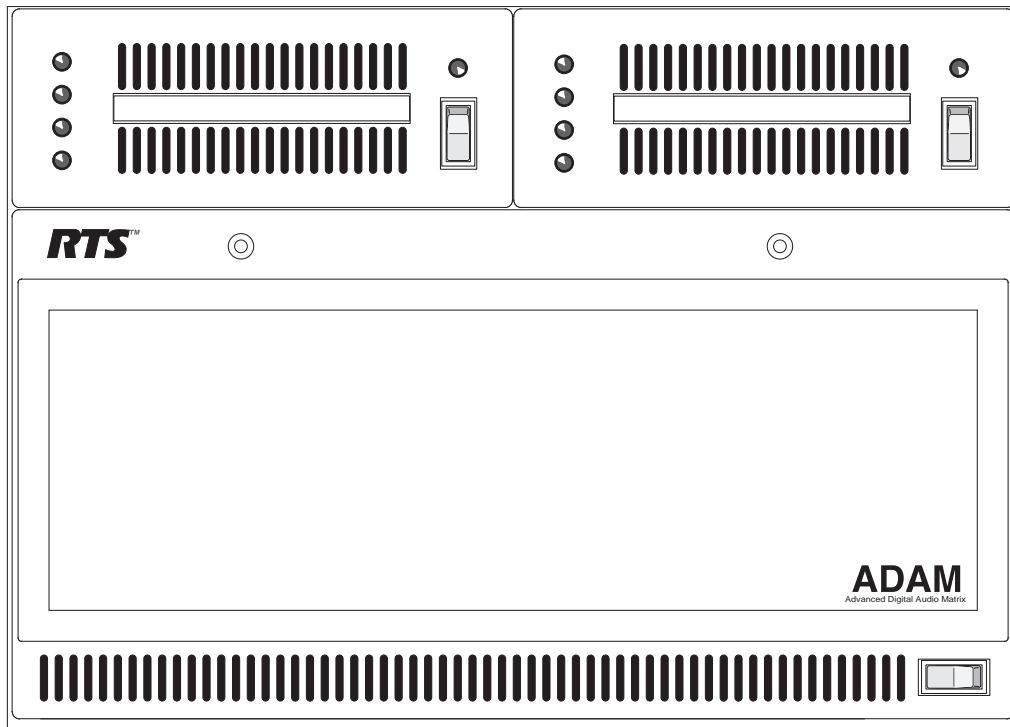


ADAM™ Advanced Digital Audio Matrix

SYSTEM INSTALLATION GUIDE



RTS™

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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

Use 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 insertion and removal of back cards. Allow at least 3 ft (1 m) in front of the rack for insertion and removal of front cards and power supplies. Note that 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, Translation Panels and Jack-fields 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 LED's, 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 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.
-

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 pro-

vided 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.

Note

When a front or back audio card is removed, the displays on any keypanels 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 9. 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 AC inputs will

assure continued operation 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

Note

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.

Note

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.

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 numbered ADAM-101 through ADAM 108 on pages 19 through 26.

9.1 Configuration Computer Connection and Check

1. 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 34.
2. Insert the CSedit software disk into the computer, type "install" and press ENTER. Follow the instructions to load CSedit onto the PC. Note that CSedit cannot be run under Windows. It can only be run under DOS. Also, the computer should have at least 2M of extended memory (4M preferable).
3. To run CSedit, change to the drive and directory where you installed CSedit. Type "csedit", then press ENTER.
4. 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 CSedit configuration program uses COM1 and 9600 baud for communication between the computer and intercom system. COM2 and/or 38.4 kbaud are selectable as options in CSedit. (Select "Communications" from the Options menu.) 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 9.)

Operation at 38.4 kbaud will permit faster downloads and uploads, but the computer cable length should be kept under

10 ft (3 m). Note that some PC's cannot operate reliably at the higher baud rate.

9.2 Program Assign Panel (PAP) Installation

9.2.1 General

Up to four PAP's can be connected to the intercom system. Each PAP has internal DIP switches to assign it as panel number 1 through 4, and to select either a low or high IFB range. As supplied, PAP's 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 PAP's are summarized below:

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 EPROM's 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 36. Connect power to the AC mains connector.

9.2.3 Connecting Additional PAP's

1. Connect any additional PAP's by wiring them in parallel with the first PAP. Use a punch block or similar connector system.
2. Change the panel number DIP switches in all but one of the PAP's. To do this, remove the covers from the PAP's 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 11, so that each PAP has a unique panel number.

3. By default, all PAP's 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 11.

Note

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

9.2.4 Programming IFB Defaults to Initialize PAP's

Before a PAP can reassign program inputs, a default configuration for each IFB must first be setup using CSedit. See "Creating an IFB" in Section 2 of the *CSedit User Manual*. 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 CSedit. When multiple PAP's are connected, it is only possible to verify the status of the lowest-numbered PAP using the PAP status feature of CSedit. An operational check of the additional PAP's 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 CSedit. (See "System, Force and Inhibit" in Section 3 of the *CSedit User Manual*.) When you select "Force and Inhibit" from the System menu in CSedit, a port pick list will be presented. Select one of the IFB output ports. A "Connecting Ports" table for that port will be presented. 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 will appear 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 5.

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 36. 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 12. The SW2 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 Table 8, page 12.
4. Connect input devices using the opto-isolator connector, J7. The connector pin-out is shown in Table 9, page 12.
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 12.
3. Connect 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 CSedit. (See "System, Digital Inputs" in Section 3 of the *CSedit User Manual*.) 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 keypad 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 keypad edit screen for the port to which the digital input was assigned. (See “Key Panel Setup: Key Assignments and Key Restrictions” in the *CSedit User Manual*.)

The UIO-256 relay outputs are programmed using the relay edit screens in *CSedit*. See “Using Relays” in the *CSedit User Manual*.

9.4 Connecting to a Trunking Master Controller

1. Connect from J2 of the Master Controller Breakout Panel to any available data port of the trunking system. Use an RS-485 data cable wired as shown in the ADAM-808 installation drawing on page 35.

Note

To use the same PC for configuration of both the ADAM system and the Trunking Controller, either use an RS232 switching box, or use separate COM ports on the PC. (*CSedit* and *CStrunk* only recognize COM1 and COM2.)

2. Interconnect one or more intercom audio ports between the intercom systems. These ports will be used for trunking communication only. See the ADAM-810 drawing, page 37, for wiring diagrams of the special intercom cables required for trunking audio interconnect.

Note

The number of intercom ports that are interconnected should be based on the number of persons that need to communicate with other intercom systems, and on the amount of intercommunication that will normally occur. The trunking system will automatically allocate the interconnected lines to personnel as needed, but if frequent busy signals are encountered during normal use, it may be necessary to allocate more trunk lines. Also remember that it is not always necessary to interconnect two intercom systems if they are both connected to a third intercom system. The trunking system can create a communication path by “cascading” through the third intercom system. However, this type of communication can tie up two or more trunk lines, and could create more busy signals for other users.

3. Within each intercom system, run the *CSedit* intercom configuration software. Turn on all restrictions for each intercom port that is being used as a trunk line. See “Key Panel Setup: Port Information” in Section 2 of the *CSedit User Manual*.

4. Also using *CSedit* within each intercom system, remove scroll restrictions for each intercom port, party line etc. that will be made available for key assignment in other intercom systems. For keypanels, belt packs etc. that are connected to individual intercom ports, this is accomplished using the same setup screen that you used in step 3 to restrict trunking ports. For party lines, IFB’s etc. refer to the numbered step regarding restrictions under “Creating a Party Line”, “Creating an IFB” etc. in Section 2 of the *CSedit User Manual*.

5. Run the *CStrunk* Trunking Configuration Software, and configure the trunking system as described in Section 2 of the *CStrunk User Manual*.

6. Within each intercom system, assign keypad keys as required to communicate with destinations in other intercom systems. See “Key Panel Setup” in Section 2 of the *CSedit User Manual*.

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 37.

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 *CSedit* 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-951 Telephone Interface, and by the 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 keypad, 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-951 Telephone Interface etc.

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 10. 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 Intercom Ports

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

1. Make a copy of the Intercom System Planning Worksheet, starting on page 13. (Or, create your own custom tables using your favorite spreadsheet or database program.)
2. For each device that will be connected, fill in a row in the worksheet.
 - Briefly note the device type (keypanel, belt pack, TIF-951, 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 "CSedit Alpha" column of the worksheet. You will enter this name into the intercom system later using CSedit. 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 "CSedit Alias" column of the worksheet if desired. This name will also be entered using CSedit. 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, and not the alpha

name will appear in the display above that key. If you do not enter an alias name, CSedit will automatically use the alpha name as the default.

3. 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.
4. Run CSedit, and enter the CSedit Alpha and Alias names as listed in the worksheet. (See "Assigning Names" in Section 2 of the *CSedit User Manual*.)
5. Complete the intercom system configuration as described in Section 2 of the *CSedit User Manual*.

10.4 KP-9X Keypanel Installation Notes

- KP-95/96/97 Keypanels all use the same basic installation procedure. Refer to Section 1 of the *KP-95/96/97 Installation Instructions Manual*.
- The KP98-7 Keypanel uses slightly different DIP switch settings than other KP-9X series keypanels. Refer to Section 1 of the *KP98-7 Installation Instructions Manual* for details.

Important!

Always reset a KP-9X keypanel after changing any of the rear panel DIP switch settings. Do this by momentarily turning off the AC power to the keypanel.

10.5 KP-12 Keypanel 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 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 keypanel address number 1). Rotate the SELECT control to display the correct logical keypanel address number, then click SELECT again. After a few moments the alpha-

numeric 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 "Service Menu" in the *KP-12 User Manual*.
- Refer to the *KP-12 User Manual* for complete user information.

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 3.

10.7 TIF-951 Telephone Interface Installation Notes

- Connect one or two phone lines to the modular phone jacks labeled "LINE" on the back of the TIF-951. A second modular jack labeled "INST" is also provided for each phone line. It may be used to connect a telephone or other device along with the TIF-951.
- For each connected phone line, connect from the DE-9S connectors (labeled "INTCM FRAME") on the back of the TIF-951 to an intercom port at a station breakout panel. Use a 9-pin intercom cable for connection to 9-pin breakout panels. If the station breakout panel has RJ-11 connectors, use one of the DE-9 to RJ-11 adapters that are provided with the TIF-951. Or, a cable may be constructed as shown in the ADAM-810 drawing on page 37.
- For each intercom port used by the TIF-951, set the Logical Keypad Number DIP switches on the back of the TIF-951 as summarized in Table 3, page 11. Note that the address for a TIF is set just like a KP-9X series keypad. For all other TIF-951 DIP switch settings, refer to the TIF-951 User Manual.

Important!

Do not use the address DIP switch settings as shown in the TIF-951 User Manual, as those address settings are only appropriate for a CS9000 Series Intercom System.

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 CSedit 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 keypad keys. The keys are arranged in a column, and are labeled "PL1" through "PL4". There are 10 columns of keys, labeled "CAM 1" through "CAM 10", 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 keypad 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 don't have to be. For example, a key could be assigned to talk to a specific person if desired. Unlike most keypads, which typically have a separate talk and listen key for each assignment, the CDP-950 has only one key which activates both the 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 non-essential 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 switches 4 thru 8: Intercom range select
 - (see Table 4, page 11 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 38.
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 CSedit program and assign the CDP-950 keys just as you would normal keypad keys. (See “Key Panel Setup and Trunking Port Allocation” in Section 2 of the *CSedit User Manual*.) For each intercom port, the PL1 through PL4 keys on the CDP-950 correspond to keys 12 through 15 in the CSedit 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)¹

Switch No.	Description (On=closed; Off=open)	Default Setting (On=closed; Off=open)
1	CSedit baud rate select ² Off: 9600 baud On: 38.4 Kbaud	Off
2	Keypanel Incoming message option ³ Off: Normal operation On: All callers displayed in Incoming Messages window	Off
3	Keypanel "busy" and "in-use" flash ⁴ Off: Enable On: Disable	Off
4	Trunk master baud rate select. ⁵ Off: 38.4K baud On: 9600 baud	Off
5	Clock monitor ⁷	Off
6	Not used (set to off)	Off
7	Primary / secondary ADAM card frame select. ⁶ 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 CSedit configuration software. Alternatively, 38.4 kbaud will provide faster uploads and downloads, but the cable from the ADAM Frame to the PC must be kept to a length less than 10 ft (3m), and some older PC's 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 assigned, 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 alpha-numeric 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 master. 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.

Table 3. Address DIP Switch Settings for KP-95/96/97/98 Keypanels and the TIF-951 Telephone Interface

Logical Keypanel Number	Address DIP Switch Settings			
	SW 4	SW 5	SW 6	SW 7
1	Closed	Open	Open	Open
2	Open	Closed	Open	Open
3	Closed	Closed	Open	Open
4	Open	Open	Closed	Open
5	Closed	Open	Closed	Open
6	Open	Closed	Closed	Open
7	Closed	Closed	Closed	Open
8	Open	Open	Open	Closed

Table 4. CDP-950 intercom Range Selection

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 5. Program Assign Panel DIP Switch Settings for Panel Number

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

Table 6. Program Assign Panel DIP Switch Setting for IFB Range

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

* Default

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

I/O 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 60 VDC.

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

Input Numbers*	Pin Numbers	
	DC Control Input "-"	DC Control 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 100 mA 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

Intercom Port No.	ADAM Audio I/O Card No.	Logical Keypanel Number*	CSedit Alpha	CSedit Alias	Description (Device type, location, 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*	CSedit Alpha	CSedit Alias	Description (Device type, location, 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*	CSedit Alpha	CSedit Alias	Description (Device type, location, 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*	CSedit Alpha	CSedit Alias	Description (Device type, location, user etc.)
73	10	1			
74	10	2			
75	10	3			
75	10	4			
77	10	5			
78	10	6			
79	10	7			
80	10	8			
81	11	1			
82	11	2			
83	11	3			
81	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 of 6

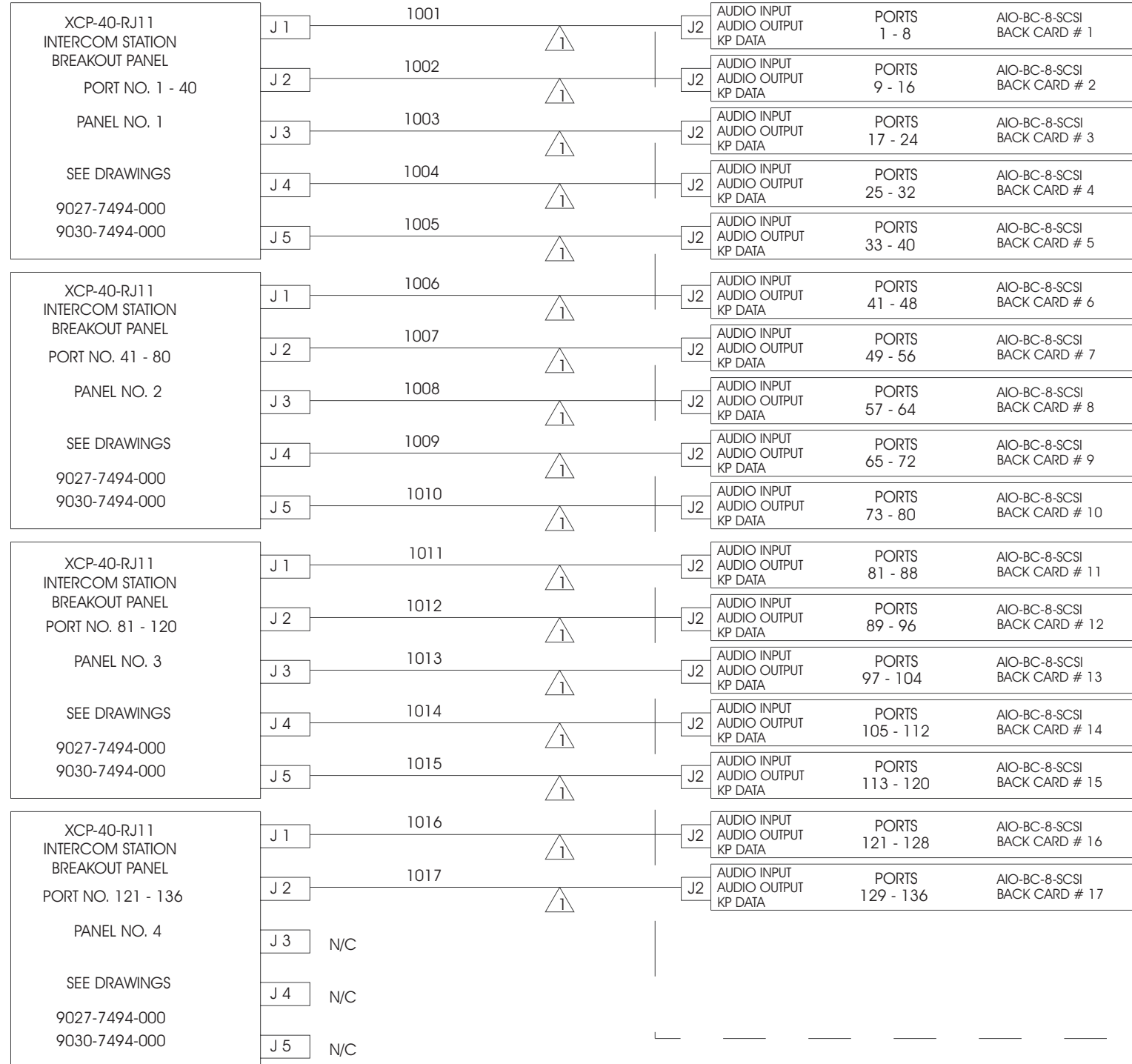
Intercom Port No.	ADAM Audio I/O Card No.	Logical Keypanel Number*	CSedit Alpha	CSedit Alias	Description (Device type, location, user etc.)
97	13	1			
98	13	2			
99	13	3			
100	13	4			
101	13	5			
102	13	6			
103	13	7			
104	13	8			
105	14	1			
106	14	2			
107	14	3			
108	14	4			
109	14	5			
110	14	6			
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 System Planning Worksheet, Sheet 6 of 6

