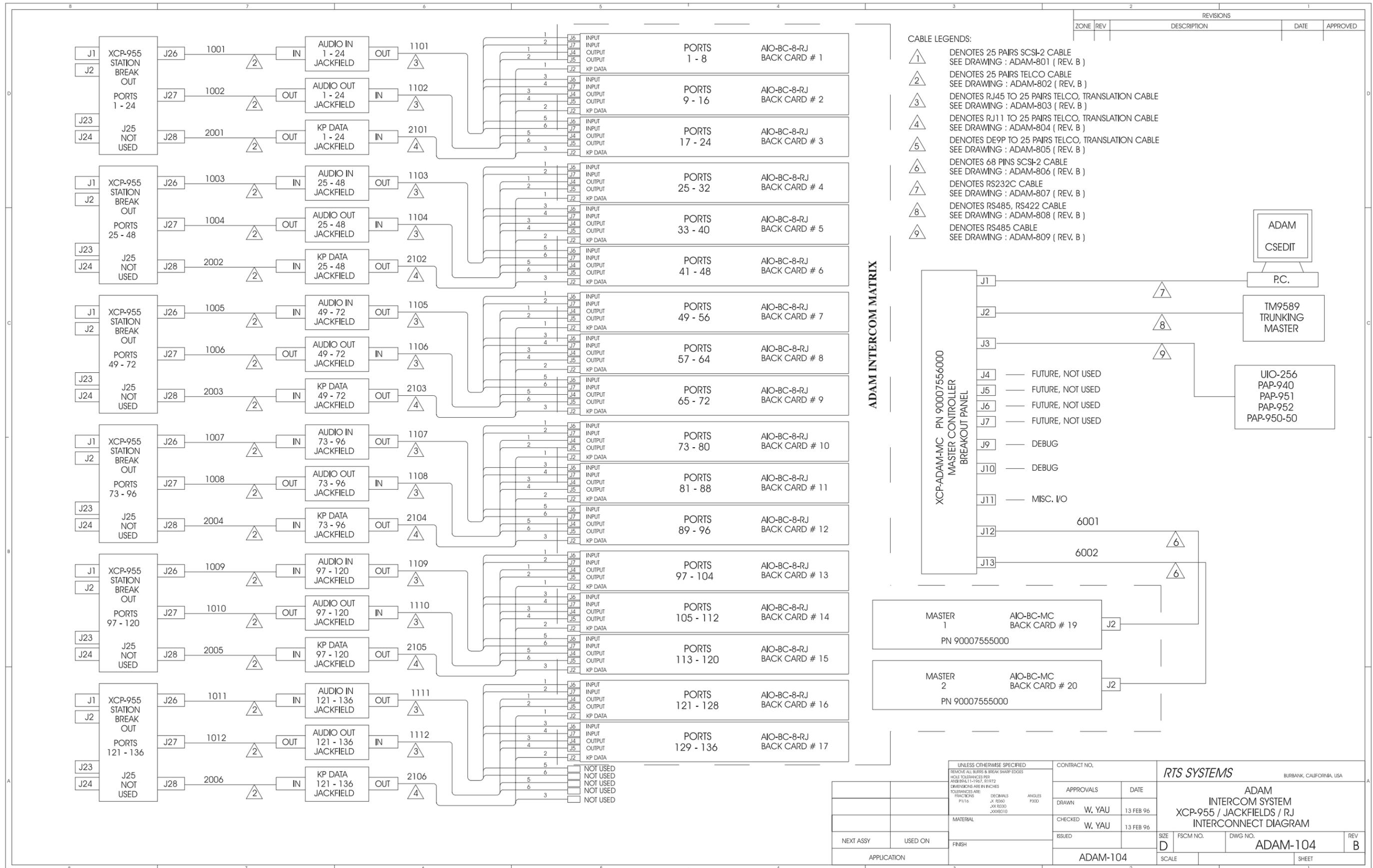


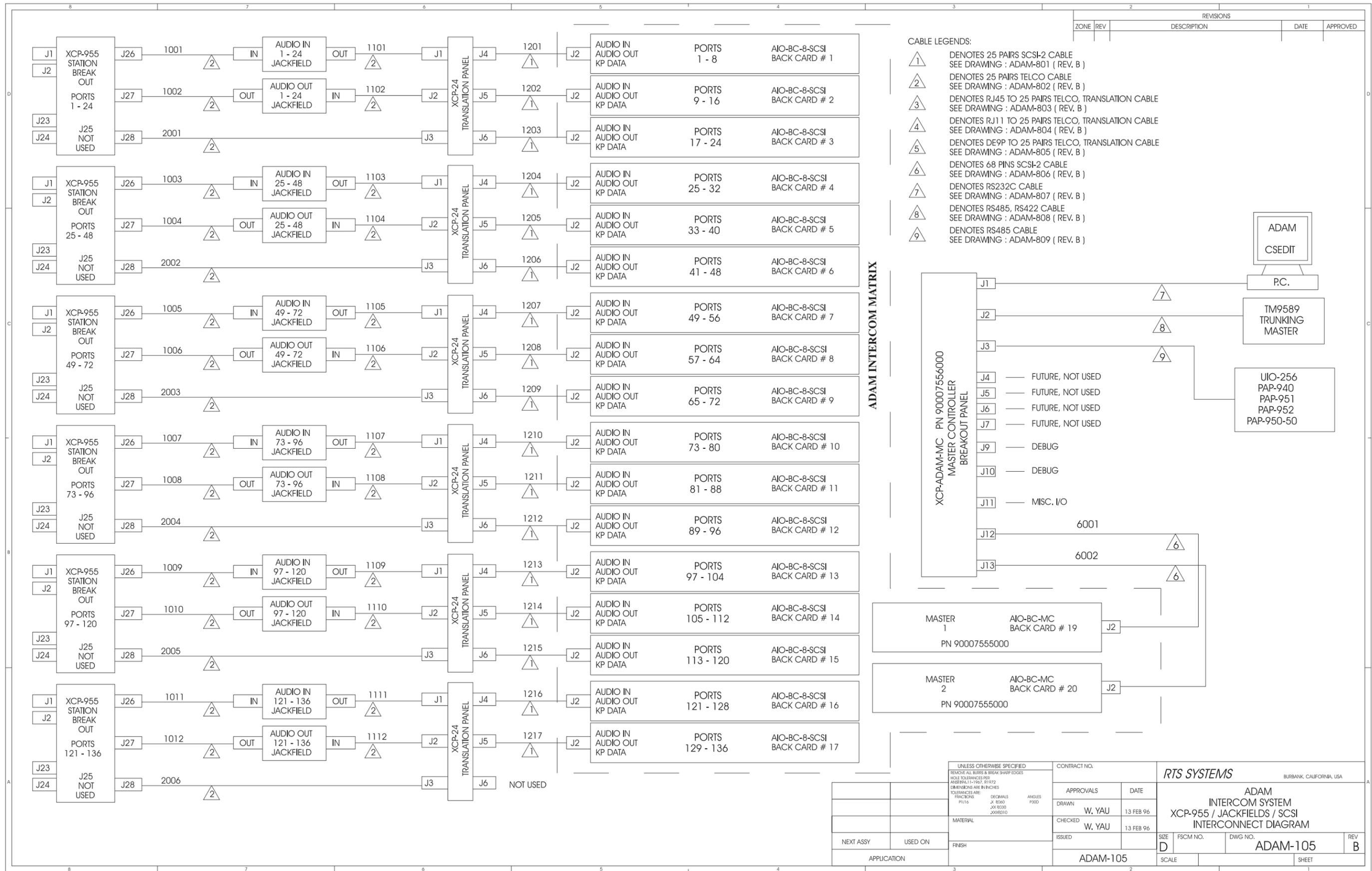
UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & BREAK SHARP EDGES HOLE TOLERANCES PER ANSI B91.1-1987, 91.972 DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES P1/16 .X .050 .X .003		CONTRACT NO.		<b>RTS SYSTEMS</b> <small>BURBANK, CALIFORNIA, USA</small>	
APPROVALS		DATE		<b>ADAM INTERCOM SYSTEM XCP-40-RJ11 INTERCONNECT DIAGRAM</b>	
DRAWN <b>W. YAU</b>		13 FEB 96			
CHECKED <b>W. YAU</b>		13 FEB 96			
ISSUED				SIZE <b>D</b>	FSCM NO.
APPLICATION		<b>ADAM-101</b>		DWG NO. <b>ADAM-101</b>	REV <b>B</b>
				SCALE	SHEET

