



GT724

*Installation and
Operations Manual*

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Information** ≡

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GT724 Installation and Operations Manual
Gentner Part No. 800-114-001 (Rev. 1.00)
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Manual Development: Bill Kilpack

Artwork and Illustrations: Mike Greenhalgh

APPROVED for connection to
telecommunications systems specified
in the instructions for use subject to
the conditions set out in them.



504120

The connection ports on the GT724 are to be used as follows:

Power	Connection to the power cord provided
Speaker	Connection to external speaker(s)
Remote Control	Connection to external Gentner remote control
RS232	Connection to external non-Gentner remote control
Room Transmit	Connection to external mixer
Room Receive	Connection to external mixer
Tape Record	Connection to external tape recorder
Tape Play	Connection to external tape player or VCR
Microphone	Connection to external microphone(s)
Four-Wire Receive	Connection to external video CODEC
Four-Wire Transmit	Connection to external video CODEC
Telephone Line	Connection to telephone line
Telephone Set	Connection to telephone set

This equipment complies with the requirements of the EU guidelines:



89/336/EEC "Electromagnetic Compatibility"
73/23/EEC "Electrical operating material for use within specific
voltage limits"

Conformity of the equipment with the above guidelines is attested by the CE mark.



Gentner Communications Corporation is committed to protecting the environment and preserving our natural resources.

This manual has been printed entirely on recycled paper.

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Introduction ≡

Congratulations on purchasing the GT724 Group Teleconferencer. The latest digital technology has been incorporated into this outstanding product to support audio for video *and* telephone teleconferencing through simultaneous two-wire (telephone)/four-wire (video) operation. It incorporates an echo cancellation span of 112 milliseconds with a bandwidth of 7kHz (the bandwidth of most video systems). This higher bandwidth translates into higher audio quality. Also, the GT724 incorporates touch-tone dialing through the RS232 port. The GT724 system will meet the growing needs of any organization — from small to large.

The GT724 was designed to work in almost any acoustic environment using most kinds of peripheral equipment. Although many acoustic factors come into play in the design and layout of conference facilities, the GT724 was built with superior acoustic-cancellation features to provide the most trouble-free acoustically pleasing conference possible.

This manual explains how to install, set up and operate your GT724 system. It also provides instructions on how to improve room acoustics and resolve minor technical problems, should any arise. If you need information on how to install, set up or operate your system, please contact Gentner Communications Corporation at the location noted below. We welcome and encourage your comments so we can continue to improve our products and serve your teleconferencing needs.

Gentner Communications Corporation

1825 Research Way
Salt Lake City, Utah 84119

TEL: Worldwide 801.975.7200 In U.S.A. 800.945.7730
FAX: Worldwide 801.977.0087 In U.S.A. 800.933.5107
FAX-On-Demand 24-Hour Information Service 800.695.8110
FAX-On-Demand International Line 801.974.3661
Worldwide Web Page @ <http://www.gentner.com>

Warranty Registration ≡

Please register your GT724 by completing the self-addressed, postage prepaid warranty registration card and return it to Gentner Communications by mail. You may also FAX it to the above number or visit Technical Support at the Gentner Worldwide Web Page and register your product *online*. When your product is properly registered, Gentner Communications will be able to serve you better should you require technical assistance or desire to receive upgrades, new product information, etc.

Unpacking ≡

Ensure that the following equipment (See Figure 1, below.) was received with your shipment:

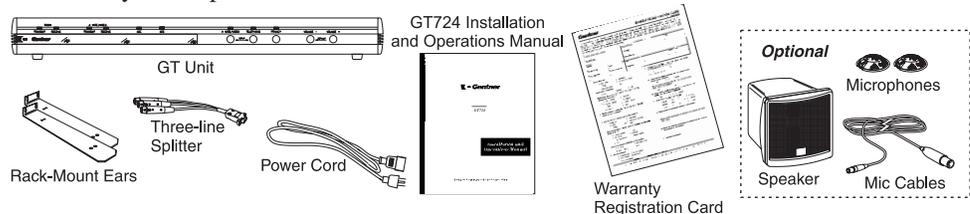


Figure 1. Equipment diagram

SHIPPING NOTE:

Gentner Communications is not responsible for product damage incurred during shipment. You must make claims directly with the carrier. Inspect your shipment carefully for obvious signs of damage. If the shipment appears damaged, retain the original boxes and packing material for inspection by the carrier. Contact your carrier immediately.

**Tools
Required** ≡

- Small flat-head screwdriver (for fine tuning adjustment pots)
- Medium Phillips screwdriver (if rack mounting)

**Features and
Benefits** ≡

- Simultaneous two-wire (telephone)/four-wire (video) operation with a single unit
- Superior acoustic echo cancellation
- 100-percent digital audio processing
- Full-duplex operation
- Digital gain processing
- Auto answer/disconnect
- Built-in microphone preamplifier
- Built-in speaker driver
- Privacy button for private conversations
- Touch-tone dialing through the RS232 port
- Remote diagnostics option
- Reliable, simple operation and setup integrity

**Product
Description** ≡

The GT724 is specifically designed as the audio interface for videoconferences that require simultaneous audioconferencing via the telephone, operating with a 7kHz bandwidth (compatible with most videoconferencing systems) for higher audio quality. This product contains a built-in microphone preamplifier and speaker driver, and incorporates touch-tone dialing through the RS232 port.

Adjustable Settings

The GT724 contains adjustable transmit and receive trim pots to match your room and network equipment levels. It also contains a simple setup procedure and switches for echo cancellation and echo suppression that can be individually set to accommodate your specific room's needs.

Echo Elimination

Front-panel acoustic echo canceller and acoustic echo suppressor LEDs will flash green/red, graphically indicating whether echo cancellation and/or echo suppression controls are working adequately. The GT724 operates with a 112-millisecond acoustic echo-cancellation span.

Noise Filtering

Internal filters remove unwanted noise: *two-wire (telephone) circuits* — below 300Hz and above 3.4kHz; *four-wire (video) circuits* — below 50Hz and above 7kHz.

RS232 Touch-Tone Dialing

Through the RS232 port, the GT724's touch-tone (DTMF) dialing capability can be accessed. This allows outbound calls to be initiated by the GT724 without requiring an external dialer or telephone set. This feature continues to function after connection, to issue tones for voice mail/pager interaction.

Two-Wire (Telephone)/Four-Wire (Video) Operation

GT724 operates in two-wire (telephone) mode, four-wire (video) mode or two-wire (telephone)/four-wire (video) modes simultaneously. Therefore, the GT724 is a one-box audio solution in videoconferencing applications (assuming your equipment supports it), as well as for telephone audioconferencing applications.

Remote Diagnostics Option

With the optional Teleconferencing Tools software, diagnostics can be accomplished locally with a PC connected directly to the RS232 port, or they can be performed remotely, via a standard telephone line and modem connected to the RS232 port.

Microphones and Speakers

GT724 contains a built-in microphone mixer and speaker driver. This enables the system to sum audio from up to three microphones and deliver up to 5W of output power to drive a 4ohm speaker. If more microphones or speakers are required, a Gentner MPAPII Mixer/Power Amplifier may be added (an eight-channel automatic mixer with a two-channel 15W power amp).

Accessories

The GT724 can be accessorized with an optional remote-control device, speakers and microphones, and all cabling required for setup. See Appendix C (Page 23) for a complete listing of accessories.

**Before You
Install** ≡

The GT724 is designed to work in almost any acoustic environment. To maximize your teleconference audio quality, we recommend that you prepare your teleconferencing site by taking the following factors into consideration:

Acoustic Room Treatment

Conference room treatment is recommended to improve the operation of your teleconferencing system. Rooms that have large areas of windows, white boards, hard floors, etc., are acoustically “live.” These areas increase the amount of audio reverberation in the room which, in turn, reduces the audio quality of your teleconference. You should minimize the amount of audio reverberation where possible.

You can improve room acoustics by installing acoustic panels, drapes and other wall fabrics. Another way to improve overall room acoustics is to keep room noise (i.e. computers and fans) to a minimum.

Power Requirements

The GT724 automatically accommodate voltage requirements ranging from 85–240Vac 50/60Hz power. No switching is required.

Telephone Line Requirements

For normal telephone audioconferencing operation, your GT724 works on standard analog telephone lines and connects to the telephone system with a standard RJ11C modular jack. If you do not have an RJ11C jack at your installation site, call your telephone company for installation.

If you are connecting your GT724 to a PBX system, please contact your telephone-equipment manufacturer or service representative. Some PBX systems will not work with your GT724; your GT724 works with the same type of telephone line that a FAX machine or modem uses.

Telephone

A single-line analog telephone set will be required at time of installation and for use during operation (if not using the RS232 touch tones) to initiate telephone calls.

Video CODEC

If you will be using the GT724 in four-wire (video) mode, a video circuit must be supplied by the user. This device, such as a video CODEC, uses special lines for handling transmission and reception of video and audio signals. Your equipment must match the audio input and output requirements of the GT724 (i.e. transmit output and receive input). Check Specifications (Page 18) for this information.

The audio from the GT724 is compatible with most popular CODECs, satellite transceivers, fiber-optic transceivers or dedicated four-wire telephone interfaces, regardless of transceiver or network delays. The four-wire (video) connection cannot connect directly into two telephone lines; a four-wire telephone interface is required.

VIDEOCONFERENCING NOTE:

Gentner Communications strongly advises using a qualified sound contractor or audiovisual specialist when installing equipment and circuitry for videoconferencing.

Auxiliary Equipment

Any auxiliary equipment to be used with the GT724 (i.e. microphones, speakers, recording equipment, etc.) should be available at time of installation.

Equipment Placement

The GT724 can be placed on a cart or table in the conference room or other nearby location (up to 1,000 feet from the conference room). The cabinet is designed for office or conference room display. Rubber “feet” are included to protect your table surface.

If your application requires mounting in a 19" equipment rack, rack-mount ears are supplied with each GT724. For rack-installation instructions, see Step 1 — Placement (next page).

Environmental Requirements

The GT724 can be safely operated in a room with varying temperatures between 32° and 100° F.

Installation 

Follow these step-by-step instructions to install your GT724:

Completed Installation

The following block diagram (See Figure 2, below.) shows the GT724 system when installation is complete.

