

Re: HowTo Wire Radio Speakers to Audio-In on TV-VCR Combo

Source: <http://sci.tech-archive.net/Archive/sci.electronics.basics/2007-09/msg00001.html>

- *From:* "911 Was An Inside Job" <nobody@xxxxxxxxxxx>
 - *Date:* Fri, 31 Aug 2007 17:04:26 -0500
-

"Don Bowey" <dbowey@xxxxxxxxxxx> wrote in message
<news:C2FDA8B6.758E3%dbowey@xxxxxxxxxxx>

On 8/31/07 9:46 AM, in article 46d845cd\$0\$18997\$4c368faf@xxxxxxxxxxxxxxxx, "911 Was An Inside Job" <nobody@xxxxxxxxxxx> wrote:

"Don Bowey" <dbowey@xxxxxxxxxxx> wrote in message
<news:C2FCBEE0.757DF%dbowey@xxxxxxxxxxx>

On 8/30/07 5:48 PM, in article 46d76556\$0\$32492\$4c368faf@xxxxxxxxxxxxxxxx, "911 Was An Inside Job" <nobody@xxxxxxxxxxx> wrote:

"Don Bowey" <dbowey@xxxxxxxxxxx>
wrote in message
<news:C2FCA4BE.7573B%dbowey@xxxxxxxxxxx>

On 8/30/07 1:25 PM, in article 46d727bd\$0\$18914\$4c368faf@xxxxxxxxxxxxxxxx, "911 Was An Inside Job" <nobody@xxxxxxxxxxx> wrote:

Hello Don,
Thanks for
your time
and your
sage advice.
Take a look
at the
images
of

Re: HowTo Wire Radio Speakers to Audio-In on TV-VCR Combo

the
board for
the radio
and let me
know what
you may
make of
them per the
following...

If
your
AM
radio
uses
an
audio
output
transformer,
find
the
connections
from
it
to
the
speaker,
and
see
if
both
wires
go
directly
to
the
speaker.
If
they
don't
then
one
of
them
is
probably
connected
to
the
systems

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"common"
somewhere.
Connect
it
to
the
shell
of
your
male
RCA
jack.
If
one
is
not
connected
to
common,
connect
it
to
the
shell
of
your
male
RCA
jack.

//SpeakerWire
<http://metromilwaukee.com/images/radio/speakerwire.jpg>

//ObliqueView
<http://metromilwaukee.com/images/radio/obliqueview.jpg>

//TopView
<http://metromilwaukee.com/images/radio/topview.jpg>

<%=
Clinton

"Don
Bowey"
<dbowey@xxxxxxxxxxx>
wrote in
message

Re: HowTo Wire Radio Speakers to Audio-In on TV-VCR Combo

news:C2FC4E42.7570A%dbowey@xxxxxxxxxxxxxxxx

On
8/30/07
9:42
AM,
in
article
46d6f389\$0\$19607\$4c368faf@xxxxxxxxxxxxxxxx,
"911
Was
An
Inside
Job"
<nobody@xxxxxxxxxxx>
wrote:

"clintonG"
<nobody@xxxxxxxxxxx>
wrote
in
message
news:46d6e83e\$0\$18948\$4c368faf@xxxxxxxxxxxxxxxx

I
like
to
record
the
Coast
To
Coast
AM
radio
program
which
airs
on
local
radio
from
12am
to
5am
nightly.
I
have
a
TV-VCR

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combo
that
will
support
recording
an
external
source.

In
the
front
of
the
TV-VCR
there
are
two
female
RCA
[1]
inputs,
one
input
labeled
Video
and
the
other
input
labeled
Audio.

In
the
rear
of
the
TV-VCR
there
are
--
two
pairs
--
of
RCA
inputs,
one
pair
labeled
Audio

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in
and
Audio
out
and
the
other
pair
labeled
Audio
in
and
Audio
out.

I
know
I
can
set
the
TV-VCR
to
Line
1
to
record
input
from
an
external
device.
Can
somebody
help
explain
to
me
how
to
wire
the
speakers
(output)
of
an
AM
radio
to
interface
with

Re: HowTo Wire Radio Speakers to Audio-In on TV-VCR Combo

the
TV-VCR
to
enable
recording
radio
programming
(input)
to
the
VCR?

<%=
clintonG

[1]
http://en.wikipedia.org/wiki/RCA_connector

Okay
searching
the
web
I
just
learned
the
speaker
wires
transmit
power
and
not
a
1:1
audio
signal
as
I
ignorantly
presumed.

The
speaker
wires
carry
an
audio
signal
(an

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AC
voltage)
to
a
low
impedance
speaker
(probably
about
8
Ohms).
The
speaker
impedance
(similar
to,
but
more
complex
than
resistance)
presents
a
load
on
the
voltage,
producing
a
current
flow
in
the
speaker
wires.
The
product
of
the
voltage
and
current
is
power.