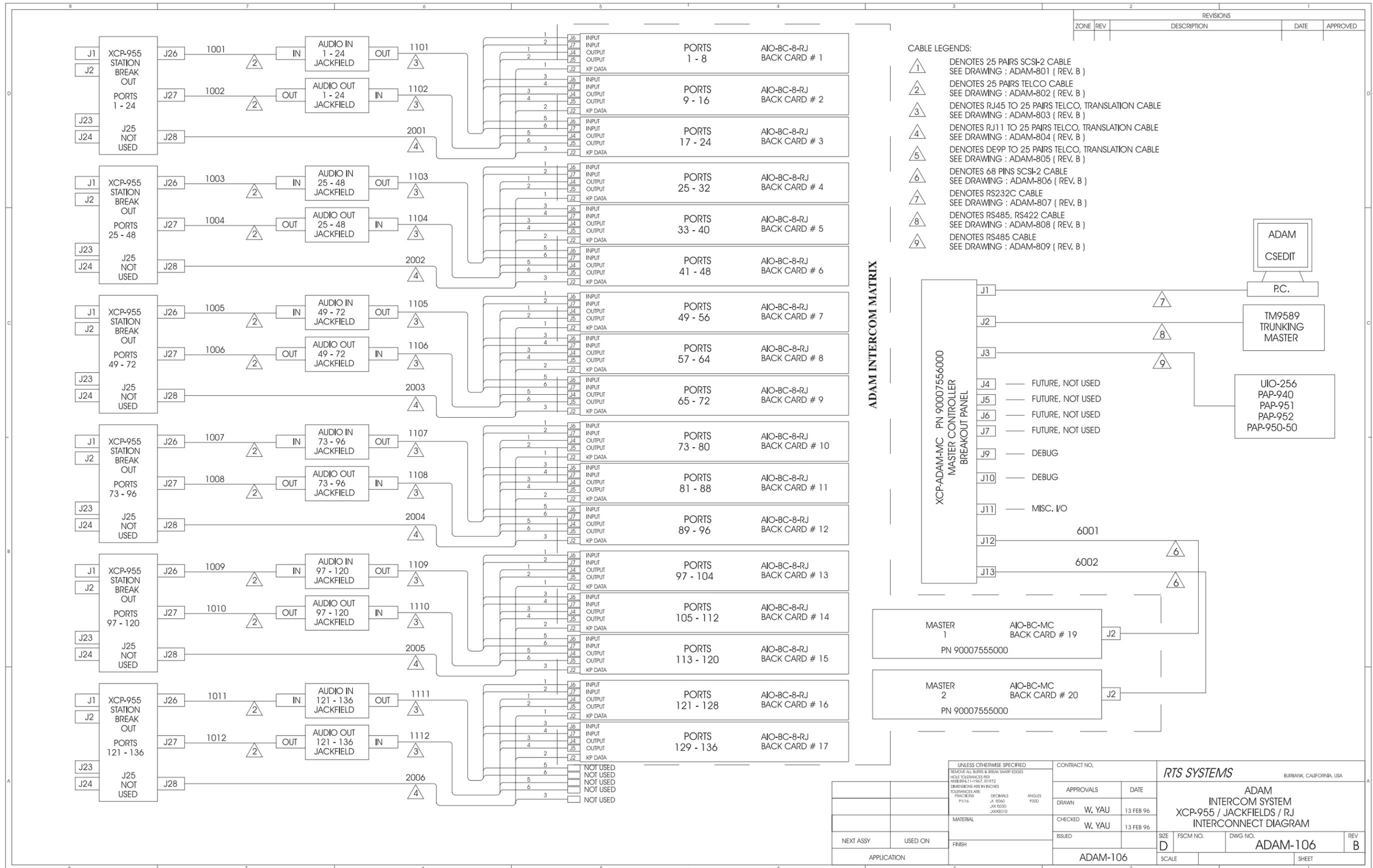


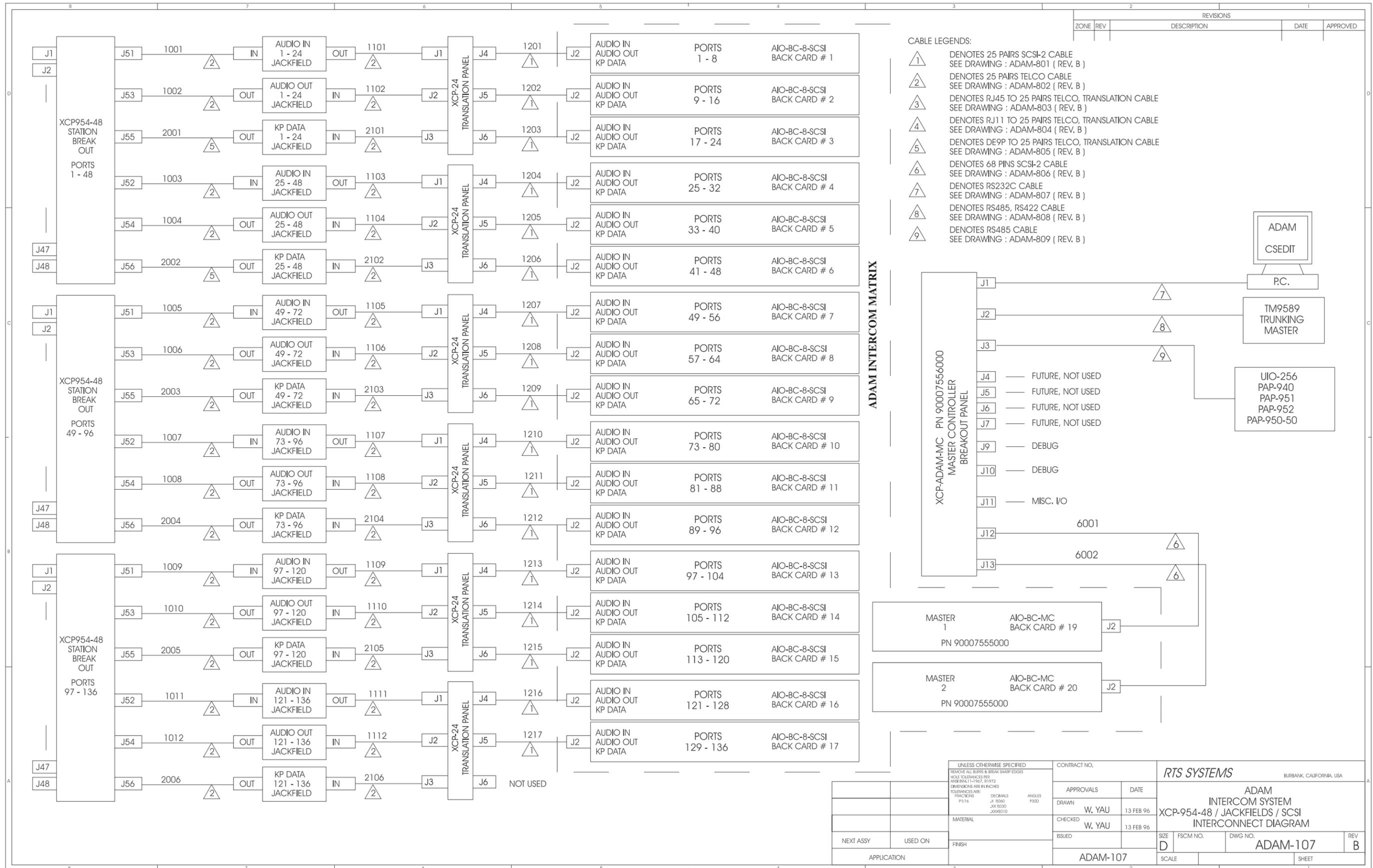
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APPROVALS		DATE		ADAM INTERCOM SYSTEM	
DRAWN W. YAU		13 FEB 96		XCP-40-DB9	
CHECKED W. YAU		13 FEB 96		INTERCONNECT DIAGRAM	
ISSUED				SIZE D	FSCM NO.
APPLICATION		ADAM-102		DWG NO. ADAM-102	REV B
NEXT ASSY	USED ON	SCALE		SHEET	







