

TALKING HOUSE /

RADIO SYSTEMS

OPTIONAL ACCESSORY

ANTENNA TUNER / RANGE EXTENDER

MODEL NO. I A.M. -ATU

BUILT BY

TALKING HOUSE/ REALTY ELECTRONICS, INC.

OBSOLETE ADDRESS & CONTACT

REALTY ELECTRONICS, INC.

195 N. MAIN STREET FOND DU LAC, WI 54935

PHONE 800-444-8255 OR 920-922-4800 FAX 888-923-6222 OR 920-923-6222

PURCHASED BY RADIO SYSTEMS

Contact Radio Systems

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COMPILED BY JEFF MORRISON APRIL 22, 2015

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**RESPONSE FROM KATIE AT RADIO SYSTEMS ABOUT THE
I A.M. - ATU RANGE EXTENDER OUTDOOR UNIT**

April 22, 2015

As of 5/30/14 we sent the last I a.m. - atu out the door. In regards to when we stopped making them, we had them made previously and when we ran out of stock that is when they were discontinued. The outdoor transmitter that we offer is the transmitter built into a weather proof box that has an 8 foot antenna that directly attaches to the box to give the extended range. It also allows you to remotely record onto it via an external audio source since it is usually mounted high up to have less interference with surrounding homes, buildings or trees.

April 22, 2015

Also I dug a little deeper to find out we did not even actually make the ATU here. When we bought out talking house there entire stock was given to us and we sold it until we had no more. So I will not be able to get or give you schematics since we don't have them.

April 22, 2015

TALKING HOUSE / REALTY ELECTRONICS. INC. :

They are no longer in business so we have no information for that on the i a.m.-atu.

**NOTE: TALKING HOUSE & REALTY ELECTRONICS, INC. & PILOT COMMUNICATION CORP.
Is the same company.**

**RADIO REALTY is a product created by
New Pilot Communications Corporation in 15612 Hwy. 7,
Minnetonka, MN, 55343.**

Talking House®

FAX COVER SHEET

PHONE
VOICE:
 800-444-8255 (free)
 920-922-4800
FAX:
 888-923=6222 (free)
 920-923=6222

THIS FAX IS TO:

Remote Antenna (ATU) Hookup Diagram



THIS FAX IS FROM:

REGARDING:

DATE

NUMBER OF PAGES

OUR ADDRESS

**Realty
 Electronics, Inc.**

195 N. Main Street
 Fond du Lac, WI
 54935

#1) Move Remote Antenna Selection Switch to "Yes"

#2) Attach Coax to Remote ATU Connector

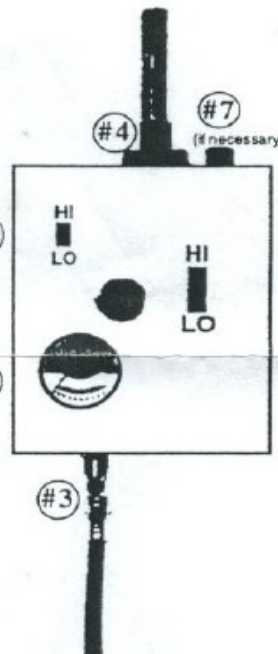
#3) Attach Coax to the ATU

#4) Attach 8' Whip Antenna to ATU

#5) Remove four (4) screws on ATU cover and select "Hi" or "Lo" on switch.
 If transmitting over 1000 KHz="Hi"(e.g. 1620)
 If transmitting under 1000 KHz="Lo"(e.g. 870)

#6) Turn black knob to peak Vu meter. Normally 7 to 9 depending on Frequency selected (note...do not touch antenna while tuning... that will change the output)

#7) If you do not get enough distance you may need to attach a ground wire from earth ground to the ground screw (next to antenna)



Some examples of earth ground:

- The center screw that holds the cover on a wall electrical outlet.
- Plumbing, water pipes.
- A copper ground rod driven into the earth.



OUTDOOR ANTENNA KIT

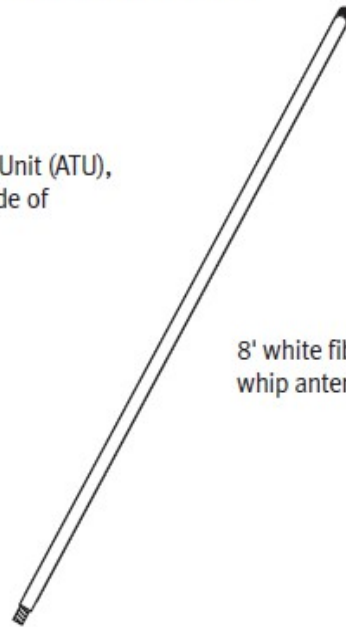
Instruction Manual

Outdoor Antenna Kit

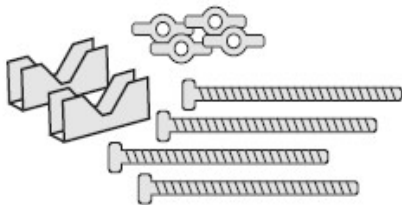
The Outdoor Antenna Kit moves the antenna outside the obstructions caused by the walls of the location, and typically, increases the distance of the signal, allowing you to reach distances of up to a quarter-mile. The Outdoor Antenna Kit contains:



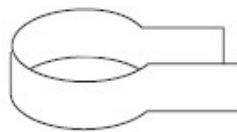
Auxiliary Transmitting Unit (ATU),
3" x 4" x 5" cube, made of
weatherproof plastic



