

**ASTRA MICROWAVE PRODUCTS LIMITED**

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November 17, 2021

To
The General Manager
Department of Corporate Relations
BSE Limited
Sir Phiroze Jeejeebhoy Towers,
Dalal Street, Fort,
Mumbai -400 001

To
The Vice President,
Listing Department
**The National Stock Exchange of
India Limited**
Exchange Plaza
Bandra Kurla Complex, Bandra (East)
Mumbai 400 051

Scrip code: 532493

Scrip code: ASTRAMICRO

Dear sir,

Sub: Conference call transcript.

We are sending herewith Conference call transcript held with analysts on 11th
November, 2021.

This information is also uploaded on the website of the Company
www.astramp.com.

Thanking you,

Yours faithfully,
For Astra Microwave Products Ltd

T. Anjaneyulu
G.M - Company Secretary



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“Astra Microwave Products Limited Q2 & H1 FY22 Earnings Conference Call”

November 11, 2021

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**MANAGEMENT: MR. S. GURUNATHA REDDY – MANAGING DIRECTOR
MR. M. V. REDDY – JOINT MANAGING DIRECTOR**



Moderator:

Ladies and gentlemen, good day and welcome to Astra Microwave Products Limited's Q2 and H1 FY22 earnings conference call. This conference call may contain forward-looking statements about the company which are based on the beliefs, opinions, and expectations of the company as on date of this call. These statements are not the guarantees of future performance and involves risks and uncertainties that are difficult to predict.

As a reminder, all participants' lines will be in the listen-only mode, and there will be an opportunity for you to ask questions after the presentation concludes. Should you need assistance during the conference call, please signal the operator by pressing “*” and then “0” on your touch-tone phone. Please note that this conference is being recorded.

I now hand the conference over to Mr. Gurunatha Reddy. Thank you and over to you, sir.

S. Gurunatha Reddy:

Good afternoon everybody. A warm welcome to all of you to this post results investor and analyst meet of our company. I am with my colleague, Mr. M. V. Reddy – Joint Managing Director. The results and earnings were uploaded on our company website and stock exchanges yesterday. I hope you had an opportunity to have a look at it. I briefly highlight the standalone results before I get into general discussion.

Revenues for the quarter is around Rs. 176 crores as against Rs. 104 crores of corresponding quarter of previous year, i.e., a growth of about 69% year on year. On a half yearly basis for 6 months, we did about Rs. 297 crores as against Rs. 202 crores of last year, i.e., a growth of about 47%. In terms of reported profit, profit after tax for Q2 is about Rs. 2.93 crores as against Rs. 6.12 crores of negative profit of last year. On a semiannual basis, we have reported a profit after tax of about Rs. 12.59 crores as against a loss of Rs. 6.96 crores of previous year.

It is suffice to say that we have recorded impressive growth both in sales and profitability on both 6 months and quarterly basis. However, for quarter 2 as compared with quarter 1 of this year, there is a dip in profit margin due to change in the product mix. However, we expect to do very well in the coming 2 quarters in terms of the margins.

I would like to give a brief outlook of the company for the coming future. Basing on the present market environment and the policy environment, our internal capabilities and also the order in pipeline, and the new initiatives taken by us, we are confident to say that we are on a path of multi-year growth trajectory. Existing domestic and export order books and the projects like Akash and good opportunities in radar systems give us a visibility for the immediate and long term. Our efforts and investments made by us in the last several years are helping us to move up the value chain from the sub-systems vendor to a system vendor.

Going forward, we have identified certain areas in the anti-drone, EW, satellites, SDRs, and electro-optics areas where we would like to partner with someone or on our own we would like to explore these opportunities. Some of these are very high margin multi-year opportunities and we will not be shying away from investing in these areas. For this purpose, if there is a



requirement to raise the funds, we may be doing it in the near future. These are the areas where we see there is a good amount of opportunities for scaling up either on our own or through existing JVs in the new areas. Success in some of these areas can help us to leapfrog the domestic high-margin revenues in the coming future.

With this brief note on our future potential, I request my colleague, Mr. M. V. Reddy to throw more light in terms of order booking and also the major achievements of our company in the last 6 months.

M. V. Reddy:

Good afternoon. As it was mentioned by Mr. G. Reddy, we booked orders close to Rs. 470 crores in Q1 + Q2 put together. In the 2nd quarter, we booked orders of Rs. 428 crores whereas in quarter 1, we booked about Rs. 42.21 crores.