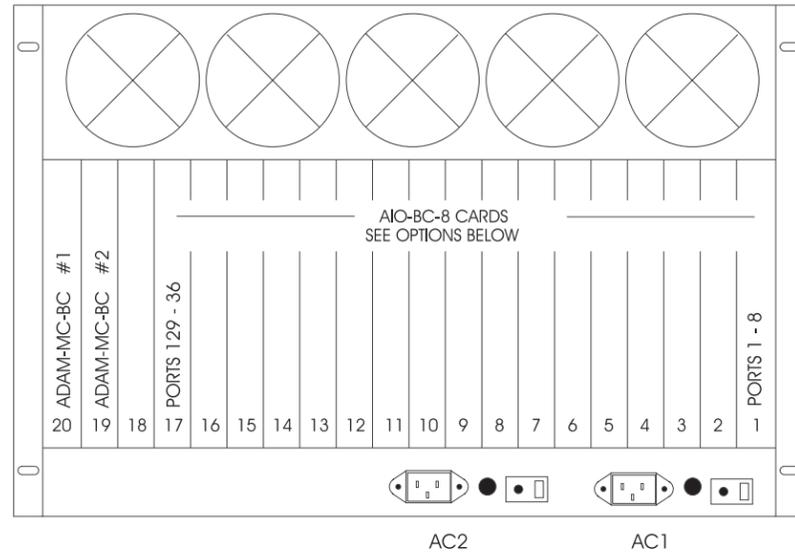




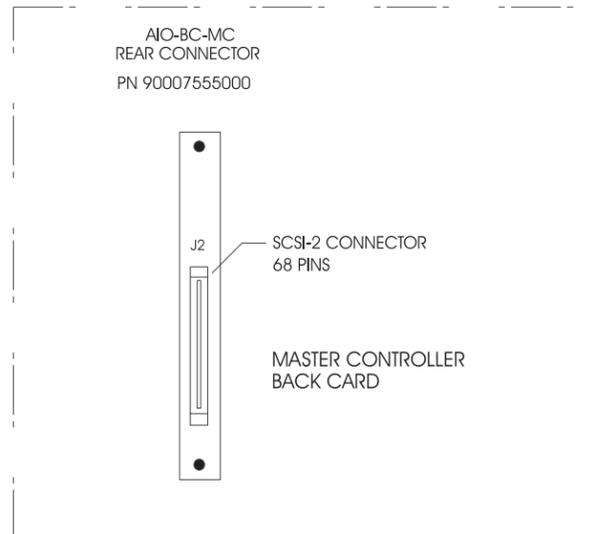
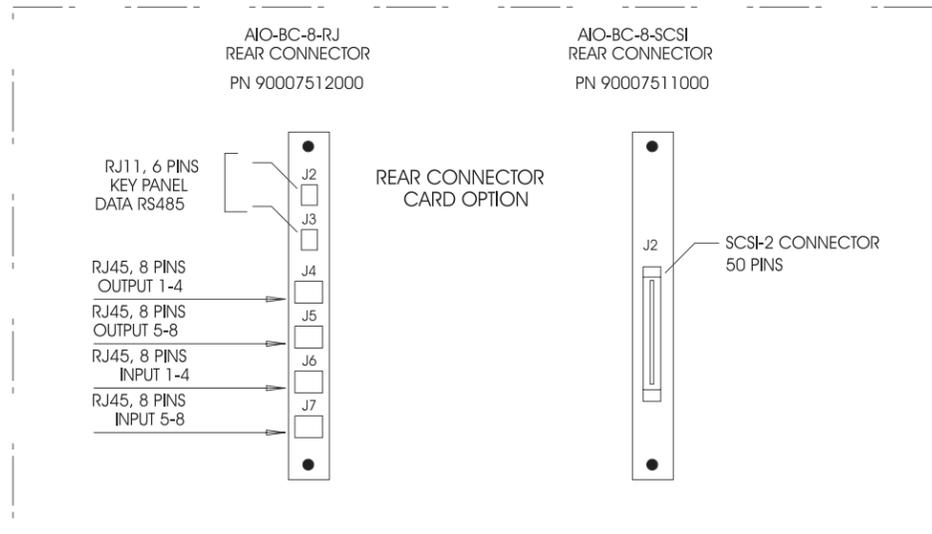
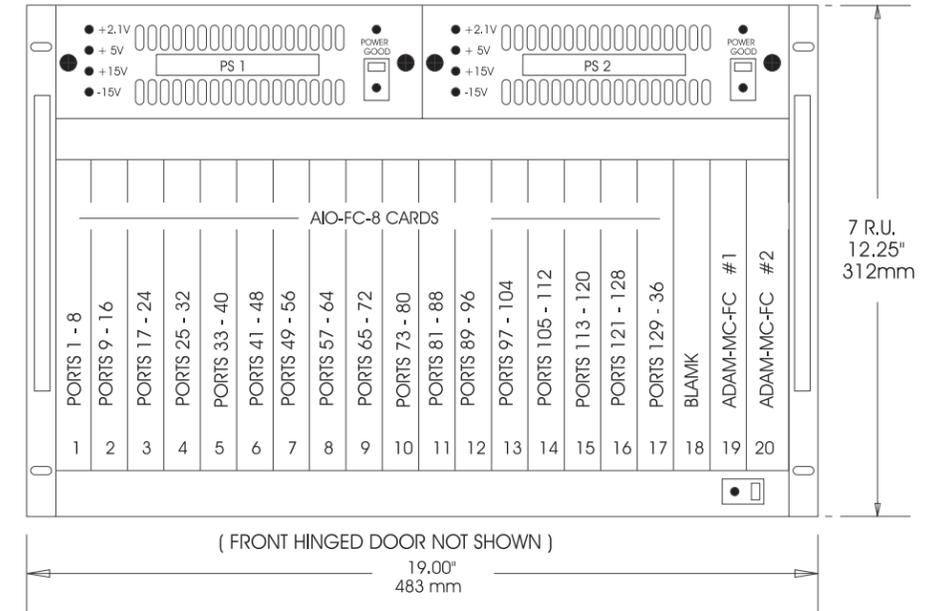


ZONE		REV	DESCRIPTION	DATE	APPROVED
REVISIONS					

ADAM MATRIX FRAME  
REAR VIEW



ADAM MATRIX FRAME  
FRONT VIEW



UNLESS OTHERWISE SPECIFIED REMOVE ALL BURS & BREAK SHARP EDGES HOLE TOLERANCES PER ANSI B91.1-1987, 91972 DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES P1/16 .X .R500 .F300 .XX .R500 .XX .XXX0.10		CONTRACT NO.		RTS SYSTEMS BURBANK, CALIFORNIA, USA	
APPROVALS		DATE		ADAM INTERCOM SYSTEM MATRIX FRAME LAYOUT	
DRAWN W. YAU		12 FEB 96			
CHECKED W. YAU		12 FEB 96			
ISSUED				SIZE D	FSCM NO.
APPLICATION		ADAM-301		DWG NO.	ADAM-301
NEXT ASSY		USED ON		SCALE	NO
				SHEET	





