

CKMS-FM

VOLUNTEER'S MANUAL

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INTRODUCTION

CKMS-FM is a campus radio station. Our operations are based at the University of Waterloo. Most of the programming is produced by volunteers who are students but a significant portion of our programming is produced by non-students from the K-W community. The aim of our programming has always been to provide information, art and entertainment not generally available through the commercially-driven media. A wide variety of music and spoken word programming is available to our listeners.

CKMS began broadcasting on the FM band in October of 1977. Fifteen years later the station moved from 94.5 to 100.3 Megahertz. This frequency provides a strong signal throughout Kitchener -Waterloo. We can be picked up as far away as Guelph and Drumbo.

While the majority of our funding comes from a student fee, we do have other sources of income, the major ones being: sponsorship sales, fund-raising events, recording studio rentals, and our tape duplication service. There are four permanent staff positions. The staff deal with the day-to-day operation of the station. Major decisions (such as budget approval, policies, etc.) are made by the board of directors. Board members are elected at regular general meetings of Radio Waterloo, Inc., the corporation that holds the broadcast licence of CKMS. All members of Radio Waterloo (all those who have paid a membership fee) are eligible to stand for election to the board.

CKMS is permitted by the CRTC (the federal body that regulates broadcasting in Canada) to carry a form of limited commercial activity called sponsorships. The CRTC, for various reasons, allows campus stations to carry only one minute per hour of regular advertising. This is fine with us, since one of the attractions of listening to CKMS is the absence of obnoxious commercials.

Part of the licence issued to CKMS by the CRTC is the *Promise of Performance*. This is where we set out our programming plans and policies, and is the basis on which the CRTC judges our performance.

If you are interested in the details of our licence, including the promise of performance and the advertising restrictions, you can have a look at them any time during business hours.

A TOUR OF CKMS

Our studios and offices are located in the Bauer Warehouse on the North Campus of the University of Waterloo. During business hours (roughly 10:00-4:00) the red door is open. Evenings and weekends entry is gained by tapping on the window of Studio A and showing the on-air programmer your staff card at the back door.

There are four staff positions at CKMS: Paul Heap — News/Spoken Word Co-ordinator; Bill Wharrie — Technical and Administrative Co-ordinator; Eva Rucki and Terry Walters share the job of Music Co-ordinator. Eva deals primarily with Record companies and our library while Terry deals with volunteers (training etc.). The staff are often in the front office area or in the Newsroom.

We have two studios that you may be working in. Studio A is the usual on-air studio. Part of the music library is in Studio A. Studio B is used for our Midday News Magazine, production of programming and for training and practice.

Between the two Studios is an area that contains a couch, bio-file cabinets, a previewing station, computer and part of the music library. The bio-files are alphabetically filed magazine clippings and biographical information on artists and bands. These are here for you to use. The boom box on the desk is the previewing station which allows you to sample recordings that you might want to use on your program or just to keep on top of the new releases. Feel free to use the computer to do various searches of our music library data. Note that new releases and some of the older vinyl records are not in the data base.

In the back of the station is Palindrome, an eight track recording studio. Our Live Radio Concerts are broadcast from here. Local musicians can rent the studio for their recording projects.

The Library

When new music arrives at the station it is first put in the *New Release* section in Studio A. These are numbered in the order in which they arrive. After a few weeks they work their way through New Releases and, if they received enough airplay, are filed in the stacks. At this point they receive a library number based on the alphabet. Recordings by one band or artist will have the same number and a different letter at the end. (e.g.. T120.5 A). Please take a look at these numbers when re-filing a recording to make sure you are putting it in the right place. The cassettes and CD singles are simply grouped according to the first letter of the name. Colour tags are used to denote music that is Canadian (green), Jazz or Blues (blue), African or Reggae (yellow) and Folk (red).

Absolutely no CD's, cassettes or records are ever to be taken from the station.

The Rack and The Logger

During your training here at the station you will be shown a wall of equipment affectionately known as 'the rack.' Here you will find the following.

- A Revox tape machine.

- A radio receiver (Includes short wave).

- A cue amplifier and speaker (allows you to listen to the equipment on the rack).

- The transmitter On/Off switch.

- A patch bay (allows you to connect equipment on the rack to Studios A & B).

- The logger.

The logger is very important. We are required by law to record everything we broadcast and save it for one month. The logger is a Revox recorder just like the others except that it runs slowly enough to hold 24 hours on one tape. The logger is changed at (or shortly after) midnight. The number on the tape that you pull should match the date. The previous day's tape should be rewound and put away. Other than at midnight the logger spins and you can forget about it. If something should go wrong though, a red light will flash on the board in studio A. If this happens while you are on air please go, as soon as

possible, to the logger machine and get it recording again. Tape twisting or breaking, and power failure are examples of what might cause logger tape troubles.

More information on this equipment is available in the technical section.

YOUR INVOLVEMENT

Many of the volunteers at CKMS are interested primarily in hosting a regular music program. What sort of time commitment is involved? Our schedule is broken into four hour time slots. In many cases there are news or feature programs taking up part of the four hours and the host may be required to monitor a tape. Most slots are done by the same programmer each week but many people alternate doing one show every other week. You should plan to arrive fifteen to twenty minutes before your program to get prepared. Afterward, it usually takes people a while to tidy up as well. On top of this you will want to spend some time in the days before your show to jot down ideas, do some research, listen to new music etc. Once every other month or so we have a programmers meeting that you will be expected to try and attend. Finally, you should expect to donate an occasional hour or two to help with some sort of housekeeping, fund raising or promotional project. It does not add up to that much time but please do not commit to a regular program if you will not have enough time. You will be responsible for that time slot. If you can not do it yourself it will be up to you to find a fill-in.

Of course, we'd like to encourage all volunteers to participate in CKMS beyond their own program. Simple things like listening to other programs and giving other programmers some feedback or spending half an hour to tidy up the record library can be a big help. As you get to know the station you may think up projects that would be good for programming, promotion or fund-raising. Even if it is a great idea it may not happen unless you do it yourself, or at least get it started. The staff at the station are generally kept busy dealing with the day-to-day operation of the station. The staff are here as resource people and co-ordinators. Let them know what you want to work on and they will help you wherever they can. You can also bring your ideas to programmer meetings. That would be very good. It requires the energy of many volunteers for the station to be vibrant.

WHAT WE DO TO NEW VOLUNTEERS

Here is an outline of the basic procedure for training people to be on air music programmers. Your area of interest may be different (spoken word programming for example) in which case the program would be changed as need be.

The Training Process

First Training Session

You will be given a quick tour of the station and the music library and then taken into Studio B. Here you will be shown The Revox tape recorder, turntables, cassette and CD players. This equipment is all connected to a mixing board or console and this board is the focus of your first session. After being shown the basics of the studio a little hands on practice usually helps make sense of it all.

Second Training Session

Your introduction to the studio is completed when we show you the use of the microphone and how to handle announce breaks. We also show you the Digital Audio Tape (D.A.T.) Machines.

Practice

People take to the studio at very different rates. We suggest that you practice until you feel that the technical aspects of doing a program are almost second nature. Then you will actually be able to concentrate on the content of your program, as well as deal with phone calls, logs etc.

There is a book for signing out studio B in the office. You are limited to Mon-Fri between 9 am and 5 pm. Evenings and weekends are reserved for production work. Special arrangements can be made if your work schedule does not allow you to practice during the weekday.