Major orders which we booked in Q2 segment-wise: As most of the investors keep asking about the segment-wise, I would like to just give a brief. From radar segment, we have booked Rs. 254 crores which is including one major contract which we have received from DRDO for AAAU for shipborne radar, and from Missile and Telemetry, we have received orders of about Rs. 50 crores, and on EW front (electronic warfare), we have received orders of about Rs. 21 crores. Space not much, it is close to about Rs. 10 crores. Exports, we have received orders of about Rs. 135 crores. Meteorology and hydrology put together around Rs 1 crore. Overall, we booked about Rs. 470 crores. This is what the breakup of orders what we booked in the 1st half of the financial year.

In terms of major achievements, as I said, we have received this order for Rs. 141 crores of shipborne radar. Apart from that, we have also received order for 5 numbers of initial development cum prototype order for AESA seeker which we have been talking for the last couple of years where we made investment finally turned out to be a contract for the initial development phase for a limited number. Once we succeed in this, we will have a good quantity of these seekers for future missile programs. Similarly, we have received an order for Uttam AAAU for 1 number. This is again for the proto model. We have been selected for this particular program to make AAAU, and once we succeed in this project, we may expect a good number of Uttam AAAU orders from the production agency.

Apart from these contracts, we also have received orders from DRDO for sub-systems of various radar programs like digital active phased array radar, similarly L-band LRR (long range radar) sub-systems, and also a few EW programs like Nayan and Shakti we have received. Also, we have received some repeat orders from DPSUs like BEL Ghaziabad and all for Aslesha MK-1 which we had developed and supplied to DRDO almost about a few years back and we got the production order close to about 30 numbers. These are all major highlights in terms of order booking in the last 2 quarters.

Gentlemen, with this, we open this call for questions & answers.



- Moderator:** Ladies and gentlemen, we will now begin the question & answer session. The first question is from the line of Santosh Yellapu from Asian Market Securities. Please go ahead.
- Santosh Yellapu:** I had 3 questions. 1) What are the large orders that we intend to bid in the next 12 months? If you could just give some color or some direction on that front, it would be helpful. 2) This shipborne radar that we have won, have we won against any competitive environment or is it a developmental order – the Rs. 141 crores? 3) The seeker that you mentioned about, it is related to which particular missile program, sir?
- M. V. Reddy:** The first question what you have asked is, which are all major prospects for the next 12 months. The one is programs like Arudhra, i.e., the medium power radar which is being given to BEL. In the sense, the contract has not been finalized, but we understand RFP was issued to them. So, probably BEL is expecting orders soon. We are there in this project, as a development partner for majority of the sub-systems for that particular radar. Also, another program is going on, high power radar, which we joined with BEL and participated. The technical evaluation is going on. These are the 2 major domestic. Apart from that, from DRDO, there are a few radar programs which have been coming in the RFP stage and we are going to bid for that. I don't want to give more details about that as it has been in the competitive scenario, but otherwise, we have a good number of RFPs which we are expecting in the next couple of years.
- Santosh Yellapu:** Approximate value would be more helpful if not the details for the DRDO program.
- M. V. Reddy:** From DRDO, approximately it is about 500+ crores in the radar segment in next few years. The second question what you asked is on the shipborne radar AAAU what we have received. This is against competition. We had 2 competitors. So, we won against competition. It was basically split into 2 parties. We were L1 and 50% was given to us and 50% to other company. As far as the seekers are concerned, I do not want to mention about the program for which we are going to supply, as it is being classified.
- Santosh Yellapu:** Lastly, with your permission, I sense we have got Rs 519 crores of order wins at the console level. That means, I think Rs 48-49 crores of orders have come to the subsidiaries. Is this any repeat order or it's a new order that has come to the subsidiaries?
- S. Gurunatha Reddy:** It is a mix. Consolidated is Aelius, Bhavyabhanu, and ARC. So, it is a mix of all the three companies.
- Santosh Yellapu:** Is it fair to assume that the subsidiaries which were almost stagnant, there, because of these orders, this is just the beginning and traction could be seen at the subsidiary level also, especially to the Aelius and Bhavyabhanu I am referring to?
- S. Gurunatha Reddy:** No, it is not. In fact, they are not stagnant. Bhavyabhanu has done very well in the last year. Same is the case with Aelius. Aelius also has done very well. Aelius is not the one which is going to report numbers in a big way, but it is a very profitable business what we are doing



there. They are not stagnant, they are very much doing well. But otherwise, the consolidated is apart from Astra, it is a mix of 3 companies – Aelius, Bhavyabhanu, and ARC.