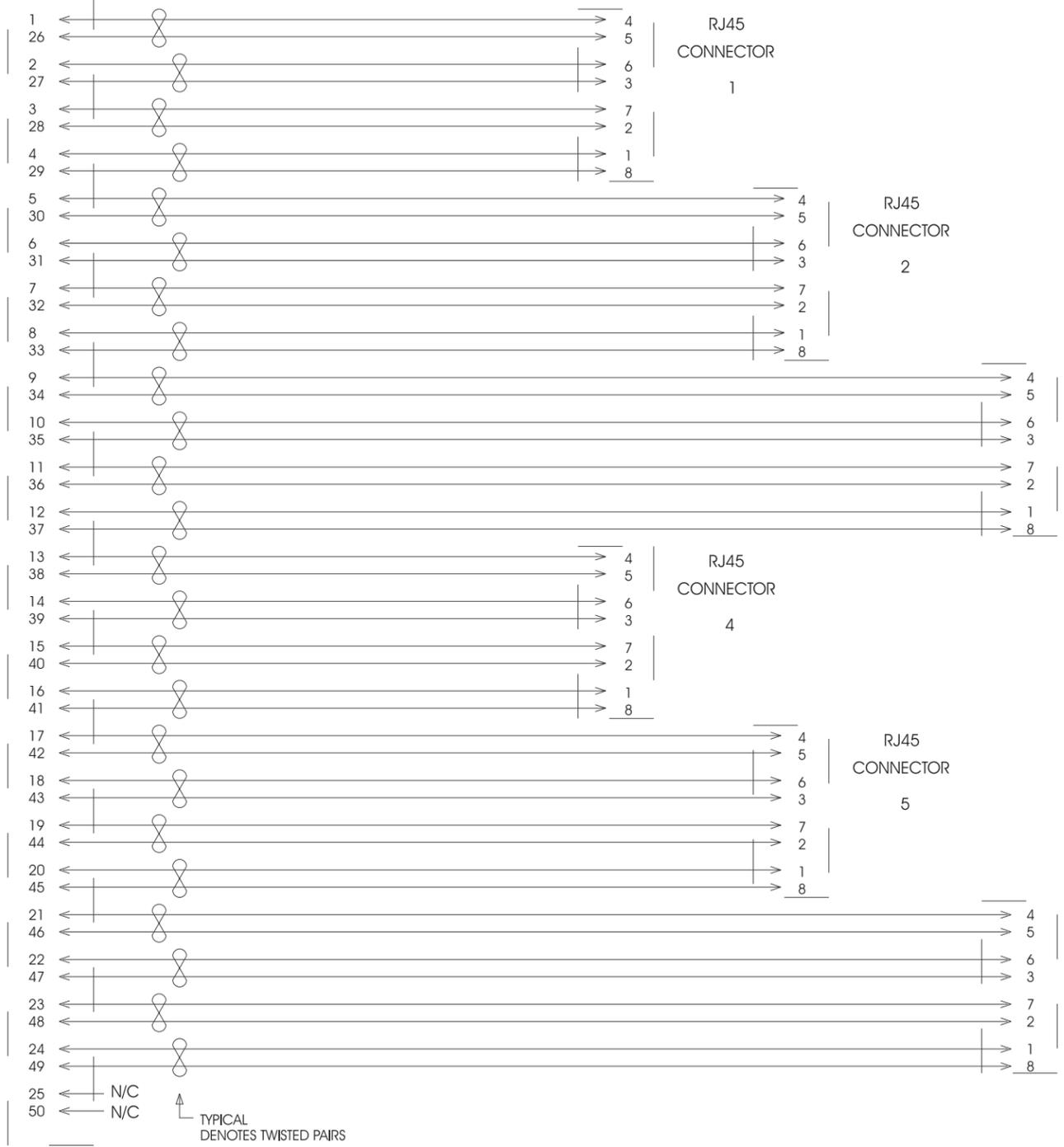
ZONE		REV	DESCRIPTION	DATE	APPROVED

50 PINS  
MALE TELCO CONNECTOR

TYPICAL 25 PAIRS  
TO RJ45 CABLE



8 PINS  
MALE RJ45 CONNECTOR



NOTE:  
CABLE DETAILS FOR



TYPICAL  
DENOTES TWISTED PAIRS

RJ45  
CONNECTOR  
1

RJ45  
CONNECTOR  
2

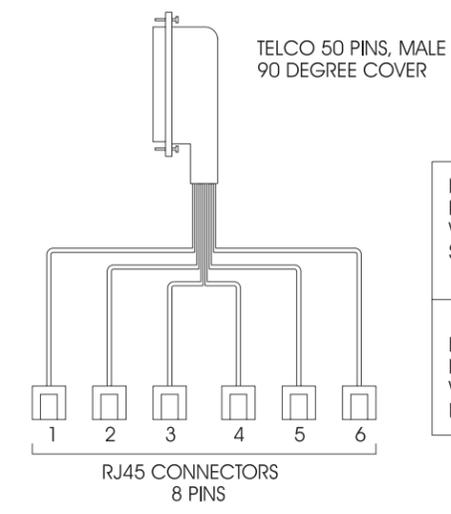
RJ45  
CONNECTOR  
3

RJ45  
CONNECTOR  
4

RJ45  
CONNECTOR  
5

RJ45  
CONNECTOR  
6

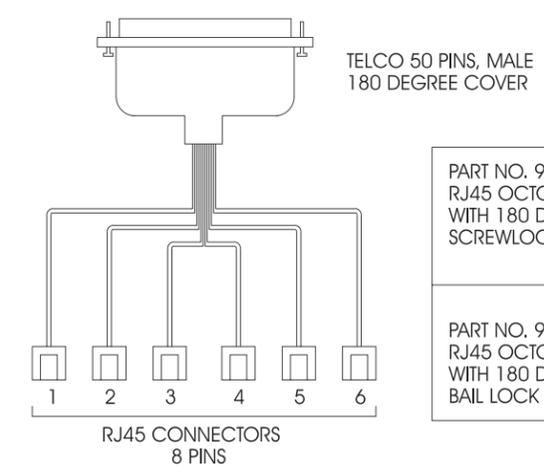
ASSEMBLY DETAIL



PART NO. 90207553008  
RJ45 OCTOPUS CABLE  
WITH 90 DEGREE COVER  
SCREWLOCK TELCO, MALE

PART NO. 90207553108  
RJ45 OCTOPUS CABLE  
WITH 90 DEGREE COVER  
BAIL LOCK TELCO, MALE

ASSEMBLY DETAIL



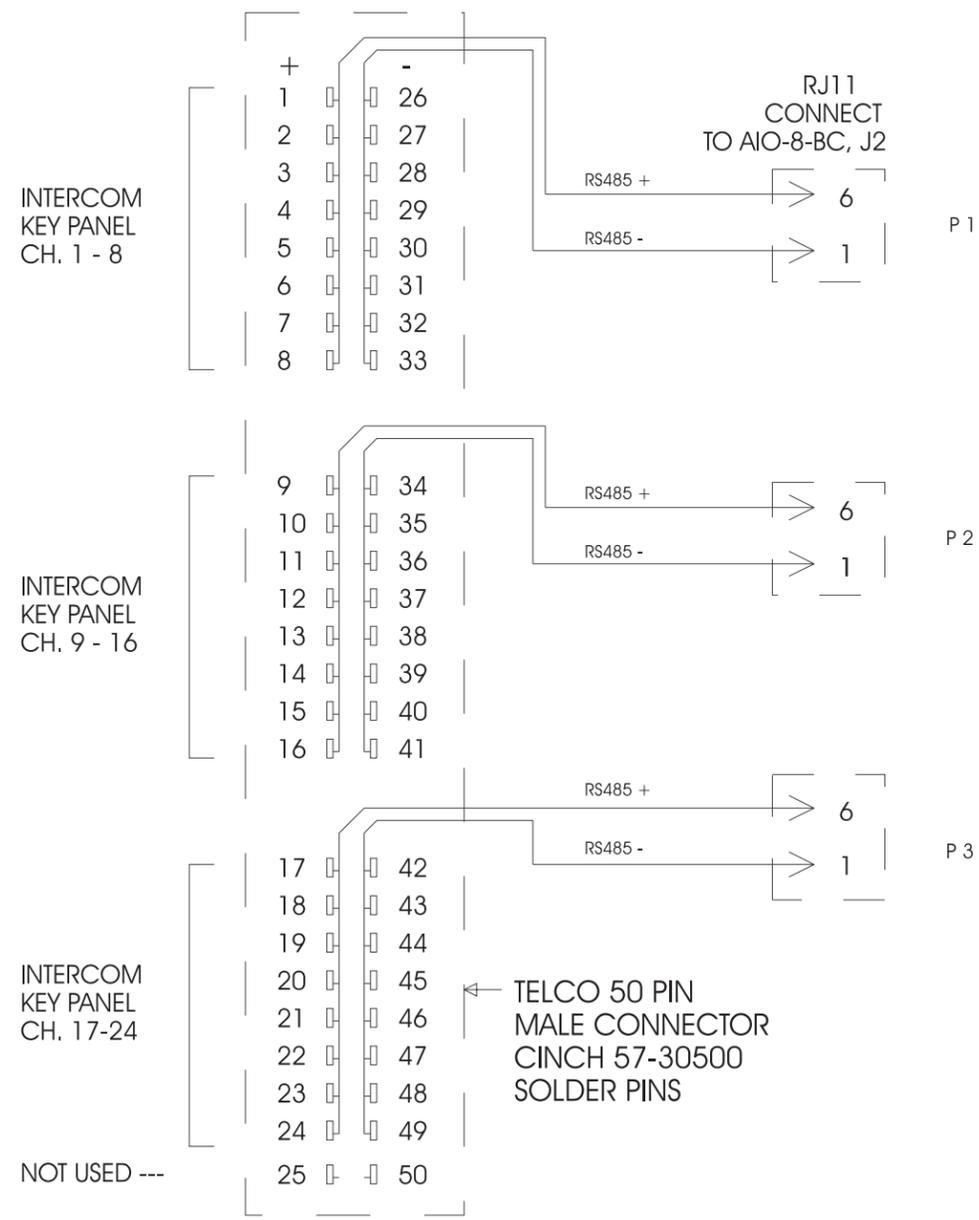
PART NO. 90207553208  
RJ45 OCTOPUS CABLE  
WITH 180 DEGREE COVER  
SCREWLOCK TELCO, MALE

PART NO. 90207553308  
RJ45 OCTOPUS CABLE  
WITH 180 DEGREE COVER  
BAIL LOCK TELCO, MALE

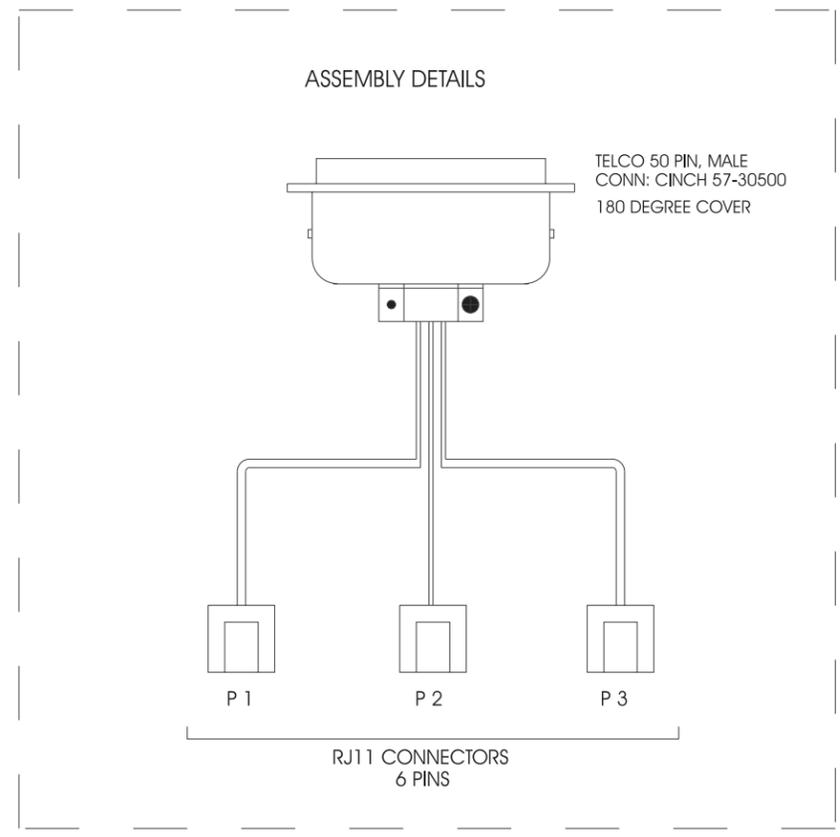
UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & BREAK SHARP EDGES HOLE TOLERANCES PER ANSI B91.1-1987, 201972 DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES P1/16 .X .R500 .F300 X .R500 .X .R500 .X .R500 X .R500 .X .R500 .X .R500		CONTRACT NO.		RTS SYSTEMS BURBANK, CALIFORNIA, USA	
APPROVALS		DATE		ADAM INTERCOM SYSTEM AUDIO INPUT / OUTPUT 25 PAIRS TO RJ45 CABLE	
DRAWN W. YAU		14 FEB 96		SIZE D	
CHECKED W. YAU		14 FEB 96		FSCM NO.	
ISSUED		ADAM-803		DWG NO. ADAM-803	
NEXT ASSY		USED ON		REV B	
APPLICATION		SCALE		SHEET	