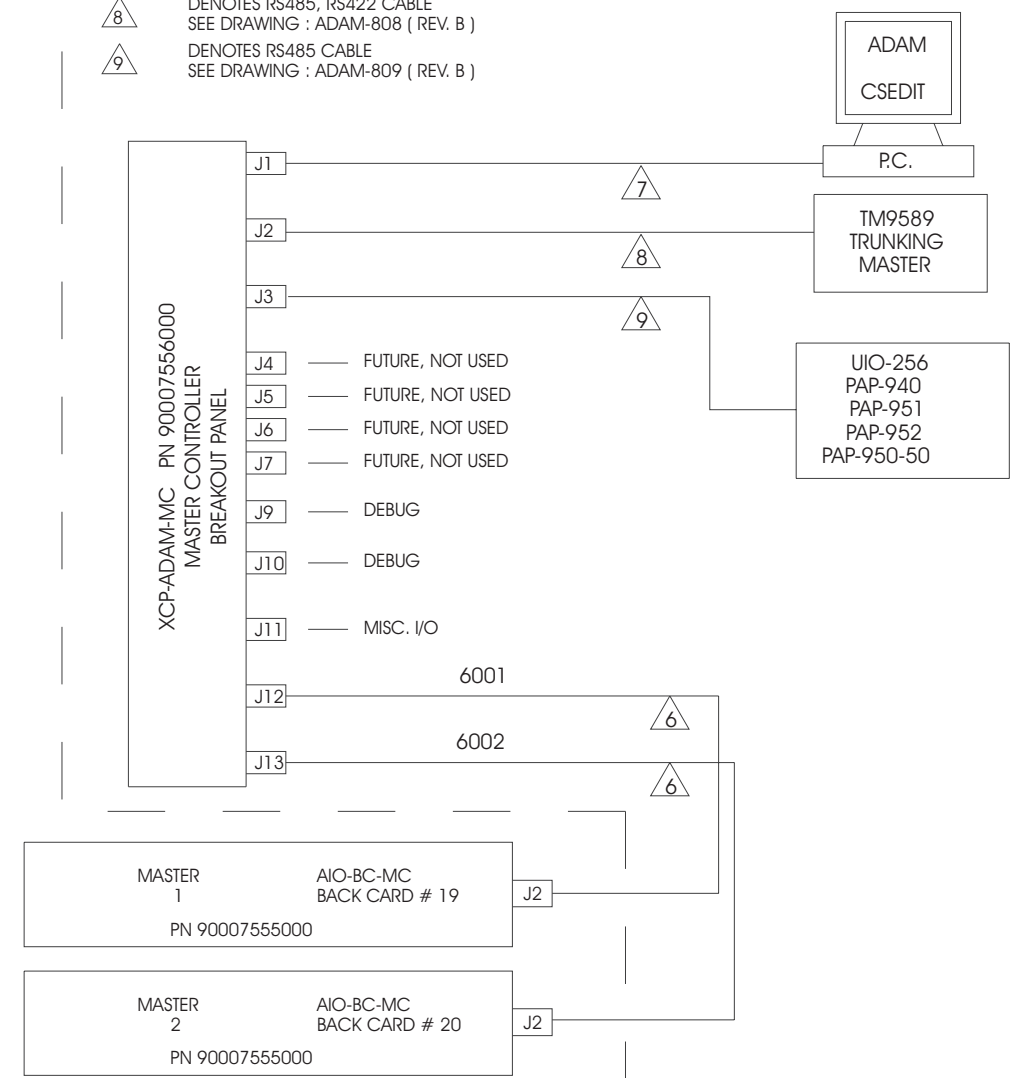
Intercom Port No.	ADAM Audio I/O Card No.	Logical Keypanel Number*	CSedit Alpha	CSedit Alias	Description (Device type, location, user etc.)
121	16	1			
122	16	2			
123	16	3			
124	16	4			
125	16	5			
126	16	6			
127	16	7			
128	16	8			
129	17	1			
130	17	2			
131	17	3			
132	17	4			
133	17	5			
134	17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

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

ADAM INTERCOM MATRIX FRAME



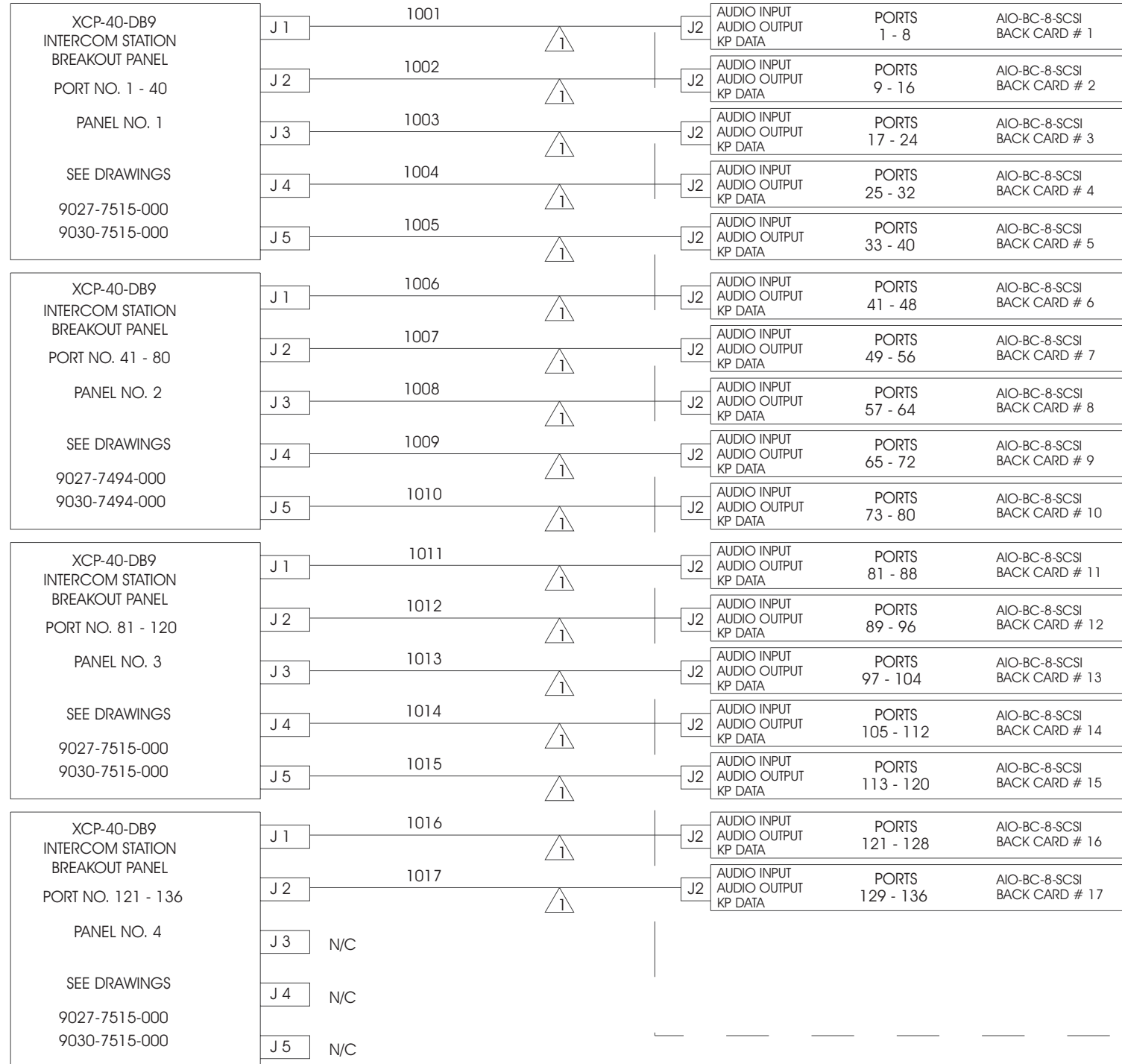
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- 1 DENOTES 25 PAIRS SCSI-2 CABLE
SEE DRAWING : ADAM-801 (REV. B)
 - 2 DENOTES 25 PAIRS TELCO CABLE
SEE DRAWING : ADAM-802 (REV. B)
 - 3 DENOTES RJ45 TO 25 PAIRS TELCO, TRANSLATION CABLE
SEE DRAWING : ADAM-803 (REV. B)
 - 4 DENOTES RJ11 TO 25 PAIRS TELCO, TRANSLATION CABLE
SEE DRAWING : ADAM-804 (REV. B)
 - 5 DENOTES DE9P TO 25 PAIRS TELCO, TRANSLATION CABLE
SEE DRAWING : ADAM-805 (REV. B)
 - 6 DENOTES 68 PINS SCSI-2 CABLE
SEE DRAWING : ADAM-806 (REV. B)
 - 7 DENOTES RS232C CABLE
SEE DRAWING : ADAM-807 (REV. B)
 - 8 DENOTES RS485, RS422 CABLE
SEE DRAWING : ADAM-808 (REV. B)
 - 9 DENOTES RS485 CABLE
SEE DRAWING : ADAM-809 (REV. B)



UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & BREAK SHARP EDGES HOLE TOLERANCES PER ANSI #11.1: 1987, #1972 DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES F/16 X .0005 P/30D		CONTRACT NO.		RTS SYSTEMS BURBANK, CALIFORNIA, USA	
APPROVALS		DATE		ADAM INTERCOM SYSTEM XCP-40-RJ11 INTERCONNECT DIAGRAM	
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CHECKED W. YAU		13 FEB 96		DWG NO. ADAM-101	
ISSUED		SCALE		SHEET	
ADAM-101		SCALE		SHEET	

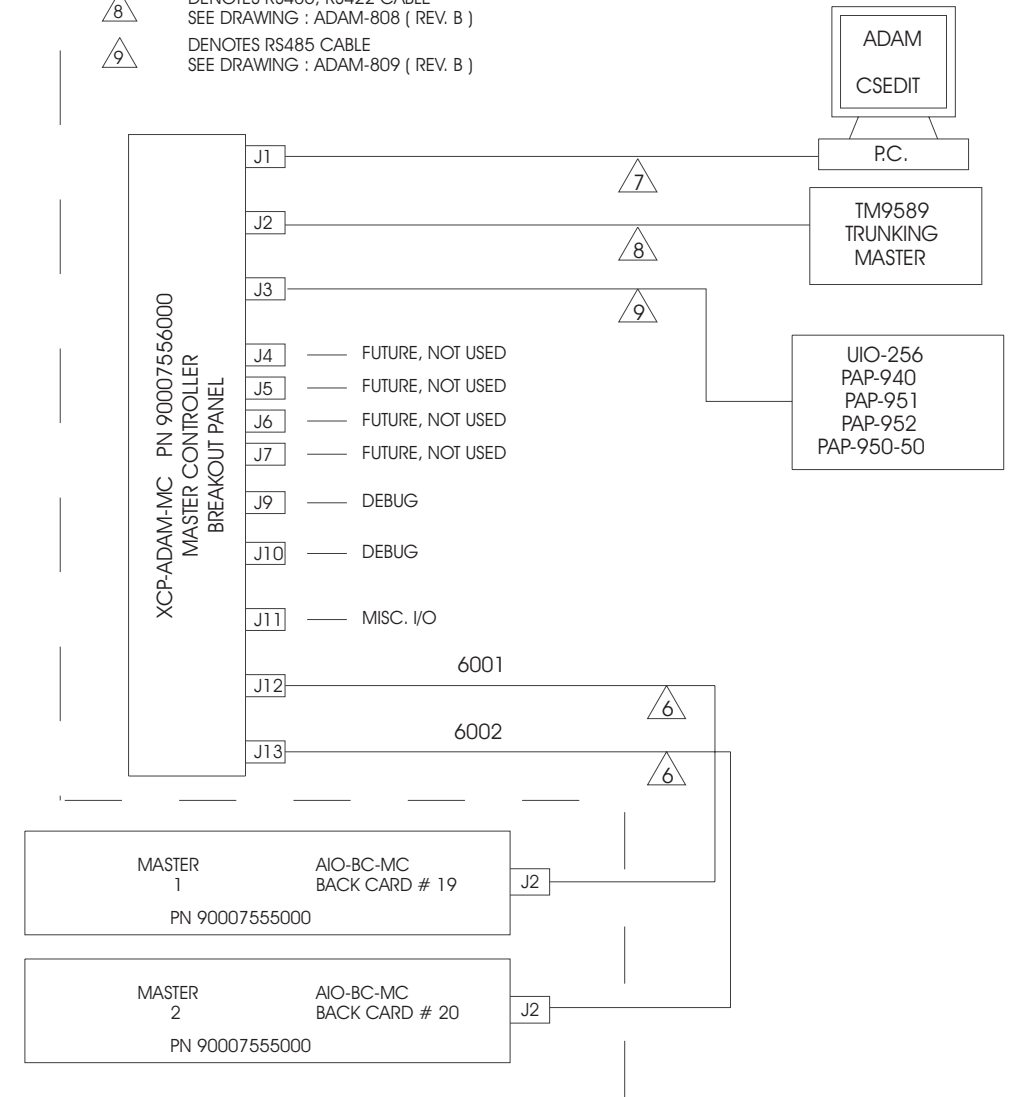
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

ADAM INTERCOM MATRIX FRAME



CABLE LEGENDS:

- ① DENOTES 25 PAIRS SCSI-2 CABLE
SEE DRAWING : ADAM-801 (REV. B)
- ② DENOTES 25 PAIRS TELCO CABLE
SEE DRAWING : ADAM-802 (REV. B)
- ③ DENOTES RJ45 TO 25 PAIRS TELCO, TRANSLATION CABLE
SEE DRAWING : ADAM-803 (REV. B)
- ④ DENOTES RJ11 TO 25 PAIRS TELCO, TRANSLATION CABLE
SEE DRAWING : ADAM-804 (REV. B)
- ⑤ DENOTES DE9P TO 25 PAIRS TELCO, TRANSLATION CABLE
SEE DRAWING : ADAM-805 (REV. B)
- ⑥ DENOTES 68 PINS SCSI-2 CABLE
SEE DRAWING : ADAM-806 (REV. B)
- ⑦ DENOTES RS232C CABLE
SEE DRAWING : ADAM-807 (REV. B)
- ⑧ DENOTES RS485, RS422 CABLE
SEE DRAWING : ADAM-808 (REV. B)
- ⑨ DENOTES RS485 CABLE
SEE DRAWING : ADAM-809 (REV. B)