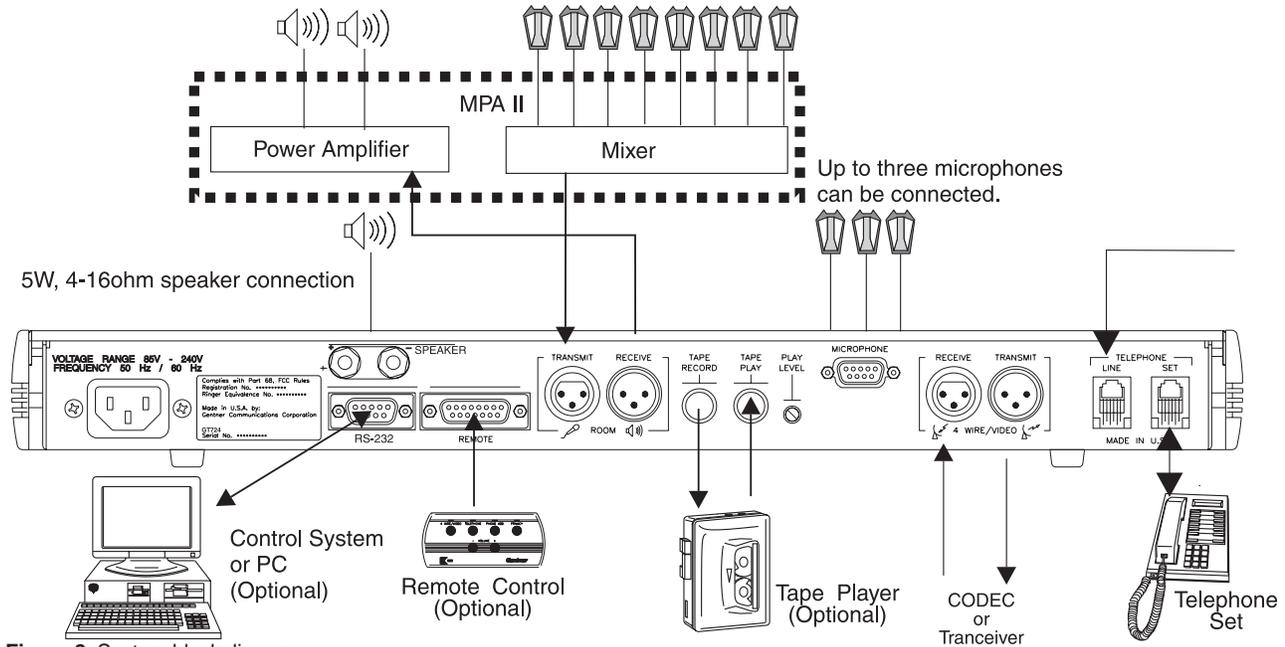


Figure 2. System block diagram

Step 1 — Placement

Your system is shipped for desktop or cabinet placement. Place the GT724 in a convenient place in the conference room, on a table, or in a cabinet.

Rack-mount ears are included in the shipment for converting to a rack-mountable unit, if desired.

Convert to Rack Placement

- 1) Remove the two screws from the side panels and retain for later use.
- 2) Remove the decorative end caps from the side panels.
- 3) Place the rack ears on the sides of the GT724, with the ears facing out.
- 4) Secure the rack ears to the side panels with the same screws.
- 5) Remove the rubber feet from the bottom of the GT724, if necessary.
- 6) Mount the unit in a standard 19" equipment rack using the screws provided.

Step 2 — Make Connections

Refer to GT724 back-panel connections (See Figure 3, next page, top.) for a description and placement of each of the connections you will be making. Each connection is numbered for easy identification.

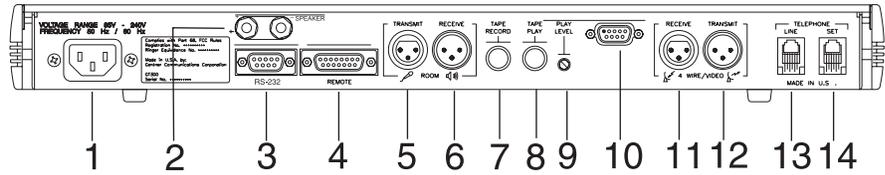


Figure 3. GT724 numbered back panel

VOLTAGE RANGE 85V - 240V
FREQUENCY 50 HZ / 60 HZ

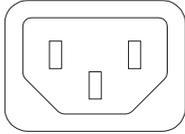


Figure 4. GT724 power module

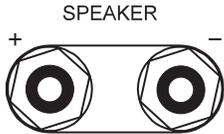


Figure 5. GT724 speaker connector

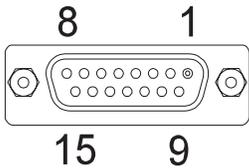


Figure 6. GT724 remote control DB15 connector

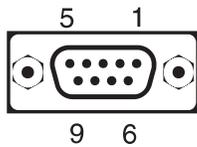


Figure 7. GT724 RS232 DB9 connector

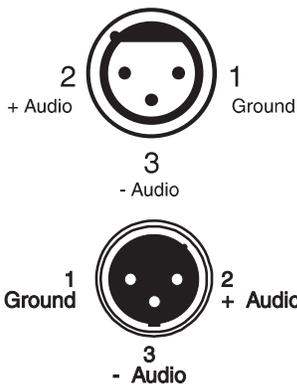


Figure 8. (Top) GT724 mixer audio female XLR connector; (Bottom) male XLR connector



Figure 9. GT724 auxiliary equipment RCA jack

Power

The power module [1] (See Figure 4, left.) will operate at any level between 85–240Vac, 50–60Hz.

Speaker

One 5W, 4–16ohm speaker can be directly connected to the GT724 (See Figure 5, left.), eliminating the need for a power amplifier. Connect the speaker wire to the + (red) and - (black) binding post connectors [2].

Remote Control

If using Gentner’s optional remote control, plug it into the DB15 REMOTE connector [4] (Figure 6, left). For pinouts, see Appendix B (Page 22).

Or

If using another manufacturer’s remote control, plug it into *either* the DB15 REMOTE connector [4], or into the RS232 connector [3] (See Figure 7, left.), depending on the manufacturer’s connector requirements. The detailed RS232 protocol is included in Appendix D (Page 23).

Mixer Audio

Connect the mixer’s Master Output to the ROOM TRANSMIT input female XLR socket [5] (Figure 8, left). This audio is sent to the remote conference site.

Connect the GT724’s ROOM RECEIVE output male XLR plug [6] to the power amplifier input (PA In on the MPAII). This is balanced line-level audio (audio from the other location). This audio will be amplified and sent to the speakers.

Auxiliary Equipment

If an audio tape or video recorder is to be used to record both sides of the teleconference, connect a cable between the “record in” or “audio in” of your recording device and the GT724’s TAPE RECORD jack [7].

To allow for audio playback (if you want to play a recorded tape to both locations), plug in the “audio out” or “line out” connector from your VCR or audio tape device into the TAPE PLAY jack [8] (Figure 9, left, bottom). The audio is mixed with the receive audio for playback in the local room and is also sent to the remote location.

VCR NOTE:

VCRs that loop record audio to the play output may cause echo and/or feedback. For more information, contact Gentner Communications at the number below.

If an audio tape player or VCR is connected to the GT724 for audio transmission to the other site, turn the audio source on and adjust the PLAY LEVEL trim pot [9] on the GT724’s back panel. This volume control will adjust the audio level being sent to both the local and the remote rooms.

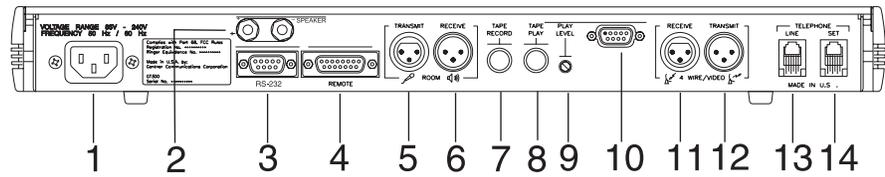


Figure 10. GT724 numbered back panel

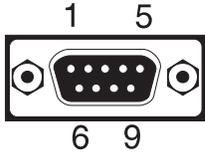


Figure 11. Microphone DB9 connector

Microphone

Plug up to three microphones into the provided three-way splitter. Plug the splitter into the MICROPHONE DB9 connector [10] (See Figure 10, above; Figure 11, left.) to take advantage of the GT724’s internal microhphone mixer. For pinouts, see Appendix B (Page 22).

Four-Wire (Video) Connections

When connecting your GT724 to four-wire (video) equipment, connect the transceiver or CODEC output to the GT724’s 4 WIRE/VIDEO RECEIVE input [11] (female XLR connector; Figure 12, left). Check your equipment manufacturer’s documentation to verify proper connector assignment and specifications.

Connect the GT724’s 4 WIRE/VIDEO TRANSMIT output [12] (male XLR connector; Figure 12, left) to the input of the transceiver or CODEC. Check your equipment manufacturer’s documentation to verify proper connector assignment and specifications.

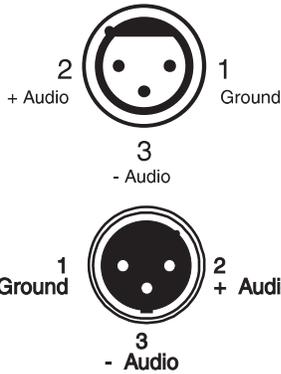


Figure 12. (Top) Four-wire (video) receive female XLR connector; (Bottom) four-wire (video) transmit male XLR connector

LEVEL/IMPEDANCE NOTE:

Check Specifications (Page 18) for proper level and impedance for both male and female XLR connections.

Connect Telephone

Plug your telephone line from the source into the RJ11C LINE jack [13] (Figure 13, left, bottom).

Plug your telephone set into the RJ11C SET jack [14].

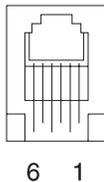


Figure 13. GT724 RJ11C telephone-line connector

Calibration 

The following information will help you make adjustments to optimize your system performance. Verify all components (including microphones and speakers, mixer/power amplifier, CODEC, bridged and auxiliary equipment, etc.) and all connections (see Step 2 — Making Connections, Page 6). Ensure that proper power is supplied to the GT724.

Front Panel Controls

Refer to GT724 front panel controls (See Figure 14, below.) for numbered easy identification.

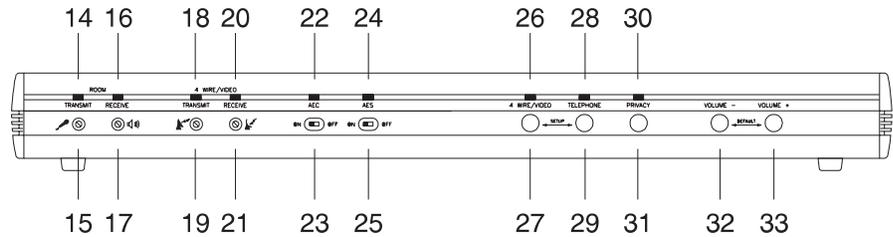


Figure 14. GT724 front panel controls

Move the front-panel slider to expose the trim pots and switches.

CALIBRATION NOISE NOTE:

Some echo and ringing may be heard while calibrating the GT724. Disregard it and continue with calibration until the end of the procedure. The echo and ringing will disappear.

The TELEPHONE [29] and 4 WIRE/VIDEO [27] push-on/push-off activate and deactivate the respective modes.

Place the AEC [23] switch in the ON position and the AES [25] switch in the OFF position.

Check trim pots [15, 17, 19, 21]. Each adjustment level should be in the (nominal) factory-default position (approximately one-fourth open or in the 10 o'clock position; Figure 15, left).

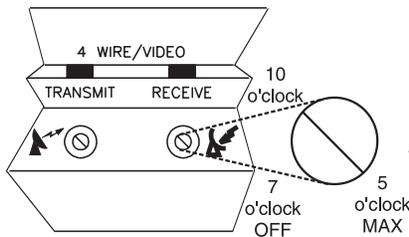


Figure 15. Factory default trim-pot position

Four-Wire (Video) Conference

To initiate a four-wire (video) conference, press the 4 WIRE/VIDEO button [27]. The 4 WIRE/VIDEO LED [26] will light and the red PRIVACY LED [30] will extinguish.

Two-Wire (Telephone) Conference

To initiate a two-wire (telephone) conference, call the remote party using the telephone set. Wait for the party to answer, then press the TELEPHONE button [29]. The TELEPHONE LED [28] will light. Once the button is pressed, you may hang up the handset.

FOUR-WIRE NOTE:

If the GT724 is not in the four-wire (video) mode prior to the two-wire (telephone) connection, the 4 WIRE/VIDEO LED [26] will also light when the TELEPHONE button [29] is pressed.

Calibration
Continued 

Room Transmit Level Adjustment

Someone in the local room should speak into the microphone at a normal distance, in a normal voice. The party at the other location should not speak during the transmit adjustments.

