

# Innovating the **future** of **global** communications



## Table of Contents

Forward Minking	3
Worldwide <b>Connectivity</b>	4
Intercom Matrices	6
Interface Cards	8
Breakout <b>Panels</b>	9
RVON VoIP <b>Devices</b>	10
Software	12
CLD Color Display Keypanel Series	14
KP-32 Classic Keypanel Series	16
KP x12 <b>12-Position Keypanel Series</b>	18
KP-12 Modular Keypanel Series	20
Value <b>Keypanel Series</b>	22
RKP-4 Wireless Keypanel	24
Trunkmaster <b>Series</b>	25
System <b>Peripherals</b>	26
IFB System Peripherals	28
Master <b>Stations</b>	29
User <b>Stations</b>	30
Beltpacks	32
Power <b>Supplies</b>	33
Accessories	34
Product <b>Specifications</b>	36
Intercom <b>Headsets</b>	38



### Forward **Thinking**

It is our goal to be the recognized global leader in delivering comprehensive communications systems and solutions to entertainment and industry.

orward Thinking is a philosophy that is applied to everything we do. Every component we build, every system we specify is derived from one fundamental challenge:

#### How can we better carry our users' communication?

In the early days of television production, intercommunication among the crew was accomplished using carbon microphone conference line intercom systems. These systems used telephone company equipment and telephone company technology. This technology was not intended to conference more than two stations, and television production needed as many as 30 stations to conference together. As the number of stations ranged from 10 upwards, the performance of the system was severely degraded. Some improvements were made over the years, but the system's flaws were never fully addressed.

In 1975, the founders of RTS took a systems approach to solve the fundamental system design problem. After six months of intensive work, the problem was solved, and products were developed to utilize the solution. This first solution was called the "Two-Wire Intercom System". The company formed then, to solve the problem and to market the solution, was—and still is RTS Systems.

In 1979, Compact Video Systems bought RTS Systems, Inc. Compact Video Systems was a television production and manufacturing company and is credited with many successful television productions. The acquisition spawned a period of new product development. During this interval, foundations were laid for further growth and a dealer network was developed. Accounting, manufacturing, engineering, and documentation systems were put into place to support rapid growth and improved quality.

From 1979 to 1989, RTS' products became a standard for the television industry. The major television networks incorporated RTS Systems products. In addition, RTS Systems products became the standard for mobile units.

In 1989 Telex Communications, Inc. bought RTS Systems and a new growth period began. This growth included improvements in manufacturing efficiency, a strengthened sales organization, and an advance in manufacturing technology (surface-mount circuitry, plastics molding and tooling resources). In 1989 RTS won an Emmy award for Outstanding Achievement in Engineering Development in recognition of their engineering contribution and development of professional two-wire intercommunications systems for use in television production and broadcast operations.

In 1990, Telex acquired the exclusive manufacturing rights to the McCurdy line of matrix intercoms to complement the series of party-line intercoms already manufactured by RTS. In the 1940's, McCurdy Radio Industries of Canada began manufacturing intercom systems and in the mid 1970's introduced a solid-state intercom matrix called the 9100. Upon acquiring the line of matrix intercoms from McCurdy Radio, Telex started to extend and improve its product portfolio. Since the RTS brand name was well known in the broadcast market, the new digital matrix products were branded RTS, as well.

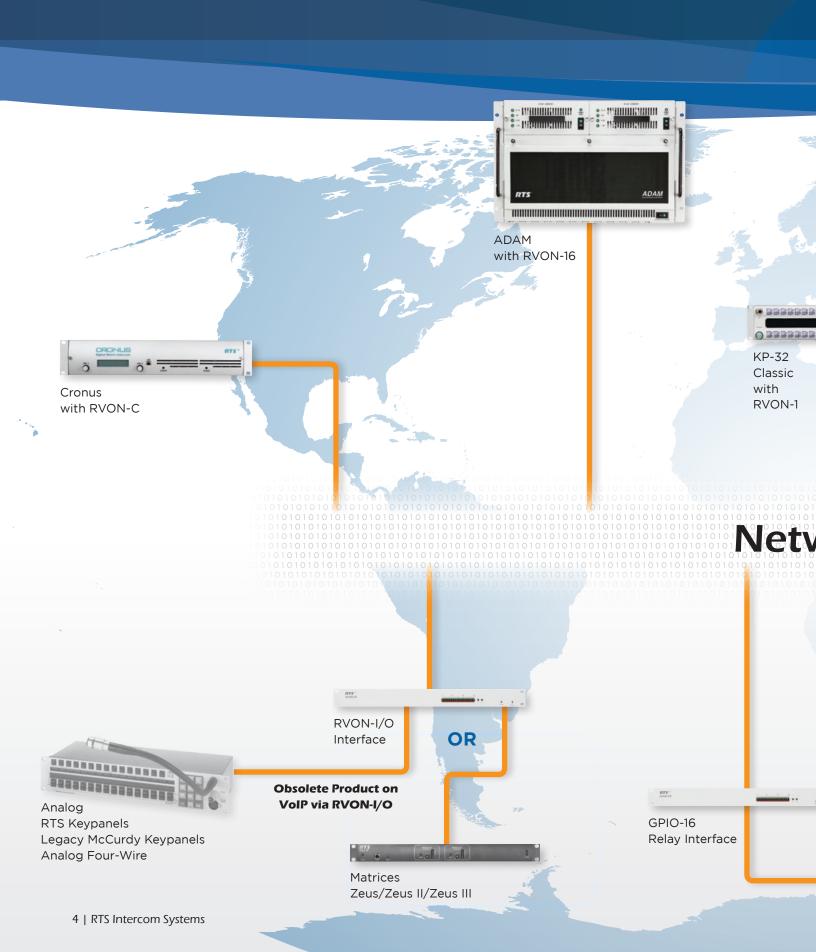
In September 2006, Telex became part of the Bosch Group. The acquisition brings Bosch's quality standards to RTS through streamlined and modernized processes, as well as a renewed commitment to research and development.

RTS' renewed commitment came to fruition with the launch of the world's first color display keypanels: the CLD series. These ground-breaking keypanels are characterized by a full-color graphic interface, and other refinements that make operation highly intuitive.

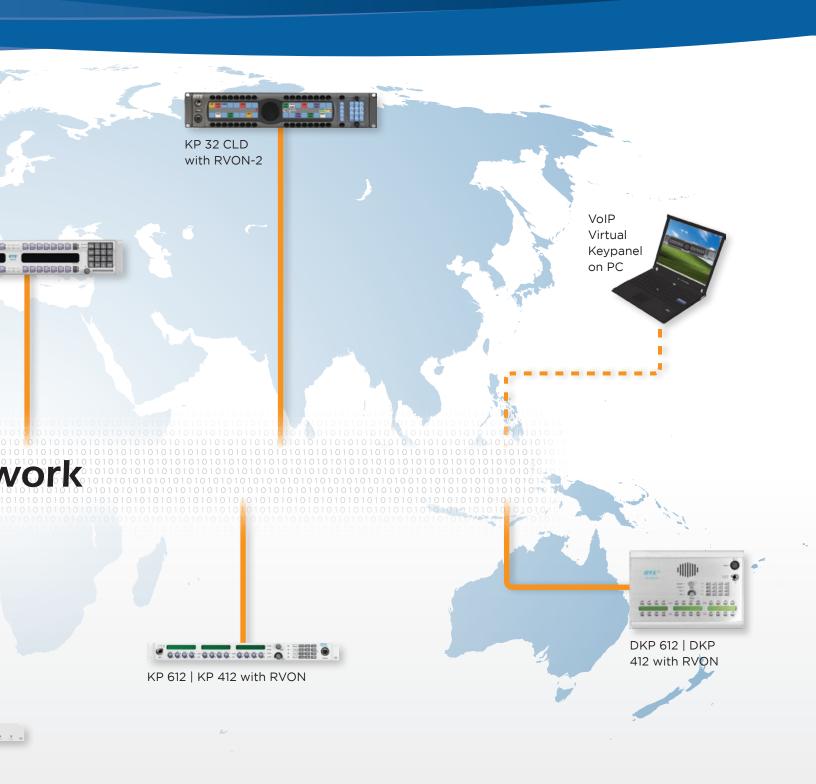
As technology moves forward, so do the innovations from RTS. We are constantly looking for new ways to deliver clear, reliable communications that strike a perfect balance between our users' demand for increasingly complex configurations and simple. intuitive operation. The components featured in this catalog are just the beginning of an exciting new era of forward thinking communications systems.



## Worldwide Connectivity



RTS is in the business of connecting people all over the world. Whether across the hall or across an ocean, RTS provides the bridge to get your message heard clearly and reliably.



### Intercom Matrices

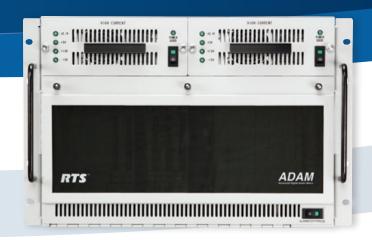


he RTS family of digital intercom matrices is the most extensive, widely used line of intercoms in the world. From the top-ofthe-line ADAM matrix, available in sizes from 16 to more than 1,000 users, to the original Zeus 24-port matrix, RTS matrices are the standard for reliable, mission-critical communications in broadcast, military, industrial, and entertainment applications.