- Moderator:** The next question is from the life of Abhijit Mitra from ICICI Securities. Please go ahead.
- Abhijit Mitra:** I just wanted to understand what is the kind of top line that you are targeting for the next couple of years and what is the kind of order inflow also you are targeting for this year and next year?
- S. Gurunatha Reddy:** Abhijit, for the current year, as projected, we are doing about 700+ and probably for FY22 and FY23, we will be coming out with a more accurate number, maybe in the next quarter call, but otherwise, we are aiming for about 800+ for FY22 and FY23. This is in terms of the top line for the current year and the coming year.
- Abhijit Mitra:** And in terms of order inflow, any guidance?
- M. V. Reddy:** Order inflow, more or less it is the same like what we have given the guidelines. We would be able to book Rs 750 crores for the current year, and the next year also, there is a visibility close to Rs 750 crores without discounting the competition and taking a probability and all. So, it should be minimum Rs 750 crores we have planned to book.
- Abhijit Mitra:** In terms of margin profile, how do you see it evolving over this year and next year – the EBITDA margin?
- S. Gurunatha Reddy:** Margins should improve compared to the present in percentage terms. Difficult to specify any number, but definitely there will be an improvement in the margins.
- Abhijit Mitra:** But in terms of export and domestic mix if you can give some percentages there?
- S. Gurunatha Reddy:** This year, the ratio between exports and domestic will be – domestic may be about 60 and exports may be about 40 or it could be like 65:35 kind of thing for the current year. Going forward, especially for FY22 and FY23, we see at least about 70% domestic and 30% exports.
- Abhijit Mitra:** So, that compares to 58% exports in this quarter?
- S. Gurunatha Reddy:** Yes.
- Abhijit Mitra:** So, there will be a significant improvement in margins for the next 2 quarters and for FY23 overall?
- M. V. Reddy:** Usually, in quarter 4, we expect good margins as in quarter 4 sales projection, we have only 35% of exports and 65% in domestic.



- Abhijit Mitra:** Just one last question. Can you repeat the order that you have received from Missile and Telemetry – the number you mentioned in the opening remarks?
- M. V. Reddy:** From Missile and Telemetry, for the 2nd quarter, we booked about Rs 41 crores, and for 2 quarters put together, we have booked about Rs 50 crores.
- Moderator:** The next question is from the line of Rahul Jain, an individual investor. Please go ahead.
- Rahul Jain:** Congratulations on a decent set of numbers. To start with, we have seen that there has been good traction across all the different companies in the recent past and even we have booked orders worth Rs 472 crores. Can you please provide us some more insight onto what was the major contribution towards this order? This is the first part of my first question. Moving on to the second part of my first question itself, on various media platforms, we have seen that you have received some orders in terms of indigenous Uttam radar LCA. Can you please elaborate that what is the size and the opportunity that Astra sees in this?
- M. V. Reddy:** The first question is, in terms of order booking highlights, the contribution as I mentioned in my opening remarks, we have booked an order of Rs. 141 crores which is the single largest domestic order we have received for a radar AAAU, which is a significant order I would say for a private company. This kind of an opportunity is like it has just begun. Otherwise, as you are aware, only DPSUs used to take these kind of orders from DRDO or even from Armed forces. So, this is paving a way for us to build more radars for the future and also we are bidding for the whole system – the complete radar system – for both DRDO and also for future MoD/Armed forces requirements. We have many RFIs and RFPs that are going to come in the near future. As far as your second question is concerned about the Uttam, as I mentioned in my opening remarks, we have received for proto version of AAAU for that Uttam radar. This is a major portion of that radar. We and the other company – one more company – have been awarded to supply these parts. Once this gets through and once goes for the production, and as you have been seeing in the media the number of radars being planned to install in LCA Mk1A and also Mk2 and other aircrafts, is a significant number will be there, at least in terms of hundreds will be there at least down the line in the next 5 to 7 years from the production agency.
- Rahul Jain:** Sir, a followup on this. You are saying that there would be a few hundred such radars that would be needed and the cost that was mentioned in one of the media articles was that 1 radar is going to cost some Rs. 13-14 crores, that is what you had bid for. Out of the hundreds of radars that would be needed, what could be the share that Astra would bite into this?
- M. V. Reddy:** In fact, I would say in the complete radar, this AAAU almost constitutes 70% of the radar.
- Rahul Jain:** So, is it fair to assume that out of the total kitty 60-70% would come to Astra or would it get split?



