



Ford Studiosonic Sound Systems 1962-69

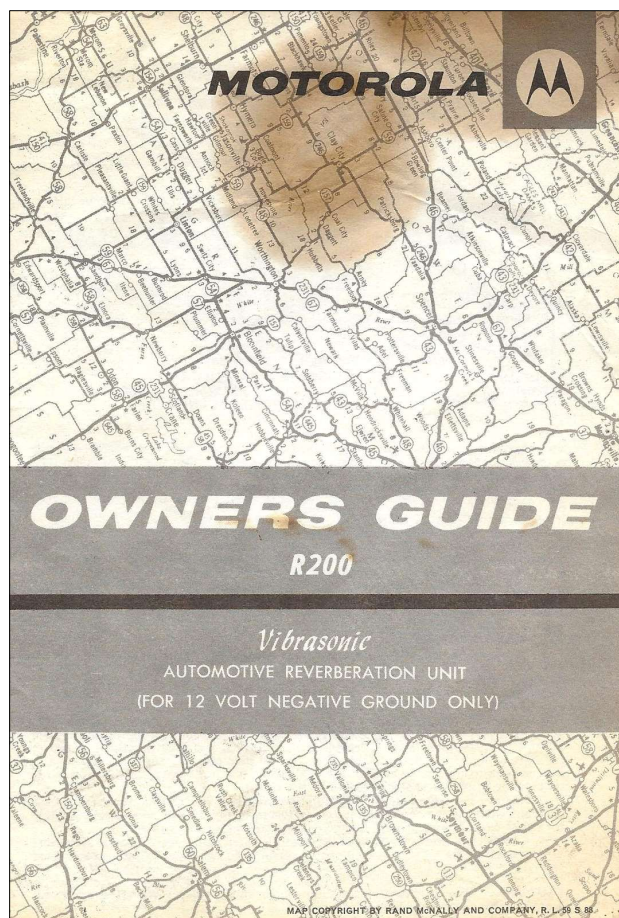
General History

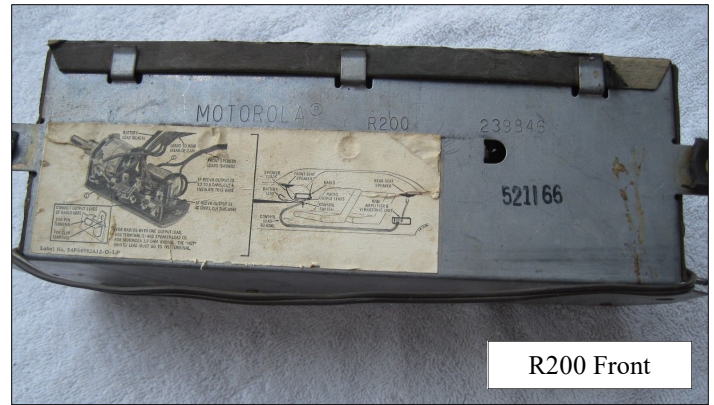
When Reverberators first came out, or at least when I was first aware of them, it was the early 60's and I was in High School. Now what could have been more cool than "making the rounds" (wording prior to "Cruising"), with your favorite AM radio station "reverberating" for all to hear - particularly in a Convertible. However, "back then", most Convertibles didn't have provisions for Rear Seat Speakers (which are required for the reverberation effect). Mine was even more of a challenge as it wasn't "just a Convertible", but a 1957 Ford Retractable. After minor modifications to the inner rear quarter structure (3/16" steel) using continuous drill bit holes to make a larger one (I didn't have hole saws then), I finally had openings to receive the magnets for the two 4" speakers.

In the Summer of 1963, I purchased a Motorola R200 Vibrasonic Reverberator and installed it. Over the next year and a half or so, I made minor customizing changes to the '57 (nothing too drastic that I couldn't change back to original "down the road"). Well, "down the road" came in 1976. Ironically, this was the same time that I purchased my 1966 Mustang (actually so I'd have another "fun car" to drive while restoring the '57). Of course, one of the "non-original" items that I removed from the '57 was the Reverberator. Not wanting to throw it away, or just set it on the shelf, I installed it in my Mustang.

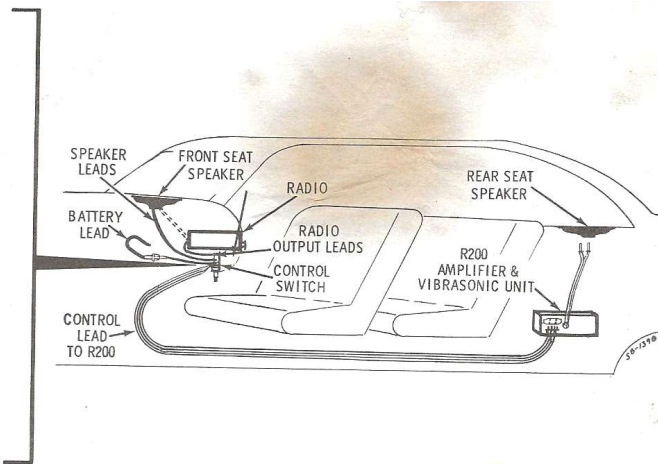
After acquiring my Mustang, I did what I had done with the '57 (and all of the other cars that I subsequently purchased), and began acquiring all of the original Ford

literature, etc. that I could that pertained to my '66. Imagine my surprise when I found that Ford offered a Reverberator ("Studiosonic Sound System" in Ford's language) as an Accessory in 1966, and it was made for Ford by Motorola. Over the following 40 years, I have acquired a considerable amount literature, along with knowledge about not only the aforementioned cars along with their available Options and Accessories, but also for the additional ones we have purchased and own, including my 1967 Mustang Convertible.





R200 Front



D) SPEAKER INSTALLATION:

1. Provision has already been made in the rear deck of many cars for the installation of a rear speaker. If you have this situation, simply cut away the rear shelf covering material (from inside the trunk), using the opening in the rear deck as a guide. If this opening does not exist, use the template provided in the kit.
2. Punch or drill rear speaker mounting holes through the rear deck covering.
3. Mount speaker and speaker grille, using the four 8-32 machine screws, with the 8-32 nuts and #8 lockwashers provided.

E) INSTALL R200 VIBRASONIC UNIT:

1. Pick a location inside the trunk compartment where the R200 can be installed lengthwise, either on the trunk floor, on a fender well, or on a body frame, where the output leads will reach to the rear speaker location. If you choose the floor, check beneath it before drilling (for gas tank, spare tire, etc.).
2. Use the R200 as a template to locate the mounting holes. Drill two 5/16" holes, and use the two #10x5/8" tapping screws provided for mounting.

F) ELECTRICAL CONNECTIONS:

1. Run the four-wire lead (from the control switch) beneath the floor covering and plug it into the receptacle on the R200.
2. Connect the speaker leads from the R200 to the terminals of the rear speaker.
3. Connect the battery lead from the control switch to the accessory terminal of the ignition switch (the battery lead carries its own SFE 9A fuse).
4. Check to be sure you have already connected the leads from the control switch to the front speaker.

NOTE: THE CAR OWNER SHOULD BE INSTRUCTED NOT TO ALLOW METAL OBJECTS TO TOUCH THE EXPOSED TRANSISTOR (ON THE SIDE OF THE R200 UNIT), AS THIS MAY SHORT OUT AND CANCEL THE VIBRASONIC EFFECT.

G) OPERATION:

1. Turn on the radio. The radio volume knob controls the output of the radio and, specifically, of the front speaker.
2. The pull-push control and switch provides three functions: (1) an on-off switch (pull "ON", push "OFF"); (2) full variable loudness control of rear speaker, without Vibrasonic (counter-clockwise from center), and (3) full variable loudness control, with Vibrasonic (clockwise from center). The rear speaker remains off when this control is in the center position, but the amplifier may remain on.