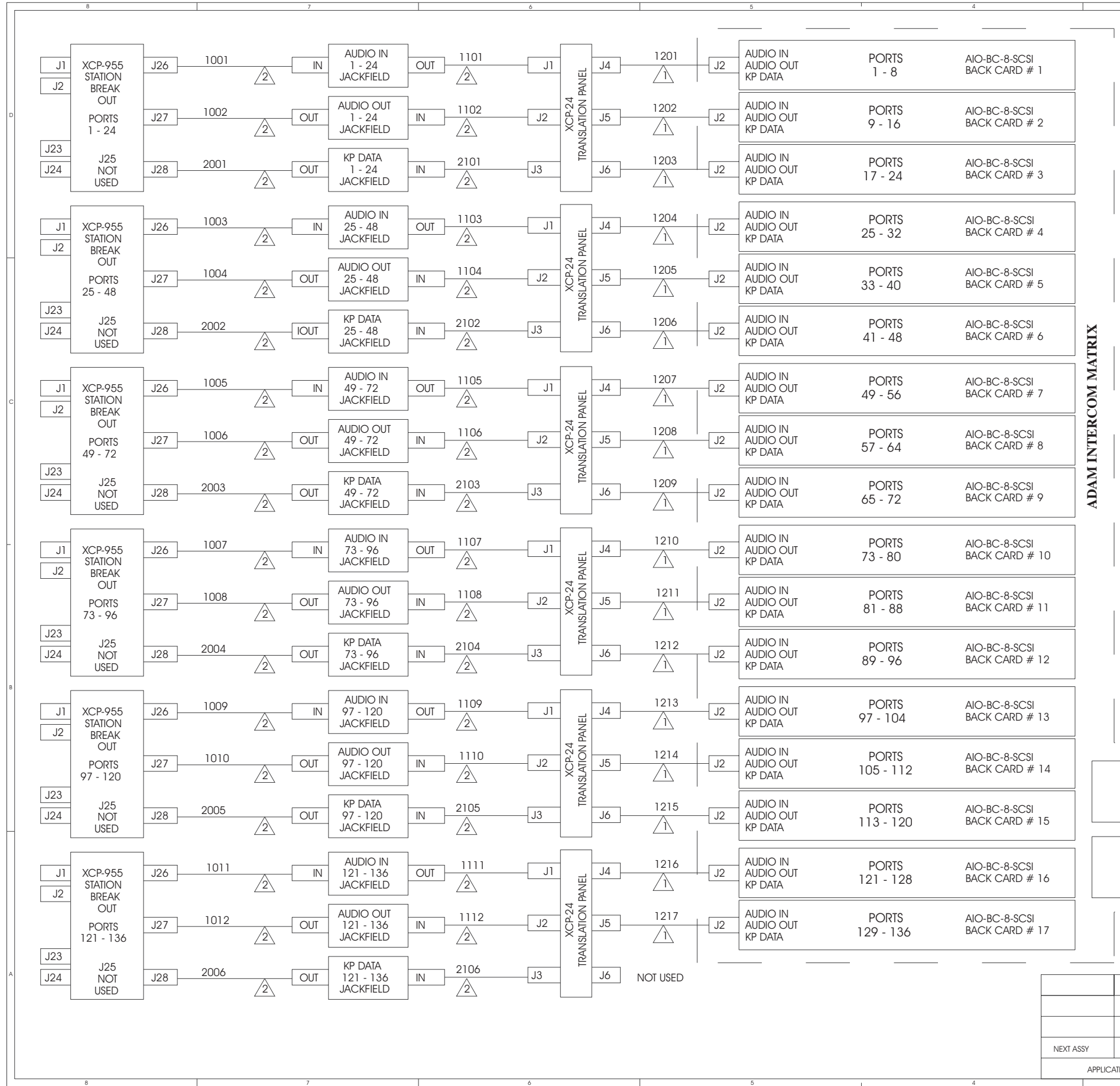
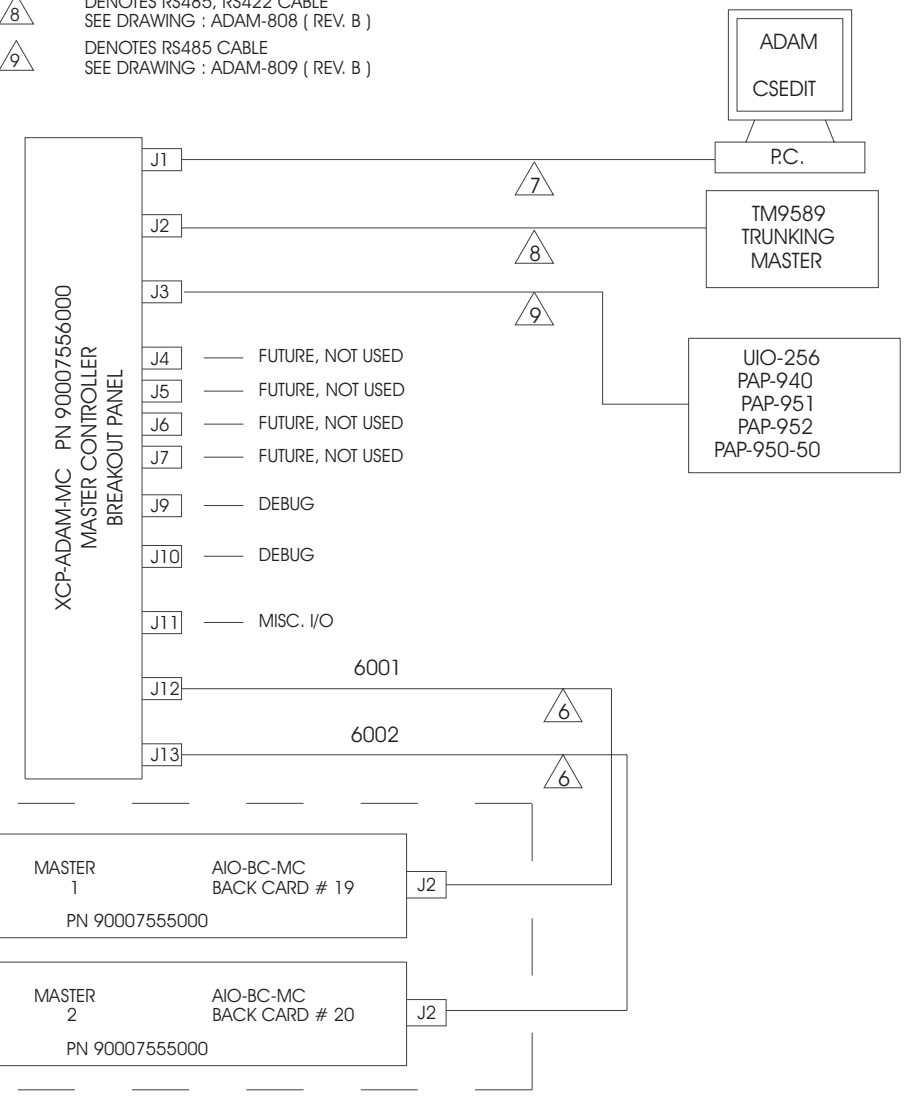


UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & BREAK SHARP EDGES HOLE TOLERANCES PER ANSI B94.11-1967, R1972 DIMENSIONS ARE IN INCHES TOLERANCES ARE FRACTIONS DECIMALS ANGLES P1/16 .X .0050 .X .0030 .X .0010		CONTRACT NO.		RTS SYSTEMS BURBANK, CALIFORNIA, USA	
APPROVALS		DATE		ADAM INTERCOM SYSTEM XCP-40-DB9 INTERCONNECT DIAGRAM	
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CHECKED W. YAU		13 FEB 96			
ISSUED		SCALE		SIZE D	FSCM NO.
NEXT ASSY		USED ON		DWG NO. ADAM-102	
APPLICATION		FINISH		REV B	
		ADAM-102		SHEET	

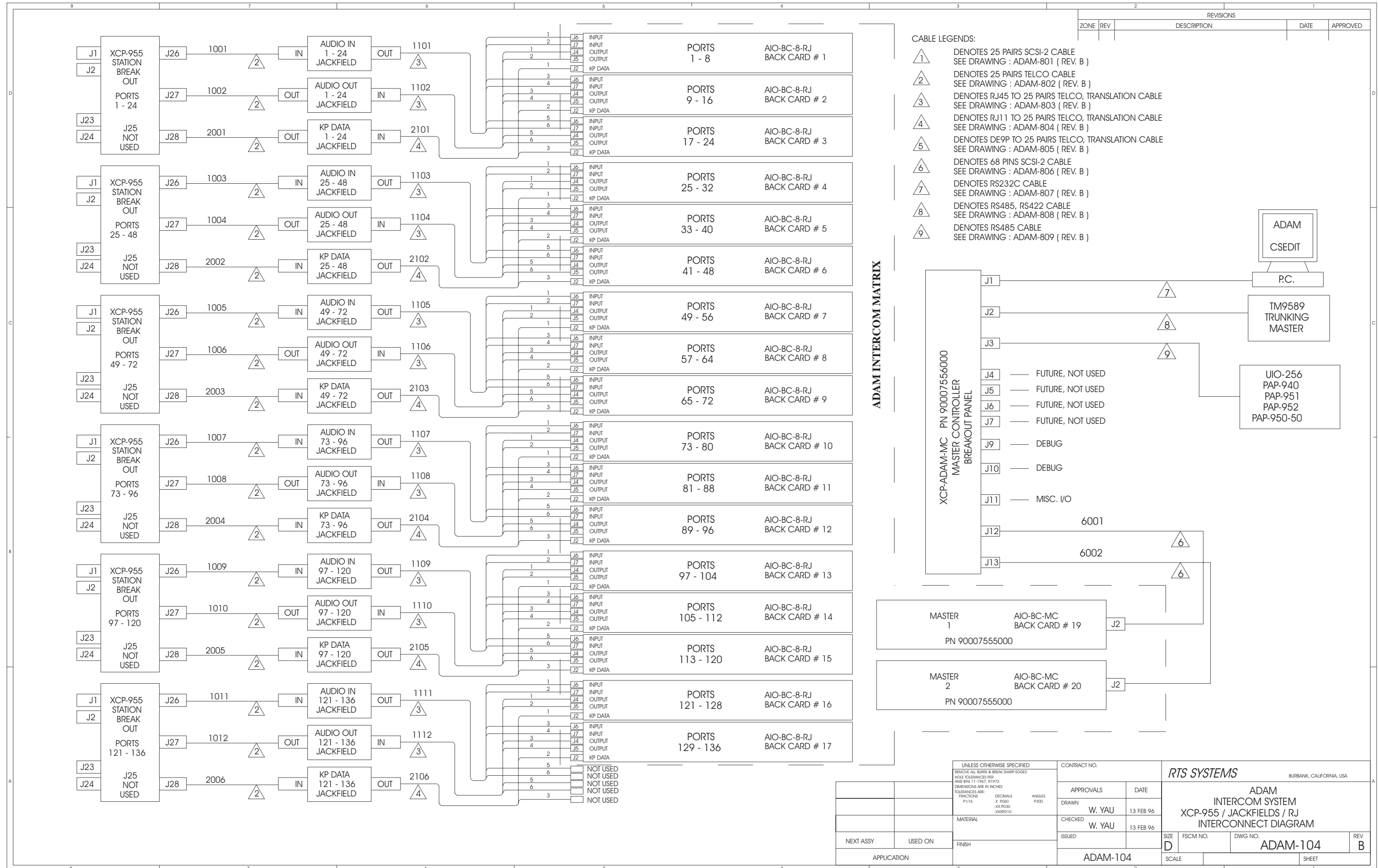
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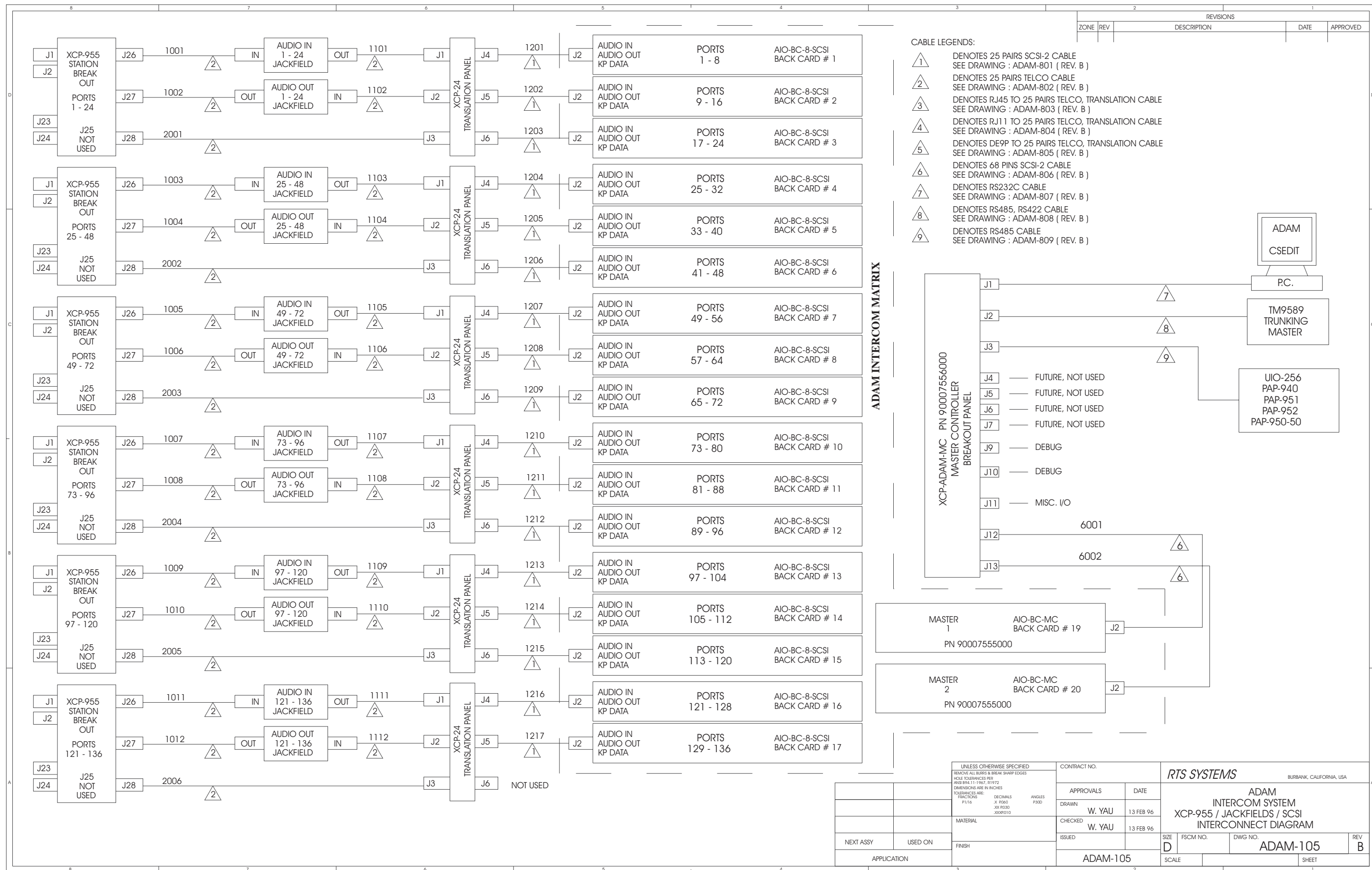
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SEE DRAWING : ADAM-801 (REV. B)
 - ② DENOTES 25 PAIRS TELCO CABLE
SEE DRAWING : ADAM-802 (REV. B)
 - ③ DENOTES RJ45 TO 25 PAIRS TELCO, TRANSLATION CABLE
SEE DRAWING : ADAM-803 (REV. B)
 - ④ DENOTES RJ11 TO 25 PAIRS TELCO, TRANSLATION CABLE
SEE DRAWING : ADAM-804 (REV. B)
 - ⑤ DENOTES DE9P TO 25 PAIRS TELCO, TRANSLATION CABLE
SEE DRAWING : ADAM-805 (REV. B)
 - ⑥ DENOTES 68 PINS SCSI-2 CABLE
SEE DRAWING : ADAM-806 (REV. B)
 - ⑦ DENOTES RS232C CABLE
SEE DRAWING : ADAM-807 (REV. B)
 - ⑧ DENOTES RS485, RS422 CABLE
SEE DRAWING : ADAM-808 (REV. B)
 - ⑨ DENOTES RS485 CABLE
SEE DRAWING : ADAM-809 (REV. B)