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

CABLE DETAILS



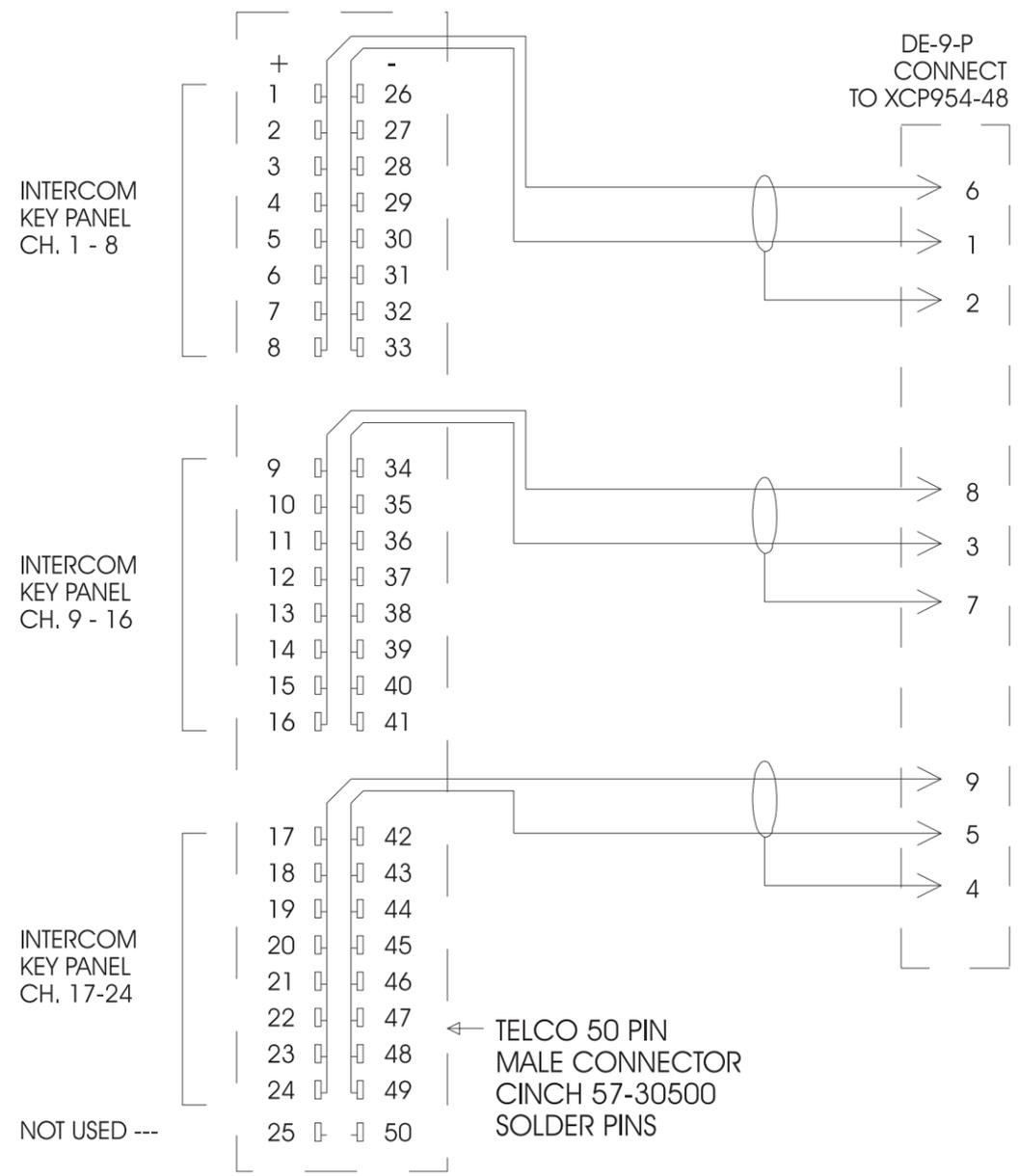
ASSEMBLY DETAILS



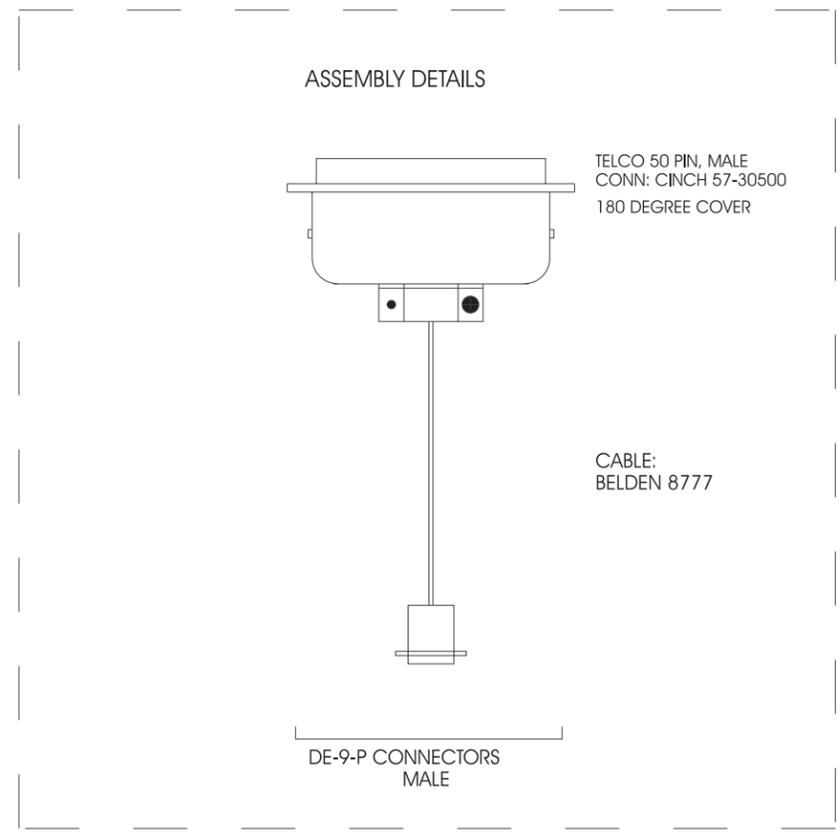
CONTRACT NO.		RTS SYSTEMS <small>BURBANK, CALIFORNIA, USA</small>			
APPROVALS	DATE	ADAM INTERCOM MATRIX RJ11 TO 50 PINS TELCO TRANSLATION CABLE			
DRAWN W. YAU	14 FEB 96				
CHECKED W. YAU	14 FEB 96				
ISSUED W. YAU	14 FEB 96				
ADAM-804		SIZE D	FSCM NO.	DWG NO. ADAM-804	REV B
SCALE		SHEET			