R200 Rear



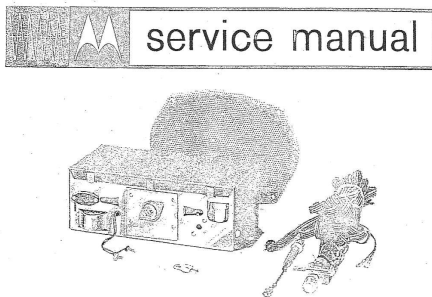
Pictures of Switch Bracket furnished with Motorola R200



MOTOROLA

vibrasonic system MANUAL 68P64980A21
auto radio MODEL R200

service manual



GENERAL INFORMATION

The R200 Vibrasonic system is designed to be installed in any automobile with a 12 volt negative ground system that has a previously installed AM or FM radio. This unit is designed to match any radio whose output impedance is either 3.2 to 8 or 40 ohms.

The unique design of the Vibrasonic system circuitry provides a choice of two (2) modes of operation with a single control: clockwise rotation controls the "Vibrasonic amplifier", counterclockwise rotation controls "rear speaker output" (fader control) without Vibrasonic, center position of control turns rear speaker "off". A pull-push on-off switch is ganged with this single control to remove power from the Vibrasonic system when not in use.

The newly designed Vibrasonic unit is the heart of the Vibrasonic system. Its reduced size minimizes noise generated through shock and allows the design of a compact chassis installation. Soft sponge polyurethane pads are used to further supplement the springs that mount the Vibrasonic unit to dampen and virtually eliminate noise generated due to shock.

The complete Vibrasonic system consists of a two stage transistorized amplifier, a Vibrasonic unit and an installation kit which consists of a flat (4) four conductor wire harness with attached control assembly, speaker, grille, adapters and necessary mounting hardware.

The harness supplies the power required by the Vibrasonic amplifier and serves to complete the control circuit to the Vibrasonic amplifier.

The Vibrasonic chassis (amplifier and Vibrasonic unit) mounts to the trunk floor or fender well. For detailed installation instructions, see the "Installation Instructions" section.

TRANSISTOR COMPLEMENT:
MNS3 Driver
SP486 Power Output

SERVICE STATION PROCEDURE

1. A Motorola Branded Model is one that has the Motorola name, and distributed to dealers through the Motorola Distributors.
2. This model is guaranteed for all parts and labor, including removal and re-installation (R & R) for a period of one year from the date of purchase. The following repairs are not covered under this guarantee: the elimination of motor noise, tire static, electrical interference, and faulty installation. Charges for these repairs are to be paid by the customer.
3. Before performing a warranty repair on a Motorola Branded Auto Radio, you must first receive the Customer's Car Radio Guarantee and Service Booklet. The installation and model information on the booklet must be filled in by the selling dealer at the time of retail sale. The Customer's Car Radio Guarantee and Service Booklet must show that the radio is within the warranty period to be repaired under the Motorola Auto Radio Guarantee.
4. To obtain your labor allowance for the servicing of the customer's in-warranty set, fill in the Motorola Auto Radio Warranty Labor Claim, Part Number 34P6498084. If you perform a R & R service, you are entitled to the R & R allowance, if you only repair the radio without

R & R service, you are entitled to the labor allowance. However, if you perform both R & R and the repair, then be sure to indicate both on your claim form for both allowances. After the form has been filled in, mail the white and green copies to your Motorola Distributor for payment. The yellow copy is to be retained in the Service Station file.

5. The pink copy of the Motorola Auto Radio Warranty Labor Claim is used to return any defective parts on the repair of the radio to your Motorola Distributor for free replacement.

6. Only those service stations authorized by their Motorola Distributor can perform repairs within the warranty period on a no-charge basis to the customer. If you are not an Authorized Motorola Auto Radio Service Station, and you are interested in handling this service, please contact your Motorola Distributor for complete details.

SERVICE NOTES

1. **POLARITY - WHEN SERVICING THIS AMPLIFIER, THE "A" LEAD MUST BE CONNECTED TO THE POSITIVE SIDE OF POWER SOURCE. IF CONNECTED OTHERWISE, AMPLIFIER WILL NOT OPERATE AND DAMAGE TO COMPONENTS MAY RESULT.**
2. **POWER SUPPLY REQUIREMENTS - It is preferable to use a**

the Motorola R200 Vibrasonic unit, with the main difference being that each year had a wiring harness that was appropriate for that year Ford. The 1967 and up units were of a total different design, being about 1/4 the size of the previous year units, and totally enclosed in a metal case. I believe that the reason for the drastic reduction in size is the elimination of the mechanical spring assembly inside the unit which created the reverberation effect and replacing it with newer electronics (note the addition of a second transistor in the attached pictures of 1968 and 1969 units). As I am not that familiar with the actual electronics or details of the later "Studiosonic" units, the remainder of this article will deal only with the 1962-66 units, and reference to the later units by pictures and text is for general information only.

The 1962-66 Studiosonic Systems were all manufactured for Ford by Motorola, using its R200 Vibrasonic unit. The main difference between the "aftermarket" and the Ford version was that instead of a "generic" brown multi-wire harness and plastic chrome "on/off/fader" control knob with bracket, the Ford units (as noted previously) had wiring harnesses tailored to each model year, and control knobs (with no bracket) that emulated Ford control knobs of the early 60's (black ribbed plastic with a chrome disk insert). In addition, the aftermarket units all had "Motorola" and a Motorola Model number stamped into the metal portion of the enclosure, while the Ford units had either "RV2F, RV4F, RV4D, or RV6F" stamped into the metal side portion of the enclosure, along with a multi-digit (non-Ford) Part Number. I, personally, have never seen an "RV3D or F", nor an "RV5D or F" stamped into a unit, although it is of course possible they may exist.

Another "quirk" that I have noticed over the years is that while all of the aftermarket Motorola units that I have come across, have had metal sides and bottoms with a black cardboard top, I have seen Ford RV4 units with **both** cardboard **and** metal tops. I have never seen an RV6 unit with other than a black cardboard top, but once again, they may also exist with a metal top.

Also of interest is how Ford named this system through the years ; 1962 -1964 it was "Studiosonic (one word) Sound System" ; 1965-1966 it was "Studio Sonic (two words) Sound System" ; and in 1967-1969 it became "Studio-sonic (hyphenated) Sound System".

In order to take a closer look at the "Studiosonic Sound System" units, a "year by year" breakdown follows :

Ford Specific

The earliest I have been able to document Ford's offering a Reverberator ("Studiosonic Sound System") is 1962 (Ford Part # C2AZ-18875-B). What is interesting about the 1962 unit (RV2F) is that it is not listed in my 1962 "Complete Selection of Accessories" (dated 1961), in my January 1962 "Ford Ready Reference Parts Book", nor in my 1962 Ford Master Parts Catalog (MPC), dated January of 1962. Thus, it must have been added "later in the year" to the "accessory line". To add to the confusion, is the fact that the first Ford specific Motorola Reverberator Service Manual that I have found (dated January 1963), shows that the kit for 1962 Fords is Part # C20Z-18875-C. The January 1963 Ford OSI book confirms this, showing that the C2AZ-18875-B was "Replaced By" C20Z-18875-C. Ford continued to offer this (although with different Part Numbers) until 1969 for sure, and I believe in 1970 (although I do not have a 1970 Accessory Catalog to confirm this).

