

# Talk Show Tech

## Getting Started

by Ted Alexander

It started, as it usually does, with a bunch of rumors. A format change was coming.

The GM/owner was hoping for an increase in the value of his facility. The PD was looking for a big increase in AQH's. And the sales manager was chomping at the bit so she could entice a whole new segment of the advertising community to buy in to the station's programming.

### THE MISSION

And now, just as you guessed, it was going to happen. The station will be doing local talk from 6:00 AM to 7:00 PM. As the meeting with the GM and PD concludes, you have your marching orders: build the new studios.

It now is up to you to deliver a working talk show studio, with facilities for up to five guests, a call screener, and some kind of "computerized" control for the talent to use.

Of course, if you are "budget and time challenged" and plan on using a 111C coil to tap across the telephone set earpiece to get your calls on the air, then this article is not for you.

### START WITH A PLAN

On the other hand, if you can use this opportunity to enhance the service your station provides to the service area and provide a substantial increase to the bottom line through proper facility improvement, then please do read onward.

Once the meeting is over, it is time to do the serious planning, planning, and planning. Did I mention the need for planning? There is no question – by stopping to plan before doing anything else, you will save time and money.

Even if you only have a small facility, you should plan for your ideal installation, and then – if you really must – pare it back, bit by bit, until you have the minimums you need to get your product on the air with good quality.

### LEARN FROM YOUR NEIGHBORS

If you have the time and opportunity, you should arrange for a visit to a working talk station to see just how that station is set up. You can also look around at various websites and publications to see what others have done.

In doing this, you will very likely see at least one great idea which had not occurred to you. The end result: a much better facility that allows your air talent to do their best work.

One talk programmer once said to me, "Build the studio as if it were for a Top 40 station without the music." That helped me understand what the PD needed and wanted, and I could anticipate the kind of talent he was planning on bringing in.

### STUDIO LAYOUT CONSIDERATIONS

Now it is time to scout around as to where this studio is going to be located. If you are lucky, you will start with an empty room. If you need to modify a music studio, things could get a bit more complicated.

One major consideration is to be sure you will be able to "fit in" the required equipment and leave room for the anticipated number of people, *including guests*. By the way, do not forget space for the screener.

Most often, the talent will be the one to "punch up" the calls on the air. But in some major market and/or network situations, there also may be a board operator.



The WRUW talk studio at Case Western Reserve University in Cleveland.

In such studios the screener is usually in a separate room to provide sound isolation. That means you need an intercom of some sort and possibly an intercom feed to the talent's headphone.

### SOFTWARE AND DISPLAY

Depending on your kind of operation, you may choose to have the screener punch up the on-air calls. Check out the use of a "screener" program on a computer, so you can let the talent know who is on screened hold and also to get text messages to the on-air personality.

Some software also interfaces with the electronics of the talk show phone system to let you "point and click" to place a call on the air. On some occasions, especially at small stations, the on-air talent is a "one man show," either taking calls unscreened or screening and holding upcoming calls during breaks.

The key point is that your installation will need to be designed around your choice of staffing and budgeting.

### TECH AND PHYSICAL SPECS

Next it is time to assess the equipment you have on hand, or in the existing studio, and prepare the "want list" for the additional capabilities.

An empty 10 foot by 12 foot room looks big, but when you install the equipment and put six or seven people in there, it gets really cramped really fast. For a show this size we recommend a studio with minimum of 200 square feet.



A comfortable and spacious talk studio with good sight lines (note the recessed monitor).

Go for the biggest reasonable size your facility will allow. Then, consider the other physical needs: will the screener/producer have an isolated room within eyeshot of the main studio? Will there be a need for a separate news booth? What about HVAC considerations? Most talk show hosts I know like the studio to be cold enough to see their breath.

A good idea, before you begin any installation, is not only planning it all out on paper, but having it agreed to by management, programming – and sales. (After all, your sales manager may want to invite in a potential new client for an "interview." Would it not be a nice way to seal a deal by welcoming the client to a comfortable studio and have them talk to several listeners over a clean and clear connection?)

### STOCKING THE STUDIO

You will need to have an audio console with at least one channel to be used for a mix-minus. More are even better; three mix-minus busses will make life even easier – for example, just in case you need an additional mix-minus to allow for doing a talk show remote.

Among the essentials, *do not skip the profanity delay!* Even if you are a religious broadcaster and your regular listeners would never think of saying "%\$#@!" on the air, you never know what nut case is trying to get through to your airwaves. \$325,000 for one "%\$#@!" is not worth it when a good profanity delay costs less than 1% of the fine.