Produce a Demo Tape

The demo should be recorded on a Revox machine. It will be about 20 minutes long and be as though you were on air (no stops or edits). It will most likely have 6-8 songs and 2 or 3 announce breaks. Include a public service announcement, or station ID from DAT at some point.

Don't forget to include some Canadian and New music and be sure to tell us something besides song titles during your breaks. Label your demo clearly and leave it on Terry/Eva's desk. There are two basic areas of concern when we listen to your demo. One is content. Do you have something interesting to offer our listeners? The other is technical. Are your levels consistent?, your mixes good?, your microphone properly placed?, etc. You may be given a tip or two on things to make your show sound better. We may feel that you have rushed into making your demo and ask you to practice some more and make another demo. We may feel that your content or style isn't quite compatible with our aims.

Final Training

If, after listening to your demo, we feel you are ready to go on air, we'll schedule a hour or so to be sure you know everything you might need to know to take charge of programming and the station. Take a good look at the mixer in Studio A. It is a bit

different from the one you are used to in Studio B and it's best to understand it before you start using it on air.

During this final session we will add you to our staff list and give you a staff card. If there is an open time slot that suits you we can sign you up for it. In most cases people go on the fill-in list for a time before a regular slot opens up. Besides filling in at different times you may be able to help with other programs or contribute reviews, interviews etc. for either the music or the current affairs department. You could also get to know the station by helping out the staff with some menial (yet strangely rewarding) task. Please ask us if you are interested in any of these, or if you have ideas for projects of your own.

Beyond The Basics

Keep your eyes and ears open. Every now and then we run seminars on digital editing, promo production, recording on DAT, etc..

Improving Your Skills

After having read the technical portion of the manual and having completed your first two training sessions you should have an understanding of the studio. With some practice you will become faster at cuing sources up, make smoother mixes and be able to keep consistent levels. In fact, with enough practice all this will become second nature. We recommend taping your practice in the studio. If you tape yourself on an open reel tape you'll get used to using the Revox machine. When you listen to the tape you will likely be able to tell what you are doing well and what you need to work on. When you go home, listen to other people on the radio. What do you like or dislike about their programs?

About Announce Breaks

The most challenging part of doing a show is the announce break. Several things have to be done while you concentrate on what you are saying. Here's a list.

Before your announce break

- 1) Cue up something to play after you talk. Remember what it is and what channel it is on.
- 2) Make sure any notes, books, CD's etc. that you want to refer to are in front of you.
- 3) Sit so you can easily reach all the controls. You should not be moving around while you're speaking.
- 4) Put the headphones on. Adjust the volume to suit yourself.
- 5) Properly position the microphone.

During your announce break

- 1) About 30 seconds before your break is to start, turn the microphone channel on and gradually bring up the fader. Sit quietly until it is time to speak.
- 2) While you are talking you will have to pull out the fader for the last source and check that you have a good level from the microphone.

Afterwards

- 1) Fade the microphone channel to zero before turning it off.
- 2) Remember, you must turn off the microphone if you want to hear the monitor speakers in the studio.

Form and Content

You may have noticed that commercial radio stations like their DJ's to sound like machines from other planets. We think our listeners would rather listen to human beings. Talk as though you are talking to a friend. There are, however a few points to keep in the back of your mind while you are talking. Make sure you are enunciating your words clearly. On radio, people can not see your lips move or your gestures. For this reason you also might occasionally want to slightly exaggerate the emotion in your voice. Most people find that they have annoying habits like saying "um", "ahh", "anyways". Try to rid yourself of these. Listening to a tape of yourself will help you identify these nasties. If you feel the urge to say "ahh", say nothing instead. The last point to remember is to relax. Your breathing should be natural and easy. Sitting up straight and avoiding running around the station before you go on air will both help.

The content of your break is of course, equally important. Do you have something interesting to say besides song titles? Put some thought into it. Some programmers find it useful to keep a book of ideas and information to use on air. You could script out your announce breaks but that usually sounds stiff. Point form notes work well for most people. Even if you don't use them it's nice to know they are there in case your mind suddenly goes blank. Some people can consistently ad lib interesting breaks but this is rather rare.

OPEN FORMAT MUSIC PROGRAMMING

While some of the music programming on CKMS is specialized (Jazz, Women's, etc.) most of the shows are open format. This means that the programmers play what they want. One-third of the selections must be Canadian and we ask you to play 20% from the new release bins. This may seem very easy but an interesting program requires a bit of thought and research. Here are some tips.

Play different music.

We encourage programmers to emphasize music from independent artists and labels. We want to play music that people do not hear on other radio stations. Allow yourself time to sample new releases. Listen to other programs, on this or other community stations, and make note of interesting music that is new to you.

When you are searching for new music keep Canadian Content in mind. You don't want to end up playing the same artist every show. Keep track of your Canadian Content throughout your program so that you do not finish the show trying to squish in enough Canadian. Do not talk on the air about "CanCon" — just play it. Listeners may like to know where a band or artist comes from but are not interested in our quotas and we play 33% Canadian not just because of regulations but because we want to support Canadian artists.

Play different styles.

Make use of our library to learn about different styles of music. We have jazz, reggae, rock, folk, and music from all corners of the world just waiting to be served up in different combinations.

Make your announce breaks interesting.

Say more than the station and the songs you played. Be creative. Make use of biographical information available at the station. We have a rack of current magazines, and a file cabinet of clippings about hundreds of bands and artists. There is no reason to limit your comments to music. Our programming should relate to/reflect the lives of our listeners. Avoid like the plague in-jokes and programming to a small circle of friends. Give your opinion on stuff, life, the universe, etc. Read poetry. Put together sets of music based on a theme, or profile an artist, or a label or a trend.

Think about your mixes.

Usually a smooth transition from one selection to the next is desired. Perhaps you prefer to shock your listeners. Think about the length of your sets as well. If they are too long listeners won't remember what was what when you read your set list. If they are too short, it's difficult to develop any kind of 'flow' to your program.

With a little forethought, research and creativity you can make a radio program that is as unique as you are. Volunteers at CKMS have a great deal of freedom in their programming and it would be a shame to waste it by just playing your favourite songs and listing titles week after week.

PROGRAMMERS' CHECKLIST

Before Your Show

1. Think. How are you going to make your show interesting.
2. Show up. Try to arrive fifteen minutes before your show so you can get organized.
3. Check The Program (CRTC) Logs. Are there any features or sponsorships during your shift?

During

1. Fill out the Program Log neatly and completely.
2. Fill out music logs.
3. If there is a taped program on before you show, rewind it and put it away.
4. Play 33% Canadian and 20% new releases.
5. Be responsible for the security of the station.
6. Don't panic.

After

1. Check New Releases and sign the check-list.
2. Make sure all your music is correctly re-filed in the library. Don't let your friends do this.
3. Tidy up. Try to leave the station a little cleaner than you found it.

POINTS TO REMEMBER WHILE ON AIR

Libel, Slander and Offensive Language

During your announce breaks you must not swear.

You must not make any defamatory remarks about people or we could be sued for libel. You can, however, make "fair comment" on individuals or their conduct by presenting facts and then your opinion.

You must not promote the use of violence to overthrow the government. This is "seditious libel". Non-violent overthrow is just fine.