### Intercom matrices at a glance

Attribute	ADAM	Cronus	Zeus III	
Port Capacity: Single Frame	272	32	32	
Rack Units	7	2	1	
Redundant Power Supplies	Yes	Yes	Yes	
Redundant Controllers	Yes	No	No	
Bus Expansion	Yes	Yes, 4x Cronus, linking license required	No	
Link Method	Single Mode Fiber or Multi Mode Fiber	Coax/Fiber between Cronus frames	N/A	
Cable Length	TBX fiber single mode 40 Coax: 90 meters km Multi mode 550 m Fiber : 15km			
Audio Bits	24	24	24	
VOX on Input	Yes	Yes	Yes	
AES Audio	Yes	No	No	
Trunking Support	Yes	Yes	Yes	
Intuitive User Interface	Yes	Yes	Yes	
Matrix PC Connection	Ethernet Serial	Ethernet, Serial, USB	Ethernet, Serial, USB	
Non-Destructive Download	Yes	Yes	Yes	
Integrated Party-Line Interface	No	No	Yes	
Remote Configuration	Yes	Yes	Yes	
Relays	External GPIO-16	4	2	



### **ADAM** Advanced Digital Audio Matrix

Using a Time Division Multiplex (TDM) technique, ADAM grows linearly as users are added; the system comes standard with newly redesigned, redundant high-current power supplies. The Ethernet master controllers, MCII-e, which allow for automatic changeover in the event of failure. The MCII-E master controller allows Ethernet connectivity between the ADAM intercom and

a PC running AZedit programming software. It can support 32 simultaneous AZedit sessions via Ethernet and three sessions via serial.

ADAM is available with the widest variety of interface cards in the industry, which includes the AIO-16. AES-3, and RVON-16 VoIP interfaces. It also has a wide variety of cabling options, including RJ-11s, RJ-54s, CAT-5s, DB-9s, jack fields, and many others.

#### **Cronus** DSP Matrix Intercom

RTS Cronus intercom is a modular, 32-port digital matrix intercom in 2RU (rack units) that can hold up to four AIO analog or RVON-C VoIP cards with eight ports each. Based on advanced DSP architecture. Cronus intercom has the ability to link up to four units into a single 128-port matrix. The Cronus can be preconfigured for fiber with



a connection up to 9.3mi (15km), or coax for a connection up to 300' (91.4m). When connected as a single matrix, individual Cronus intercom controls remain autonomous and independent at each matrix for the highest reliability. Cronus is available with an analog card or the RVON-C VoIP card.

### Zeus III Digital Intercom Matrix

Zeus III is the next generation of compact intercom system units, giving compact systems more options for their intercom configurations. Zeus III has 32 channels IN/OUT and two additional configurable party-line interface channels. Its compact size is perfect for environments with limited space. With integrated Ethernet, Zeus III can be configured



from virtually anywhere on the network using AZedit Intercom software. Alternatively, Zeus III can be directly connected to AZedit a USB connector on the front panel. The system has 32 standard RJ45 connectors, making it easier to connect the intercom system with audio lines and keypanels by keeping the RTS wiring scheme.

### Interface Cards

TS interface cards are the core of the modular digital matrix intercom concept. An array of features and connectivity options allows users to customize their ADAM matrix to integrate seamlessly into a communications network. Each new generation provides expanded possibilities for

existing ADAM frames, solidifying its investment value for years to come. With features such as hot swap and SNMP support, the ADAM subassemblies ensure that users can scale their intercom systems to fit their growing needs with peace of mind.

#### MCII-e

### Ethernet Master Controller Card Kit for ADAM

The Ethernet connectivity of the MCII-E enables multiple AZedit sessions and remote peripherals such as the GPIO-16 (page 26). Adding Ethernet connectivity between the ADAM intercom and a PC running AZedit configuration software, the new controller can support up to 35 simultaneous AZedit sessions. Using a pair of MCII-e controller cards provides full redundancy with seamless automatic changeover upon failure. The MCII-e also supports SNMP, the IETF standard protocol for monitoring network-attached devices.

#### **TBX-Tribus**

### Triple-Bus Expander Card Kit for ADAM

A single TBX-Tribus fiber card can link up to four ADAM frames together and allow them to appear as one matrix system. This makes it possible to increase the number of available users on a system by transparently integrating additional frames. This functionality can be very useful in mobile production scenarios to tie systems together via fiber using the digital audio of the TBX-Tribus.



### Interface Card Comparison

Frame	Card	Functionality	Backcard Connectors
ADAM	MCII-E	Ethernet Master Controller	Connects to AZedit configuration software via Ethernet
ADAM	RVON-16	16-Port VoIP	Connects ADAM to panels and/or audio tielines over standard IP networks
ADAM	AIO-16	16-Port Analog I/O	Provides 16 ports of audio IN and OUT via MDR and 50-pin SCSI, plus individual data drivers
ADAM	AES-3	Digital Audio Interface	Supports four audio channels through eight AES-3 connections via BNC coax.
ADAM	TBX-Tribus	Triple-Bus Expander	One Card Links up to four ADAM frames together
Cronus	RVON-C	8-Port VoIP	Connects Cronus to panels and/or audio tielines over standard IP networks
Cronus	Cronus-AIO	8-Port Analog I/O	Provides 8 ports of audio IN and OUT via RJ-12 or MDR

### Breakout Panels

Breakout panels provide a convenient way of expanding the port capacity of ADAM intercom systems. There are seven breakout panels for use

with the AIO cards: XCP-32-DB9, XCP-16-DB9-T, XCP-48-RJ45, XCP-48-TELCO, XCP-40-DB9, XCP-40-RJ11, XCP-955, XCP-24, and the XCP-24-USOC.

#### CinevideoGroup Equips High-Def Broadcast Trucks with RTS Intercom

Netherlands-based Cinevideogroup acquired two new RTS-equipped high-definition OB vehicles.

Cinevideogroup's new <u>Outside Broadcast Vans</u> (OBV), equipped with an RTS ADAM matrix intercom, are widely used in mobile productions throughout Europe. Some recent productions include the games of Spanish first division clubs Real Madrid, FC Barcelona, and a Berlin concert by The Cure, and a Simply Red concert in Sicily.

To ensure optimal communication during every production, Cinevideogroup entrusted RTS. One broadcast van is equipped with a comprehensive 128-port ADAM matrix: the other features a Cronus. Both broadcast vans include KP-32 Classic and KP-12 keypanels. The multi-truck system featured breakout panels that were used to conveniently expand the port capacity of the ADAM.



#### **Breakout Panel Comparison**

Frame	Panel	Back Card	Connectors	
XCP-955	ADAM	Telco	(25x) RJ-12	
XCP-954-48	ADAM	Telco	(48x) DB-9	
XCP-32-DB9	ADAM & Cronus	MDR	(32x) DB-9	
XCP-16-DB9-T	ADAM & Cronus	MDR	(16x) DB-9	
XCP-48-RJ45	ADAM & Cronus	MDR	(48x) RJ-45	
XCP-48-Telco	ADAM & Cronus	MDR	(6x) Telco	
XCP-40-DB9	ADAM	SCSI	(40x) DB-9	
XCP-40-RJ12	ADAM	SCSI	(40x) RJ-12	
XCP-24	ADAM	SCSI	(3x) Telco	
XCP-24-USOC	ADAM	SCSI	(3x) Telco	
XCP-ADAM-MC	ADAM	SCSI	(10x) DB-9, (1x DB25)	

### **RVON VolP Devices**

he RTS Voice Over Network (RVON) series allows the full integration of our intercom system into your existing data network. It also allows you to create an independent network for your RVON equipment. Our devices are fully IP-compliant

with current VoIP standards. All RVON series devices can be monitored via SNMP. The RVON product family supports ancillary data control for use with RTS Intelligent Trunking. These products enable trunking over IP for local to worldwide connectivity.

#### Broadcasters Choose RTS Intercom Systems for Inaugural Coverage



The RTS **VoIP Virtual Keypanel (VKP)** is a Windows-based application that allows any user to have a fully functioning RTS Digital Matrix Intercom user station on their PC. The Virtual Keypanel application connects via the PC's Ethernet connection to any path that can support standard IP protocols, including LAN, WAN, and VPN.

Barack Obama was sworn in as the 44th president of the United States in 2009. With a record 1.8 million spectators in attendance Washington DC and the surrounding community was virtually shut down for the event. In addition, **38 million Americans** watched the inauguration on television. How did broadcasters cope with this unprecedented viewership? They stayed connected with RTS Intercom Systems.

RVON technology played a central role in connecting broadcasters to their worldwide communication networks. RVON allows the **full integration** of the intercom system into a user's **existing data network**. It also allows for the creation of an independent network for a user's RVON equipment.

The RVON series devices are fully IP-compliant with current VoIP standards, and can be monitored via SNMP. The flexibility of being able to use an existing data network simplifies the whole process.

One broadcaster used RVON to interconnect the Newseum and production trucks at Capitol Hill and the Library of Congress to remote stations and the Master Control Room via trunking.