- M. V. Reddy:** Let us not go in detail about exactly the numbers and all, but I would say 70-75% of the total Uttam radar is this portion of AAAU. With that, I think probably you can calculate.
- Rahul Jain:** Sir, even in your opening remarks, you all have mentioned that you all are foraying into quite a few new things – small satellites, small radar systems, electro-optics, SDR robotics. Can you please throw some color on what could be the opportunity size, how do you intend to scale up on this, and what is going to be the capital outlay for the same, and how soon do you see these things contributing meaningfully to your top line and bottom line?
- M. V. Reddy:** As you know, we have a joint venture with an Israeli company for manufacturing these SDRs, and the opportunity has come for us to expand and to scale up this particular JV to even go for design and development and we have already bid for Army version of SDR and our JV got the project sanction order to develop under Mk2 category. So, we are enhancing our operations in terms of design and development and also we are expanding SDR product portfolio in our JV. And second is, we have also planned to add EO (electro-optics) product line in JVC. The discussions are going on with our JV partner. Probably in a couple of months' time, I think we should be in a position to confirm about this particular product line, but otherwise, we have this product line in our business plan to add in this. Then, other opportunities like satellite as you are aware that the reforms what have been introduced by the Government of India, we are also trying to move up in value chain from the sub-systems to the small satellite payloads which we are analyzing potential and we are gearing up for the same. We will be in a position to finalise the subject proposal in few months from now. And other segment what we discussed about the robotics, we have made an investment in one of the start-up companies and they are coming out with the robotic arms specially for the security applications and is in the development phase. These are all a few categories where we are investing for the future.
- Rahul Jain:** So, sir, is it fair for me to assume that in say another year or 2 years, Astra would move up the value chain from a sub-system player to a system player? Is my assessment fair?
- M. V. Reddy:** Yes, you are right in few segments.
- Moderator:** The next question is from the line of Bhagyesh Kagalkar from HDFC Mutual Fund. Please go ahead.
- Bhagyesh Kagalkar:** Initially in the beginning itself, you mentioned the new areas. You mentioned anti-drone efforts also. What will be these technologies that we are keen to promote and to market? What is the potential roughly? How much investment is required? You need to raise funds also for the satellite and all other areas. So, total how much requirement is there?
- M. V. Reddy:** The first question I will answer, regarding this anti-drone system/ counter-drone system. We have signed for LAToT with DRDO. Now, we are initiating the development of this particular system, and we would be optimizing the design with our core expertise in consultation with DRDO, and we would like to come out with a very competitive solution for MoD/Armed forces and for paramilitary forces' requirements. We also have a variant of this for going for a



commercial market. That, of course, we will probably be in a position to inform you in a few months later, but currently, we are focusing for military market with DRDO technology. This is what I would like to say about the anti-drone system. As far as the investment is concerned, Mr. Gurunath Reddy will be able to tell you.

S. Gurunatha Reddy: We need capital in a significant way to actually move into the next opportunities what we have shared with you. We are working out various options how this capital can be inducted into the company. Probably, we will be able to share more specifics down the line, but as of now, there is a requirement and we are working on that.

Moderator: The next question is from the line of Priyanka from Atidhan Securities. Please go ahead.

Priyanka: I have one question. What are the key drivers for our defense and non-defense products?

S. Gurunatha Reddy: Key drivers means what? We are into RF and microwave sub-systems and now we have graduated into the systems. So, all the requirements in the area of missile and electronics and EW....

M. V. Reddy: You mean to say, about the product systems category? or you are asking about any other?....

Priyanka: Basically, key growth drivers I am asking about.