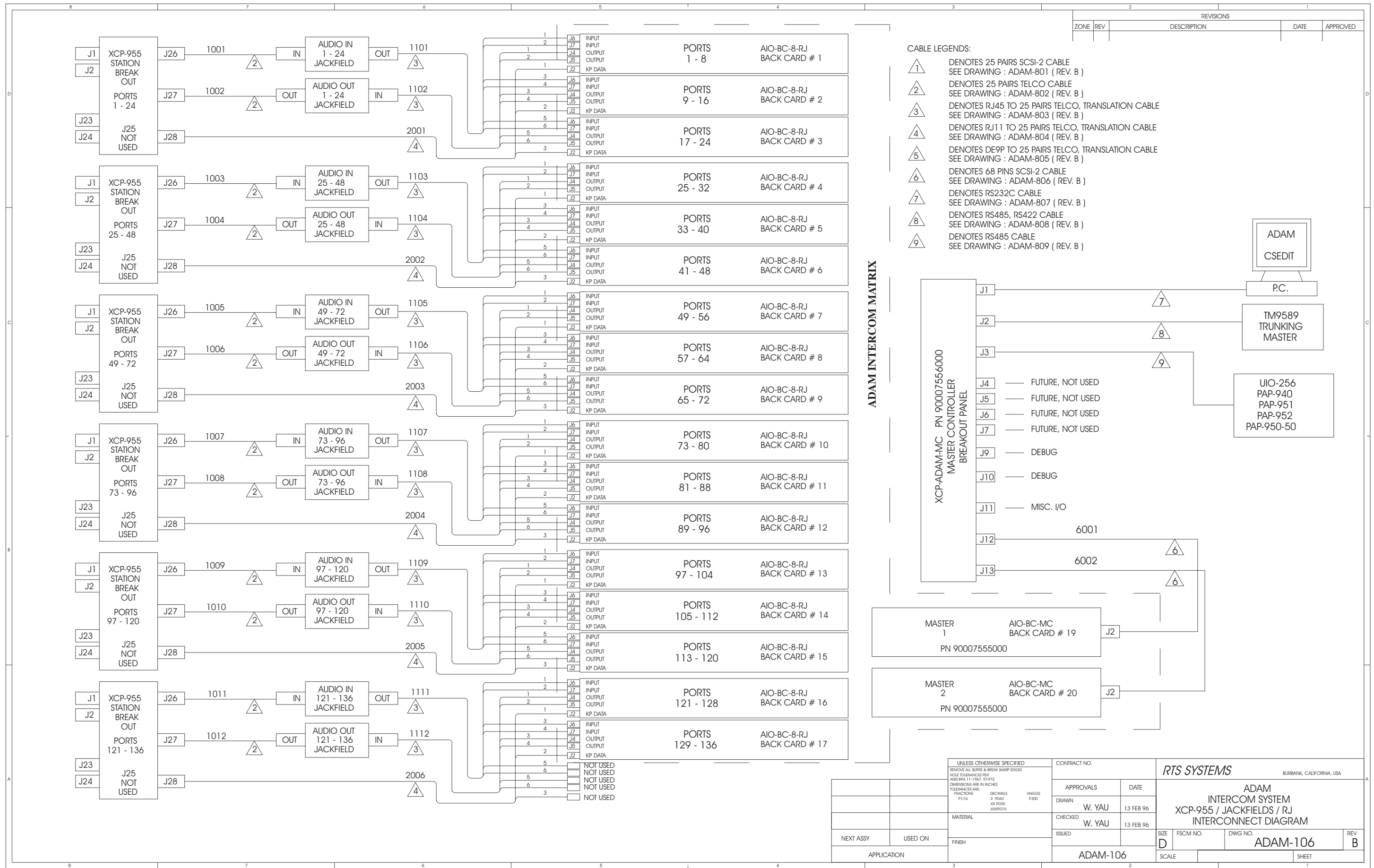
ADAM INTERCOM MATRIX

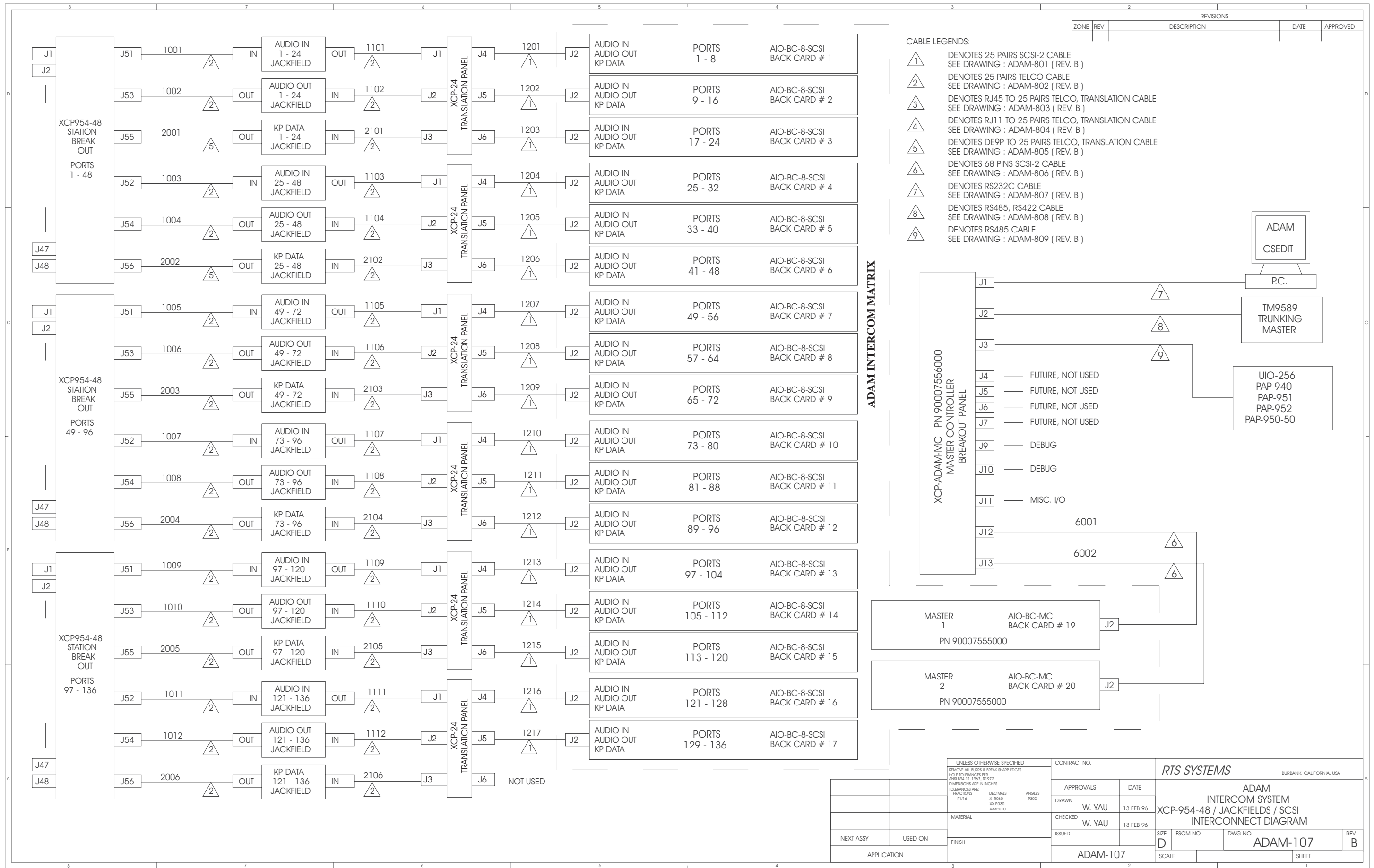


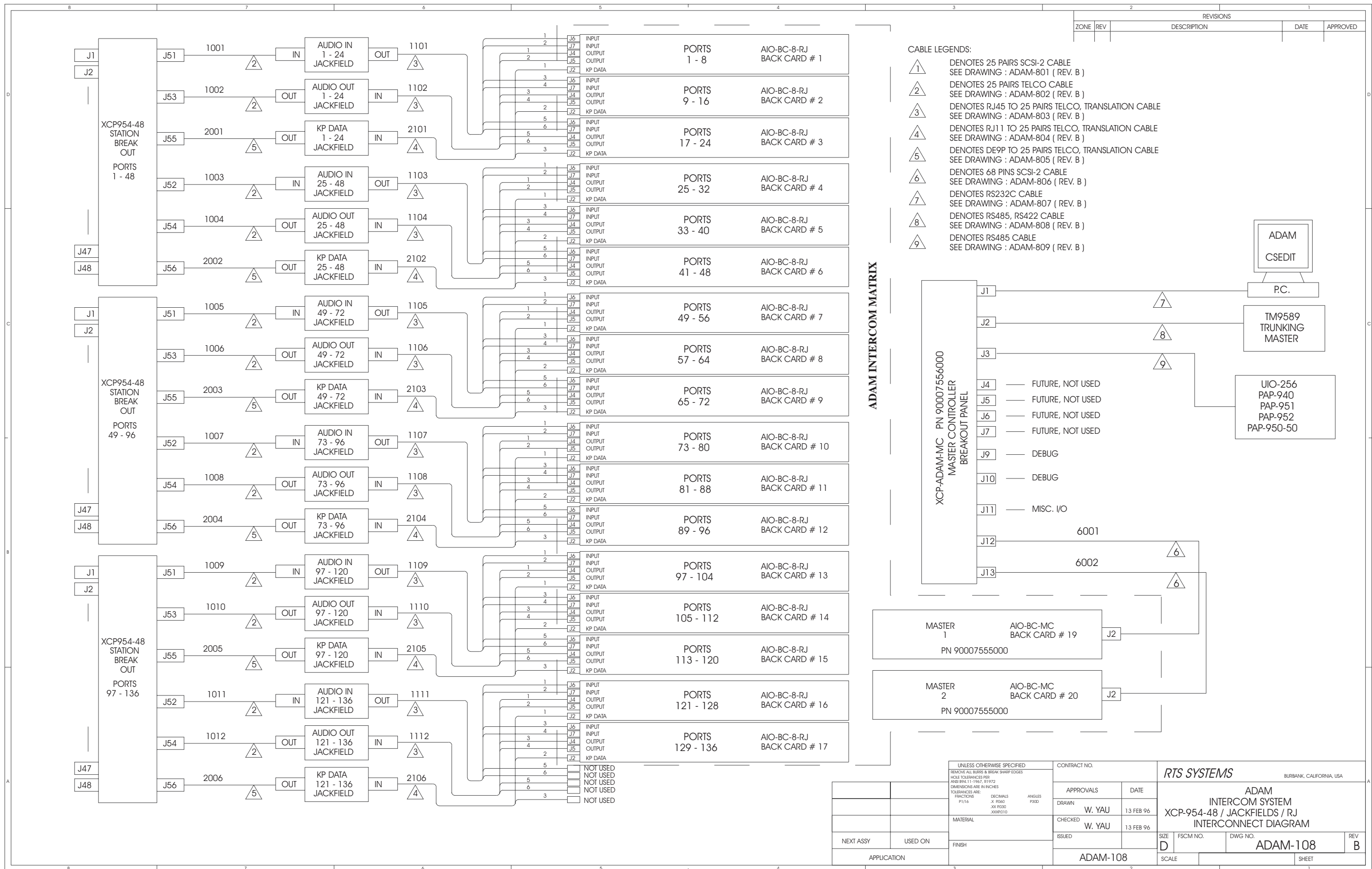
UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & BREAK SHARP EDGES HOLE TOLERANCES PER ANSI B94.1-1967, R1972 DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES PLUS .010 .0050 .030 MINUS .010 .0030 .00010		CONTRACT NO.		RTS SYSTEMS BURBANK, CALIFORNIA, USA	
APPROVALS		DATE		ADAM INTERCOM SYSTEM XCP-955 / JACKFIELDS / SCSI INTERCONNECT DIAGRAM	
DRAWN W. YAU		13 FEB 96		SIZE D	
CHECKED W. YAU		13 FEB 96		FSCM NO.	
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NEXT ASSY		USED ON		REV B	
APPLICATION		ADAM-103		SCALE SHEET	





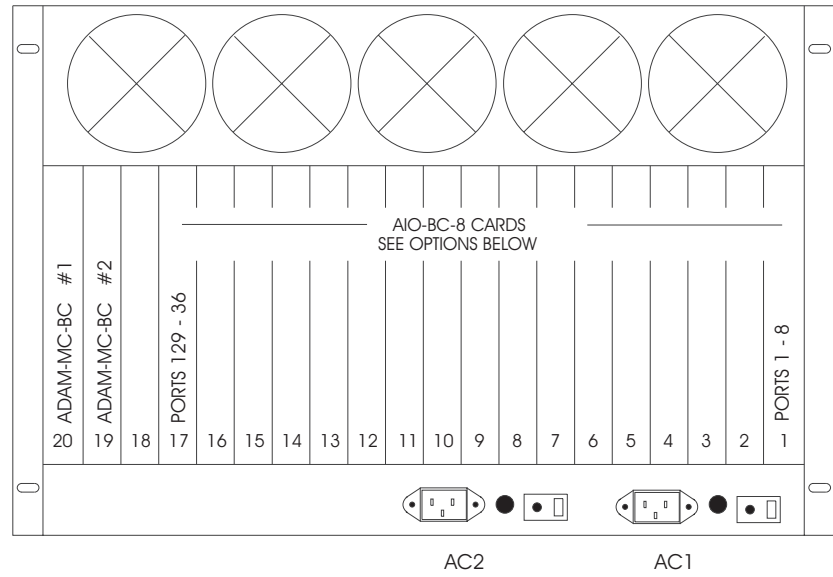




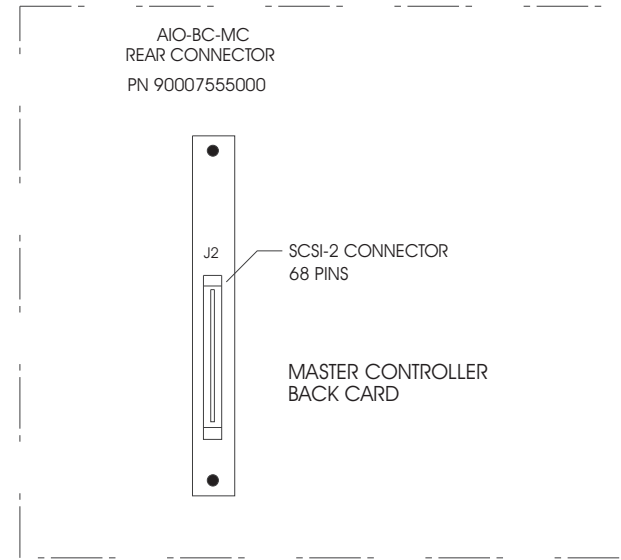
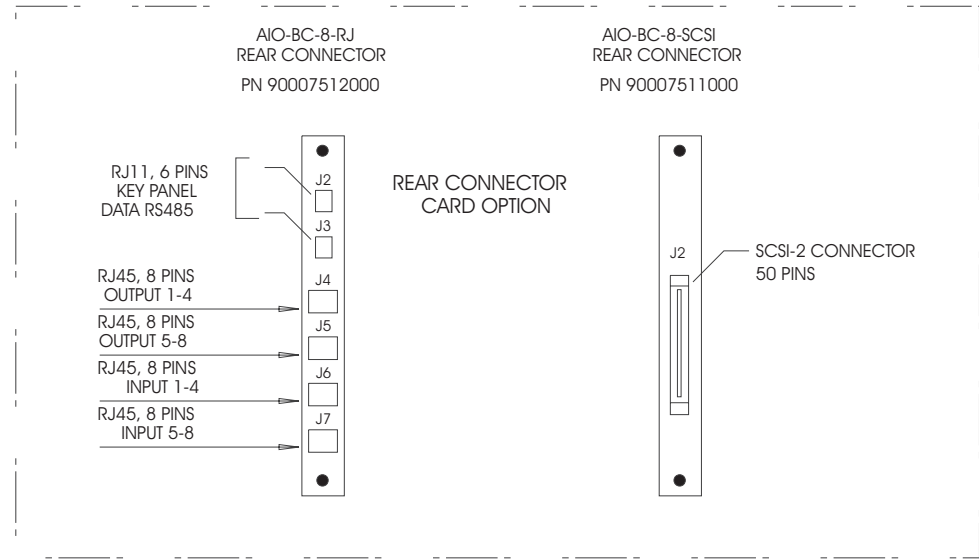
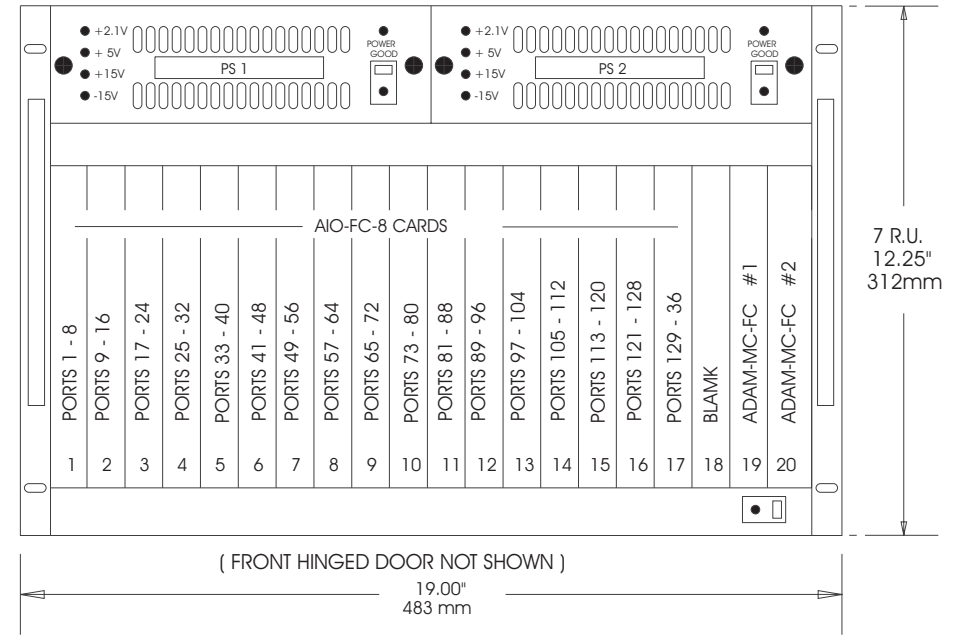