As for the music that you play on the air... well you have to use some judgement. Material that is clearly hateful (racist, sexist, homophobic, etc.) will not be tolerated. Songs that are offensive for the sake of being offensive are best left for home listening. There is a lot of music that has artistic merit but might offend some people. It would be wise to save this for late night air-play.

Remember, the air-waves are public property in Canada and anyone certainly has the right to complain to us and/or to the CRTC. We must take responsibility for what we play.

Dealing With Complaints

We believe it is important to offer our listeners new and different music and ideas. Sometimes this material will offend people and they may call the station to complain. You should be prepared to listen to complaints. If you think the complaint is justified, apologize, explain how it came about that you aired it (new song, request, etc.) and make a note on the comment sheet on the disc to warn other programmers. If you do not feel that the complaint is justified try to politely explain why you played the song or said what you did and what it is about. If they are still dissatisfied or you are starting to get angry or are just too busy, ask them to call Terry or Eva during office hours (Mon. - Fri. 10-4), or take their name and number and leave it for us. In any case, be nice and calm and *always* let Eva and/or Terry know what happened.

If it becomes quite clear that a caller just wants to harass you, simply hang up. There is no point in arguing with fools.

The Request Line

884-2567 is the only number you should give out on-air for requests. 886-2567 is the office number. When the staff is in, please answer only 884-2567. After hours please answer the office line as well. Do not give out programmers phone numbers over the phone unless you are certain you are talking to a programmer. You can always take messages though.

Speaking of requests, it is up to you as to whether you take request or not. If you are not going to play a request try to briefly and politely explain to the caller why you do not play requests or why their particular request does not fit on CKMS, etc. Sometimes, new programmers are disappointed by the lack of phone calls. Please don't whine about this on-air. Usually people listen to radio while doing something else (working, cleaning, driving) and are not inclined to drop it to call you, even if they really are enjoying your show. Often we run into listeners months later, or never.

Dealing With Mistakes

What if you make a mistake? Don't panic. A little bit of dead air never hurt anybody. Slogans aside, try not to let mistakes fluster you. In most cases do not apologize for errors as this only draws attention to them. Just keep going.

Your Shift Responsibilities

During your shift on air you are responsible for the security of the station. Outside of office hours do not let anyone into the station unless they have a current staff card. Please be strict with this policy. If someone is already in the station politely introduce yourself just so that you know what's going on and other people realize that you are awake.

Always carefully check the new releases and sign the checklists so that if anything does go missing we have a chance to track it down.

Your shift will generally be longer than your show. You are responsible for playing any pre-recorded programs scheduled during your shift, and you must not leave the station until the next programmer arrives.

Speaking of pre-recorded programs: never introduce one as a "tape." In fact, you shouldn't introduce it at all, since the program will undoubtedly have its own introduction. Don't fade up pre-recorded programs. If there is a pre-recorded program before your show, don't ever cut it off before it ends.

Make sure the door is closed after you come or go. Do not leave the station unattended unless it is 2:00 am and you have signed off. It is illegal to have the station on the air with no program being broadcast and no-one at the studio.

SIGNING OFF

1. Announce that we will be leaving the air.
2. Play the Promise of Performance.
3. Note in the Program log exactly what time you are signing off.
4. Go to the rack. Turn the transmitter off. (Note that the logger is left running)
5. Get organized, tidy up, check that the window and back door are secure, then head to the alarm panel and follow the simple instructions to activate the alarm system.

SIGNING ON

1. Pick up the key from the turnkey desk in the Student Life Centre. You will need a current staff card to do this. You'll leave your card with them until you return the key.
 2. Go in through the front (red) door and go directly to the alarm panel and enter your code to disarm the system.
 3. Go to the rack. Turn the transmitter on.
 4. Play the Promise of Performance.
 5. Note in the Program log exactly what time you signed on.
 6. Proceed with your show. Don't forget to return the key to the turnkey desk afterwards.
- Please note** that signing-on requires prior arrangement with the CKMS staff so that you have a valid staff card and code number for the alarm system.

THE PROGRAM LOG

On the following page there is a sample program log sheet. These sheets will be found on the clipboard in the control room. As each sheet is completed, move it to the bottom of the pile. A description of the purpose of each column follows:

Sched: Scheduled Time. This is the time each item or program is scheduled to start. Feature programs should start as close as possible to this time and not more than one minute early nor more than two minutes late. Station ID's can be plus or minus 10 minutes and sponsorships should be within two minutes.

Start: This is the exact time the program or item *actually* started and is filled in by you.

End: This is the time the program or item actually ended. It does not need to be filled in for items of less than one minute duration such as station ID's and sponsorships.

Init: Enter your initials here to indicate that the item was actually broadcast.

Len: The length of the item or program in minutes.

Program: The name of the program or item. When the program is shown as "Music" you should PRINT your name in the remaining space.

Origin: The Origin of the program - Local or Other.

Codes: This column contains codes indicating the content of the program: you don't need to concern yourself with these.

Check the program log carefully at the beginning of your show and be prepared to play/read any sponsorships and features scheduled during it.

"Legal" Station IDs

At the top of each hour in the Program Logs there is a "Station ID" listed. These IDs are a legal requirement. They must be done within 10 minutes of the top of the hour, and must include "CKMS-FM", "100.3" and "Waterloo." You can do the ID live yourself, or you can use one from the Spot computer - just make sure that the one you use includes these three pieces of information.

WHAT TO DO IF SOMETHING GOES WRONG!

If a program is not broadcast or a different program was broadcast, stroke out the name in the "Program" column and PRINT either the title of the program actually broadcast, or the words "NOT AIRED".

If there is an unscheduled sign-off or sign-on, print "SIGN OFF" and the time in the program column after that last item broadcast, and print "SIGN ON" and the time before the first item broadcast after sign-on.

If there is a power failure, treat it as a sign-off/sign-on, but note in the "Program" column that there was a power failure.

IN GENERAL — the "Program" column is the place to make notes about any other unforeseen circumstances.

REMEMBER — THESE FORMS ARE SENT TO THE CRTC. THEY ARE NOT THE PLACE TO MAKE NOTES ABOUT REQUESTS OR MAKE SILLY OR IRRELEVANT COMMENTS.

Sample Program Log

Program Log for CKMS-FM 100.3 Waterloo, ON EST Thu, Feb 18, 1999

Page 1

Time	Start	End	Init	Len	Program	Origin	Codes
00:00	00:01		BB		Station ID	Local	1
00:00	00:01	02:05	BB	120	Music Bruce Bennett	Local	2/1
01:00	00:57		BB		Station ID	Local	1
02:00	02:05		BB	240	Music Promise and Sign Off	Local	2/1
02:00	02:03		BB		Station ID	Local	1
03:00					Station ID	Local	1
04:00					Station ID	Local	1
05:00					Station ID	Local	1
06:00	05:50	10:00	AH	240	Music Andrea Halma	Local	2/1
06:00	05:58		AH		Station ID	Local	1
07:00	07:00		AH		Station ID	Local	1
08:00	08:04		AH		Station ID	Local	1
09:00	09:00		PH	10	CKMS News	Local	1
09:00	09:00		PH		Station ID	Local	1
09:11	09:11		AH	3	Club & Concert List 2	Local	1
10:00	10:00		PH	10	CKMS News	Local	1
10:00	10:00	11:59	MS	120	Music Magnus Scholz	Local	2/1
10:00	10:00		PH		Station ID	Local	1
11:00	10:59		MS		Station ID	Local	1
11:59	11:59	12:59	PH	60	Midday Magazine	Local	1/2
12:00	11:59		PH		Station ID	Local	1
13:00	13:01	14:00	PH	60	Salmagundi	Local	2/1
13:00	13:00				Station ID	Local	1
14:00	14:00	17:00	JT	180	Music Jose Torres	Local	2/1
14:00	14:04		JT		Station ID	Local	1
15:00	15:01	15:16	JT	15	ScienceCenter	Local	1
15:00	15:00		JT		Station ID	Local	1
15:15	15:16	15:19	JT	3	Club & Concert List 2	Local	1
16:00	16:02		JT		Station ID	Local	1
17:00	17:00		JT		Station ID	Local	1
17:00	17:01	17:30	JT	29	Making Contact	Other	1,2