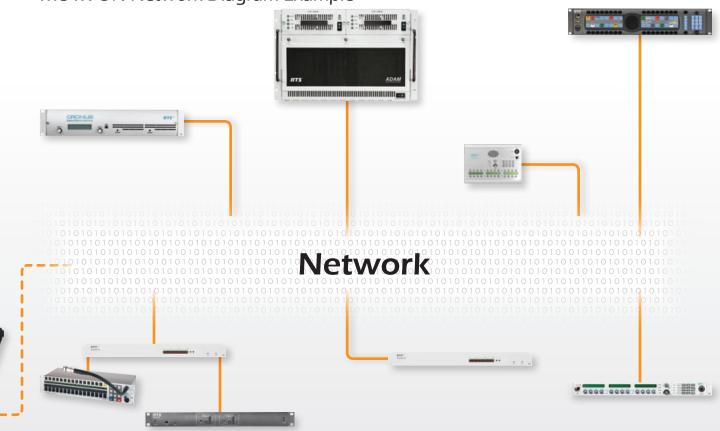
"I will say that each and EVERY remote production truck I visited at the US Capitol had an RTS system as their main communications system on board. You could say that the RVON product was key to all the critical communication used during the inauguration." Shawn Anderson, Systems Engineer.

The RTS VKP application is compatible with any RTS Digital Matrix Intercom equipped with the RVON interface. The Virtual Keypanel brings a new level of enterprise-wide and remote access to your RTS Digital Matrix Intercom system. The VKP requires that the PC have a static IP address.

"The VKP looks and behaves just like our best-selling RTS keypanels, but it is just an application on your computer. This frees up physical real estate on your desk, and allows any PC user on the network to connect the intercom system via Ethernet." -Christian Latzelsberger, Product Manager, RTS Intercoms

Device	VoIP Interface	Functionality
ADAM	RVON-16	16-Port VoIP Card Kit
Analog Devices	RVON-I/O	8-Port VoIP Analog Interface
KP 32 CLD	RVON-2	Two Channel VoIP Interface
KP 12 CLD		for CLD Series Keypanels
DKP 16 CLD		
KP-32 Classic	RVON-1	Single Channel VoIP Interface
KP x12	RVON	VoIP Interface
DKP x12		
Cronus	RVON-C	8-Port VoIP Card Kit
PC Client	VKP	Virtual Keypanel

#### RTS RVON Network Diagram Example



### Software



Intercom system configuration has never been easier with the advent of RTS' AZedit Intercom System Software. AZedit is a Windows-based, full-featured configuration software, providing online and offline configuration capabilities. It gives you the ability to manage multiple intercom systems, assign and reassign users to different ports, as well as dynamically add intercom hardware to your system setup without jumper changes, rewiring, or taking the system offline. AZedit has the capability to load pre-set configuration files, which means configurations saved to a disk or computer can be uploaded to the live application at anytime without interruption. AZedit can be used as a monitor tool to observe the status of features like gain and crosspoint settings, keypanel keys activated, and other aspects of the system. AZedit can run in multiple sessions using the MCII-e ADAM master controller to allow for remote system configuration. AZedit is updated regularly to provide users with the latest features and innovations available.



"The ability to have a tech **login from anywhere** and see what's happening is invaluable. Not a day goes by where Chris or I don't login and **remotely manage** the system with RTS products." -Bob Streeter, NBC

TS Software provides complete control over your intercom system from any standard Windows computer. Configure keypanel settings, assign user rights, even link matrices together that are thousands of miles away.

The RTS VoIP <u>Virtual Keypanel</u> (VKP) is a Windowsbased application that allows any user to have a fully functioning RTS Digital Matrix Intercom user station on their PC. Learn more on page 10.



#### RestrictEdit

The **Restrictions Editor** is a tool to create restriction files for use with AZedit Intercom software. Restriction Files allow administrators to manage user access to resources and features. AZedit includes support for user restrictions by reading a text file (the restrictions file) and parsing out the set of resources and features available to each user.



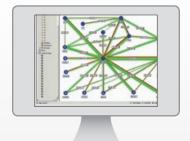
#### **TES TrunkEdit**

**TrunkEdit** is a GUI for programming TM-2000 or MTM-2000 trunking devices. TrunkEdit allows the user to set up all necessary parameters required for trunking multiple intercom systems. Each intercom system can be configured to work together as a virtual-integrated, single-intercom system while still maintaining each individual system's autonomy.



#### **RVONedit**

RVONedit is a Windows-based GUI application for configuring and displaying RVON RTS Voice Over Network devices connected to your Matrix system. RVONedit is to the VoIP products as AZedit is to ADAM, Cronus, and Zeus. An enhanced version of RVONedit is available, which can configure multiple RVON devices simultaneously.



### TSS Trunk Supervisor

The **Trunk Supervisor** Software program is a trunking system management application. The program allows for real-time monitoring of trunk line status information. When used in combination with the RT-2M test set, it allows for fully automated testing of a trunked system. If a trunk line is found to be out of specification, the trunk line can be pulled out of service until the issue is resolved. The program also has the capability of remote notification of user defined alarm events.

### CLD Color Display Keypanel Series



he CLD series represents a new generation of RTS keypanels. The panels sport advanced features that take flexibility and ease-of-use to the next level. CLD series keypanels feature a revolutionary customizable GUI in integrated full-color

LCD displays. The CLD panels' advanced functionality is wrapped in a sleek, ergonomic design with a contoured bezel that fits flush within a rackmount configuration and looks great on the desktop.

### Features of the CLD Keypanel Series

#### Full-Color LCD Display

The new color display hosts a rich and intuitive GUI that allows to indicate different keypanel functions in different colors.

#### Modern, Modular Design

The rackmount CLD keypanel's flush front panel is ergonomically designed to fit easily into any control room or truck application. The back panels are optimized for future expansion.

### Multi-Directional Keys

Multi-directional keys are used for talk, listen, and emulation of traditional level control function.

#### **Enhanced Features**

The CLD keypanels include industry leading features such as up to six auxiliary inputs, three relays, independent digital gain control for microphone sources, and configurable audio routing. Other keypanels require external interfaces to enable these features, but the RTS CLD series has them built-in.

#### **DSP** Processing

Acoustic Echo Cancellation, Equalization, Mixing, Filtering, and Metering.

#### **USB**

For future expansion and other planned interface features.

### User-Programmable Buttons

User-programmable buttons provide custom shortcuts to menu functions.

### **Key Sequence Options**

CLD Series keypanels can be ordered with the new CLD key sequences and button screening, or the Classic key sequences and button screening configured for the backlit numeric keypad.

### **Future Expansion**

Designed to allow for an expansion panel and optional connections to the matrix through current and future standard transmission formats. Relay mixing will also be enabled via RC kit for added flexibility.



KP 32 CLD 32-Position Color Display Keypanel



**EKP 32 CLD** Color Display

**Expansion Panel** 



KP 12 CLD 12-Position Color Display Keypanel



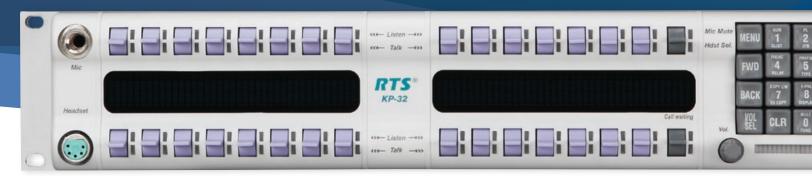
**DKP 16 CLD** Color Display Desktop Keypanel



#### **CLD Series Accessories**

	Panel	Component	Functionality	Features
	KP 32 CLD DKP 16 CLD KP 12 CLD	RVON-2	VoIP Interface	Two channels of audio in and out, Ethernet compatible.
	KP 32 CLD,	KP 32 CLD RC	Rear Connector Kit	6 AUXs, 3 Relays, 4 Opto Inputs, Headset, Foot SW, Speaker, 2 OC Outputs, Mic In/Out
	KP 12 CLD	KP 12 CLD RC	Rear Connector Panel	3 AUXs, 3 Relays, 4 Opto Ins, Headset, 2 OC Outs, Foot SW, Mic In/Out, LCP, EXP, Frame, VoIP
	DKP 16 CLD	DKP 16 CLD RC	Rear Connector Kit	5 AUXs, 3 Relays, 4 Opto Ins, Headset, 2 OC outs, Foot SW, Mic In/Out, Speaker
•	KP 32 CLD	LCP 16 CLD	Level Control Panel	Provides direct knob access to the volume levels of AUX, sidetone, speaker, headset, and other functions of the KP 32 CLD,

### **KP-32 Classic Keypanel Series**



he RTS KP-32 Classic family of keypanels offers an unbeatable match of features, options, and performance. Available in four-, six-, and eight-character models, RTS is the only intercom manufacturer to give YOU the choice of any or ALL of these standards. KP-32 panels feature contemporary styling and extensive programmability for unprecedented function and performance. Each of the models is 2RU high. The KP-32 Classic family of DSP keypanels provides all the functionality of the KP-12 series, and adds significant features such as DSP processing for mixing and audio control. Depending on the model selected, the keypanel may provide from 16 to 32 keys, with four-, six-, or eightcharacter alphanumeric displays on fluorescent or high-contrast LCD backlit displays. KP-32 Classic series keypanels feature a standard mic connector and offer a variety of standard headset connector options to help ensure seamless compatibility with your system.

