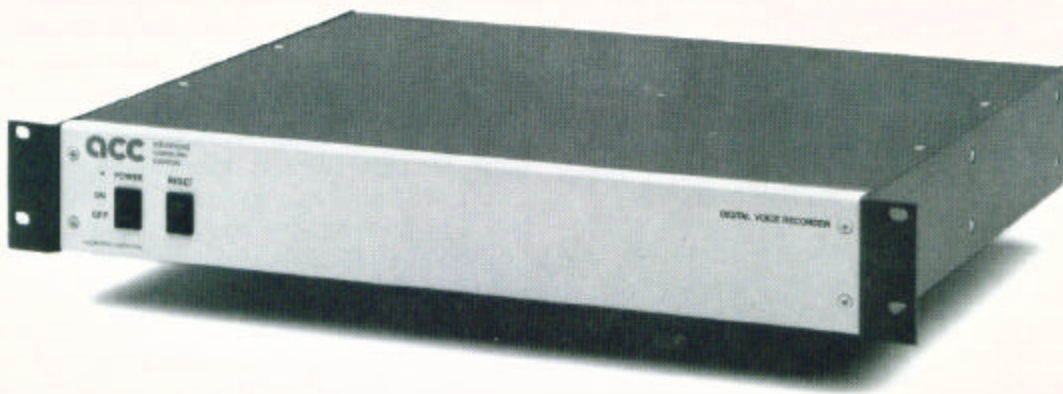




advanced
computer
controls, inc.



Digital Voice Recorder

Description

ACC's Digital Voice Recorder (DVR) is a multichannel solid-state digital audio recorder that remotely records and plays back audio through your repeater systems. It allows you to remotely record all of your repeater controller's programmable messages and offers a Touch-Tone activated voice mailbox. The DVR makes your repeater an information center, enhancing the communications through your system.

No Compromise Audio

Playback sounds "live". The DVR preserves the full audio fidelity of your repeater. Its highest quality level results in recording indistinguishable from the original. Your repeater is judged by how it sounds, and the DVR keeps it sounding first class! High quality recording is especially important when your "celebrity", or other favorite voices, record IDs and other announcements.

You Decide

The DVR allows recording and playback of a number of variable length audio "tracks". You choose the quality level of different tracks. Select the highest quality reproduction for your favorite IDs, and conserve memory by choosing a secondary level of audio quality for less frequently used messages. The DVR uses only as much memory as the length of the track, so there's no "wasted space" when you record.

Easy To Use Mailbox

Now it's easy to leave messages for other repeater users without having to remember lots of codes. Just enter a simple Touch-Tone command and talk. You're guided through the entire process of leaving a message with voice prompts, so the mailbox couldn't be easier to use. And your voice mail messages can say anything you want, since *you* say them!

To leave a voice message, enter a simple command and the DVR will ask who your message is for. Say who it's for (like "Tom"), then say your message. To see if there are any messages for you, ask it with a simple command and the DVR will list who has messages waiting ("Pete", "Joe", "Tom"). If you're Tom, you can retrieve your message by simply pressing 3 on your Touch-Tone pad.

For a large number of users, and more message privacy, the 100 slot "semi-private" mailbox works like Post Office Boxes. Leave messages directly for your friends and retrieve your own any time. Special "run time variable" audio tracks let your repeater automatically notify you when there is mail waiting.

The DVR Grows As Your System Grows

You can start with inexpensive and readily available computer memories from us or from your neighborhood computer store and add more a row at a time. As your needs increase, you can expand to a full megabyte, lengthening the recording time with no hardware changes.

And the DVR can be expanded to three-in-one. This means that one DVR can service three fully independent repeater systems or two repeaters and the phone line*. All three channels can be recording or playing back at the same time.

Start out with the single channel DVR - you can upgrade anytime. Or go in together with other groups that share your site to reduce the cost all around.

Synergy

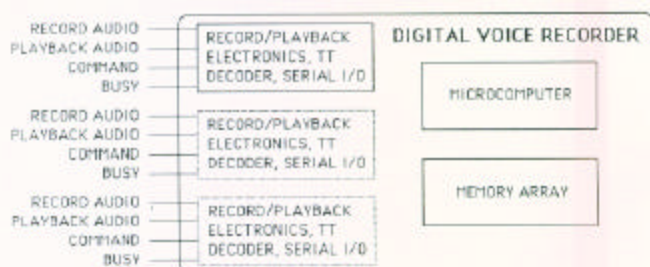
Your ACC RC-850 or RC-85 Repeater Controller and the DVR work together to enhance the value of each other. Any or all of the remotely programmable messages of the controller may be made up of DVR audio tracks. That means many IDs, tail messages, bulletin board announcements, and other messages can be stored at one time. With the '850 controller, the various messages can even be scheduled. And since a message can consist of several tracks joined together, each track can be used in more than one message to make the most of the recording time available.

Reliability

Since the DVR is fully solid-state and there are no moving parts, it's ideal for use in remote locations and harsh environments - there's simply nothing to wear out.