All sponsorships are 30 seconds long unless marked otherwise

TECHNICAL REFERENCE

About Radio Jargon

Radio has its own set of buzzwords and special terminology. These are mainly just a form of shorthand for describing things that are unique to the broadcasting or recording environment. Listed here for your reading pleasure is a random list of these special terms.

Studio: a room equipped for recording or broadcasting radio programs.

Mixer: a device for combining many audio signals into one, and controlling the relative volume of each signal. Also: board, console (and, if you're from England, mixing desk, or just desk).

Fader: a device on a mixer for controlling the volume of a source. Also: slider, pot.

Channel: one input on a mixer. Also: input.

Strip: the group of physical electronics and controls arranged in a line from top to bottom of the mixer. Usually preceded with the name of the function of the controls in that strip, as in Input Strip, Monitor Strip.

Module: part of a strip, usually performing a sub-function of the strip. In some cases synonymous with strip, as in Cue/Talkback module.

Source: anything that can send an audio signal to a mixer: e.g. a microphone, turntable, CD player, etc.

Cue: 1) to preview a source and set it to the beginning of the item (as in "cue up a tape"); 2) an indication of when to start the next item (as in "Your cue will be when the announcer says ..."); 3) a verbal or physical signal from another operator of when to start an item (as in "I'll cue you by saying...").

Talkback: an intercom system, usually between different studios.

Level(s): relative volume, usually measured with a VU (volume unit) meter. As in "Watch your levels!"

Program (output): the main output of a mixer. So named because it is usually the output that the program goes out on.

Audition (output): the secondary output of a mixer. So named because it can be used to audition (preview) a source.

Remote: 1) a source that is not physically in the studio; 2) a broadcast from a location other than the studio building (as in "We'll be doing a remote from the Student Life Centre").

Microphones

A microphone is a device that converts sound energy into electrical energy. In many ways it is the inverse of a loudspeaker — sound waves cause a diaphragm to vibrate, which generates a small electrical current that mirrors the sound wave. The physics of this process dictate that the diaphragm must be small and light, and consequently fairly fragile. This leads to the first rule about using microphones: *NEVER BLOW INTO A MICROPHONE*.

The main announce microphones in Studio A and B, and the two microphones in Studio D are *directional* — they pick up sound best from the front. Thus these microphones must be pointed at your mouth in order to get the best sound quality. (The guest microphone in Studio A is omni-directional — it picks up sound equally well from all directions.)

Certain sounds produced when you are talking will produce bursts of air from your mouth (for example, P's and T's). If you are talking directly into the microphone, these bursts of air will “pop” the microphone. To avoid this, do not talk directly into the microphone.

Lastly, directional microphones are prone to something called the “proximity effect.” This means that they emphasize the lower frequencies when you talk very close to them. If your voice sounds muddy, you are probably talking too close to the microphone.

These three facts lead to the following method for getting the best sound when talking into a microphone: 1) keep the microphone 4 to 10 centimetres from your mouth; 2) talk in a normal voice (don't whisper or shout); 3) point the microphone at your mouth; 4) don't point your mouth directly at the microphone.

As with any sound source, you should adjust the fader to get good levels — don't be afraid to push the fader all the way up if you are speaking softly, or to pull it down a bit if your levels are too high.

Turntables

Two different types of turntables are used in the station.

The McCurdy turntables must be started and stopped using the remote controls on the mixer. To cue a record, turn the speed knob on the turntable base to one of the OFF positions. Place the stylus on the record and spin the turntable by hand, listening on the cue speaker. When you have found the beginning of the selection, rock the turntable back and forth to find the exact start, then back it up one-half turn. Make sure the remote control is OFF, then move the speed knob to the appropriate position (33 or 45).

When you are finished in the studio, make sure that the turntable is OFF.

The Technics turntables can be started and stopped at the turntable as well as at the remote controls. To cue a record, place the stylus on the record and spin the turntable by hand, listening on the cue speaker. When you have found the beginning of the selection, rock the turntable back and forth to find the exact start, then back it up one-half turn. Make sure the turntable power is on (small switch on the left side of the turntable — the red light at the front will be on). Check the speed.

Care of Tone-arms and Turntables

The stylus assembly (needle) is very delicate. It is very important that the tone-arm is resting securely in its holder when not in use. The stylus can be damaged if it comes into contact with anything other than a record.

In studio B, make sure the tone-arm is secured to its rest with the rubber band when the turntable is not in use. Also make sure that the speed selector on the McCurdy is in the OFF position.

Don't put anything on the turntables other than a record. Always put the wooden turntable covers down if you are not using the turntables. You can use the covers as shelves for your CDs, etc. if you like.

Don't sit on the counter where the turntables are mounted — you could easily break one of the tone-arms, resulting in a major hassle and expense (replacement tone-arms are expensive and hard to get these days).

Revox reel-to-reel tape recorders

At CKMS, the word "tape" refers to reel-to-reel tape, not cassettes. Similarly, "tape deck" or "tape machine" or just "deck" refers to a Revox reel-to-reel machine. If you have a problem or question about cassettes or the cassette or DAT decks, be sure to say "cassette" or "DAT" or we'll think you're talking about reel-to-reel tape or a Revox.

Clean the heads

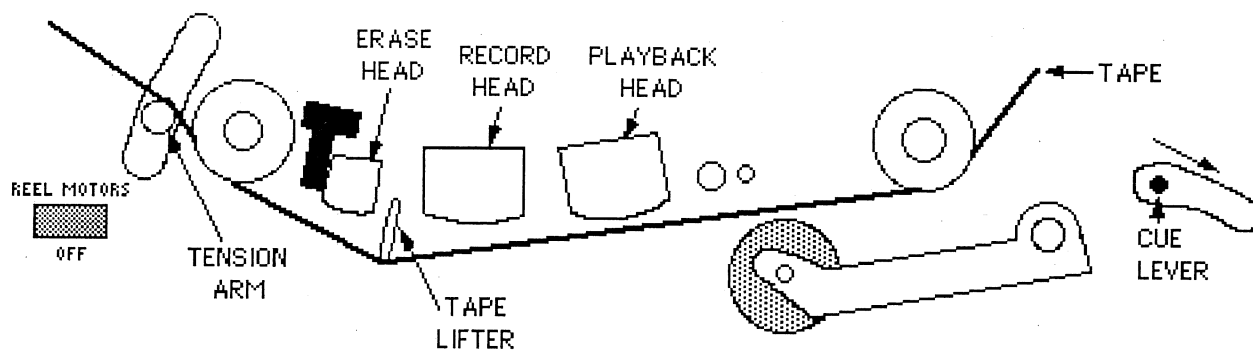
Before you use a Revox, clean the heads. There is a bottle of methyl hydrate and a package of cotton swabs in Studio B for this purpose. Get the swab good and wet. Start with the playback head (see diagram on next page), since it is usually the cleanest. Scrub hard. Move on to the record head, then the erase head.