The 1962-1966 units were all basically the same, using

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1962

As noted earlier, this is the first year that I have found any information of the appearance of the Ford "Studiosonic Sound System". Interestingly, it does not appear in the "1962 Accessories" flyer (dated 1961), nor in the 1962 MPC. Thus, the 1962 unit was either a "mid" or "late" year introduction. It is noted in the Motorola Service Manual as Ford Part # C20Z-18875-C (which, as noted above, actually replaced C2AZ-18875-B). According to the Service Manual, this was furnished as a "Kit" which included the "RV2F" (the Ford version of the R200) reverberation unit, wiring harnesses tailored to the 1962 Fords, a Ford 8 ohm speaker, a Ford speaker grille, and necessary mounting hardware. Ford's "Suggested List Price" (SLP) was \$29.95.

reverberation system MANUAL 68P40056A24
MOTOROLA RV2F
FORD C20Z-18875-C

1963

The 1963 Accessory foldout brochure shows that the 1962 Kit (C20Z-18875-C) was carried over for the 1963 Model Year, and used, at least for a time, in the 1963 Ford Models. The 1963 MPC, dated January of 1963 also confirms this. At some time between January 1963 and January of 1964, the 1962-63 Kit became C20Z-18875-D. Interestingly, the C20Z-18875-D was not shown as "NR" (Not Replaced) until sometime between July 1965 and July, 1966. The SLP was still noted as \$29.95.

1963 Accessory Brochure



1964

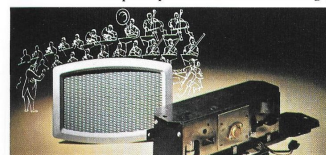
For 1964, the Ford Accessory Brochure shows the "Studiosonic Sound System" as Part # C4AZ-18875-A. The Kit still included the 8 ohm speaker and speaker grille, but now, in addition, it also included a "Foot Operated Switch" to turn the rear speaker reverberation effect "On and Off". This switch is identical to the headlight dimmer switch; as a matter of fact, in the 1964 MPC under "Headlight Dimmer Switch" (Part # C0TF-13A024-A) is the notation "Also used for reverberation type rear seat speaker switch". This switch was in addition to the dash mounted control switch.

1964 Accessory Brochure

1964 FORD ACCESSORIES
 FOR *Greater Listening Enjoyment*

FORD RADIOS ENHANCE DRIVING PLEASURE
 Take your choice of genuine Ford quality AM radios or double duty AM/FM radios that blend glamorously with the interior of your car. The Ford name on the bezel tells you these radios both feature full transistor power and printed circuitry for instant response, static-free reception and long service life—plus automatic volume control and fingertip push button tuning.

The exceptional AM/FM radio with full-range programming and drift-free reception provides ultimate listening pleasure in your Ford or Thunderbird.



STUDIOSONIC SOUND SYSTEM Reproduces music with the full fidelity of concert hall listening with Ford's Studiosonic System. Rear speaker reverberator delays sound waves a fraction of a second and blends them with front speaker to produce a rich consonance that cannot be matched by any ordinary rear seat speaker. One switch on the instrument panel controls reverberation effect; another on the floor turns rear speaker on and off.



AM/FM RADIO Enjoy the wider range of programs available with an AM/FM Radio. Select either the timeliness of AM radio reception or the tempo of FM reception with the flick of a button.

MOTOROLA

service manual

GENERAL INFORMATION

The RV2F reverberation system is designed to be installed in an automobile with a 12-volt negative ground system that has a previously installed AM radio whose output impedance is 8 ohms.

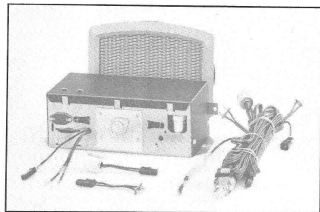
This unit is designed for custom installation in 1962 Ford and Mercury cars.

The newly designed reverberation unit is the heart of the reverberation system. Its reduced size minimizes noise generated through shock and allows the design of a compact chassis installation. Soft sponge polyurethane pads are used to further supplement the springs that mount the reverberation unit to dampen and virtually eliminate noise generated due to shock.

The complete reverberation system consists of a two stage transistorized reverberation amplifier, a reverberation unit and an installation kit which consists of a flat three (3) conductor cable (harness) with attached control assembly, speaker, grille, adapters and necessary mounting hardware.

The harness supplies the power required by the reverberation amplifier and serves to complete the control circuit to the reverberation amplifier.

The reverberation chassis (reverberation amplifier and reverberation unit) is mounted to the trunk floor. For detailed installation instructions, see the "Installation Instructions" section.



2. POWER SUPPLY REQUIREMENTS - It is preferable to use a storage battery (without a battery charger) in place of a battery eliminator. If a battery eliminator is used, it must be well filtered and regulated.
3. DRIVER TRANSISTOR REPLACEMENT - When replacing a driver transistor, grasp the transistor leads (between transistor body and chassis) with a pair of long nose pliers to prevent excessive heating of transistor body during soldering operation.

4. POWER TRANSISTOR REPLACEMENT - When replacing a power transistor, be sure to:
 - A. Use the transistor specified in the Replacement Parts List.
 - B. Coat sides of transistor insulator with DC-4 grease (Motorola Part No. 11M490487) to insure proper heat dissipation.
 - C. Securely and evenly tighten the transistor mounting screws.

SERVICE STATION PROCEDURE
 This unit manufactured by Motorola for the Ford Motor Company is not covered by the Motorola Warranty Plan because Ford Motor Company itself carries the warranty.
 Motorola Warranty Labor Claim

Ford is not to be used for repair of a Ford product, nor are defective parts for repair to be directed to Motorola, Inc. or their authorized distributors.

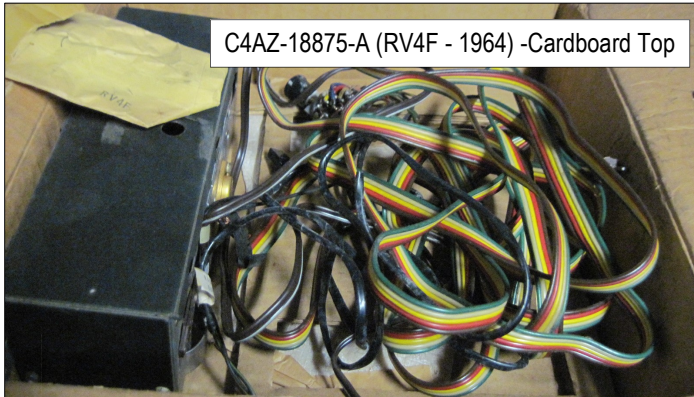
Here is an outline which may be followed by the Ford Dealer when warranty repairs are required on any Motorola built Ford product.

1. If he is equipped, he can service the receiver himself.
2. If he is not equipped, he may take the unit to another Ford Dealer who has the facilities for this service.
3. He may take the unit to a Service Station of his own choice with whom he has a Service Agreement.

If you have a contract agreement with Ford Dealers in your vicinity, please follow the instructions below:

- A. Bill the Ford Dealer for replacement parts and for labor as agreed upon between you to repair the in-warranty unit.
- B. The model and serial number of each unit, the description of replacement parts and for labor as agreed upon on your invoice to the dealer.
- C. All defective parts should be returned to the Ford Dealer. THIS IS IMPORTANT AND NECESSARY so that he may receive his adjustment from the Ford Factory.

MOTOROLA INC. 9401 WEST GRAND AVENUE, FRANKLIN PARK, ILLINOIS
 PART NO. 68P40056A24 2-62 PRICE 20 CENTS PRINTED IN U.S.A.



C4AZ-18875-A (RV4F - 1964) -Cardboard Top

was now designated (and likewise stamped), "RV4F", and it included the Foot Operated switch. Interestingly, the November, 1963 Ford Suggested List Prices book lists all three, the C20Z-18875-C, the C20Z-18875-D and the C4AZ-18875-A, at \$29.95 each.



