SOFTWARE CONSIDERATIONS

SHAREWARE

The CD that comes with your MFJ-1279/1279M contains shareware. This CD will automatically run the *MFJ Sound Card Interface Software Installation Menu* upon startup. If, for some unforeseen reason, your CD does not automatically run you must manually invoke it. To do this, follow the steps listed below.

1. With the Shareware CD in the CD drive, click on the Start button at the bottom left of the screen.
2. Click on RUN. This will bring up a command window.
3. Click the Browse button.
4. When the browse window is open, double click on the CD drive.
5. Double click on the autorun.exe program.
6. The autorun.exe program will now show up in the command window.
7. Click OK and the *MFJ Sound Card Interface Software Installation Menu* will begin to run.

From the menu, you may choose which shareware program(s) to install. Though effective, this software is limited in its uses. To get the full experience with your unit, MFJ recommends that you purchase either the MFJ-1296 or the MFJ-1298 Sound Card Program.

MFJ-1296 & MFJ-1298 SOFTWARE PACKAGES

The MFJ-1296, RadioCom4, and the MFJ-1298, RadioCom5, are the best programs for soundcard interfaces and amateur radio.

Some features of the MFJ-1296 and the MFJ-1298 include:

- PSK: Supports PSL-31, Q and B PSK
- SSTV: 32-bit color, supports all SSTV formats, screen sizes/SSTV parameters are all variable.
- FAX: Supports AM/FM bands. Includes Weather FAX and satellite FAX direct. Supports ICO 267, 288, 352, and 567. RPM 48, 60, 90, 120, 180, and 240. FAX resolution is up to 1810 dpi, FAX features IOC and slant-correction. FAX pictures can be saved, printed, retransmitted.
- CW: Features automatic speed tracking, DSP notch and bandpass filters.
- RTTY: Supports all standard shifts and speeds. X/Y scope and frequency spectrum display makes tuning RTTY a breeze. Also supports NAVTEX, European SYNOP, Baudot, and Sitor-B.
- Radio control for over 80 radios.
- DSP Audio Filters and Analyzer.
- RS-232 Level Converter.

The MFJ-1298 has additional features that include Spectrum Analyzer, Dual Scope Display, Sound Recorder, Time/Frequency Management, Frequency Analyzer, 3-D Scanner, Satellite Tracking, and much more!

The MFJ RadioCom requires a computer with a minimum 200 MHz, Pentium/Celeron processor, at least 64 MB of RAM, and Win95/98/ME/2000/NT operating system.

These fully integrated software packages can be purchased from MFJ and are fully supported by MFJ.

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INTRODUCTION

Thank you for purchasing the MFJ-1279 (or modular 1279M) *Deluxe Sound Card Radio Interface*. The MFJ-1279/1279M was designed for use in all sound card to radio applications. Great care was taken to make sure hum, noise, and distortion are minimized or eliminated, insuring the best possible signal from your equipment.

Before attempting to use the MFJ-1279/1279M, please read section 3.0. This section contains important information about interfacing the MFJ-1279/1279M with your transceiver. We will start with a brief introduction into the special features that make your *Deluxe Sound Card Radio Interface* an important addition to any computer station.

MFJ-1279 (1279M) Features:

Serial Port: This port allows the computer to control the push-to-talk of your radio and the microphone push-to-talk switch to override and/or interrupt your computer's transmission.

Direct Keying Output: Allows direct keying of your radio in CW or FSK operation.

Microphone/Radio plug-in jumpers: Internal jumpers program microphone wiring for any brand or model of radio with the appropriate 8-pin connector. There is no need to solder tiny plugs and wires or purchase adapters.

PTT Message Interrupt/Stop: Microphone PTT (push-to-talk) switch automatically halts outgoing messages when using software that allows external com-port interrupts. Even if software does not allow interrupts, you can still hold the microphone PTT to stop digital transmissions and transmit microphone audio.

Footswitch: A footswitch can be used for PTT when VOX is not used.

Radio/Speaker-Computer/Speaker switching: This transfers audio lines with a touch of the ON/BYPASS switch. No need to move cables every time you change use of the computer or radio. NOTE: Requires you use external speaker on radio.

Off-Air Recording: Capture signals from your receiver's audio jack for review or replay, or use with spectrum analyzer programs.

RFI Proof Circuitry: RF suppression and line isolation virtually eliminates RF feedback, hum, and distortion. An isolation transformer prevents audio ground loops.

Level controls: Two level controls, one for transmitter drive and one for receiver-to-sound card drive level. No need to adjust microphone gain or sound card level settings every time you change modes.

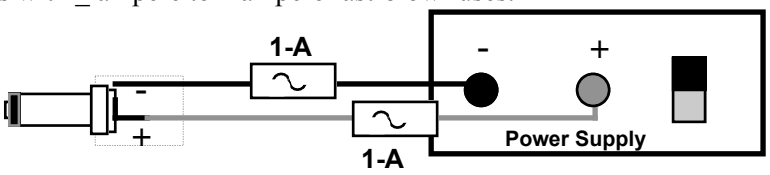
Stereo or Mono Audio input: A front-panel switch selects left, right, or both sound card audio output channels.

Headphones: A front panel _" jack allows you to use your station headphones while disabling the external radio speaker.

Rugged Construction: A solid all aluminum cabinet and sturdy surface-mount construction gives the MFJ-1279/1279M mechanical and electrical durability.