M. V. Reddy: As you know, for the military market where we have our existence like in radar and electronic warfare segments wherein the companies like us are getting opportunity directly from Services and also from DRDO to bid as a total system integrator. Earlier, we were into only sub-systems. Now, we have been getting opportunities to make complete systems. This is the key growth driver as far as the defense market is concerned. Even in the space also, with these new reforms, there are opportunities for companies like us to build these satellites and to supply directly to the users. This is another key growth driver. In the commercial market, we are not much into this segment. Only we have another segment called meteorology and hydrology sector wherein we build a total station – automatic weather stations – and also we have weather radars which we have been supplying to the meteorology department. And the major factor here is Make- In India and with imports negative list which is being declared by the Government of India, many of those products in our domain expertise are coming under negative imported list. Indian industries like us, are getting opportunities to develop and supply same products to the armed forces.

Moderator: The next question is from the line of Abhijit Mitra from ICICI Securities. Please go ahead.

Abhijit Mitra: My question is on the new initiatives with these anti-drone and electro-optics. Over the past 1 year, we are seeing so many companies coming up and trying to enter this space. We have seen from Paras Defence, Adani, MKU, HFCL, even partly Data Patterns; is there any big order which is expected or is the government sort of inciting interest from private sector on this? What exactly is the story if you can give some broad indications? My second question is that



your stake has now gone down to 8.7%. So, what will be the modus operandi of raising the capital? How do you plan to tackle this low stake and yet raise capital in the company?

S. Gurunatha Reddy: In terms of capital, yes, we know that the promoters' stake is at a low level, but that is how it is. More or less, it is a professionally managed company. We have to see how to take it forward in terms of dilution. We don't have any second option on that.

Regarding so many players getting into the market in anti-drone, probably M. V. Reddy will take that call.

As far as the EO business is concerned, this is something where we are working out with our JV partner in ARC. They are very keen that this product line is added to the JV. The discussions were going on for the last 6 to 8 months, and we are sure that maybe in about 3 months or so, we should be able to share the firm information about this EO business coming into the JV. So, EO product line is something which is going to be done in joint venture but not in Astra whereas anti-drone is something which we are doing in Astra with a technology transfer from the DRDO labs.

Regarding competition, how it is going to be looking in the near future, probably M. V. Reddy can share and throw more light.

M. V. Reddy: You are right. Actually, there are a number of players who have already emerged in this anti-drone system, but as I mentioned in my previous clarification, we have been planning for design optimization in consultation with the DRDO so that we would like to come out with a very competitive product and to beat the competition. So, we have our own strategy. I don't want to go into more details about that, but we have our own strategy to address this particular requirement.

Moderator: The next question is from the line of Devendra Pandey from DP Financial Advisory. Please go ahead.

Devendra Pandey: Sir, I have a couple of questions. My first question is on CapEx. How much incremental CapEx are we planning for next 1 year and how are we going to fund it? My second question is about China Plus One and Make In India benefits that our industry will get going forward.

S. Gurunatha Reddy: Regarding CapEx, I think we shared with you in the last con-call for optimizing the existing requirements. We have planned about Rs 30 crores of CapEx which we are implementing now. Currently, about 50% of that is already done. This is what we see as CapEx requirement for the existing operations for the next 1 year. We don't see any additional CapEx coming in, but regarding the newer opportunities what we talked to you now, it is a bigger requirement that we already told you that we have to work out a mechanism how funds can be raised.

Devendra Pandey: Sir, what is our capital allocation strategy for this CapEx?



S. Gurunatha Reddy: The existing CapEx is being funded by a term loan from one of the bankers and about 20% being contributed by the company through internal accruals.

Devendra Pandey: Sir, on my second question about industrial tailwinds due to Make In India and China Plus One, how are we going to benefit from that?

M. V. Reddy: As I mentioned earlier, this is an opportunity what we are getting from the Services to build systems and to supply to Armed forces. Make In India policy is encouraging the industry to develop the system either through in-house development or with some kind of a foreign technology tie-up. A good amount of opportunities are coming out, and I am sure definitely in the years to come, all industries will have a good benefit out of this Make-in India policy.

Moderator: The next question is from the line of Santosh Yellapu from Asian Market Securities. Please go ahead.

Santosh Yellapu: I had 3 questions. 1) Sir, what would be the approximate share of our scope of work for the sub-systems we will be supplying to BEL for Arudhra project? 2) Is my understanding right that the shipborne radar order that we won, it is an order won from DRDO, right? Then, who all or what is the total opportunity size we see for this particular radar in the years to come? 3) Within the radar's program, how many technologies have we procured from DRDO? And how many technology partners are we competing with? Usually, if a particular technology would have been shared, it is usually shared with 2 or 3 players. So, is it the same 2-3 players along with us which shared for most of these programs or not? Some color on that front would be helpful.