8' white fiberglass
whip antenna



Pole mount hardware kit, jaw/vises type
pole clamp and wing mounts

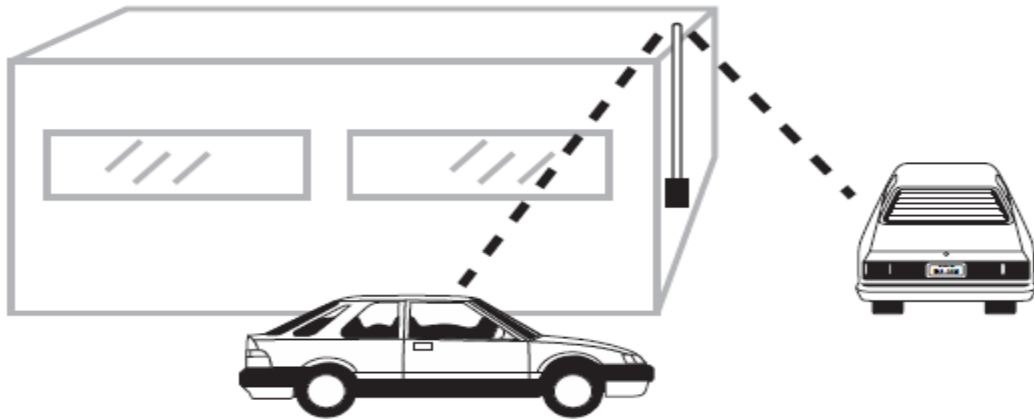


Plastic antenna
securing fastener

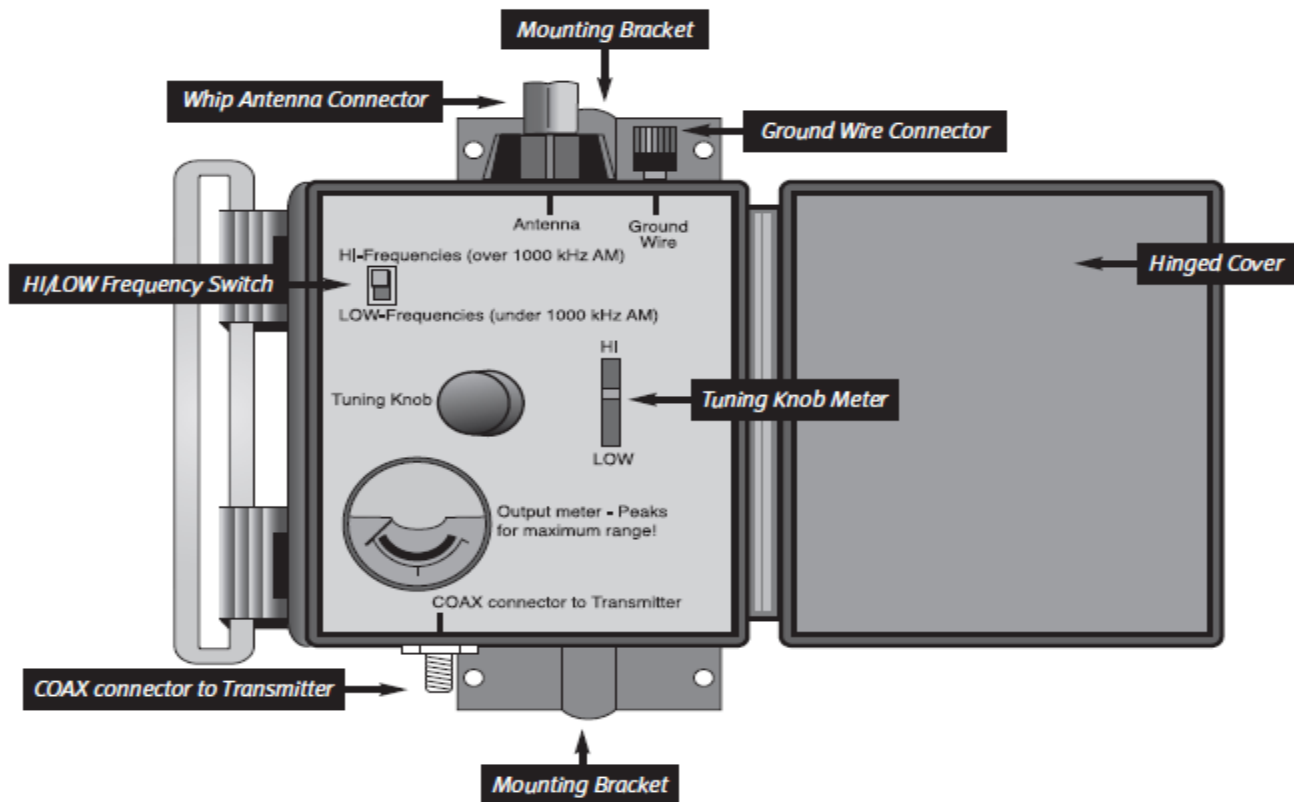


100' coaxial cable

Placement. The Outdoor Antenna should be mounted directly to the outside of a building in an inconspicuous location within sight of where you want your messages to be heard. It typically allows you to significantly increase your signal distance because the signal is no longer being hindered by the building materials of the structure. You do not want to mount the Outdoor Antenna behind the building where cars will be tuning-in since AM radio signals broadcast in direct line of sight. The higher the antenna is placed, the further the signal will broadcast.



The ATU. The following is an illustration of the ATU and its parts.



Temporary Mounting of the Outdoor Antenna. Use the steps below to temporarily mount the Outdoor Antenna at a location, using the pole mount method. This would be used any time you need some extra distance to reach listeners at a location where the Transmitter is likely to be moved after a short period of time.

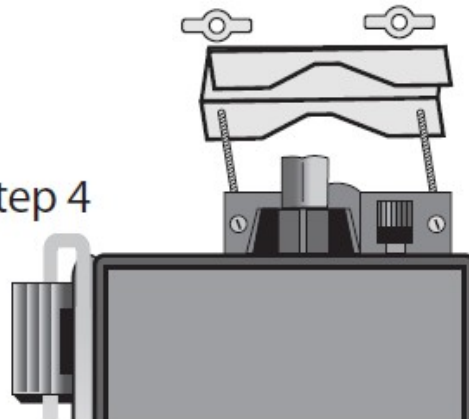
| Step | Action |
|------|---|
| 1 | You'll need to purchase a five-foot length of one inch diameter metal pipe in a five foot length and drive this into the ground where you want the antenna installed. |
| 2 | Open the pole mount hardware kit (supplied). |
| 3 | Place the 4 screws through the screw holes in the Mounting Brackets on the ATU box. |
| 4 | Attach one pole clamp onto the top screws, and one pole clamp onto the bottom screws, so that the jaws are facing the ATU. Slightly tighten the wing nuts to prevent the clamps from falling off. |
| 5 | Slide the clamps over the pole and fully tighten the wing nuts. |
| 6 | Screw the fiberglass whip antenna onto the top of the ATU. |