Forum
discussions
say
I
must

Re: HowTo Wire Radio Speakers to Audio-In on TV-VCR Combo

use
an
amplifier
inline
i.e.
AM
radio
speaker
wires
-->
amplifier
-->
TV-VCR
Audio
In.

Your
forum
discussion
group
is,
in
my
experience,
wrong
on
this
one

I
don't
really
understand
how
power
can
become
audio
when
amplified

You
should
discard
this
idea.
Further

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study,
if
wanted,
will
explain
the
conditions
much
better.

but
if
that's
all
that
it
is
I
know
I
am
using
an
older
table
top
AM-FM
radio
which
will
need
to
have
an
amplifier
to
record
the
radio's
audio
using
the
TV-VCR.

No
external
amplifier
is
needed.

Your
recorder's
audio
input
has
a
very
high
impedance,
which
means
the
signal
audio
voltage
will
drive
it
easily.

If
your
AM
radio
uses
an
audio
output
transformer,
find
the
connections
from
it
to
the
speaker,
and
see
if
both
wires
go
directly
to
the
speaker.
If
they
don't

then
one
of
them
is
probably
connected
to
the
systems
"common"
somewhere.

Connect
it
to
the
shell
of
your
male
RCA
jack.

If
one
is
not
connected
to
common,
connect

it
to
the
shell
of
your
male
RCA
jack.

Connect
one
end
of
a
low
power,
100,000
Ohm
resistor
(radio

shack?)
to
the
other
speaker
wire.
Connect
the
other
end
of
the
resistor
to
the
center
pin
of
the
RCA
jack.

Turn
the
radio
volume
down
low,
and
plug
the
RCA
jack
into
the
audio
input
of
your
recorder.
While
recording,
turn
the
radio
volume
up
to
a
usable
level.

So
what
might
be
your
recommendation
for
the
least
expensive
amplifier?
I'll
be
calling
Radio
Shack
to
learn
what
may
be
learned.
Thanks
for
your
time...

<%=
clintonG

I can't tell if the transformer
shown is a power
transformer or an
audio
output transformer. If you
can't trace the wire by eye,
or check it
with
an
Ohmmeter..... Hmmm!

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Do you have a Volt/Ohmmeter? If yes, then first measure for voltage (AC and DC) between the outer shell of the audio input jack, and each of the radio speaker wires. If there is no voltage, then measure for resistance between the same points. If there is no voltage and no continuity (n low resistance) then it doesn't matter which wire goes where.

Otherwise..... Do you have a soldering iron?

Have soldering iron and good at soldering but no meters.

Ok. Won't need soldering iron then.

What does the large obstructive metal shield wrapped around the transformer imply?

That there is a honking big get-hot transistor mounted on it, needing to shed it's heat to the surroundings.

Load the SpeakerWire.jpg and ObliqueView.jpg links above. Any inference regarding the determination of transformer type which may be deduced?

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No, I can't see enough detail to be sure. If you can't see if the speaker wires are connected to it (or that the AC power is wired to it via the power switch), let's ignore it.

Your comments regarding my reply to a headphone hack as suggested by Meat Plow? Doesn't sound plausible or consistent with what I've learned from your earlier comments. Jees, this topic deserves to be blogged for posterity!

Actually, if you could put in a jack that opens the path to the speakers when a plug is inserted, that would be ok and you might like it because the speakers would be off while you are recording. Or just add a jack in parallel with the speakers, but the speakers will be on while you record.

A jack is optional hardware. However, see below.

Since we have no schematic, no meter, and don't know how the amplifier output interfaces the speakers, and don't know whether the radio or recorder is AC/DC, there is a safety hazard in going further with the simple plan.

Instead, go to radio shack and buy their el-cheapo 8 Ohms to 1000 Ohms audio transformer. Connect the 8 Ohm connections to the speaker wires (with or without a jack), and connect the 1000 Ohm transformer wires to the RCA plug

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for connection to the recorder. That is not only safe, but the quality of the sound may be a bit better.

No 8 Ohm to 1000 Ohm audio transformers to be found in stock by any electronics or audio shops around Milwaukeeville. Typical for this deadbeat region. So working both angles here and with the Meat Plow mic --> amp suggestion but at stand still with TV-VCR which just won't record for me using Line 1 or Line 2 from Audio In noting all other recording is a-okay. Stumped for now but appreciate the time and attention. I'm going to work this out one way or another...

Just a thought – Are you sure a VCR will record audio without the presence of video?

Duh. As it turns out I called the company supporting BrokSonic TV-VCR combo later this morning and they told me recording would in fact be mute without a video channel. So this project has crashed and burned for the moment and I have to try to cobble together other equipment. Thanks so much for your time and efforts...