M. V. Reddy: Roughly about 40% to 45% is our share in the Arudhra as far as electronics is concerned, I am not taking complete radar.

The second question is on SBR front. This is the first radar being built by the industry with DRDO technology's support. That I think in the future, yes, definitely there is a lot of potential for this kind of a radar for different applications for the Indian Navy. Exact numbers and all would be difficult to mention here at this stage, but definitely there would be the potential for this similar radar for the next 7 to 10 years.

Santosh Yellapu: Sir, one small point if I could ask before you get to the third question, is this a replacement opportunity, the shipborne radar, or it is for an upcoming opportunity? How do you see that?

M. V. Reddy: It is upcoming. Actually, the ship is being built by Indian companies and we are going to install this radar. This is an upcoming opportunity. It is not for replacement.

Your third question was on DRDO technology partners. As you said, every technology will go for multiple companies. Like anti-drone, we are among the 4 companies who have already received the technology, but each technology partner will have their own strategies to build the system and to go for the market. Similarly, there are other technologies what we got from



DRDO. One is the coastal surveillance radar that also we have signed recently. Then, also there are some more in the pipeline.

Santosh Yellapu: Sir, just to put it from a different perspective the same question, if we have to put it into the buckets of Airforce-related radars, army-related or I would say the ground radars, and the ship-related radars, could you just give the names of the competitors or who are in the play for these 3 categories, that should be helpful.

M. V. Reddy: Santosh, I think it's not fair on my part to talk about my competitors in this investor call.

Santosh Yellapu: Sir, just the names?

M. V. Reddy: No, sorry. I don't want to take any competitor's name here.

Moderator: The next question is from the line of Bhavik Shah from Emkay Ventures. Please go ahead.

Bhavik Shah: My first question is regarding the PLI scheme which was announced for drones and drone components. Are we in any way looking at that?

M. V. Reddy: We are actually basically into anti-drone systems; we are developing that. We are not into drones business.

Bhavik Shah: Regarding the order book and execution of our Astra Rafael JV, how has it been in the 1st half and what is the order book there?

M. V. Reddy: For JV, we have close to \$99 million of open orders. That's the total order book of the JV as on date.

Bhavik Shah: How is the execution there? Is it going at a good pace or was it delayed?

M. V. Reddy: It got delayed actually. In fact, execution would have begun in the last year, but because of the design optimization, it got delayed and more likely this execution will get picked up. Actually, it has just started in the current month. I think more in FY23, we are expecting a good amount of sales from this JV.

Bhavik Shah: But margins will be similar to exports, right?

M. V. Reddy: Better than the BTP business; as what we do in exports is basically the build to print whereas in the JV, they have more value to add to that. So, margins are definitely better than the exports being carried out from Astra.

Bhavik Shah: Regarding the space segment, there were some technical issues which you were trying to resolve with DRDO. What is the update on that?



- M. V. Reddy:** ISRO, not DRDO. More or less it has been resolved and we are likely to get clearance for the balance production.
- Bhavik Shah:** Will we see execution in the coming H2?
- M. V. Reddy:** No, not in H2, probably in FY23.
- Bhavik Shah:** What will be the quantum of that if you can quantify it?
- M. V. Reddy:** Next year, we have planned about close to Rs 110 crores of execution for the space segment.
- Moderator:** The next question is from the line of Ketan Gandhi from Gandhi Securities. Please go ahead.
- Ketan D. Gandhi:** Sir, you have spoken about the seeker. It is the same seeker which we were building for the last 3-4-5 years, right?
- M. V. Reddy:** Actually, I have mentioned about 2 seekers. One seeker in one particular band, the second one is another frequency band. One order we have received about 6 months back. That is under execution. Most probably by March, we would be in a position to hand over at least 50% of that quantity, maybe 2 or 3 numbers, whereas the one which I mentioned we got in the last quarter is a different frequency band. Also, we had developed proactively a few years back and we could succeed in making up meeting this requirement. That is how actually we got this contract. Now, this order most probably by next year end, we should be in a position to complete.
- Ketan D. Gandhi:** So, this is not a sub-system; it is a full seeker, right?
- M. V. Reddy:** It is a full seeker.
- Ketan D. Gandhi:** Sir, about the Uttam radar AAAU, ourselves and BEL got the order. Is it the final conclusion that every order will be split between ourselves and BEL?
- M. V. Reddy:** I can't tell at this particular moment, but we both have been selected to build these AAAUs. Initially, we have to complete this and we have to bid for the future production; that is what I mentioned.
- Ketan D. Gandhi:** Any chance of we getting the order from BEL itself for the T/R module for Uttam?
- M. V. Reddy:** BEL is also manufacturing T/R modules. Of course, we have a good relationship with BEL. We have been supplying some of the components to the T/R modules like MMIC components which have been developed by our company. We are there in their supply chain. So, we are part of that particular program also.
- Ketan D. Gandhi:** Sir, are we doing anything to do with gallium nitride fabrication?