You will need as many microphones as your anticipated number of guests, plus one for the talent, and possibly one or two more for a news person/sidekick/etc. There will also be a need for just as many headphones, so they can hear the program.

Add up the required microphone channels, inputs for the telephone hybrids, computer, CD player, aux/remote inputs, add in one or two more for the "future," and you will have the number of input channels you will need on the board.

### TELEPHONE INTERFACING

If all you need is to take an occasional single call, a low-cost single hybrid connected to a single line may be all that is required.



A single line hybrid from Telos.

Most probably you will want to be able to have the capability to place at least two calls simultaneously on the air. Ideally, each caller should be put on the air through their own hybrid. That provides the best quality and allows individual control of the callers.

For a smaller operation, where the usual case would be to take one caller at a time, a single hybrid is most economical, but would require a "mashing" of two (or more) lines to take two calls on the air simultaneously – fine for occasional use, but not as good for top sounding day-in and day-out operation.

### CONNECTION CHOICES

There are several options these days for the call-in lines to the station. You have good old fashioned POTS ("Plain Old Telephone Service"), BRI ISDN, a channelized T-1 (or PRI – Primary Rate Interface) lines. You will need to consider this together with your selection of a Talk Show System, since not all systems support all the types of lines.

POTS (e.g. analog loop-start) lines are still the most common lines most stations use for their talk shows, but these days POTS can mean several things.

The best way to implement a POTS system is to install the line directly from the telco central office and *not through a PBX or some other switch* after the CO. ISDN provides a higher quality on-air line since all audio is digital from the central office to the station's demarc and any POTS deterioration is minimized. Of course, ISDN is becoming a bit more difficult to arrange in some areas.

When using a PRI, particularly when sharing it across multiple stations, there are additional considerations with regards to configuration of trunk groups. In this case you will need to consider how many call-in lines, hot lines and warm lines will be dedicated to each station.

(Continued on Page 6)

# Talk Show Tech

## Getting Started

by Ted Alexander

Continued from Page 4

Whatever type of lines you choose, keep the telephone company informed and involved right from the beginning.

### DEALING WITH THE TELCO

Be upfront with your telco and work with them for most consistent service. Develop a relationship; invite your local telco representative to the station so you can discuss, on site, the kind of use you anticipate on your lines.

As you progress, you will want to confirm these details in writing, in advance, so that should there be problems the telco cannot claim you attempted to deceive them. Keep in mind that broadcasters are not the typical business telephone users, so odds are good the people at the telco will not understand your needs. Be skeptical of their replies, and continue the discussion.

For example, if you want ISDN and it is available for others in the area, do not take “no” for an answer. If this technology is available to other customers, it is reasonable for you to wish the same level of technology – why should you be limited to 100-year-old analog technology just for the telco’s convenience?

### LINE LOADING

Another important word about planning with your local telco: in many cases telcos require that broadcast users have their service from a so-called “choke exchange.” This is a special central office that has a unique three-digit prefix and has very limited trunking into it from surrounding areas.

The idea is to return all trunks busy (e.g. fast busy) from the dialing end without using up talk paths. This prevents contests and other broadcast traffic from interfering with service to non-broadcast facilities.

If you have an AQH of 80,000 and plan on giving away \$10,000 to the 150th caller, expect that the telco will be “blown out” if you are not using a choke exchange.

On the other hand, if you are a small station, in a small market with an AQH of 1,200, and you are talking about cattle futures, you probably will not need a choke exchange. In fact, in small markets, the telco representative may not even know what a choke exchange is.

When using a PRI, particularly when sharing it across multiple stations, there are additional considerations with regards to configuration of trunk groups. In this case you will need to consider how many call-in lines, hot lines and warm lines will be dedicated to each station.

### MORE OPTIONS TO CONSIDER

For the station with multiple simultaneous calls, you may need two or more hybrids, a dozen lines, multiple screener and talent work stations, and the capability to use the phone system in two or more studios.

I have found that working out a block diagram and flow chart of a proposed system, shared with management and programming, is the best way to determine what the station needs to produce its product and work within limitations of space and budget. If everyone is “on the same page,” no one is surprised and everyone can come to an agreement about the install.

Some other things to consider: If possible, install the same kind microphones throughout the studio – and be sure to use shock mounts. Individual microphone pro-

cessors will help “control” enthusiastic guests and host’s levels into the board. A cough button and headphone level control for each host/guest position is a great creature comfort.



A Telos 2X12 Talk Show System with multiple capabilities.