C4AZ-18875-A (RV4F - 1964) - Metal Top

Along with Ford's new part number, Motorola also issued a new Service Manual (dated October, 1963). The Service Manual was designated "RV4F", and was shown for "both 1963 and 1964" Ford Models. As this manual came out during the 1964 Model Year, its use for 1963 models must have been as an "optional choice", as the C20Z unit is not shown in the January 1964 OSI as either "NR" nor "RB"; the only real differences being that the C4AZ unit



Both the C20Z and C4AZ Kits are shown as "NR" in the July 1966 OSI.

1965 Accessory Catalog

by Ford-quality radios, rear speakers and antennas

auto reverberation system MANUAL 68P40056A70

FORD MODEL RV4F

MOTOROLA service manual

GENERAL INFORMATION

The RV4F reverberation system is designed for installation in various 1963 and 1964 Ford Motor Company automobiles.

The newly designed reverberation unit is the heart of the reverberation system. Its reduced size minimizes noise generated through shock and allows the design of a compact chassis installation. Soft sponge polyurethane pads are used to further supplement the springs that mount the reverberation unit to virtually eliminate noise generated due to shock.

SERVICE NOTES

- POLARITY - WHEN SERVICING THIS AMPLIFIER, THE "A" LEAD MUST BE CONNECTED TO THE POSITIVE SIDE OF POWER SOURCE. IF CONNECTED OTHERWISE, AMPLIFIER WILL NOT OPERATE AND DAMAGE TO COMPONENTS MAY RESULT.**
- POWER SUPPLY REQUIREMENTS -** It is preferable to use a storage battery (without a battery charger) in place of a battery eliminator. If a battery eliminator is used, it must be well filtered and regulated.
- DRIVER TRANSISTOR REPLACEMENT -** When replacing a driver transistor, grasp the transistor leads (between transistor body and chassis) with a pair of long nose pliers to prevent excessive heating of transistor body during soldering operation.
- POWER TRANSISTOR REPLACEMENT -** When replacing a power transistor, be sure to:
 - Use the transistor specified in the Replacement Parts List.
 - Coat both sides of transistor insulator with DC-4 grease (Motorola Part No. 11M499487) to insure proper heat dissipation.
 - Securely and evenly tighten the transistor mounting screws.

SERVICE STATION PROCEDURE

This model or any other automotive type radio previously manufactured by Motorola for the Ford Motor Company is not covered by the Motorola Auto Radio Guarantee Plan because Ford Motor Company itself carries the guarantee.

Motorola Guarantee Labor Claim Form is not to be used for a Ford radio repair, nor is it if defective parts for repair to be directed to Motorola, Inc. or their authorized distributors.

Here is an outline which may be followed by the Ford Dealer when guarantee repairs are required on any Motorola built Ford automobile or truck radio.

- If he is equipped, he can service the radio himself.
- If he is not equipped, he may take the radio to another Ford Dealer who has the facilities for this service.
- He may take the radio to a Service Station of his own choice with whom he has a Service Agreement. If you have a contract agreement with Ford Dealers in your vicinity, please follow the instructions below:
 - Bill the Ford Dealer for replacement parts and for labor as agreed upon between you to repair the in-guarantee Ford receiver.

B. The model and serial number of each receiver, the description of repair, the Motorola or Ford number of the parts replaced should appear on your invoice to the dealer.

C. All defective parts should be returned to the Ford Dealer. THIS IS IMPORTANT AND NECESSARY so that he may receive his adjustment from the Ford Factory.

REVERBERATION SYSTEM

The reverberation system custom tailors the sound to simulate the acoustics of a concert hall. At "live" performances, only a small percentage of the sound comes directly from the performers. Most of the sound you hear has "bounced" from walls, ceiling and floor. Unless this reflected sound energy can be recreated, the performance can never have the full, brilliant presence of the actual performance.

Also, no matter how well a set reproduces sound, the "live" characteristic of that sound can be altered by the acoustical properties of a car.

The reverberation system adds the exact amount of reflected sound energy needed to recreate recording studio acoustical effects.

REVERBERATION UNIT

The reverberation unit consists of an input and an output transducer sep-

CONVENTIONAL REAR SEAT SPEAKER

Enhance front speaker sound... 3-way control allows for mixed or separate speaker tuning.

FORD, FAIRLANE AND FALCON
Part No. C5AZ 18875 Price: 11.95

THUNDERBIRD
Part No. C5SZ 18875-A Price: 13.45

MUSTANG
Part No. C3AZ 18875-A Price: 11.95

STUDIO SONIC SOUND SYSTEM

Reproduces music with the fidelity of concert hall listening. Rear speaker reverberator delays sound waves a fraction of a second and blends them with the front speaker to produce a rich consonance that cannot be matched by an ordinary rear seat speaker. This unit comes with an instrument panel control switch. For additional convenience, a foot switch is available for Ford, Fairlane, and Falcon. Rear seat speaker is extra cost.

STUDIO SONIC SOUND SYSTEM, ALL MODELS
Part No. C5AZ 18813-E Price: \$22.95

FOOT SWITCH
Part No. C3SZ 18876-A Price: 3.75

THUNDERBIRD ELECTRIC ANTENNA

Located on right front fender... fully retractable from 40" to 0"... operates by an inside lever switch.

Part No. C5SZ 18813-B Price: 27.95

DUAL REAR QUARTER ANTENNAS

Right and left rear antennas that add a stylish flair... highly chromed and rust-resistant units... special design coaxial cable for static free reception.

FORD
Part No. C5AZ 18813-B (R.H.) Price: 8.25
C5AZ 18813-C (L.H.) Price: 7.00

AIR-FOIL ANTENNA

Aerodynamically engineered to scientifically break air flow... less wind noise... fender-mounted.

FORD
Part No. C5AZ 18813-A Price: 5.70

CROSS SECTIONAL TOP VIEW OF AIR-FOIL ANTENNA

MOTOROLA INC. 9401 WEST GRAND AVENUE, FRANKLIN PARK, ILLINOIS
PART NO. 68P40056A70 10-63 PRICE 35 CENTS PRINTED IN U.S.A.

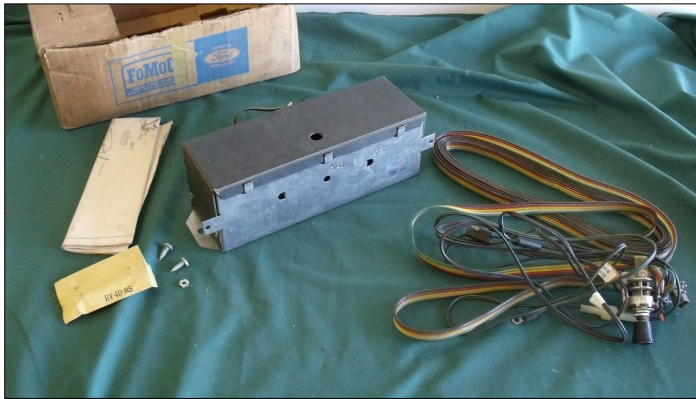
1965

Several interesting things occurred in 1965, besides the "Studiosonic Sound System" Part # now being C5AZ-18875-E. The 1965 Accessory Catalog lists this part number along with its description, for a price of \$22.95 (neither the 1963 nor the 1964 Accessory brochures included prices). The last sentence of the description notes "Rear seat speaker is extra cost". Following the part number and price for the Kit, a "Foot Operated Switch" is listed (Part # C5SZ-18876-A) for \$3.75.. Note that this is listed *incorrectly* (misinterpretation of dictaphone ?); It should have been noted as C5AZ-18876-A, as confirmed in the 1965 MPC. So thus, the speaker, speaker grille and the Foot Operated Switch were only included in the C4AZ Kit; for subsequent Kits, they were "extras", explaining the reduced cost.