The RTS model KP-32 Classic keypanel fits in a standard 19" rack and is 2RU high. It has 32 lever keys: 30 keys are for intercom talk/listen assignment, one for call waiting response, and one for headset/ microphone/program selection and volume setup. KP-32 Classic combines all of the programmable features of the KP-12 keypanel. The KP-32 Classic features digital signal processing and binaural headset operation with left/right assignment of audio signals. It also has large, super-bright, longlife fluorescent displays with adjustable brightness control, making it suitable for all types of ambient lighting. The KP-32-RC audio board with GPI option is available for KP-32 Classic series keypanels.







### KP-32 Classic 32-Position,

4-Character Keypanel

**KP-632** 24-Position, 6-Character Keypanel

**KP-832** 20-Position, 8-Character Keypanel

**KP-32/16** 16-Position, 4-Character Keypanel

### EKP-32 32-Position, 4-Character Expansion Panel



(a) 222222222 === 0:00:00:00:00

#### **KP-32 Classic Series Accessories**

Panel	Component	Functionality	Features
KP-32 Classic	KP-32 RC	Rear Connector Kit	2 line-level audio inputs, unswitched balanced microphone preamplifier output, headset, speaker output, foot switch input, GPIO, 4 opto-isolated inputs, 2 open- collector outputs, 2 SPDT relay outputs
KP-32 Classic	RVON-1	VoIP Interface	One channel of audio in and out, Ethernet compatible.
KP-32 Classic Series	LCP-32/16	16-Position Control Panel	Provides direct "knob access" to individual listen level controls for operator convenience.

### KP x12 12-Position Keypanel Series



he RTS KP 612 and KP 412 are 12-position keypanels available in pushbutton or lever key versions. The keypanels fit in a standard 19" rack and are 1RU high each. Additional desktop versions are available. The KP 612 and KP 412 feature two encoders. One encoder is used for headset, microphone, auxiliary input, and matrix in volume adjustment. The other encoder knob is used for menu selection. The KP 612 and KP 412 keypanels

have standard numerical keypads with four extra keys: Mic Mute, User Assignable Button, Page Up, and Page Down keys. The keypanels feature state-of-the-art audio processors and drivers. The KP 612 features a six-character display, and the KP 412 features a four-character display. RVON options are available to connect to RTS Voice-Over Network.

**KP 612** 12-Position, 6-Character Keypanel

KP 412 12-Position, 4-Character Keypanel



**EKP 612** 12-Position, 6-Character Expansion Panel

0:0:0:0:0:0:0:0:0:0:0:0:0:

EKP 412 12-Position, 4-Character Expansion Panel

EKP 612-16 16-Position, 6-Character Expansion Panel

EKP 412-16 16-Position, 4-Character Expansion Panel

**DKP 612HND** 12-Position, 6-Character Handset Keypanel

**DKP 412HND** 12-Position, 4-Character Handset Keypanel

**DKP 612DKP** 12-Position, 4-Character Desktop Keypanel

**DKP 412DKP** 12-Position, 4-Character Desktop Keypanel







Feature	CLD	KP-32 Classic	KP x12	KP-12	Value Series
Display	Color LCD	Monochrome LCD	Monochrome	Monochrome LCD	Monochrome Call Waiting Window
Alpha Characters	4, 6, or 8 Locally Configurable	4, 6, or 8	4 or 6	4	4
Character Sets Supported	English, Kanji, Katakana	English, Katakana	English, Kanji, Katakana	English, Katakana	English
Mounting	Rackmount, Desktop	Rackmount	Rackmount, Desktop	Rackmount, Desktop	Rackmount, Desktop, Tektronix®, Wallmount
Key Type	Lever Key	Lever Key	Lever Key or Pushbutton	Lever Key or Pushbutton	Lever Key
Color	Black/Grey Duotone	Black or Grey	Black, Grey, or Nickel	Black or Grey	Grey
Keypanel Cable Length	Total 10,000 ft (3 unlimited with RV		or 10,000 ft (3048r	n) per port per AIC	)-16,
Local XPT Level Control	Yes, Integrated into Key	Yes	Yes	Yes	
Pages on Panel	4	4	4	4	4



### **KP-12 Modular Keypanel Series**



he RTS KP-12 modular series of keypanels represents the ultimate in compact, fully-programmable user stations. Based on a common set of internal modules (modules also available separately for custom designs), the KP-12 series has a common set of very powerful features, which makes each model attractive in mobile applications and in other situations

- Extremely long-life, high-visibility, green alphanumeric LEDs.
- Fully programmable via pull-down menus selected via front-panel shaft encoder.
- Lever-key versions provide individual Talk/Listen functions on each key.
- Pushbutton versions provide individually assignable talk, listen or T/L function on each button.
- All keys assignable for all functions (point

where space is limited. Available in lever-key and pushbutton versions, the basic KP-12 provides a menu-driven, fully programmable, 12-key user station in a single RU of space. Expansion panels and level control panels round out the offerings in the rackmount form factor. Desktop and Tektronix WFM x 3RU form factor units are also available.

to point, IFB, ISO, PL, SL, relay, GPI).

- Removable, optional MCP-90-XX gooseneck microphone.
- Universal power supply for 100 240 VAC, 50/60 Hz operations.
- Optional rear connector and GPI options available for rackmount panels.
- Wide range of keypanels and expansion panels for specific applications.

### **KP-12 Series Accessories**

Panel	Component	Functionality	Features
KP-12	KPM-CK	Rear Connector Kit	Mic in/out, EXT line in, headset, speaker
KP-12	KPM-I/O	GPI Option Kit	4 Optos, 2 OCs, 2 Relays

The extremely compact modular circuit boards used in the KP-12 line of products are available in kits including the circuit boards, interconnect wiring, switches, etc. for those applications where a custom enclosure or mounting is required.





**KP-12** 12-Position Keypanel



**EKP-20** 20-Position Expansion Panel



LCP-20 20-Position Level Control Panel



LCP-12 12-Position Level Control Panel



**DKP-12** 12-Position Desktop Keypanel

**DKP-8** 8-Position Desktop Keypanel

**KP-8T** Keypanel for Tektronix® WFM Mounting



### Value Keypanel Series



he RTS Value Keypanel series is ideal where simplicity of operation and cost are paramount. The keypanels share a common set of features across the entire family. The alphanumeric call waiting window is used for scrollable access to all ports, PLs, ISOs, IFBs, etc. and to check and make key assignments. Keys may be assigned to any intercom function including talk, listen, talk/listen, relay, PL, ISO,

IFB, and SL. All models use the optional RTS MCP-90 series gooseneck microphones. These keypanels are ideal for use with the RTS Zeus series intercom matrices, but (like all RTS Digital Matrix Intercom keypanels) are compatible with all RTS matrices, past and present. The RTS Value Keypanel Series provides a scribble strip for key identification.

#### Kaplin Medical Education Services Uses RTS to Link Their Exam Rooms

Kaplin Medical Educational Services of Newark, NJ uses an RTS **Zeus**-based system to communicate between 12 examination rooms, two wireless proctors, and a three-position control/monitor center. A team of licensed physicians located in the control room monitor and evaluate student physicians in the exam rooms on various medical practices and procedures via small, ceiling-mounted video cameras and an intercom station. If assistance is required, the student contacts

the control room via a wall-mounted **WKP-4** station. Based on the situation, the licensed physician, using an **MKP-12** station, either talks the student through the problem or contacts a roving proctor. The roving proctor, using an **RKP-4** wireless 4-channel beltpack, talks with both the control room, the exam room, and/or a second roving proctor to resolve the problem.



# el Serie



### **MKP-4** 4-Position Rackmount/Desktop Keypanel

**MKP-12** 12-Position Rackmount Keypanel

**BKP-4** 4-Position Desktop Keypanel





### WKP-1 1-Position Wall Keypanel

**TKP-4** 4-Position Keypanel for Tektronix® WFM Mounting

WKP-4 4-Position Wall Keypanel

### **Keypanel Comparison**

<u> </u>	-					
Feature	MKP-12	MKP-4	BKP-4	WKP-4	TKP-4	WKP-1
Keys	12	4	4	4	4	1
Mounting	Rackmount or Desktop	Rackmount (with MCP mounting kit) or Desktop	Desktop	Wallmount	Tektronix <sup>®</sup> WFM	Wallmount
Call Waiting Window	4 Characters	4 Characters	4 Characters	4 Characters	4 Characters	N/A
Cost Effective	Yes	Yes	Yes	Yes	Yes	Yes
Headset Jack	XLR-4F	XLR-4F	XLR-4F	XLR-4F	XLR-4F	N/A
Mic Jack	1⁄4" TRS	1⁄4" TRS	1⁄4" TRS	1⁄4" TRS	1⁄4" TRS	Integrated Mic
Speaker	Integrated	Optional MCS-325	Integrated	Integrated	Integrated	Integrated

### **RKP-4 Wireless Keypanel**

here is nothing like the RKP-4 wireless intercom system anywhere in the world. The RKP-4 four-button wireless keypanel intercom system is a one-to-one (one base station to one beltpack) full-duplex, digitally encrypted wireless intercom that provides communication directly to RTS Digital Matrix Intercom communication systems. The RKP-4 offers a list of standard features that are unparalleled in the industry, like frequency agility, digital audio encryption, advanced ClearScan, battery telemetry to the base station, base station RF meter, and much more. The RKP-4B, like its sister product the BTR-1, is packed full of the latest technology- intelligent power control, DSP digital audio processing, and proprietary digital audio encryption.