### THE SAFETY VALVE

For the profanity delay, installing a big fat “mushroom” push switch to eliminate the “%\$#@!” makes it easier for the talent or producer to find and hit the button when the undesired word(s) are uttered.

Here is why: if it takes three to four seconds for the talent or producer to find the “dump” switch, and the profanity delay is just seven seconds long, you may get uncomfortably close to not “dumping” the unmentionable. In fact, you may well want to consider a profanity delay with at least 12 seconds in the buffer.



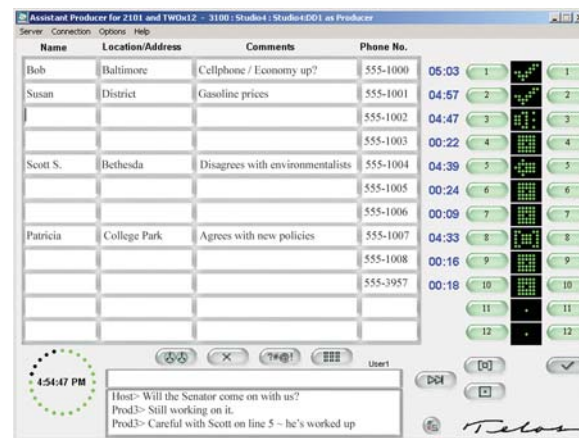
Along with the microphone processors, telephone hybrids and switchers, do not forget the delay unit and accessible “dump” button.

Even more delay might be advisable if you plan on airing *really* controversial material with a big opportunity for “%\$#@!” to get on the air. You may wish to go to an “overkill” setup using two separate profanity delays, separately controlled, in case the first one’s buffer has not fully caught up when the next “%\$#@!” is uttered.

### CALLER SOFTWARE

For a small, simple installation, you may wish to use an uncomplicated software text program and simply outfit a computer for two monitor operation. That gives you a basic text display for the talent and is certainly easier than ordering a large quantity of Post-It notes.

The next step up is two or more computers networked and running a general purpose chat program. There are also several commercially available software packages available specifically for talk show use, some include the ability to control the hybrids with a “point and click.” Your complexity and budget will help determine what works for you.



Assistant Producer software from Telos.

Recently, several software packages such as Neowinners™ have become available; these integrate call screening, contest recording, and caller database management into one sophisticated program.

Caller database features vary from none at all, to simply logging information about callers, to real-time access by caller ID. If you need these sophisticated features, you will need to verify that both the hardware and software have the features needed.

Ease of use is always a factor. You should look at contrast, text size and similar ergonomics. If the screening software allows remote control of the phone system itself then, to avoid unnecessary confusion, it is important that the mode of operation (e.g. line status and selection) is similar to that of the Talk Show System.

### TRAINING IS PART OF PLANNING

Consideration should also be given to training. Some of the more sophisticated systems benefit from installation by factory-trained technicians who can also train you on the system.

Of course, it is essential that the operators are trained to understand how the system works and how to use its features to operate it efficiently. Depending on your staff, and the complexity of the system, you may do this training yourself or bring in someone.

### FINALIZING THE PLANS

Now that the preliminary sketching out of the requirements is done, you can begin the serious planning and design stage. Seek as much input as you can get from those who will be using the facility and share the “almost final” plans with them. Make any needed changes now, *before* the cabinets and wiring are half-way installed. Get the equipment list together and discuss it with your vendors.

As noted, there are many fine facilities now on the air which can serve as idea starters for you to customize your installation. Look through our industry publications and cruise the Internet for information. It only takes one great new idea to make your studio much easier to build and much easier for the staff to operate.

Plan, too, for after you complete the new studio(s). Take some extra time to show everyone who will be working in there exactly what does what and how to use their new “tools” to bring out their finest performances. That young talent you just brought into your new studios may be the next Art Bell!

If you did your planning and homework properly, when you get everything together that is needed for your project, everything will go smoothly – at least until Murphy shows up! Next time out we will discuss the preparing of the room, installation of the new equipment, wiring the studio, connecting the lines, air-checking calls, audio storage – and the “mystery” of mix-minus.

Some more reference material on Talk Show Systems and Screener Software: <http://www.telos-systems.com/techtalk/3-10.pdf> This URL, and others in this issue are found at [www.radio-guide.com/URL.htm](http://www.radio-guide.com/URL.htm)

Ted Alexander is part of the technical support team at Telos-Omnia-Axia as well as an experienced engineer in the Cleveland market. Contact Ted at [talexander@telos-systems.com](mailto:talexander@telos-systems.com)