Another interesting thing for 1965, is that even though the C5AZ "Studiosonic Sound System" is shown in the 1965 MPC as applicable to "Full Size, Fairlanes, Mustangs and Falcons", there is an additional listing for a C5ZZ-18875-A "Studiosonic Sound System" for Mustangs, "Except Model 76". I have never seen this unit, nor any additional information concerning it.



Of interest here in regard to the C5ZZ system, is that in the July 1967 OSI, it is shown as "RB" the C5AZ system, and in the same 1967 OSI, the C5AZ system is shown as "NR". Thus, the C5ZZ system being "RB" must have occurred between July 1966 and July of 1967. The November, 1966 SLP book still lists the C5AZ-18875-E Kit, but now at a SLP of \$26.80.



Once again, with the new Ford Part number, Motorola issued a new Service Manual dated October 1964. The previous "RV4F" unit is now designated either "RV4D" or "RV4D-NS". Motorola added the "-NS" designation to note that this Kit had "No Speaker". Presumably, this coincides with Ford's description that the Rear Speaker was not included, but available "at extra cost". However, this does not explain the "RV4D" (with speaker) being available, since the only C5AZ part number shown is the "-E". Possibly, the RV4D Kit was for the C5ZZ-18875-A part number?

In any case, the C5ZZ Kit is shown as being "RB" the C5AZ unit in the July 1966 OSI, and the C5AZ Kit is shown as "NR" in the July 1967 OSI.

1966

The 1966 Accessory Catalog shows that the "Studiosonic Sound System: for all models is Part Number C6AZ-18875-A, and is now listed for \$27.95. The description does not mention a speaker being included; however, just below the part number and price, is a rectangular red box which says "Note : See your Ford Dealer for custom rear

1966 Accessory Catalog

auto reverberation system MANUAL 68P43100A28

FORD MODELS RV4D,RV4D-NS

MOTOROLA

service manual

GENERAL INFORMATION

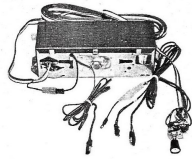
The reverberation system is designed for installation in various 1966 Ford Motor Company automobiles which have a previously installed radio whose output impedance is 8 ohms. Model RV4D-NS is the same as the RV4D except that it has no speaker supplied.

SERVICE NOTES

- POLARITY** - WHEN SERVICING THIS AMPLIFIER, THE "A" LEAD MUST BE CONNECTED TO THE POSITIVE SIDE OF POWER SOURCE. IF CONNECTED OTHERWISE, AMPLIFIER WILL NOT OPERATE AND DAMAGE TO COMPONENTS MAY RESULT.
- POWER SUPPLY REQUIREMENTS** - It is preferable to use storage battery (without a battery charger) in place of a battery eliminator. If a battery eliminator is used, it must be well filtered and regulated.
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- POWER TRANSISTOR REPLACEMENT** - When replacing a power transistor, be sure to:
 - Use the transistor specified in the Replacement Parts List.
 - Coat both sides of transistor insulator with DC-4 grease (Motorola Part No. 11M490487) to insure proper heat dissipation.
 - Securely and evenly tighten the transistor mounting screws.

SERVICE STATION PROCEDURE

This model or any other automotive type radio previously manufactured by Motorola for the Ford Motor Company is not covered by the



Motorola Auto Radio Guarantees Plan because Ford Motor Company itself carries the guarantee.

Motorola Guarantee Labor Claim Form is not to be used for a Ford radio repair, nor is it or defective parts for repair to be directed to Motorola, Inc. or their authorized distributors.

The Ford Dealer may perform guarantee repairs himself if he is adequately equipped.

If the Ford Dealer is not equipped, he may contact a Service Station of his own choice with whom he has a Service Agreement for guarantee repairs.

Here is an outline which may be followed by the Service Station when guarantee repairs are required by a Ford Dealer on any Motorola built Ford automobile or truck radio:

- Bill the Ford Dealer for replacement parts and for labor as agreed upon between you and the dealer, in the repair of the in-guarantee Ford receiver.
- The model and serial number of each receiver, the description of repair, the Motorola or Ford number of the parts replaced should appear on your invoice to the dealer.
- All defective parts should be returned to the Ford Dealer. THIS IS IMPORTANT AND NECESSARY so that he may receive

his adjustment from the Ford factory.

REVERBERATION SYSTEM

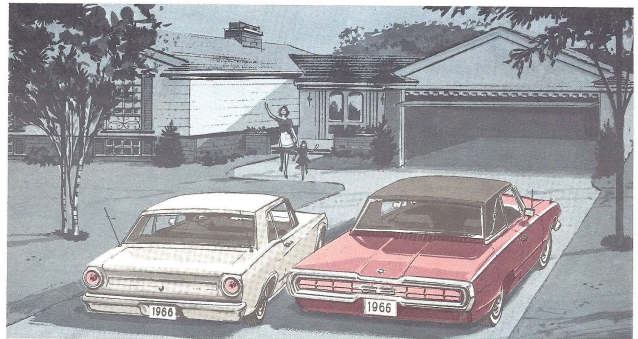
The reverberation system custom tailors the sound to simulate the acoustics of a concert hall. At "live" performances, only a small percentage of the sound comes directly from the performers. Most of the sound you hear has "bounced" from walls, ceiling and floor. Unless this reflected sound energy can be recreated, the performance can never have the full, brilliant presence of the actual performance.

Also, no matter how well a set reproduces sound, the "live" characteristic of that sound can be altered by the acoustical properties of a car. The reverberation system adds the exact amount of reflected sound energy needed to recreate recording studio acoustical effects.

REVERBERATION UNIT

The reverberation unit consists of an input and an output transducer separated by two precision-wound springs. The two transducers are very similar, differing principally in their modes of operation. The input transducer receives the electrical signal from the radio output transformer and converts it into mechanical, rotary motion. This motion is transmitted, axially, via the springs which introduce a pre-calculated delay to the output trans-

LISTENING PLEASURE quality antennas sculptured by the wind



DUAL REAR QUARTER ANTENNAS

Right and left rear telescopic antennas add a stylish flair with their swept-back styling . . . gleaming chrome plated brass tubing and base.

ALL MODELS CS5Z 18813-J

\$ 8.25 ea.

ELECTRIC ANTENNA

A great convenience—raise and lower the antenna by operating lever switch on instrument panel . . . fully retractable from 40" to 0"

THUNDERBIRD CS5Z 18813-B

\$27.95

"live" sound reproduction



STUDIO SONIC SOUND SYSTEM

Special reverberator mechanism in this unit provides tone and fidelity that can't be matched by any conventional rear seat speaker . . . rear speaker sound waves are delayed a fraction of second, then blended with the front speaker to produce a rich resonance . . . unit comes with an instrument panel control switch.

ALL MODELS CS6Z 18875-A

\$27.95

NOTE: See your Ford dealer for custom rear seat speakers and their specific model application.



TWO-WAY RADIOS*

These two new units are good investments for those people who wish a low-cost two-way communications system. Transistorized and precision-crafted, this equipment is equally "at home" in business or pleasure.

TWO-WAY CITIZEN'S BAND RADIO

True excellence in electronics . . . eleven crystal controlled channels . . . virtually distortion free transmission—constant, drift-free receiver performance.

(1) CS5Z 18805-E (Universal Application)

\$179.50

(2) See your Ford Dealer for details.