Mounting a tape

The first step in recording or playing a tape is to thread it on the machine properly. The tape must be threaded on the machine following the diagram on the next page. Note that the tape goes above the tension arm on the left of the head-block, and below the tape lifter near the middle of the head-block.

All tape is threaded with the dull black side facing away from the heads, and the shiny brown side facing towards the heads.

Make sure that: 1) the HUB sizes of the feed reel (left side) and the take-up reel (right side) are the same; 2) that the take-up reel is big enough to hold all the tape from the feed reel.



Setting the speed

Step two is to select the proper tape speed and reel size on the speed-power switch at the right of the machine. All tapes should be recorded at the higher speed (7 1/2 inches-per-second) — this gives the best sound quality. Second — and this is very important — the switch should be set at the large circle *only* for reels with a large hub. All reels larger than 7 inches in diameter will have a large hub, but occasionally you will encounter reels of 7 inches and smaller with large hubs.

Cueing and playing a tape

Before you attempt to play a tape, check the following:

- 1) the volume control (at the left of the machine) is turned up (range 5 - 8)
- 2) the balance control is set to the middle
- 3) the mode switch is set to stereo, and
- 4) the NAB/Input switch is set to NAB.

To cue a tape, follow these steps:

- 1) move the cue lever in the direction indicated in the diagram — this will put the tape in contact with the heads.
- 2) press the “Reel motors off” button. Press rewind — the brakes will release, but the tape will not move because you turned the reel motors off.
- 3) turning the reels by hand, move the tape back and forth until you find the beginning of the selection, then back the tape up about 10 centimetres.
- 4) press Stop.
- 5) Release the “reel motors off” switch.

The tape is now ready to play.

Hint: sometimes when you start a tape that is cued at the very beginning of the tape (i.e. feed reel full and take-up reel empty), the tape will “slip” resulting in the first second or two playing back too fast. The way to avoid this is to use a large-hub take-up reel. Yes, this violates the rule about matching hub sizes, but it works. Also note, in this case the “speed circle” should match the size of the *feed reel hub*. If you’re going to play the whole tape, make sure that all the tape will fit on the take-up reel.

Recording a tape

To record a tape, thread it on the machine as described above. Make sure the red “record interlock” buttons beside the VU meters are pressed down. The record levels are pre-set to match the levels from the board, so you don’t need to worry about adjusting

them. Press record and play simultaneously. *Do not* turn up the tape playback level on the board, or you will get feedback.

Check your recording. Record a minute or so onto the tape, then stop and play it back to check the quality of the recording. If one channel is lower than the other, or sounds funny (especially if it has a lack of high frequencies), clean the heads again, then do another test recording. If it still doesn't sound right on playback, use the other Revox, and leave a note describing the problem.

Fast forward and rewind

Do not fast-forward or rewind a tape with the levels turned up on the board — you could very well blow the tweeters in the speakers.

The brakes on Revox machines are their weakest point. Often, pressing stop while a tape is fast-winding will result in a fair amount of slack being created. The recommended way to stop a tape out of fast-wind is as follows: press the button for the *opposite* fast-wind function (i.e. if the tape is rewinding, press fast-forward). When the tape has almost come to a stop, press Stop. This takes a bit of practise, but it is worth it — it is easier on the machine, and give a cleaner (i.e. slack-free) stop.

The NAB/Input story

The switch labelled and referred to as the “NAB/Input” switch is actually a “Tape/Source” switch. “NAB” refers to a tape playback standard that is used in North America. It is underlined because Revoxes record tapes according to this standard. The rule is simple: to play a tape, the switch must be in the NAB position.

When it is set to the “Input” position, the input to the machine is connected directly to the output. This is useful in live recording situations when you want to check the signal that is being fed into the machine. It is fairly useless in a studio. If you turn up a Revox that is set to Input you will get a horrid screeching sound. Not recommended.

The DAT Machines

General Information

The DAT machines are nothing more than fancy cassette decks, with a few features from a CD player thrown in.

Like a cassette deck, the DATs can play, record, fast-forward and rewind. The transport controls operate exactly as you would expect.

And like a CD player, the DATs allow you to cue the tape to a specific “track.” The Skip buttons can be used to move backward or forward, and the remote control can be used to go to a specific track number. When the deck is in play, the fast-forward or rewind buttons act like search buttons on a CD.

Treat DAT cassettes with care. DAT cassettes have a tape protection lid on the front edge to protect the tape. Do not open this lid forcibly, and do not pull the tape out from the cassette or touch it with your fingers.

Always rewind a DAT cassette before removing from the machine.

Try not to leave the machine in Pause mode for extended periods. Doing so will cause extra wear on the machine and the tape. The machine will automatically drop out of

Pause into Stop after 8 minutes, but the shorter the length of time it spends in Pause mode the better.

About the display

The counter in the display can display three different things: 1) The absolute time since the start of the tape [ABS]; 2) The time since the start of the most recent program [PGM], or; 3) a relative counter that is fairly meaningless. [COUNTER]. It also has a REMAIN mode, but this only works with commercial pre-recorded tapes that have a table of contents. If the display shows " - - - " this means that there is not enough information on the tape to display in that mode. If this happens, press the Counter Mode button repeatedly until the display shows something useful.

The display also shows recording and playback levels and various status indicators.

About the remote controls

There are a number of functions available on the remote control that are not available on the front panel of the machine. The only buttons on the remote that you need to be familiar with are in the group at the top: the number keys, the START button and the SKIP PLAY button.

Loading a tape in the machine

DAT cassettes record and play in one direction only. Do not load DAT cassettes upside down. If you put the cassette in wrong, the machine will reject it.

Press the Open/Close button — the tray will slide open (like a CD player).

The hinged part of the cassette must go in first, with the clear window facing up and the label facing out. Make sure no foreign objects or dirt falls into the tray which can contaminate the transport. Press the Open/Close button — the tray will slide closed and the tape will be loaded. The tape automatically runs for a short period of time and rewinds back to the original location, during which time the machine reads absolute time and program number data (if available) off the tape into the display.

Simple Operating Procedures for the DAT Machines

These instructions apply only to using the DATs for playback. If you want to learn how to use them to produce and record programs, sign up for a training session, and read the Recording section. Everyone should read this section, since it describes how to cue up a tape to the desired program.

About Skip ID and Start ID

A Start ID marks the beginning of a program. A Skip ID marks the end of a program. When the machine is in Skip Play mode and it encounters a Skip ID, it skips forward to the next Start ID. If the deck is in Standby mode it will cue up to the Start ID and go into Pause.

Playing a Feature

Check that the machine is turned on. Press the Open/Close button. Insert the feature tape and press the Open/Close button.

Wait for the machine to load the tape. Check that the machine is in *Standby* mode. Use the skip buttons to find the track that you want. In most cases it will be ID#1.