The RKP-4 system provides a menu-driven, fully programmable, four-key user station in a wireless beltpack (RKP-4) and base station (RKP-4B) combination. The alphanumeric call waiting window is used for scrollable access to all ports, PLs, ISOs, IFBs, etc. and to check and make key assignments and is configured with AZedit software. Keys may be assigned to any intercom function including talk, listen, talk/listen, relay, PL, ISO, IFB and SL. The RKP-4 system interfaces directly with ADAM, Cronus, and the Zeus family of matrices.

The **RKP-4B** is the base station for the RKP-4 beltpack. The wireless keypanel system is a full-duplex (simultaneous talk and listen) audio system designed to work with ADAM, Cronus, and the Zeus Digital Matrix Intercom Systems. The RKP-4's operation is very similar to the MKP-4, BKP-4, TKP-4, and WKP-4 four-button wired keypanels. The base has the ability to program the frequencies of the beltpack over-the-air. The sidetone for the base's local headset and the beltpack are adjusted at the base station.

The **RKP-4** is the beltpack for the RKP-4 keypanel system. The wireless system is a full-duplex audio system that is



designed to work with ADAM, Cronus, and Zeus family of matrices. The RKP-4's operation is very similar to the MKP-4, TKP-4, and WKP-4, four-button wired keypanels. The beltpack, via the base station, allows communication with a Digital Matrix and acts as a keypanel on the system.

### RTS Digital Matrix System Example with Wired & Wireless Keypanels



### Trunkmaster Series

What is RTS Intelligent Trunking? It is your own private version of long distance telephone system, allowing users of two or more (up to 31) separate matrices to communicate with one another instantaneously and seamlessly with all the same presets, scroll lists, and tallies available on local matrices. Whether the systems are located in adjacent studios or on different continents, intelligent trunking brings all your communications together.

The RTS trunking system consists of a RTS model TM-2000 or MTM-2000 trunkmaster and one or more RTS model ICP-2000 interconnection panels, depending on the number of intercom systems to be trunked. A backup TM-2000 may also be added to prevent downtime in the event of a failure of the main master control unit. Each trunkmaster comes prepared to trunk eight matrices, and can scale up to 31 matrices.

TM-2000 Trunkmaster for up to 31 matrices



MTM-2000 Mini Trunkmaster for up to 16 matrices



ICP-2000 Interconnect Panel



**SWP-2000** Redundancy Switch Over Panel



RT-2M & TSS Trunking Supervisory Test System



### System Peripherals

### **GPIO-16** General Purpose Interface

The GPIO-16 interface provides 16 opto-isolated inputs and 16 relay outputs. It connects to the matrix via serial or Ethernet for remote operations.



### **MDA-100** Mixing & Distribution Amplifier

The MDA-100 contains an 8x1-summing amplifier (mixer) and a 1x8 distribution amplifier.



### **SIP-ISDN** SIP Telephone Interface

The SIP-ISDN has support for the SIP protocol and incorporates an ISDN basic rate interface (1x SO/ 2 Lines) and a LAN interface.



### TIF-4000 Telephone Interface

The TIF-4000 provides bidirectional communication between the intercom matrix and an analog telephone line.



### **TIF-2000A** Single-Line Telephone Interface

The TIF-2000A provides bidirectional communication between the intercom matrix and a standard analog telephone line.



#### LCP-102 Level Control Panel

The LCP-102 functions as an analog trim panel, used to either adjust input/output gains, partyline assign panel, or program assign panel for IFB.



### PAP-32 Program Assignment Panel

The PAP-32 enables routing of program sources to IFB destinations.



### PAM-32 Program Audio Monitor

The PAM-32 has 30 keys for monitoring inputs; one key for scrolling alpha assignments; and one is for headset/speaker selection.



### **DSI-2008** Digital System Interface

The DSI-2008 interfaces two two-wire intercom lines to two four-wire lines, and also interfaces balanced and unbalanced two-wire lines.



Digital hybrids eliminate all nulling and ducking adjustments. Puts an end to concerns about echo and feedback when interfacing two-wire lines.

### **SSA-324** System-to-System Adapter

The SSA-324 interfaces two two-wire intercom lines to two four-wire lines, and also interfaces



balanced and unbalanced two-wire lines. The SSA-324 is ideal for steady load applications.

### **IFB System Peripherals**

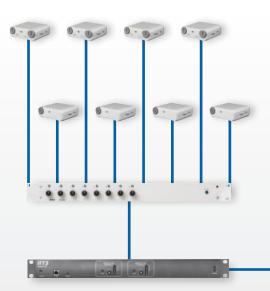
nterrupt Fold Back (IFB) is a broadcast term used to describe the process of cueing on-air talent. RTS IFB equipment is designed with a modular approach that meets the needs of not only large television networks, but also can be configured for any one-way communications need. With multiple program audio sources and individual or simultaneous interrupts, the RTS series of IFB and ISO products is perfect for any talent-cueing need.

The **4010** is a central IFB electronics station. It contains all necessary control functions and electronics, including line power, to provide an active link between the 4001, 4002, and 4003 control stations and the 4030 and IFB-325 user stations.

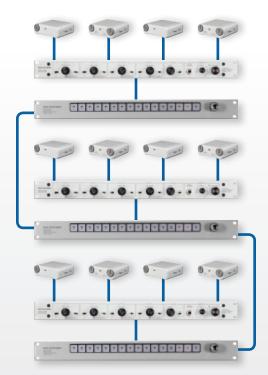
The **IFB-828** interfaces up to eight RTS IFB-325 or 4030 IFB beltpacks to any RTS Digital Matrix Intercom system, and provides power to the beltpacks. The IFB-828 may also be used as a simple program interface to feed two separate program sources to each of eight 4030 beltpacks (16 program sources to eight beltpacks total).

The **4030** and **IFB-325** are listen-only IFB earset stations with two and one channels, respectively. The 4030 contains electronics to provide a stereo audio signal to the user. The IFB-325 provides a mono (either interrupt non-interrupt selected at 4010) audio signal to the user. The 4030 and IFB-325 feature volume controls in extruded aluminum cases. For earset options see page 38.

The **4001**, **4002**, and **4003** are IFB Control stations with four, eight, and 12 channels, respectively thus the control stations separate talent feeds per channel plus one stage announce send. The control stations feature two distinct audio sends per IFB channel for interrupt/non-interrupt or multiple program feeds. Each unit has illuminated switches, programmable priority levels and gooseneck mic connector and is shipped with a wall power supply. Optional rack kit is also available. Requires one 4010 Central IFB. 4001 and 4002 not displayed.



Digital Matrix IFB System



Party-Line IFB System

Zeus III Integrated Partyline Interface

### Master **Stations**

RTS Two-Wire Intercom series 800 master stations have been the industry standard advanced for professional party-line communication systems for more than 25 years. With their flexible configurations, ease of use, and legendary reliability, they are the elite core communications control tools.

RTS Two-Wire Intercom master stations are installed in major broadcast and industrial application venues worldwide. With unparalleled industry acceptance, no other product offers this level of comprehensive communications control.



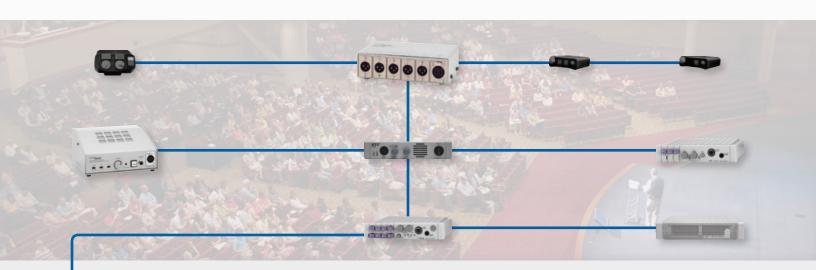
### **803** 12-Channel Programmable Master Station

The RTS model 803 master intercom station is the hub for the two-wire intercom system. Call signaling is standard on all twelve intercom channels. For applications requiring four-wire operation, IFB panel emulation or ISO panel emulation the circuitry is already there; you simply install an option cable to the back panel, set one or two internal DIP switches (IFB and ISO emulate only) and you're ready to go. For all other applications, everything you need is "in the box".



### **MCE-325** 2- or 4 Channel User-Programmable Master Station

The MCE 325 is a four-channel, programmable intercom station. It may be used as a headset station or, with the addition of the MCS-325 modular speaker, as a speaker station. It may be mounted in a console or equipment rack via optional mounting kits. The MCE 325 can be used with either two-wire or four-wire intercom lines, or a combination of both. The MCE 325 can be interfaced to a variety of external devices including external program sources, two-way radios, paging systems, and satellite circuits. The MCE 325 can be ordered for 4- or 5-pin operation.