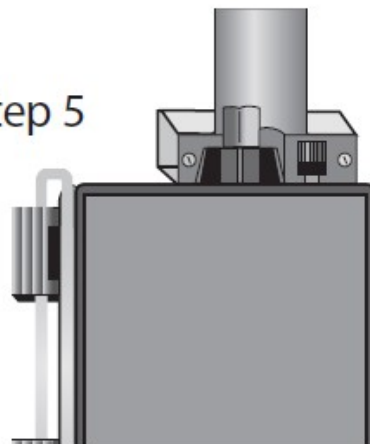
step 3



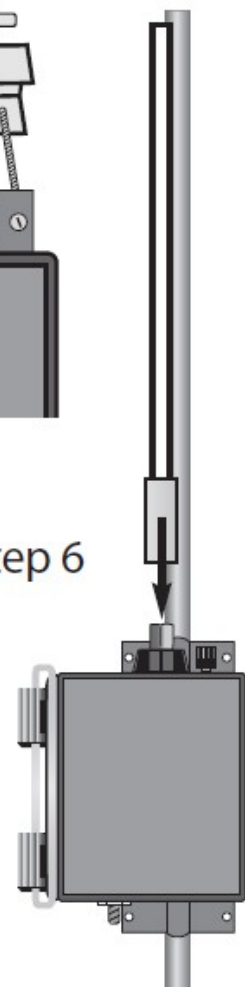
step 4



step 5



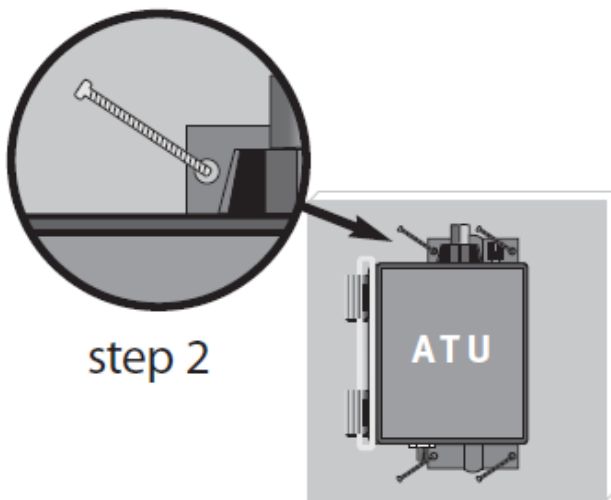
step 6



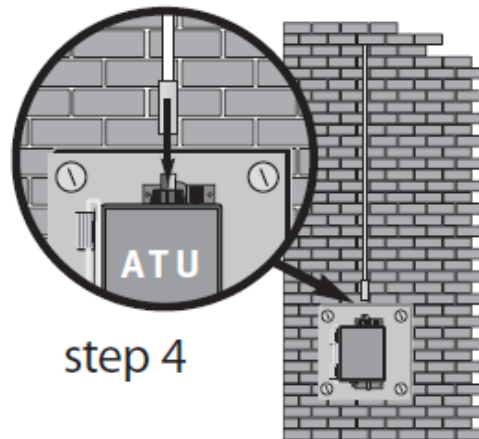
TIP:
Remember that the higher you mount the antenna from the earth, the further your signal can reach.

Permanent Mounting of the Outdoor Antenna. Use the steps below to permanently mount the Outdoor Antenna to a building. This would be used any time you need some extra distance to reach listeners at a location where the Transmitter is likely to remain for an extended period of time.

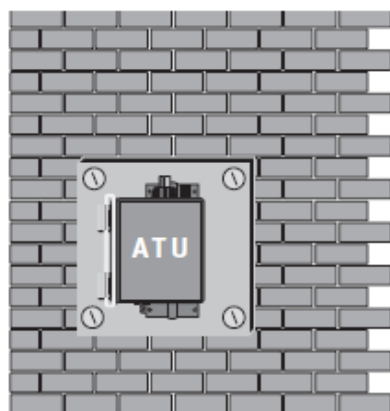
| Step | Action |
|------|---|
| 1 | You'll need to purchase: <ul style="list-style-type: none"> • 1 sq. ft. pressure treated wood • 4 wood screws to attach the ATU to the piece of wood • Screws to mount the wood plate and ATU to the building's exterior |
| 2 | Using the wood screws, attach the ATU to the wood square through the Mounting Brackets on the top and bottom of the ATU |
| 3 | Mount the wood square to the building. |
| 4 | Attach the whip antenna onto the Whip Antenna Connection on top of the ATU. |
| 5 | Secure the top of whip antenna to the building, with the plastic whip antenna securing fastener, to prevent whipping or bending. |



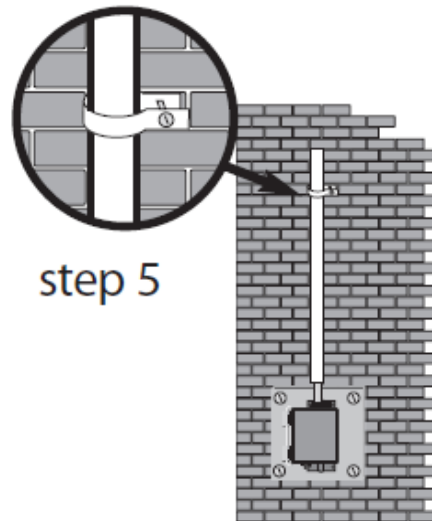
step 2



step 4



step 3



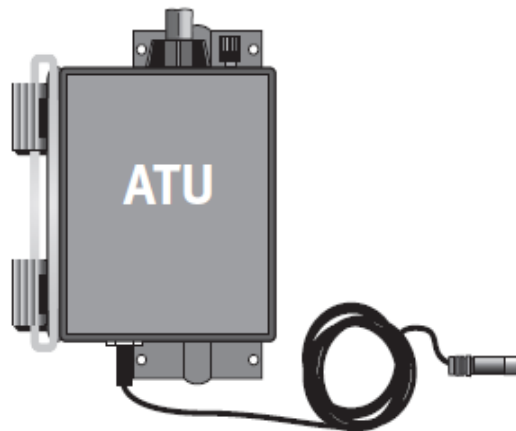
step 5

Connecting the Outdoor Antenna to the i A.M. Radio Transmitter. Follow the steps below to connect the Outdoor Antenna to the i A.M. Radio Transmitter.