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

CABLE DETAILS

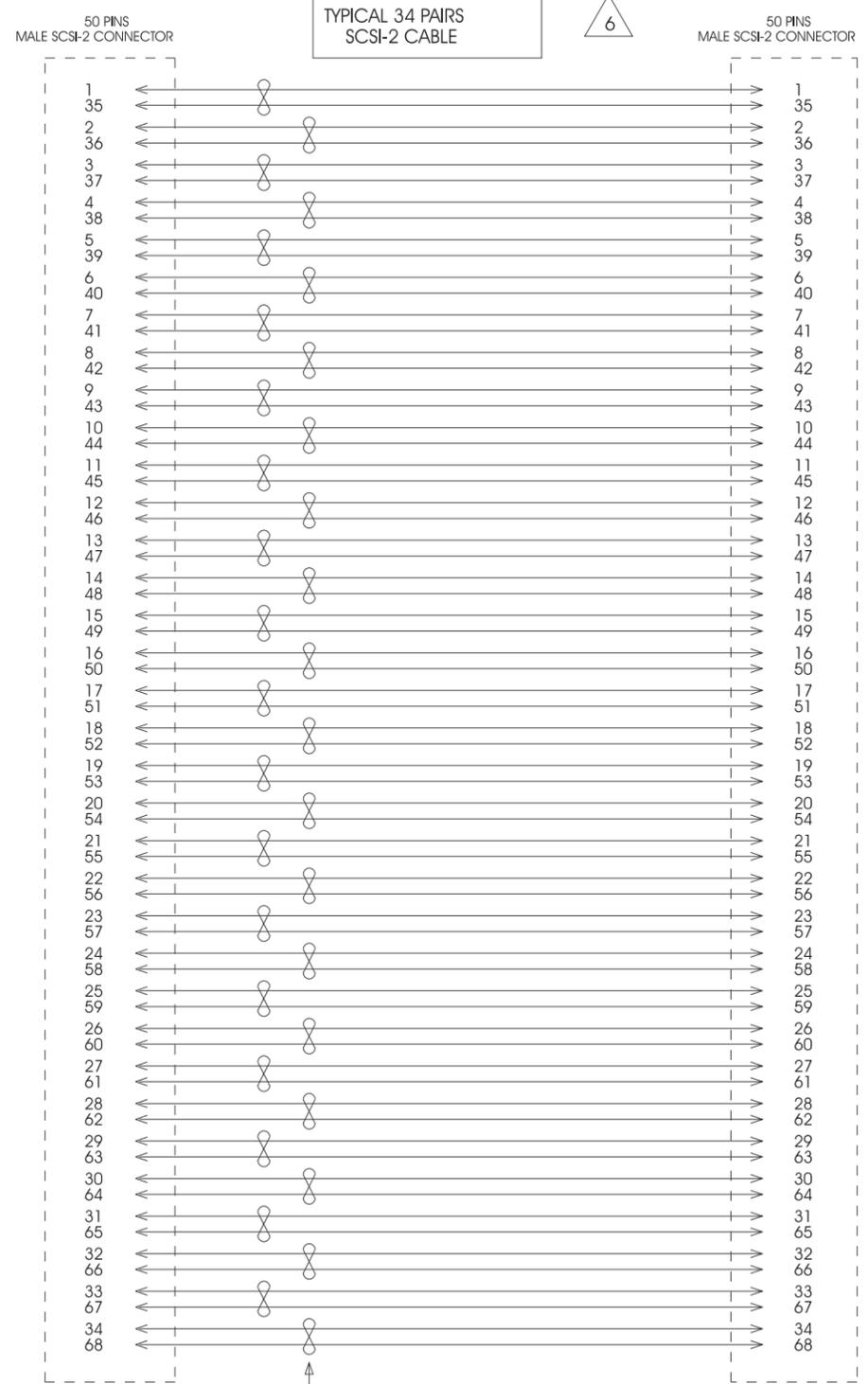


ASSEMBLY DETAILS



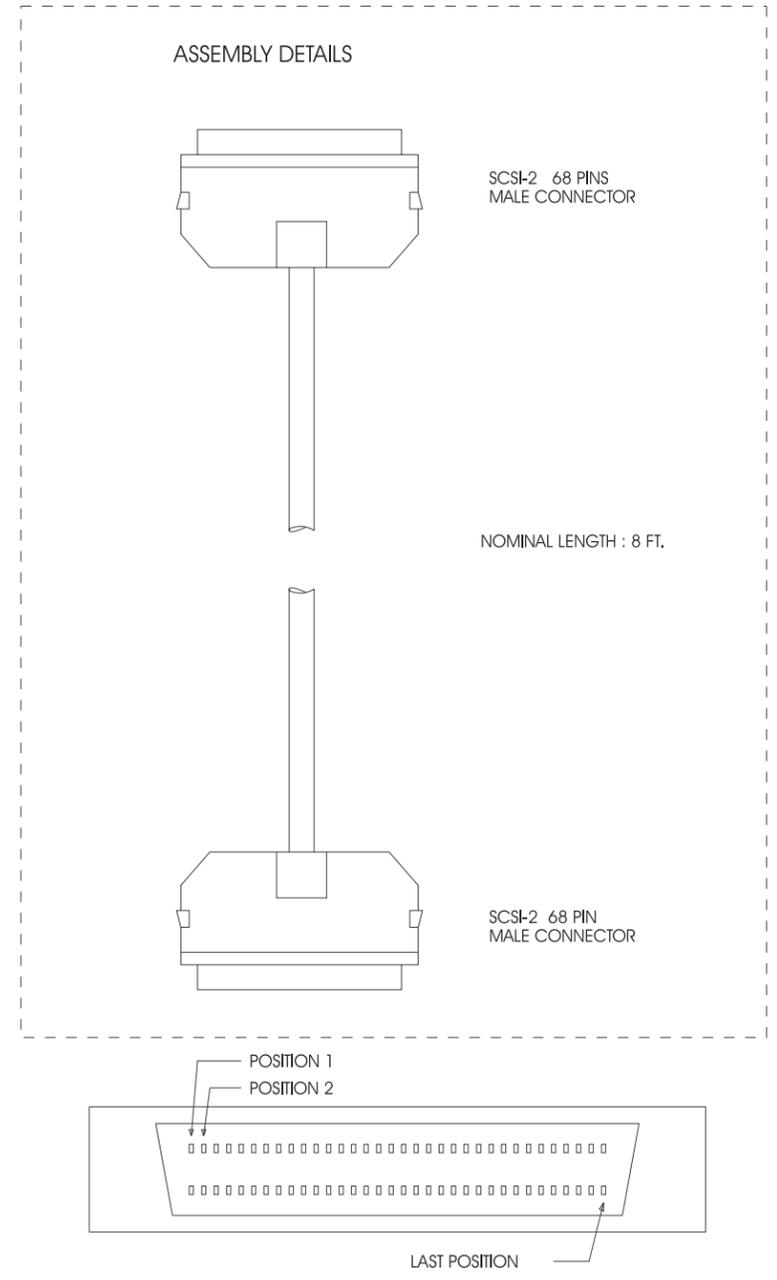
CONTRACT NO.		RTS SYSTEMS <small>BURBANK, CALIFORNIA, USA</small>			
APPROVALS	DATE	ADAM INTERCOM MATRIX DB9 TO 50 PINS TELCO TRANSLATION CABLE			
DRAWN W. YAU	14 FEB 96				
CHECKED W. YAU	14 FEB 96				
ISSUED W. YAU	14 FEB 96				
ADAM-805		SIZE D	FSCM NO.	DWG NO. ADAM-805	REV B
SCALE		SHEET			

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



TYPICAL DENOTES TWISTED PAIRS

CABLE DETAILS FOR : 6



UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & BREAK SHARP EDGES HOLE TOLERANCES PER ANSI B91.1-1987, S11912 DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES P1/16 .X .R500 .F300 .XX .R500 .XX00/10		CONTRACT NO.		RTS SYSTEMS BURBANK, CALIFORNIA, USA	
APPROVALS		DATE		ADAM INTERCOM SYSTEM MASTER CONTROLLER 68 PINS SCSI-2 CABLE	
DRAWN W. YAU		14 FEB 96			
CHECKED W. YAU		14 FEB 96			
ISSUED				SIZE D	FSCM NO.
NEXT ASSY		USED ON		DWG NO. ADAM-806	
APPLICATION		ADAM-806		SCALE	REV B
				SHEET	

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

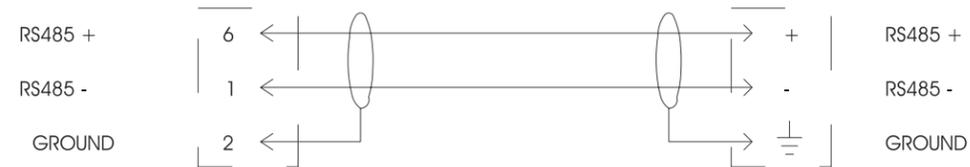


UNLESS OTHERWISE SPECIFIED REMOVE ALL BURS & BREAK SHARP EDGES HOLE TOLERANCES PER ANSI B91.11-1987, SI 1972 DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES P1/16 .X .R500 P300 .XX .R500 .XXX0.10		CONTRACT NO.		RTS SYSTEMS BURBANK, CALIFORNIA, USA	
APPROVALS		DATE		ADAM INTERCOM SYSTEM AZEDIT TO PC RS-232-C CABLE	
DRAWN W. YAU		15 FEB 96			
CHECKED W. YAU		15 FEB 96			
ISSUED					
NEXT ASSY	USED ON	ADAM-807		SIZE D	FSCM NO.
APPLICATION		ADAM-807		DWG NO.	ADAM-807
				REV	A
				SCALE	SHEET