1.0 POWERING THE MFJ-1279/1279M

External Power: Use any well filtered power source capable of supplying 12-15 Vdc at 100 mA. The minimum operating voltage is 10 Vdc. Under a full load, sources exceeding 16 Vdc may permanently damage this product. The external power jack, of the Sound Card Radio Interface, accepts a standard 2.1mm coaxial power plug. *The power plug's center pin must be positive (+) and ground-isolated.* The outer shell is negative (-) and may be grounded or floated at the supply. When connecting to a high current supply (more than one ampere), we strongly recommend fuse protecting both positive and negative supply leads with _ ampere to 1 ampere fast-blow fuses.



WARNING: Never insert the power plug with power applied—an accidental short from (+) to chassis ground may result. Also, never allow the MFJ-1279/1279M supply voltage to exceed 16 Vdc. Connections to high current power sources must be fuse protected!

MFJ-1312B Power Supply: The MFJ-1312B wall adapter is also suitable for powering your Sound Card Radio Interface. It comes with the correct 2.1mm power plug installed, and is available directly from MFJ Enterprises, Inc. or through your local MFJ dealer.

2.0 CONNECTING THE MFJ-1279/1279M

FRONT PANEL:

HEADPHONES	Accepts a _" stereo plug to supply audio through your headphones, while disabling the external radio speaker.
MICROPHONE	Accepts standard 8-pin microphone plug (8-pin modular for the MFJ-1279M)
INPUT	Selects left, both, or right sound card audio channel
MANUAL/VOX	Selects PTT control from COM port or VOX operation
MONITOR/OFF	Allows the user to listen through the radio speakers while at the same time being routed through the Sound Card Radio Interface
ON/BYPASS	Selects computer audio and control (ON) or normal operation of computer and radio (BYPASS)
XMIT	Illuminates when computer transmitting or ready to transmit (VOX) with audio input
POWER	Illuminates when unit is in ON mode
FOOTSWITCH	Accepts a _"mono plug that allows a footswitch to be used for PTT when VOX is not used.

REAR PANEL:

POWER	Requires 12-15 Vdc @ 100mA (16 volt absolute maximum)
COMPUTER RS-232	DB-9 female serial (COM port) connection
CW OUTPUT	RCA phono jack connects to the KEY jack of the radio
AUX AUDIO INPUT	3.5mm mono jack connects to an external audio device (audio is routed to the sound card audio in when the MFJ-1279/1279M is bypassed)

RADIO

TO EXT SPKR	3.5mm mono jack connects to station loudspeaker or other audio accessories normally connected to radio speaker jack
TO RADIO MIC	3.5mm mono jack connects to external speaker output of radio

COMPUTER

TO SOUND CARD AUDIO IN	3.5mm mono jack connects to sound card input
TO EXT SPKR	3.5mm stereo jack connects to computer speaker
FROM SOUND CARD AUDIO OUT	3.5mm stereo jack connects to sound card output
GROUND	Ground terminal to station's ground buss (see section 4.6)

3.0 MICROPHONE AND RADIO CONNECTIONS

Different manufacturers and different radios may wire the same style connectors differently. The MFJ-1279 and MFJ-1279M have internal headers that use small moveable jumpers. The MFJ-1279 uses common round 8-pin microphone connectors found on most transceivers. The MFJ-1279M comes with a modular microphone jack (like telephones might use).

Internal jumpers are used to program connections for any radio that connects to the prewired connectors. This feature eliminates the need for soldering jacks or purchasing adapter cables. **The MFJ-1279/1279M must be configured using the internal jumpers before use** (see section 3.1 and 3.2).

The microphone/radio setup procedure requires a few minutes of time. Before you start, you will need the manual of your radio readily available.

3.1 INTERNAL HEADER AND JUMPER CONNECTION DESCRIPTION

The jumpers in this unit are grouped by connection type, with all eight-microphone pins in a row. The connection blocks are:

HD1 Chassis ground

HD2 Audio ground (***NOT*** the same as ***chassis*** ground)

HD3 Pass through, jumper all connections except microphone audio (HD4, HD7) and push-to-talk lines (HD5, HD6)

HD4 Audio from microphone

HD5 PTT line to radio

HD6 PTT from microphone

HD7 Microphone audio output to radio

There are eight rows of jumpers (16 pins) in each header. Each pin, starting from the rear of the unit, represents pins one through eight of the microphone connectors.
This header makes a connection to chassis ground. The chassis ground is normally ***not*** connected to the microphone ground, except in the radio itself.

> **Note:** If chassis ground connects to microphone ground outside the radio, low-level audio hum or distortion often appears on the transmitted signal.

This header connects to the microphone audio ground. The pin selected here should match the *audio* ground lead on the radio and microphone. This ground is normally ***not*** connected to the chassis ground, except in the radio itself.

> **Note:** If the audio ground connects to a chassis somewhere outside the radio, the result can be audio hum or distortion.

The pass-through connection should have jumpers in all connections except leads used by microphone "hot" audio (HD4, HD7) and push-to-talk lines (HD5, HD6).

Microphone *ground* leads, both PTT and audio *grounds*, should remain jumpered at this header even if connected to ground at HD1 or HD2.

This header is for the radio's PTT (push-to-talk) lead. This pin should match the radio's "hot" PTT lead. The pin selected here should match the selection at HD6. This pin should not have a pass-through connection at HD3.

This header is for the radio's PTT (push-to-talk) lead. This pin should match the microphone's "hot" audio lead. The pin selected here should match the selection at HD5.