Adjust the ROOM TRANSMIT trim pot [15] (See Figure 16, below.) while monitoring the ROOM TRANSMIT LED [14]. The ROOM TRANSMIT LED should be solid green while the person is speaking and extinguish when the person stops.

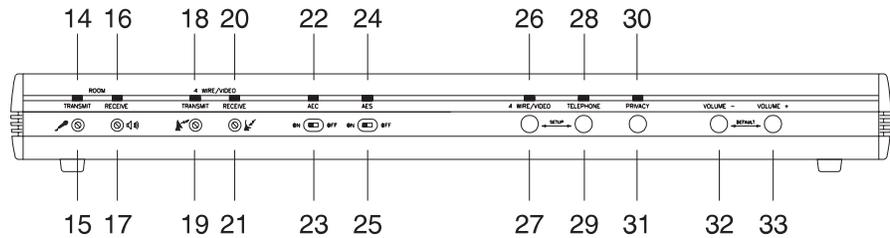


Figure 16. GT724 front panel controls

Under normal operating conditions, the ROOM TRANSMIT trim pot [15] is typically set at a 10 o'clock position or one-fourth open (Figure 17, left).

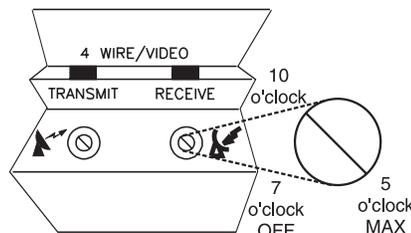


Figure 17. Factory default trim-pot position

4 Wire/Video Transmit Level Adjustment

VIDEOCONFERENCING NOTE:

If you are not using the GT724 in four-wire (video) mode, skip to Room Receive Level Adjustment (next page).

Someone in the local room should continue to speak into the microphone from a normal distance, in a normal voice; the other party should continue to maintain silence. While the person in the local room speaks, adjust the 4 WIRE/VIDEO TRANSMIT trim pot [19] to match the input level of your four-wire (video) equipment. The 4 WIRE/VIDEO TRANSMIT LED [18] should be solid green while the person is speaking and extinguish when the person stops.

Under normal operating conditions, the 4 WIRE/VIDEO TRANSMIT trim pot [19] is typically set at the 10 o'clock position or one-fourth open (Figure 17, above).

MULTIPOINT CONFERENCING NOTE:

For applications that will be used in multipoint conferencing, it is important to develop a network standard for your transmit level. All sites should conform to this level. Gentner Communications recommends a -10dBm level for multipoint networks.

4 Wire/Video Receive Level Adjustment

Someone in the distant location should speak into their microphone from a normal distance, in a normal voice. The people in the local room should not speak during these receive adjustments. While the person speaks, adjust the 4 WIRE/VIDEO RECEIVE trim pot [21] until the 4 WIRE/VIDEO RECEIVE LED [20] is solid green and just begins to flash red on audio peaks.

AUDIO PEAK NOTE:

The 4 WIRE/VIDEO RECEIVE LED [20] is the only LED that should be set to flash red on audio peaks. This level is 6dB below clipping and is the optimum level for maximum echo cancellation.

Room Receive Level Adjustment

Someone in the distant location should continue to speak into their microphone from a normal distance, in a normal voice; the local room should maintain silence.

Internal Power Amp

If you are using the GT724's internal power amp, adjust the ROOM RECEIVE trim pot [17] (while the person is speaking) for a comfortable listening level on the speaker(s).

External Power Amp

If you are using an external power amp, such as the MPAII Mixer/Power Amplifier, adjust the ROOM RECEIVE trim pot [17] to match the input level of your external power amp. Then adjust your power-amp level for a comfortable listening level on the speaker(s).

The ROOM RECEIVE LED [20] should be solid green with receive audio and extinguish when no audio is present.

Automatic Setup

Once the above settings and adjustments have been completed, the setup routine must be initiated. For best results, neither the party at the other location or anyone in the room should speak during the setup-routine noise. (It will sound like static.) The AES switch [25] should be OFF; the AEC switch [23] should be ON. The GT724 should be in two-wire (telephone) mode, four-wire (video) mode or both.

Momentarily press the TELEPHONE [29] and the 4 WIRE/VIDEO [27] buttons simultaneously. This will transmit a white-noise burst (static) over the speakers for 25 seconds, or until the GT724 has adapted for maximum echo cancellation.

During normal conversation, if the AEC LED [22] stays green, no further adjustments to the AES/AEC switches need be made.

During normal conversation, it is normal for the AEC LED [22] to occasionally flash red. If the AEC LED turns solid red while the calling party is speaking at normal levels, contact Gentner Communications for setup assistance.

The AES (Acoustic Echo Suppression) switch [25] can be used to help eliminate echo in particularly harsh acoustic environments. However, in typical operating environments, this feature is not used and should remain in the OFF position.

READJUSTMENT NOTE:

If you make any additional adjustments or changes on the front panel, or if any mics or speakers are moved after setup has been completed, initiating the automatic-setup routine is recommended before operating the GT724.

Calibration
Continued 

Volume + and Volume -

These front-panel controls [32, 33] (See Figure 18, below.) should not be adjusted during calibration. Their use will be described in the Operation section (next page).

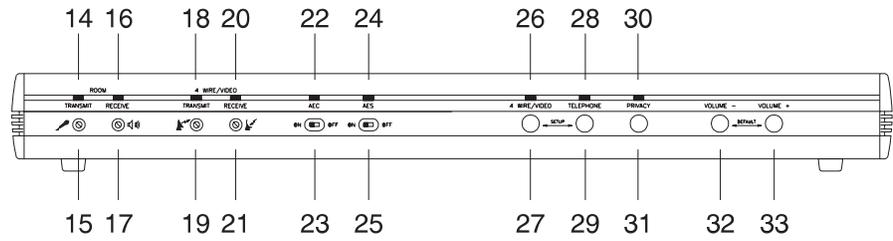


Figure 18. Front panel controls

Front Panel Security

Now that your system has been properly installed, adjusted and calibrated, and setup is complete, your level settings can be protected from tampering by sliding the front-panel cover to the left-most position.

Establishing a Videoconference

Videoconferencing systems and networks vary, and can be as diverse as there are different manufacturers and types of networks used. Your audiovisual installer/specialist should provide the information necessary to establish your videoconference using the type of network your equipment utilizes.

Once your conference connection is established through your network, the GT724 will be engaged and audio will be sent to and received from the other room by pressing the 4 WIRE/VIDEO button [27] (Figure 18, previous page). When in use, the associated green LED [26] will light and the red PRIVACY LED [30] will go out. The audio for your videoconference will be processed through the GT724, using DSP to provide the clearest audio possible along with your video transmission.

Terminating a Videoconference

When the videoconference is concluded, press the 4 WIRE/VIDEO button [27] again. The green LED [26] will go out and the red PRIVACY LED [30] will light, indicating the connection is terminated.

Your audiovisual installer/specialist should provide the information necessary to properly terminate your video transmission, depending on the type of equipment you are using.

Simultaneous Two-Wire/Four-Wire Mode

When *already engaged* in a videoconference, make a call using your telephone set. When the person answers, simply hit the TELEPHONE [29] button. The telephone call will automatically be included in your videoconference.

If using RS232 touch tones, it is not necessary to hit the TELEPHONE button [29]. When using the D serial-port command, the GT724 automatically activates the two-wire (telephone) mode. See Appendix D, RS232 Touch Tones, Page 24.

To terminate the telephone call, simply press the TELEPHONE button [29] again. It will not affect your four-wire (video) conference.

VIDEOCONFERENCE TERMINATION NOTE:

You cannot terminate a videoconference while the two-wire (telephone) mode is engaged. The two-wire (telephone) must be terminated before terminating the four-wire (video) mode.

Teleconferencing**Answering a Call**

An incoming call will ring on the telephone set (the TELEPHONE LED [28] will flash rapidly during each ring). Answer the call by pressing the TELEPHONE button [29] on either the front panel or the remote-control pad. The green TELEPHONE and 4 WIRE/VIDEO LEDs [26, 28] will turn on and the red PRIVACY LED [30] will turn off. The call may also be answered on the telephone set and then given to the GT724 by pressing the TELEPHONE button [29], if you prefer. (See also Auto-Answer/Auto-Disconnect Mode, next page.)

Operation
Continued ≡

Making a Call

Using your telephone set, call someone. After the other party has answered the call, press the TELEPHONE button [29] (Figure 18a, below). The TELEPHONE and 4 WIRE/VIDEO LEDs [26, 28] will light and the PRIVACY LED [30] will turn off. The GT724 takes control of the call and disables the telephone set. You should now hang up the handset.

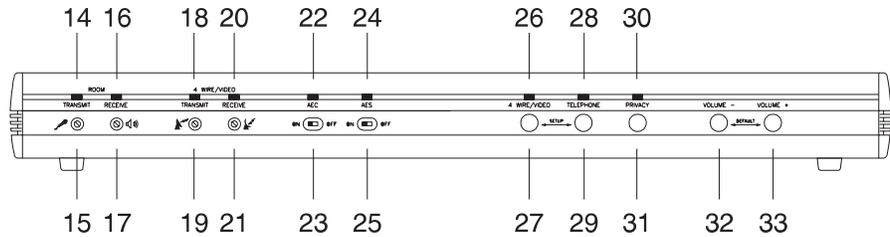


Figure 18a. Front panel controls

If using RS232 touch tones, it is not necessary to hit the TELEPHONE button [29]. When using the D serial-port command, the GT724 automatically activates the two-wire (telephone) mode. See Appendix D, RS232 Touch Tones, Page 24.

Disconnecting a Call

When you are finished with the call, press the TELEPHONE button [29] again. The TELEPHONE LED [28] will turn off and the 4 WIRE/VIDEO LED [26] will remain lit. Press the 4 WIRE/VIDEO button [27] to dim the 4 WIRE/VIDEO LED [28].

Auto-Answer/Auto-Disconnect Mode

In the auto-answer mode, the GT724 will automatically answer telephone calls after one complete ring, even if already engaged in a four-wire (video) conference.

To put the GT724 in auto-answer mode, make sure that a Two-wire (telephone) call is not currently connected. (When not connected, the red PRIVACY LED [30] will be lit and the green TELEPHONE LED [28] and 4 WIRE/VIDEO LED [26] will be off; or the 4 WIRE/VIDEO LED [26] may be lit and the red PRIVACY LED [30] and green TELEPHONE LED [28] will be off). Press and hold the TELEPHONE button [29]. When the associated LED [28] begins blinking at a slow, steady rate (after approximately four seconds), release the button. As long as the LED is blinking, the GT724 will remain in auto-answer/auto-disconnect mode. The PRIVACY LED [30] will remain lit, unless active in four-wire (video) mode.

When a two-wire (telephone) call is auto-disconnected, the 4 WIRE/VIDEO LED [26] will remain lit. Press the 4 WIRE/VIDEO button [28] to switch it off.

AUTO-ANSWER/AUTO-DISCONNECT NOTE:

This mode may not function as described with some PBX systems. The difficulty with the auto-answer mode may be caused by ring timing. Auto-disconnect requires loop drop or loop reversal to function. Contact your telephone company for this signaling.

Terminating Auto-Answer/Auto-Disconnect Mode

To take the GT724 out of auto-answer/auto-disconnect mode, make sure the GT724 is not currently on a call (the PRIVACY LED [30] should be lit and the TELEPHONE LED [28] should be blinking slowly). Press and hold the TELEPHONE button [29]. Release when the TELEPHONE LED [28] turns

off.