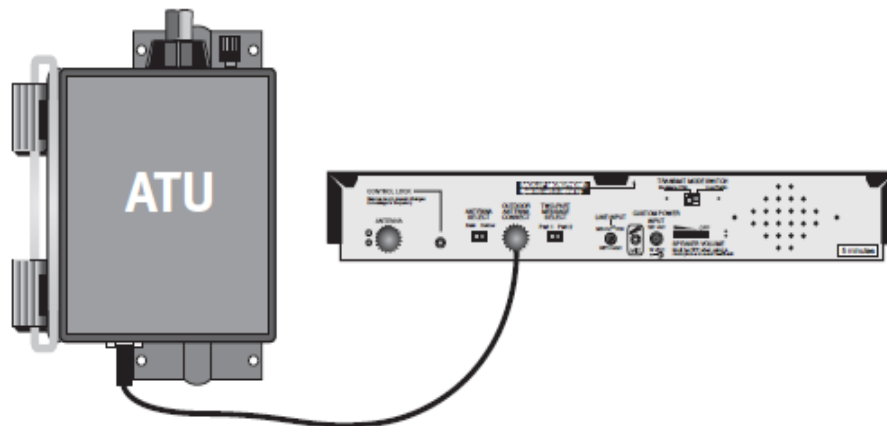
NOTE: The Coax Cable that attaches the Outdoor Antenna to the i A.M. Radio Transmitter comes in 100' length. Do not attempt to adjust the length of the cable by cutting it. This will jeopardize performance. You may coil any extra cable and secure it with a tie.

| Step | Action |
|------|---|
| 1 | Connect one end of the Coax Cable to the COAX Connector on the bottom of the ATU. |
| 2 | Connect the other end of the Coax Cable to the Outdoor Antenna Connect located on the back of the i A.M. Radio Transmitter. |
| 3 | Remove the clear plastic protector from the Antenna Selection Switch located on the back of the Transmitter and move the switch to Outdoor. RESULT: You will now see a red light on the Display Panel located on the front of the Transmitter, indicating that the Outdoor Antenna is now in use. |

step 1



step 2

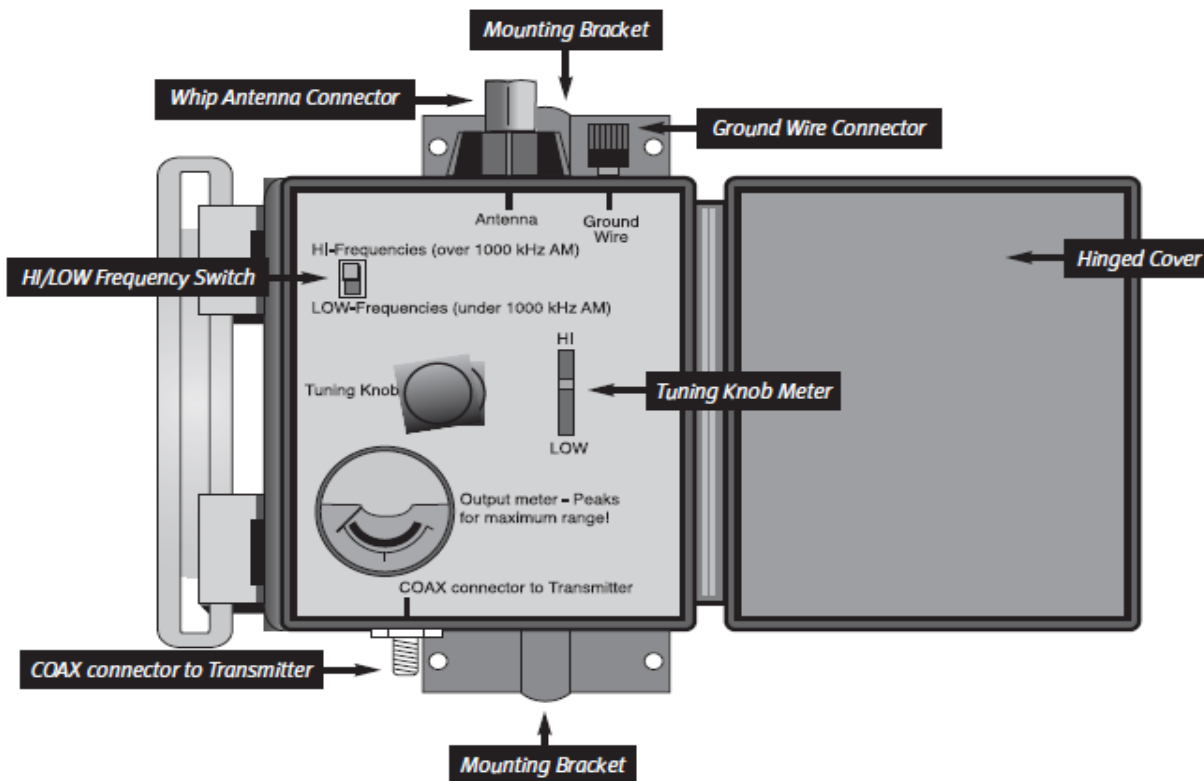


step 3



Tuning the Outdoor Antenna. Follow the steps below to tune the Outdoor Antenna.

| Step | Action |
|------|--|
| 1 | Make sure that the Transmitter is operating inside the location and is set to your chosen frequency. |
| 2 | Open the cover of the ATU. |
| 3 | Select HI or LOW on the HI/LOW Frequency switch. If you are broadcasting on a frequency: <ul style="list-style-type: none"> • OVER 1000 KHz (e.g. 1620) select HI • UNDER 1000 KHz (e.g. 870) select LOW |
| 4 | Turn the Tuning Knob on the ATU until the needle on the Output Meter peaks at its highest number. NOTE: Don't worry if you cannot get to 10, anything 6 or higher is good (Typical is 7-9). Do not touch antenna while tuning, it will cause the output to change. |
| 5 | Close the cover on the ATU box. NOTE: Anytime you select a different frequency on the transmitter you will need to open the ATU cover and re-peak the meter so that the antenna is tuned to the new frequency. |
| 6 | For best performance,, you may want to attach a wire (not supplied,) from the the Ground Wire Connector on the top of the ATU to an earth ground. Some examples of earth grounds are: <ul style="list-style-type: none"> • The center screw that holds the cover on a wall electrical outlet. • Plumbing, water pipes (metal). • A copper ground rod driven into the earth. <p>Please note that Part 15 FCC regulations do not allow an antenna in excess of 3 meters in length and most usually the ground wire length must be considered by adding its length to this total antenna measurement calculation.</p> |



i A.M. radio



Model #IAM-Transmitter

- **FCC CERTIFIED***

No license required. Just plug it in and you're on the air

- **Frequency Agile**

Just dial-up one of 117 AM stations on the front panel display

- **Internal Audio Storage**

5 minutes of built-in digital message storage

- **Patented Antenna Tuner**

Automatically matches to antenna for maximum range

- **Outdoor Antenna Range Extender**

10 ft. whip antenna and antenna tuning unit for up to one mile coverage

- **Built-In and Remote Microphone**

Record your message or transmit live

- **External Input**

Broadcast from any audio mixer via the unbalanced 1/8" phone connector

*Broadcast Regulations

The i A.M.- radio Transmitter may be used license-free in the United States under Part 15 of the Federal Communication Commission which allows the use of 100mw final output power into no greater than a three meter antenna in the AM commercial broadcast band. Consult applicable regulations in other countries for approved use.