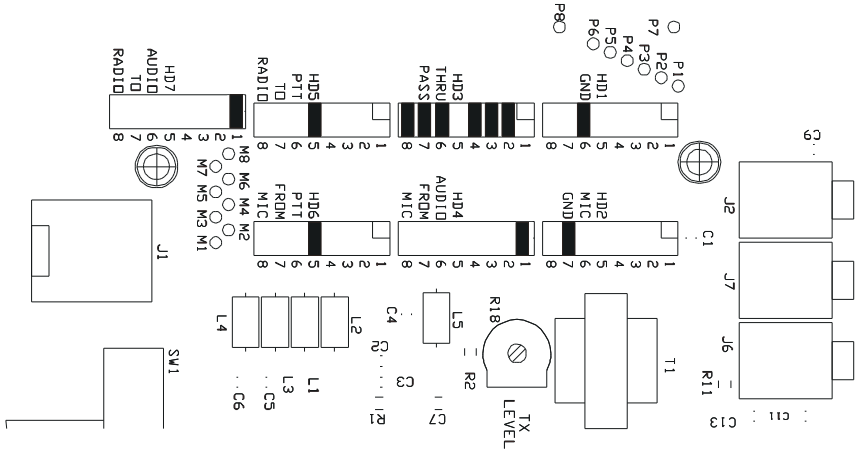
This header is for the microphone's audio output lead. This pin should match the radio's "hot" audio input lead from the microphone. The pin selected here should also match the selection at HD4.

3.2 JUMPER DIAGRAMS

The Jumper Installation diagrams with this instruction manual will help you in setting up your MFJ-1279/1279M to match your radio. If your radio is not listed with the diagram, it means that we have not verified your radio to use that diagram. You can try to install jumpers as indicated. If that does not work, please refer to the radio manual to identify the MIC pin assignment for you radio then follow the instructions given in the MFJ-1279/1279M instruction manual to install the jumpers.

ICOM

IC-255, 288, 28, 290, 38A, 375, 707, 726, 728, 729, 730, 735, 725, 737, 781, 761, 751, 745



This diagram may cover some other radios in the ICOM product line with 8-pin round mic jack.

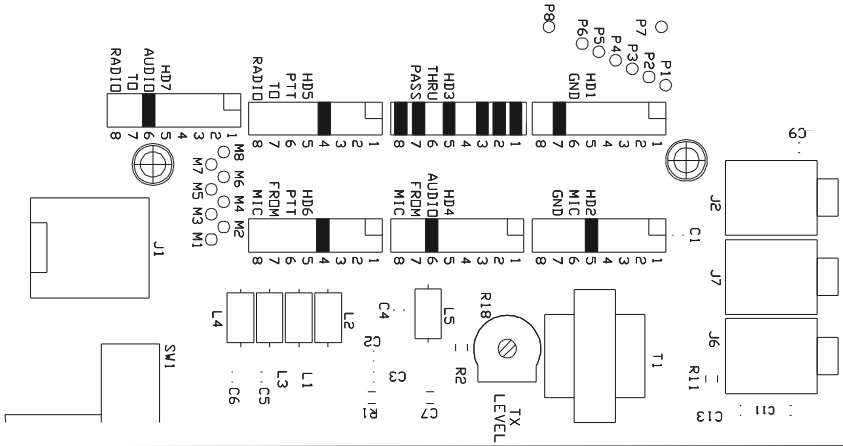
If there are any Questions concerning the information provided, please refer to your RADIO INSTRUCTION MANUAL.

MFJ is neither liable nor responsible for any mistakes or errors in the information provided.

Receive Audio is taken from the External Speaker output or some other speaker level audio source.

ICOM

IC-706



This diagram may cover some other radios in the ICOM product line with 8-pin modular plug.

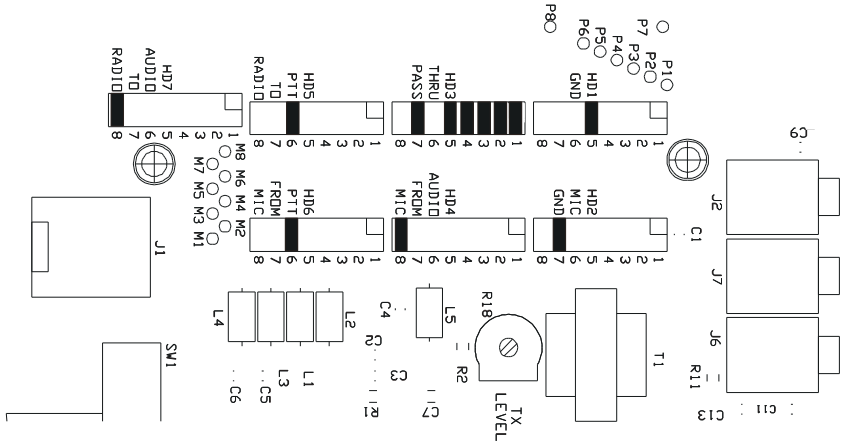
If there are any Questions concerning the information provided, please refer to your RADIO INSTRUCTION MANUAL.

MFJ is neither liable nor responsible for any mistakes or errors in the information provided.

Receive Audio is taken from the External Speaker output or some other speaker level audio source.

YAESU

FT-650, 707, 712, 726, 736, 756, 767, 77, 790II, 700, 840, 890, 990, 1000D



This diagram may cover some other radios in the Yaesu product line with 8-pin round mic jack.