- M. V. Reddy:** We have plans to roll out these GaN devices. Except in X-band, most of the other frequency bands, we have already made these GaN power amplifiers, and with those power amplifiers, we could demonstrate all the T/R modules and few programs we are already supplying these GaN devices, whereas in X-band which is under development and we got first iteration recently. Maybe within the next few months, I think we should be in a position to come out with a GaN-based X-band PA device.
- Ketan D. Gandhi:** Sir, I believe we were also working on jamming of the radars. Can you throw some light on that? Where has it gone and how is it progressing?
- M. V. Reddy:** As I said, the counter-drone systems, that is what actually the radar that we talked about. I think we have already given the details about the strategy of how we are going about it.
- Moderator:** The next question is from the line of Santosh Yellapu from Asian Market Securities. Please go ahead.
- Santosh Yellapu:** Sir, a couple of questions. 1) What is your outlook on the upgradation opportunity of the ground-based radars? Do you see that taking off big time in the next 3 to 4-5 years' time period? 2) Is it an intentional strategy of ours that we are trying to move up the value chain by sticking more to the air-side and the ship-side radars rather than going more into the ground-side radars where already PSU is a lead player there?
- M. V. Reddy:** Even in the ground radar segment also, we are developing a few radars. The first radar what we had developed is basically for the ground radar only; that perimeter surveillance radar which is being supplied to the paramilitary forces. The other one like even for surveillance, tracking radar is ground-based radar. Even telemetry radars which we got from DRDO like phased array telemetry radar and PPTR, these are all ground-based radars only. Apart from these radars, we are also planning to bid for bird detection radar for Airforce. So, in the ground radars, definitely there is going to be a rich potential in the next few years. But at the same time, we are focusing on other segments for both airborne and as well as for the shipborne.
- Moderator:** The next question is from the line of Mridul Shah from Aamara Capital. Please go ahead.
- Mridul Shah:** Sir, I had 2 questions. 1) How should one visualize margins of the company in a steady state? 2) How should one read into the raw material cost as a percentage of the sales which has gone up significantly over the last 5-6 years?
- S. Gurunatha Reddy:** Raw material costs going up in the last couple of years, you have to look at the sales mix. We told you many times that in the exports, the raw material content is close to about 90%. Therefore, wherever there is an export segment in the overall sales in a significant way, the percentage of raw material consumption will be high. Otherwise, when you look at in general terms, for the domestic business, the raw material cost varies from about 45% to 60% whereas for the exports, as I said earlier, the raw material cost is close to about 90%.



Mridul Shah: Sir, I will flip that question a bit. Now, coming to the order books in the future, how do you see the company in a steady state with respect to the splits here? Again, the question is directed with respect to understanding the margins in the near future.

S. Gurunatha Reddy: It is very simple. As long as the domestic sales are in a major way – major way in the sense 80% and above – the raw material costs will be close to about 45% to 60%. It will be in that range. With reference to that, we can always calculate what will be the margins.

Moderator: As there are no questions from the participants, I now hand the conference over to Mr. Gurunatha Reddy for closing comments.

S. Gurunatha Reddy: Thank you ladies and gentlemen for participating and discussing with us. I look forward to talk to you again at the end of the 3rd quarter. Thank you.

Moderator: Ladies and gentlemen, on behalf of Astra Microwave Products, that concludes this conference. We thank you all for joining us and you may now disconnect your lines.