

# COMREX STAC

## What are you talking about?

### About STAC

What are you talking about?

- A call-in on local politics.
- An interview with the winning quarterback from his hotel.
- An eyewitness with late-breaking news.
- A dedication to the one someone loves.
- Congratulating caller number six on winning concert tickets.

The telephone has always been essential to live broadcast. Studio Telephone Access Center (STAC) puts you in control of your talk shows, call-ins and phoners with great sound, ease of operation and scalable configuration.

STAC incorporates a pair of Comrex high-performance digital hybrids with automatic audio level control. The result is the most natural sounding telephone audio, even when conferencing multiple callers. A compact, rack-mounting mainframe houses the hybrids, the multiline controller and all telephone and audio connections.

The attractive, ergonomic control surfaces offer two operational modes, selectable with a flip of a switch:

- Studio/Producer Mode provides both pre-air and on-air caller management.
- Screener Mode simplifies the task of screening and queuing callers.

Powerful call management can be quickly mastered with minimal training. A single control surface is included for basic operation. For more demanding programming, up to four control surfaces may be used.

Call screening and control are available from any networked computer, using a standard web browser, with the included STAC IP. With STAC IP, your talent can host their shows from anywhere there is an Internet connection or you can economically create more control points from any computer on your local network. No additional computer is needed to serve the STAC IP webpage, as it is served from the mainframe. Your connections are secured by password protection and no dedicated client software needs to be installed. In addition to replicating the call status information on the control surfaces, STAC IP also provides fields for additional information about callers and text "chat" among those on your show network.

Innovative features include an Auto Attendant that automatically answers incoming callers with your custom message and puts them on hold; dedicated control surface buttons to designate the next caller to be placed on air and to activate an external recorder or delay; and program-on-hold audio.

The STAC12 mainframe and control surface are configured for 12 phone lines, while the STAC6 is configured for six lines. Expanding a STAC6 to a STAC12 in the field is quickly accomplished by installing a mainframe extension card and control surface "sidecars".

No matter what you're talking about, you'll be talking about quality, convenience and value when you put the Comrex STAC on the line.