ZONE		REV	DESCRIPTION	DATE	APPROVED

DE-9-P  
MALE, 9 PINS  
"D" SUB  
CONNECT TO MATRIX  
XCP-ADAM-MC

TELCO AMP CHAMP  
MALE, 50 PINS  
CONNECT TO TM9589  
COMM. PORT



TM 9589  
TRUNK MASTER CONTROLLER  
COMMUNICATION PORTS  
ASSIGNMENT TABLE  
RS485 SERIAL

CONN.	PIN +	PIN -	GROUND	COMM	TYPE
J5	27	2	3	1	RS485
J5	30	5	28	2	RS485
J5	32	7	8	3	RS485
J5	35	10	33	4	RS485
J5	37	12	13	5	RS485
J5	40	15	38	6	RS485
J5	42	17	18	7	RS485
J5	45	20	43	8	RS485
J4	27	2	3	9	RS485
J4	30	5	28	10	RS485
J4	32	7	8	11	RS485
J4	35	10	33	12	RS485
J4	37	12	13	13	RS485
J4	40	15	38	14	RS485
J4	42	17	18	15	RS485
J4	45	20	43	16	RS485
J3	27	2	3	17	RS485
J3	30	5	28	18	RS485
J3	32	7	8	19	RS485
J3	35	10	33	20	RS485
J3	37	12	13	21	RS485
J3	40	15	38	22	RS485
J3	42	17	18	23	RS485
J3	45	20	43	24	RS485

TM 9589  
TRUNK MASTER CONTROLLER  
COMMUNICATION PORTS  
ASSIGNMENT TABLE  
RS232C SERIAL

CONN.	PIN +	PIN -	GROUND	COMM	TYPE
SELECTABLE BY JUMPER SETTING ON FC9588-IOU CARD ( TOP CARD )					
J5	46	21	22	7	RS232C
J5	49	23	48	8	RS232C
SELECTABLE BY JUMPER SETTING ON FC9588-IOU CARD ( CENTER CARD )					
J4	46	21	22	15	RS232C
J4	49	23	48	16	RS232C
SELECTABLE BY JUMPER SETTING ON FC9588-IOU CARD ( BOTTOM CARD ) FACTORY DEFAULT SETTING					
J3	46	21	22	23	RS232C
J3	49	23	48	24	RS232C

Note:

1 -- J3, J4, J5 ARE AMP CHAMP 50 PIN FEMALE CONNECTORS ON TM9589

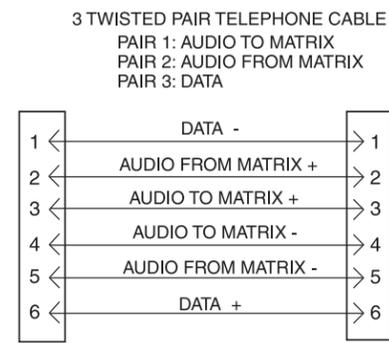
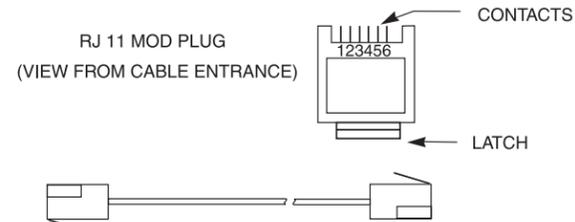
2 -- COMM. PORT 7, 8, 15, 16, 23, 24 ARE SELECTABLE FOR RS485 OR RS232C.

FACTORY DEFAULT SETTING : COMM. 7, 8, 15, 16 = RS485, COMM. 23, 24 = RS232C.

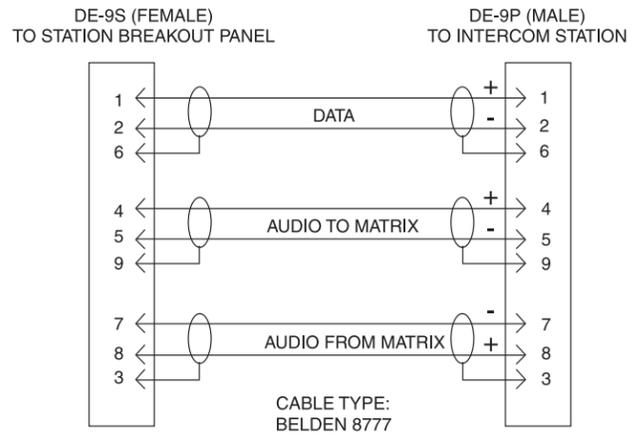
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APPROVALS		DATE		ADAM INTERCOM SYSTEM MATRIX TO TRUNK MASTER RS-485 / RS232C CABLE	
DRAWN W. YAU		15 FEB 96			
CHECKED W. YAU		15 FEB 96			
ISSUED		SCALE		SIZE D	FSCM NO.
APPLICATION		ADAM-808		DWG NO.	ADAM-808
NEXT ASSY	USED ON	SHEET		REV	A



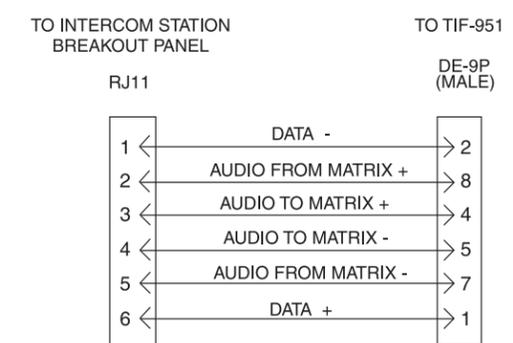
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