Wait for the machine to find the track and go into Pause.

It is always wise to listen to a few seconds on cue to be sure you have the right tape, then use the skip button to re-cue the tape.

Unless you are going to play the tape right away press the Stop button shortly after the machine goes into Pause mode to save wear on the tape and the machine. Press the pause button again when it is near time to play the tape.

To play the program, press Play on the machine or the remote, or press the green play button on the Studio A console. There will be a delay of about one-half to one second before the audio starts.

When the program is finished, rewind the tape, take it out of the machine, put it back into its case, *and return the tape to its feature slot.*

Recording on the DAT Machines

Getting ready

If you have never used the DAT machines for recording before, read the “General Information” section a few pages back, and read this section completely before you start.

The switches on the right front of the machine should be set as follows:

Input - Analog

Analog Input - Bal (in Studio B); Unbal (in Studio A)

Sampling Frequency - 44.1 KHz

Digital Input - AES/EBU

Program Time - (see instructions below)

Load a tape into the machine.

If you are using a new blank tape: press REW (regardless of the current tape position). The tape will be located to a point 100 mm ahead of the end of the leader tape. Then hold Record and press Pause - the Pause indicator will blink for a few seconds while the machine records a “lead-in mark”. If you do not perform this step, or record from the middle of a blank tape, ABS time will not be recorded, and the ABS time display will be blank.

If you are adding a recording to a tape, use the search functions to cue the tape up to the desired point (e.g. if you want to record over program number 4, cue the tape to that point). If you want to add a recording to the end of the tape, press the End Search button — the tape will be cued up either to the end of the recorded portion of the tape, or to the END ID mark if one was recorded.

About recording levels and overloads

The record level controls on the front of the machine should be left at the indicated settings — use the meters on the board to monitor recording levels.

Digital recording is very intolerant of overloads. To the right of the peak level display is an indicator labelled “Margin”. This will tell you how close you have gotten to the maximum recording level. If it is flashing “0”, that means that at some point the level went past zero and overload (distortion) occurred.

Digital tape has a very low noise level. It is not necessary to record at a high level to get a clean, noise-free recording. It is quite all right (in fact, desirable) to have 10 to 12 dB or more of *margin* in your recording.

About the “Program Time” switch

When this switch is ON, Program Time (the time since the start of the program) is continuously recorded on the tape. You should have this switch ON if and only if: 1) you do not anticipate stopping the tape during the recording of your program, and 2) you do not anticipate having to edit the start ID’s (more about that later).

In most cases you will want to leave this switch OFF.

About “Auto ID”

When the Auto ID indicator is lit in the upper left of the display, a Start ID and Program Number will be automatically recorded when the audio signal resumes after a period of silence. If you use Auto ID anywhere other than from the beginning of a tape, Start IDs are recorded but not Program Numbers — these can be added later with the Renumber function.

If you are recording a feature program, it is probably a good idea to have Auto ID on when you start the program, and then turn it off before you do your first edit, so that you won’t get a Start ID recorded at each edit point.

Preparing to record

Hold Record and press Pause. If you are using a new blank tape, the Pause LED will blink for a short period of time, during which time the machine will advance the tape, recording a “lead-in” mark.

Recording

Press Play to initiate recording, *wait a moment*, and then start your first audio source. If Auto ID is on, a Start ID mark will be written to the tape as soon as the audio starts, which will make it very easy for the tape to be cued to the beginning of your program.

When your program is finished, record a few seconds of silence, then mark the end of your program: record a Skip ID (press the ID Select button repeatedly until “Skip ID Write” appears in the display, then press the “Write/Erase” button) and then another Start ID (press the ID Select button once — “Start ID Write” should be showing in the display — then press the “Write/Erase” button; wait until “Start ID” stops blinking in the upper right of the display). Now, when your program is played back, the DAT machine will stop playing when it hits the Skip ID.

About End IDs

It is recommended that you *do not* record End IDs. We have encountered intermittent problems in recording over (erasing) them.

Digital Audio Workstation

The computer in Studio B can be very useful helpful in certain types of production work. Interviews are often edited before they go on air, usually to remove coughs, stammers, interruptions etc. The music editing program Pro Tools allows for some tricky multi-track production. This is often used to make station IDs and promotional messages. If you want to learn about using it, talk to Bill to arrange a training session, or go through the tutorial available in the binder on the computer table.

STUDIO B

Inputs

The board in Studio B has 13 *input channels*. The first 12 of these are dedicated to a single *input source*: microphone, turntable, CD, etc. The thirteenth input can have one of several different sources connected to it — the *input selector switch* for channel 13 is immediately to the right of the channel 13 input strip, at the top.

On/Off buttons

At the bottom of each *input strip* is a pair of push buttons. The yellow one turns the channel off and the green one turns the channel on. The red light in the green button must be lit up in order to get sound from the channel. When a channel is on, the red “CH. ON” light (above the fader) will also be lit.

In the case of channels 4 through 11, these buttons also control the machines (e.g. turntable, cassette deck) connected to those channels. The channel-on button starts the machine, and the channel-off button stops it.

Microphone channels

Channels 1, 2 and 3 are microphone channels. Channel 1 is the Studio B main microphone. Channels 2 and 3 are for the microphones in Studio D (the small announce booth facing into Studio B). When you turn channel 1 on, the main speakers and the cue speaker in Studio B will be shut off, preventing feedback — thus you will have to use the headphones when you are using the Studio B microphone. Also, the telephone is muted (you will not hear it ring or receive any pages through it), and the red warning light just outside the studio door will be lit. Turning channels 2 or 3 on also causes the warning light to come on, but does not cause the speakers or telephone to mute.

The volume fader control

Above the on/off buttons is the volume control *fader* (or *slider*) for that channel. The “normal” position for this fader is marked with the heavy line about three-quarters of the way up. This is a good “first guess” about where to set the fader, but you should always check and adjust it to get good readings on the VU meters.

Cueing

To *cue* a source (listen to it without putting it over the air), press the CUE button above the fader. The green light above the cue button will come on, and the sound from the source will be heard through the cue speaker. Adjust the volume with the cue volume control at the lower right of the board. When you are finished cueing, press the CUE button again to turn the cue off. WARNING — pressing the CUE button does NOT disconnect the source from going over the air, so make sure the fader is all the way down.

Program and Audition output select

At the top of each input strip is a pair of buttons labelled “PGM” and “AUD”, standing for “Program” and “Audition”. These buttons control where the signal from that

input strip goes to. Program is the “main” output, and Audition is a “spare” or “extra” output. In most cases you will want to have all the “PGM” buttons pressed down.

The Monitor system (listening to what you are doing)

You can control what you hear over the speakers and the headphones using the controls on the *monitor strip*. This has a bank of 8 red push-buttons at the top, and two volume controls at the bottom. The same source is sent to both the speakers and the headphones. “P SUM” means the sum of the stereo Program outputs (i.e. mono). “A SUM” means the sum of the stereo Audition outputs. Note that you can send the cue signal to the headphones and the speakers. Changes made on the Monitor strip *do not* affect what is being recorded or broadcast!