ZONE		REV	DESCRIPTION	DATE	APPROVED

ADAM MATRIX FRAME REAR VIEW

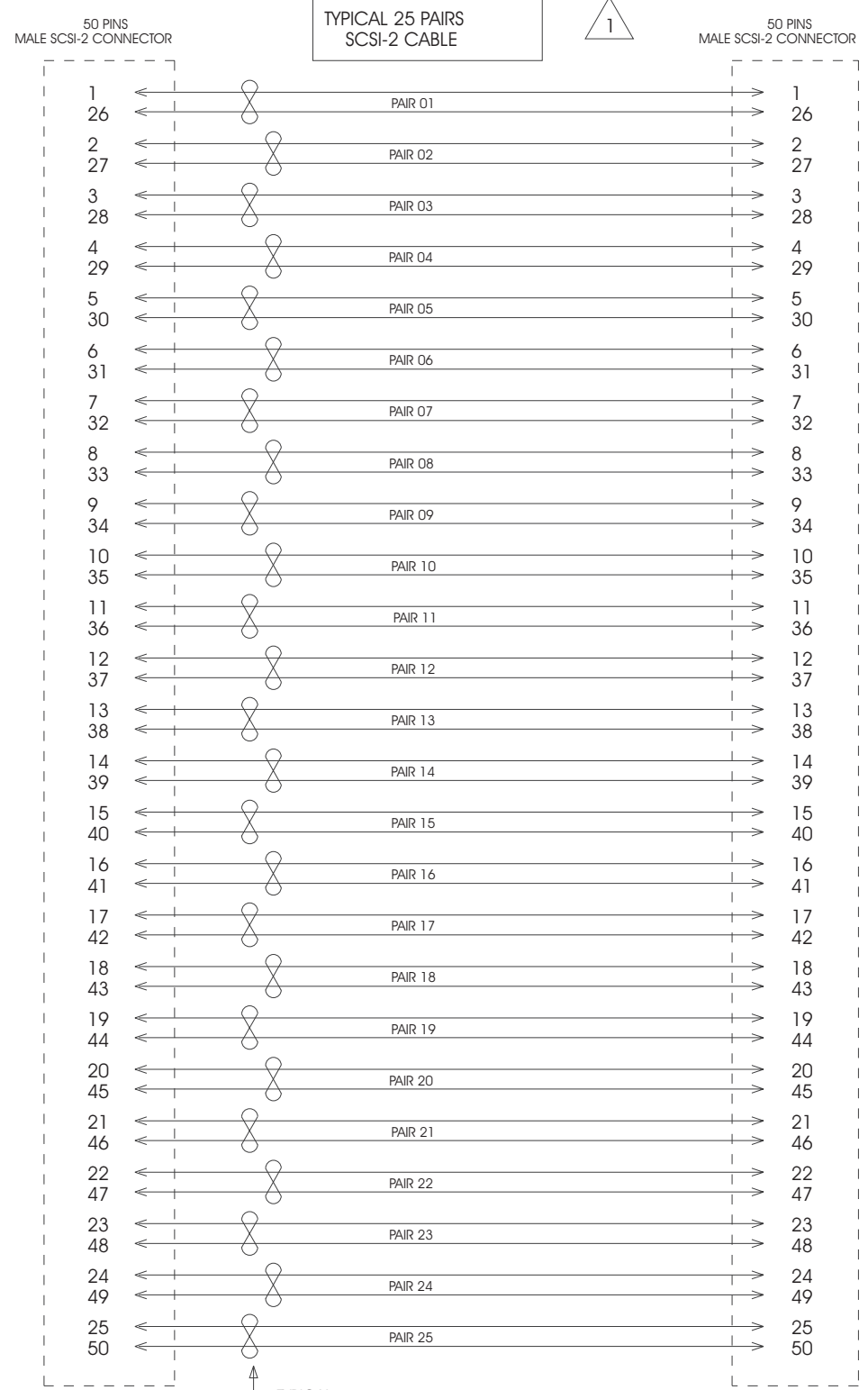


ADAM MATRIX FRAME FRONT VIEW



<small>UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & BREAK SHARP EDGES HOLE TOLERANCES PER ANSI B91.11-1987, 0.012 DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS P1/16 DECIMALS .X P000 ANGLES P300</small>		CONTRACT NO.		RTS SYSTEMS <small>BURBANK, CALIFORNIA, USA</small>	
APPROVALS DRAWN W. YAU 12 FEB 96 CHECKED W. YAU 12 FEB 96		DATE		ADAM INTERCOM SYSTEM MATRIX FRAME LAYOUT	
MATERIAL		ISSUED		SIZE D	FSCM NO.
FINISH		APPLICATION		DWG NO. ADAM-301	
NEXT ASSY		USED ON		SCALE NO	REV B
ADAM-301		ADAM-301		SHEET	

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

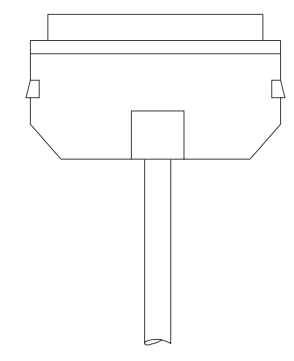


TYPICAL
DENOTES TWISTED PAIRS

CABLE DETAILS FOR :

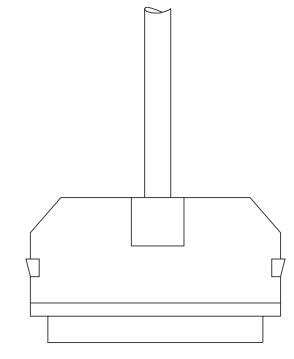


ASSEMBLY DETAILS



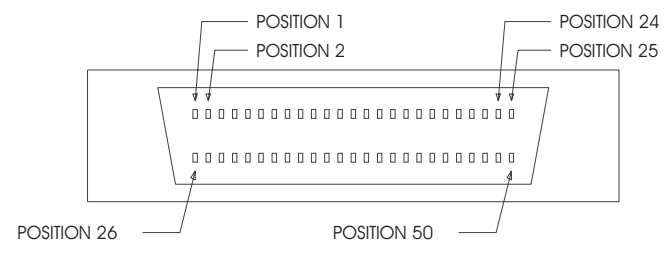
SCSI-2 50 PIN
MALE CONNECTOR

NOMINAL LENGTH : 8 FT.



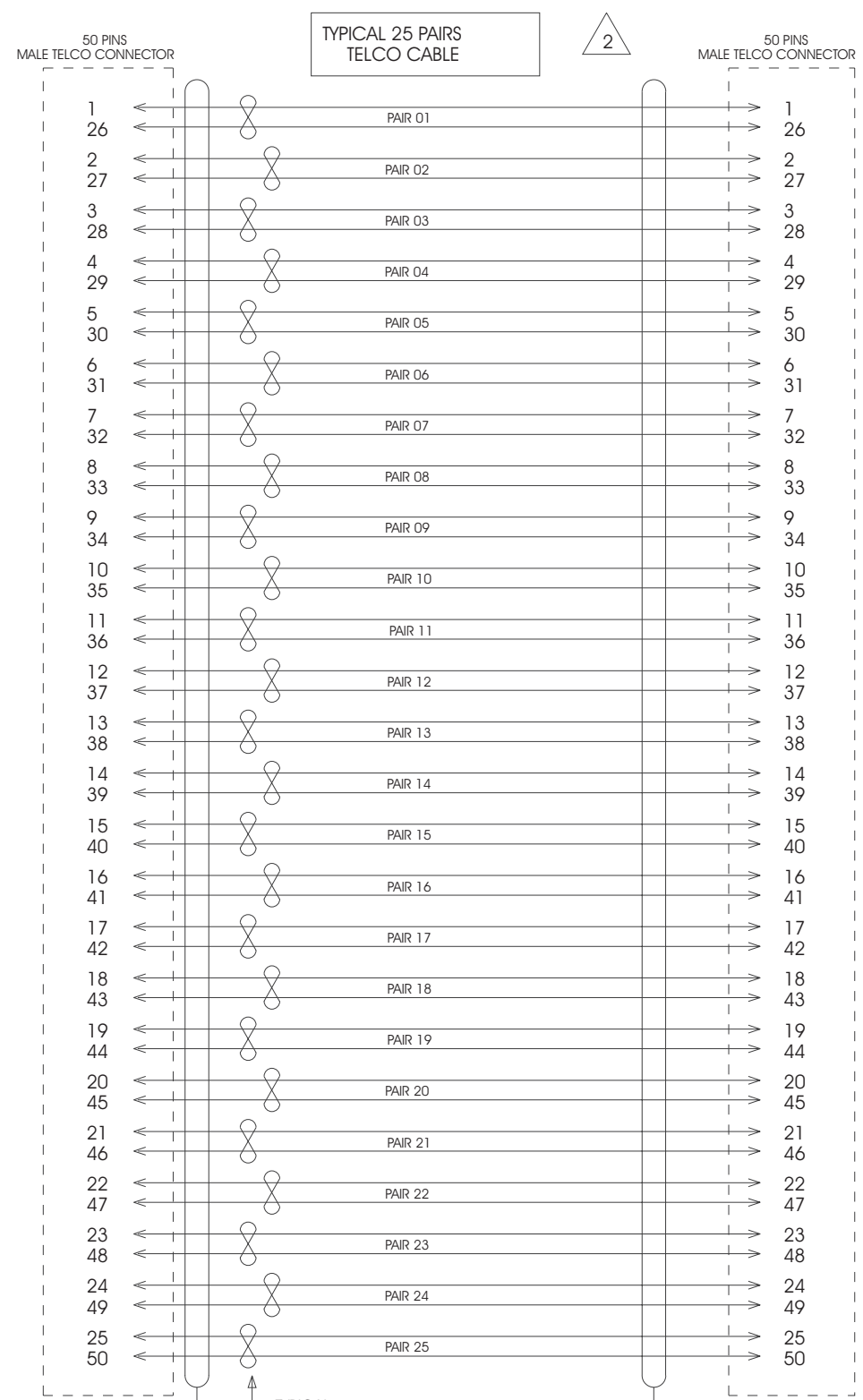
SCSI-2 50 PIN
MALE CONNECTOR

CONNECTOR LAYOUT
VIEW FROM CONTACT SIDE

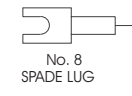


UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & BREAK SHARP EDGES HOLE TOLERANCES PER ANSI B94.11-1967, R1972 DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS: P1/16 DECIMALS: .X, .0050 ANGLES: 30D0		CONTRACT NO.		RTS SYSTEMS BURBANK, CALIFORNIA, USA	
APPROVALS		DATE		ADAM INTERCOM SYSTEM AUDIO INPUT / OUTPUT / DATA 50 PINS SCSI-2 CABLE	
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CHECKED W. YAU		14 FEB 96			
ISSUED					
NEXT ASSY	USED ON	FINISH	ADAM-801	SIZE D	FSCM NO. ADAM-801
APPLICATION		ADAM-801		SCALE	DWG NO. ADAM-801
				REV B	SHEET

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

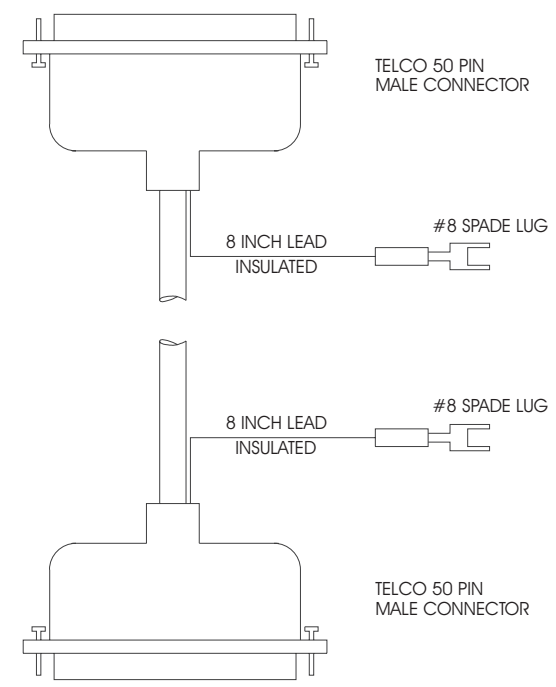


TYPICAL DENOTES TWISTED PAIRS

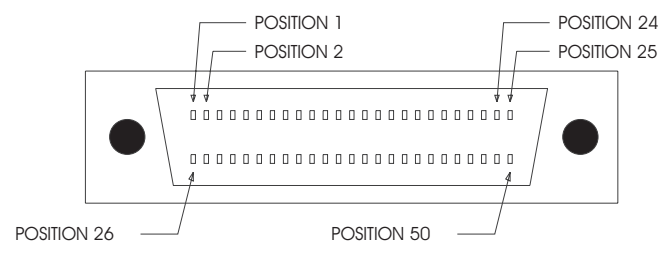


CABLE DETAILS FOR :