**RJ-11 INTERCOM CABLE**



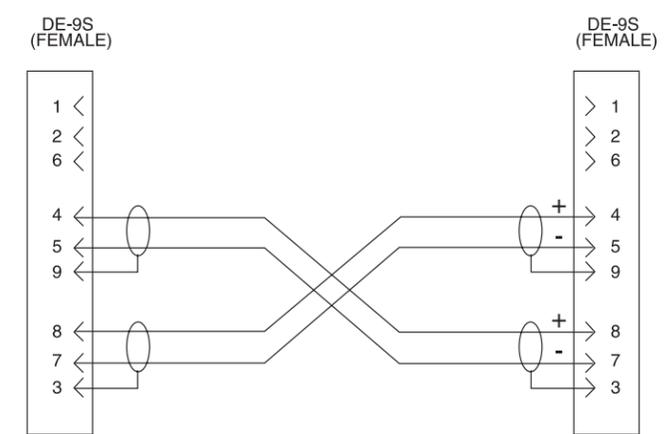
**9-PIN D-SUB INTERCOM CABLE**



**RJ-11 TO 9-PIN D-SUB INTERCOM CABLE  
FOR CONNECTION OF TIF-951 TO AN RJ-11  
STYLE STATION BREAKOUT PANEL**

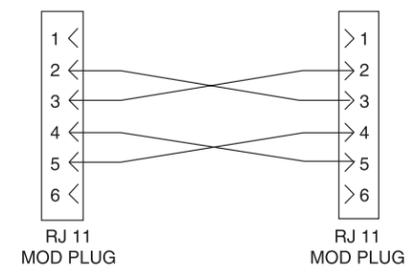
TO STATION BREAKOUT PANEL  
IN FIRST INTERCOM SYSTEM

TO STATION BREAKOUT PANEL  
IN SECOND INTERCOM SYSTEM



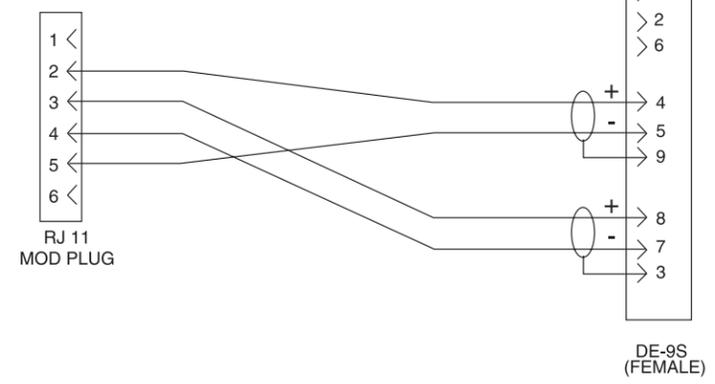
TO STATION BREAKOUT PANEL  
IN FIRST INTERCOM SYSTEM

TO STATION BREAKOUT PANEL  
IN SECOND INTERCOM SYSTEM



TO STATION BREAKOUT PANEL  
IN FIRST INTERCOM SYSTEM

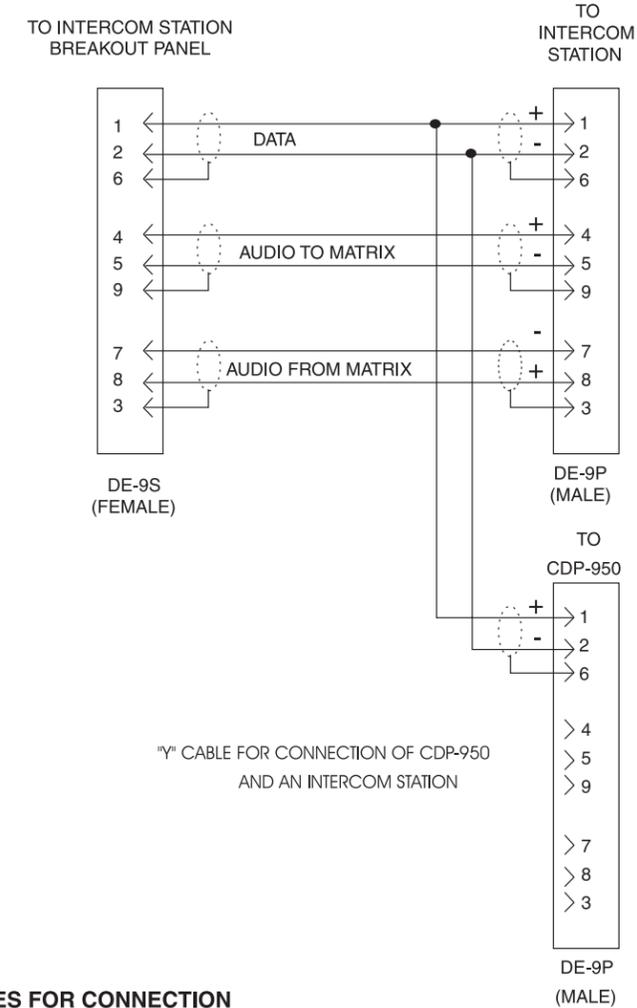
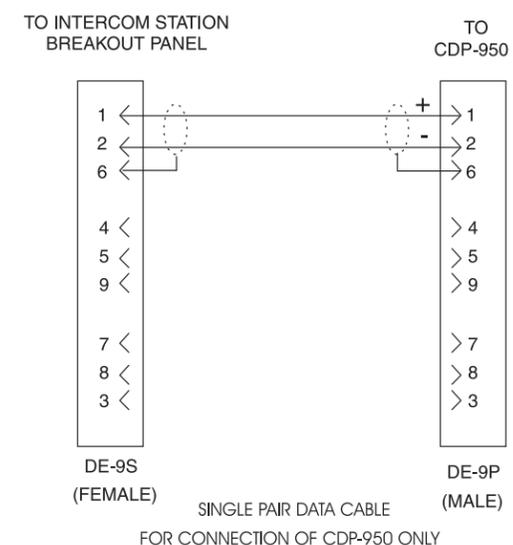
TO STATION BREAKOUT PANEL  
IN SECOND INTERCOM SYSTEM



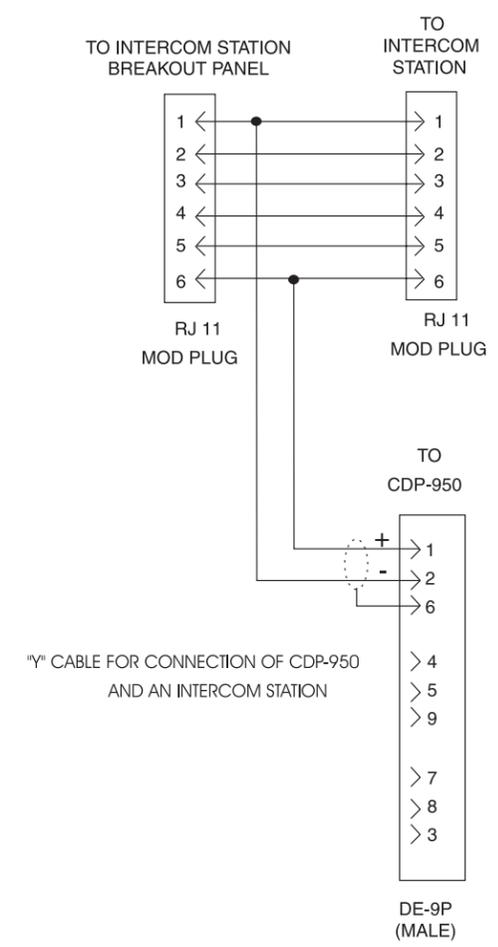
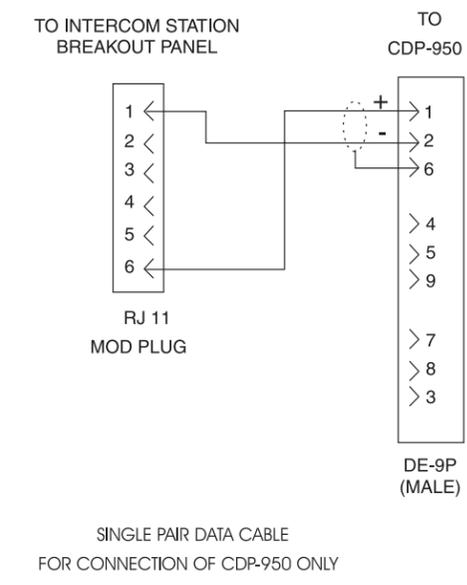
**INTERCOM AUDIO CABLES FOR TRUNKING INTERCONNECT**

UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & BREAK SHARP EDGES HOLE TOLERANCES PER ANSI B91.11-1987, 91.1972 DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONING DECIMALS ANGLES P1/16 .X .R500 P300		CONTRACT NO.		RTS SYSTEMS BURBANK, CALIFORNIA, USA	
APPROVALS		DATE		<b>ADAM INTERCOM SYSTEM INTERCOM STATION CABLES</b>	
DRAWN W. YAU		15 FEB 96			
CHECKED W. YAU		15 FEB 96			
ISSUED					
NEXT ASSY	USED ON	ADAM-810		SIZE D	FSCM NO.
APPLICATION		ADAM-810		SCALE	DWG NO. ADAM-810
				REV A	
				SHEET	

ZONE		REV	DESCRIPTION	DATE	APPROVED
REVISIONS					



**CDP-950 CABLES FOR CONNECTION TO INTERCOM STATION BREAKOUT PANELS WITH 9-PIN D-SUB CONNECTORS**



**CDP-950 CABLES FOR CONNECTION TO INTERCOM STATION BREAKOUT PANELS WITH RJ-11 CONNECTORS**

UNLESS OTHERWISE SPECIFIED		CONTRACT NO.		RTS SYSTEMS BURBANK, CALIFORNIA, USA	
REMOVE ALL BURRS & BREAK SHARP EDGES		APPROVALS		DATE	
HOLE TOLERANCES PER ANSI B91.11-1987, 31.1972		DRAWN		15 FEB 96	
DIMENSIONS ARE IN INCHES		CHECKED		15 FEB 96	
TOLERANCES ARE:		ISSUED		SCALE	
FRACTIONAL: P1/16		MATERIAL		SIZE D	
DECIMALS: .X R050		FINISH		FSCM NO.	
ANGLES: F300		APPLICATION		DWG NO. ADAM-811	
NEXT ASSY		USED ON		REV A	
				SHEET	
		ADAM-811		SCALE	

# Index

## A

- AC Power Connection 5
- ADAM Circuit Cards 4
  - Card Removal and Installation 4
  - Front Card Access 4
  - Master Controller Card DIP Switches 5
  - Unused Back Card Slots 5
- ADAM Drawings 23
- ADAM Frame Power-Up 5
- Alarm Operation 5

## C

- Circuit Card Reset and Fail Indication 5
- Connections to the ADAM Card Frame 6
  - Configuration Computer Connection and Check 6
  - Connecting to a TM-2000 8
  - Program Assign Panel (PAP) Installation 6
    - Checking PAP Operation 7
    - Connecting a Single PAP 6
    - Connecting Additional PAPs 6
    - Connecting Program Sources for use by PAP's 7
      - General 6
    - Programming IFB Defaults to Initialize PAPs 7
- UIO-256 Input/Output Frame 7
  - Connecting Additional UIO-256 Frames 7
  - Connecting One UIO-256 Frame 7
  - Programming the UIO-256 7

## I

- Intercom Port Connections 10
  - CDP-950 Camera Delegate Panel Installation N 12
    - CDP-950 General Description 12
    - CDP-950 Theory of Operation 12
    - Installing the CDP-950 12
    - Programming the CDP-950 12
  - General Information 10
  - General Procedure for Connecting Devices to 10
  - KP-12 Installation Notes 10
  - KP-32 Keypanel Installation Notes 11
  - Logical Keypanel Numbers 10
  - Program Source Notes 11
  - TIF-2000 Telephone Interface Installation Note 11
- Intercom System Planning Worksheet 17

## **K**

KP-32 Addressing 15

## **M**

Mounting the Central Matrix Components 4

## **P**

Power Supply Removal/Installation 5

## **T**

Table 1. ADAM Master Controller Card DIP Switch Se 13

Table 2. Relationship between Audio Input/Output C 14

Table 3. Address DIP Switch Settings for KP-95/96/ 15

Table 4. CDP-950 Intercom Range Selection 15

Table 5. Program Assign Panel DIP switch Settings 15

Table 7. UIO-256 DIP Switch SW1 Settings for Input 16

Table 8. UIO-256 Relay Outputs Connector (J5) 16

Table 9. UIO-256 Opto-isolated Inputs Connector (J 16

## **U**

Unpacking the Components 4