Privacy

If you wish to mute your conversation (so the remote parties cannot hear you), press the PRIVACY button [31]. The red PRIVACY LED [30] will light up; however, you will still be able to hear the other locations. When you want to resume two-way communication with the other parties, press the PRIVACY button [31] again. The PRIVACY LED [30] will turn off, re-establishing two-way communication with your parties.

PRIVACY NOTE:

When using the PRIVACY button [31], both the two-wire (telephone) and four-wire (video) send audio is muted.

Increasing Listening Volume

If the audio on the speakers is not loud enough, press and hold the VOLUME + button [33] until the desired listening level is reached. This does *not* adjust the level of the audio the other location hears.

Decreasing Listening Volume

If the audio on the speakers is too loud, press and hold the VOLUME – button [32] until the desired listening level is reached. This does *not* adjust the level of the audio that the other location hears.

Restoring Listening Volume to Default

To restore volume levels to a nominal, mid-range setting, press and hold the VOLUME + [33] and VOLUME – buttons [32] simultaneously.

VOLUME DEFAULT NOTE:

At the conclusion of each conference, the volume levels are automatically restored to the nominal, mid-range setting.

Remote Control Option

The optional Gentner Remote Control contains six essential operational buttons: 4 Wire/Video, Telephone, Privacy, Phone Add, Volume + and Volume –. The 4 Wire/Video, Telephone and Privacy buttons operate exactly as their respective buttons on the GT724's front panel.

FOUR-WIRE NOTE:

If the GT724 is not in the four-wire (video) mode prior to the two-wire (telephone) connection, the 4 Wire Video LED on the remote control will also light when the Telephone or Phone Add buttons are pressed.

The phone-add feature is activated by pressing the Phone Add or Telephone buttons on the remote control *or* TELEPHONE button [29] on the GT724.

PHONE ADD BUTTON NOTE:

The Phone Add button and the Telephone button on the remote control perform the same function as the TELEPHONE button [29] on the GT724 front panel.

The 4 Wire/Video, Telephone, Privacy and Phone Add buttons each contain their respective LEDs to graphically indicate current operation mode. These

Operation
Continued ≡

four buttons are push-on/push-off in operation.

AUTO-ANSWER/AUTO-DISCONNECT NOTE:

This function can be activated from the remote control as per the front-panel controls (Page 14). However, the Phone Add button cannot activate/deactivate the auto-answer/auto-disconnect function.

The Volume + and Volume – buttons will incrementally increase/decrease the remote parties’ volume level, in the same manner as using the respective buttons on the GT724 front panel.

Emergency Restoration

As long as power is maintained, your system will maintain all information the GT724 has “learned” about your room environment.

Following a power failure, the GT724 will reset itself to factory default settings. On first connection of two-wire (telephone) or four-wire (video), a three-second white noise (static) burst will automatically be emitted to quickly read the room and make internal settings for echo-elimination.

If the system is still unstable or echo is present, a full setup routine should be initiated to set the system to optimal operation. Momentarily press the TELEPHONE [29], 4 WIRE/VIDEO [27] buttons simultaneously (Figure 18b, below). AEC/AES switches and volume should be kept in the position set prior to the outage. The receive volume level will reset to nominal levels. Two-wire (telephone) or four-wire (video) operation will need to be reinitiated by pressing the required button (LED will light). The telephone call will need to be redialed, when using the telephone mode.

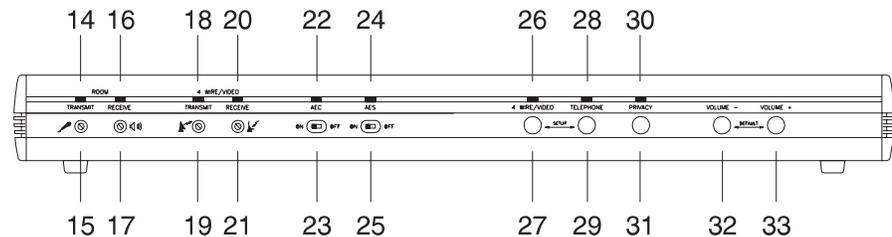


Figure 18b. Front panel controls

FOUR-WIRE (VIDEO) NOTE:

If continual power failures occur, your GT724 can be programmed to automatically retrain when power is restored. To do this, connect pins 8 and 9 together on the REMOTE [4] connector (Figure 3, Page 6). The system will power up in four-wire (video) mode, train for 25 seconds, and remain in the four-wire (video) mode. In conjunction with pin 8, if you want to lock the GT724 in the four-wire (video) mode continually, connect pins 15 and 9 together on the REMOTE connector [4]. This mode locks the unit into four-wire (video) mode and disables the 4 WIRE/VIDEO button [27].

When Not in Use

When the GT724 is not in use, the red Privacy LED [30] will remain lit, and the green TELEPHONE LED [26] and 4 WIRE/VIDEO LED [28] will be off (if in auto-answer mode, the TELEPHONE LED [26] will be blinking).

POWER NOTE:

Power should be maintained to the unit at all times.

**Two-Wire (Telephone)
Teleconferencing**

The GT724 provides all connections necessary to perform point-to-point audioconferencing over a standard telephone line. When open microphones and speakers are used at each location, two GT724s should be used (See Figure 19, below; disregard CODEC connection.). one at each location, to achieve maximum audio quality. The two locations may be either in the same building or at distant sites. Only one GT724 is required when the distant location is using a handset or speakerphone. If you are conferencing room-to-room, and you want to maintain full-duplex, you must use one GT724 in each room.

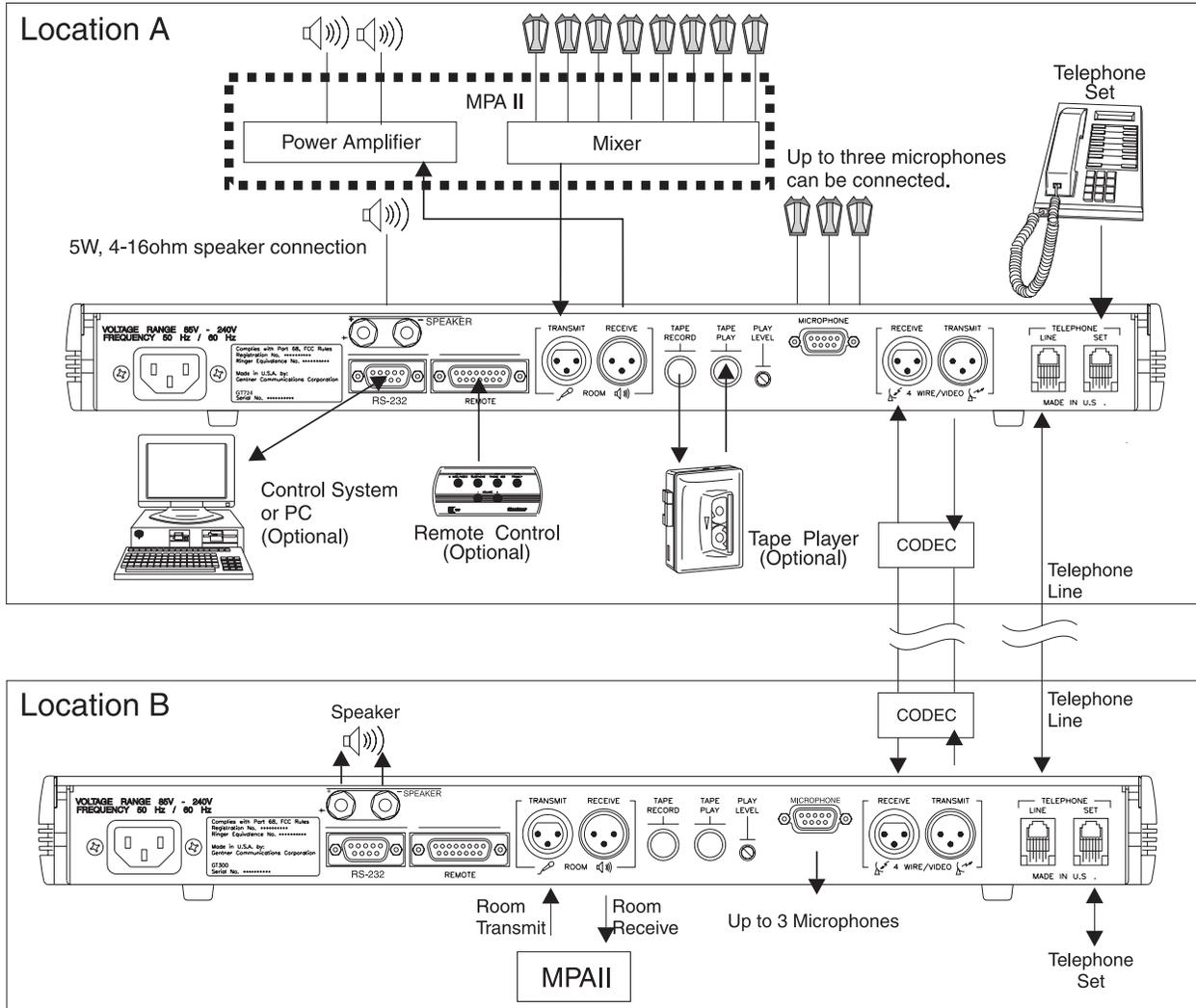


Figure 19. Two-GT724 connection

GT724 COMPATIBILITY NOTE:

The GT724 is compatible with most other manufacturer's teleconferencing equipment; however, systems with full-duplex capability are recommended.

**Four-Wire (Video)
Teleconferencing**

The GT724 can be used to provide full-duplex audio for videoconferencing applications. One GT724 is required to interface to a video CODEC or transceiver system at each location.

Figure 19 (above) illustrates a two-GT724 connection in a videoconferencing scenario. If using two GT724 for four-wire (video) conferencing *only*, disregard the telephone applications. If your application *occasionally* uses telephone (two wire) conferencing, make all connections shown

**Bridging
Multiple Calls** 

Telephone bridge services, such as 1-800 LETS MEET, are available to connect multiple remote sites to your GT724 conference. The bridging service can connect all callers together then direct them to one GT724. The number of distant locations that can be conferenced together is dependent upon the telephone bridge service used. Contact 1-800 LETS MEET at 1-800 LETS MEET for more information. 1-800 LETS MEET's bridge service offers the best audio quality possible when bridging your sites together.

Specifications **GT724****Dimensions**

19"/48.3cmW x 1.75"/4.45cmH x 10"/25.4cmD

Weight

10 lbs./4.5 kg dry

13 lbs./5.9 kg shipping

Connectors

POWER: Auto-adjusting power module

REMOTE: DB15 female

ROOM TRANSMIT INPUT: 3-pin female XLR; balanced bridging >20k Ω input impedance; +4dBu nominal level, adjustableROOM RECEIVE OUTPUT: 3-pin male XLR; balanced; 50 W (designed to drive \geq 600 W inputs); +4dBm nominal level, adjustable4 WIRE TRANSMIT OUTPUT: 3-pin male XLR; balanced; 50 W (designed to drive \geq 600 W inputs); -10dBm nominal level, adjustable4 WIRE RECEIVE INPUT: 3-pin female XLR; balanced, bridging >20k Ω input impedance; -10dBu nominal level, adjustableRECORD OUTPUT: Phono connector; unbalanced; 1k Ω output impedance (designed to drive \geq 10k Ω inputs); -10dBu nominal levelPLAYBACK INPUT: Phono connector; 10k Ω input impedance; -10dBu nominal, adjustable

RS232: DB9 female

TELCO LINE/SET: RJ11C

Power Requirements

85–240Vac; 50/60Hz; (Fuse) 2 amp 250Vac, Slo Blo type

Frequency Response50Hz to 7kHz \pm 1dB in four-wire (video) mode; 300 to 3.4kHz \pm 1dB with 6dB pre-emphasis on transmit in two-wire (telephone) mode**Operating Temperature**

32–100° F

Specifications are subject to change without notice.