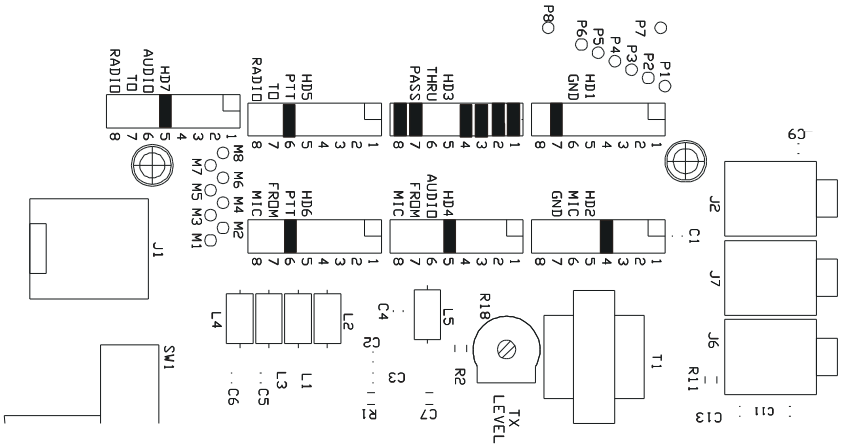
If there are any Questions concerning the information provided, please refer to your RADIO INSTRUCTION MANUAL.

MFJ is neither liable nor responsible for any mistakes or errors in the information provided.

Receive Audio is taken from the External Speaker output or some other speaker level audio source.

YAESU

FT-817



This diagram may cover some other radios in the Yaesu product line with 8-pin modular mic jack.

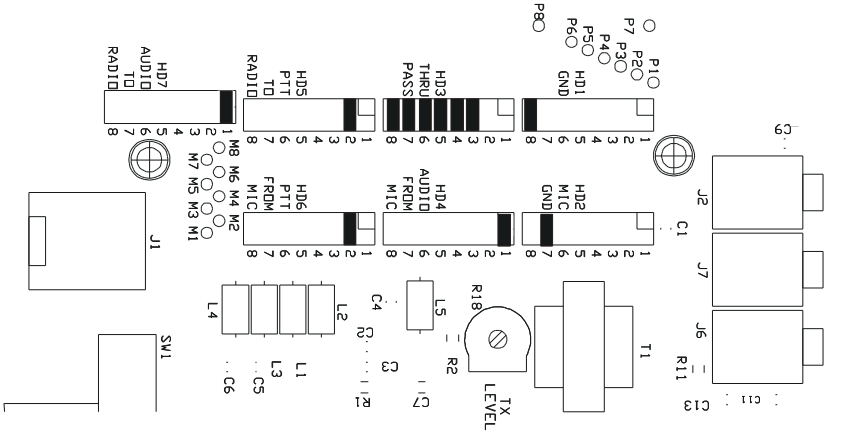
If there are any Questions concerning the information provided, please refer to your RADIO INSTRUCTION MANUAL.

MFJ is neither liable nor responsible for any mistakes or errors in the information provided.

Receive Audio is taken from the External Speaker output or some other speaker level audio source.

KENWOOD

TS-50, 140, 430, 440, 450, 680, 690, 701, 711, 780, 811, 930, 940, 950
TR-50, 751, 851, 3200
TM-201, 241, 2530, 441, 721, 731, 621
TW-4000, 4100



This diagram may cover some other radios in the Kenwood product line with 8-pin round mic jack.

If there are any Questions concerning the information provided, please refer to your RADIO INSTRUCTION MANUAL.

MFJ is neither liable nor responsible for any mistakes or errors in the information provided.

Receive Audio is taken from the External Speaker output or some other speaker level audio source.

3.3 PROGRAMMING INTERNAL JUMPERS

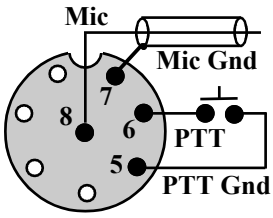
Begin by removing the screws from the sides of the cabinet. Lift the cover off. Look from the front view and notice the group of pins and black jumpers on the left side behind the microphone connector and in front of the microphone output wire. Notice the pins start at the back and are labeled 1 through 8 before repeating at the next header group.

Place jumpers at pins marked with "X":

Table 1. Yaesu FT-1000 series

Pin	HD1 chas/ptt	HD2 mic gnd	HD3 pass	HD4 mic aud	HD5 rad ptt	HD6 mic ptt	HD7 rad aud
1			X				
2			X				
2			X				
4			X				
5	X		X				
6					X	X	
7		X	X				
8				X			X

To configure your interface, look at the radio's manual. Find the page that shows the microphone wiring. This is a sample Yaesu-style connection.



Yaesu Mic Jack Pin-out, Front View

If you compare table 1 to this connector, you will see it is laid out for this radio.

Look at the microphone-wiring diagram and connect the PTT and microphone leads as described in section 3.1. On the next page, a blank chart has been provided for you to fill in. **Remember header 4 and 7 are the same pin connection. The same is true for header 5 and 6. A pass-through connection belongs on every other lead, including connections that are used for grounds on HD1 and HD2.**

The following chart is supplied for your radio. You can look in your radio's manual, and fill in the chart. This will assist you in properly setting the jumpers for your radio.

Using the following wiring chart:

1.) Never ground the microphone ground to the chassis ground!