Remember... the synthesized speech in your controller is the "voice of the repeater". The Digital Voice Recorder records your voice and your users' voices to enhance communications through your repeater system.

*Access from the telephone is achieved by connecting a DVR channel to the telephone interface of the controller.



Features/Benefits

Direct digital recording - 64K bit/second PCM

Outstanding audio quality, just like the original
3db bandwidth 150-3800 Hz, 1.5% distortion (highest quality mode)
Selectable software data compression for extended recording time at reduced quality levels
No vocabulary restrictions of synthesized speech

Direct interface to RC-850 and RC-85 Repeater Controllers

Playback of various tracks specified with message editor allows use with IDs, tail messages, courtesy tones, Emergency Autodial responses, etc.
Tracks may be joined together for messages - a track may be used in several messages increasing effective "playback" time

Up to three independent record/playback channels

Supports up to three independent systems for cost effective operation
Allows cross-directed voice mail
Makes most efficient use of a common memory resource
Permits simultaneous record/playback operations on all three channels

Uses industry standard 64K and 256K dynamic RAM chips

Compatibility with 256K chips allows recording time extension
Accommodates up to 1 megabyte memory (8 megabits)
Recording time may be extended with "home computer" memory chips

Dynamic allocation of memory

Recording takes only as much memory as required for no wasted memory
No playback "dead time"
128 addressable "tracks" plus mailbox

Solid-state, fully electronic operation

High reliability in harsh environments

High reliability, low power design

All ICs socketed in gold machine contact sockets
Uses Advanced Low Power Schottky and CMOS logic families for low current drain
Easy to battery back up for audio storage during main power outage

Available in a variety of configurations

Select the configuration you need and can afford
Assembled/tested board only, or in rack mount enclosure
Choice of memory size - may be upgraded with standard memory chips at any time
Choice of one, two, or three audio channels; factory upgradeable

101 Ways To Use Your Digital Voice Recorder On Your Repeater

- ✓ Welcome a new user to your repeater.
- ✓ Congratulate a user for upgrading his license.
- ✓ Use a "ho-ho-ho" courtesy tone for Christmas.
- ✓ Provide instructions for visiting users.
- ✓ Use a "champagne cork pop" courtesy tone on New Year's.
- ✓ Remind users to drive safely.
- ✓ Announce intruder with "Help, help, call the police".
- ✓ Remind your users of an upcoming flea market.
- ✓ Provide talk-in information for your hamfest.
- ✓ Solicit volunteers for your bike-a-thon.
- ✓ Record remote base memory names with QTH of system.
- ✓ Advise users of status of an emergency situation.
- ✓ Announce new technical additions to the repeater system.
- ✓ Warn users of weather advisories.
- ✓ Check out the audio on your new handheld.
- ✓ Wish a user "happy birthday".
- ✓ Use a "firecracker" courtesy tone on July 4th.
- ✓ Use a "gobble-gobble" courtesy tone on Thanksgiving.
- ✓ Feature a celebrity voice for your repeater's ID.
- ✓ Custom tailor emergency autodial response messages.
- ✓ Provide instructions on how to use the repeater.
- ✓ Announce the code practice schedule.
- ✓ Distribute system information to control operators.
- ✓ Replay bits of interest from the Westlink broadcast.
- ✓ Tell a friend you can't make the meeting.
- ✓ Announce the call sign slots of new users.
- ✓ Let new users introduce themselves.
- ✓ Check out the audio quality on your new mobile mic.
- ✓ Use "thunder-clap" courtesy tone during wx emergency.
- ✓ Provide a brief club meeting directory.
- ✓ Congratulate a new ham for getting his license.
- ✓ Ask a friend how he likes his new rig.
- ✓ Encourage users to respond to open FCC matters.
- ✓ Remind users what to bring on field day.
- ✓ Provide directions to the field day site.
- ✓ Do a sample FD QSO so users know what to expect.
- ✓ Announce field day results.
- ✓ Provide a local net directory.
- ✓ ID your repeater using your favorite sexy voice.
- ✓ Provide a short "repeater directory" for your area.
- ✓ Solicit volunteers for your walk-a-thon.
- ✓ Remind users of proper repeater procedure.
- ✓ Provide info about repeater's facilities and coverage.
- ✓ Announce availability of a new repeater in the area.
- ✓ Put a siren on the alarm message.
- ✓ Rent a DVR channel to a commercial site user.
- ✓ Offer holiday greetings to your users.
- ✓ Play an alarm clock sound when the repeater signs on.
- ✓ Remind all of the upcoming repeater coordination meeting.
- ✓ Ask scanner listeners to call you for info on being a ham.
- ✓ Thank a friend for doing you a favor.
- ✓ Announce the results of your club's election.
- ✓ Welcome your new club president and cabinet.
- ✓ Remind users of APRIL sponsored events.
- ✓ Ask another repeater user to give you a call.
- ✓ Announce when club owned gear is available for loan.
- ✓ Tell a friend about a new circuit you found.
- ✓ Use a "leigh-bell" courtesy tone on Christmas.
- ✓ Leave a message for your wife to get over the phone.
- ✓ Include your repeater's location in its IDs.
- ✓ Include the name of your repeater organization in the IDs.
- ✓ Round up a group interested in getting an ATV.
- ✓ Have rptr say "Brrr, it's cold up here" after first snow.
- ✓ Notify users of the latest info on the local packet board.
- ✓ Leave a phone number and time for someone to call you.
- ✓ Announce presence of a rare DX station on 20 meters.
- ✓ Announce current propagation conditions.
- ✓ Announce upcoming OSCAR passes.
- ✓ Remind users about an upcoming contest.
- ✓ Announce roads washed out during a storm.
- ✓ Direct users to other repeaters during an emergency.
- ✓ Ask a friend when he'll be on the air.
- ✓ Congratulate a user for getting married.
- ✓ Congratulate a user on having a baby.
- ✓ Remind users of an upcoming club meeting.
- ✓ Promote the speaker for your next club meeting.
- ✓ Let the speaker for your next meeting promote himself!
- ✓ Provide directions to your club meeting place.
- ✓ Provide minutes of your last club meeting.
- ✓ Provide a brief report from your club's officers.
- ✓ Remind users that it's time to pay club dues.
- ✓ Announce the results of your club's contest.
- ✓ Thank a club member for his equipment donation.
- ✓ Praise members for donated time on club projects.
- ✓ Have a rooster crow when the repeater signs on.
- ✓ Tell a friend you're done using his wattmeter.
- ✓ Solicit volunteers to teach the ham classes.
- ✓ Provide a schedule of ham classes.
- ✓ Congratulate the graduates of your ham classes.
- ✓ Provide announcements of other club's activities.
- ✓ Announce equipment for sale (careful, no prices).
- ✓ Remind users about your weekly swap net.
- ✓ Solicit volunteers for an antenna work party.
- ✓ Tell users of the upcoming meteor shower.
- ✓ Provide the digipeater path for a new packet link.
- ✓ Provide info to users about a new FCC rules change.
- ✓ Give up-to-date info about the status of the brush fire.
- ✓ Thank the users who helped put up the new tower.
- ✓ Announce your repeater's new freq. when you change.
- ✓ Describe the equipment making up your repeater.
- ✓ Tell users of other repeaters sponsored by your group.
- ✓ Announce the presence of the new DVR on your repeater!