RTS Two-Wire Party-Line System

### User **Stations**

TS Two-Wire Intercom user stations employ a unique modular design that enables a few station types to be configured into a multitude of communications solutions. Rugged and dependable RTS Two-Wire Intercom user stations form the widest variety of stationary communications

stations in the industry. RTS Two-Wire Intercom user stations are the perfect choice for a wide range of applications regardless of what physical profile is required. RTS is the only two-wire protocol that allows two communication channels to be connected on a single standard microphone cable.

#### MRT-327 User Station

The model MRT 327 is a two-channel intercom station for use in RTS Two-Wire Intercom systems. It may be used as a headset station or as a speaker station (with an optional MCS-325 modular speaker,



P. 34). The MRT 327 may be installed in optional console or rackmount configurations. The MRT-325 can be ordered for four- or five-pin operation.

### RM 325 User Station

The RM 325 is a two-channel binaural headset station. Features stereo (split feed) operation, microphone limiter circuit, two powerful headphone



amps, and simplified operational controls including individual volume adjusts. Packaged in ½-rack by 1RU metal housing for added durability.

### **SPK 300L** Portable Desktop Speaker User Station

The SPK 300L is a desktop station with built-in speaker. It can be used as a "public" listen box via built in speaker or privately through the headset connection. Features a channel-select switch, call light,



speaker on/off switch, and dual-purpose portable desktop volume control. Packaged in a rugged, all-metal housing perfect for table-top operation.

### **CM-300L** Console-Mount User Station

Two-channel select, console-mount user station. Features microphone limiter circuit, separate dynamic and carbon microphone input, and



silent channel-select switching. Solid metal front and open back for console mounting.

### WM 300L Wallmount User Station

Two-channel select, wall-mount headset station. Features channel select switch, call light, and headset volume control. Fits in standard two-gang outlet box.



### WMS 300L Dual-Channel Wallmount User Station with Speaker

Two-channel select, wall-mount speaker user station. Features channel select switch,



#### Which user station is **right for you**?

Feature	MRT 327	RM 325	SPK 300L	CM 300L	WM 300L	WMS 300L
Keys	Pushbutton	Pushbutton	Toggle Switch	Toggle Switch	Toggle Switch	Toggle Switch
Mounting	Rackmount or Desktop	Rackmount or Desktop	Desktop	Console- Mount	Wallmount	Wallmount
Speaker	MCS-325	MCS-325	Internal	N/A	N/A	Internal
Call Light	Yes	Yes	Yes	Yes	Yes	Yes
Power Consumption						
Quiescent	45 mA ±10%	60 mA ±10%	10 to 40 mA	23 mA ±10%	10-40 mA ±10%	10-40 mA
Operating $25\Omega$ Phones	75 mA ±10%	100 mA ±10%	50 mA	37 mA ±10%	50 mA	50 ma
Operating 25Ω Phones + Call Light	90 mA ±10%	125 mA ±10%	70 mA	60 mA ±10%	75 mA	70 mA
Operating 8Ω Speaker	240 mA ±10%	300 mA ±10%	100 mA			100 mA
Operating 8Ω Speaker + Call Light	300 mA ±10%	360 mA ±10%				

### Beltpacks

sing the latest in space age materials, RTS Two-Wire Intercom beltpacks are mechanically engineered to be rugged and dependable. Unique audio circuitry is perfect for either high- or low-noise environments while maintaining maximum voice intelligibility.

## **BP-325** Dual-Channel Binaural Programmable Beltpack

The BP-325 is a portable beltpack for use with RTS Two-Wire intercom systems. The BP-325 is a binaural (stereo), programmable



two-channel beltpack with program-input capability. For use with a dynamic microphone only. The BP-325 consumes 65 to 85 mA of power.

## **BP-351** Dual-Channel Portable Metal Beltpack

The BP-351 is a portable beltpack for use with RTS Two-Wire intercom systems. The BP-351 is a microprocessor controlled two-channel select intercom beltpack. The BP-351 has connections for headset/earset microphones (dynamic or



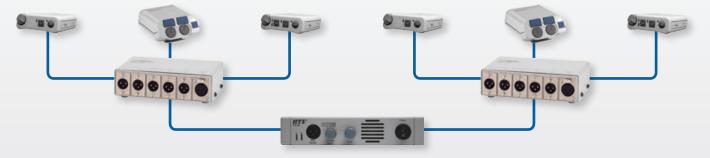
electret). The beltpack has an autosensing function that automatically detects the headset mic and powers it if the mic is electret. The BP-351 consumes 45 to 70 mA of power.

### **BP-319** Single-Channel Portable Metal Beltpack

The BP-319 is a portable beltpack for use with RTS Two-Wire intercom systems. The BP-319 is a microprocessor controlled, one-channel intercom beltpack. The BP-319 has connections for headset/earset microphones (dynamic or



electret). The beltpack has an autosensing function that automatically detects the headset mic and powers it if the mic is electret. The BP-319 consumes 45 to 70 mA of power.



### Power Supplies

Power supplies are the heart of party-line intercom systems. They supply operating voltage to beltpacks and many user stations. Unique, short-circuit reset circuitry design and unparalleled mechanical

engineering ensures reliable, trouble-free operation for years to come. With all of the things you have to worry about, power supplies should not be one of them.

### PS 20 Power Supply

The RTS PS-20 is the new RTS Two-Wire Intercom power supply. The PS-20 features two- and fourchannel operation. RTS monitoring, two-channel program input, audio linking, and three-mode operation: RTS 2-channel, RTS 4-channel, and Clear-Com® mode. It also has double the power output per channel of previous RTS power supplies, which will substantially increase the number of user stations and beltpacks that can be connected.

The PS-20 features two channels of communication where both channels are "wet," meaning there is power on each channel (RTS two-channel mode). In RTS four-channel mode, the audio signals and DC exist on the same wire. The PS-20 can also be switched



into Clear-Com® mode. The PS-20 has a three-pin XLR (male) connector on the front of the system, where a RTS user station can connect and monitor activity on either or both channels. A single PS-20 power supply has 1.8 amp per channel, which means the user can power up more stations. If additional user stations or beltpacks are needed, two PS-20s can be joined together to double the power capability. A pair of standard stereo plug connectors are available on the back of the power supply to connect two PS-20s through audio linking as well. The PGM IN (three-pin XLR female Program Input) connector can be used to send audio to both CH 1 and/or CH 2.



### Accessories

full line of products to complete your communications system, including interfaces to party-line intercoms, cable, telephone lines, and relays. Accessories also include control panels for IFB levels and assignments, panels for adjusting system audio levels, microphones, and four-wire beltpacks.

RTS Two-Wire Intercom source assignment panel accessories are a key element in large, high-end RTS Two-Wire Intercom party-line systems. With the ability to turn a standard two-bus communications system into a 12 or more bus configuration, SAPs are vital to system expansion. Increasing the number of usable communication busses allows the system to be better tailored to individual user needs.

The **SAP-1626** is a 2RU source-assignment panel. It Assigns any one of 12 intercom channels and/or



three program audio channels to 26 separate twochannel user stations via convenient thumb-wheel switches. I/O provided via two 50-pin connectors. Normally used in conjunction with a BOP-220

The **SAP-612** source-assignment panel transforms a basic two-bus intercom system into a six-bus system via convenient slide switches. Provides six input channels and 12 two-channel TW user station

strings. I/O provided via two ¼", three three-pin XLR female, and twelve three-pin XLR male connectors. Contains XLR jacks for RTS power supply.

The model **4012** is a passive connector translation device used specifically for system applications designed around the 803 master station.



The model **4012** acts as a breakout panel to facilitate easy connections to the intercom system. The 4012 is hardwire programmable, allowing a variety of system configurations. Both dedicated-line and conference-line connections can be arranged to suit individual system requirements.

The **BOP-220** is a 19", 3RU breakout panel, I/O connector transition assembly.



Provides a convenient interface between a SAP-1626 (25 pair 50-pin) and up to 20 user stations or strings of stations (three-pin XLR male).

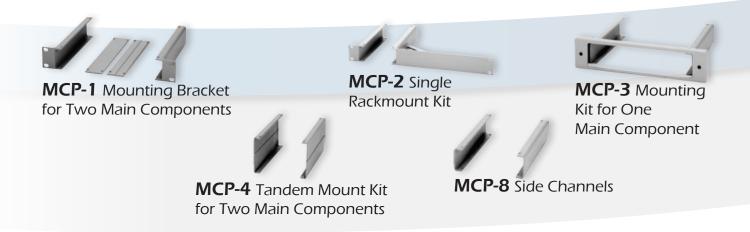
The **MCS-325** is a passive modular speaker. It can be combined with MCE 325 and MRT 327 to provide speaker station operation. Packaged in ½ rack by 1RU metal housing for added durability.

The **LMS-325** is a (active) linemonitor speaker station. Part of RTS's unique modular packaging system. Features a full-range, 5W speaker and power amp, dual-channel inputs from Two-Wire or separate program inputs, and volume control. Packaged in ½ rack by 1RU metal housing for added durability and magnetically shielded for use near video monitors.