Warranty

Gentner Communications Corporation (Manufacturer) warrants that this product is free of defects in both materials and workmanship. Should any part of this equipment be defective, the Manufacturer agrees, at its option, to:

A. Repair or replace any defective part free of charge (except transportation charges) for a period of one year from the date of the original purchase, provided the owner returns the equipment to the Manufacturer at the address set forth below. No charge will be made for parts or labor during this period;

B. Furnish replacement for any defective parts in the equipment for a period of one year from the date of original purchase. Replacement parts shall be furnished without charge, except labor and transportation.

This Warranty excludes assembled products not manufactured by the Manufacturer whether or not they are incorporated in a Manufacturer product or sold under a Manufacturer part or model number.

THIS WARRANTY IS VOID IF:

A. The equipment has been damaged by negligence, accident, act of God, or mishandling, or has not been operated in accordance with the procedures described in the operating and technical instructions; or,

B. The equipment has been altered or repaired by other than the Manufacturer or an authorized service representative of the Manufacturer; or,

C. Adaptations or accessories other than those manufactured or provided by the Manufacturer have been made or attached to the equipment which, in the determination of the Manufacturer, shall have affected the performance, safety or reliability of the equipment; or,

D. The equipments original serial number has been modified or removed.

NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE, APPLIES TO THE EQUIPMENT, nor is any person or company authorized to assume any warranty for the Manufacturer or any other liability in connection with the sale of the Manufacturer's products.

Manufacturer does not assume any responsibility for consequential damages, expenses, or loss of revenue or property, inconvenience, or interruption in operation experienced by the customer due to a malfunction in the purchased equipment. No warranty service performed on any product shall extend the applicable warranty period.

In case of unsatisfactory operation, the purchaser shall promptly notify the Manufacturer at the address set forth below in writing, giving full particulars as to the defects or unsatisfactory operation. Upon receipt of such notice, the Manufacturer will give instructions respecting the shipment of the equipment, or such other matters as it elects to honor this warranty as above provided. This warranty does not cover damage to the equipment during shipping and the Manufacturer assumes no responsibility for such damage. All shipping costs shall be paid by the customer.

This warranty extends only to the original purchaser and is not assignable or transferable.

Gentner Communications Corporation, 1825 Research Way, Salt Lake City, Utah 84119

**FCC Part 15
Compliance** ≡

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his/her own expense.

Changes or modifications not expressly approved by Gentner Communications Corporation could void the user's authority to operate the equipment.

**FCC Part 68
Compliance** ≡

FCC Registration Number: FBIUSA21442BRN
The Ringer Equivalence Number (REN) is 1.1B

A label containing, among other information, the FCC registration number and Ringer Equivalence Number (REN) for this equipment is prominently posted on the top plate, near the rear of the equipment. If requested, this information must be provided to your telephone company.

USOC Jacks: This device uses RJ11C and RJ21X terminal jacks.

The REN is used to determine the quantity of devices which may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most, but not all areas, the sum of the RENs should not exceed five (5). To be certain of the number of devices that may be connected to the line, as determined by the total RENs, contact the telephone company to obtain the maximum RENs for the calling area.

If this equipment causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. If advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice for you to make the necessary modifications in order to maintain uninterrupted service.

If you experience problems with this equipment, contact Gentner Communications Corporation, 1825 Research Way, Salt Lake City, Utah 84119, or by phone at (801) 975-7200 for repair and warranty information. If the trouble is causing harm to the telephone network, the telephone company may request you remove the equipment from the network until the problem is resolved.

No user serviceable parts are contained in this product. If damage or malfunction occurs, contact Gentner Communications for instructions on its repair or return.

This equipment cannot be used on telephone company provided coin service. Connection to Party Line Service is subject to state tariffs.

IC Compliance ≡

NOTICE: The Industry of Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective operational and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by Gentner Communications. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

The Ringer Equivalence Number (REN) is 1.1
IC Certification Number : 19706306A

Safety **Information** ≡

CAUTION: For use only with certified telecommunication equipment.

ATTENTION: Pour utilisation seulement avec du materiel de telecommunications certifie de marque.

BABT Recording Requirements

This condition applies in circumstances where you wish to use telecommunications apparatus comprised in or connected to your system to record, silently monitor or intrude into live-speech telephone calls. (It does not apply where the apparatus in question is not telecommunications apparatus; i.e. is not apparatus that had been constructed or adapted for use in transmitting or receiving telecommunications messages.) Silent monitoring is the establishment of a receive-only transmission path to a third terminal, enabling a third party to hear the call. Intrusion is the establishment of a bothway speech transmission to another terminal enabling a third party to hear and be heard by at least one of the other parties to the call. The condition does not apply to the monitoring of telephone calls for a systems control or diagnostic purposes where the meaningful content of the call itself is monitored.

This condition provides that you should make every reasonable effort to inform all parties to a call that it may or will be recorded, silently monitored or intruded into. The particular means by which you choose to do this are not specified in the condition. Acceptable options, depending on circumstances, might include warning tones, prerecorded messages, spoken warnings by the operator or written warnings included in publicity material, telephone directories, contracts, terms of business, staff notices, etc. It may not always be possible to warn first-time callers with whom you have had no previous contact but what is important is that you have a systemic procedure in place which provides the necessary information wherever this is a realistic possibility.

For recording and silent monitoring, this condition recognises two forms of warning: a written notice before the call or a warning during the call itself. Both warnings should also inform all parties to a call why it is being recorded or silently monitored. In the case of intrusion, a warning before the intrusion takes place is sufficient as both parties will become aware that a third party has joined their conversation.

This condition does not specify the detail of how these forms of warning should be given. A written statement included in any of the following — contractual terms, conditions of employment, publicity material, staff notices, telephone directory entries — would be a possible method.

The essential point is that the equipment user must be able to demonstrate that a determined attempt has been made to reach prospective callers; as an illustration, we would expect any warning included in a company's publicity material to be presented in such a way that it would not be missed by anyone looking for that company's telephone number(s). A warning which is not clearly visibly would fail to meet this requirement.

Where the warning is to be given during the call itself, the possibilities include a recorded message at the beginning of the call or a spoken message at any time during the conversation.

You should also maintain a record of the means by which callers have been warned which the Director may request sight of. This does not mean that you have to log each phone call; rather, that should a dispute arise, it will be possible for you to show from records how callers were being made aware at the time.

This condition does not apply where apparatus is being used for the purpose of law enforcement or in the interests of national security or to calls involved the national Emergency Organisations. It also provides that other licensees may be excluded, by means of a Director's consent, where there are compelling factors that outweigh the normal expectation of privacy. Such factors might apply where security is a consideration or in the case of specialised users such as helplines. In accordance with Section 19 of the Telecommunications Act of 1984, these consents will be entered on a register open to public inspection.

This condition attempts to secure objectives similar to those which were previously achieved through an approval requirement that equipment capable of recording, silently monitoring or intruding into telephone conversations should emit warning tones as these operations take place. The removal of warning tones was permitted by an OFTEL General Variation provided that an alternative form of warning was given. The expectation is that procedures complying with the General Variation should, generally, also meet the requirements of this condition.

Appendix A:
Glossary 

Throughout this manual, you may notice some unfamiliar terms. Some of these terms and how they relate to the GT724 appear below.

AEC	Acoustic echo cancellation.
AES	Acoustic echo suppression
Digital Echo Cancellation	The GT724 digitally subtracts acoustic echo from the audio being returned to the caller. The GT724 digitally eliminates both direct and indirect acoustic echoes, making the conference much more intelligible.
Full-Duplex Operation	Both locations can speak simultaneously without interruption, because the GT724 does not use switching to cut off either the transmit or receive audio signals. This produces full-duplex operation.
Digital Gain Processing	The GT724 uses special digital gain processing techniques to maintain consistent audio levels within the room. Receive volume levels will be maintained consistently, even when changes occur in the other room, or telephone line conditions change.
PBX	Private branch exchange. This is a common form of business telephone system.

Appendix B: Connector Pinouts

Table 1. Remote Control DB15 Connector Pinouts

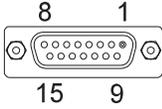
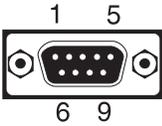
	<u>Pin Number</u>	<u>Control</u>	<u>Pin Number</u>	<u>Control</u>
	1	Ground	9	Ground
	2	Two-wire audio switch	10	Two-wire lamp
	3	Four-wire audio switch	11	Four-wire lamp
	4	Privacy switch	12	Privacy lamp
	5	Phone add switch	13	Phone add lamp
	6	Volume up	14	Not used
	7	Volume down	15	Four-wire lock
	8	Four-wire mode		

Table 2. RS232 DB9 Connector Pinouts

	<u>Pin Number</u>	<u>Control</u>	<u>Pin Number</u>	<u>Control</u>
	1	DCD	6	DSR
	2*	Transmit	7	No connection
	3*	Receive	8	CTS
	4	DTR	9	No connection
	5*	Ground		

* Required for computer or remote control

Table 3. Telephone Set and Line Connections

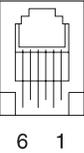
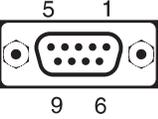
	<u>Telephone Set</u>	<u>Telephone Line</u>
	1	No Connection
	2	A-lead closure
	3	Ring
	4	Tip
	5	A-lead closure
	6	No connection

Table 4. DB9 Microphone Connector Pinouts

	<u>Pin Number</u>	<u>Control</u>	<u>Pin Number</u>	<u>Control</u>
	1	Mic 1+	6	Mic 3-
	2	Mic 1-	7	Ground
	3	Mic 2+	8	Ground
	4	Mic 2-	9	Ground
	5	Mic 3+		

Appendix C: Available Options ≡

Accessory	Gentner Part Number
Tabletop Omni Microphone	910-103-148
Tabletop Unidirectional Microphone	910-103-158
Delta Microphone	910-103-333
Wall Mount Speaker	910-103-010
Mixer/Power Amplifier	910-101-001
Remote Control	910-110-100

Appendix D: Serial Port Commands ≡

The RS232 serial port will accept serial commands. The commands provide the same control as the front-panel switches, except that the serial commands will not control either the AEC or the AES switches.

RS232 Serial Port Protocol

9600 baud, 8 bits, 1 stop bit, no parity

```

Teleconferencing Interface
Gentner Communications Corporation © 1993

Ports Initialized

POC vx.x
RAM OK
CODEC OK
GT724

INTERRUPTS $Revision: x.xx$
INTERRUPTS SETUP $Revision: x.xx$
BACKGROUND $Revision: x.xx$
GT724 MONITOR $Revision: x.xx$
    
```

Figure 20. GT724 power-up message

When the serial port is connected to a computer, the information in Figure 20, (left) will be displayed on the screen on power-up:

SERIAL PORT NOTE:
Placing 3 milliseconds of character spacing between commands will reduce the chance of missed commands. It is also best to wait for the GT724 to acknowledge a command before going on to the next one.

The GT724 is now in the serial command mode. The GT724 serial commands taken in this mode are shown in Table 5 (below), as well as all telephone-keypad digits (0–9), the * and # keys (for voice-mail/pager use; see RS232 Touch-Tone Dialing, next page). These commands are designed to allow users to control the GT724 through the serial port.