TWO-WAY WALKIE-TALKIE RADIO

Compact convenience of portability . . . 2 3/4 pounds, 2-watt station . . . features press-to-talk operation . . . attractive case included

(3) CS5Z 18805-F (Universal Application)

\$119.50

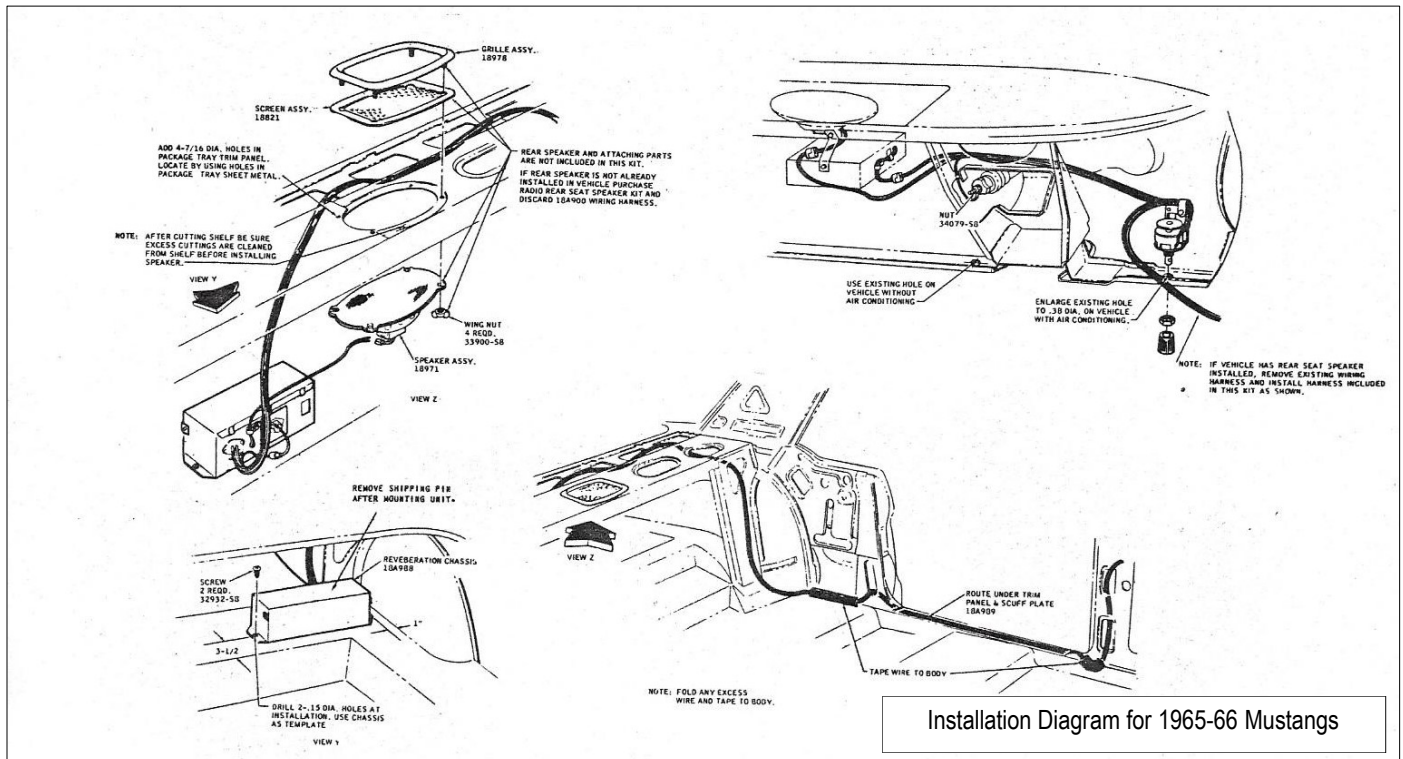
*See your Ford dealer for other available Radio accessories (mobile and base station antennas, batteries, 117-volt adaptor, tone signaling device etc.)

MOTOROLA INC. 9401 WEST GRAND AVENUE, FRANKLIN PARK, ILLINOIS PART NO. 68P43100A28 10-64 PRICE 20 CENTS PRINTED IN U.S.A.

seat speakers and their specific model application". I believe that the 1965 offering hinted toward this, as with so many Models being available (Full Size Ford, Fairlane, Falcon, Mustang, etc.), a "universal" rear speaker was no longer applicable. A look at the list of Rear Speakers noted in the 1966 MPC and the 1960-68 MPC, shows at least 8 different ones, including "Standard", Delux", and ones for specific applications.

While the 1966 Accessory Catalog does not include a separate listing for the "Foot Operated Switch" (Part # C5AZ-18876-A), the 1966 MPC did still list it for "reverberator application". As a matter of fact, the C5AZ Foot Operated Switch was still available in 1969, and was finally "NR" sometime between 1969 and 1972. Once again, with the new Ford Part Number, Motorola issued a new publication. However, this time, instead of a completely new Service Manual, they issued a "Supplement" to the RV4D Manual, noting that the new model, "RV6F" is "...designed for custom installation in various 1965 and 1966 Ford Motor Company Models which have a previously installed radio...", and "...is electrically the same as Model RV4D".

The C6AZ "Studiosonic Sound System" was shown as "NR" in the July, 1968 OSI.



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1967- 69

As noted at the beginning of this Post, I have little detailed information, and even less personal knowledge, in regard to the 1967 and "up" Studiosonic Sound Systems". As such, I am treating them collectively in order to at least pass on some basic information and observations.

The Ford part numbers for the 1967-69 units were C7AZ-18875-E, C8AZ-18875-E and C9AZ-18875-A respectively.

The 1967 and 1968 units are both shown in their respective year Accessory Catalogs. The 1967 system is listed for \$26.80, while the 1968 catalog does not list any prices.

sound for your car? dealer of course!

- A. **AM RADIO**—Outstanding tone and fidelity... All transistorized with push buttons and illuminated dial. (Includes Antenna) ALL MODELS—Basic Part No. 18805..... \$51.35
- B. **AM/FM RADIO**—Enjoy the full rich sounds of true fidelity. All transistorized with tone control, illuminated dial, and push buttons. (Includes Antenna) FORD, MUSTANG, THUNDERBIRD—Basic Part No. 18805..... \$119.30 (Thunderbird—\$119.85)
- C. **TWO WAY RADIO—(TWR-7)**—Operates at full 5 watt maximum power input. Delivers crisp, fully-modulated signal in any of Chevrolet, All Models, C7AZ-18805-C..... \$129.95 each
NOTE: Ask your dealer for details on the various types of mobile antennas available with two way radio.
- D. **TWO WAY RADIO—(TWR-9)**—Exceptional performance... full 5 watt transmitter (6 channels)... simple to operate... convenient. Use as an interim or all-call sound system. (Late availability—see your Ford Dealer for details.)
- E. **TWO WAY RADIO—(TWR-8)**—Powerful 14 transistor hand-held portable two-way radio provides a full 2 watt power input. Two Ni-CAD batteries assure ample reserve operating power. (Late availability—see your Ford Dealer for details.)
- F. **TWO WAY RADIO—(TWR-11)**—Excellent, advanced design unit has full 5 watt input power... handy compact... exceptionally low current drain. (Late availability—see your Ford Dealer for details.)
- G. **STEREO MULTIPLEX**—Enjoy living, colorful stereo in your car. With radio adjusted for FM reception, unit automatically provides true stereo when broadcasted. FORD, MUSTANG, THUNDERBIRD (Used with AM/FM radio and stereo speaker kit). (See your Ford Dealer for other details and cost.)
- H. **STEREO TAPE PLAYER (HANG-ON UNIT)**—The richness of living stereo. Uses self-contained tape cartridges to safely discriminate tones. FORD, FAIRLANE, FALCON, MUSTANG—(Cannot be used with Economy A/C Unit) overdrive, 4 speed manual transmission, reverberator, FM Multiplex, console or safety convenience package. C7AZ 15A033-A—without A/C..... \$99.50* C7AZ 15A033-B—with Self-Drive A/C..... \$99.50* (Stereo speaker kit required.)
- I. **AM RADIO/STEREO TAPE PLAYER**—Combination AM radio and self-contained tape cartridge player. FORD, C7AZ 18805-CA..... \$149.50 MUSTANG, C7ZZ 18805-CA..... \$149.50
NOTE: Stereo Speaker Kit Required.
STEREO SPEAKER KITS (Not Illustrated)—Also available from your Ford Dealer are distinctive stereo speaker kits... cover to door mounted for your particular model. (See him for specific part number and cost.)
- J. **TELEVISION**—Powerful all-channel (including UHF) entertainment for car, home or beach. All-transistorized for fine reception. ALL MODELS—C7AZ 18804-A..... \$169.95
NOTE: Ask your Ford Dealer about the fine reception cut-in/away, seek or window lock, and battery pack.
- K. **STUDIO-SONIC SOUND SYSTEM**—Add another dimension to your listening enjoyment. This unit gives the effect of concert hall acoustics to AM or FM reception. (Available all models with rear speaker). C7AZ 18875-E..... \$26.80
- L. **DELUXE REAR SEAT SPEAKER**—Surround yourself with the finest "sound of music". Enjoy the depth and dimension of "true" entertainment. FORD, MUSTANG—C7AZ 18875-D..... \$13.75 FAIRLANE, FALCON (Except convertible and station wagon)—C7OZ 18875-B..... \$13.75
- M. **STANDARD REAR SEAT SPEAKER (Not Illustrated)**—Your Ford Dealer has custom designed and engineered rear speakers for most models. (Required for Studio Sonic and with stereo tape players for full stereo effect.)
- N. **ELECTRIC ANTENNA**—Inside switch operated for added convenience and safety. THUNDERBIRD—C7SZ 18813-B—Front Mounted..... \$22.50
- O. **ANTENNA MANUAL (Rear Mounted)**—For a sports flair in a low cost antenna. Use singularly or in a pair for added styling complement. ALL MODELS—C7AZ 18813-J..... \$8.10
- P. **ELECTRIC ANTENNA (Rear Mounted) (Not Illustrated)**—Inside switch operated... sleek back styling gives an added sports flair. ALL MODELS (Late availability).