## MCP-90 Electret Gooseneck Microphone

MCP-90-0 0" Gooseneck Microphone
MCP-90-8 8" Gooseneck Microphone
MCP-90-12 12" Gooseneck Microphone

MCD 00 19 10" Cooronack Microphone

MCP-90-18 18" Gooseneck Microphone



### **CIA-1000** Call Light Indicator Assembly



**TW-5W** 1x5 Dual-Channel 3-Pin XLR-Type Passive Splitter



**TW-7W** One XLR-3F into Seven XLR-3M Out

**4022** 1x2 25 pair, 50-pin passive splitter

**4025A** 1x4 50-pin passive splitter

## Product **Specifications**

Product	Form Factor	Height	Width	Depth	Weight	Color
803	Rackmount	2RU	19" (48.26 cm)	10" (25.4 cm)	8.1 lbs (3.67 kg)	Grey
4010	Rackmount	1RU	19" (48.26 cm)	15" (38.1 cm)	10.74 lbs (4.87 kg)	Grey
4012	Rackmount	3RU	19" (48.26 cm)	5.06" (12.86 cm)	3.72 lbs (1.69 kg)	Silver
4030	Beltpack	1.5" (3.8 cm)	3.75" (9.53 cm)	1.8" (4.57 cm)	0.67 lbs (0.3 kg)	Grey
ADAM	Rackmount	7RU	19" (48.26 cm)	20" (50.8 cm)	44.75 lbs (20.3 kg)	Grey
BKP-4	Desktop	5.06" (12.86 cm)	9.25" (23.5 cm)	8" (20.32 cm)	3.2 lbs (1.45 kg)	Grey
BOP-220	Rackmount	3RU	19" (48.26 cm)	5" (12.7 cm)	2.43 lbs (1.1 kg)	Silver
BP-319	Beltpack	5" (12.7 cm)	3.5" (8.89 cm)	1.8" (4.57 cm)	0.75 lbs (0.34 kg)	Black or Grey
BP-325	Beltpack	5" (12.7 cm)	3.75" (9.53 cm)	2.05" (5.21 cm)	0.5" (0.23 kg)	Black or Grey
BP-351	Beltpack	5" (12.7 cm)	3.5" (8.89 cm)	1.8" (4.57 cm)	0.75" (0.34 kg)	Black or Grey
CIA-1000 Front	Rackmount or Desktop	1RU	8.19" (20.8 cm)	5.56" (14.13 cm)	0.94 lbs (0.43 kg )	Grey
CIA-1000 Top	Desktop	2" (5.08 cm)	8.19" (20.8 cm)	5.25" (13.34 cm)	0.94 lbs (0.43 kg)	Grey
CM 300L	Console Mount	2.75" (6.99 cm)	6.25" (15.88 cm)	6.4" (16.26 cm)	1.2 lbs (0.54 kg)	Grey
Cronus	Rackmount	2RU	19" (48.26 cm)	13.25" (33.66 cm)	14.15 lbs (6.41 kg)	Grey
CSI-200	Rackmount	1RU	8.19" (20.8 cm)	8.25" (20.96 cm)	2.2 lbs (1 kg)	Grey
DKP 16 CLD	Desktop	3.2" (8.13 cm)	10.1" (25.65 cm)	9.2" (23.37 cm)	3.78 lbs (1.71 kg)	Duotone
DKP x12	Desktop	3.1" (7.87 cm)	11.3" (28.7 cm)	7.63" (19.4 cm)	4.17 lbs (1.89 kg)	Black, Grey, or Nickel
DKP x12HND	Desktop	3.1" (7.87 cm)	11.3" (28.7 cm)	7.63" (19.4 cm)	6.45 lbs (2.93 kg)	Black, Grey, or Nickel
DKP-8, 12	Desktop	3.75" (9.53 cm)	9" (22.86 cm)	7.25" (18.42 cm)	4.58 lbs (2.08 kg)	Grey
DSI 2008	Rackmount	1RU	8.19" (20.8 cm)	8.25" (20.96 cm)	2.9 lbs (1.32 kg)	Grey
EKP x12	Rackmount	1RU	19" (48.26 cm)	7.5" (19.1 cm)	3.7 lbs (1.68 kg)	Black, Grey, or Nickel
EKP x12-16	Rackmount	1RU	19" (48.26 cm)	7.5" (19.1 cm)	5.12 lbs (2.3 kg)	Black, Grey, or Nickel
EKP-20	Rackmount	1RU	19" (48.26 cm)	713" (18.1 cm)	4.6 lbs (2.09 kg)	Black or Grey
EKP-32	Rackmount	2RU	19" (48.26 cm)	5" (12.7 cm)	5.6 lbs (2.54 kg)	Black or Grey
GPIO-16	Rackmount	1RU	19" (48.26 cm)	7" (17.78 cm)	5.48 lbs (2.49 kg)	Grey
ICP-2000	Rackmount	1RU	19" (48.26 cm)	0.75" (1.91 cm)	0.89 lbs (0.4 kg)	Black
IFB-325	Beltpack	1.5" (3.8 cm)	3.75" (9.53 cm)	1" (2.54 cm)	1 lb (0.45 kg)	Grey
IFB-828	Rackmount	1RU	19" (48.26 cm)	7" (17.78 cm)	8.84 lbs (4.01 kg)	Grey
KP 12 CLD	Rackmount	1RU	19" (48.26 cm)	4.28" (10.87 cm)	3.76 lbs (1.71 kg)	Duotone
KP 32 CLD	Rackmount	2RU	19" (48.26 cm)	3.25" (8.25 cm)	6.3 lbs (2.86 kg)	Duotone
KP x12	Rackmount	1RU	19" (48.26 cm)	7.5" (19.1 cm)	6.42 lbs (2.91 kg)	Black, Grey, or Nickel
KP-12	Rackmount	1RU	19" (48.26 cm)	5.5" (14 cm)	5.1 lbs (2.31 kg)	Black or Grey
KP-32 Classic	Rackmount	2RU	19" (48.26 cm)	5" (12.7 cm)	6.4 lbs (2.9 kg)	Black or Grey

#### Width Weight Color **Product** Form Factor Height Depth KP-32/16 Rackmount 2RU 19" (48.26 cm) 5" (12.7 cm) 5.9 lbs (2.68 kg) Black or Grey 2RU KP-632 Rackmount 19" (48.26 cm) 5" (12.7 cm) 6.28 lbs (2.85 kg) Black or Grey KP-832 2RU Rackmount 19" (48.26 cm) 5" (12.7 cm) 6.28 lbs (2.85 kg) Black or Grey KP-8T Tektronix® 5.2" (13.21 cm) 8.38" (21.29 cm) 9" (22.86 cm) 10.9 lbs (4.94 kg) Grey Rackmount 2RU 19" (48.26 cm) 7.13" (18.1 cm) 8.28 lbs (3.76 kg) Black or Grey Rackmount 1RU 19" (48.26 cm) 6.63" (16.83 cm) 3 lbs (1.36 kg) Black or Grey LCP-32/16 1RU 19" (48.26 cm) 1.75" (4.45 cm) 3 lbs (1.36 kg) Rackmount Black or Grey LMS-325 1RU 8.19" (20.8 cm) 8" (20.32 cm) 2.76 lbs (1.25 kg) Rackmount Grey MCE 325 Rackmount 1RU 8.19" (20.8 cm) 8" (20.32 cm) 4.5 lbs (2.04 kg) Grey MCS-325 Rackmount 1RU 8.19" (20.8 cm) 8.25" (21 cm) 2.52 lbs (1.14 kg) Grey 8.5" (21.59 cm) 1RU 19" (48.26 cm) MDA-100 Rackmount 7.38 lbs (3.35 kg) Grev MKP-12 Rackmount 1RU 19" (48.26 cm) 8" (20.3 cm) 4.96 lbs (2.25 kg) Black or Grey MKP-4 Rackmount 1RU 8.19" (20.8 cm) 8.25" (21 cm) 2.82 lbs (1.28 kg) Grey 1RU 8.19" (20.8 cm) 9" (22.86 cm) MRT 327 Rackmount 2.75 lbs (1.25 kg) Grey MTM-2000 Rackmount 2RU 19" (48.26 cm) 12" (30.48 cm) 26.78 lbs (12.15 kg) Black **PAM-32** 2RU Rackmount 19" (48.26 cm) 3.5" (9 cm) 3.86 lbs (1.75 kg) Black or Grev Rackmount 2RU 19" (48.26 cm) 4.5" (11.43 cm) 5.58 lbs (2.53 kg) Black or Grey Rackmount 1RU 8.19" (20.8 cm) 8.56" (21.75 cm) 5 lbs (2.27 kg) Grev RKP-4 5.35" (13.59 cm) 3.75" (9.53 cm) 2.02" (5.13 cm) 1.2 lbs (0.55 kg) Black Beltpack Rackmount 1RU 8.19" (20.8 cm) 9" 22.86 cm) 3.5 lbs (1.59 kg) Black 8" (20.32 cm) RM 325 1RU 8.19" (20.8 cm) Rackmount 2.75 lbs (1.25 kg) Grey RVON-I/O 1RU 19" (48.26 cm) 8" (20.32 cm) 3.7 lbs (1.67 kg) Rackmount Grey Rackmount 2RU 19" (48.26 cm) 9.8" (24.89 cm) 10 lbs (4.54 kg) Grey 1RU Rackmount 19" (48.26 cm) 8" (20.32 cm) 4.52 lbs (2.05 kg) Grev Rackmount 1RU 8.19" (20.8 cm) 8.5" (21.59 cm) 3 lbs (1.36 kg) Duotone **SPK 300L** Desktop 4" (10.16 cm) 8" (20.32 cm) 8" \*20.32 cm) 3.5 lbs (1.59 kg) Grey SSA-324 Rackmount 1RU 8.19" (20.8 cm) 8.25" (20.96 cm) 2.7 lbs (1.22 kg) Grey Rackmount 1RU 19" (48.26 cm) 5.75" (14.61 cm) 4.6 lbs (2.09 kg) Black Rackmount 1RU 8.19" (20.8 cm) 8.25" (20.96 cm) 2.25 lbs (1.13 kg) Grey 4RU Rackmount 19" (48.26 cm) 13" (33.02 cm) 28.45 lbs (12.9 kg) Grey Tektronix® WFM 5.2" (13.21 cm) 3.25" (8.26 cm) 3.5" (8.3 cm) 1.84 lbs (0.83 kg) Grey TM-2000 4RU Rackmount 19" (48.26 cm) 18" (45.72 cm) 37.06 lbs (16.81 kg) Black Wallmount 4.5" (11.43 cm) 4.5" (11.43 cm) 2.75" (7 cm) 0.79 lbs (0.36 kg) Grey 2.5" (6.35 cm) Wallmount 6.5" (16.51 cm) 9" (22.9 cm) 1.32 lbs (0.6 kg) Grey 4.5" (11.43 cm) 4.5" (11.43 cm) Grey Wallmount 1.81" (4.6 cm) 0.56 lbs (0.25 kg) Wallmount 4.5" (11.43 cm) 8" (20.32 cm) 1.75" (4.45 cm) 1 lb (0.45 kg) Grey Rackmount 1RU 19" (48.26 cm) 15" (38.1 cm) 7 lbs (3.18 kg) Duotone