2.) HD4 and HD7 are always the same

3.) HD5 and HD6 are always the same

4.) HD3 always has a jumper except where HD4 through HD7 are jumpered

Pin	HD1 chas/ptt	HD2 mic gnd	HD3 pass	HD4 mic aud	HD5 rad ptt	HD6 mic ptt	HD7 rad aud
1							
2							
2							
4							
5							
6							
7							
8							

4.0 REAR PANEL CONNECTIONS

The rear panel has a power jack, one computer port, one CW output jack, and six audio jacks.

4.1 COMPUTER RS-232 PORT

The **COMPUTER RS-232** port is a standard female DB-9 connector. It should connect to an active COM port on your computer. This connection allows the computer to watch the PTT line from your microphone, and the computer to control the transmitter PTT line.

4.2 CW PORT

The **CW PORT** is a RCA phono jack. It should be connected to the KEY jack of the radio. This connection allows direct keying of your radio in CW or FSK operation.

4.3 RADIO

FROM AUDIO OUT: This 3.5mm monaural jack should be wired to your radio's external speaker output jack. It connects straight through to the radio **"TO EXT SPKR"** jack when the **ON/BYPASS** switch is "out" (**BYPASS**) or when **the MONITOR/OFF** switch is "in" (**MONITOR**).

1. If you use only the external speaker on your radio, you will have to plug and unplug this connection at the radio when changing between digital and normal operation. We recommend using an external radio speaker to simplify operation.
2. If you want to use a "line" audio output on the radio, you can wire it to this jack. In this case, be sure the **MONITOR/OFF** switch is "in" (**MONITOR**); otherwise, you may not have enough audio level to the computer when receiving digital transmissions.

   Note: Always run the receiver at normal listening volume before switching to digital modes. The internal potentiometer, R31, sets the drive level from the radio receiver to the sound card. It is the adjustable potentiometer closest to the rear of the unit. A hole is provided in the cover so the pot can be adjusted without removing the cover. Use a small flat-blade screwdriver and be careful to not break the potentiometer!

TO EXT SPKR: This 3.5mm monaural jack should be wired to the radio's external speaker. This jack connects the radio's external speaker to the radio's speaker output when the front panel **ON/BYPASS** switch is in the "out" or **BYPASS** position. The jack disconnects the radio's speaker when the **ON/BYPASS** switch is "in" or **ON**.

The **MONITOR/OFF** switch defeats the speaker switching, and causes this jack to always remain connected to the radio's speaker output when the **MONITOR/OFF** switch "in" (**MONITOR**).

4.4 AUXILIARY AUDIO INPUT

The **AUX AUDIO INPUT** is a 3.5mm stereo jack. This connection allows the input of an external audio device (such as a tape player or audio from a camcorder/VCR). When the MFJ-1279/1279M is off (BYPASS) the external device audio is routed to the audio in of your sound card. This allows both peripherals to be in line. You choose which one to use by the simple push of a button.

4.5 COMPUTER

TO SOUND CARD AUDIO IN: This 3.5mm monaural jack should be wired to the sound card audio input. You can use either the microphone or the line input of the sound card. This jack connects the radio's audio output to the computer audio input when the **ON/BYPASS** switch is ON. This jack is not connected to anything when the **ON/BYPASS** switch is "out" (**BYPASS**).

Note: If you use the microphone input, you will want to disable any extra gain if provided by the sound card (normally accessible in your computer's sound or volume software settings). This function is normally available in the "Advanced" menu of sound card software. Be sure to set up this input for mono operation, if applicable.

TO EXT SPKR: This 3.5mm stereo jack connects to the computer's external speaker system. This jack is connected to the computer's audio output when the **ON/BYPASS** switch is "out" (**BYPASS**). It is not connected when the **ON/BYPASS** switch is "in" (**ON**).

FROM SOUND CARD AUDIO OUT: This 3.5mm stereo jack connects to the computer's audio output. This jack connects to the radio's microphone input when the **ON/BYPASS** switch is "in" (**ON**). It connects to the "**TO EXT SPKR**" jack and the computer's speaker system when the **ON/BYPASS** switch is "out" (**BYPASS**).

4.6 GND

A ground connection post has been provided in case you have RF problems or hums. In many cases, this connection will not be needed. If you notice hum or noise on any audio lines, connect this post (with the shortest possible connection) to the ground post on your radio.

5.0 OPERATING SUGGESTION

5.1 PLACEMENT OF THIS UNIT

We recommend placing this unit as close to the radio and computer as possible. Do not place this unit within one foot of power transformers, video monitors, or anything that emits strong varying magnetic fields. If you locate this unit near a monitor, the sweep circuits can introduce hum and noise into your signal. If there is a powerline-operated transformer within several inches and if it has flux leakage, 60-cycle hum can be introduced into your stations audio systems.

5.2 HUM, SQUEALS, AND DISTORTION

When different pieces of equipment are interconnected, unwanted hum, audio distortion, or oscillations may result. RF feedback or an audio system loop of some kind may cause this condition.

To eliminate RF feedback, replace the antenna with a dummy load. If the problem still appears while transmitting at full power level, it is probably caused by a ground loop. If the problem disappears, it is almost certainly RF related. Make sure your station ground is good, and you have followed all the suggestions found in reliable sources like the ARRL Handbook.

If the problem still occurs, even while transmitting on a dummy load, be sure you have placed the microphone-wiring jumpers correctly as outlined in section 3 of this manual. Also, make sure the microphone ground connection has continuity through the entire system, and that it is NOT connected to any other grounds or chassis except inside the radio.