1967 Accessory Catalog

Nov 1966 Parts and Merchandising News

WHAT'S NEW AND DIFFERENT

The 1967 Ford Accessories Catalog colorfully illustrates and describes the product features for the complete line of 1967 accessories. Following are some additional facts about several of the new items.

STUDIO-SONIC SOUND SYSTEM (page 15)
All new for 1967. The reverberator unit is only one-third the size of the 1966 unit and mounts under the instrument panel out of sight.
Wiring is designed to plug into existing rear seat speaker harness in the instrument panel area (no extensive wiring required). Controlled by the existing rear speaker fader... plus a foot switch to turn the reverberator off and on.
PART NO. C7AZ-18875-E. (Order on interim form with weekly stock order.)
Adaptor harness C7SZ-18A900-D is required on cars with console, air conditioner or other options requiring the reverberator to be mounted in luggage compartment.

DE LUXE REAR SEAT SPEAKER (page 15)
This is an alternate kit for Mustang, Ford, Falcon, and Fairlane 2-door hardtops and sedans. Also available for Ford 4-door hardtop models. The speakers incorporate a heavier magnet for more power, plus improved low frequency characteristics for truer sound. PART NO. C7AZ-18875-G (Fords, Mustangs); C7OZ-18875-B (Fairlane, Falcon). (Page A-18, Weekly Stock Order Pad.)