The meters

The stereo meters can monitor either the Program or Audition output. This is selected with the upper rotary switch to the left of the timer. You will probably want to leave this set to “Pgm”. Similarly, the Mono meter can monitor any of the sources selected by the lower rotary switch. A “good” reading on the VU meters is when the meters *occasionally* peak up into the red. Always check your meters when you start a new source, and be aware of sudden changes in volume, adjusting the fader as needed.

The timer

At the top right of the board is the timer. Any time a channel ON button is pressed (except for one of the microphone channels) the timer resets to zero and starts counting up.

Talkback

The *talkback system* provides a convenient intercom system between studios. Talkback is controlled by the four red push-buttons on the Cue/Talkback strip. When you press and hold the button labelled “ST.A” your voice will come out of the cue speaker in Studio A. Similarly, pressing the button labelled “ST.D” will cause your voice to come out of the little speaker in the control box in Studio D. NOTE: your voice is picked up by a small microphone mounted in the Cue/Talkback strip, *not* the main microphone.

Studios A and D can also talk back to you. If the operator in Studio A presses their talkback button for Studio B, their voice will come out of your cue speaker in Studio B. People in Studio D can talk to you by pressing the talkback button on the control box.

Studio D

The two microphones in Studio D come up on inputs 2 and 3 on the board. The control *turret* in Studio D provides a number of functions. The headphones can be set to listen to Program, Audition, or the off-air signal. The volume of each headphone can be individually adjusted. When one of the Studio D microphone channels is turned on, the corresponding light on the control turret also comes on. Finally, channels 2 and 3 can be turned on and off from the control turret.

STUDIO A

This section assumes that you are familiar with studio operation in general, and Studio B in particular. It tells you about the differences between Studio A and Studio B. You should read this section after your demo tape has been accepted, and before your final training session.

Channel ON/OFF and remote controls

In Studio A, the remote controls are *separate* from the channel ON/OFF controls.

The push-buttons along the bottom of the mixer are the remote controls for the various machines. The Revox has Start and Stop buttons. The buttons for the turntables are Start/Stop buttons — press them once to start the turntable, and again to stop the turntable. The buttons for the CDs, cassettes, DAT and SPOT are Play buttons — there are no stop buttons. Finally, there is a pair of Start and Stop buttons for the remote Revox.

The channel ON/OFF buttons are the RED buttons above the faders. These are of the push-on/push-off type — you need to check carefully to make sure the button is lit up. In general, it is best to turn on all the channels you are going to use during your show, except, of course, the microphone channels.

In the case of the two microphone channels (channels one and two), the red channel-on buttons control the speaker mute and warning light.

Program and Audition

The Program and Audition output switches are immediately above the channel-on buttons. They click down as well as lighting up, so it is fairly easy to tell when they are on. Again, you should turn on the Program outputs for all the channels you are planning to use.

The Program and Audition master modules (immediately to the right of the group of 15 input modules) have red master on/off switches. The ones for Program are permanently on — you can press them all you want, nothing will happen. The Audition master switches are functional — if you want to use Audition, make sure these two buttons are down and lit.

Cueing

Cueing is done very differently in Studio A. To cue a source, pull the fader all the way down into the Cue position. At the far right of the mixer is the cue volume control and cue-speaker-on switch. The preferred way to use the cue system is to set the volume up high, and then turn the cue speaker on - using the switch - only when you need it. This is much better than constantly turning the cue volume control up and down, which will quickly wear out the control.

The Studio A mixer also has cue buttons similar to the ones in Studio B. The buttons are immediately above the Audition output switches. You can use these if you want, but they are old and unreliable.

If you hear the off-air signal on the cue system, this usually means that you either have cassette 1 in cue or RMT 1 in cue.

If you hear something unexpected over the cue speaker, check *all* your faders to make sure one of them isn't in cue when you don't need it in cue, and also check the cue buttons.

Monitor control (speakers and headphones)

At the right of the mixer are the headphone and speaker controls. There are separate source-selector switches for the headphones and speakers. The three that you will use most are clearly labelled — Program, Audition, and Air. When you are programming from Studio A you should *always* listen to the Air signal, to make sure you are really broadcasting.

Meters

There are meters for Program and Audition. The ones to watch are the pair on the left.

Levels and the Gain Reduction meter

Between the studio A board and the transmitter sits the *limiter*. This device prevents us from broadcasting a signal that is too loud (the technical term is “over-modulation”). When the signal from Studio A is too loud, the limiter turns the volume down (this is called “gain reduction”) — it's like keeping your hand on the fader and making rapid adjustments.

The centre meter on the Studio A board is connected to the limiter. This meter indicates how much gain reduction (GR) the limiter must apply to the incoming signal (the signal from Studio A) in order to prevent our broadcast signal from being too loud.

The meter normally sits at zero, indicating no gain reduction is taking place. It is OK for the meter to occasionally swing down from zero. If the meter is indicating less than zero constantly, your levels are too high and should be turned down. When the meter swings below -3dB the TOO LOUD light will flash — this is your cue to turn down your levels a bit.

Different styles of music and recording techniques will give very different effects when comparing the level meters and the GR meter. With heavily compressed music the level meters will reach zero or beyond before the GR meter reacts. Music with lots of dynamics (e.g. solo piano or percussion) will cause the GR meter to swing down while the level meters are reading well below zero.

For the best sound, turn up the music until the GR meter just starts to swing down from zero, then pull back a little. Operating with the GR meter constantly indicating below zero will compress (squash) the sound. Pushing the GR meter below -6dB will likely introduce distortion.

The “Studio Control” buttons

These buttons (located at the upper right of the Studio A mixer) control which studio is feeding the transmitter. The Studio A button *must* be lit in order to broadcast from Studio A.

The “On Air/Off Air” lights

These lights (located at the upper right of the Studio A mixer) give a visual indication of whether or not the transmitter is working properly. The white light should be lit when you are broadcasting from Studio A. If neither light is lit, then either the white light is burnt out or Studio A is not feeding the transmitter (check the Studio Control buttons to make sure Studio A is selected — both lights will be off when Studio A is not feeding the transmitter). The orange light will be lit if the transmitter is off.

If the orange light is lit, check that the transmitter control switch is on. If it is, then call the “Technical Emergency” number posted in Studio A.

Talkback

The talkback control buttons are immediately above the cue volume control. Pressing the Studio B talkback button and talking into the main microphone will cause your voice to come out of the cue speaker in Studio B. Please don’t play with this — but use it when you need to.

Computerized IDs and Promos Machine (SPOT)

A computer that we have nick-named SPOT contains several short messages that you may want or need during your show. Station IDs and program promos can be played as you see fit. Sign on and off messages are played at the beginning or end of our broadcast day. The Concert List and Spots must be played at the times specified in the program log. Spots are sponsorships or commercials. Some will be for CKMS events, others come from community groups or businesses.

Each message is represented by a button in the lower two-thirds of the screen. There are up to five “pages” of buttons. To select a page, click on one of the buttons at the upper right of the screen.

When you click on a message button, that message is added to the Play List at the upper left of the screen.

The message that is ready to play is shown in the large, yellow display just below the Play List. To play the message, either: 1) press the right button on the track-ball [the one with the “PLAY” label on it], or: 2) press the remote control button on the mixer. As the message plays, the timer will count down.

To stop a message, move the pointer over the “Stop” button, and click. The message will be re-cued.

Several messages can be “stacked up” in the list. They can be played continuously (one right after the other) or one at a time. To choose which method you want to use, click on the appropriate button beside the Play List.