Optional Accessory
Antenna Tuner / Range Extender
Model # IAM-ATU
Includes 100' coax cable

radio
SYSTEMS



Specifications

| | |
|--------------------|------------------------|
| Range*: | 300-3000 ft. |
| Frequency Choices: | 530-1700 AM |
| Message Length: | Up to 5 min. |
| Message Storage: | Solid State |
| Microphone: | Built-in and hand-held |
| Size: | 8" x 14" x 3" |
| Weight: | 4 lbs. |
| Antenna: | 3 meters |
| Power: | 110AC/12v DC |

Included Accessories



Transmitter Power Supply
Model # IAM-Power Supply



Transmitter Hand-held Mic
Model # IAM-Mic



Indoor AM Antenna
Model # IAM-Indoor Antenna



FRONT VIEW, CASE



Optional Accessory
Antenna Tuner / Range Extender
Model# IAM-ATU
Includes 100' coax cable



SIDE VIEW, LATCH & HINGED SIDE



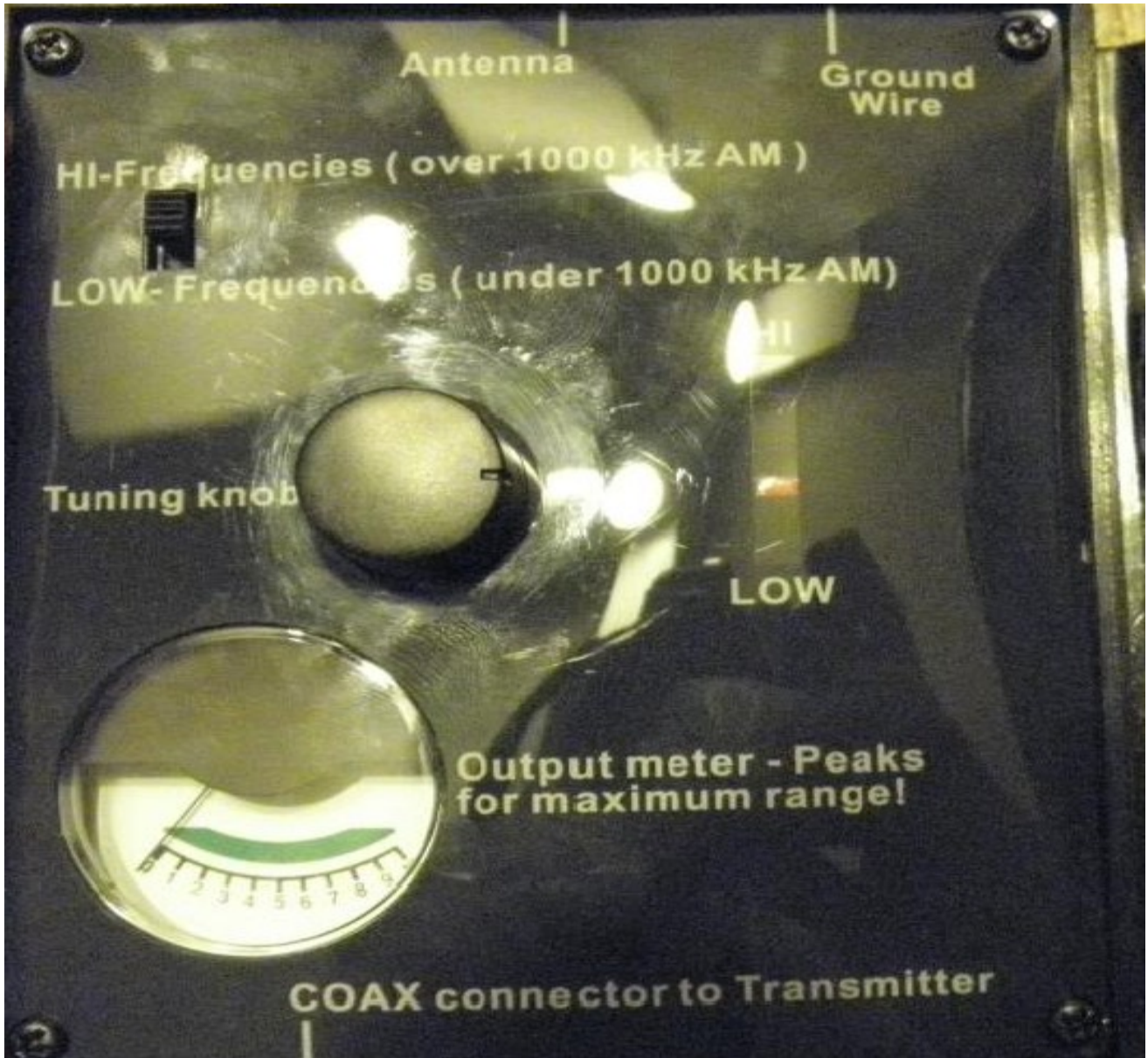
CONNECTORS VIEW, TOP & BOTTOM OF I A.M. - ATU