Specifications

Audio Quality

Frequency Response 150-3800 Hz
Distortion 1.5% (highest quality level)

Recording Time

Highest Quality Level - up to 130 seconds
Intermediate Quality Level - up to 260 seconds
Lowest Quality Level - up to approximately 360 seconds [(2-6 minutes depending on quality level of each track and memory installed)
Playback time is much larger since each track may each be used in many messages

Memory

Audio memory expandable from 64K byte to 1M byte
Four optional rows of memory chips, each row consisting of eight 4164 or 41256 type dynamic RAM chips*

Audio Tracks

128 variable length tracks (0-360 seconds each, total limited by memory)
Record operation initiated with Touch-Tone commands
Playback initiated with ASCII serial commands (supplied by RC-850 and RC-85 repeater controllers), or Touch-Tone commands

Voice Mailbox

User is voice prompted through the process of leaving mail
Touch-Tone activated entry and retrieval
Public and semi-private mailboxes
Public mailbox - two step entry process - say who the message is for, then say the message
Semi-private mailbox - specify one of 100 slots, then say the message
Easy message retrieval - ask who messages are stored for, then ask for your message
Remotely recordable prompting messages

Record Audio Inputs and Playback Audio Outputs

1, 2, or 3 (depending on number of channels); adjustable levels
Record operation - Touch-Tone (independent decoder per channel)
Playback operation - ASCII serial commands, Touch-Tone

Repeater Controller Interface

Five wires (record audio, playback audio, COS, command, busy)

Repeater Controller Supported Remotely Recordable Messages

ID Messages - 16 / scheduled (RC-850); 7 (RC-85)
Tail Messages - 13 / scheduled (RC-850); 3 (RC-85)
Emergency Autodial Responses - 10 (RC-850 and RC-85)
Bulletin Board Messages - 5 (RC-850); 2 (RC-85)
Alarm Messages - 4 (RC-850); 1 (RC-85)
Courtesy Tones - 12 (RC-850)
Scheduled Event Messages - 5 (RC-850)

Multichannel Option

Independent record/playback electronics, Touch-Tone command decoder, and serial interface port per channel

Power 13.8V \pm 10%, 1.5A max.; independent battery power input (rack mount version)

Board Size 8.5" x 12.25"

Cabinet Size 19" rack mount, 2.5" high

*The unit is designed to work with standard 200, 150, or 120 ns or faster 4164 and 41256 memory devices.
The warranty applies to memory supplied by the factory.