Some of you may already have the optional Yaesu
FIF-232 interface in which case you should be almost
ready to go. However for those of you that don't
here is a little background information and a few
ideas.

The C.A.T. interface on the back of the FT990 provides
TTL level serial data. As your Macintosh uses RS-232
levels we need to do some form of voltage conversion
between TTL and RS232. As it turns out this is a lot
easier than you might think.

I personally would recommend using the MAX232 chip.
This is really a very clever little device. From a
single + 5 volt supply it will provide full
TTL <> RS232 conversion including the -12 and
+12 lines. It is also capable of providing full
handshaking however as the FT990 does not use any
form of handshaking we don't need to worry about that.

See "Interface Diagram," in the help menu for the
circut diagram.

The only thing we really need to think about is where
to get the +5 volts supply line from. Well you could
always use the 13.8 volts available from pin 7 of the
REMOTE socket on the back of the rig. In case you are
worried about this Yaesu list pin 7 of the REMOTE
socket for been used to power an external device. Put
a 5 volt regulator between the rig and the interface.
It's also a good idea to place a fuse in this line as
the rig can only supply 200mA. To recap, make sure
it's fused, a 100mA fuse should do it, make sure you
use a 5 volt regulator.

If you feel a little nervous about taking power from
the rig try this. Get a battery holder, one that will
take three AA batteries and connect that to the
interface. Yes I know this will only supply 4.5 volts
to the interface but to be honest it's what I'm using
right now and it works just fine, of course if does
mean that you will have to change the batteries every
now and then.

Maplin Electronics here in the U.K sell a RS232 to
TTL converter kit complete with PCB and all parts,

details are,

Maplin Electronics,
Telephone 24 hour sales line.   (0702) 554161

Order Code   Type   Price
LM75S   RS232/TTL Converter Full Kit   £10.75
GD93B   RS232/TTL Converter PCB only   £3.25
AM10L   RS232/TTL Converter Fully Assembled £14.95

*NOTE,
I WILL NOT BE HELD RESPONSIBLE FOR ANY DAMAGE IN ANY
WAY WHAT-SO-EVER CAUSED TO EITHER PERSON OR
EQUIPMENT !

These are the pin/wiring details for the
FT990 <> Maplin Interface <> Macinotsh. However if
you use or build a different interface you should be
able to use the data line names as reference.

FT990 pin #   Maplin pin # (TTL side)
1...................Ground.................4.....Ground
2...................TX Data...............5.....RX Data
3...................RX Data...............2.....TX Data

Maplin pin # (RS232 side)   Mac pin #
6...................TX Data...............5.....RX Data
7...................RX Data...............3.....TX Data
8...................Ground...............4.....Ground

One last thing, I have built a couple of different
interfaces for use with this stack and found the same
problem with all of them. The data output from my
FT990 seems to be a little on the shy side in terms
of voltage swing (+ 5v to 0v). I have found that the
use of a 1K pull-down resistor between the TX data
line from the transceiver and Ground solved this
problem. I usually build this into the interface and
have included it into the interface diagram.