The basic structure of the serial commands are one or two letters with a digit following the letters. The two letters identify the command type. The digit or lack of a digit tells the GT724 what to do with the current command.

Table 5. GT724 Serial Port Commands

Function	Command	Function	Command
Auto Answer	AA	Dialing	Dx
Four-wire (video)	4W	Phone Add	PA
Privacy	P	Ring acknowledgment	RING
Setup	S	Two-wire (telephone)	TE
Volume down	L-	Volume up	L+

SERIAL COMMAND NOTE:
All commands are not complete until you hit ENTER.

Appendix D: Continued ≡

Two-Wire (Telephone)

The TE command has the same function as the two-wire audio switch. It connects or disconnects the GT724 in two-wire mode.

TE1 <CR>

Connects the GT724 in two-wire mode.

The GT724 responds, TE1 <CR> (if connected) *or* TE0 <CR> (if not connected).

TE0 <CR>

Disconnects the GT724 from two-wire mode.

The GT724 responds, TE0 <CR>.

TE <CR>

Returns the two-wire connect state.

The GT724 responds, TE1 <CR> if connected *or* TE0 <CR> (if not connected).

Four-Wire (Video)

The 4W1 command has the same function as the four-wire video switch. It connects or disconnects the GT724 in four-wire mode.

4W1 <CR>

Connects the GT724 in four-wire mode.

The GT724 responds, 4W1 <CR> (if connected) *or* 4W0 <CR> (if not connected).

4W0 <CR>

Disconnects the To from four-wire mode.

The GT724 responds, 4W0 <CR>.

4W <CR>

Returns the four-wire connect state.

The GT724 responds, 4W1 <CR> (if connected) *or* 4W0 <CR> (if not connected).

RS232 Touch-Tone Dialing

To dial touch tones through the RS232 port, send Dx (x stands for a single button on a telephone keypad). All digits on a standard telephone keypad (0–9) are available for use when issuing tones through the RS232 port, as well as the * and # keys, for use with voice mail and pagers.

Dx <CR>

Sends the first digit.

The GT724 automatically activates two-wire (telephone) mode and responds, Dx <CR>.

OR

Dxxxxxxxxx <CR>

Sends entire phone number as a string.

The GT724 automatically activates the two-wire (telephone) mode and responds, Dxxxxxxxxx <CR>.

RING <CR>

GT724 receives a ring at the dialed-up location.

The GT724 responds, RING <CR>.

TOUCH-TONE NOTE:

Before sending additional commands, wait for the GT724 to respond. Also, if you require a pause in your dial-out string (for the telephone to grab an outside line, etc.) enter a comma (,). Example: D9,1234567 <CR>. The “,” is read by the GT724 as a two-second pause.

Appendix D:
Continued ≡

Phone Add

To put the GT724 in phone-add mode, send

PA1 <CR>

Enables phone add.

The GT724 responds, PA1 <CR>.

PA0 <CR>

Disables phone add.

The GT724 responds, PA0 <CR>.

PA <CR>

Returns the current phone-add status.

The GT724 responds, PA1 <CR> (if phone-add active) *or* PA0 <CR> (if phone-add inactive).

Privacy

The GT724's privacy mode will work if the GT724 is connected to either the telephone lines (two wire) or the four-wire interface. To enable the privacy through the serial port, send the following characters:

P1 <CR>

Enables privacy mode.

The GT724 responds, P1 <CR>.

P0 <CR>

Disables privacy mode.

The GT724 responds, P0 <CR>.

P <CR>

Returns the current status of privacy.

The GT724 responds, P1 <CR> (if privacy is enabled) *or* P0 <CR> (if privacy is disabled).

Volume Up and Volume Down

The volume up command is initiated by sending the following characters:

L+ <CR>

Increases the volume level.

The GT724 responds, L+ <CR>.

L- <CR>

Decreases the volume level.

The GT724 responds, L- <CR>.

Volume Status

The GT724 will return the volume status by sending the following characters:

L <CR>

Returns the current volume level.

The GT724 responds, L+1 <CR> (for example) if the volume level is up one decibel, *or* L-3 <CR> (for example) if the volume level is down three decibels.

Auto Answer

The GT724 is put in auto-answer mode by sending the following characters through the serial port:

AA1 <CR>

Enables auto answer.

The GT724 responds, AA1 <CR>.

Auto Answer continued**AA0 <CR>**

Disable auto answer.

The GT724 responds, AA0 <CR>.

AA <CR>

Returns the current auto answer state.

The GT724 responds, AA1 <CR> (if auto answer enabled) *or* AA0 <CR> (if auto answer disabled).

Setup

To put the GT724 into setup mode, send

S1 <CR>

Puts the GT724 into setup mode.

The GT724 responds, S1 <CR>.

SETUP NOTE:

The GT724 must be connected in four-wire (video) or two-wire (telephone) mode first.

S0 <CR>

Takes the GT724 out of setup mode.

The GT724 responds, S0 <CR>.

S <CR>

Returns the current status of setup mode.

The GT724 responds, S1 <CR> (if in setup mode) *or* S0 <CR> (if not in setup mode).

SETUP EXIT NOTE:

The setup training will timeout after 25 seconds.

Status

A special command returns the entire status of the GT724 in one command. The character string for the command is

ST <CR>

Returns the entire GT724 status.

The GT724 responds in the following order:

AAx

Sx

Lxx

Px

PAx

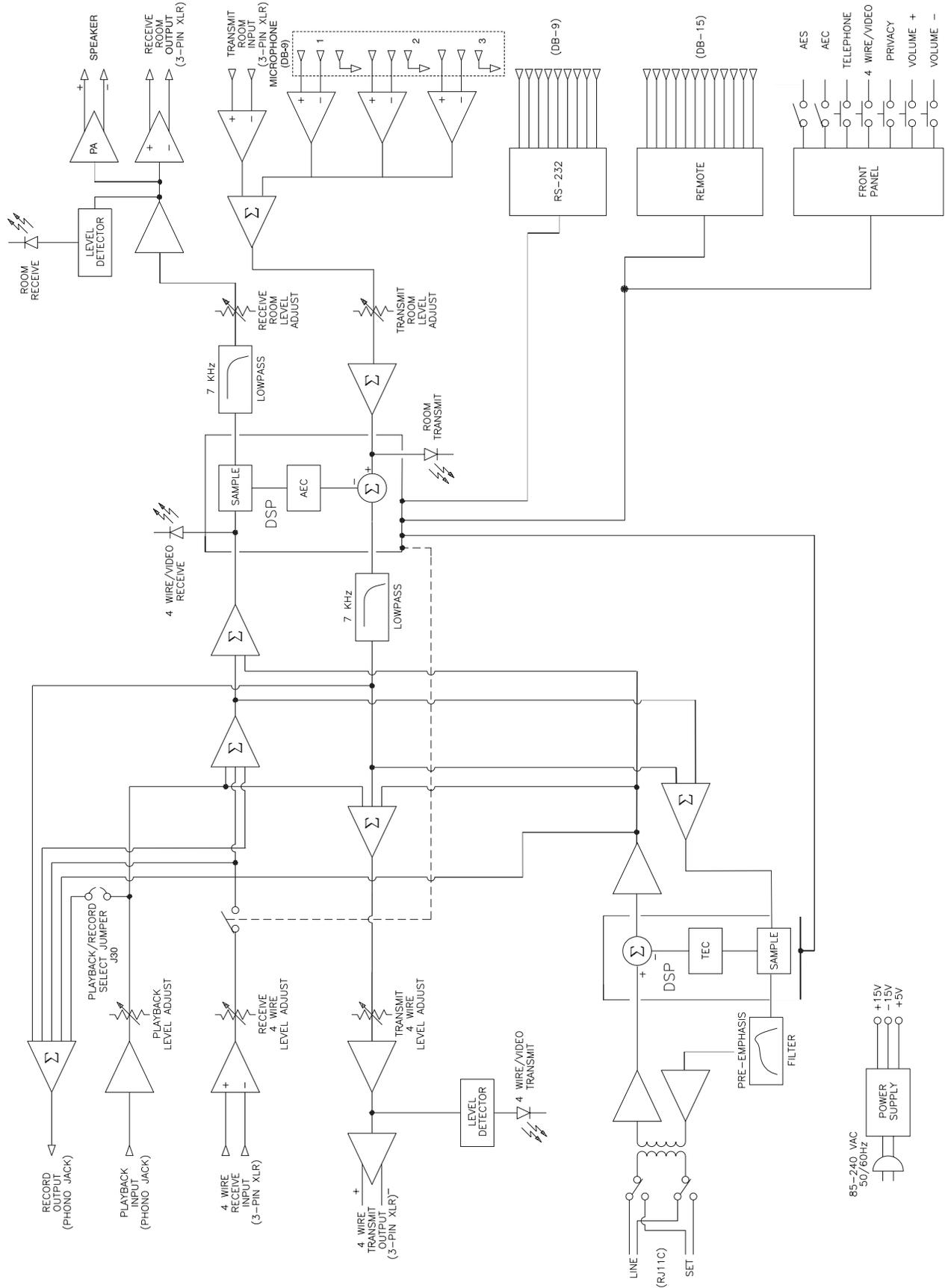
TEx

4Wx

**Appendix E: PC Command
Quick Reference** ≡

TE <CR>	Return two-wire connect status
TE1 <CR>	Connect in two-wire
TE0 <CR>	Disconnect two-wire
4W <CR>	Return four-wire connect status
4W1 <CR>	Connect in four wire
4W0 <CR>	Disconnect in four wire
Dx <CR>	Dial RS232 touch tones
RING <CR>	Response when GT724 acknowledges a ring
P <CR>	Return privacy status
P1 <CR>	Enables privacy
P0 <CR>	Disable privacy
L <CR>	Return current volume level
L+ <CR>	Increase volume level
L- <CR>	Decrease volume level
AA <CR>	Return current auto answer status
AA1 <CR>	Enable auto answer
AA0 <CR>	Disable auto answer
S <CR>	Return current setup status
S1 <CR>	Enable setup
S0 <CR>	Disable setup
PA <CR>	Return current phone add status
PA1 <CR>	Enable phone add
PA0 <CR>	Disable phone add
ST <CR>	Return all above status