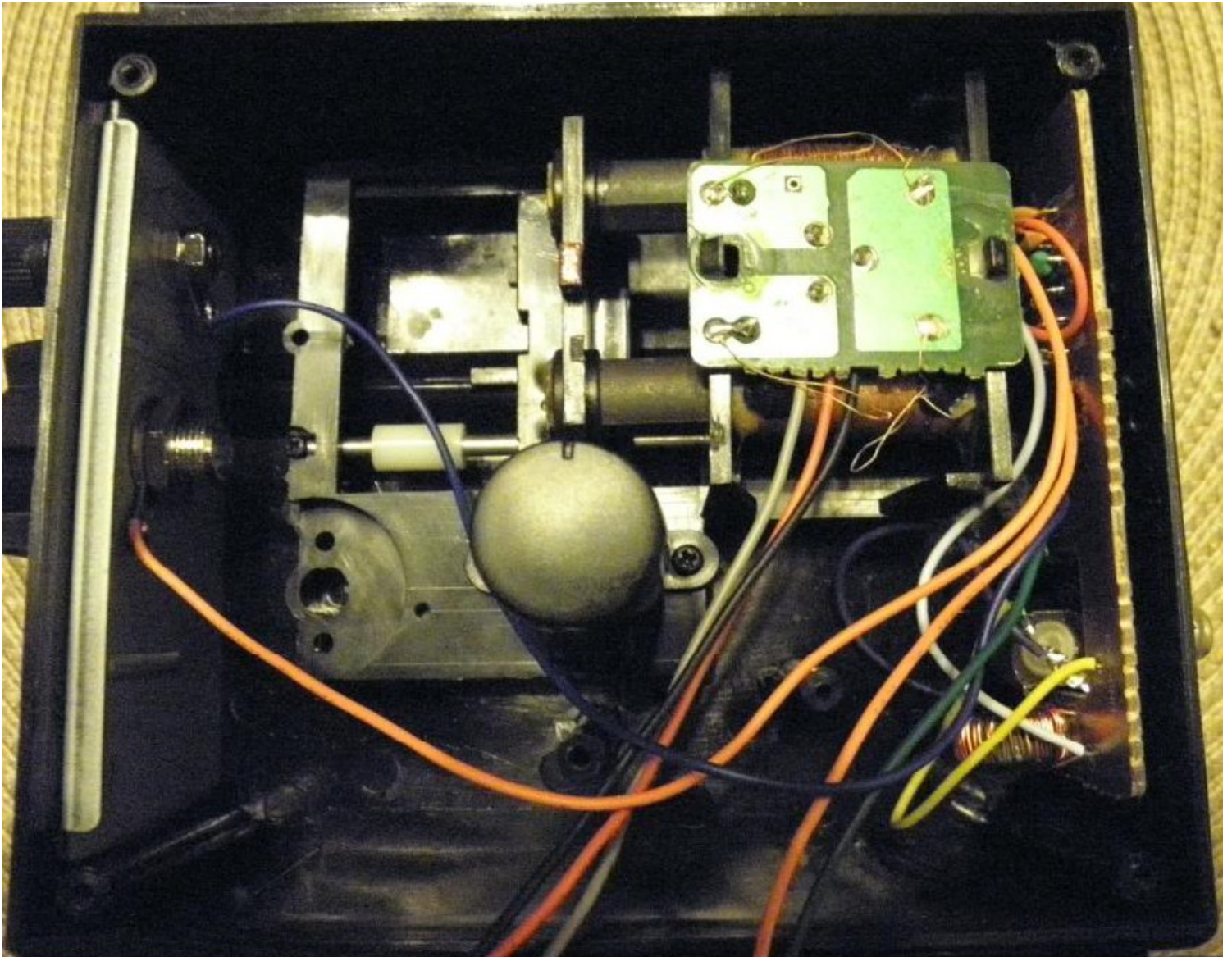
BOTTOM VIEW, I A.M. - ATU



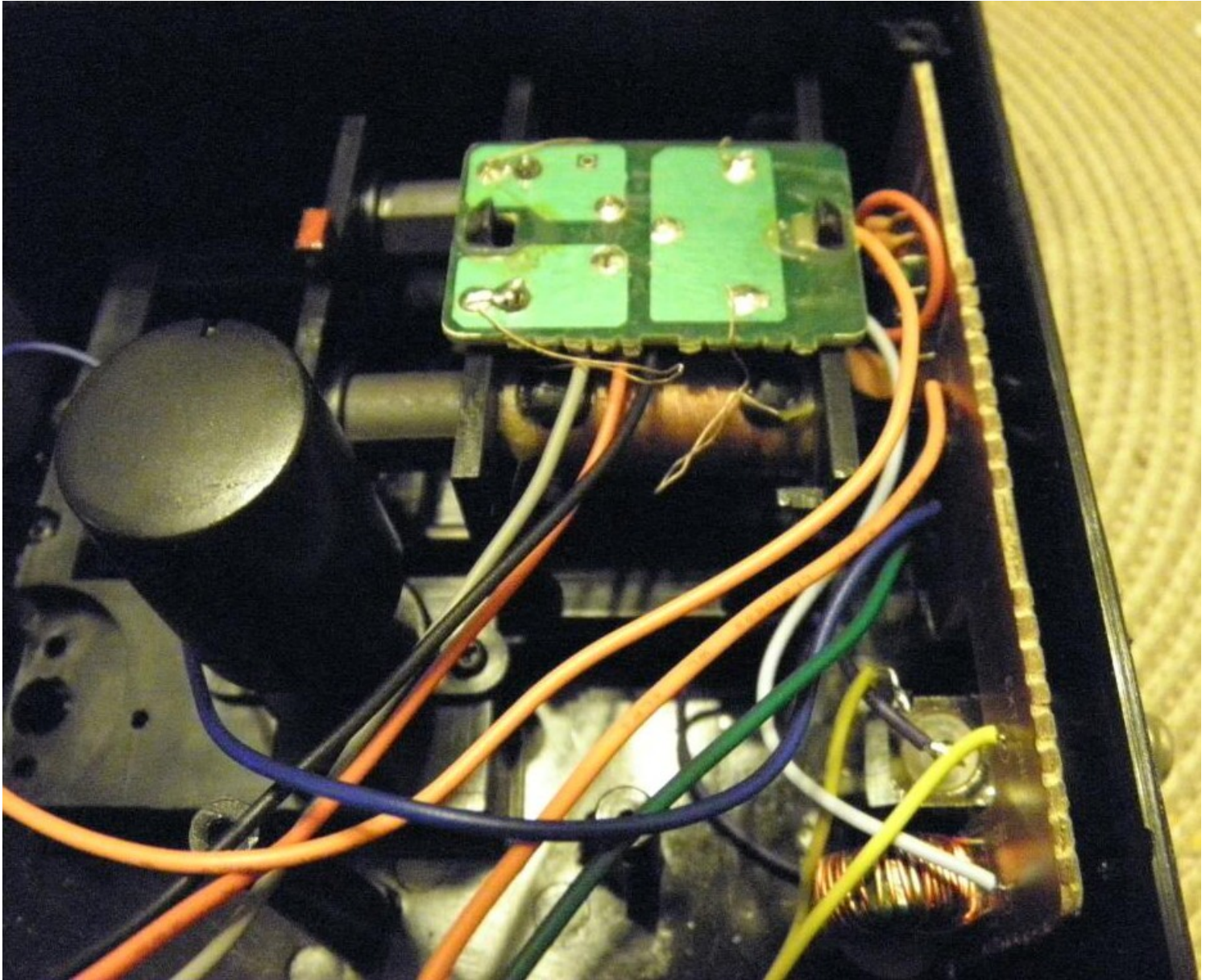
FRONT VIEW, I A.M. - ATU PANEL