Be sure you have not created a problem with improper configuration of the sound card or radio. Try turning the radio's monitor OFF when working digital, in case audio is looping from the monitor back through the sound card to the transmitter's input.

5.3 OPERATING ADJUSTMENTS

The most common problem with digital modes is an improper system level. Even at best, digital modes have limited dynamic range* compared to modes that "fit" the filters in the transmitter and receiver. This is mainly because the entire system affects bandwidth.

**Dynamic range is the ratio of strongest undesired signal tolerated to weakest signal that can be copied.*

When transmitting, it is extremely important to have levels correct. If you overdrive the input of your transceiver, your signal may interfere with others. Such problems do not always show up on spectrum or IMD displays, and if they do many people do not recognize them. Excessive levels into the radio can aggravate harmonic distortion (this does not register on IMD readings), causing you to transmit on multiple frequencies. For example if you are on PSK using a 1,000 hertz receiving and transmitting sound card frequency, you will also have some signal level at 2,000 hertz and every other multiple of 1,000 Hz.

The system depends entirely on low distortion in the sound card and the transmitter, as well as the filter in the transmitter to limit the level of these unwanted signals.

If audio level from the sound card or interface is too low, the ratio of signal to hum and noise will be reduced.

The best way to check for proper transmission is to listen to your own signal on a separate receiver with a narrow filter, taking care to not overload the receiver. If you cannot do that, the best general guideline is to use normal microphone gain settings and approximately half volume on the sound card "Volume" settings. Adjust the transmitter level control (R18) in the MFJ-1279/1279M for normal transmitter drive (just at the start of ALC action) and use the microphone gain on the transmitter (or sound card volume) for fine adjustment. It is always a good idea to have someone listen to your signal when the band is empty, signals are strong, or noise is very low. They should look carefully for spurious signals, noise, and hum.

When transmitting on modes like MFSK and PSK, try to use a frequency setting more than 1400 Hz and less than 2200 Hz. This will allow the transmitter's SSB filter to suppress any unwanted harmonics from the audio system driving the transmitter. Use normal receiver volume setting, and adjust the sound card microphone level (make sure any extra gain options are off) to approximately half scale. Adjust the receiver level control (R31) in the MFJ-1279/1279M for normal display operation.

If you use the line output of a radio, the receiver volume control has no effect on receiving levels. Be sure you always leave the MONITOR/OFF switch in the MONITOR connector, when there is no radio speaker plugged in, or when using a radio line output connection. As an alternative, you can plug the line output of the radio directly into the computer soundcard.

Remember it is sometimes necessary to select the narrowest filter possible in the receiver, rather than depending on the computer to filter out strong unwanted stations. Many transceivers allow a selection of more narrow filters while operating SSB, or include passband-tuning controls. If you have trouble with a strong station nearby causing you to lose the desired signal, try more selectivity or use a notch filter.

5.4 MONITORING RECEIVER (SSTV, VOICE KEYER)

Certain modes, such as SSTV and Voice Keying, may require listening to receiver audio. We have provided a receive monitor switch on the front panel of the MFJ-1279/1279M.

During SSTV or Voice Keyer operations, the MONITOR switch should be set to monitor on (Push in). This will allow you to have a normal QSO and receive SSTV pictures at the same time.

In order for the MONITOR switch to work, you must have the external speaker connection of the radio connected to the MFJ-1279/1279M "Audio from Radio" connector and an external speaker connected to the MFJ-1279/1279M "Radio Speaker" connector.

Remember, when the MONITOR switch is on, the radio's external speaker will always be connected no matter what other front panel switch settings you use.

6.0 SOFTWARE

The CD included with the MFJ-1279/1279M contains a collection of shareware programs that will operate PSK-31, RTTY, SSTV, Packet, AMTOR, CW, and other modes. These programs are shareware.

They are not supported by MFJ Enterprises, Inc. Some programs in the CD are feature limited, some have limited time of use and some are trial versions. Please contact the author to obtain a full version. MFJ Enterprises, Inc. offers two software packages specifically designed for sound cards. These software packages are fully supported by MFJ.

MFJ-1296 RadioCom 4 sound card program for PSK-31, RTTY, SSTV, Packet, AMTOR, and FAX/SatFAX also features DSP filter and Radio Control programs. A RS-232 radio control interface is included.

MFJ-1298 RadioCom 5 sound card program has all the features of the RadioCom 4.0 plus a DSP Audio Filter Analyzer, Spectrum Analyzer, Dual Scope Display, Sound Recorder, Audio Equalizer, Time and Frequency Management, Frequency Analyzer, 3D Scanner, Satellite Tracking, and Radio Control for over 80 receivers and transceivers. An RS-232 radio control interface is also included.

Trail versions of these programs can be downloaded. For more information about the MFJ RadioCom programs, please call MFJ Enterprises, Inc. at 1-800-647-1800 or visit up online at www.MFJEnterprises.com or www.Bonita.net.

7.0 TROUBLESHOOTING GUIDE

Sound Card Radio Interface Will Not Power Up: Check power connections and cables. Also, check the voltage and polarity of your power source--it must be capable of providing 12-15 Vdc at 100 mA.

Station Microphone PTT Function Will Not Work: Check internal microphone PTT jumpers. Read section 3 of this manual. Check to see if the jumpers match the type of transceiver you are using.