**Appendix F: GT724
Block Diagram**



GT724 Notes 



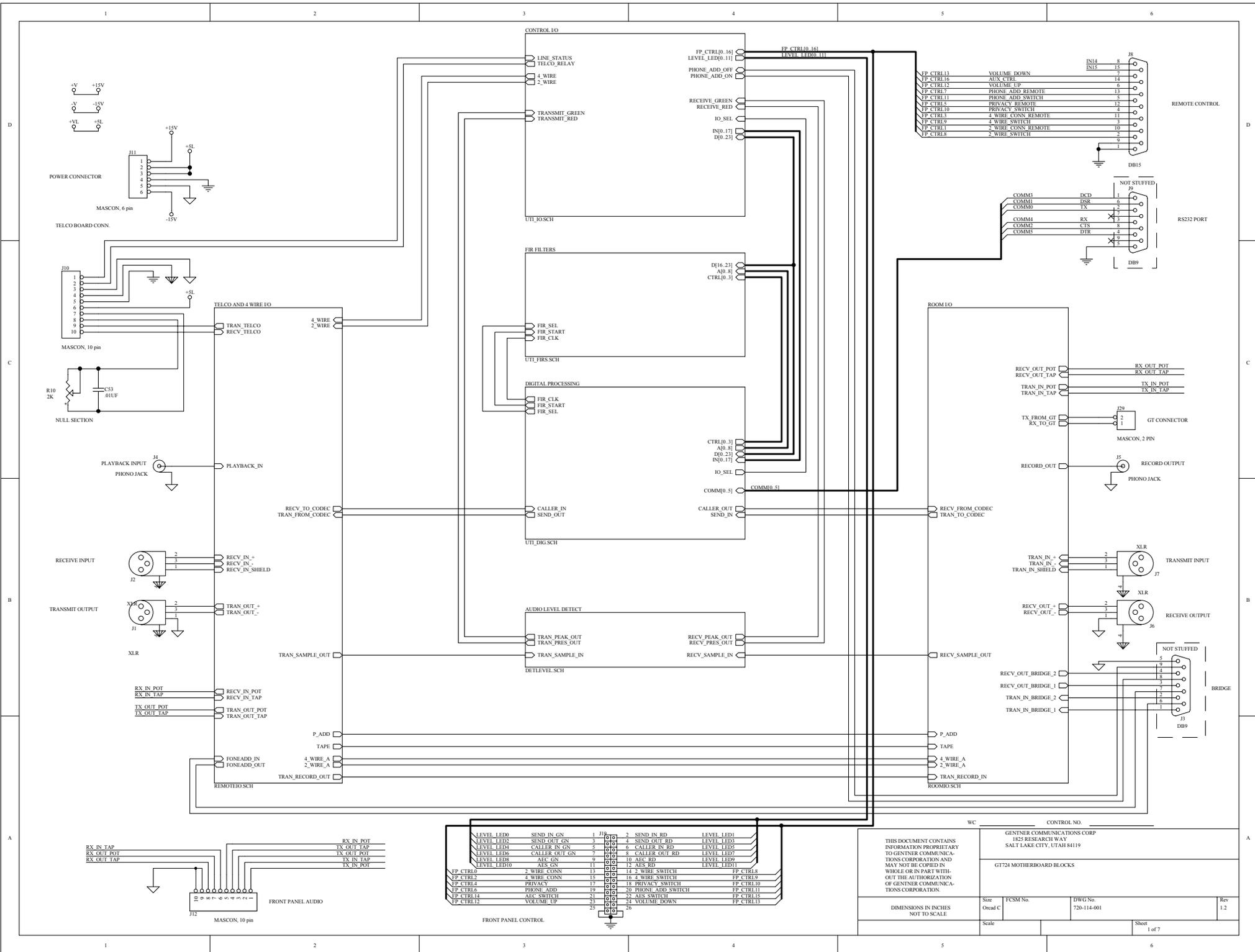
*“Our vision is to provide our customers with
the total audio solution for conferencing.”*



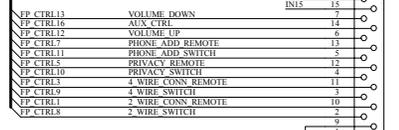
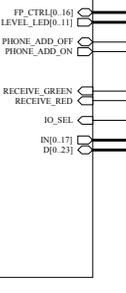
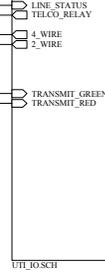
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Sales and Technical Assistance
1825 Research Way
Salt Lake City, Utah 84119

Toll Free 800-945-7730
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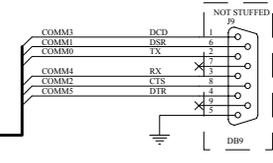
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CONTROL I/O

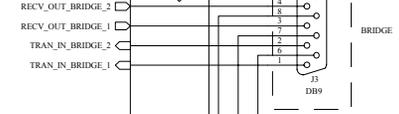
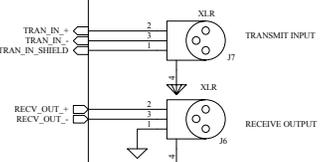
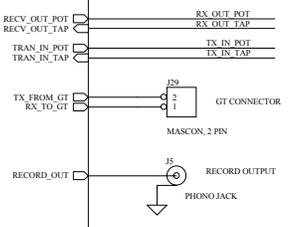


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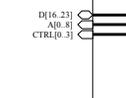
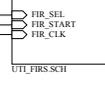


RS232 PORT

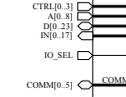
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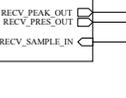
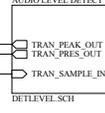
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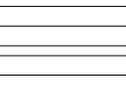
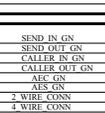
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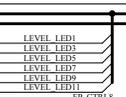
AUDIO LEVEL DETECT