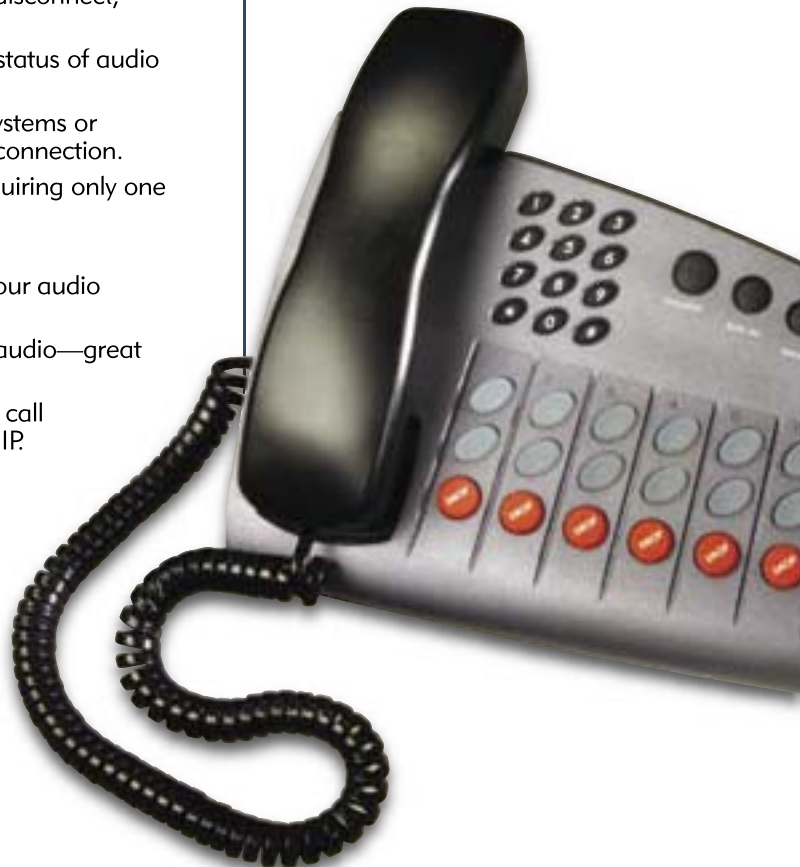


## Key STAC Features

- Dual, high performance digital hybrids for reliable, natural sounding caller audio, even when conferencing.
- Configurations for six and 12 phone lines. Easy to expand in field.
- Flipping a switch on the back of a control surface is all that is required to select Studio/Producer or Screener Mode.
- A standard web browser can be used on any locally networked or Internet connected computer for call screening and control.
- Auto Attendant for automatically answering incoming calls with your custom outgoing message. Call is answered after two or six rings, the message is played and, at the end of the message, the line is put on hold. If no message is recorded, lines will automatically be answered and put on hold. Function selected from control surface.
- Two phone lines can be assigned to VIP mode, removing them from the priority rotation and Auto Attendant. These can be reserved for placing outgoing calls and incoming hot lines.
- Selectable auto-disconnect of calls terminated by caller.
- Selectable automatic gain control for consistent levels on-air and send audio down the line to your callers. A separately controllable caller level boost may also be used.
- Talent maintains control using selectable caller ducking that lowers caller audio level when talent speaks.

## STAC Mainframe

- No configuration required after initial installation. Set-up controls are behind an easy-access panel and include pots for level adjustments and DIP switches for configuring Auto Attendant, auto-disconnect, automatic audio gain control, VIP and other settings.
- Front panel features three bicolor LEDs indicating level status of audio input and hybrid levels.
- Telephone line connections provide loop-thru to other systems or telephone sets sensing loop-thru provided for PBX interconnection.
- Callers are conferenced within the STAC mainframe requiring only one mix-minus audio input to feed both hybrids.
- A separate audio input is used for program-on-hold.
- Each hybrid has an individual audio output to send to your audio mixing console or router.
- A third audio output sums the two callers with the host audio—great for connection to a recording device.
- Ethernet port allows the integrated web server to deliver call screening info and to control all call functions via STAC IP.
- Software is field upgradable via compact flash port.



## STAC Control Surfaces

- One control surface is included with purchase of mainframe. Additional control surfaces, up to four per system, may be added at any time. STAC6 control surfaces can be upgraded to STAC12 in the field.
- Clean, logical design allows functions to be mastered quickly. Dedicated buttons, with associated multicolor LEDs, minimize the number of button presses and make it easy to determine status of phone lines and callers.
- Any control surface can operate in Studio/Producer or Screener Mode.
- Designed to use standard Cat-5 wiring to link the control surfaces to the mainframe. No proprietary cabling or additional power source required for control surface connection.
- Common STAC control surface functions available in both Studio/Producer and Screener Modes:
  - Auto-Attendant activation, deactivation.
  - Default Priority for next caller to be placed on air is:
    - Callers on hold who have been screened,
    - Followed by callers on hold who have not been screened, in order of length of time on hold.
  - Change Priority function overrides the default priority to select and indicate the next caller to be to be placed on the air.



## STAC Control Surfaces *(continued)*

- Busy All function assists in “clearing the phones” for contests and other uses. Pressed once, the Busy All button drops all unlocked lines and will “busy them out”. On second press, the unlocked lines are freed up and are now available to receive calls.
- Aux button controls logic output to turn on/off external recorder or delay. DIP switch configurable as momentary or latching. The Aux function on each control surface operates independently of the others. In Studio/Producer mode, this button may alternately operate as a “Next” button, seamlessly putting the next priority line on the air.
- Jack provided for headset connection to provide alternative to handset.

### Screener Mode functions:

- The top row of buttons performs off-air call answering, including placing calls on hold or releasing them. Callers selected from these controls communicate via the control surface handset. Bicolor green/yellow LEDs indicate whether the line was answered at this control surface or another.
- The middle row of buttons is used to signal screening status to studio/producer control consoles, place callers on hold and to change priority. A screener cannot place callers on air. Bicolor red/blue LEDs indicate which lines are on hold, which lines are on screened hold, and priority status.
- The bottom row of buttons drops lines that have been selected using the top row of buttons.