Station Microphone has no audio: Check internal microphone PTT jumpers. Read section 3 of this manual. Check to see if the jumpers match the type of transceiver and microphone you are using.

Low or Excessive Transmit Level on digital: Make sure that the *Transmit Level Control, R18*, has been set for the transmitter currently in use. Also, see if the R18 needs adjusting to bring the output level within the transceiver's limits. See section 5 for further details.

Sound Card Radio Interface Will Not Activate PTT line on Playback: Check *XMIT* switch position.

PTT Switch Fails to Halt Message Playback: Check com-port configuration and make sure that you have the software for that function.

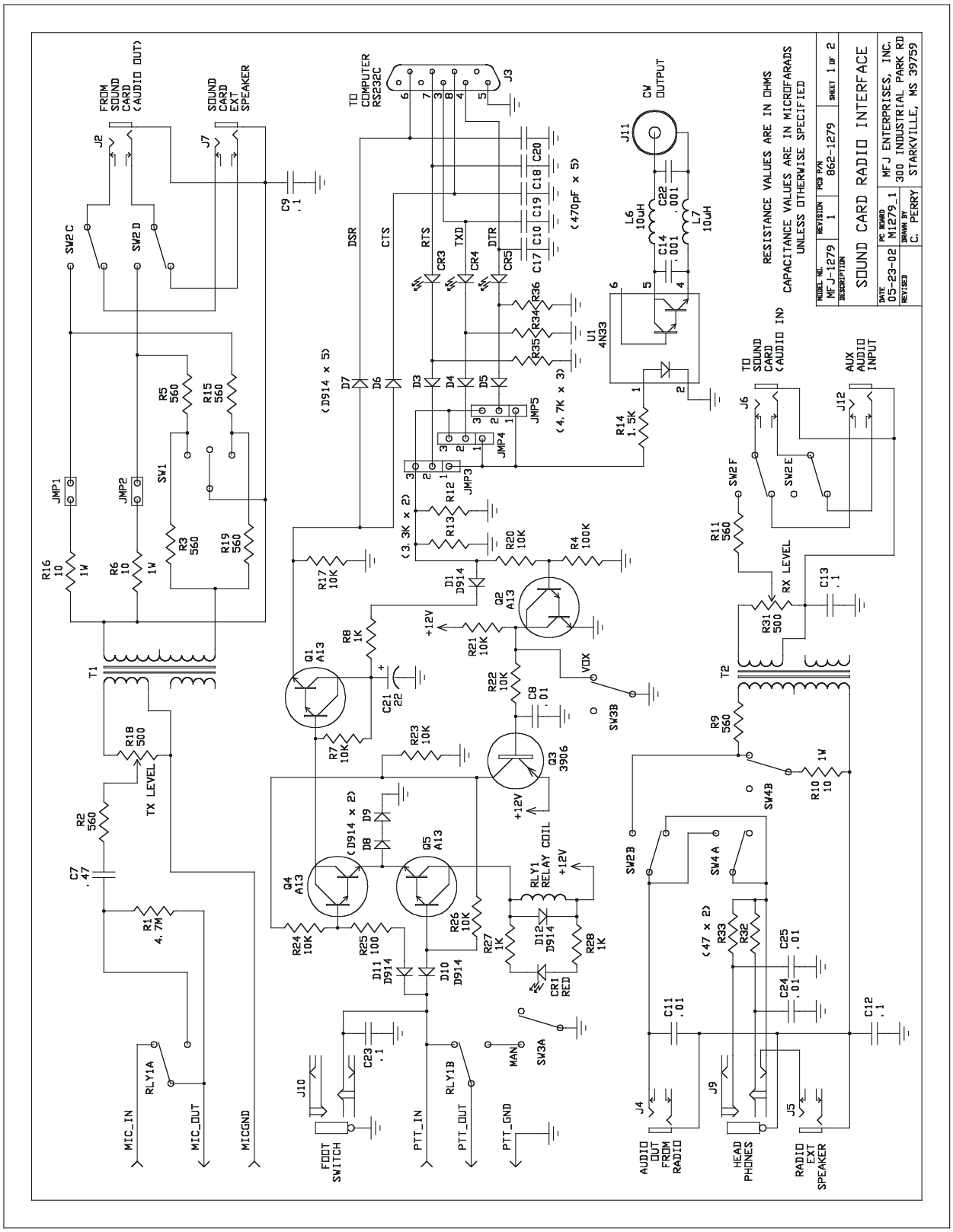
Hum and Distortion: See section 5.0 and check wiring of jumpers (section 3). Also, check that the correct connections have been made with the jumpers.