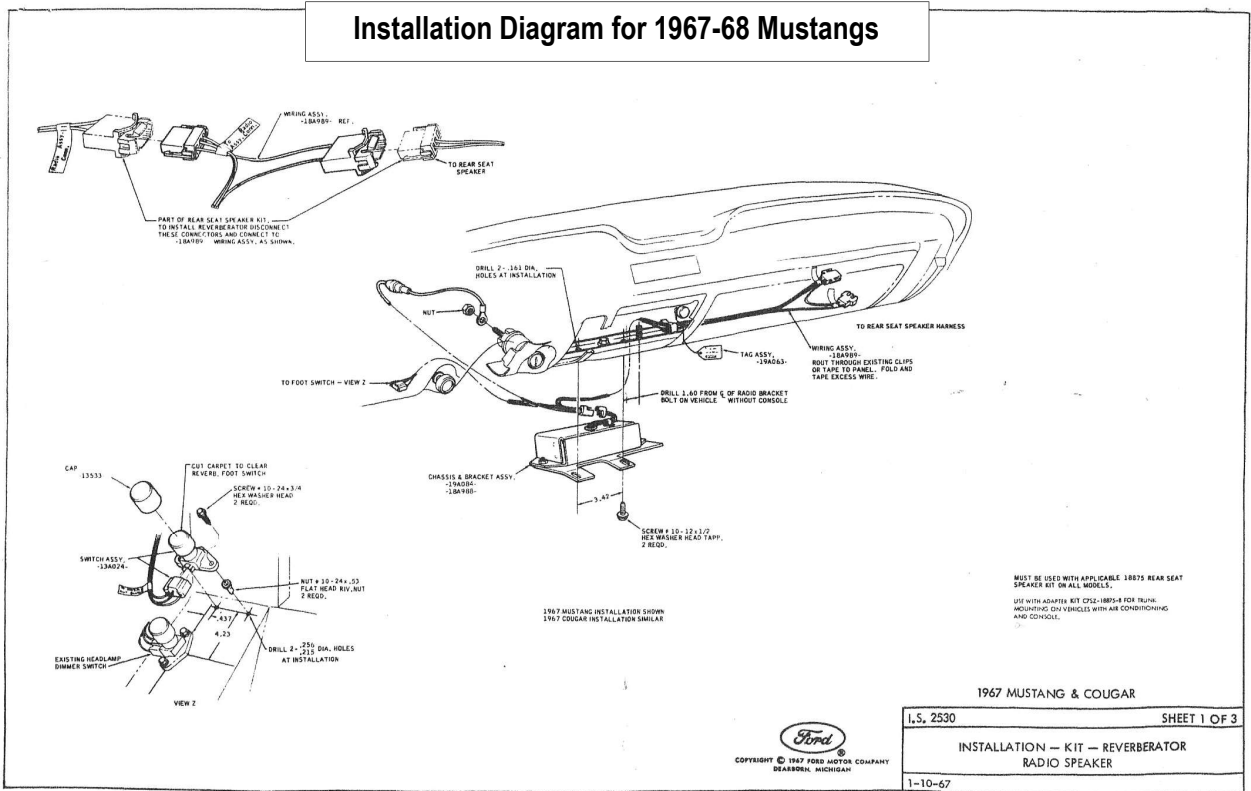
accessories will please you more

- A. **STEREO TAPE PLAYER (HANG-ON UNIT)**—The magic and richness of living stereo is yours with this quality tape player. Uses self-contained stereo tape cartridge. FORD, FAIRLANE, FALCON, MUSTANG, C7AZ 15A033-A. (Not available with StudioSonic sound system, console, 4-speed transmission or hang-on A/C.)
- B. **STEREO TAPE CARTRIDGE HOLDER**—A perfect companion for stereo tape players. Holds six tape cartridges. FORD, FAIRLANE, FALCON, MUSTANG—C7AZ 15A033-A. FORD STEREO 8 TAPE CLIP, Box 26888, Lovensco, Jackson, MS for information.
- C. **AM/FM RADIO**—Delight in the fine reception from Ford's combination AM and FM radio. Integral multiplex permits tuning to true stereo broadcasts. (Includes Antenna) FORD, FAIRLANE, MUSTANG, THUNDERBIRD—Basic Part No. 18805.
- D. **AM/STEREO TAPE PLAYER**—Hudcose combination unit offers a complete entertainment center mounted conveniently in your car's instrument panel. (Includes Antenna)—FORD, MUSTANG, THUNDERBIRD—Basic Part No. 18805.
- E. **AM RADIO**—All transistorized unit with push buttons and illuminated dial offers outstanding tone and fidelity. (Includes Antenna) ALL MODELS—Basic Part No. 18805.
- F. **REAR SEAT SPEAKERS**—Surround yourself with the exciting depth and dimension of "true" entertainment. Basic Part No. 18875.
- G. **STUDIO-SONIC SOUND SYSTEM**—Add still another dimension to AM sound reception with the almost mystic effect of Ford's concert hall realism. C7AZ 18875-E.
- H. **ELECTRIC ANTENNA**—Added convenience and luxury are featured in a remote controlled, automatic antenna. FRONT—THUNDERBIRD, REAR—ALL MODELS—Basic Part No. 18813.
MANUAL CONTROLLED ANTENNA (REAR MOUNTED)—Provides a sports car flair at low cost. ALL MODELS—C7AZ 18813-J.
- I. **TELEVISION**—Powerful all-channel (including UHF) entertainment for your home or beach. All-transistorized for fine reception. ALL MODELS—C7AZ 18804-A.
- J. **TWO WAY RADIO—(TWR-9)**—Exceptional performance... full 5 watt transmitter (6 channels)... simple to operate (Home Base ID Volt Operation)—C7AZ 18805-G.
- K. **TWO WAY RADIO—(TWR-7)**—Operates at full 5 watt maximum power input. Delivers crisp, fully-modulated signal in any of 5 channels. FORD, MUSTANG—C7AZ 18805-C.
NOTE: Ask your dealer for details on the various types of mobile antennas available with two way radio.
- L. **TWO WAY RADIO—(TWR-8)**—Powerful 14 transistor hand-held portable two-way radio provides a full 2-watt power input. ALL MODELS—C7AZ 18805-E.
- M. **TWO WAY RADIO—(TWR-11)**—Excellent, advanced design. Incorporates full 5-watt input power... low current drain. (UHF-Volt Adaptor and Selective Call Adaptors also available). ALL MODELS—C7AZ 18805-H.

1968 Accessory Catalog



Installation Diagram for 1967-68 Mustangs



1967 MUSTANG & COUGAR
 I.S. 2530 SHEET 1 OF 3
 INSTALLATION - KIT - REVERBERATOR
 RADIO SPEAKER
 1-10-67



C9AZ-18875-E (1969)

While I do not have any Accessory Catalogs beyond 1968 (until the 80's), I would think that the 1969 unit was shown in the 1969 Accessory Catalog as I have included pictures of a 1969 unit, in its original box. All three (1967-69) were finally designated "NR" sometime between July 1974 and July 1976. Major points of the above "year by year" descriptions are summarized in the following spread sheet.

| SUMMARY OF FORD STUDIOSONIC SOUND SYSTEMS - 1962-1969 | | | | | | | | | | | | | |
|--|---------------|-----------------------------|--|------------------|------------------|--------------------|------------------------------|-----------|--------|-------------------------------------|--------------------------------|------------------------------------|------------------|
| MODEL YEAR | FORD PART NO. | NOTED IN FORD ACCY. CATALOG | NOTED IN INDIVIDUAL YEAR FORD PARTS AND ACCY CAT (MPC) | SPEAKER INCLUDED | FOOT SW INCLUDED | SUGGEST LIST PRICE | FORD OSI CATALOG DISPOSITION | | | MOTOROLA SERVICE MANUAL DESIGNATION | MOTOROLA SERVICE MANUAL NUMBER | SERVICE MANUAL YEAR(S) DESIGNATION | MANUAL DATE |
| | | | | | | | NR | DATE | RB | | | | |
| 1962 | C2AZ-18975-B | N | N | Y | N/A | \$29.95 | | | C20Z-C | JAN 63 OE | | | |
| | C20Z-18975-C | N | N | Y | N/A | \$29.95 | - | | | | RV2F | 68P40056A24 | 1962 02/01/62 |
| 1963 | C20Z-18975-C | Y | Y | Y | N/A | \$29.95 | | | C20Z-D | JAN 64 OE | RV2F | 68P40056A24 | 1962 02/01/62 |
| | C20Z-18975-D | N | N | Y | N/A | \$29.95 | Y | JUL 66 OE | | | RV2F | 68P40056A24 | 1962 02/01/62 |
| 1964 | C4AZ-18975-A | Y | Y | Y | Y | \$29.95 | Y | JUL 66 OE | | | RV4F | 68P40056A70 | 1963-64 10/01/63 |
| 1965 | C5AZ-18975-E | Y | Y | N - EC | N - EC | \$22.95 | | | C6AZ-A | JUL 67 OE | RV4D & RV4D-NS | 68P43100A28 | 1965 10/01/64 |
| | C5ZZ-18975-A | N | Y | ? | ? | ? | | | C5AZ-E | JUL 65 OE | ? | ? | ? |
| 1966 | C6AZ-18975-A | Y | Y | N - EC | N - EC | \$27.95 | Y | JUL 68 OE | - | - | RV6F | 68P43100A29 | 1965-66 08/01/65 |
| 1967 | C7AZ-18975-E | Y | Y | N - EC | Y | \$26.80 | Y | JUL 76 OE | | | ? | ? | ? |
| 1968 | C8AZ-18975-E | Y | Y (IN 1960-68 MPC) | N - EC | Y | ? | Y | JUL 76 OE | | | ? | ? | ? |
| 1969 | C9AZ-18975-A | ? | ? | N - EC | Y | ? | Y | JUL 76 OE | | | ? | ? | ? |
| NOTES : | | | | | | | | | | | | | |
| 1) Abbreviations Used | | | | | | | | | | | | | |
| a) MPC - Master Parts Catalog | | | | | | | | | | | | | |
| b) NR - Not Replaced | | | | | | | | | | | | | |
| c) RB - Replaced By | | | | | | | | | | | | | |
| d) OE - Or Earlier (Inclusion of this notation means that action shown could have occurred between OSI noted and previous one) | | | | | | | | | | | | | |
| e) N/A - Not Available | | | | | | | | | | | | | |
| f) EC - Extra Cost | | | | | | | | | | | | | |
| g) ? - Do Not Have any Documentation for This | | | | | | | | | | | | | |
| 2) Accessory Catalogs typically were available at Model Year Introduction (Usually September of previous year) | | | | | | | | | | | | | |
| 3) Individual Model Year Parts & Accessories Catalogs (MPC's if you will) are all Dated January of the Model Year | | | | | | | | | | | | | |
| 4) Documentation Sources Used : | | | | | | | | | | | | | |
| a) 1962,63,64,65,66,67 and 68 Accessory Catalogs | | | | | | | | | | | | | |
| b) 1962,63,64,65,66 and 67 MPC's | | | | | | | | | | | | | |
| c) 1960-68 MPC (Dated 1967 and 1968) | | | | | | | | | | | | | |
| d) 1963,64,65,66,67,68,69,71,74 and 76 OSI Catalogs | | | | | | | | | | | | | |
| e) 1962,63,64 and 65 Motorola Service Manuals | | | | | | | | | | | | | |
| f) SAM's Photofact Technical Library | | | | | | | | | | | | | |
| 5) Per Sources "e) and f)", there is no evidence of the existence of RV3D or F Units, or of RV5D or F Units for Ford Vehicles | | | | | | | | | | | | | |

RJM - JAN 2017 (REV FEB 2017)

Should anyone have any documentation which would replace the question marks (?) in the above spread sheet, please contact the author, Bob McKee, through the Private Message system (PM) on this site- Screen Name -196667Bob