### Studio/Producer Mode functions:

- The top row of buttons performs off-air call answering, including placing calls on hold or releasing them. Callers selected from these controls communicate via the control surface handset. Bicolor green/yellow LEDs indicate hold and priority status.
- The middle row of buttons places callers on air, with or without screening. Lines will drop when another caller is selected. Alternately, by pressing the corresponding line button a second time, the line may be locked for conferencing and requires pressing the drop button to disconnect. Bicolor red/blue LEDs indicate which lines are on air, to which hybrid the lines are assigned, and whether the line is locked on air.
- The bottom row of buttons drops lines that have been selected from either the top or middle row.

## STAC IP

- Duplicates control surface functions on any network-connected computer using standard web browsers.
- Password protected access to talent, producers and screeners on existing local networks and Internet connections.
- Software is served from STAC mainframe, so no dedicated server is required.
- Call timers are displayed for each line, showing length of time on hold and length of time on air.

## STAC Configuration

- STAC12 Complete System includes mainframe for 12 phone lines and one 12-line STAC control surface
- STAC6 Complete System includes mainframe for six phone lines and one six-line STAC control surface
- Additional items:
  - Extra control surfaces are available with either 12 or six lines
  - STAC6 to STAC12 mainframe upgrade includes field-installable plug-in circuit board
  - Sidecar Upgrade increases the number of lines managed by a control surface from six to 12

## STAC Mainframe

### Rear panel connections

- Send input—XLR female: 0 dBu nominal, adjustable, balanced, bridging, 20 k $\Omega$  impedance
- Caller 1 and 2 outputs—XLR male: 0 dBu nominal, adjustable, balanced, 50  $\Omega$  impedance
- Telco lines—Two x RJ-45 connectors per six phone lines: POTS (plain old telephone service) line, analog extension from a PBX or dry line (no DC offset voltage)
- Auto-disconnect—Disconnects on loop drop or loop reversal. User selectable.
- Key service compatibility—Any key system providing true tip and ring compatibility to telephone instruments
- Tip/ring switching—Solid state relay
- Loop-through to PBX—Two x RJ45 per six phone lines
- Hybrid expansion port—RJ-45
- Control surface—Four x RJ-45
- Network connection—10Base-T Ethernet

### Hybrid Performance

- Telephone transmit
  - Nominal send input: 0dBu referenced to -15 dBu onto the telephone line
  - Frequency response: 250 Hz to 3.5 kHz,  $\pm 1$  dB
  - Signal-to-noise ratio: >56 dB
  - Distortion: <0.2%
- Telephone receive
  - Nominal telephone line level: -15 dBu referenced to caller output of 0 dBu
  - Frequency response: 250 Hz to 3.5 kHz,  $\pm 1$  dB
  - Signal-to-noise ratio: >56 dB
  - Distortion: <0.2%
- Null
  - Send-to-caller separation: 55dB nominal
  - Tail time: 32 milliseconds
- Mix-Minus
  - Caller-to-send separation: 50 dB nominal
  - Tail time: 32 milliseconds

### Power and physical

- Internal supply: Auto Adjusting 100/240 VAC 50/60 Hz
- Dimensions: 19" W x 11.5" D x 3.5" H (48.26cm x 29.21cm x 8.89 cm)
- Weight: 12.5 lb (5.75 kg)

## STAC Control Surface

### Rear panel dip switch adjustments

- Selection of control surface mode: Screener or Studio/Producer
- Aux mode selection: Momentary or toggling
- Aux/Next button mode assignment
- Handset level boost
- Headset mode selection

### Rear panel connections

- Headset jacks—Two stereo mini-jacks
- Aux control output—DB-9: Selectable as momentary or latching signal

### Powered by STAC Mainframe

#### Physical

- Control Surface for STAC6
  - Size: 10" W x 7" D x 3.25" H (25.4 cm x 17.78 cm x 8.25 cm)
  - Weight: 2.2 lbs/ 1 kg
- Control Surface for STAC12
  - Size: 16.5" W x 7" D x 3.25" H (41.91 cm x 17.78 cm x 8.25 cm)
  - Weight: 3 lbs (1.4 kg)

## About Comrex

Comrex, an innovator in communications and telephony technologies for over 40 years, provides reliable solutions to meet the demands of live broadcast. Thousands of radio and TV stations trust the quality of our products every day for news, sports and entertainment audio. Headquartered near Boston, Massachusetts, Comrex products are offered and supported by a worldwide network of dealers.

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