ASSEMBLY DETAILS

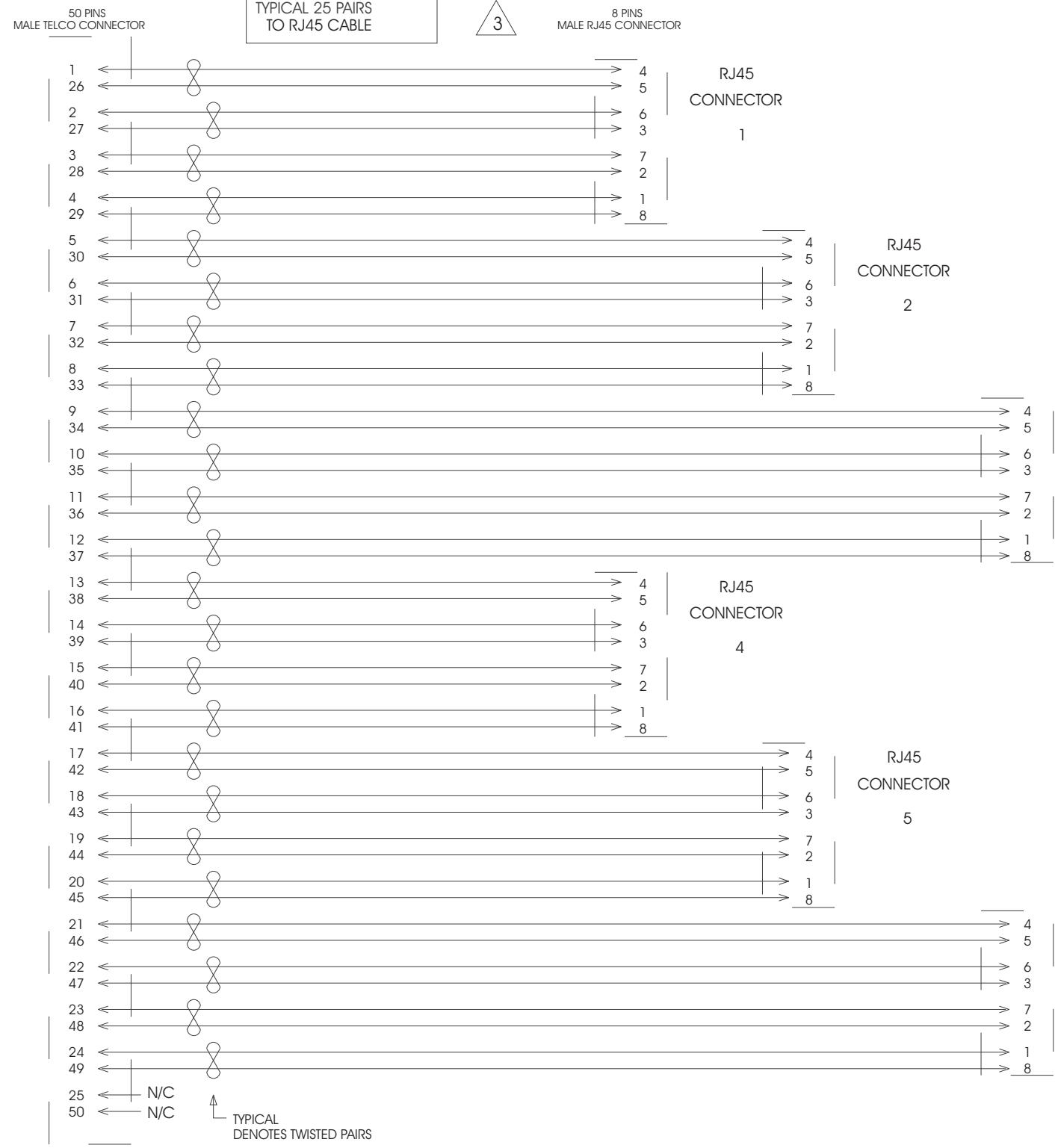


CONNECTOR LAYOUT VIEW FROM CONTACT SIDE

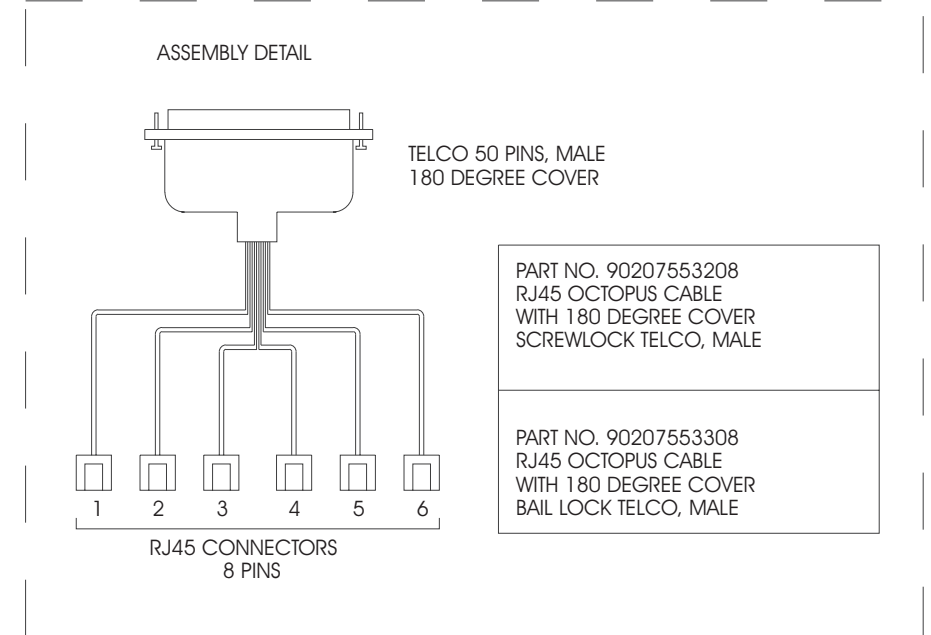
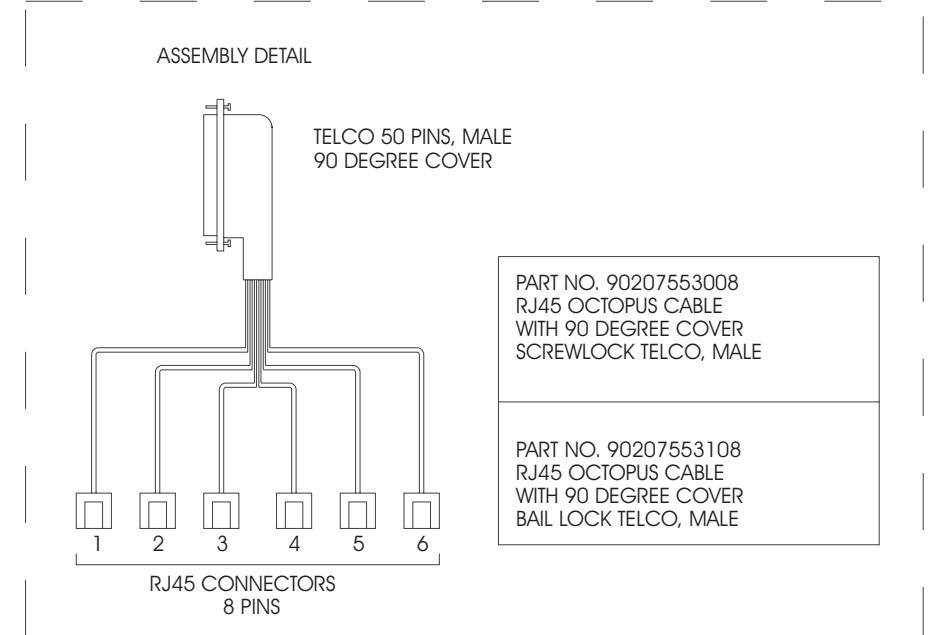


UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & BREAK SHARP EDGES HOLD TOLERANCES PER ANSI B94.11-1967, 01972 DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES P/16 .0050 .0300		CONTRACT NO.		RTS SYSTEMS BURBANK, CALIFORNIA, USA	
APPROVALS		DATE		ADAM INTERCOM SYSTEM AUDIO INPUT / OUTPUT 25 PAIRS TELCO CABLE	
DRAWN W. YAU		14 FEB 96		REV B	
CHECKED W. YAU		14 FEB 96		SIZE D	
ISSUED		ADAM-802		FSCM NO. ADAM-802	
NEXT ASSY		USED ON		DWG NO. ADAM-802	
APPLICATION		ADAM-802		SCALE	

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



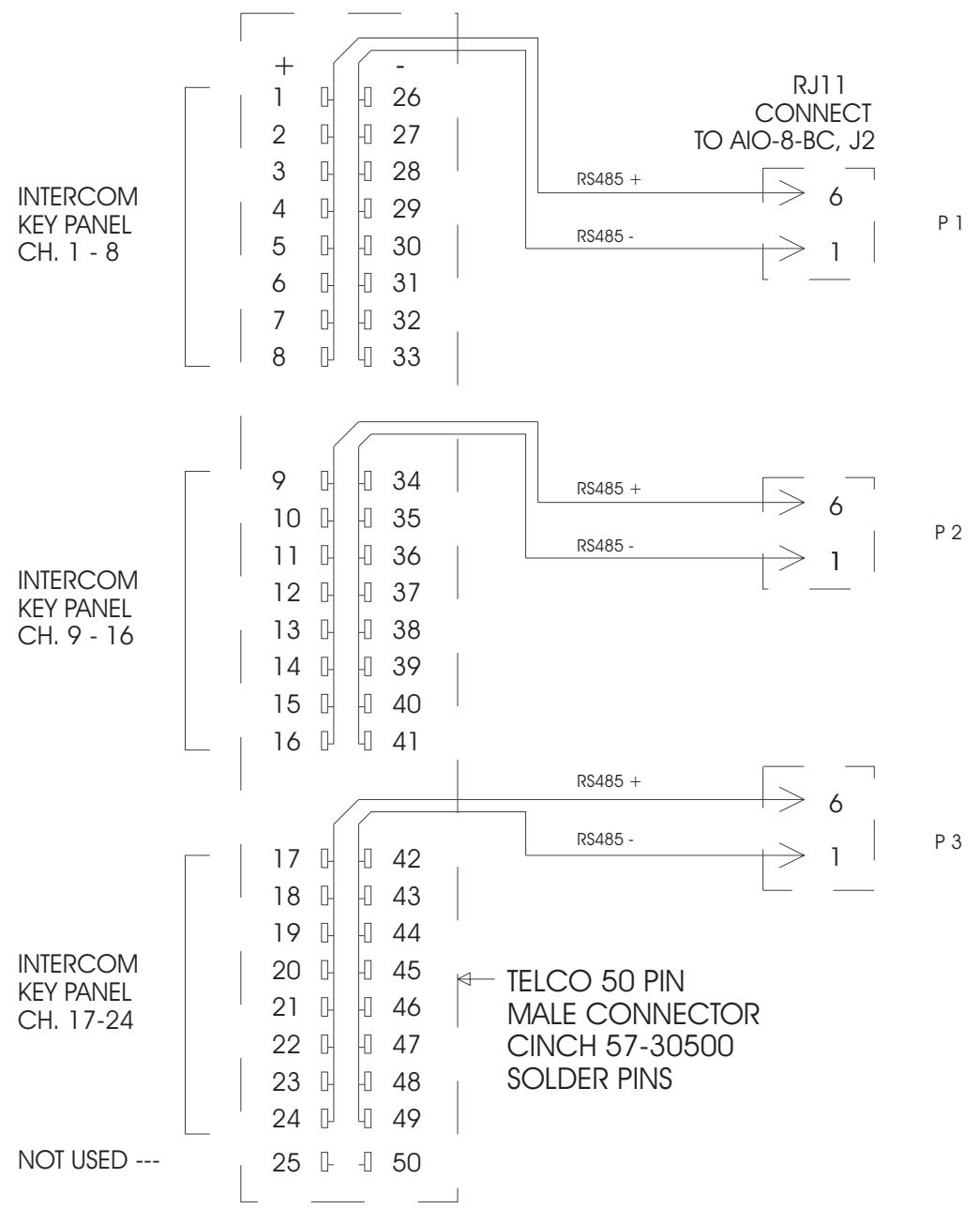
NOTE: CABLE DETAILS FOR



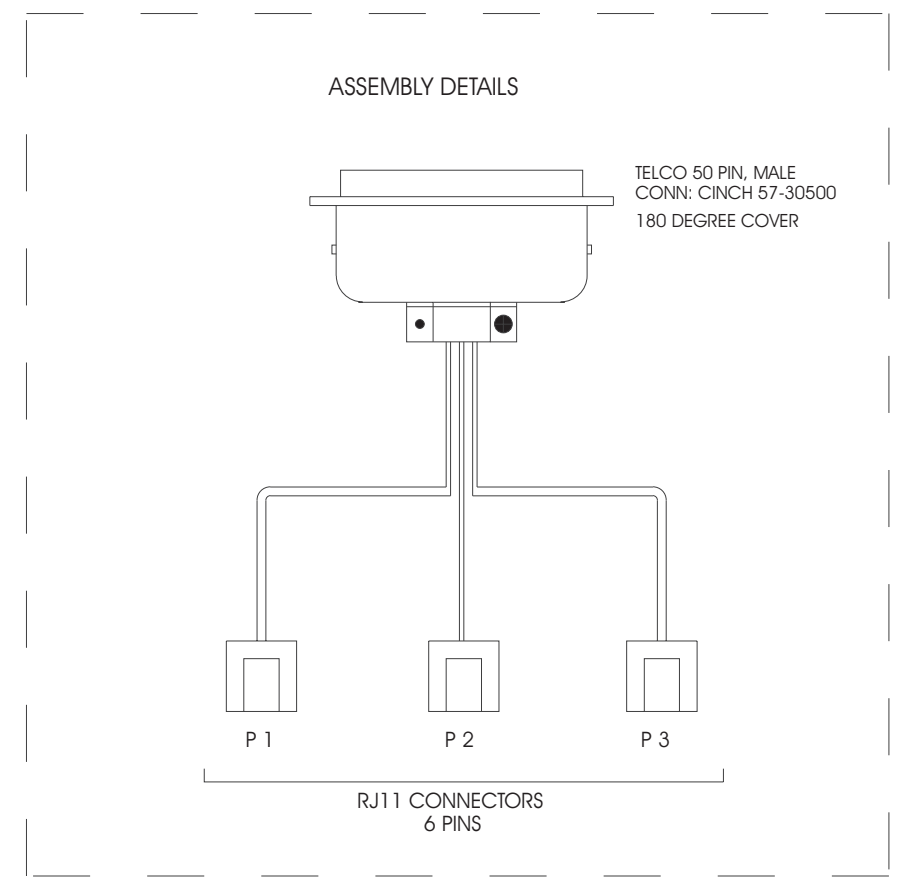
UNLESS OTHERWISE SPECIFIED		CONTRACT NO.		RTS SYSTEMS	
REMOVE ALL BURRS & BREAK SHARP EDGES		APPROVALS		BURBANK, CALIFORNIA, USA	
HOLE TOLERANCES PER ANSI B94.11-1967, 91972		DATE		ADAM INTERCOM SYSTEM	
DIMENSIONS ARE IN INCHES		W. YAU 14 FEB 96		AUDIO INPUT / OUTPUT	
TOLERANCES ARE:		CHECKED		25 PAIRS TO RJ45 CABLE	
FRACTIONS P/16	DECIMALS X .0040	W. YAU 14 FEB 96		SIZE D	FSCM NO.
ANGLES 3/32	X .0030	ISSUED		DWG NO. ADAM-803	REV B
				SCALE	SHEET
NEXT ASSY	USED ON	ADAM-803			
APPLICATION					

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

CABLE DETAILS



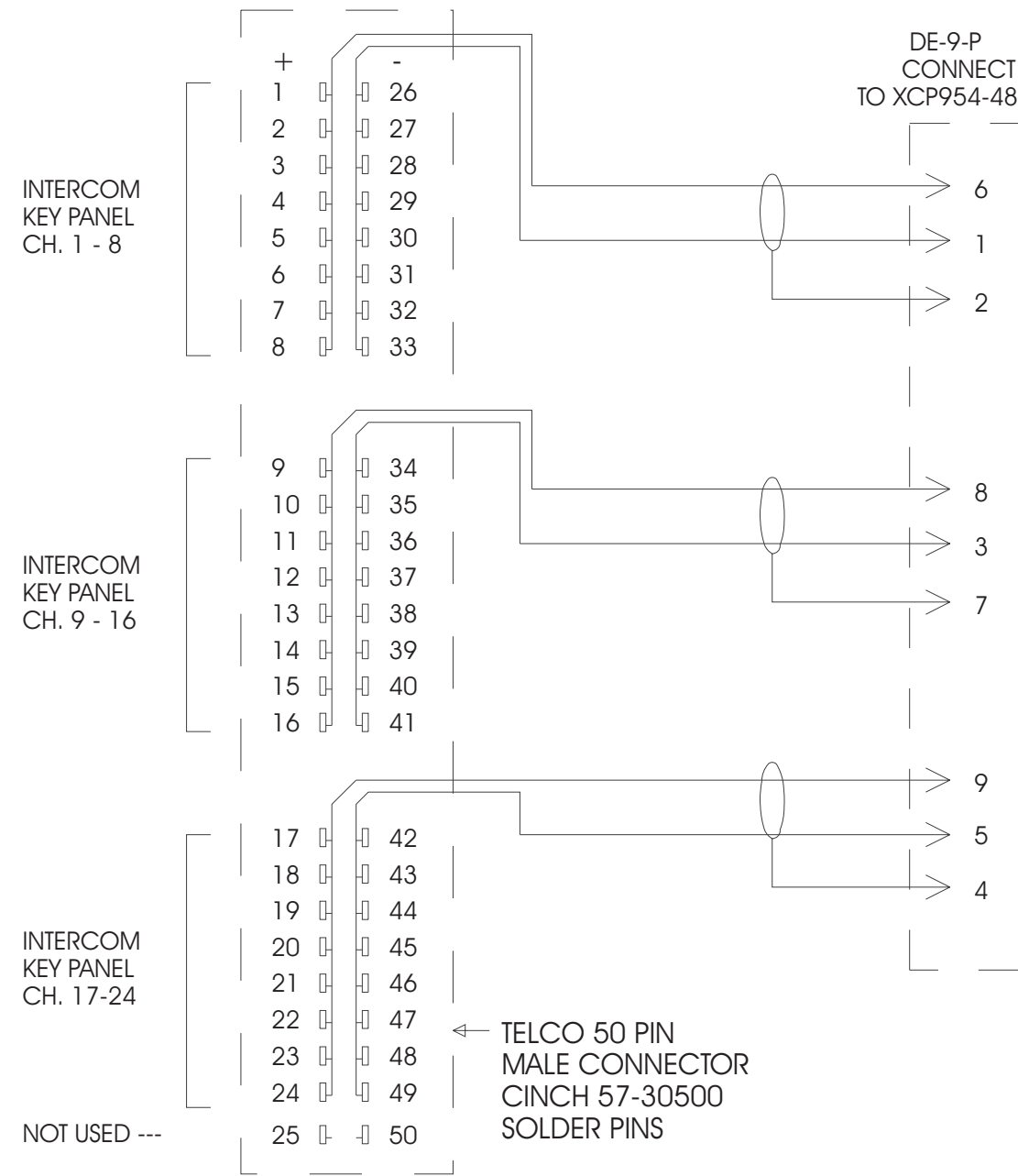
ASSEMBLY DETAILS



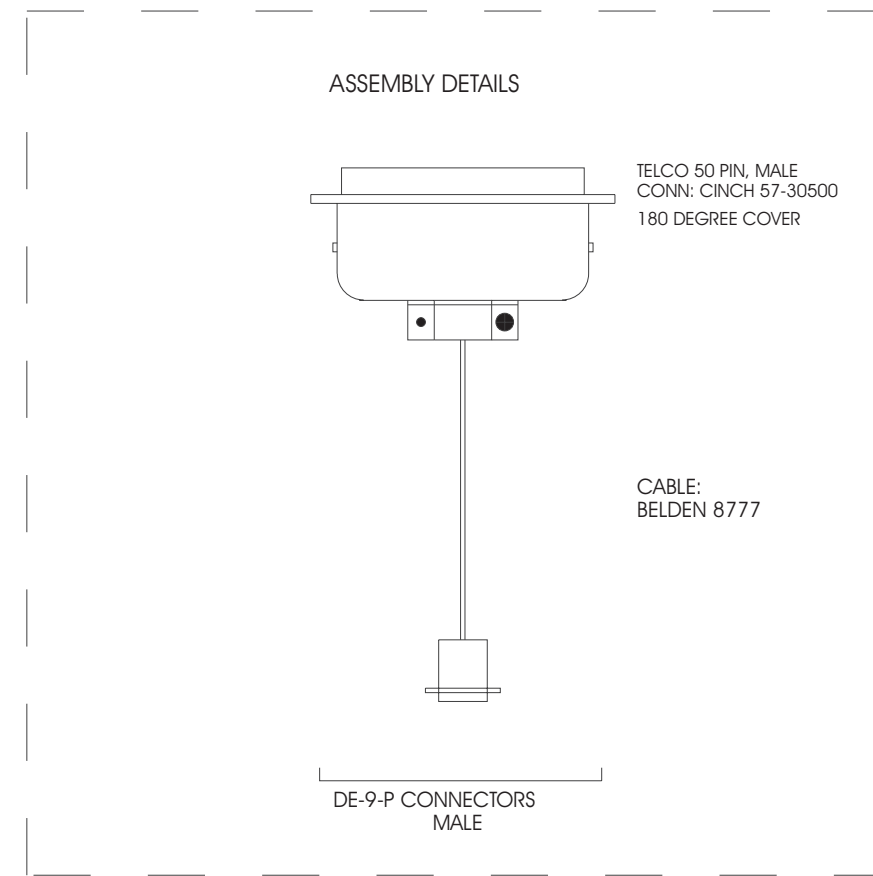
CONTRACT NO.		RTS SYSTEMS <small>BURBANK, CALIFORNIA, USA</small>			
APPROVALS	DATE	ADAM INTERCOM MATRIX RJ11 TO 50 PINS TELCO TRANSLATION CABLE			
DRAWN W. YAU	14 FEB 96				
CHECKED W. YAU	14 FEB 96				
ISSUED W. YAU	14 FEB 96				
ADAM-804	SCALE	SIZE D	FSCM NO.	DWG NO. ADAM-804	REV B
				SHEET	