TOP VIEW, INSIDE I A.M. - ATU



TOP VIEW, CIRCUIT & MECHANICAL TUNER



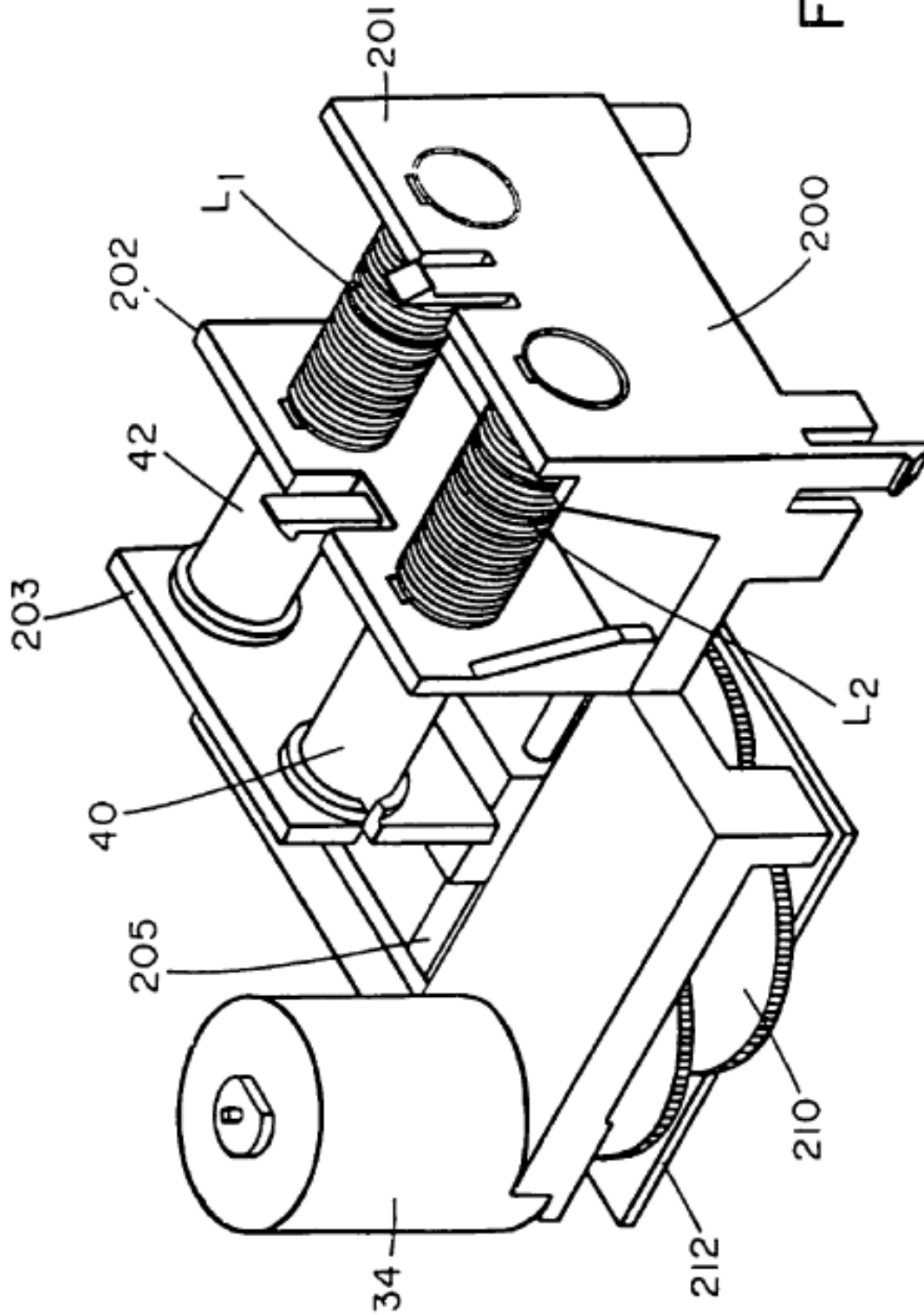


FIG. 6

DRIVE UNIT, ANTENNA MOTOR SCHEMATIC