RECEIVE INPUT



TRANSMIT OUTPUT



PLAYBACK INPUT



ROOM I/O



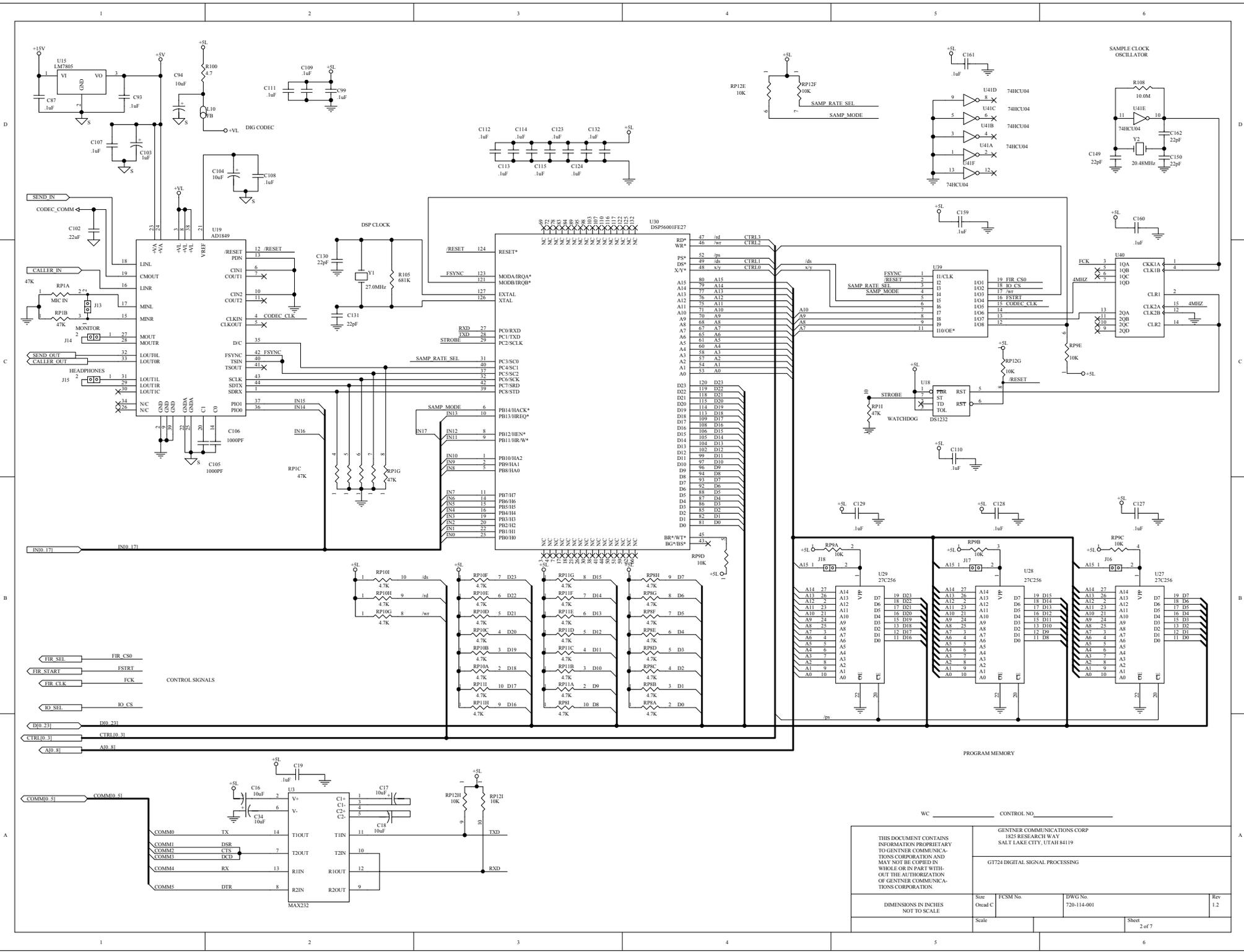
FRONT PANEL AUDIO

FRONT PANEL CONTROL

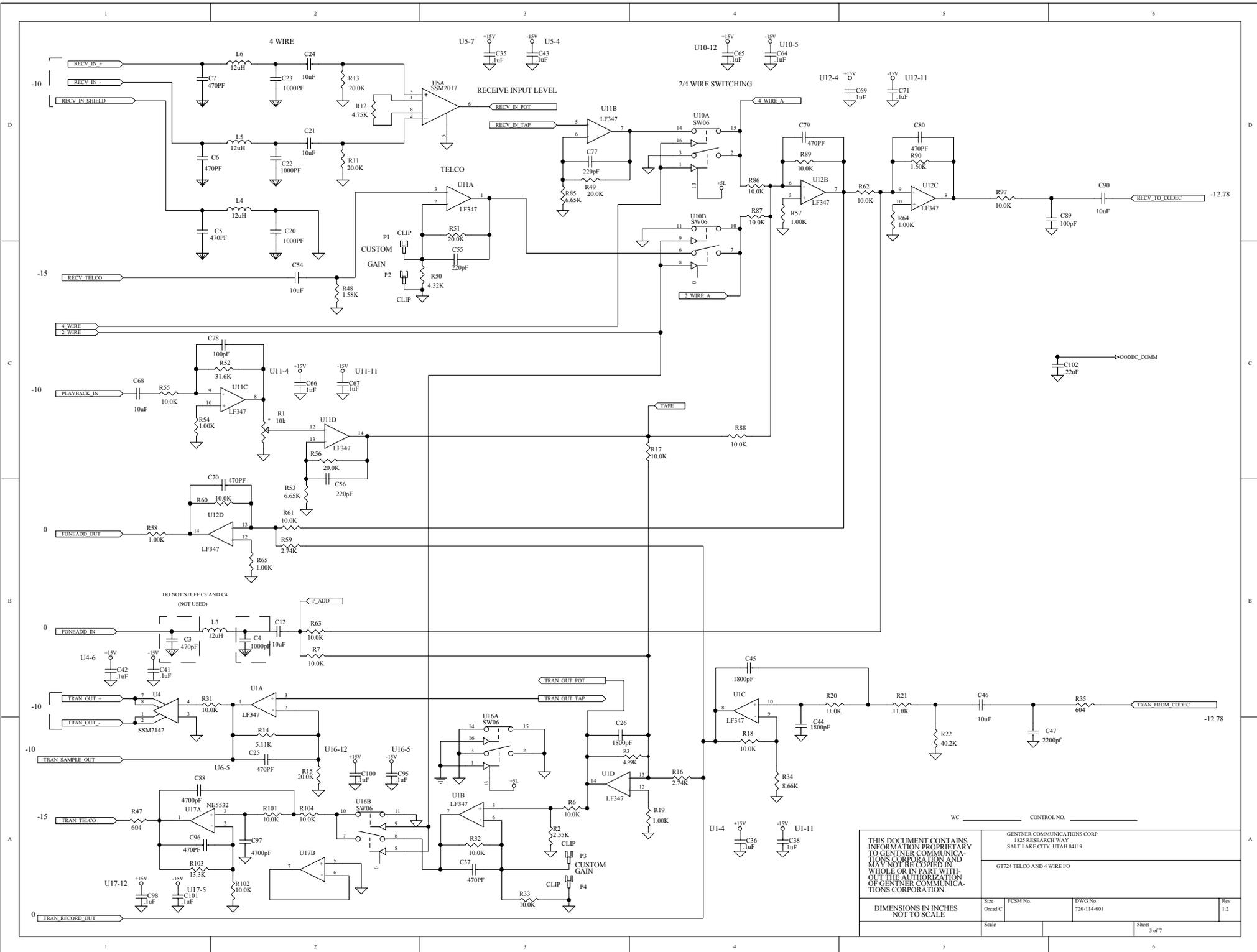
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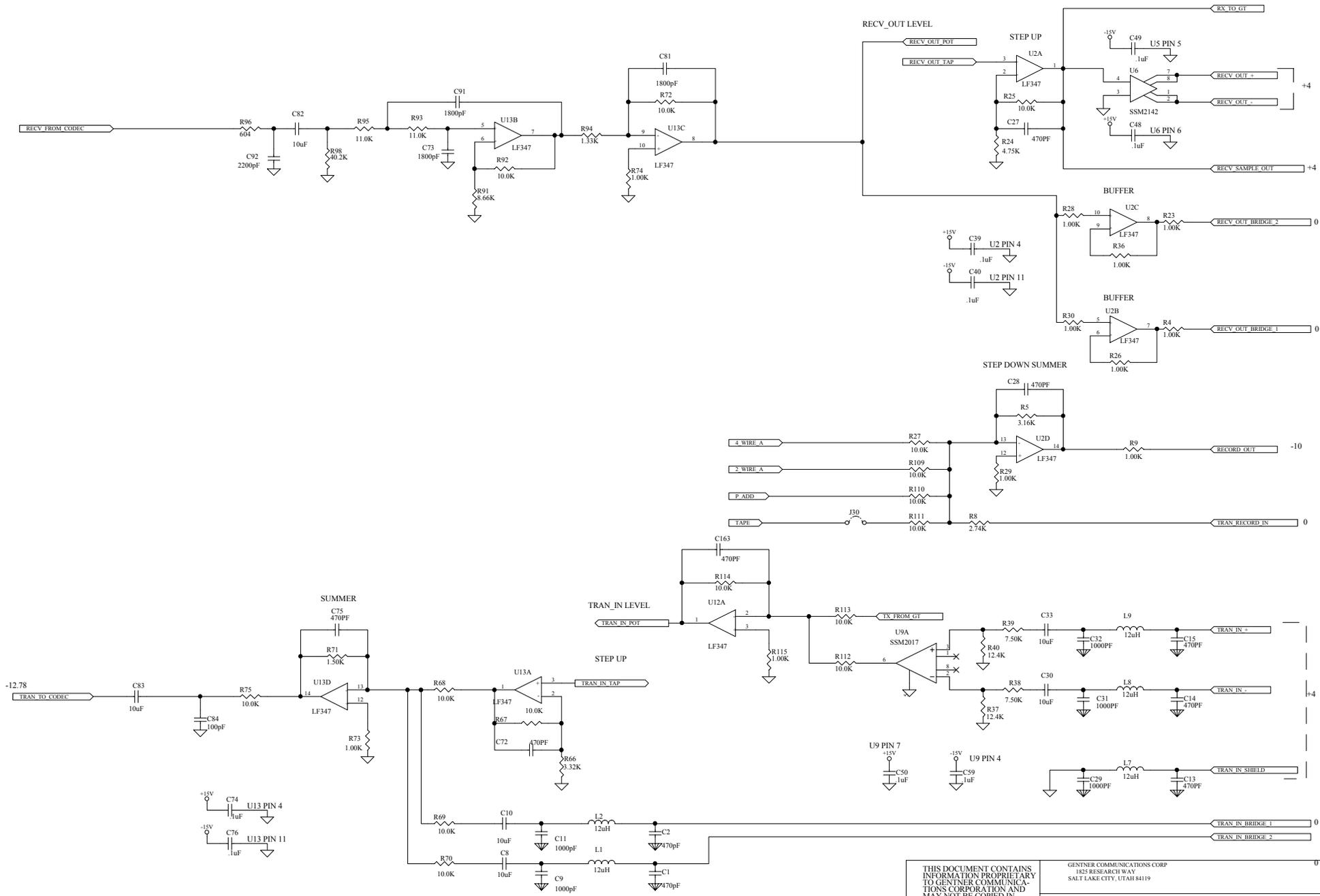
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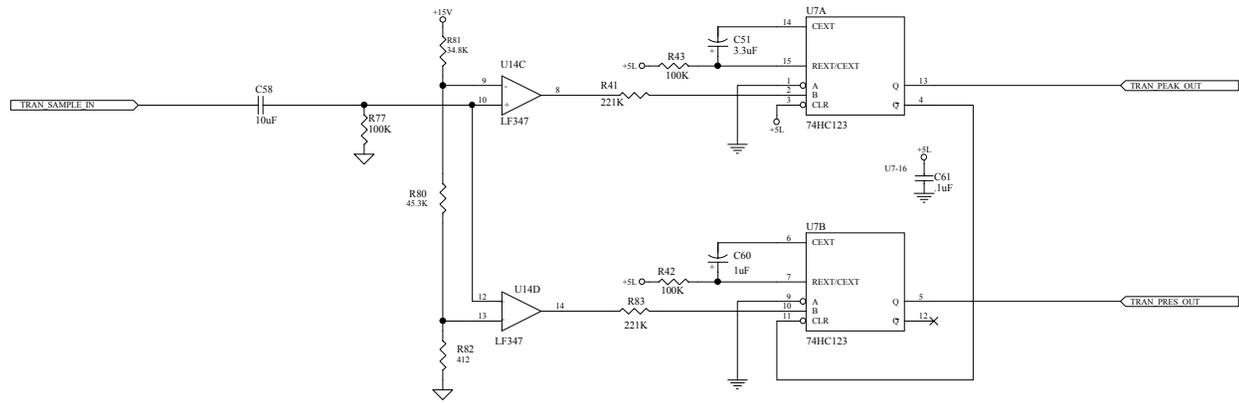
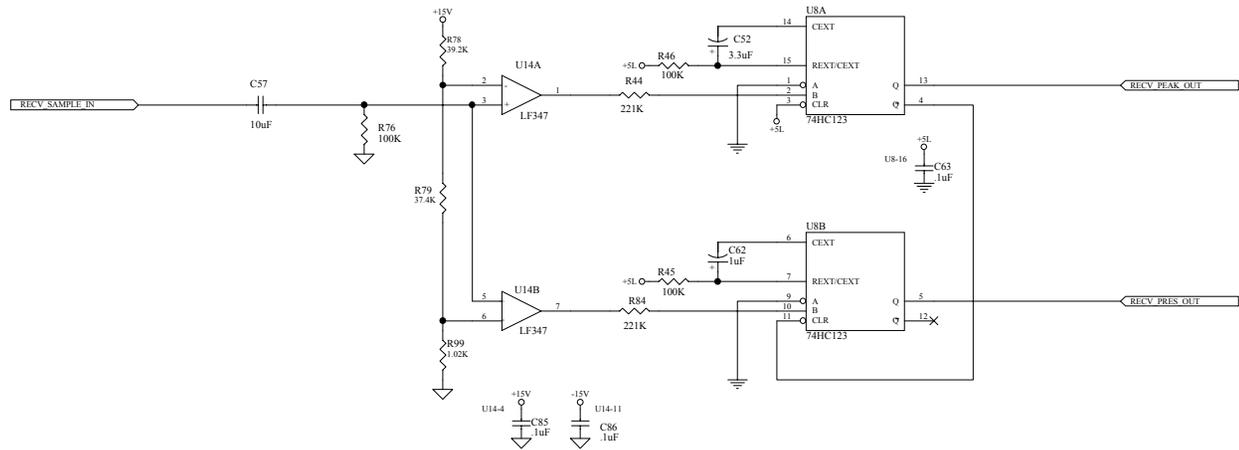


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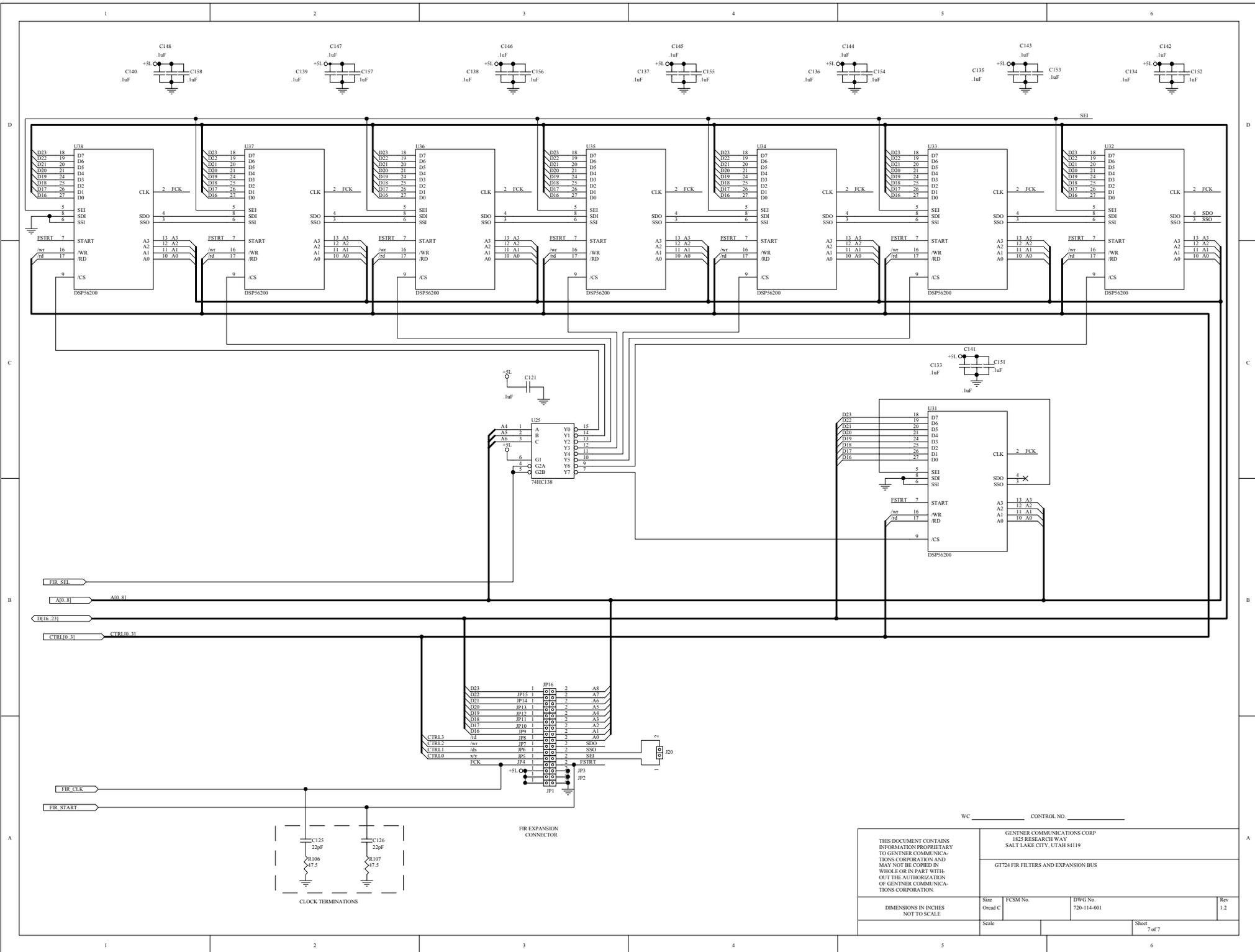
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