To remove a message from the list, click on the message name in the Play List, then click the “Remove From List” button. You cannot remove the message that is currently playing.

NOTE: the Concert List and Sign On-Off are on the “Spots & Special” page.

OTHER TECHNICAL THINGS YOU NEED TO KNOW

The Logger

The logger machine is located in the equipment racks beside the tech room, near the centre of the station. The logger tape runs 24 hours a day and records everything that is broadcast. There is one tape for each day of the month. The tapes are kept for one month, and then recorded over again. This is a requirement of the Broadcasting Act (it's the law). The CRTC can ask for any tape at any time, just to check up on us. The tapes are also used in case anyone complains about anything that we broadcast. It is very important that the logger tapes be mounted properly on the machine.

There is a red "Logger" warning light at the upper right of the board in Studio A. If it starts flashing it means that the logger has stopped. See the section "Logger Problems" below.

Tapes are changed every day around midnight. If you are on the air at midnight, it is *your* responsibility to change the tape. Proceed as follows.

- 1) Rewind the current tape.
- 2) While it is rewinding, get the next tape from the shelf. Check that the number on the tape corresponds to today's day of the month. If it doesn't, check the "Logger Problems" section below.
- 3) Thread the new tape on the machine, making sure that the shiny brown side of the tape is facing the heads.
- 4) Press record and play.
- 5) When you return to Studio A, the red "Logger" light should not be flashing. If it is, you did something wrong. Go back and check that the tape is running and that it is recording.
- 6) Note in the Program Log the actual time that you changed the logger.

Logger Problems

1) *Tape runs out early*: if it is after 11:30 pm, just mount the next tape, and leave a note that the tape ran out early, so we can check the tape. If it is before 11:30 pm, mount the "Spare" logger and run it until midnight, then put on the next day's tape. Leave a note describing what happened.

2) *Tape stops in the middle*: this usually means that there is some damage to the tape at this point. Check the physical condition of the tape - there will likely be a short section that is "stretched." Press and hold record and play until the damaged section is past. Make sure that the shiny brown side of the tape is facing the heads after the damaged section goes past — if it isn't, stop the tape and put a half-twist in the tape between the feed reel and the head-block. Leave a note describing what happened, including the time, so we can repair the tape.

3) *Machine won't stay in record*: this means that either the tape is not threaded properly, or it is not yet past the leader tape. Check that the tape is threaded properly. Fast-forward the tape past the leader. Press record and play and try again.

4) *Wrong tape was playing, or next day's tape can't be found*: this means that someone before you screwed-up with the logger. If the tape you would normally put on at this point is already on the machine, put on the "Spare" logger tape instead, and leave a note describing the problem. Similarly, if you can't find the next day's tape, use the "Spare" and leave a note. Finally, if the tape currently playing is the incorrect day, don't just put on the next day, put on the correct one. Leave a note.

The Transmitter Power On switch

This switch is located to the right and slightly above the logger. It must be up for the transmitter to be on.

The remote lines, remote Revoxes, and the shortwave

In Studio A, inputs 14 and 15 on the mixer are normally connected to the "remote lines," labelled RMT1 and RMT2. "Remote" just means that the audio sources are outside (remote from) the studio.

In Studio B there is only one remote line. It is labelled "RMT" and is available on input 13.

To the right of the logger in the equipment racks is the "patch bay." This is how you connect a source to one of the remote lines. The upper panel of jacks is labelled with the names of the various sources. The lower panel of jacks connects to the remote inputs of Studio A and B. *Starting at the right* they are: Studio A RMT 1, Studio A RMT 2 and Studio B RMT (the fourth jack connects to nothing). Hanging on the wall beside the racks are a number of patch cords.

To connect an audio source to one of the RMT inputs, simply plug one end of a patch cord into the source jack, and the other end of the patch cord into the jack for the appropriate remote line.

Using the remote Revox

There may be occasions when you will need to play two programs on reel-to-reel tape one after the other. There is only one Revox in Studio A, so you'll have to use the remote Revox.

Mount the tape on the remote Revox. Make sure the volume on the Revox is turned up and the NAB/Input switch is set to NAB. To the right of the Revox is the Cue Amplifier. Set the switch on the cue amp to Tape, and turn up the volume on the cue amp. Now cue up the tape, as explained in the section of this manual on Revoxes.

Get a patch cord and plug one end of it into the jack corresponding to the Revox and the other end into one of the remote jacks for Studio A.

Note that input 15 on the Studio A mixer is switchable between two inputs — RMT 2 and AUX. If you are going to use RMT 2, make sure the input switch is in the correct position.

Finally, you want to be able to start and stop the Revox from Studio A. The black panel above the remote Revox controls the remote start and stop functions. Set the switch to ST.A.

The machine is now ready to use. In Studio A, the red stop light for the remote Revox should be lit, indicating that you have remote control of the machine from Studio A. When you are finished using a remote Revox, please return the remote-control switch to the "Local" position.

In Studio B the remote Revox controls are mounted in a small box located on top of the DAT machines.

Telephones

When you answer the phone, *don't* say "Hello" — say "CKMS-FM".

884-2567 is the *only* phone number you should announce for people to call in to make requests. During office hours that is also the only line you should answer. When this line is ringing, the blue light at the upper right of the Studio A mixer will flash.

To answer a ringing telephone, simply pick up the hand-set - it is not necessary to press the button for the ringing line first. To answer a line that is on hold, *first* pick up the hand-set, *then* press the button. It is *bad practice* to press the button first - this could result in dropping the line (unintentionally hanging up).

If you answer a call and it is for someone else, you *must* put the line on hold (press the HOLD button) before any other telephone can pick up the call.

You don't have to leave the studio to tell someone that there is a call for them — use the "paging" feature of the telephones: put the call on hold; press the "Feature" button; dial 81; announce who the call is for and what line it is on — your voice will come out of the speakers on all the phones in the station; hang up the phone. If the person you are after is in Studio B they may not hear a phone page. You can use the talkback feature on the board.

Keep an eye on the flashing light of the line that was put on hold — if it doesn't change to a steady light in a short time (a minute or so), you'll probably have to go and find the person the call is for (they didn't hear the page).

The button labelled "DND" means "Do not disturb." If light beside this button is lit, the phone will not ring and you will not receive any pages through it, so it's a good idea *not* to have DND on.

Long-distance and directory assistance is locked out of all phones at night and on weekends, and is available *only* through the three office phones during working hours. If you need to make a long-distance call, ask one of the staff.

Outside of office hours the on-air person should answer both phone lines. Remember that at these times you are CKMS's representative. Business and public-relations calls should be handled pleasantly and competently. If there is a call for someone not present it is extremely important to take and leave a decipherable message.

The bulk eraser

The bulk eraser erases tape "in bulk" by generating a large magnetic field that erases the information on the tape. It is located in the rack area. It is a good idea to bulk-erase a tape before you use it, in case the erase head on the Revox is dirty and doesn't completely erase the old material on the tape.

Hold the reel of tape away from the eraser; press *and hold* the button; put the tape on the eraser and spin it around a few times; flip the tape over and spin it around a few more times; *slowly* move the tape away from the eraser; release the button.

This also works for normal-bias cassettes, but the eraser does not generate a strong enough field to erase chrome cassettes. Do not attempt to bulk erase DAT cassettes.