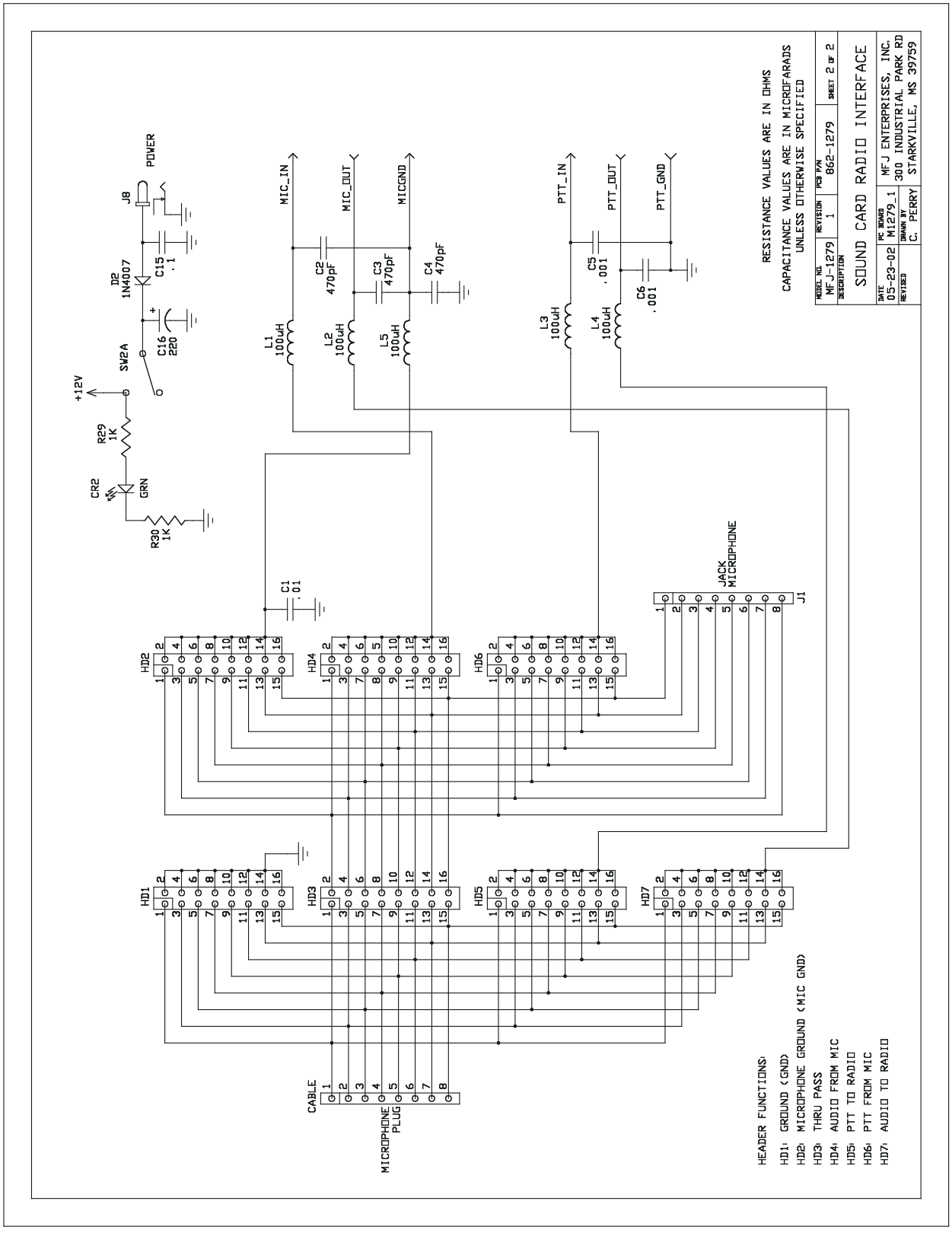
Poor print or copy on good signals, distorted digital recordings: The levels from your receiver may be too high or too low. Check the potentiometer, R31, to insure that it is adjusted correctly (see section 4.2). Also, look to see if the card settings are configured correctly (see section 5). Lastly, check to see if the switches are in the correct position.

8.0 TECHNICAL ASSISTANCE

If you have any problem with this unit first check the appropriate section of this manual. If the manual does not reference your problem or your problem is not solved by reading the manual, you may call *MFJ Technical Service* at **662-323-0549** or the *MFJ Factory* at **662-323-5869**. You will be best helped if you have your unit, manual and all information on your station handy so you can answer any questions the technicians may ask. You can also send questions by mail to MFJ Enterprises, Inc., 300 Industrial Park Road, Starkville, MS 39759; by FAX to 662-323-6551; or by email to techinfo@mfjenterprises.com. Send a complete description of your problem, an explanation of exactly how you are using your unit, and a complete description of your station.

9.0 SCHEMATIC




RESISTANCE VALUES ARE IN OHMS
CAPACITANCE VALUES ARE IN MICROFARADS
UNLESS OTHERWISE SPECIFIED
MODEL NO. MFJ-1279
REVISION 1
PCB P/N 862-1279
SHEET 2 OF 2
DESCRIPTION
SOUND CARD RADIO INTERFACE
DATE 05-23-02
PC BOARD M1279_1
DRAWN BY C. PERRY
REVISED
MFJ ENTERPRISES, INC.
300 INDUSTRIAL PARK RD
STARKVILLE, MS 39759
HEADER FUNCTIONS:
HD1: GROUND (GND)
HD2: MICROPHONE GROUND (MIC GND)
HD3: THRU PASS
HD4: AUDIO FROM MIC
HD5: PTT TO RADIO
HD6: PTT FROM MIC
HD7: AUDIO TO RADIO
MICROPHONE PLUG
CABLE
JACK MICROPHONE
J1
HD1
HD2
HD3
HD4
HD5
HD6
HD7
C1 .01
C2 470pF
C3 470pF
C4 470pF
C5 .001
C6 .001
C15 .1
C16 220
L1 100uH
L2 100uH
L3 100uH
L4 100uH
L5 100uH
MIC_IN
MIC_OUT
MICGND
PTT_IN
PTT_OUT
PTT_GND
D2 1N4007
J8 POWER
SW2A
+12V
R29 1K
R30 1K
CR2 GRN