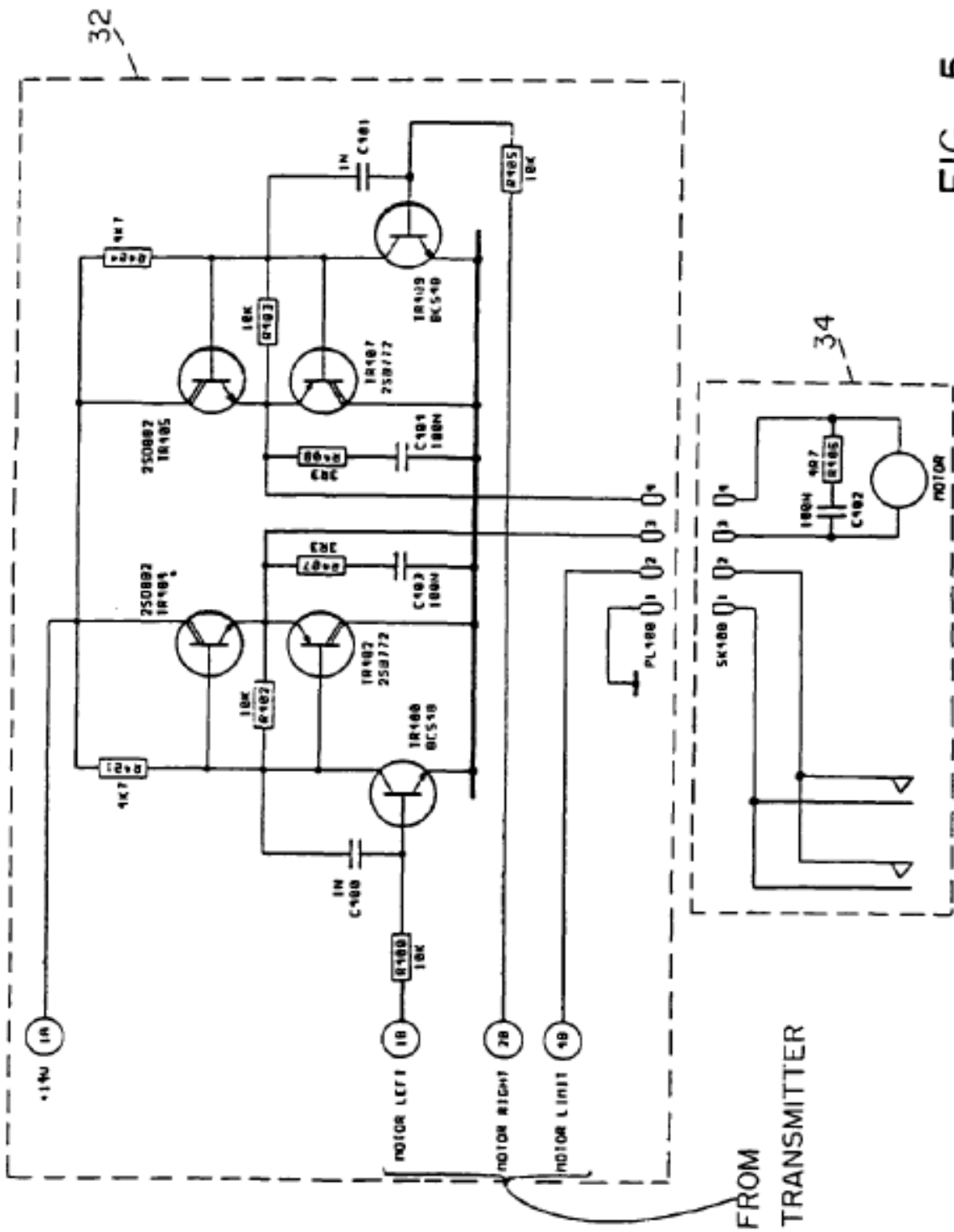


FIG. 5

SCHEMATIC, ATU

U.S. Patent

Dec. 6, 2005

Sheet 9 of 11

US 6,973,294 B1

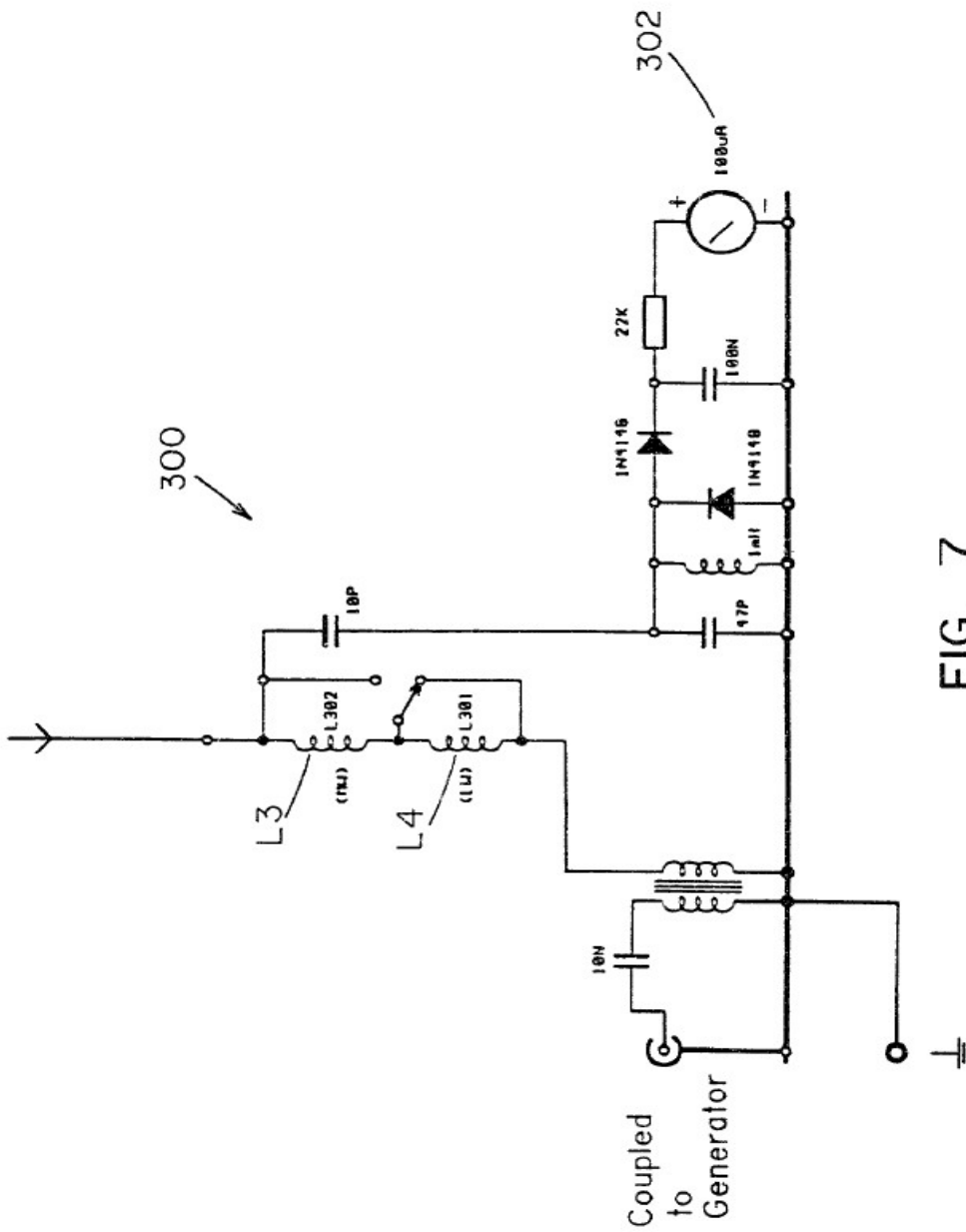


FIG. 7