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

CABLE DETAILS

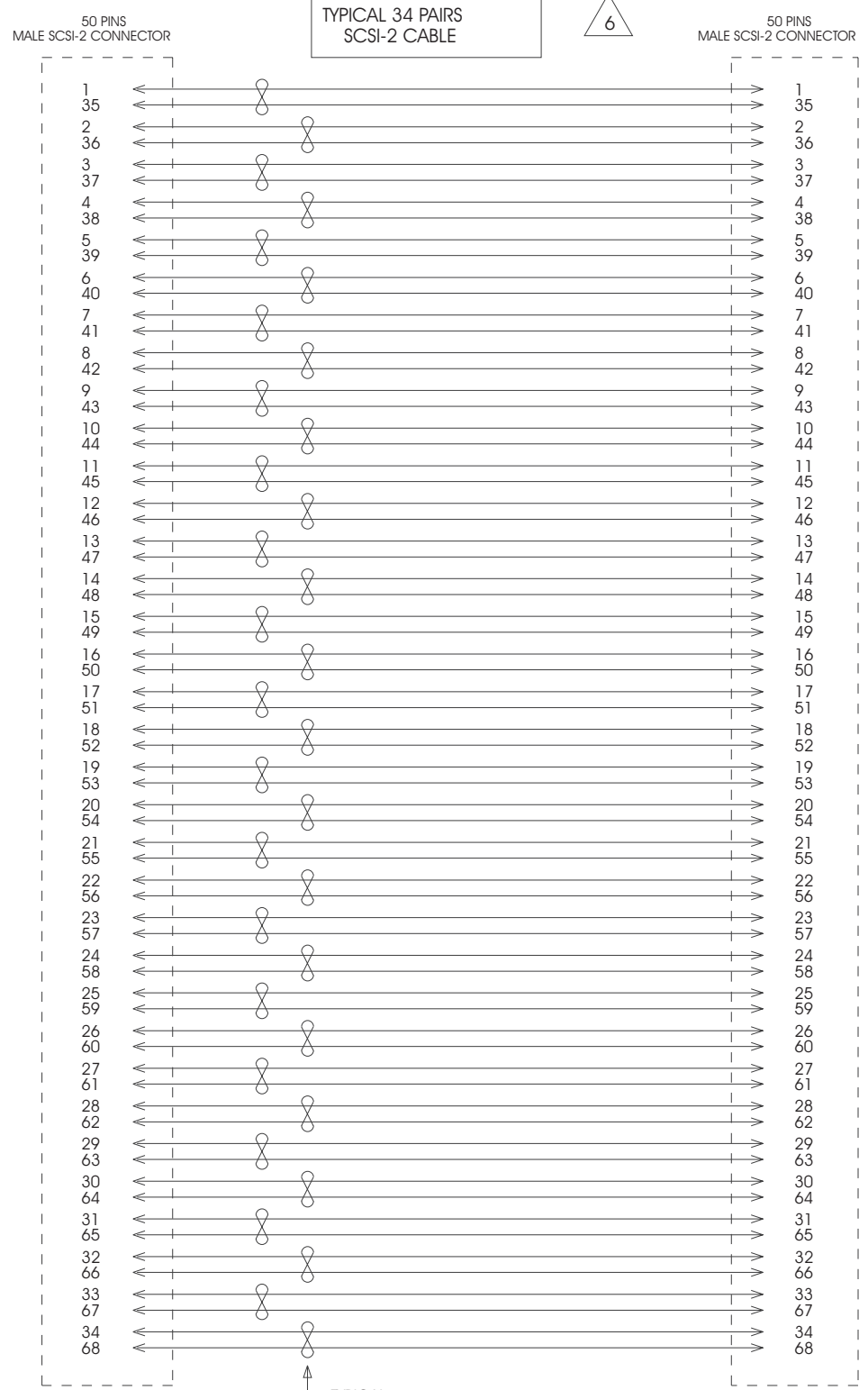


ASSEMBLY DETAILS



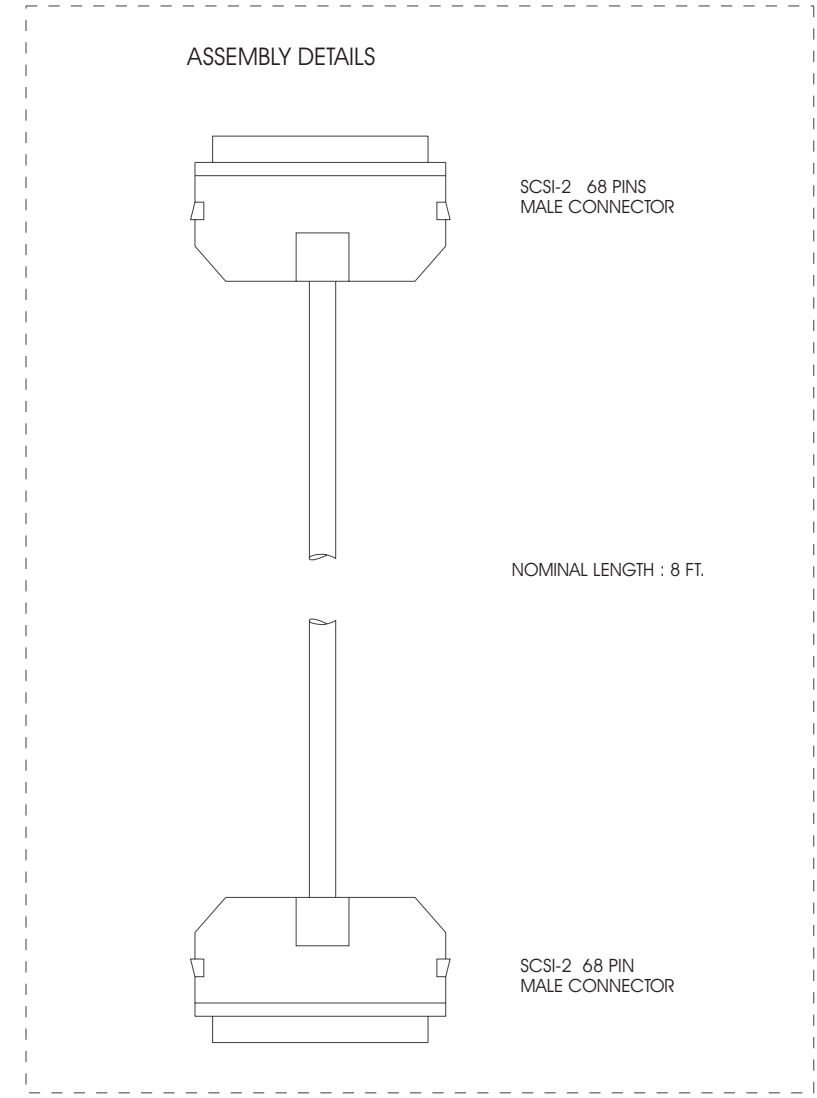
CONTRACT NO.		RTS SYSTEMS BURBANK, CALIFORNIA, USA			
APPROVALS	DATE	ADAM INTERCOM MATRIX DB9 TO 50 PINS TELCO TRANSLATION CABLE			
DRAWN W. YAU	14 FEB 96				
CHECKED W. YAU	14 FEB 96				
ISSUED W. YAU	14 FEB 96				
ADAM-805	SCALE	SIZE D	FSCM NO.	DWG. NO. ADAM-805	REV B
				SHEET	

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



TYPICAL 34 PAIRS SCSI-2 CABLE

6

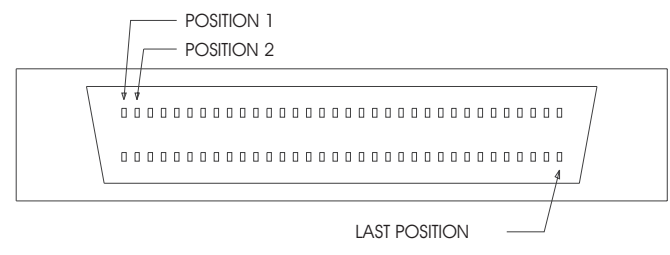


ASSEMBLY DETAILS

SCSI-2 68 PINS MALE CONNECTOR

NOMINAL LENGTH : 8 FT.

SCSI-2 68 PIN MALE CONNECTOR



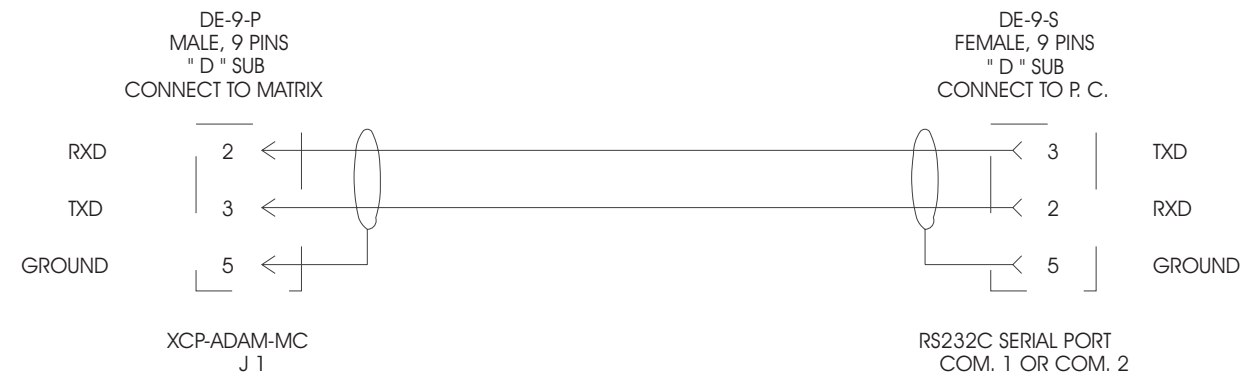
TYPICAL DENOTES TWISTED PAIRS

CABLE DETAILS FOR :

6

UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & BREAK SHARP EDGES HOLE TOLERANCES PER ANSI B91.11-1967, R1972 DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES 1/16 .005 30° .0005		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		SCALE		SIZE D	FSCM NO.
APPLICATION		ADAM-806		DWG NO.	REV B
NEXT ASSY	USED ON	ADAM-806		ADAM-806	SHEET

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

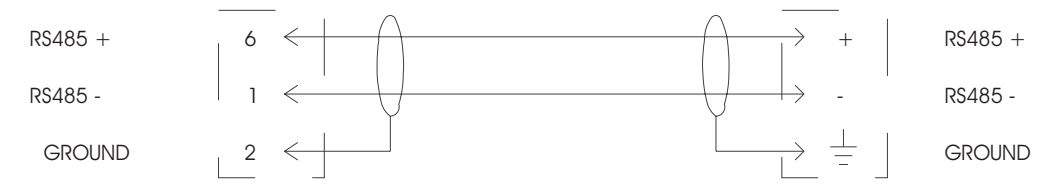


UNLESS OTHERWISE SPECIFIED		CONTRACT NO.		RTS SYSTEMS BURBANK, CALIFORNIA, USA	
REMOVE ALL BURRS & BREAK SHARP EDGES		APPROVALS		DATE	
HOLE TOLERANCES PER ANSI B94.11-1967, 91.972		DRAWN		15 FEB 96	
DIMENSIONS ARE IN INCHES		CHECKED		15 FEB 96	
TOLERANCES ARE:		ISSUED			
FRACTIONS P/16		MATERIAL		SIZE D	
DECIMALS .X .0040 .XX .0030 .XXX .010		FINISH		FSCM NO.	
ANGLES 30/30		APPLICATION		DWG NO. ADAM-807	
				REV A	
				SCALE	
				SHEET	

REVISIONS				
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

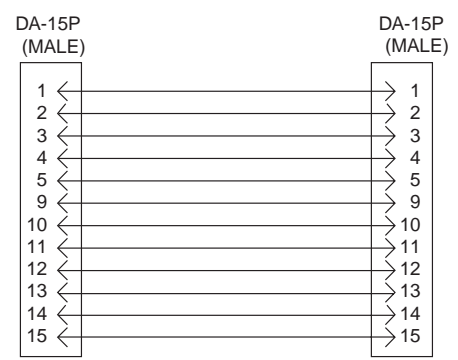
TM 9589
TRUNK MASTER CONTROLLER
COMMUNICATION PORTS
ASSIGNMENT TABLE
RS232C SERIAL

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

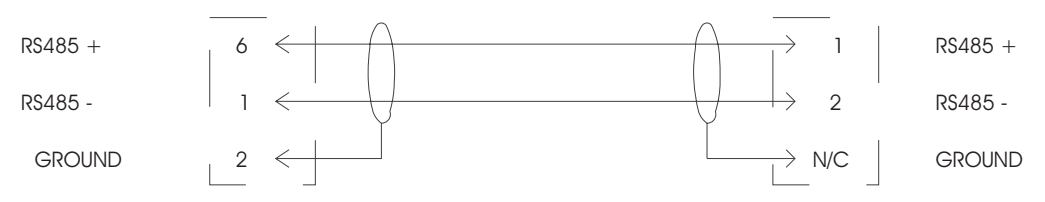
Note:
1 -- J3, J4, J5 ARE AMP CHAMP 50 PIN FEMALE CONNECTORS ON TM9589
2 -- COMM. PORT 7, 8, 15, 16, 23, 24 ARE SELECTABLE FOR RS485 OR RS232C.
FACTORY DEFAULT SETTING : COMM. 7, 8, 15, 16 = RS485, COMM. 23, 24 = RS232C.

UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & BREAK SHARP EDGES HOLE TOLERANCES PER ANSI B94.11-1967, 91972 DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES P/100 X .0040 X .0300		CONTRACT NO.		RTS SYSTEMS BURBANK, CALIFORNIA, USA	
NEXT ASSY		USED ON		APPROVALS	DATE
APPLICATION		FINISH		DRAWN W. YAU	15 FEB 96
				CHECKED W. YAU	15 FEB 96
				ISSUED	
				SIZE D	FSCM NO.
				DWG NO. ADAM-808	
				SCALE	REV A
				SHEET	

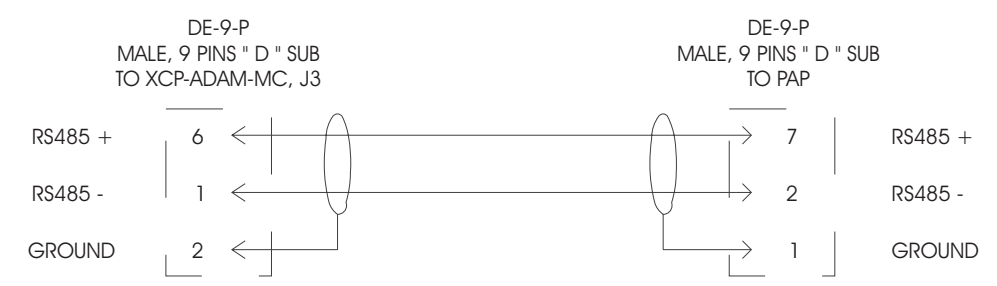
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED



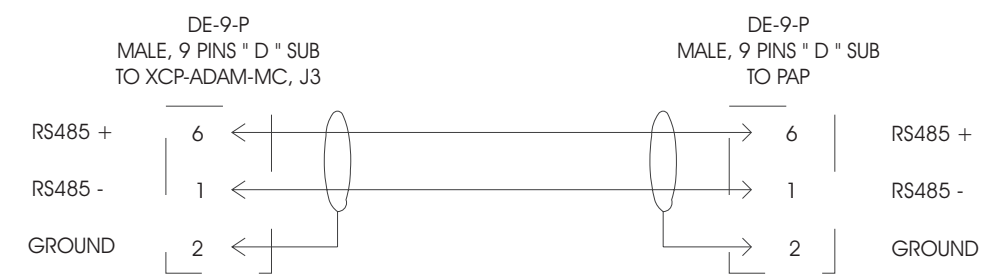
**UIO-256 TO UIO-256
INTERCONNECT CABLE**



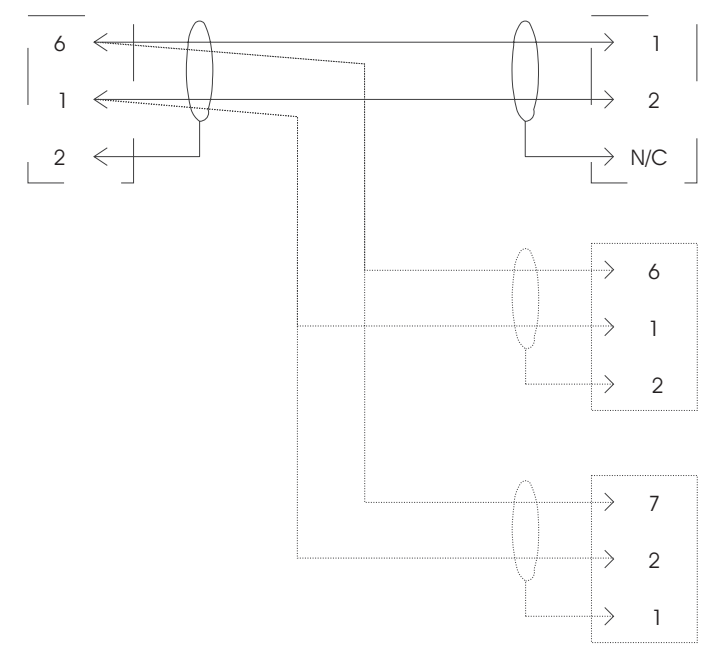
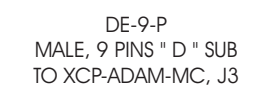
**UIO-256 TO XCP-ADAM-MC
MASTER CONTROLLER BREAKOUT PANEL**



**PAP-940, PAP-951, OR PAP-952 TO XCP-ADAM-MC
MASTER CONTROLLER BREAKOUT PANEL**



**PAP-950-50 TO XCP-ADAM-MC
MASTER CONTROLLER BREAKOUT PANEL**



DE-9-P
MALE, 9 PINS " D " SUB
TO UIO-256, J2

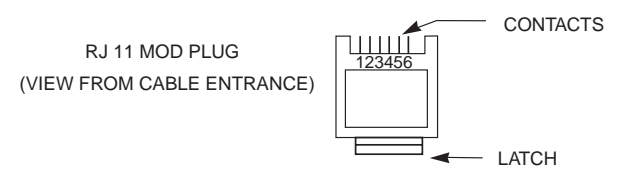
DE-9-P
MALE, 9 PINS " D " SUB
TO PAP-950-50

DE-9-P
MALE, 9 PINS " D " SUB
TO PAP-940, PAP-951, OR PAP-952

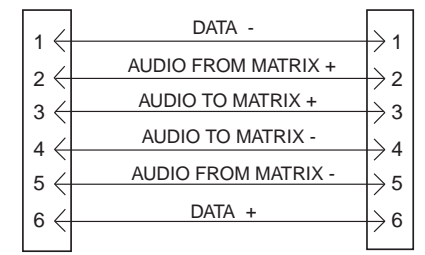
**COMMONING CABLE FOR CONNECTION OF UIO-256 AND PAP
TO XCP-ADAM-MC MASTER CONTROLLER BREAKOUT PANEL**

UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & BREAK SHARP EDGES HOLE TOLERANCES PER ANSI B91.11-1967, R1972 DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES F1/16 .0050 F300 X .0050 XX .0030 XXX.010		CONTRACT NO.		RTS SYSTEMS BURBANK, CALIFORNIA, USA	
APPROVALS		DATE		ADAM INTERCOM SYSTEM UIO-256 AND PAP CABLES	
DRAWN W. YAU		15 FEB 96			
CHECKED W. YAU		15 FEB 96			
MATERIAL		ISSUED		SIZE	FSCM NO.
FINISH		APPLICATION		D	ADAM-809
NEXT ASSY		USED ON		SCALE	DWG NO. ADAM-809
APPLICATION		ADAM-809		REV	A
				SHEET	

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

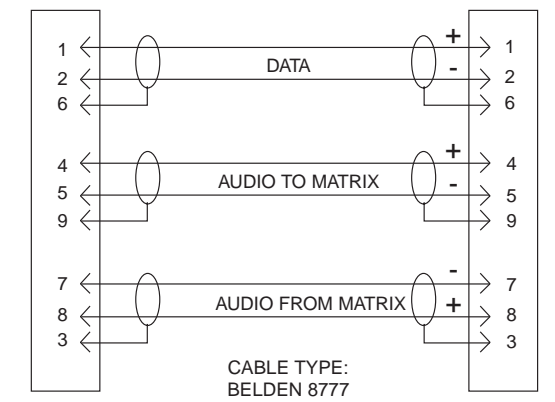


3 TWISTED PAIR TELEPHONE CABLE
PAIR 1: AUDIO TO MATRIX
PAIR 2: AUDIO FROM MATRIX
PAIR 3: DATA



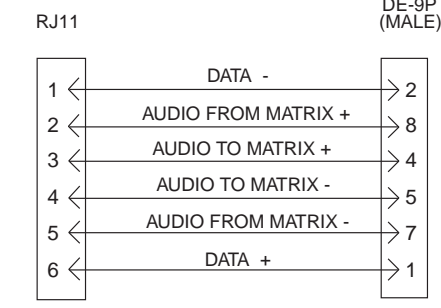
RJ-11 INTERCOM CABLE

DE-9S (FEMALE) TO STATION BREAKOUT PANEL DE-9P (MALE) TO INTERCOM STATION



9-PIN D-SUB INTERCOM CABLE

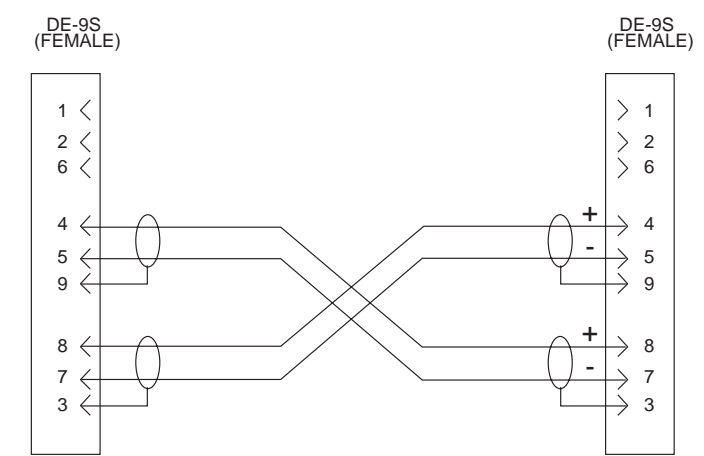
TO INTERCOM STATION BREAKOUT PANEL TO TIF-951



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

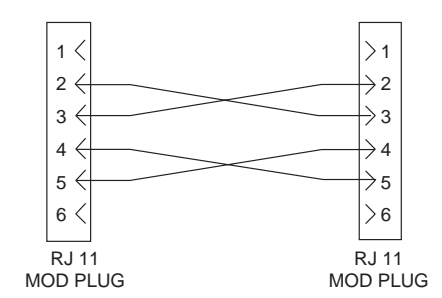
TO STATION BREAKOUT PANEL IN FIRST INTERCOM SYSTEM

TO STATION BREAKOUT PANEL IN SECOND INTERCOM SYSTEM



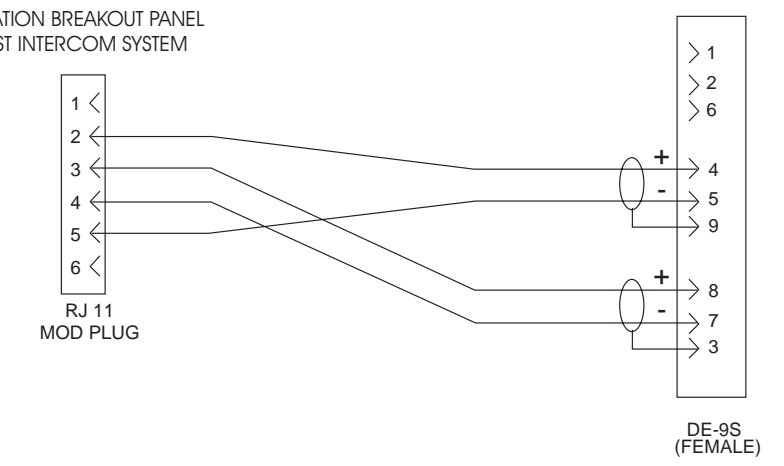
TO STATION BREAKOUT PANEL IN FIRST INTERCOM SYSTEM

TO STATION BREAKOUT PANEL IN SECOND INTERCOM SYSTEM



TO STATION BREAKOUT PANEL IN FIRST INTERCOM SYSTEM

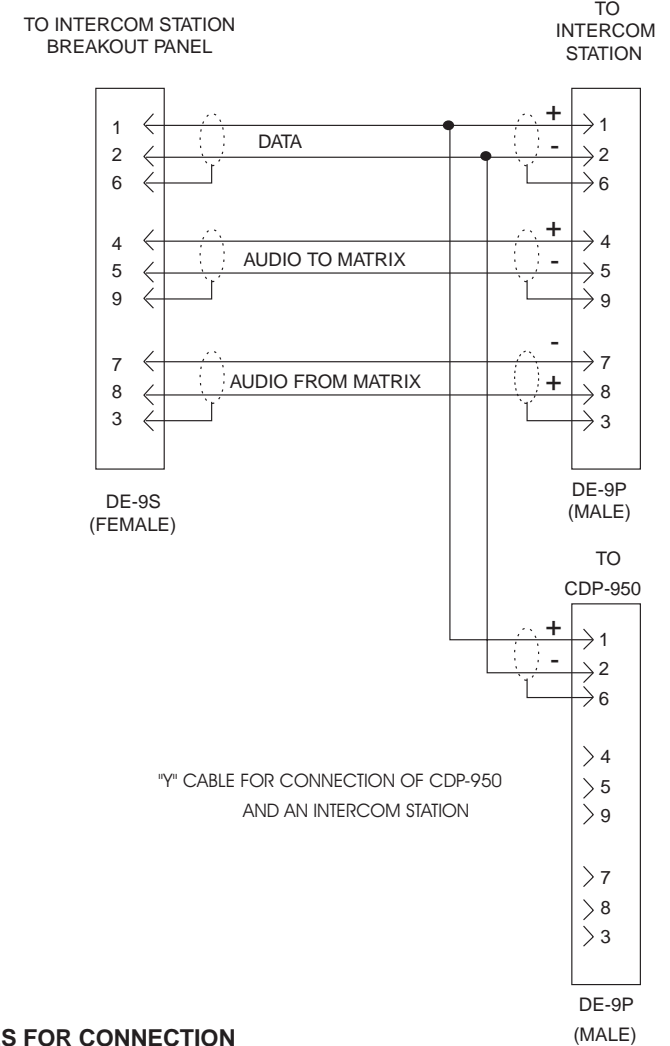
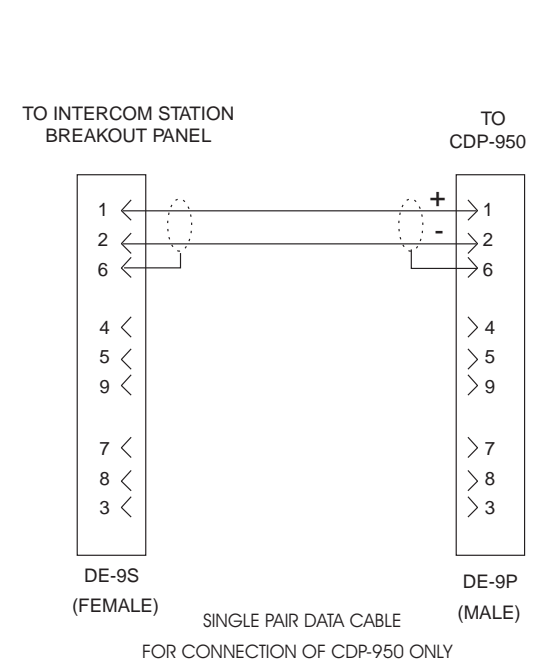
TO STATION BREAKOUT PANEL IN SECOND INTERCOM SYSTEM



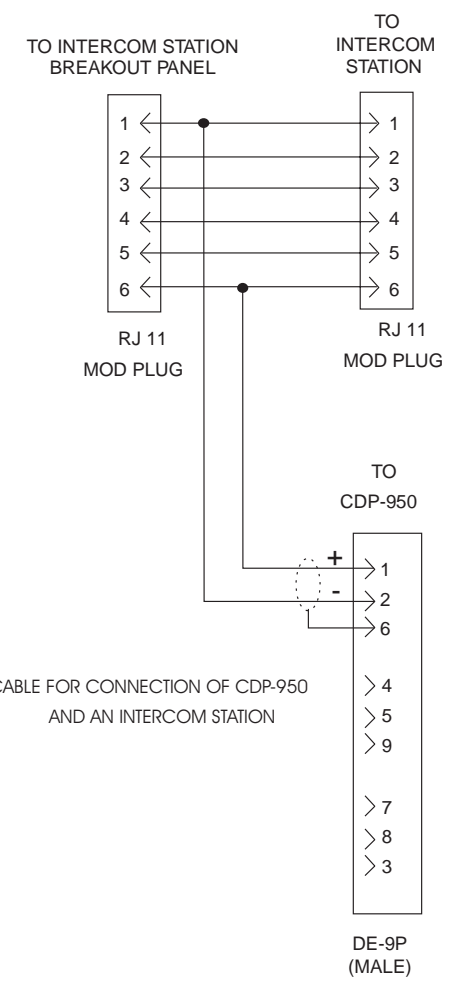
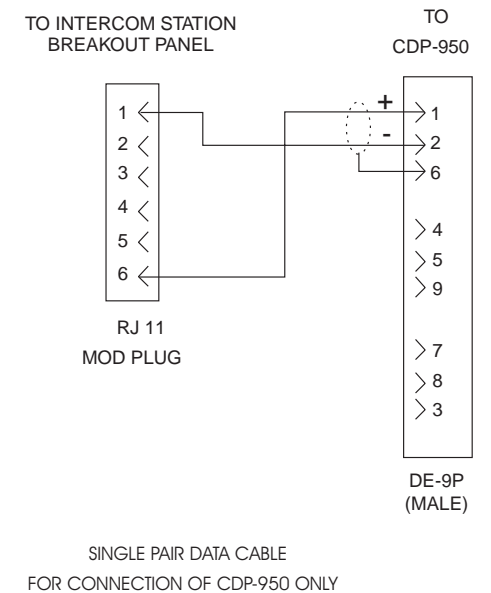
INTERCOM AUDIO CABLES FOR TRUNKING INTERCONNECT

UNLESS OTHERWISE SPECIFIED REMOVE ALL BURRS & BREAK SHARP EDGES HOLE TOLERANCES PER ANSI B91.1-1987, B1.9-1992 DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES P1/16 .X P100 P30D		CONTRACT NO.		RTS SYSTEMS BURBANK, CALIFORNIA, USA	
APPROVALS		DATE		ADAM INTERCOM SYSTEM INTERCOM STATION CABLES	
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		DWG NO. ADAM-810	REV A
				SCALE	SHEET

ZONE		REV	DESCRIPTION	DATE	APPROVED



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 REMOVE ALL BURRS & BREAK SHARP EDGES HOLE TOLERANCES PER ANSI B94.11-1967, B1.972 DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES P1/16 .0050 P30.0		CONTRACT NO.		RTS SYSTEMS BURBANK, CALIFORNIA, USA	
APPROVALS		DATE		ADAM INTERCOM SYSTEM	
DRAWN W. YAU		15 FEB 96		CDP-950 CABLES	
CHECKED W. YAU		15 FEB 96		SIZE D	FSCM NO.
ISSUED				DWG NO. ADAM-811	REV A
NEXT ASSY	USED ON	APPLICATION ADAM-811		SCALE	SHEET

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