### Intercom Headsets

TS offers a wide variety of headset styles to choose from, including lightweight and full-cushion headsets in either single or dual-sided versions. We also have hearing protection headsets that offer noise reduction of up to 24dB and earset selection that can accommodate all applications.

Most headsets feature our new flexible boom arms and are terminated with an A4M connector for compatibility with RTS intercom systems. Most headsets are also available with an A5M connector or unterminated.

### The right **headset** for the right **application**

	_				
Feature	PH-88R, -44R	PH-1R, -2R	HR-1R, -2R	PH-100R, -200R	PH-10R
Single Sided	PH-88R	PH-1R	HR-1R	PH-100R	
Dual Sided	PH-44R	PH-2R	HR-2R	PH-200R	PH-10R
Weight W/O cord	2.5oz, 3oz	11oz, 13oz	11oz, 15oz	16oz, 18oz	17oz
Noise Reduction Rating <i>Dual-Sided Only</i>			21dB	21dB	24dB
Mic Type					Flexible Dynamic Noise-Cancelling
Mic Sensitivity	-65dBV/Pa @1cm	n -65dBV/Pa @1cm	n -65dBV/Pa @1cm	n -65dBV/Pa @1cm	n -65dBV/Pa @1cm
Mic Frequency Range	200Hz - 10kHz	200Hz - 6kHz	150Hz - 8kHz	150Hz - 8kHz	200Hz - 6kHz
Mic Impedance	200Ω	150Ω	200Ω	200Ω	150Ω
Speaker Sensitivity	109dB SPL @1kHz, 1mW	95dB SPL @1kHz, 1mW	95dB SPL @1kHz, 1mW	97dB SPL @1kHz, 1mW	95dB SPL @1kHz, 1mW
Speaker Frequency Range	100Hz - 7kHz	100Hz - 10kHz	100Hz - 3kHz	500Hz - 4kHz	100Hz - 3kHz
Speaker Impedance	300Ω, 150Ω	300Ω, 150Ω	300Ω, 150Ω	300Ω, 150Ω	150Ω

#### **RTS Announcer Earsets**

The popular RTS earsets are precisely designed for inconspicuous listening while on camera. Used by nearly all major television networks and stations, we have surpassed industry standards. The extremely efficient miniature driver element requires only nominal operating power and enables the announcer to hear program cues while working with a live microphone. The units are also suitable for many other applications such as live-theater script prompting.





CES-1

CES-2

### Lightweight

The PH-88R, -44R are super lightweight headsets for the ultimate in daylong comfort. They offer a dynamic noise-canceling gooseneck microphone with a semi-rigid, fully adjustable boom for precise positioning. The high-quality wide band dynamic earphones are covered in moleskin for superior fit, isolation and frequency response.

### Full-Cushion, Medium Weight

The PH-1R and PH-2R series of medium-weight intercom headsets is considered the industry-standard by many users in all applications. With a weight of only 12 oz., these headsets offer the ultimate in daylong comfort.

### **Medium Weight**

The HR-1R and HR-2R are medium-weight passive noise reduction headsets with dynamic noise-canceling microphones. The headsets have a noise reduction rating of 21dB; suitable for use in a moderately noisy environment. The ergonomic moleskin-covered headband design distributes pressure evenly with no pressure points, ensuring hours of comfortable wear. This headset folds into a compact form for ease of storage.

### **Premium Medium Weight**

The PH-100R and PH-200R are premium, medium-weight, noise-reduction headsets with dynamic noise-cancelling microphones. Similar to the HR-1 and HR-2 headsets, the PH-100R and PH-200R feature a unique, comfortable headband design that distributes pressure evenly. These headsets come with high-quality moleskin cushions and offer a 21dB noise-reduction rating. In addition, the headsets fold into an extremely compact shape.

### Medium Weight with 24dB NRR

The PH-10R is the ultimate in passive noise-reduction. This heavy-duty headset offers snug-fitting, dual-sided, monaural headphones with a dynamic, noise-canceling microphone for use in high-noise environments. The PH-10R offers an Environmental Protection Agency rated noise-reduction rating of 24dB. Perfect for industrial and concert applications.



PH-88R



PH-44R



PH-1R



PH-2R



HR-1R



HR-2R



PH-100R



PH-200R



PH-10R



For information on any of the products featured in this catalog, you can reach us at **info@rtsintercoms.com** Please visit the RTS Digital Matrix Intercom website at: **www.rtsintercoms.com** 

#### **Americas**

Bosch Security Systems, Inc.

12000 Portland Avenue South | Burnsville, Minnesota 55337 | United States

**United States** Phone: +1-877-863-4169 | Fax: +1-800-323-0498 **Canada** Phone: +1-866-505-5551 | Fax: +1-866-336-8467 **Latin America** Phone: +1-952-887-5532 | Fax: +1-952-736-4212

#### Europe, Africa, & the Middle East

#### Germany

Bosch Communications Systems (EVI Audio GmbH) Hirschberger Ring 45, | D-94315, Straubing, Germany Phone: +49 9421 706-0 | Fax: +49 9421 706-265

#### **United Kingdom**

Bosch Communications Systems (Telex Communications UK Ltd)

Unit 26 Fiddlebridge Industrial Center, | Lemsford Road Hatfield, Hertfordshire AL10 ODE, UK

Phone: +44 1707 280 960 | Fax: +44 1707 265 083

#### **United Arab Emirates**

Bosch Communications Systems (Telex Communications, Inc.)
Jebel Ali Free Zone, LB21 016 | P.O. Box 79129 Dubai, U.A.E.

Phone: +971 4 881 3850 | Fax: +971 4 881 3851

#### Asia & the Pacific Rim

**Singapore** Asia Pacific Regional Headquarters

Bosch Communications Systems (Robert Bosch (SEA) Pte Ltd)

38C Jalan Pemimpin | Singapore 577180

Phone: +65 6319 0616 | Direct Line: +65 6319 0613 | Fax: +65 6319 0620

#### China

Bosch Communications Systems (EVI Audio Ltd.)

Room 3105-3109, Tower 1, Office Building, 218 Tian Mu Xi Rd., | Shanghai, China. Post Code: 200072

Phone: +86 (21) 63172155 | Fax: +86 (21) 63173025

#### Hong Kong

Bosch Communications Systems (Telex EVI Audio (Hong Kong) Ltd.)

Unit 5,1/F, Topsail Plaza, 11 On Sum Street, Shek Mun, | Shatin, N.T., Hong Kong.

Phone: +852 2636 2551 | Direct Line:+852 3103 8321 | Fax:+852 2351 3329

#### Japan

Bosch Communications Systems (EVI Audio Japan Ltd.) 5-3-8 Funabashi, Setagaya-Ku, | Tokyo, Japan 156-0055

Phone: +81 3-5316-5024 | Fax: +81 3-5316-5030

© 2009 Bosch Security Systems, Inc.

Information in this document is subject to change without notice. Technical specifications may vary with options ordered.

All trademarks are the copyrights of their respective owners.